CSR, Sustainability, Ethics & Governance
Series Editors: Samuel O. Idowu · René Schmidpeter

Mara Del Baldo
Jesse Dillard
Maria-Gabriella Baldarelli
Massimo Ciambotti *Editors*

Accounting, Accountability and Society

Trends and Perspectives in Reporting, Management and Governance for Sustainability

Springer

CSR, Sustainability, Ethics & Governance

Series Editors

Samuel O. Idowu, London Metropolitan University, London, UK

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Foreword 1

The Centre for Social and Environmental Accounting Research (CSEAR) based in the University of St Andrews, up in Scotland (one of the oldest UK universities), is a familiar entity to me. I was in fact Member of CSEAR until the early part of the twenty-first century when my research focus tweaked a bit. I have continued to admire many of the great things Prof. Rob Gray and many of his team members did and continue to do for CSEAR, first during his time at the University of Glasgow and when his career moved on to Saint Andrews, where he is now Emeritus Professor. It was therefore a great opportunity for me to attend the 7th Italian CSEAR Conference in Urbino, Italy, in September 2018, where I was fortunate to meet a number of great and long-standing members of the CSEAR's family; it was an unforgettable conference for me personally.

When I was asked to put this piece together for the book emanating from the Urbino Conference, it was one of the easiest and most honourable "yes", I have had to say during my thirty something years in academia! It is therefore a great honour for me to write the Foreword to this addition to the literature focusing on *Accounting, Accountability and Society*. Browsing through many of the chapters that make up the book, one cannot but be impressed by the tenacity of the arguments and the information they contain.

The United Nations has taken the issue of sustainable development seriously for more than 30 years; see, for example, "Our Common Future", Brundtland Report 1987 the genesis of it all. The Eight Millennium Development Goals of September 2000 on global sustainable development came to an end in September 2015. The issues encompassed in the current UN Sustainable Development Goals 2030 have challenged both corporate and individual citizens of the world to behave and operate sustainably; this also requires corporate entities of the modern era to sustainably manage their dealings with all their classes of stakeholders including the environment, that is what will survive them in both their local and global markets and consequently survive the planet we all live in. We all owe this planet a compelling debt to ensure that things are not made unnecessarily difficult for future generations of the occupants of planet Earth, regardless of whether they are animate beings or inanimate objects, and many of the chapters in the book have either directly or indirectly amplified this point; needless to say, I am in total agreement with them.

Let me conclude the piece by congratulating Profs. Mara Del BaIdo, Jesse Dillard, Maria-Gabriella Baldarelli and Massimo Ciambotti for this valuable addition to the literature; having browsed through it carefully, I am delighted to recommend it as a must-have companion to today's sustainability and sustainable development scholars, practitioners and research students that reside in the length and breadth of our world who work in this field. I recommend the book to you all unreservedly.

November 2019

Samuel O. Idowu, Ph.D.
London Metropolitan University
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Foreword 2

The issues associated with ethics, governance, sustainability and corporate social responsibility are critically important to accounting scholars as well as being important in the world of practice. It is, therefore, hugely rewarding and encouraging that these concerns are placed at the heart of this book and championed by colleagues. The book reflects the central tensions that exist for many of us in the field. On the one hand, we have faith that accounting scholarship and corporate practice will rise to the challenge of social, environmental and ethical concerns. We work with concepts such as accountability and stewardship to inform our emancipatory intentions and desire. On the other hand, we harbour concerns about greenwashing and impression management intentions of those companies we seek to transform. Failure and redemption are the two sides of this coin. This collection of work from influential scholars takes a fresh approach to these concerns and plays them out in the context of integrates reporting, non-financial assurance, health and safety decision-making and tax avoidance, among others. I hope and trust you will find much in these pages that inform your reflections and actions.

November 2019

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Jan Bebbington works at the University of Birmingham and focuses on issues that emerge at the intersections between sustainable development concerns and accounting scholarship. She has published on topics such the Sustainable Development Goals; sustainability science; motivations and rationales for stand-alone reporting; carbon accounting; sustainability assessment; and accounting education. She is also involved in a long-term collaboration between ecologists and sustainability scientists at the Stockholm Resilience Centre at the Stockholm University that aims to provide knowledge to a practice-based cohort of seafood companies who are seeking to actively contribute to ocean stewardship (focusing on SDG 14—Life Below the Water). The project is yielding insight into the differences between accountability and stewardship as well as the issues in establishing organisational control over supply chains and reporting meaningfully on performance.

Alongside her academic work, she has also made substantive contributions to the practice and policy communities in a variety of roles including being Vice Chair (Scotland) of the Sustainable Development Commission from 2006 to 2011. The role of the commission (a part of the UK government) was to promote sustainable development across the UK and all sectors of society, particularly within government. A more recent practice engagement is her membership (since 2013) of Scottish and Southern Energy's Sustainable Development Fund panel, which supports community projects across regions in Scotland where SSE has renewable generation assets. In 2018, the Royal Scottish Geographical Society awarded her an Honorary Fellowship.

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(NIBR), the O.I.B.R. Foundation (Organismo Italiano di Business Reporting—Sustainability, Non-Financial e Integrated Reporting) and the European Business Ethics Network (EBEN Italy). Moreover, she is member of the Academic Advisory Committee in the Global Corporate Governance Institute (USA) and Global Network Member of Corporate Governance Experts Global Repository (Virtus InterPress) and responsible for the University of Urbino Carlo Bo partnership in the Erasmus+ Project Designing Innovative Pedagogy for Complex Accounting Topics. She serves as Editorial Board Member, Associate Editor and Reviewer of various international scientific journals, and as Editorial Board Member of the Dictionary of Corporate Social Responsibility (Springer, 2015). She published in major international journals, including *Accounting History*, *Accounting History Review*, *Meditari Accountancy Research*, *International Journal of Social Ecology and Sustainable Development*, *Journal of Management and Governance*, among others. She authored several scientific publications, including articles, chapters on Springer's Series CSR, Sustainability, Ethics and Governance and conference proceedings.

Jesse Dillard received a Ph.D. in business administration from the University of South Carolina and a Master of Science Management and Bachelor of Science in industrial management from Clemson University. He has served on the faculties of Ohio State University, University of New Mexico (KPMG Professor), University of Central Florida (KPMG Professor), Portland State University (Retzlaff Chair in Accounting) and Queen's University Belfast. In addition to being Emeritus Professor at Portland State, he holds appointments at Victoria University in Wellington and the University of Central Florida. He is Founding Editor of *Accounting and the Public Interest* and serves as Associate Editor for *Critical Perspectives on Accounting* and *Sustainability, Accounting, Management and Policy Journal* in addition to serving on various editorial boards. His published works include books, chapters and articles appearing in leading management and accounting journals. His teaching and research interests include the ethical and public interest implications of administrative and information technologies particularly as they affect social and environmental sustainability and accountability. He is currently Member of the governing board for the Centre for Social and Environmental Accounting Research, University of St Andrews, Scotland.

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His teaching and research experiences range from cross-cultural management to business information systems to strategy and management control to cover the field of knowledge management and intellectual capital, with publications in major international journals. He is also author of many publications in the field of accounting history. Moreover, he has worked in these areas as a private consultant, especially in the world of small- and medium-sized firms.

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Sustainability Accounting and Accountability

Accounting and Accountability Tools and Practices for Environmental Issues: A Narrative Historical Academic Debate

Sandro Brunelli

1 Introduction

Since the early 90s, the pathway of sustainability has affected public and private organizations' accountability. Until that time, the accountability issue was largely addressed through the provision of fair accounts internally, as a result of correct uses of managerial accounting tools and procedure and externally, as a result of a correct use of GAAP for the preparation of financial statements and related disclosure. However, the concept of accountability is rapidly changed since the early 90s as a natural aftermath of the growing relevance of other important issues linked to social and environmental variables and facts (financial troubles in developed countries, growing pollution, big corruption scandals, climate changes, etc.). In response, both academics and practitioners strove their efforts to new models, concepts, and techniques for addressing the enlarged accountability needs for society. While at the beginning of 90s main issues were represented by searching which existing tools or models could be proposed for addressing these new accountability needs, the passage of time (and especially with the advent of the twenty-first century) has revealed the need of new and integrated frameworks determining a sort of accountability process re-engineering. The aim of this chapter is using a narrative and chronological approach, to retrace this never-ending journey with a focus on selected environmental issues and to point out the main contributions provided overtime by the academic debate. To this end, it seems possible to chronologically review the debate dividing the time span into four main periods:

1. the early debate occurred in the 90s regarding accounting for sustainability and preliminary issues for environmental accounting purposes;

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2. the “meta” debate observed in the late 90s and early 2000s aimed at criticizing and refining models and tools proposed during the early one;
3. the environmental debate, which became the absolute protagonist in the light of many alarms launched throughout the world in the late of 10s in response to natural disaster and climate extreme events;
4. the recent debate regarding the awareness of an integrated approach and the need of integrated reports. To this regard, we will see that main issues, which historically affect accounting themes, such as harmonization, standardization, compulsoriness, or voluntariness seem to be so far the heart and the solution of the problem.

This chapter has a twofold aim: on the one hand, it would fix milestones achieved in the landscape of environmental accounting; on the other hand, it highlights the need to change the mindset in facing on the issue fostering further efforts aimed at improving accounting for sustainability (A4S) as a whole. As a matter of fact, merging innovative approach in the fields of accounting, economics, and law could represent the best effective way to point out fair and shared models useful for both academics and practitioners. The great call represented by United Nations Sustainable Development Goals (UN SDGs) rows exactly in this direction: finding large consensus to heal the world.

Consequently, this paper is organized in four sections aimed at exploring each period individuated and the related debate. Final remarks conclude the paper summing up evidences achieved and formulating suggestions for further researches.

2 The Early Debate

In order to account for sustainability, Gray (1992) suggests that sustainable cost analysis should be used as a shadow of price-driven accounting information. Indeed, a parallel accounting system should be derived in order to provide calculations of what it would cost at the end of the accounting period to return the biosphere to the point it was at the beginning of the accounting period (Gray 1992). The figures produced by this shadow accounting system should be deducted from computed accounting profit and be expended in the restoration of the biosphere (Gray 1992). At this early stage, Johnson (1993) identifies three main challenges for accountants engaged in environmental reporting and accounting:

1. How should environmental outlays be depicted when they are made? Here, the main issues are whether to capitalize or expense them, as well as how to assign them to accounting periods;
2. When, and if, events or conditions that may require future environmental outlays should be recognized as liabilities?
3. How should expected environmental outlays be measured?

The author specifies that recognized items could require additional disclosures to provide more information. Milne (1996) suggests that two decision-making tools can be introduced to integrate environmental concerns into accounting. They are environmental impact analyses and extended cost-benefit analyses. Both of these methodologies strive to account for social and environmental externalities: they capture information on those impacts beyond the entity that creates them. The main difference between these tools is that environmental impact analyses represent environmental factors in the form of a descriptive analysis, with information expressed in non-monetary amounts. While, extended cost-benefit analysis seeks to quantify, under the financial standpoint, all known impacts. Birkin (1996) brings attention to life cycle analysis: a methodology, which can be used as an integrating and comprehensive tool in order to account for the ecosystem. Solomon (2000) asks himself whether corporate environmental reporting could shadow financial reporting. In particular, he addresses the need to standardize corporate environmental reporting through a formal framework, in order to ensure credibility and effective communication. According to the author, the easiest way to do so is to use the existing financial reporting conceptual framework as a basis for a corporate environmental reporting conceptual framework. Solomon (2000) tests his hypothesis disseminating a survey in the UK, with the aim to verify whether there is consensus on some perceived commonalities between the UK financial reporting conceptual framework and a potential corporate environmental reporting conceptual framework. The table below provides Solomon (2000)s findings (Table 1).

What emerges from Solomon (2000) findings is that a conceptual framework for corporate environmental reporting could shadow the existing conceptual framework for financial reporting, except for the users of disclosed information and the issues of recognition and measurement. Indeed, the users of corporate environmental information are a broader group than shareholders, and recognition and measurement issues are strictly related to the items being recognized and measured. Looking into the organizations, in the view of Atkinson (2000), one of the keys to understanding corporate sustainability is full cost accounting aimed at valuing pollution in corporate green accounts. The author cites the definition according to which full cost accounting means *"accounting for a corporate entity's internal and external costs generated as a result of its economic activity"* (Atkinson 2000, p. 436). External costs are described as costs imposed by organizations as a consequence of their economic activity on third parties. For instance, pollution is an external cost, which imposes costs on others, through detrimental effects on health and environmental quality. This is an external cost because firms do not take into consideration this outcome when deciding the amount of pollution they should emit. Full cost accounting for external costs includes the monitoring of physical indicators and makes it possible to estimate those costs in monetary terms. Then, it is possible to adjust firms' incurred income by the amount corresponding to externalities directly associated with the production of their income. Theoretically, that amount should be used to compensate the externalities produced. Monetary evaluation of environmental impacts means *"the value in dollar terms of the stream of benefits that society derives from the environment"* (Atkinson 2000). The author argues that measuring changes in this stream can provide that link between human well-being and the environment, which is sought in sustainability debates. In fact, the value of pollution damage consists of

Table 1 Potential corporate environmental reporting conceptual framework

Items	Features of corporate environmental reporting conceptual framework	Similarities to financial reporting conceptual framework
Users of information	Shareholders are important, but they are not the primary users. The most relevant information' users are employees, legislators, and local communities	No
Qualitative characteristics	The greatest emphasis is on understandability, relevance, reliability, faithful representation, freedom from error, and a true and fair view	Yes
Recognition and measurement	The elements to be recognized are natural resources: air, land, water, and sound. They are treated as assets, while their pollution is a liability	No
Verification	Independent verification will increase credibility	Yes, at least in terms of actions undertaken
Bearing the cost of disclosure	The cost of disclosure has to be beard by firms	Yes
Timing and communication of information	Information has to be disclosed via the annual report	Yes, but also elsewhere

Source Author elaboration from Solomon (2000)

a price multiplied by a quantity. The price should reflect the marginal willingness to pay: the amount of income an individual is willing to give up in return for a small improvement in environmental quality. While quantity is total emissions attributable to an individual organization. The aftermaths of this preliminary debate have been consisted in deepening the use of accounting sustainable tools by academics integrating the existing knowledge with new approaches and a certain spirit of criticism in suggesting to move from accounting to accountability initiatives and instruments.

3 Meta Debate

Bebbington et al. (2007) criticize cost-benefit analysis and suggest sustainability assessment models should be adopted to support sustainable development initiatives. They identify five principal categories of concern about cost-benefit analysis:

1. Over-reliance on monetization. The monetization of non-economic values involved in sustainable development risks underestimating values themselves; moreover, choices risk being determined exclusively by market values;
2. Subjectivity of calculations. Cost-benefit analysis faces a number of measurement and valuations difficulties, such as: the dependency of economic values on property rights' allocation; the impact of wealth and income distribution on willingness to pay; information asymmetries and scientific uncertainty. Moreover, the results of contingent valuation methods depend on the selected population. Furthermore, cost-benefit analysis computations entail cost and benefit estimates, as well as judgments about the proper discount rate. These uncertainties in the monetization process can lead to opportunistic interpretations;
3. Politics of cost-benefit analysis. Cost-benefit analysis is assumed to be a-political in nature. However, this can hide value choices and the political nature of actions, jeopardizing democratic processes. Decision-makers can filter information stakeholders receive and take opportunistic advantage of cost-benefit analysis calculations' uncertainties;
4. Distributional issues. Cost-benefit analysis focuses on monetary totals, disregarding how costs and benefits are allocated among different groups;
5. Reliance on experts. Cost-benefit analysis is an expert-driven process, inaccessible to non-specialist audience. Results are often presented in a technical language or via summary statistics, without providing explanations. Alleged scientific objectivity is conveyed, with people accepting results on faith.

Sustainability assessment models are presented by the authors as an alternative to cost-benefit analysis. A sustainability assessment model can be defined as a full cost accounting approach to make external costs more central to organizational decision-making. The development of a sustainability assessment model follows a four-step process: (1) definition of the entity for which the account has to be developed; (2) determination of analysis's boundaries; (3) quantification of physical flows related to aspects of interest; (4) translation of information into monetary terms. The application of this methodology results in a project-specific sustainability assessment model, which shows changes in economic, environmental, and social capital categories resulting from the project. Below we summarize the main differences between cost-benefit analysis and sustainability assessment models (SAMs) signaled by the authors (Bebbington et al. 2007):

1. Monetization. SAMs combine monetary and non-monetary indicators and it allows dialog among stakeholders with different ideological orientations;
2. Subjectivity of calculations. SAMs explicitly recognize subjectivity;
3. Politics of SAMs. SAMs explicitly acknowledge the political nature of decision-making processes. SAMs do not adopt a predefined approach to sustainable development since different stakeholders' perspectives can emerge during the decision-making process. Indeed, if the engagement is not plural enough, there is the risk that SAMs will be dominated by a narrow range of interests;
4. Distributional issues. SAMs explicitly express impacts on economic, environmental, and social capital;

5. Reliance on experts. The design of SAMs explicitly involves all relevant stakeholders, in order to consider a plurality of perspectives.

Full cost—environmental—accounting has been conceived as a valuable approach also in more recent years. According to Cuckston (2013), it can be seen as a way of representing the interactions between organizations and the natural world. In particular, it tries to assess, financially, the value that the organization has extracted from nature. A way to pragmatically affect corporate financial accounting calculations of profit and loss will be a tax system based on full cost environmental accounting. Specifically, governments should impose a tax on corporation's equivalent to the cost of restoring the damage done by corporations on the environment. Bebbington and Larrinaga (2014) ascertain that, among various accounting techniques that have tried to better expose social, environmental, and economic externalities, full cost accounting has been seen as the most promising since it moves beyond the entity to find externalities. As a matter of fact, contrary to full cost accounting, financial accounting ignores social and environmental impacts, by contributing to a bounded organization, which ignores its overall nature. Specifically, the idea at the basis of full cost accounting is that in order to identify more sustainable ways for producing goods and services, it is necessary to consider the sustainability of current activities, by assigning a value to the use of otherwise free environmental and social services. Linnenluecke et al. (2015) describe full cost accounting as accounting for the amount of money a firm would have to spend to return the environment back to the state where it was at the beginning of the accounting period. External costs are central to full cost accounting and the interlinks between sustainable development issues and the entity are addressed under this approach. Discussing quality in full cost accounting, Bebbington and Larrinaga (2014) state it has to be measured by the level of stakeholder's engagement in the construction of an account. This leads to several challenges to be tackled, such as: (a) the representativeness of participant; (b) inclusiveness; (c) how to obtain a fair deliberation or the access to resources to participate. In addition to full cost accounting, Linnenluecke et al. (2015) recall the other two methods for accounting for environmental impacts. They are input/output accounting—it analyzes the physical flow of inputs such as materials, energy, waste, and outputs such as carbon emissions or waste, and natural capital accounting such as habitat or biodiversity costs usually not included into pricing decisions. Unerman and Chapman (2014) add that conventional accounting practices disregard or judge as immaterial the long-term economic risks arising from social and environmental impacts of firm's activities. Along the lines of Unerman and Chapman (2014), Linnenluecke and Birt and Griffiths (2015) state that finance and accounting systems focus on short-term outcomes and the management of short-term costing, reporting, and disclosure, rather than on longer-term climate risks. However, since the impacts of climate change become more visible, they will need to be reflected in the costing, reporting, and disclosure of impacts, vulnerabilities, and adaptive capacity (Linnenluecke et al. 2015). The CDSB Climate Change Reporting Framework can be considered as an attempt to integrate climate change-related information into mainstream company reporting (Linnenluecke et al. 2015). Previously, Llena et al. (2007)

studied environmental reporting practices in the annual report of large companies operating in Spain. They verified the impact of the implementation of a compulsory accounting standard (in 2002) on environmental reporting behaviors. Authors' findings can be classified according to four categories:

1. Type of environmental information provided. On the one hand, narrative information about environmental performance is common for the majority of the companies; on the other hand, quantitative information is less frequent. The introduction of a compulsory accounting standard has led to a significant increase in the provision of financial data and in the number of environmental items disclosed via narrative and qualitative information;
2. Sections of the annual report devoted to environmental information. Firms publish their environmental information in the general corporate information included in the annual reports. The adoption of a compulsory accounting standard has caused an increase in the environmental data published in the notes to the annual accounts. Moreover, it is possible to register an increase in the number of companies providing an environmental report and the majority of the companies have devoted a section of corporate website to the environment. Finally, there has been an increase in the number of firms disclosing environmental information within compulsory information subject to audit procedures;
3. Organizations' environmental policies. The introduction of a compulsory accounting standard has triggered the increase of (1) the implementation of environmental audit, (2) the adoption of an ecological policy, and (3) the external environmental commitments with governmental agencies or business organizations;
4. Environmental disclosure in the annual accounts. All the environmental information provided in the annual reports is located in the notes; only few companies have included environmental items in the balance sheet or income statement. The introduction of a compulsory environmental standard has resulted in an increased disclosure of information on environmental provisions, investments, and expenses.

Llena et al. (2007) summarize that the implementation of a compulsory accounting standard has increased the publication of environmental information in the annual reports, especially in the (financial) data provided in the notes to the accounts and in the corporate general information section. de Villiers and van Staden (2011a) broaden the scope of the analysis considering not only environmental disclosure in firms' annual reports but also on their websites. Firms use both media to disclose environmental information, but annual reports are more credible than websites, because of regulation and audit. Moreover, these two different media serve different purposes and audiences. The table below summarizes the main findings of de Villiers and van Staden's (2011b) study on S&P 500 and the largest 3000 US publicly traded firms by market capitalization; it shows that managers' voluntary disclosure decisions are influenced by their firms' environmental performance (Table 2).

Table 2 Where firms disclose environmental information

Annual reports	Bad reputation firms report more environmental information in their annual reports. Indeed, managers provide investors with additional environmental disclosure in their annual reports in order to reduce information asymmetry and the cost of capital
Websites	Firms experiencing an environmental crisis disclose more environmental information on their websites. In fact, managers use corporate websites to provide activists, regulators, politicians, and the general public with information in order to reduce the political costs related to the crisis, by showing that the situation is adequately managed and neither consumer action nor regulation is required

Source Authors elaboration from de Villiers and van Staden (2011b)

4 The Growing Relevance of Environmental Issues in the Global Landscape of A4S

The worries about climate change phenomena as a whole, the increasing attention posed by social media all around the world, issues of carbon accounting, and the rise and rise of greenhouse gas (GHG) protocol have brought the debate on this mainstream also among academics. In 2008, Kolk, Levy, and Pinske focused specifically on the development of reporting mechanisms for GHGs. The authors argue that an ambitious project of commensuration should be at the basis of the institutionalization of standardized information disclosure. Commensuration is the transformation of qualitative relationships into quantities on a common metric. In general, a process of commensuration is characterized by three dimensions: technical, value, and cognitive dimensions, which can be applied to climate change as well. First of all, as financial reporting translates firms' activities into a common monetary metric, so carbon reporting, from a technical perspective, aims at rendering organizational operations involving multiple gases and impacts in terms of a common carbon metric: tonnes of carbon dioxide equivalent—tCO_2. Secondly, value commensuration is the attachment of a price to GHGs reductions; finally, from a cognitive perspective, it is necessary to develop a common understanding of the meaning of pollution, the identity of the polluter, and the emissions a firm is responsible for Kolk et al. (2008) believe the key to achieve commensuration in carbon accounting is the use of a widely accepted methodology to transform all polluting activities into corresponding emissions. For instance, the GHG Protocol can be adopted to track and register firms' GHG emissions. Under this protocol, emissions are distinguished between direct and indirect ones. Direct emissions come from sources that a firm owns or controls, while indirect ones come from sources where the point of release is either upstream or downstream in the supply chain. Moreover, there are indirect GHG emissions, which cannot be classified according to the above-mentioned dichotomy. They are, for instance, business travel, external distribution, use and disposal of products, others (Matisoff et al. 2013). The authors highlight the difficulties emerging from this process since carbon market is not a naturally existing entity. Indeed, the commodification of carbon requires a legal and bureaucratic infrastructure to: (a) define and measure carbon units for various activities and gases; (b) allocate and adjudicate property rights; (c) establish rules for trading across national boundaries, and (d) different carbon jurisdictions. Moreover, reporting systems should consider not only technical issues such as which technologies and activities count toward emissions and reductions but also political ones in terms of emissions' allocation to actors and activities in the value chain. Bebbington and Larrinaga (2008) study carbon trading's financial implications for companies. In particular, short-term financial implications arise from the cost of allocated or purchased allowances. In their risk-based approach to global climate change, the authors believe financial and non-financial information, such as GHGs emissions, is necessary to provide insights on the risks associated with global climate change. They argue the GHG Protocol can be the starting point of a standard for the measurement of GHG emissions and it can be adopted as a benchmark of corporate performance in this area. Since its first publication in 2001, this protocol has been incorporated into several voluntary and governmental reporting guidelines such as the GRI (Ascui and Lovell 2011). Linnenluecke et al. (2015) define the GHG Protocol Corporate Standard as a mitigation accounting standard, which provides guidance for organization preparing a GHG emissions inventory. In line with Bebbington and Larrinaga-González (2008), Ascui and Lovell (2011) highlight that companies operating in carbon markets have new liabilities, assets, and financial flows to account for in their financial reports. Rathee and Kapil (2015) reiterate that, because of firms' participation in climate trading, new balance sheet items and/or cash flow and income statement events can emerge. Specifically, climate trading-related new financial activities may affect either the annual net income or net balance sheet value, which can change the firm's debt valuation and affect the price of corporate equity securities. The recognition of these items in financial accounting makes visible the real impact of CO_2 emissions on companies' profit (Cuckston 2013). Thus, accountants are engaged in reporting these assets and liabilities in corporate financial reports (Ascui and Lovell 2011). On the same wavelength, Linnenluecke et al. (2015) register an increase in corporate development of informational infrastructure for assessing, measuring, reporting and managing GHG emissions. Moreover, companies are building GHG accounting capabilities to establish emission baselines, measure actual emissions, and budget for future purchase or sale of emissions credits. However, in the absence of an official international guidance on how to account financially for carbon allowances or credits (Lovell and MacKenzie 2011), several accounting practices have emerged to account for emissions rights and obligations (Ascui and Lovell 2011). It is the multinational scope of carbon trading schemes that would require financial carbon accounting's convergence on a global basis. The authors argue that if carbon accounting fails to provide comparable information on corporate emissions, impacts, and responses and to recognize and reward negative emissions, society will lose the valuable chance to avoid or reduce the damage caused by climate change. Andrew and Cortese (2011) recognize that a variety of voluntary and mandatory regulatory regimes has emerged to encourage climate change in standardized reporting and disclosure practices. For instance, the

GHG Protocol promoted by the CDP. This methodological guidance reflects a desire for a greater level of data uniformity and comparability. Drawing parallels between financial and GHG accounting and reporting, generally accepted GHG accounting principles are necessary to ensure that the information provided represents a faithful, true, and fair account of firms' GHG emissions (Andrew and Cortese 2011). According to Bowen and Wittneben (2011), a fully functioning carbon accounting system should be based on measurement that is (1) materially accurate: actual atmospheric emissions have to be reflected; (2) consistent over space and time, by using calibrated equipment, agreed procedures, and verification; and (3) able to incorporate data uncertainty to allow for valid data interpretation. Indeed, all the initiatives dealing with climate change require the measurement, collection, and comparison of carbon dioxide (CO_2) emissions data. Also, the authors argue that carbon accounting systems have to evolve on three levels: (a) scientific knowledge: how to recognize and count carbon emissions; (b) accounting effort to collect and record this information; (c) policy field of developing accountability systems that use and compare this data. Finally, they question the practice of reporting carbon performance in a separate corporate environmental, sustainability, or social report. On the one hand, this signals firms' awareness of the need to tackle climate change; on the other, these reports represent merely symbolic responses by firms, rather than substantive mitigation actions. A solution to this issue may be represented by Evangelinos, Nikolaou, and Filho's (2015) proposal. They believe information on the corporate response to climate change should be measured (a) in financial terms, being recorded into formal financial statements—balance sheet and income statement—and in (b) non-financial terms, being recorded into balance sheet. Bui and de Villiers (2017) distinguish between (a) short-term, past-oriented physical and monetarized accounts and ad-hoc collection, reporting, and use of carbon information and (b) long-term, future-oriented physical and monetarized accounts and recurring collection and use of carbon information in decision-making. The approach sub (a) characterizes reactive strategies toward climate change, while the approach sub (b) is typical of more proactive ones. Lovell and MacKenzie (2011) already recognized that, since carbon accountancy rules have a great influence on companies' profits and liabilities, there is an unsurprising conflict in the field of accountancy rules and standards. However, it is crucial to settle this conflict and make carbon accounting easier, by eliminating the current necessity of following a variety of national, international, and corporate guidelines. Indeed, the lack of international carbon accounting and reporting standards jeopardizes data sets comparison Stechemesser and Guenther (2012). In addition, Matisoff et al. (2013), in their study based on the contribution of the CDP to environmental reporting's transparency, state that the inconsistency of measurement techniques and standards make the assessment of environmental reporting difficult. They also believe the heterogeneity of reporting signals that carbon commensuration is not just a technical issue, but it has also social and political implications. One of the benefits of greater clarity in carbon accounting will be the fairer comparison of companies with their competitors (Lovell and MacKenzie 2011). In line with Bebbington and Larrinaga (2008) and Ascui and Lovell (2011), Stechemesser and Guenther (2012) clarify that, because of emissions trading, CO_2 allowances have to be included in annual financial statements. In particular, they highlight how carbon accounting involves both the valuation of assets—granted pollution rights—and the assessment of liabilities, since organizations have to purchase further permits to compensate for their emissions. In addition, Bui and de Villiers (2017) clarify that monetarized data include costs, revenue from selling carbon credits and estimated cost savings from new investments. In fact, despite carbon accounting tends to be connected with physical information, monetary assessment is also crucial for climate change information (Stechemesser and Guenther 2012). Moreover, Stechemesser and Guenther (2012) state the necessity to standardize GHG reporting as well as to audit the GHG emissions; indeed, this will enhance the credibility of disclosed information. This is reiterated by Linnenluecke et al. (2015), according to whom, the assurance of carbon emissions information increases the quality of disclosed information. Despite the need to standardize and provide guidance for the treatment of climate instruments in financial statements has been expressed since 2011, in 2015 Rathee and Kapil had to certify the absence of a formal accounting policy in countries across Europe, America, and Asia. This leads to great disparities in reporting, measurement, and disclosures by firms on climate instruments. Rathee and Kapil (2015) also argue that the consequent lack of credible information on climate-related economic activities creates difficulties for financial analysis, investment research, and comparability among firms willing to rise private capital. Moreover, the absence of common guidelines for climate accounting across countries and industries can constitute an obstacle toward the achievement of effective results to control carbon emissions (Rathee and Kapil 2015). However, it has to be considered that incorporating carbon accounting information in corporate financial reports is not the only way this information can be collected and presented.

5 Unresolved Questions: How to Account for Climate Changes? Toward Partially Mandatory Integrated Reports

There are radical alternatives such as online map-based formats to present site-specific emissions, allocations, and offsets data (Stechemesser and Guenther 2012). As regards, authors signal that the application of software for monitoring and reporting aims leads to lower costs, improved verification, and higher transparency. Birnik (2013) states that, in addition to the GHG Protocol, other standards can be adopted in the preparation, validation, and reporting of GHG inventories, such as the Climate Registry, ISO 14064, and the CDP. GHG inventories help managers quantify a company's climate impact, by knowing how much is emitted and from what sources. The table below provides Birnik's (2013) standards' collection (Table 3).

The author recognizes that the above-mentioned standards may lead to silo-based reporting structure. A way to avoid this risk is the development of integrated reporting practices, in order to present a comprehensive view of a firm's performance in a

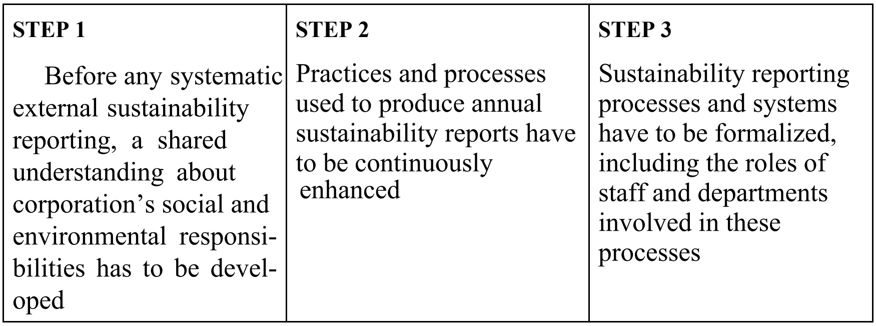
Table 3 Standards for the computation and reporting of corporate GHG inventories

GHG protocol	– It does not require an organization to report GHG information externally – It provides guidelines for: (a) the setting of organizational and operational boundaries for GHG inventories (b) consolidating inventories across multiple organizational levels (c) choosing a base year for emissions reporting; (d) setting GHG reduction targets – It does not provide technical details on how to compute GHG inventories
Climate registry's general reporting protocol	– It provides a more hands-on guide to the computation of a corporate GHG inventory than the GHG protocol – Contrary to GHG Protocol's global approach, it focuses only on North America – It keeps a verified registry of completed voluntary GHG inventories
ISO 14064	– It focuses on measuring, quantifying, and reducing GHGs – The first two components focus on the quantification, monitoring, and reporting of GHGs at organizational and project levels – The third component involves the validation and verification of greenhouse assertions. This component can be used to validate and verify GHG inventories computed under the GHG Protocol
CDP	– It does not prescribe how GHG inventories should be computed, but it requires that submitted reports be verified by third parties

Source Authors elaboration from Birnik (2013)

single reporting document. The main advantage of integrated reporting is that it considers sustainability as a constitutive part of firm's operations, rather than a separate topic to be addressed in an additional sustainability report (Birnik 2013). According to the author, adopting integrated reporting signals internally that sustainability and climate change are integral concerns for the company as a whole. Hahn and Kühnen (2013) reiterate that integrated reporting combines sustainability information together with financial information in a single report to convey a holistic picture of value creation over time. In this field, the GRI guidelines provide principles and standard disclosures, which firms can adopt to report their economic, environmental, and social performance and impacts (Linnenluecke et al. 2015). In fact, GRI can be considered the most comprehensive framework for sustainability reporting (Arena et al. 2015). Moreover, Hahn and Kühnen (2013) signal voluntary initiatives may be insufficient in achieving corporate accountability. In addition, companies' self-governance is inadequate because of a scarce level of transparency, incomplete and irrelevant information for stakeholders, and a lack of comparability of sustainability reports. Thus, a basic legal framework is necessary in order to promote a level of sophistication similar to mandatory financial reporting systems. On the one hand, Matisoff et al. (2013) add that mandatory disclosure programs will allow for more uniformity and standardization, enhancing comparability over time and across firms. On the other hand, it can be argued that by adhering to voluntary reporting and disclosure firms can distinguish themselves from competitors and gain recognition for going beyond compliance. Schaltegger et al. (2017) warn against the risk of limiting accounting and reporting innovations through rigid standardization. Evangelinos et al. (2015) enter the debate about voluntary versus mandatory reporting specifying that currently the majority of accounting methods record information on climate change on a voluntary basis. According to the authors, the informal nature of such accounting standards and the variable type of financial and non-financial information make the use of such models untrustworthy and complex. In line with Stechemesser and Guenther's (2012) discourse about the need to audit GHG emissions, Hahn and Kühnen (2013) signal the need of independent assurance to improve the sustainability reporting quality. Also, it has been found that perceived credibility increases when a sustainability report is assured by professional accountants. Bebbington and Thomson (2013) enter the debate about the relationship between traditional accounting and sustainability accounting arguing that DuPont analysis, a valuable management accounting tool, can be adapted to provide an integrated assessment of corporate environmental and economic performance. In particular, eco-efficiency can be disaggregated into its value components and drivers in order to provide guidance on the use of environmental and economic resources (Bebbington and Thomson 2013). This example shows that the challenge to be addressed is the development of pragmatic accounting tools for integrating sustainability targets with performance management. Siddiqui (2013)s analysis, despite devoted to the public sector in developing countries, may provide a further example of practices which can be developed by the private sector. Indeed, he argues that an inventory of natural assets using proper biodiversity accounting techniques is more objective than descriptive environmental disclosures that cannot be easily verified. The production of a pre-disaster inventory of those natural assets companies are accountable for can be conceived as an objective basis for responding to stakeholders' demand for clarity in the assessments of the impacts from natural disasters and climate change (Siddiqui 2013). One of the methods aiming at estimating the economic value of environmental assets is the restoration cost method. It is based on the economic benefits derived from an environmental attribute lost due to a natural disaster. According to Unerman and Chapman (2014), firms have to cover three steps in order to turn social and environmental reporting into a generally accepted practice within their organizations. This path is shown in Fig. 1.

Arena, Conte, and Melacini (2015) study how environmental accounting instruments can be linked to corporate reward systems for motivating firm's employees to adopt more environmentally friendly behaviors. Specifically, the environmental accounting instrument they consider is the environmental profit and loss account, which complements the traditional profit and loss account by including figurative



STEP 1	STEP 2	STEP 3
Before any systematic external sustainability reporting, a shared understanding about corporation's social and environmental responsibilities has to be developed	Practices and processes used to produce annual sustainability reports have to be continuously enhanced	Sustainability reporting processes and systems have to be formalized, including the roles of staff and departments involved in these processes

Fig. 1 How to embed social and environmental reporting into organizational general accepted practices. *Source* Personal elaboration from Unerman and Chapman (2014)

revenues and costs related to the environmental impact of business activities. This helps employees consider corporate environmental performance as part of their daily activities. For instance, the environmental impacts associated to GHG emissions can be transformed into monetary values by adopting the social cost of carbon (SCC) methodology. The SCC represents the damage caused by one additional ton of CO_2 or equivalent substances.

6 Final Remarks

In this chapter, I reviewed academic discourses about measurement, accounting, and reporting of sustainability-related data and information, with a particular focus on several environmental issues (carbon accounting, GHG emissions, and climate changes). This is a recurring theme among scholars and it is reiterated by Bebbington and Unerman (2018) who state that the technologies of accounting, target setting, and reporting are required in the context of the UN SDGs. Schaltegger et al. (2017) clarify why measurement systems and accounting are important for sustainable development. They argue that decision-makers and stakeholders can only act in favor of sustainability if they are well informed about unwelcome environmental and social impacts and if they can compare different investment and operational options on the basis of their sustainability impacts. Despite academic consensus about the necessity to account for social and environmental externalities by using both physical and monetary measures, scholars complain about the lack of standardization and international guidance. This is especially the case when considering carbon-trading implications for financial reporting. Efforts toward a more shared agreement on how to pursue objectives are therefore strongly encouraged. Fixing rules is something desirable but at the same time, fixing identical standards for all does not seem desirable, if we acknowledge that the higher is the distance from measuring something through the monetary lenses, the lower is the success in searching shared and harmonized standards. To this regard, it seems to be fair moving on using supranational legislative power (such as the last EU directive 95/2014) in order to pursue soft alignments across jurisdictions. This way pushes to higher accountability for sustainability.

From academics and practitioners, one would expect new empirical evidence, new framework, or proposal for enriching available arrows for sustainability under the awareness that one size does not fit all but "similar languages" are needed.

Literature

Andrew, J., & Cortese, C. (2011). Accounting for climate change and the self-regulation of carbon disclosures. In *Accounting Forum* (Vol. 35, No. 3, pp. 130–138). Taylor & Francis.

Arena, M., Conte, A., & Melacini, M. (2015). Linking environmental accounting to reward systems: The case of the environmental profit and loss account. *Journal of Cleaner Production, 108,* 625–636.

Ascui, F., & Lovell, H. (2011). As frames collide: Making sense of carbon accounting. *Accounting, Auditing & Accountability Journal, 24*(8), 978–999.

Atkinson, G. (2000). Measuring corporate sustainability. *Journal of Environmental Planning and Management, 43*(2), 235–252.

Bebbington, J., Brown, J., & Frame, B. (2007). Accounting technologies and sustainability assessment models. *Ecological Economics, 61*(2–3), 224–236.

Bebbington, J., & Larrinaga-Gonzalez, C. (2008). Carbon trading: Accounting and reporting issues. *European Accounting Review, 17*(4), 697–717.

Bebbington, J., & Larrinaga, C. (2014). Accounting and sustainable development: An exploration. *Accounting, Organizations and Society, 39*(6), 395–413.

Bebbington, J., & Unerman, J. (2018). Achieving the United Nations sustainable development goals: An enabling role for accounting research. *Accounting, Auditing & Accountability Journal, 31*(1), 2–24.

Bebbington, J., & Thomson, I. (2013). Sustainable development, management and accounting: Boundary crossing. *Management Accounting Research, 4*(24), 277–283.

Birkin, F. (1996). The ecological accountant: From the cogito to thinking like a mountain. *Critical Perspectives on Accounting, 7*(3), 231–257.

Birnik, A. (2013). Developing climate change strategy: A framework for managers. *Thunderbird International Business Review, 55*(6), 699–717.

Bowen, F., & Wittneben, B. (2011). Carbon accounting: Negotiating accuracy, consistency and certainty across organisational fields. *Accounting, Auditing & Accountability Journal, 24*(8), 1022–1036.

Bui, B., & De Villiers, C. (2017). Business strategies and management accounting in response to climate change risk exposure and regulatory uncertainty. *The British Accounting Review, 49*(1), 4–24.

Cuckston, T. (2013). Bringing tropical forest biodiversity conservation into financial accounting calculation. *Accounting, Auditing & Accountability Journal, 26*(5), 688–714.

de Villiers, C., & van Staden, C. (2011a). Shareholder requirements for compulsory environmental information in annual reports and on websites. *Australian Accounting Review, 21*(4), 317–326.

De Villiers, C., & Van Staden, C. J. (2011b). Where firms choose to disclose voluntary environmental information. *Journal of Accounting and Public Policy, 30*(6), 504–525.

Evangelinos, K., Nikolaou, I., & Leal Filho, W. (2015). The effects of climate change policy on the business community: A corporate environmental accounting perspective. *Corporate Social Responsibility and Environmental Management, 22*(5), 257–270.

Gray, R. (1992). Accounting and environmentalism: An exploration of the challenge of gently accounting for accountability, transparency and sustainability. *Accounting, Organizations and Society, 17*(5), 399–425.

Hahn, R., & Kühnen, M. (2013). Determinants of sustainability reporting: A review of results, trends, theory, and opportunities in an expanding field of research. *Journal of Cleaner Production, 59,* 5–21.

Johnson, L. T. (1993). Research on environmental reporting. *Accounting Horizons, 7*(3), 118.

Kolk, A., Levy, D., & Pinkse, J. (2008). Corporate responses in an emerging climate regime: The institutionalization and commensuration of carbon disclosure. *European Accounting Review, 17*(4), 719–745.

Linnenluecke, M. K., Birt, J., & Griffiths, A. (2015). The role of accounting in supporting adaptation to climate change. *Accounting & Finance, 55*(3), 607–625.

Llena, F., Moneva, J. M., & Hernandez, B. (2007). Environmental disclosures and compulsory accounting standards: The case of Spanish annual reports. *Business Strategy and the Environment, 16*(1), 50–63.

Lovell, H., & MacKenzie, D. (2011). Accounting for carbon: The role of accounting professional organisations in governing climate change. *Antipode, 43*(3), 704–730.

Matisoff, D. C., Noonan, D. S., & O'Brien, J. J. (2013). Convergence in environmental reporting: Assessing the Carbon Disclosure Project. *Business Strategy and the Environment, 22*(5), 285–305.

Milne, M. J. (1996). On sustainability; The environment and management accounting. *Management Accounting Research, 7*(1), 135–161.

Rathee, S., & Kapil, S. (2015). An investigation into recent trends and challenges of accounting 'climate instruments'. *Journal of Services Research, 15*(1), 7.

Schaltegger, S., Etxeberria, I. Á., & Ortas, E. (2017). Innovating corporate accounting and reporting for sustainability–attributes and challenges. *Sustainable Development, 25*(2), 113–122.

Siddiqui, J. (2013). Mainstreaming biodiversity accounting: Potential implications for a developing economy. *Accounting, Auditing & Accountability Journal, 26*(5), 779–805.

Solomon, A. (2000). Could corporate environmental reporting shadow financial reporting? In *Accounting Forum* (Vol. 24, No. 1, pp. 30–56). Elsevier Science Publishing Company, Inc.

Stechemesser, K., & Guenther, E. (2012). Carbon accounting: A systematic literature review. *Journal of Cleaner Production, 36,* 17–38.

Unerman, J., & Chapman, C. (2014). Academic contributions to enhancing accounting for sustainable development. *Accounting, Organizations and Society, 39*(6), 385–394.

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The Management Process Underpinning the Non-financial Reporting: A Case Study of a Listed Italian Company

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1 Introduction

In the current economy, several institutions, organizations, stakeholders, and societies are promoting a new idea of business, based on more ethical, social, and environmental-oriented (Cantino and Cortese 2017; Epstein 2018). Hence, community pressures and stakeholders' expectations have led to a rise in sustainability reporting and standards and guidelines regarding the disclosure of environmental, social, and governance information mainly provided on a voluntary basis (Salvioni and Bosetti 2014).

The preparation of stand-alone corporate non-financial reporting provided by large companies is increased from 70% in 2013 to 73% in 2015, and by the year 2017, about 77% of the companies produced reports regarding environmental, social, and governance (ESG) matters (KPMG 2017).

More recently, regulation has begun to be deemed necessary to address matters regarding the firm's legitimacy, transparency, comparability, and credibility of non-financial reporting procedures (Eccles and Serafeim 2015; Vitolla and Ramio 2018). The European Union has introduced the Directive 2014/95/EU to oblige companies

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in reporting non-financial information. This Directive has aimed to achieve similar levels of transparency across the EU states by allowing high levels of flexibility in taking into account the ESG dimensions and the diversity policies implemented by each company.

In Italy, the corresponding Legislative Decree regarding the disclosure of non-financial and diversity information has been implemented in 2016, and it operates from 1 January 2017.

Despite the growing interest in non-financial information disclosure, studies, examining the reasons for and the activities and managers-related disclosure choices, are still lacking (Bebbington and Larrinaga 2014; Gray 2010; Adams and Larrinaga 2007; Hopwood 2009; Moser and Martin 2012).

In fact, to date, most of the studies mainly focus on analyzing the content and structure of the non-financial reports by neglecting research topics such as the process underlying the realization and the development of non-financial disclosure (NFD). Therefore, this study aims to fill that gap by exploring the process steps that lead to the non-financial information disclosure.

Due to the explorative nature of this research, a qualitative approach, based on a case study (Eisenhardt and Graebner 2007; Miles et al. 2014), is adopted. The research focus is on a listed Italian company operating in the manufacturing sector. Semi-structured interviews (Qu and Dumay 2011) are used to highlight the activities and the stages characterizing the management processes and valorization practices of non-financial information.

Therefore, the research questions are the following: (RQ1) Which actors are involved in the process underpinning the non-financial information disclosure? (RQ2) Which are the phases characterizing the non-financial information disclosure process? And finally, (RQ3) what are the main critical areas meet during the development and the implementation of the non-financial disclosure process?

It is the first step of preliminary research of a more extensive project aiming to investigate the implementation practices of non-financial reporting. Therefore, this paper contributes to extending the literature regarding the non-financial reporting by providing a deeper description of the process characterizing the NFD implementation and the critical areas and the opportunities associated with the developing process of this report, after the European regulations, with a focus on the Italian context.

The paper is structured as follows. In section two, a brief literature review regarding studies on non-financial information reporting is shown. In section three, an overview of the Italian Legislative Decree n. 254/2016, adopted by the Italian Parliament, regarding the disclosure of non-financial and diversity information, is provided. Finally, the research methodology, findings, and conclusion sections are illustrated.

2 Literature Review

In recent years, the world has been profoundly transformed by events related to human, social, environmental, and economic issues which have increased society distrusts and social and economic inequality. Governments, public and private institutions, enterprises, and communities have highlighted the need to create a new vision of sustainable growth, intending to integrate economic efficiency and social growth (Bebbington et al. 2012; Epstein 2018; Ries et al. 2018).

This change has driven an increased awareness of corporate social responsibility (CSR) issues (Dahlsrud 2008; Del Baldo 2012; Okoye 2009), which has set up the foundation for a new role of business within the society in terms of social, ethical, and environmental orientation (Campbell 2007; Cantino and Cortese 2017; Costa and Torrecchia 2018; Idowu and Del Baldo 2019).

In this context, the need emerges to come over the traditional technical-accounting system in favor of accounting practices able to measure not only economic and financial performance but also the social complexity which typifies companies. As mentioned by Gray et al. (2000), the accounting system should be considered as a multidimensional tool able to take into account "social, political, and ethical" components to entirely satisfy the corporate information needs to face today's business environment. In fact, the traditional accounting system is not able to unveil company's strengths in terms of non-financial aspects such as intangible assets, qualitative key performance indicators (KPIs), and environmental, social, and governance (ESG) parameters (Perrini and Vurro 2010; Del Baldo and Nesheva-Kiosseva 2017; Bontis et al. 2018).

To date, a growing number of organizations are disclosing non-financial information in terms of ESG impacts together with the financial statement in order to create and promote social and economic value (Eccles and Krzus 2010; Cohen et al. 2015; Epstein 2018), to deal with stakeholders' and society needs (Higgins and Larrinaga 2014; Prado-Lorenzo et al. 2009; Sierra-Garcia et al. 2015), and to meet firm's cultural and reputational reasons (Camodeca and Almici 2017). More specifically, these dimensions concern the strategic goals related to environmental protection, social responsibility, treatment of employees, respect for human rights, anti-corruption, and diversity policies on company boards (in terms of age, gender, educational, and professional background).

Therefore, an integration perspective of the economic and financial dimension into the social, environmental, and governance ones allows organizations to provide a more well-informed picture of their corporate performance and better transparency and legitimacy with regard to society (Epstein 2018). This is even more important in listed companies, where the disclosure of non-financial information results to be positively correlated with the equity value of the company and to the growth of shareholder value and engagement (Wang and Li 2016; Godfrey et al. 2009).

Consequently, the adoption of both financial statement and NFD, benefits an entire organization, since it helps to improve the formulation, implementation, and review of business strategy; to strengthen the relationships with stakeholders and society through better communication of the achieved results; to improve the ability to identify and assess risks; and to improve the motivation and the ethical behavior of employees, managers, and stakeholders and thereby promoting organizational culture and learning (Cantino and Cortese 2017; Cho and Patten 2007; Salvioni and Bosetti 2014; Sierra-Garcia et al. 2018; Vitolla and Ramio 2018).

Additionally, authors such as Adams and Mc Nicholas (2007) and Dey (2007), focusing the attention on the effects that social and environmental disclosure may have on a firm, highlighted how non-financial information can produce firm's structural and procedural changes and modify companies' values and norms systems. They find out that companies, adopted social or environmental accounting, are more likely to conducting business operations in a more environmentally and socially responsible way.

Several studies have investigated the internal organizational and contextual factors influencing the adoption of complementary social and environmental reporting to the annual reports (Contrafatto 2011). Specifically, factors such as the role and the skills of organizational board members and employees (Adams and Mc Nicholas 2007; Bebbington et al. 2009), the reference society and governments' regulations (Georgakopoulos and Thomson 2008), corporate' culture (Bebbington et al. 2009), training courses (Baldarelli 2019), and firm's attitude in undertaken initiatives in accordance with competitor's behavior (Contrafatto 2014), stakeholders' requests and finally, organizational resources in terms of time, financial sources, knowledge (O'Dwyer and Unerman 2008) seem to influence the SER implementation and usage.

Over the years, the reporting of non-financial information has been mainly based on a voluntary approach, which has led to the development of many standards and guidelines (De Villiers et al. 2014; Salvioni and Bosetti 2014). However, there is still a "gray" area regarding the reasons promoting and pushing firms voluntarily in undertaking and implementing practices of social and environmental reporting (Contrafatto 2009; Georgakopoulos and Thomson 2008). Historically, the choice to produce and disclose non-financial information is, by Buhr (2002) and O'Dwyer (2002), related to the aims of increased the firm's legitimacy, to provide valuable and useful information, and finally, to satisfy firm's self-interested. Nevertheless, the firm's willingness to spread a favorable organizational culture and effective management of environmental and reputational risk is recognized as the main motivation able to influence a firm's non-financial disclosure (Contrafatto 2009).

Due to the social and economic pressures and the inadequacy of current reporting practices and lack of transparency, the EU Commission is intervened with the Directive 2014/95/EU to promote common rules for the NFD starting from 1 January 2017. More specifically, the EU Directive aims to improve the quality and the comparability of non-financial information and to decrease the lack of completeness, accuracy, and neutrality (Adams 2004), across Europe.

However, there is heterogeneity in the definitions of the underlying concept. The non-financial information disclosure is interchangeably called "non-financial information", "non-financial reporting", or a "non-financial statement" (European Union 2014), and these labels refer to the ability to report and explain to firm's stakeholders and the qualitative and quantitative aspects regarding ESG performance.

Additionally, according to Erkens et al. (2015), which reviewed about 53 accounting and non-accounting journals during the period 2009–2013, NFR mainly refers to a wide range of topics such as social and environmental disclosure, intellectual capital, integrated reporting, or CSR. As highlighted by Haller et al. (2017), there is not a shared meaning or a general definition of non-financial information. However, CSR represents the leading topic within the NFI literature in terms of the number of articles published during the timeframe 2009–2013 (Erkens et al. 2015).

Other studies focus on the mandatory and voluntary requirements influencing non-financial reporting. For instance, Wang et al. (2016), focusing on listed companies producing voluntary disclosure, find out a positive relationship between the quality of the NFI reporting and the companies' equity value. Additionally, the importance of voluntary disclosure of activities regarding economic, social, and environmental sustainability can generate confidence among stakeholders and the community (Carroll and Shabana 2010; Godfray et al. 2009).

However, several studies show that the voluntary reporting of non-financial information has been driven by manager's willingness to improve corporate reputation and legitimacy (Neville et al. 2005; Prado-Lorenzo et al. 2009; Sierra-García et al. 2015) with the aim to manage the stakeholders' perceptions following by negative changes regarding ESG issues (Cho and Patten 2007; Deegan 2002; Siano et al. 2017). In fact, the rise of reporting regarding ESG issues, based on a voluntary approach, with partial or total absence of regulatory provisions, can lead to the manager's tendency to disclose only the information able to persuade their stakeholders in an opportunistic perspective (Siano et al. 2017; Stacchezzini et al. 2016). Finally, one of the few contributions regarding the voluntary process characterizing the non-financial information disclosure is given by Comodeca and Almici (2017). The authors, with a focus on Italian listed companies, highlight the main role of integrated reporting in representing a starting point for a company's change. First and foremost, the transition starts with a new way of thinking about the enterprise understood as an integrated entity and not a stand-alone one. Second, the Decree stimulates to move from an implicit sustainability approach to an explicit one by stimulating the firm's vision to ESG issues. Finally, it fosters a new firm's role within society, such as a firm aiming to create economic and social value.

Numerous authors (Crowford and Williams 2010; Deegan 2002; Hąbek and Wolniak 2016; Ioannou and Serafeim 2017) state that the mandatory requirement leads to increase the quality and the number of the non-financial reports and to incentivize manager's behavior in disclosing firm's performance regarding both tangible and intangible dimensions.

Conversely, studies (Venturelli et al. 2018; Crawford and Williams 2010) based on the content of the mandatory and voluntary disclosures and focusing on listed companies, find out that countries that have adopted an ex-ante regulation seem to have a higher quality of disclosure than countries that have adopted the non-financial disclosure only after the introduction of the EU Directive 2014/95. In other words, the introduction of the mandatory regulation does not have the same positive influence on quality disclosure, especially about Italian and UK firms (Mio and Venturelli 2013).

Moreover, other studies show that the imposition of specific rules to disclose NFI might originate standardization and benchmarking practices (Brown et al. 2009; Hess 2007) or it could increase the number of reports but without being accompanied by qualitative improvements (Bebbington et al. 2012; Chauvey et al. 2015).

Therefore, the regulation alone cannot guarantee better levels of quality and reliability of reporting practices, but the assurance processes help to avoid the disclosure of adulterated non-financial information.

In particular, some authors (Coram et al. 2009; Fonseca 2010) sustain that the process of assurance can help the firm's managers in avoiding the negative stakeholders and investors perceptions' coming from greenwashing processes and in strengthening the retention processes of the shareholder. Moreover, the effects of an effective assurance process are considered positive as the positive effects on stakeholders, provided by the financial statements certification processes (Hay and Davis 2004; Moroney et al. 2012). Finally, the assurance process represents a valuable tool for managers to understand the level of compliance achieved (Bagnoli and Watts 2017).

Nevertheless, numerous EU countries (such as Italy, Spain, France, Portugal, Finland, Sweden, and Denmark) state that regulation is preferable to the voluntary disclosure, promoting many initiatives to promote a compulsory approach to the disclosure of non-financial information (Hibbitt and Collison 2004; Albareda et al. 2007).

Notwithstanding the growing interest in non-financial information disclosure, studies examining the internal organizational processes are still lacking (Adams and Larrinaga 2007; Bebbington and Larrinaga 2014; Camodeca and Almici 2017; Gray 2010; Hopwood 2009; Contrafatto 2014).

Following the same line of research, Contrafatto (2014) by focusing on a case study regarding an Italian multinational company operating in the energy sector sums up the steps through which social and environmental reporting (SER) has been institutionalized. In particular, the author identifies three phases involved in the development of the firm's SER. The first one concerns the ability to constructing a common meaning system around the idea of social and environmental responsibility by highlighting the critical role of human capital in making the social and environmental issues widespread among enterprises. The second phase is related to the "practices" aspect in terms of rules and routines to adopt to implement the SER as a "natural" consequences coming out from "what goes on inside organizations" (Bebbington et al. 2009). Finally, the last phase concerns the initiatives and the adoption of intra-organizational managerial structures and procedures that are undertaken to sustain SER practices.

Nevertheless, there is a need to increase studies regarding how companies' non-financial reporting is influenced by the code of ethics, the management of the company, and the stakeholders' relationships (Romolini et al. 2014). This is even more important if considering that such elements set up the foundation of a corporate approach to NFI issues.

Hence, this study, in order to provide a better understandings of organizational processes that lead to the non-financial information disclosure, aims to investigate: (i) the company's actors involved in the non-financial information disclosure process; (ii) the process phases characterizing the development and the implementation of the NFD; and finally, (iii) the main critical areas met during the development and the implementation of the NFD.

3 An Overview on the Italian Legislative Decree n. 254/2016

The non-financial information disclosure provided by Italian companies is due to the Legislative Decree n. 254/2016, adopted by the Italian Parliament, enacting Directive 2014/95/EU regarding the disclosure of non-financial and diversity information. It has set up the foundation for a comprehensive disclosure of the company, highlighting the importance of promoting a new perspective of doing business that is furthering social, environmental, and economic development (European Union 2014). Notably, the Decree applies to large public interest entities (PIEs), such as listed companies, banks, and insurance companies, which meet the following criteria. First, an average number of employees for the year of 500 units and a balance sheet total of more than €20 million or a net turnover of more than €40 million, are required (European Union 2014; Venturelli et al. 2018).

With regard to the "non-financial information" (European Union 2014), the Directive states that the report should include "information to the extent necessary for an understanding of the development, performance, position, and impact of corporate activity, relating to, as a minimum, environmental, social and employee matters, respect for human rights, and anti-corruption and bribery matters".

Notably, these issues should, at least, include a brief description of the undertaking business model, a description of the policies, the outcome of those policies, the principal risks related to those matters, and finally, non-financial key performance indicators relevant to the particular business (European Union 2014).

Additionally, the NFD has to pay particular attention to information about the energy consumption (whether renewable or not), the use of water, the emissions of greenhouse gases and pollutant emissions into the atmosphere, policies to ensure gender equality, and finally, actions aimed at struggling both active and passive corruptions.

About the "diversity information", the Directive recommends "a description of the diversity policy applied in relation to the undertaking's administrative, management and supervisory bodies with regard to aspects such as, for instance, age, gender, or educational and professional backgrounds, the objectives of that diversity policy, how it has been implemented, and the results in the reporting period. If no such policy is applied, the statement shall contain an explanation as to why this is the case" (European Union 2014).

Furthermore, the non-financial information needs to respect some principles such as relevance, clarity, and comparability (Article 3 of Legislative Decree n. 254/16). The selection of relevant information must be based on the principle of materiality. Each information should guarantee an understanding of business activity in terms of performance, outcomes, and impact. Moreover, each enterprise should provide a reasoned explanation for not pursuing policies concerning ESG issues. Finally, the non-financial report should allow comparing the information with current and previous years.

According to regulatory standards, companies have significant flexibility to disclose relevant information. Organizations could employ international, European, or national guidelines for the statements. The choice should reflect the set of performance indicators used to measure the organizational objectives and activities (Venturelli et al. 2018; La Torre et al. 2018a) to stimulate a corporate-integrated thinking (Adams 2017; Camilleri 2018) and to implement a multidimensional performance measuring system that takes into account tangible and intangible resources. The companies have to indicate which guidelines have applied to produce the report.

Some of these frameworks have been developed by the Global Reporting Initiative (GRI), the International Integrated Reporting Framework (IIRC), the United Nations of Global Compact (UNGC), the Organization for Economic Co-operation and Development (OECD), and the Sustainability Accounting Standards Boards (SASB), among others (Brown et al. 2009; Waddock 2008; Baldarelli et al. 2017). These frameworks differ from a flexibility point of view since some of them provide detailed methodologies to disclose non-financial information. Instead, others only offer a reporting path based on principles to respect. Furthermore, some are oriented to a wide range of stakeholders; while, others mainly focus on financial stakeholders and to highlight the firm's sustainability or value creation processes (Waddock 2008). However, the main difference is related to the principle of materiality and on the choice of non-financial information to be disclosed (La Torre et al. 2018a). The Italian Law allows publishing the non-financial statement as a part of the annual management report or as a separate report accessible from the firm's Web site.

4 Methodology

4.1 Research Method, Case Selection, Data Collection, and Analysis

The empirical research is based on the qualitative analysis of an in-depth case study. This methodology is recommended to understand complex phenomena (Eisenhardt 1989; Wolcott 1994; Cooper and Morgan 2008), such as that of the present study. Moreover, a qualitative field case study methodology was used in analyzing corporate social responsibility reporting (Laine et al. 2017) and social and environmental reporting (Contrafatto 2014). Finally, as suggested by Yin (1994), a single case study can be useful for exploratory purposes, if it is used as a "prelude case" or pilot case. In this sense, the present study can be considered the first phase of a broader exploratory survey, which may subsequently be realized, starting with the information gathered by the current investigation.

The case study was selected with the logic of a predetermined criterion of importance (Patton 1990); it represents an information-rich case whose study allows a better understanding of the questions under examination.

The selected case is a listed Italian Group (from now on called the Group) operating in the manufacturing sector, specifically in the business to business type of industry. Overall, it works in more than 100 countries all around the world. There are several reasons why this specific firm is well suited to the exploratory purpose of the research. First, though it was a well-established business, before 2017 (when the law 254/2016 came into force), the firm had never voluntarily made an NFD, addressing the social and environmental impact of its activities. Second, the process of collecting and assembling social and environmental data and information does not merely involve the headquarters but also extends to the various subsidiaries located in different countries. Thus, it is about a very challenging process, making this case a relevant setting for investigation. Such organizational complexity lends itself to the purposes of this study by placing the emphasis squarely on the question of the coordination of the operational activities needed for the NFD. Third, as stressed by recognized qualitative researchers (Bérdad and Gendron 2004 Laine et al. 2017; Major et al. 2018), firm's readiness to be examined was a significant factor in its being selected for the case study.

Data collection began in September 2018 and ended on February 2019. Before starting primary data gathering, secondary data were collected (such as consolidated financial statement 2017, sustainability report 2017, corporate journal, Web site, and online news) to familiarize with the business features and its NFD. These multiple sources of data were gathered so as to provide an effective triangulation, confirm emergent results, and avoid inconsistencies in the data (Miles and Huberman 1994) during the next step of data analysis. However, the key data source was represented by in-depth, semi-structured, and face-to-face interviews. Guided by a checklist, interviews were carried out in the company headquarters by four of the authors and involved the team entrusted with the entire process of reporting the NFD: the chief executive auditor and other team members. Since the present study is a pilot case, in this phase, it was deemed appropriate to interview only those directly involved in the entire process of reporting the NFD. The questions were aimed at collecting information regarding the following three sections: background of actors involved, aimed at assembling a professional profile for each team member (training, work experience, etc.); implementation process of NFD, to understand and analyze the different phases characterizing the NFD process; critical areas, in order to identify and understand the various problems which emerged during the development and implementation of the NFD process. During the meeting, the interviewees gave the authors supplementary documents regarding the business and the process of NFD.

The interviews, lasting about an hour, were recorded with the consent of the interviewees and subsequently transcribed verbatim for the subsequent process of analysis.

According to the method of qualitative research, the data analysis followed an iterative approach. Firstly, each researcher read the interview transcription independently and taking into account also the secondary data collected, so developing an individual case study summary before consultation with colleagues. Subsequently, all the authors pooled their thoughts in a series of brainstorming sessions and discussed the range of interpretations suggested by the findings. Attention was devoted to the actors mentioned by the interviewees as subjects involved in the process of non-financial reporting, the identification of different phases that characterized the process, and the criticalities encountered during the process. The constant alternation of individual and collective analysis enabled the research team to arrive at a collegial interpretation enriched by the insights of the different members.

In the findings paragraph, the organizational process underpinning the non-financial reporting is described by providing a detailed narrative of the dynamics through which the non-financial information was developed and implemented. In the narrative, reported quotations from interviews and secondary sources had been translated from Italian to English by the authors.

4.2 The Research Context

The Group is located in Central Italy and has operated for more than 40 years. It has grown gradually during this time, also thanks to a process of internationalization, leading, at the beginning of the millennium, to its being listed on the Italian Stock Exchange in the Star segment.

Today, the Group operates through different plants and businesses worldwide, working in various related business sectors of industry. The broad range of activities produces a significant economic, environmental, and social impact on multiple stakeholders. Specifically, the production processes typical of the industrial sector pose a series of questions concerning environmental impacts, such as those relating to energy consumption, materials, the disposal and processing of waste, and the management of water resources.

Furthermore, given the organizational complexity, with some thousands of employees, it places human resources management high on the organizational agenda: staff training, security in the workplace, incentive projects, and staff remuneration. Additionally, the company's close ties with the surrounding area emerge as relevant, taking an active role in social, cultural, artistic, and sporting activities. Thanks to its effort in promoting and supporting several initiatives in the local context and abroad, the business is widely recognized as a pillar by the social and economic communities. Despite this, the company did not develop any voluntary CSR reporting before 2017. The firm has been pushed to collect and communicate non-financial data and information by the law to fulfill the regulatory obligation introduced by the Legislative Decree n. 254/2016, adopted by the Italian Parliament, enacting Directive 2014/95/EU.

5 Findings

As mentioned above, the business, which was the focus for the case study, had never implemented an NFD before Law 254/2016 came into force. Although a well-structured and well-organized business, the Group found itself in the position of having, in a short space of time, to fulfill its legal obligations in a way that required the careful planning and implementation of numerous procedures preliminary to the reporting of the NFD. It was not the easiest of starts:

> The preparation of the Group's first Sustainability Report was the result of an incredibly intense project, on which the team worked almost full-time for over six months. It was like assembling a huge puzzle whose pieces were scattered all over the company departments. (Chief Audit Executive, Corporate Journal/2018)

Responsibility for coordinating and carrying out the various procedures connected to the implementation of the NFD was assigned to the internal audit area. The team was made up of specialist professionals who had all been trained in areas closely linked to the world of auditing and management control and had an average working experience of four years with the firm. Furthermore, the team worked in close contact with the marketing and communication department, which was able to bring a mixture of know-how and skills to the task and with an outside consultant who supported the development of NFD right from the outset.

The process of implementing the NFD involved, directly and indirectly, not only all the corporate areas at headquarters but also those of the entire Group's more than 30 subsidiaries.

The initial steps were taken amid considerable uncertainty, especially as regards content and form. It was immediately apparent that the process would be complex and far-reaching, largely due to the number, diversity, and geographical distance separating the individuals who needed to be involved, as well as the sheer quantity of data to be collected, managed, and processed at both the headquarters and Group level.

Aware of these complexities, the team deemed it advisable to engage a consulting firm to support it in carrying out the work. Together, they decided on the methodology to adopt and settled for the GRI standards. At the same time, the team was trained so as to learn the methodology selected and gain a full understanding of the rationale which would govern their work. Once the necessary skills had been acquired, the process of sharing with the whole Group got underway. Crucial to this stage was the "finance meeting" at which the team met all the CFOs from the subsidiaries and briefed them on the various questions:

> The finance meeting proved decisive. It's an appointment that the Group has scheduled in recent years, organized by the Finance area, held every two years in Italy, to which the CFOs of all subsidiaries attended […]. On that occasion, we had half a day to brief all the CFOs on the legislation, sustainability and related matters […] and it was a real piece of luck since it was essential to communicate with them seeing we already knew that we would have to involve all the Group's foreign branches at a time when the CFOs were all concentrating on reporting the financial statement. (Chief Audit Executive)

The next step was to create a benchmark to identify the companies with experience of NFD, in the same sector, and other fields, to learn the best practices and adapt them to the specific characteristics of the business. Thanks to this analysis, it was possible firstly to carry out a mapping of stakeholders, such as: trade associations, shareholders and investors, customers, financial community, employees and their families, suppliers and trade partners, sector-specific media and magazines, public administration, government entities, universities and research centers, and local communities.

After mapping the stakeholders, it was time to identify the critical sustainability issues for the Group employing a materiality analysis based on analyzing the context of reference, the leading competitors, further companies operating in the sector, and documents of various kinds relating to the business:

> The next step was the materiality analysis which meant deciding on the topics to be included in the sustainability report [...] because, unlike the "finance" statement which has a structure laid down in the Civil Code, this needs to be constructed from scratch because there is no set format [...] The GRI standard indeed provides a number of issues, but it only gives the scantiest indication of what you have to report and then it's up to you to flesh it out with relevant data and give it a form and structure which is linear and logical. That is why, once we had identified the issues, we involved the department heads managers who, for various reasons, might have had experience of these matters and hence be a source of useful information [...] (Chief Audit Executive)

The matrix of materiality was developed, taking into account two dimensions: the importance of the material issues for the Group and for its stakeholders. This assessment was carried out through an abbreviated form of stakeholder engagement since the time available for implementing the NFD was extremely limited:

> [...] The first year we carried out a form of stakeholder engagement with our managers, telling them: think things through as if you were an outsider, be critical – obviously, because in September it was impossible to organize stakeholder engagement with all the interested parties [...], but this year we're doing it again and involving all the stakeholders. (Chief Audit Executive)

The prioritization stage takes into account the economic, environmental, social and compliance impact, positive and negative, generated by the Group, as well as the expectations of the principal stakeholders and their requirements in terms of decision making:

> Issues relating to the environment, human rights or the management of human resources, relations with the local area as well as the future of technology, are all aspects already present in the day-to-day running of the company. What's new is that the Sustainability Report has brought these issues to the attention of stakeholders in an organic fashion, highlighting specific aspects, related risks, prospects, and future strategies that the Group has chosen or is beginning to consider. (Chief Audit Executive, Corporate Journal/2018)

This procedure, submitted to the company's Control and Risk Committee for approval, enabled the business to identify the materiality matrix where the relevance of the ESG issues both for the Group and for the stakeholders emerges. Then, according to the matrix of materiality, data and information were collected from various departments and subsidiaries. Several problems/critical areas emerged at this stage are mainly to do with collecting and linking up information.

The first was due to the inherent complexity of the process, which required the involvement of the whole organization that, in this specific case, comprised more than 30 legal entities:

> Involving the people by getting them to actively participate proved one of the biggest difficulties of the whole process (Chief Audit Executive, Corporate Journal/2018)

The second problem area was the difficulty of finding a language which would enable the various corporate departments to exchange information (i.e., research and development, human resources, service, technical, quality control, safety, sales, accounting, and administration):

> […] we interviewed some areas which use a technical language that is highly specific, and it was difficult to communicate and synthesize information. (Chief Audit Executive)
>
> […] sometimes they hand you a bulleted list, and you have to interpret and develop it (Team member)
>
> […] other times, they give you a screed, and in both cases, it was difficult to produce a synthesis that wasn't either too sparse or too detailed. (Team member)

The third was the difficulty of collecting and summarizing both quantitative and qualitative information in a logical, homogeneous, and organic manner:

> […] The first year, collecting data was a major problem: everyone delivered information which had been processed in different ways […] because the means of calculating differed from one country to another, or else one country had a different system from another, so the data weren't all homogeneous. (Team member)

The fourth problem area was the need to collect quantitative data that were objective and reliable. More specifically, the difficulty arose from the need to show that all the data in the report were supported by documentary evidence:

> […] You need to account for practically everything, which means having the data for waste, electricity for the current year and the previous one, […] and with some of the companies being small, it's complicated enough to get hold of the bills. (Team member)
>
> […] The data need to be revised, so we can't only trust what the various subsidiaries supply us. We must have concrete evidence for all this data […], and this is a further complication because it means you have to check out every single figure. (Team member)

Once the methodological procedure had been completed and the data collected and processed, the internal audit department drafts the NFD with the assistance of the marketing department and the consulting company. The role of the marketing department was especially important. It was at once apparent that the sort of communication attempted in the NFD was different from the communication of economic and financial reports, in terms of both content and graphics. The marketing director, in agreement with top management, felt that it was appropriate to give the sustainability report a new layout. The significance of the report was not merely economic but also environmental and social and hence demanded changes to the layout (in terms of color, design, format) that would reflect its content. The restyling was intending to ensure effective communication with stakeholders.

> […] sustainability needed to be communicated in a different way from the canonical financial report […]a very different form of communication which takes the individual as its subject. (Chief Audit Executive)

The final draft of the NFD was submitted to Control and Risk Committee for examination and then to the Board of Directors for approval, together with the consolidated financial statement. The report then followed the legal procedure governing publication and filing.

The NFD was shared with the internal stakeholders, adopting various forms of communication including multimedia boards, posters, and giant blow-ups in public areas, social media (Facebook, Twitter, Instagram, and Linkedin), dedicated newsletters shared on the company's intranet, paper documentation available in designated areas, etc. In this sense, stakeholder engagement was perceived as an important opportunity to encounter the stakeholders to explain and share information regarding the economic, social, and environmental impact of the company's activities. A further means of dissemination took the form of a new section to the Group's official journal, called "corporate journal," and founded years ago with the aim of reporting on the corporate world for the benefit of internal and external stakeholders. The new section, explicitly devoted to the NFD and entitled "sustainability", contains a series of information about the NFD, the main findings, and the role and meaning of sustainability in terms of the Group's strategic vision.

The process of preparing the first NFD generated several positive effects on the business. Firstly, it triggered a learning process, which has resulted in a fuller awareness of some issues highlighted in the report. The NFD has proved to be a source of new knowledge for the Group. Data were emerged concerning the company's activities, which had never been analyzed before. The NFD has demonstrated its value in highlighting the contribution of the various corporate management areas such as production (i.e., reducing environmental impact, improving safety in the workplace, attending to the quality and safety of the products), human resource management (career structure, training policies), and besides the financial aspects:

> Starting from a blank page, we created an image of the group hitherto largely unknown to most people, talking about the Group from various angles, often different from the normal ones based mostly on economic and financial information. The main aim of the regulations that have made it mandatory for some companies, including the Group, to publish non-financial information and the consequent Sustainability Report, is to put the companies in front of a mirror so that they can see themselves from a new perspective. (Chief Audit Executive, Corporate Journal/2018)

In particular, as regards the management of human resources, two features emerged, which even took the management by surprise. The first was the low level of staff turnover, with many in the company's employed for over ten years. The second was the staff training schemes which amounted to about 100 thousand hours per year:

> […] Evidence that the Group is a good place to work, people around taking photos, the "best employee" is an award we make every year […] what better proof to show those outside that people come here to work and stay? (Chief Audit Executive)

And again:

> We were staggered to learn that the Group timetables 100 thousand hours a year for training. Everyone who read about that, from top management downwards, was stunned at the amount. (Chief Audit Executive)

Another aspect, which had never previously been pointed out in any other company report, was the Group's close ties with the territory in which it operates. They are relationships that affect, on the one hand, the supply chain—so much so that a good 80% of supplies come from local firms—and on the other, the local community—many social, cultural, and sporting activities are regularly sponsored by the Group.

Secondly, the implementation of the first NFD, as part of a policy of continuous improvement, seems to have triggered a process of change involving the Group's corporate activities right across the board.

The first of the changes—considered the cornerstone of the whole process—has produced the improvement of data collection among the subsidiaries through a standardized, shared, and centralized computer system serving as a common repository for all the Group's subsidiaries that have enabled the Group to optimize the communication and data collection process, now standardized and homogeneous, with the result that it is easier to manage the timing of a process that overlaps with the reporting of the consolidated statement. For example, the Human Resources office has implemented an ad hoc function within the information system capable of accurately registering staff training hours.

Furthermore, it emerges that in the wake of the publication of the first NFD, corporate management was stimulated to examine data that had never previously been considered. Management's involvement to monitor data and carry out an in-depth study has led to the introduction of a series of new procedures:

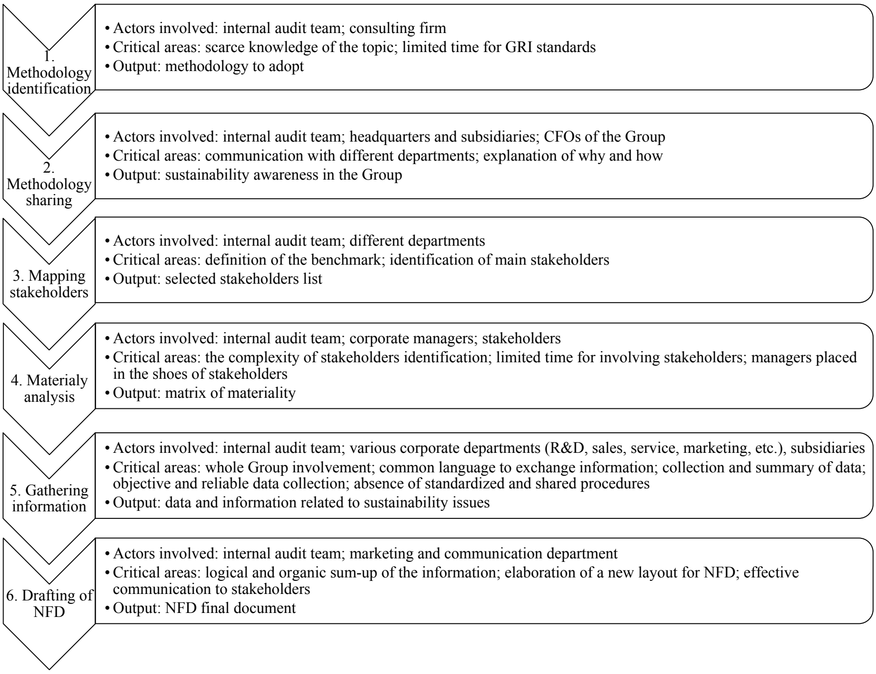
> […] The sustainability report has inspired other small procedures. Some of the data were further analyzed […], that hadn't happened before because they were concealed elements that hadn't emerged elsewhere. For example, corporate management has requested an analysis of service supplier costs […] by category, an aspect that had never been analyzed before now. (Team member)

Thirdly, another highlighted change concerns the organizational structure of the internal audit area. 2018 saw the introduction of the "compliance specialist," an internal resource responsible for monitoring and guaranteeing correct procedures and making sure that legally binding regulations are strictly adhered to. The Chief Audit Executive maintains that this new role was decisive in ensuring the smooth running of the entire NFD implementation process.

Finally, two new documents stem from the publication of the first NFD: sustainability policy and NFD implementation procedure. The first undertakes to explain the fundamental principles underlying the Group's approach to sustainability. The second sets out to describe the procedures leading to the processing, approval, and publication of the NFD to ensuring that the process, accurately monitored and precisely timed, can be repeated in the future.

6 Discussion and Conclusions

This paper investigates how a listed Italian company has developed its non-financial reporting following the Italian Legislative Decree n. 254/2016, answering the calls



1. Methodology identification

- Actors involved: internal audit team; consulting firm
- Critical areas: scarce knowledge of the topic; limited time for GRI standards
- Output: methodology to adopt

2. Methodology sharing

- Actors involved: internal audit team; headquarters and subsidiaries; CFOs of the Group
- Critical areas: communication with different departments; explanation of why and how
- Output: sustainability awareness in the Group

3. Mapping stakeholders

- Actors involved: internal audit team; different departments
- Critical areas: definition of the benchmark; identification of main stakeholders
- Output: selected stakeholders list

4. Materialy analysis

- Actors involved: internal audit team; corporate managers; stakeholders
- Critical areas: the complexity of stakeholders identification; limited time for involving stakeholders; managers placed in the shoes of stakeholders
- Output: matrix of materiality

5. Gathering information

- Actors involved: internal audit team; various corporate departments (R&D, sales, service, marketing, etc.), subsidiaries
- Critical areas: whole Group involvement; common language to exchange information; collection and summary of data; objective and reliable data collection; absence of standardized and shared procedures
- Output: data and information related to sustainability issues

6. Drafting of NFD

- Actors involved: internal audit team; marketing and communication department
- Critical areas: logical and organic sum-up of the information; elaboration of a new layout for NFD; effective communication to stakeholders
- Output: NFD final document

Fig. 1 Non-financial information disclosure process

of several scholars for further research into the internal organizational processes that lead to the reporting of the NFD (Adams and Larrinaga 2007; Hopwood 2009; Gray 2010; Bebbington and Larrinaga 2014).

Findings from interviews with both the Chief Executive Auditor and other team members and the analysis of complementary documents allowed us to answer the research questions.

Figure 1 illustrates the main results of the analysis: the phases of the process, the key actors, and critical issues. Figure 1 also shows the individual phases' outcomes progressively achieved during the process.

The complexity of the whole process is evident, and it was a great challenge for the company to accomplish it in very few months. The connections and interactions among a wide range of actors were crucial in reaching the goal. Thus, referring to the RQ1, a variety of subjects involved in different periods and places and with diverse roles and logics emerged. A heterogeneous network of local and global actors was constructed, starting from the team located at headquarters, extending to different departments and the various subsidiaries located in different countries. The network also included an external subject that is the consulting firm. Connections and interactions among actors were aimed to fulfill a twofold purpose. On the one hand, it was necessary involving internal actors to collect data essential to the non-financial information disclosure. On the other hand, the inclusion of a consulting firm and co-operation with the marketing and communication department was crucial to steer the process, acquiring knowledge and competences about what NFD is and how NFD can be developed and communicated to stakeholders. Even if the stakeholders' engagement in developing the first NFD was indirect because of the limited time available, the experience gained allowed the business to decide how stakeholders should be involved in the future.

Concerning the RQ2, sequential phases are synthesized in Fig. 1. The process that led to the first NFD had the purpose of not only producing the required report but also introducing into the company, a new methodology and numerous procedures preliminary to the reporting of the NFD.

The first two phases of the process were therefore designed to put in place the process itself, by identifying the methodology to adopt (methodology identification) and then sharing it with the internal interlocutors so as to ensure a common vision regarding how and why the NFD would be produced (methodology sharing). These phases may, therefore, be considered as distinctive of the first NFD process and will probably not be repeated for subsequent annual reports. The four later phases are the ones that led to the concrete application of the methodology and the publication of the first report. These phases were aimed at addressing the essential points required of the NFD: mapping stakeholders, materiality analysis, prioritization of sustainability issues, and finally reporting the NFD document. Unlike the initial two, these four later phases will be repeated in subsequent years and improved to create standardized procedures for data collection.

Concerning RQ3, findings show that several critical issues arose. Unlike the economic-financial disclosure, which followed well-established procedures, there were no consolidated internal procedures and guidelines for producing the NFD.

Additionally, there were only a few months to the statutory deadline. Every phase of the process pointed up one or more critical issues (Fig. 1), some of which were easily resolvable while others were less. The support of the consultancy firm and the benchmarking analysis were decisive in easily overcoming the difficulties stemming from the lack of specific skills and know-how and ensuring that the process got underway successfully. The problem areas were those connected with the gathering, processing, and summarizing of data. The truly major hurdle to overcome was the need to involve the whole organization in obtaining reliable data in the absence both of shared and standardized procedures for data collection and of a common language for the exchange of information. On the other hand, these difficulties proved an incentive to create new processes and new standardized procedures to enable better, more efficient data collection.

Indeed, even though it was not among our research questions, findings showed several positive effects resulting from the process. The need to fulfill the legal requirements increased awareness of the business and of how the company relates to its main stakeholders. It also favored the start of a process of change involving the whole Group in terms of new procedures and organizational improvements. In other words, the company was able to turn a challenge into an opportunity.

This study contributes to the non-financial information disclosure literature, providing insights both on a theoretical and practical level.

From a theoretical point of view, our paper enriches existing knowledge about the mandatory adoption of the NFD by providing field-based case study evidence collected from a listed Italian company. Previous research has investigated several issues related to mandatory NFD, such as the quality, the number of the non-financial reports (Crowford and Williams 2010; Deegan 2002; Hąbek and Wolniak 2016; Ioannou and Serafeim 2017), and the content of the mandatory disclosures of listed companies (Venturelli et al. 2018; Crawford and Williams 2010). This paper is one of the first attempts to perform a qualitative analysis of the internal organizational processes that lead to NFD by presenting an emblematic case of how a firm that had never voluntarily made an NFD, addressing social and environmental issues following the introduction of the Italian regulatory standard n. 254/2016. This qualitative study moves forward the current knowledge shedding light on the management process underpinning the mandatory non-financial reporting in terms of actors involved, phases of the process, and criticalities encountered. Empirical evidence allowed us to point out the complexity of the process by which new accounting practices to support NFD are constructed and implemented, the wide range of local/global and internal/external subjects involved, and how the company tried to overcome difficulties due to the lack of previous experiences on NFD. Our findings also show that, even if the reason behind the introduction of NFD was merely due to the Italian governments' regulations, its development and implementation can generate a better top management's mindfulness about the company, the commitment toward its stakeholders (e.g., employees, suppliers), and the corporate social responsibility toward the territory and local communities.

From a practical point of view, our study provides useful insights into the difficulties and positive outcomes of the mandatory adoption of the NFD by firms. Collecting data within complex organizations is always a difficult process even when NFD is voluntarily adopted (Camodeca and Almici 2017; Laine et al. 2017). However, voluntary implementation is based on the partial or total absence of regulatory requirements and allows managers to choose what to disclose and how sometimes adopting opportunistic approaches toward stakeholders (Siano et al. 2017; Stacchezzini et al. 2016). Conversely, the mandatory adoption is designed to guarantee a neutral approach to stakeholders, requiring specific data that have to be produced and communicated in a manner that is reliable and complete. Furthermore, the analyzed case supports the belief that the mandatory adoption of the NFD is not merely a question of a firm's performing its legal duty. Clever companies may be able to transform an obligation into an opportunity, paving the way for beneficial change. From this perspective, the Italian Decree should also stimulate firms never engaged in ESG issues to acquire more awareness about how an organization demonstrates sustainability and creates economic, social, and environmental value.

It should be recognized that the research presents some limitations. The main is attributable to the analysis of only one case. It may be considered a pilot case, and it is hoped that it will be followed by further empirical studies focusing on the internal organizational processes that lead to the reporting of the NFD in order to make useful comparisons. For instance, following the same line of research of Contrafatto (2014), the dynamics through which NFD will evolve, from its first introduction to the phase of institutionalization, could be investigated. Furthermore, it would be valuable to extend the analysis involving multiple case studies in a similar context to identify similarities or differences between cases. Specifically, we focused our analysis on an Italian company that did not develop any kind of voluntary CSR reporting before the regulatory obligation introduced by the Legislative Decree n. 254/2016. Thus, it could be interesting to analyze several companies that had never developed any voluntary non-financial reporting before the regulatory obligation in order to ascertain patterns of convergence or divergences between cases. Moreover, future research could investigate companies, which had traditionally longer standing expertise in voluntary CSR aiming to understand whether and how the entry into force of the new legislation changed their organizational process underpinning the non-financial reporting.

Additionally, multiple case studies comparing companies characterized by these different approaches to non-financial reporting could be beneficial to gain more comprehensive knowledge on dynamics, changes, and effects produced by the regulatory obligation on non-financial disclosure. Furthermore, longitudinal research should investigate if the introduction of a regulatory obligation may (or not) have positive effects on companies and producing changes in terms of organizations' behaviors and corporate social responsibility. Finally, further research may also investigate the companies' practices in different countries to highlight how different normative may influence the management process underpinning non-financial reporting.

Literature

Adams, C. A. (2004). The ethical, social and environmental reporting-performance portrayal gap. *Accounting, Auditing & Accountability Journal, 17*(5), 731–757.

Adams, C. (2017). *Understanding integrated reporting: The concise guide to integrated thinking and the future of corporate reporting*. Routledge.

Adams, C. A., & Larrinaga-González, C. (2007). Engaging with organisations in pursuit of improved sustainability accounting and performance. *Accounting, Auditing & Accountability Journal, 20*(3), 333–355.

Adams, C., & Mc Nicholas, P. (2007). Making a difference: Sustainability reporting, accountability and organizational change. *Accounting, Auditing and Accountability Journal, 20*(3), 382–402.

Albareda, L., Lozano, J. M., & Ysa, T. (2007). Public policies on corporate social responsibility: The role of governments in Europe. *Journal of Business Ethics, 74*(4), 391–407.

Bagnoli, M., & Watts, S. G. (2017). Voluntary assurance of voluntary CSR disclosure. *Journal of Economics & Management Strategy, 26*(1), 205–230.

Baldarelli, M. G. (2019). CSR training and financial statement "Disclosure": The case of Italy. In *Accounting, financial statements and reporting*. Intech Open.

Baldarelli, M. G., Del Baldo, M., & Nesheva-Kiosseva, N. (2017). Some tools and standards for reporting. In *Environmental accounting and reporting* (pp. 161–276). Cham: Springer.

Bebbington, J., Higgins, C., & Frame, B. (2009). Initiating sustainable development reporting: Evidence from New Zealand. *Accounting, Auditing & Accountability Journal, 22*(4), 588–625.

Bebbington, J., Kirk, E. A., & Larrinaga, C. (2012). The production of normativity: A comparison of reporting regimes in Spain and the UK. *Accounting, Organizations and Society, 37*(2), 78–94.

Bebbington, J., & Larrinaga, C. (2014). Accounting and sustainable development: An exploration. *Accounting, Organizations and Society, 39*(6), 395–413.

Bérdad, J., & Gendron, Y. (2004). Qualitative research on accounting. Some thoughts on what occurs behind the scenes. In C. Humphrey, & B. Lee (Eds.), *The real life guide to accounting research: A behind the scenes view of using qualitative research methods* (pp. 191–206). Amsterdam: Elsevier.

Bontis, N., Ciambotti, M., Palazzi, F., & Sgro, F. (2018). Intellectual capital and financial performance in social cooperative enterprises. *Journal of Intellectual Capital, 19*(4), 712–731.

Brown, H. S., de Jong, M., & Levy, D. L. (2009). Building institutions based on information disclosure: Lessons from GRI's sustainability reporting. *Journal of Cleaner Production, 17*(6), 571–580.

Buhr, N. (2002). A structuration view on the initiation of environmental reports. *Critical Perspectives on Accounting, 13*(1), 17–38.

Camilleri, M. A. (2018). Theoretical insights on integrated reporting: The inclusion of non-financial capitals in corporate disclosures. *Corporate Communications: An International Journal, 23*(4), 567–581.

Camodeca, R., & Almici, A. (2017). Implementing integrated reporting: Case studies from the Italian listed companies. *Accounting and Finance Research, 6*(2), 121–135.

Campbell, J. L. (2007). Why would corporations behave in socially responsible ways? An institutional theory of corporate social responsibility. *Academy of Management Review, 32*(3), 946–967.

Cantino, V., & Cortese, D. (2017). Integrated report system in Italian Law. *Symphonya. Emerging Issues in Management, 1,* 83–94.

Carroll, A. B., & Shabana, K. M. (2010). The business case for corporate social responsibility: A review of concepts, research and practice. *International Journal of Management Reviews, 12*(1), 85–105.

Chauvey, J. N., Giordano-Spring, S., Cho, C. H., & Patten, D. M. (2015). The normativity and legitimacy of CSR disclosure: Evidence from France. *Journal of Business Ethics, 130*(4), 789–803.

Cho, C. H., & Patten, D. M. (2007). The role of environmental disclosures as tools of legitimacy: A research note. *Accounting, Organizations and Society, 32,* 639–647.

Cohen, R., Holder-Webb, L., & Zamora, V. L. (2015). Nonfinancial information preferences of professional investors. *Behavioral Research in Accounting: Fall, 27*(2), 127–153.

Contrafatto, M. (2009). *Il social environmental reporting e le sue motivazioni. Teoria, analisi empirica e prospettive* (Vol. 10). Giuffrè editore.

Contrafatto, M. (2011). Social and environmental accounting and engagement research: Reflections on the state of the art and new research avenues. *Economia Aziendale Online, 2*(3), 273–289.

Contrafatto, M. (2014). The institutionalization of social and environmental reporting: An Italian narrative. *Accounting, Organizations and Society, 39*(6), 414–432.

Cooper, D. J., & Morgan, W. (2008). Case study research in accounting. *Accounting Horizons, 22*(2), 159–178.

Coram, P. J., Monroe, G. S., & Woodliff, D. R. (2009). The value of assurance on voluntary nonfinancial disclosure: An experimental evaluation. *Auditing: A Journal of Practice & Theory, 28*(1), 137–151.

Costa, M., & Torrecchia, P. (2018). The concept of value for CSR: A debate drawn from italian classical accounting. *Corporate Social Responsibility and Environmental Management, 25*(2), 113–123.

Crawford, E. P., & Williams, C. C. (2010). Should corporate social reporting be voluntary or mandatory? Evidence from the banking sector in France and the United States. *Corporate Governance, 10,* 512–526.

Dahlsrud, A. (2008). How corporate social responsibility is defined: An analysis of 37 definitions. *Corporate Social Responsibility and Environmental Management, 15*(1), 1–13.

De Villiers, C., Rinaldi, L., & Unerman, J. (2014). Integrated Reporting: Insights, gaps and an agenda for future research. *Accounting, Auditing & Accountability Journal, 27*(7), 1042–1067.

Deegan, C. (2002). Introduction: The legitimising effect of social and environmental disclosures–a theoretical foundation. *Accounting, Auditing & Accountability Journal, 15*(3), 282–311.

Del Baldo, M. (2012). Corporate social responsibility and corporate governance in Italian SMEs: The experience of some "spirited businesses". *Journal of Management and Governance, 16*(1), 1–36.

Del Baldo, M., & Nesheva-Kiosseva, N. (2017). Toward the future perspectives of business integrated measurement and communication. In *Environmental Accounting and Reporting* (pp. 91–159). Cham: Springer.

Dey, C. (2007). Social accounting at Traidcraft plc: A struggle for the meaning of fair trade. *Accounting, Auditing and Accountability Journal, 20,* 423–445.

Eccles, R. G., & Krzus, M. P. (2010). *One report: Integrating reporting for a sustainable strategy*. Hoboken: Wiley.

Eccles, R. G., & Serafeim, G. (2015). *Corporate and integrated reporting* (p. 156). Corporate Stewardship: Achieving Sustainable Effectiveness.

Eisenhardt, K. M. (1989). Agency theory: An assessment and review. *Academy of Management Review, 14*(1), 57–74.

Eisenhardt, K. M., & Graebner, M. E. (2007). Theory building from cases: Opportunities and challenges. *Academy of Management Journal, 50*(1), 25–32.

Epstein, M. J. (2018). *Making sustainability work: Best practices in managing and measuring corporate social, environmental and economic impacts*. Routledge.

Erkens, M., Paugam, L., & Stolowy, H. (2015). Non-financial information: State of the art and research perspectives based on a bibliometric study. *Comptabilité-Contrôle-Audit, 21*(3), 15–92.

Fonseca, A. (2010). How credible are mining corporations' sustainability reports? A critical analysis of external assurance under the requirements of the international council on mining and metals. *Corporate Social Responsibility and Environmental Management, 17*(6), 355–370.

Fonseca, A., McAllister, M. L., & Fitzpatrick, P. (2014). Sustainability reporting among mining corporations: A constructive critique of the GRI approach. *Journal of Cleaner Production, 84,* 70–83.

Georgakopoulos, G., & Thomson, I. (2008). Social reporting, engagements, controversies and conflict in an arena context. *Accounting, Auditing & Accountability Journal, 21*(8), 1116–1143.

Godfrey, P. C., Merrill, C. B., & Hansen, J. M. (2009). The relationship between corporate social responsibility and shareholder value: An empirical test of the risk management hypothesis. *Strategic Management Journal, 30*(4), 425–445.

Gray, R. (2010). Is accounting for sustainability actually accounting for sustainability… and how would we know? An exploration of narratives of organisations and the planet. *Accounting, Organizations and Society, 35*(1), 47–62.

Gray, R., Owen, D., & Adams, C. (2000). *Accounting and accountability*. Harlow: Prentice Hall Europe.

Hąbek, P., & Wolniak, R. (2016). Assessing the quality of corporate social responsibility reports: The case of reporting practices in selected European Union member states. *Quality & Quantity, 50*(1), 399–420.

Haller, A., Link, M., & Groß, T. (2017). The term 'non-financial information'–a semantic analysis of a key feature of current and future corporate reporting. *Accounting in Europe, 14*(3), 407–429.

Hay, D., & Davis, D. (2004). The voluntary choice of an auditor of any level of quality. *Auditing: A Journal of Practice & Theory*, *23*(2), 37–53.

Hess, D. (2007). Social reporting and new governance regulation: The prospects of achieving corporate accountability through transparency. *Business Ethics Quarterly, 17*(3), 453–476.

Hibbitt, C., & Collison, D. (2004). Corporate environmental disclosure and reporting developments in Europe. *Social and Environmental Accountability Journal, 24*(1), 1–11.

Higgins, C., & Larrinaga, C. (2014). Sustainability reporting: Insights from institutional theory. In *Sustainability accounting and accountability* (pp. 291–303). Routledge.

Hopwood, A. G. (2009). Accounting and the environment. *Accounting, Organizations and Society, 34*(3–4), 433–439.

Idowu, S. O., & Del Baldo, M. (2019). Coping with integrated reporting: An overview of financial and social reporting using the integrated approach. In *Integrated Reporting* (pp. 1–9). Cham: Springer.

Ioannou, I., & Serafeim, G. (2017). The consequences of mandatory corporate sustainability reporting. *Harvard Business School Research Working Paper*, (11–100).

KPMG International survey of Corporate Responsibility Reporting 2017. (2017). KPMG.

La Torre, M., Sabelfeld, S., Blomkvist, M., Tarquinio, L., & Dumay, J. (2018a). Harmonising non-financial reporting regulation in Europe: Practical forces and projections for future research. *Meditari Accountancy Research.*

La Torre, M., Valentinetti, D., Dumay, J., & Rea, M. A. (2018b). Improving corporate disclosure through XBRL: An evidence-based taxonomy structure for Integrated Reporting. *Journal of Intellectual Capital*, *19*(2), 338–366.

Laine, M., Järvinen, J. T., Hyvönen, T., & Kantola, H. (2017). Ambiguity of financial environmental information: A case study of a Finnish energy company. *Accounting, Auditing & Accountability Journal, 30*(3), 593–619.

Lock, I., & Seele, P. (2016). The credibility of CSR (corporate social responsibility) reports in Europe. Evidence from a quantitative content analysis in 11 countries. *Journal of Cleaner Production, 122,* 186–200.

Major, M., Moll, J., & Hoque Z. (2018). The qualitative research tradition. In Z. Hoque, (Ed.), *Methodological issues in accounting research: Theories and methods* (2nd ed., pp. 498–521). Spiramus.

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook.* London, UK: Sage.

Miles, M. B., Huberman, A. M., & Saldana, J. (2014). *Qualitative data analysis: A methods sourcebook*. Thousand Oaks, CA: Sage.

Mio, C., & Venturelli, A. (2013). Non-financial information about sustainable development and environmental policy in the annual reports of listed companies: Evidence from Italy and the UK. *Corporate Social Responsibility and Environmental Management, 20*(6), 340–358.

Moroney, R., Windsor, C., & Aw, Y. T. (2012). Evidence of assurance enhancing the quality of voluntary environmental disclosures: an empirical analysis. *Accounting & Finance, 52*(3), 903–939.

Moser, D. V., & Martin, P. R. (2012). A broader perspective on corporate social responsibility research in accounting. *The Accounting Review, 87*(3), 797–806.

Neville, B. A., Bell, S. J., & Mengüç, B. (2005). Corporate reputation, stakeholders and the social performance-financial performance relationship. *European Journal of Marketing, 39*(9/10), 1184–1198.

O'Dwyer, B. (2002). Managerial perceptions of corporate social disclosure: An Irish story. *Accounting, Auditing & Accountability Journal, 15*(3), 406–436.

O'Dwyer, B., & Unerman, J. (2008). The paradox of greater NGO accountability: A case study of Amnesty Ireland. *Accounting, Organizations and Society, 33*(7–8), 801–824.

Okoye, A. (2009). Theorising corporate social responsibility as an essentially contested concept: Is a definition necessary? *Journal of Business Ethics, 89*(4), 613–627.

Patton, M. Q. (1990). *Qualitative evaluation and research methods*. SAGE Publications, inc.

Perrault Crawford, E., & Clark Williams, C. (2010). Should corporate social reporting be voluntary or mandatory? Evidence from the banking sector in France and the United States. *Corporate Governance: The international Journal of Business in Society, 10*(4), 512–526.

Perrini, F., & Vurro, C. (2010). Corporate sustainability, intangible assets and competitive advantage. *Symphonya: Emerging Issues in Management, 2*, 1–8.

Prado-Lorenzo, J. M., Gallego-Alvarez, I., & Garcia-Sanchez, I. M. (2009). Stakeholder engagement and corporate social responsibility reporting: The ownership structure effect. *Corporate Social Responsibility and Environmental Management, 16*(2), 94–107.

Qu, S. Q., & Dumay, J. (2011). The qualitative research interview. *Qualitative Research in Accounting & Management, 8*(3), 238–264.

Ries, T. E., Bersoff, D. M., Adkins, S., Armstrong, C., & Bruening, J. (2018). *Edelman trust barometer global report*. Chicago: Edelman.

Romolini, A., Fissi, S., & Gori, E. (2014). Scoring CSR reporting in listed companies–Evidence from Italian best practices. *Corporate Social Responsibility and Environmental Management, 21*(2), 65–81.

Salvioni, D. M, & Bosetti, L. (2014). Sustainable development and corporate communication in global markets. *Symphonya. Emerging Issues in Management (symphonya.unimib.it)*, (1), 32–51.

Siano, A., Vollero, A., Conte, F., & Amabile, S. (2017). More than words: Expanding the taxonomy of greenwashing after the Volkswagen scandal. *Journal of Business Research, 71,* 27–37.

Sierra-Garcia, L., Garcia-Benau, M., & Bollas-Araya, H. (2018). Empirical analysis of non-financial reporting by Spanish companies. *Administrative Sciences, 8*(3), 29.

Sierra-García, L., Zorio-Grima, A., & García-Benau, M. A. (2015). Stakeholder engagement, corporate social responsibility and integrated reporting: An exploratory study. *Corporate Social Responsibility and Environmental Management, 22*(5), 286–304.

Stacchezzini, R., Melloni, G., & Lai, A. (2016). Sustainability management and reporting: The role of integrated reporting for communicating corporate sustainability management. *Journal of Cleaner Production, 136,* 102–110.

Stubbs, W., & Higgins, C. (2014). Integrated reporting and internal mechanisms of change. *Accounting, Auditing & Accountability Journal, 27*(7), 1068–1089.

Union, European. (2014). Directive 2014/95/EU. *Official Journal of the European Union, 214*(330), 1–9.

Venturelli, A., Caputo, F., Leopizzi, R., & Pizzi, S. (2018). The state of art of corporate social disclosure before the introduction of non-financial reporting directive: A cross country analysis. *Social Responsibility Journal*.

Vitolla, F., & Raimo, N. (2018). Adoption of integrated reporting: Reasons and benefits—A case study analysis. *International Journal of Business and Management, 13*(12), 244–250.

Waddock, S. (2008). Building a new institutional infrastructure for corporate responsibility. *Academy of Management Perspectives, 22*(3), 87–108.

Wang, H., Tong, L., Takeuchi, R., & George, G. (2016). Corporate social responsibility: An overview and new research directions: Thematic issue on corporate social responsibility.

Wang, K. T., & Li, D. (2016). Market reactions to the first-time disclosure of corporate social responsibility reports: Evidence from China. *Journal of Business Ethics, 138*(4), 661–682.

Wolcott, H. F. (1994). Transforming qualitative data: Description, analysis, and interpretation. Sage.

Yin, R. (1994). *Case study research: Design and methods* (2nd ed.). Beverly Hills, CA: Sage Publishing.

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A Sociotechnical Analysis of Accounting for Employee Health and Safety: Evidence from a Multiple Case Study

Emilio Passetti and Massimo Battaglia

1 Introduction

The interest concerning accounting for employee health and safety (H&S) is relatively recent (Jallon et al. 2011). The aim is 'to improve employees' workability as well as the health of the organization' (Johanson et al. 2007, p. 24) and to provide information on employees' health, so that appropriate actions can be taken, and the interplay between employee well-being and organization's targets can be promoted (DeArmand et al. 2010). In the accounting and health and safety literature, analysis is scarce as regards whether and how accounting allows the promotion of employee H&S issues and its integration into organization decision making (Cooper et al. 2011; Gröjer and Johanson 1998; Jallon et al. 2011; Rikhardsson and Impgaard 2004). Employee H&S issues have been analyzed in disclosure studies (Chan 1979; Coetzee and Van Staden 2011), in terms of the classification of direct and indirect accident costs (Feng et al. 2015) and concerning the measurement of the accident costs at the workplace through the use of dedicated instruments (e.g., Jallon et al. 2011).

In this regard, the development and use of accounting instruments related to H&S issues can enhance H&S performance as they are able to offer new and additional information to inform decision-making processes. However, the implementation and integration of an accounting instrument for H&S measurement depend on the presence of different interrelatedness and co-existing dimensions and factors (Loeppke et al. 2015; O'Neill et al. 2013, 2015; Reiman and Rollenhagen 2011) that previous academic literature has not adequately analyzed. As the analysis of the different

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dimensions and factors influences the success or failure of accounting instruments (Contrafatto 2014; Gosselin 2006; Liu and Pan 2007), the present chapter investigates the following question: Which are the technical, organizational, and cognitive factors that influence the implementation and integration of an accounting instrument for accident-cost analysis?

The empirical material was gathered through a two-year interventionist study (Jönsson and Lukka 2006) of two Italian medium-sized waste-management companies. The aim of the project was to develop an accounting instrument for measuring accident costs—an accident-cost analysis tool—and integrate it into organization decision making. The waste-management sector is among the risky sectors concerning H&S issues (Battaglia et al. 2015). The present analysis adopts a sociotechnical perspective to analyze the topic. The sociotechnical perspective focuses on the social aspects of people in a given society and on the technical aspects of organizational structure and processes. It enhances understanding of whether and how different dimensions and types of factors impact H&S practices, instruments, and outcomes (Noy et al. 2015), thus offering a structure for in-depth analysis of problems and potentialities associated with workplace safety issues (Flach et al. 2015; Kleiner et al. 2015; Robertson et al. 2015).

Chapter contributions are varied. The first is represented by an in-depth analysis of accounting for employee H&S (O'Neill et al. 2013, 2015). It adds evidence to the debate about the role and potential of accounting in the promotion of social issues (Bebbington and Thomson 2013; Parker 2005), and to H&S literature that has investigated the implementation and integration of dedicated instruments for the measurement of accidents costs. Compared to the previous studies that have mainly focused on the technical dimension and factors, the present study provides a more comprehensive analysis focusing also on the organizational and cognitive dimensions. In providing specific insights into sociotechnical barriers to, and enablers of, the development of an accounting instrument for employee H&S, the analysis adds knowledge to the understanding of the technical, organizational and cognitive aspects as regards the use of financial information for H&S decision making. It also highlights the fact that the co-existence of all three dimensions is a necessary condition for the promotion of accounting for H&S issues. Previous studies (Gond et al. 2012; Battaglia et al. 2016) have argued that integration is possible even if not all the dimensions are well developed since the high level of integration of one dimension can compensate the low level of the other(s). Put differently, on the basis of results of case studies, the study argues that this assumption may be not necessarily valid. This point contributes explicitly to the concept of co-existence/compensation between the three sociotechnical dimensions, as highlighted by Gond et al. (2012). The study analysis also provides some practical implications that can support the implementation and integration management process.

The following is the remaining structure of this chapter: Section 2 is the literature review, which provides an explanation of the framework of the analysis, while Sect. 3 presents the research methodology. Section 4 presents the case studies. Section 5 covers the discussion of the findings, proposes perspectives for future research, and presents the conclusion of the study.

2 Literature Review and Analytical Framework

Accounting and H&S literature have attracted considerable attention to the analysis of how companies develop accounting tools that support accident-cost analysis and related organizational decision making (Battaglia et al. 2014; Frey et al. 2014; Rikhardsson and Impgaard 2004). From a company perspective of analysis, the cost of an accident in the workplace can be defined as the effects on company costs that would not be incurred if the injury/accident did not take place (European Commission 2011). The measurement of accident-related costs and its use for decision making presents many challenges, such as the classification of costs and the related use of information by companies (Jallon et al. 2011). One crucial distinction to be made is that between external and internal costs. Some examples of internal costs include loss of productivity and the investigation time spent. Examples of external costs are the victim's medical expenses (not compensated through workers' compensation), and the time and resources expended in nursing and recuperation by the victim's household. Another distinction is that between direct and indirect costs, which highlights that not all costs are visible (Huang et al. 2007, 2011). From a sample of companies operating in the UK, Haslam et al. (2010) found that the vast majority of small to mid-size enterprises (SMEs) did not recognize any benefits in measuring costs of injury and illness in accounting terms. Most believed that the effort involved would outweigh the benefits, and many reported that, as their company already had an established commitment to H&S, such cost information would not motivate them further. In contrast, two-thirds of large companies recognized the importance of measuring accident costs in terms of specific industry figures.

Other pieces of evidence show that some companies prefer to avoid economic measurement and, instead, opt for non-financial evaluations, which better underline that safety is a core value of the organizational culture (Miller and Haslam 2009). However, an accident-cost analysis tool, when expertly designed, implemented, and used, provides a set of information that enables a comprehensive analysis of the different consequences related to an accident. The tool can increase the visibility of an accident within organizations (Jallon et al. 2011), and if linked to other instruments, such as the accident analysis report and the investigation of the root causes of the accident, it can also create a set of specific instruments for employee H&S analysis.

The analytical framework proposed by the sociotechnical analysis focuses on technical, organizational, and cognitive dimensions (Battaglia et al. 2016; Gond et al. 2012). These three dimensions and factors related to them offer an accurate and analytical view for discussing the implementation and integration of a new instrument within. Implementation refers to the design process and experimentation of a new instrument during the integration of its use in decision making. Further, a substantial level of integration in a dimension can lead to the tighter coupling on one or both of the other dimensions, compensating it or their secondary level(s) of integration. For example, collective cognition or shared practices on a specific aspect may compensate for a lack of technical integration. Conversely, effective technical integration may lead to the enhancement of organizational integration through the construction of new shared practices and subsequently of a common cognitive understanding. According to Gond et al. (2012), this concept is co-existing/compensation, and it is fundamental for explaining and understanding the implementation and integration process.

The *technical dimension* (Anderson 1995) considers the availability of information and whether and how the information is diffused within the organization. Technical aspects indicate the possibility of tracing and observing injury-cost data and information, and of implementing and integrating the measurement instrument into the pre-existing H&S management procedures, H&S performance reports, dashboard, and investment decisions (Ibarrondo-Dávila et al. 2015). The technical dimension is essential because it allows the acquisition and sharing of information, increasing the organizational legitimacy of the instrument. When information is scarce, the decision-makers may become risk-averse, and consequently, the implementation and integration of the instrument become more complex, reducing the level of acceptance (Ansari et al. 2010). For example, Gosselin's (2006) review of activity based on costing adoption and implementation illustrated that the technical complexity of the instrument owing to the high costs of acquiring and maintaining adequate information led to its abandonment.

The second dimension is the *organizational dimension*, which refers to how mechanisms, processes, and actors are organized around a specific topic. Liu and Pan's (2007) study on activity-based costing implementation identified the training of employees as a critical organizational enabler, while Contrafatto (2014) indicated the constituency of an internal unit specifically dedicated to social and environmental issues in shaping the implementation and integration of social and environmental reporting. The organizational dimension can increase or decrease the visibility and importance of a particular instrument (Ansari et al. 2010), and in turn, may also reduce technical and cognitive barriers (Gond et al. 2012).

The *cognitive dimension* analyzes the cognitive aspects (Hall 2016), i.e., the 'mental template that individuals impose on an information environment to give it form and meaning' (Walsh 1995: 281). Cognitive aspects include the knowledge that is assimilated by individuals, and that becomes part of their competencies. Cognitive frames serve to reduce the complexity of the internal and external environments and drive individual and collective decisions and actions (Englund et al. 2013). Cognitive factors also influence how employees decide to adopt an innovative instrument, how they perceive the expectations, reward, and support for a specific instrument within an organization, and how the instrument will foster (or inhibit) the fulfillment of their values (Klein and Sorra 1996). Battaglia et al. (2014) indicated the importance of creating a collective meaning between the different organizational actors concerning the relevance of measuring the cost of accidents at work.

The three dimensions are linked to and may interact with each other. To foster the development process, each dimension and its specific factors should operate in an enabling way (Gond et al. 2012). However, the three dimensions can also trigger the implementation and integration process because hindrance factors can be present (Barki and Pinsonneault 2005; Battaglia et al. 2016). The following sections describe the research methodology and the characteristics of the instrument development.

3 Research Methodology

This study follows an interventionist research approach in two case organizations (see Table 1 for a summary of their characteristics). The aim was to develop a safety accounting instrument for measuring the costs of accidents, namely the *accident-cost analysis tool*. The tool provided financial information concerning the management of accidents and should be able to inform accident analyses and managerial decisions.

Jönsson and Lukka (2006, p. 374) defined interventionist research as 'a kind of field experimentation where the researcher […] seeks to determine the experimental situation through observation, acts on that situation in concert with the host organization, observes the process and outcome, and analyzes findings in view of the relevant literature'. The type of interventionist research differs according to the degree of intervention, i.e., modest or strong. A strong case is one in which 'the researcher—jointly with members of the target organization—develops a new construction, tests its usability, and draws theoretical conclusions based on this process' (Jönsson and Lukka 2006: 377). In this case, the aim is to change the work processes or instruments or to influence the host organization's decision making through the design or redesign of specific aspects.

A strong case orientation characterized a large part of the research. The research team developed the accounting instrument in collaboration with the host companies, and then supported the companies in different ways during the project. The construction of a close 'contact zone' and cooperation between the researchers and the two companies served to develop a new applicative instrument for H&S analysis. It also represented an opportunity to test the scientific literature, discussing employee H&S measurement issues and exploiting research skills on the ground to gather in-depth materials and information for academic purposes.

Table 1 Characteristics of companies

Characteristics	Alpha	Beta
Municipalities served	Five municipalities and 170,000 citizens	29 municipalities and 138,000 citizens
Number of employees	325	414
Number of accidents	63	28
Safety indexes	Frequency index: 120.15 Severity index: 2.36	Frequency index: 54.97 Severity index: 1.28

3.1 Data Collection and Analysis

The interventionist research occurred within two medium-sized public waste-management companies operating in Italy characterized by a different level of H&S performances, here referred to as *Alpha* and *Beta*. Site visits and interviews allowed the research team to observe and collect a considerable quantity of data and information. To create an open and participatory research environment, in most cases, the meetings were not recorded, allowing for greater confidentiality and fluency between the researchers and staff. During the meetings and interviews, extensive notes were taken and reviewed immediately after. The companies provided internal documents and interactions that occurred through e-mail and phone calls. The material collected was organized in a table in which there was a listing of the interactions with the companies with the following date (when applicable): date of the meeting, participants, topics discussed, critical aspects, time length, and link to the meeting notes.

After the end of the project, the research team concentrated its efforts on developing the theoretical analysis through an ex-post reverse analysis (Jönsson and Lukka 2006). In this phase, the materials and experiences collected were interpreted and analyzed through readings concerning accounting instrument implementation and the occupational H&S. An in-depth analysis of the notes, materials, and experiences took place around some key themes: H&S performance measurement, accident analysis, H&S reporting, technical factors, organizational and cognitive factors, and decision making.

It is important to note that the problematic story narrated in the present chapter corroborates the authenticity, plausibility, and critical aspects of the two cases (Golden-Biddle and Locke 1993). The narration of the positive and negative aspects of an interventionist analysis avoided a second potential drawback of the research method, i.e., the biased representation of a successful story. The latter occurs when the research team unduly guides the empirical research process toward the expected positive findings (in the case of this research, the full integration of the instrument within the two organizations) and search selectively for empirical evidence to confirm a positive story. In the next section, the analysis of the case informed by the theoretical aspects is illustrated.

4 Comparative Analysis

An initial meeting was held between the research team and the two companies to present the project. A discussion about accident costs and their measurement occurred, during which the research team explained that in medium-sized enterprises with a relatively low number of accidents per year, the absence of a measurement process and the lack of dedicated instruments might lead to a misperception of the accident risk and of the costs associated with it.

The design of the instrument followed three meetings. In the first meeting, both companies presented their profiles, explaining their operational characteristics and how they managed employee H&S, as well as how they measured accidents. The research team showed the potential costs associated with accidents, including the cost of replacing an injured worker, of the staff involved in the accident, of investigations, of sanctions against the company, of insurance, of training new employees, the costs associated with the plant shutdown, and so on. The differences in costs between severe and non-severe accidents were an important issue discussed. The first meeting familiarized the companies with the aims of the project. It also revealed the H&S units' high commitment to enhancing the work safety of employees in everyday life.

During the second and third meetings, three methods for measuring the costs of accidents were discussed: insurance-based, activity-based, and labor capacity-based methods (Battaglia et al. 2014). The strengths, weaknesses, and potential for implementation and integration within the two organizations were the objects of analysis. The H&S units were particularly interested in the activity-based method owing to the possibility of mapping all activities associated with an injury. Activity-based methods document all of the activities (consequences) generated by accident and evaluate the costs of the activities (Battaglia et al. 2014). The accounting manager of Alpha also sponsored this method, indicating that correct identification of the activities would facilitate data acquisition and representation. Accordingly, the research team and the companies' representatives decided to focus on this method. The new instrument developed was named the *accident-cost analysis tool*. It is composed of 31 specific items related to the management of an accident and grouped into five main categories of potential costs. Category A focuses on those activities associated with the initial consequences of the accident, category B on the administrative consequences, category C on the possible effects on the equipment, category D on the costs of resuming business activities, and category E on compensation and penalties.

To facilitate the data collection and analysis, a set of 'rules of thumb' was defined. First, not all of the items had to be analyzed for each accident because their presence depended on the severity of the accident—the higher the level of severity, the higher the number of items to be included. Second, the value of each item should be calculated as a total amount or unit amount of time, depending on the nature of the item. Third, the owner of the data collection process was the H&S unit, owing to its local knowledge of practices and procedures related to accidents. Finally, the companies would flexibly experiment according to the time they could dedicate to data collection and analysis. The discussion also underlined that the data acquisition did not strictly depend on the accounting information system because some information had to be collected appositively.

Alpha

For Alpha, the data collection process concerned a pilot phase and the main phase. The pilot phase focused on the analysis of four accidents to test the clarity of the items that composed the tool, the time required to acquire the data, and to increase the H&S unit's confidence in the data collection process. Despite some difficulties related to data acquisition, the pilot phase allowed new analyses, and the general director of Alpha decided to extend the analysis to a broader set of 20 accidents. It represented a large set because it included half of all accidents that occurred in the previous years. The main phase included a selection of different accidents to ensure a complete representation of all kinds of accidents (not severe, severe and acute, depending on the number of days lost).

The main phase was more demanding than expected. An employee had to collect manually almost all of the information on each of the 20 accidents. As expected, neither the accounting information system nor the specific H&S instruments already in force, such as the OHSAS 18001 and the accident report analysis, contained enough information to complete most of the items that composed the tool. For half of the accidents, the costs were calculated following ex-post logic (i.e., after the accident occurred), while for the other half the costs were calculated concurrently with the accident. In this second case, the data collection was more fluid and manageable compared with the ex-post reconstruction because of the real-time data collection. The research team and the internal health unit screened all 20 cards that were compiled to check the data validity and reliability. Technically, for each accident, an average of 10 out of the 31 available items was compiled, most of which were in categories A and B, with acute accidents being particularly relevant from an economic point of view.

From an organizational perspective, the data collection process partially involved the human resources office and technical service (i.e., the area that directly manages the waste-collection activities). The human resources office supplied some information concerning the items in categories B and C. However, the need for a series of reminders from the H&S unit highlighted the difficulty of modifying the accounting information system to collect the information *automatically.* The operational service had a minor role in the data collection for category A, in that, it increased the difficulty of collecting complete information. The operational service units usually compiled a short accident report for the H&S unit containing necessary information on the accident. Instead, the tool required a more active approach by the technical service toward the H&S unit, requesting a higher level of accountability concerning the ex-post activities related to the accident. The operational service manager contested the trade-off between, on the one hand, managing the accident and the completion of the shift, and on the other, the difficulty of supplying the information requested.

As a consequence of technical and organizational difficulties, the development of the instrument was in grave danger of being interrupted owing to the joint effects of a lack of time, some organizational differences, and a lack of clarity on how the data would be used. The research team explained that merely visualizing the costs of accidents could be considered a real effort because it permitted a more in-depth analysis of employee H&S performance. The analysis of the accidents shown enabled the identification of some micro-organizational efforts that the H&S unit had not previously been fully considered. An example was the time taken by staff to manage administrative duties and to carry out extra activities so as to comply with ad hoc external audits by public authorities, information of all of which was not present before the application of the instrument. The cost information related to the injuries concerning climbing and descending the lorries highlighted the possibility of making comparisons between new preventive investments in employee H&S and the potential incoming costs of the accidents associated with the status quo. An economic simulation was also performed on the data to calculate the total costs of accidents analyzed. The analysis showed a total cost of just over €55,000 for the sample of accidents analyzed (with a unit cost for injuries slightly lower than €2000 for an accident of medium severity), corresponding to an estimated annual value of about €120,000 for all of the accidents.

After the analysis, the general director expressed the desire to integrate the tool to support planning and control activities related to employee H&S. His appreciation was essential to support as well as promote the H&S unit employees' efforts due to the significant commitment that they made to collect the data. Accordingly, despite the presence of technical and organizational barriers, the assessment of the implementation phase was considered prospective. To integrate the instrument, Alpha decided to follow an incremental implementation path.

Beta

Beta decided to collect information in a single phase on all 28 accidents of the previous year. The data collection process was similar to that of Alpha. The cost of accidents was manually collected because a large portion of the data and information was not available. The H&S unit made a painstaking analysis of the internal documents to obtain as much information as possible. Other information was collected in collaboration with the human resource office while the operational unit was not involved in this phase. According to the H&S unit, the operational unit required specific ex-ante training concerning the aim and purpose of the tool. Otherwise, the analysis could be interpreted as an attempt to decrease, rather than to increase, aspects of safety.

The research team actively supported the internal staff during the data collection, progressively checking each accident report produced and helping them to clarify the meaning of some items. The H&S unit highlighted the fact that despite an initial problem with the data collection, and especially the information related to the time the operational unit dedicated to the management of the accident, the analysis of the accidents gradually became more standardized and reproducible. The H&S unit noted that similar accidents required similar management time. The same observation was made by the human resources office, which noted that the administrative time dedicated to the management of the activities listed in the tool was very similar among the various accidents. Both offices thus gave a constructive evaluation of the data collection process. They underlined that, with some modification of the items in the accident report usually compiled by operational units, the cost analysis process could become faster. The H&S manager was also confident that the incoming OHSAS 18001 certification would favor a more organic collection of H&S information.

From an economic point of view, the calculation showed a total cost of approximately €50,000 and an average cost per medium-severity accident of €1900 (very similar to Alpha). The vast majority of the costs (more than 90%) were related to category A, then to category B, and, in the case of severe accidents (lasting more than 35 days), to category C of the tool. When compared with previous studies, the average cost of a common accident was minor. The OSH study (European Commission 2011) reported a value of €1651 for a low-severity accident, of €4985 for one of medium severity and of €11,760 for cases with high severity. The results of the OSH study indicated that the most critical consequences of accidents concerned the human-related aspects which accounted for 80% of the total cost.

The reaction to the new information was different from that at Alpha, whereas at Alpha the H&S office was initially more interested in the numeric value, and at Beta, the attention progressively moved to the analysis of the organizational aspects. The two offices of Beta recognized the value relevance of the financial information, but they underscored that the majority of the cost concerned employees' absence from work after the accidents. They highlighted the fact that most of the costs in category B were related to administrative time. In their view, the new information was interesting not only because it explained the economic value of an accident but also because it indicated the areas and operational activities that were riskier. The analysis of accident-cost reports revealed the importance of focusing on equipment, procedures, and machines as the core aspects for improving employee H&S. The experimental adoption of the accident-cost analysis tool showed a different view of H&S performance compared to the previous analysis implemented. Beta, however, questioned whether the economic measurement of accidents might be conceptually too risky because its aim could easily be misinterpreted as a way to reduce, rather than to improve, safety.

The data were then presented to the head of the operational unit in a meeting in July 2013. The head of the operational unit agreed on the value-added of the information because of the possibility of increasing safety awareness. However, the proposal was only partially implemented because the H&S unit, in conjunction with the operational unit manager, subsequently decided to show only the list of activities related to the accident and not the financial information. This precautionary approach occurred because the operational units were not confident about the usefulness of financial information when referring to safety aspects. The idea of integrating the instrument is discussed in the following section.

Alpha—The (no)-integration phase

In 2013, more than a year subsequent to the experimental implementation, a one-day meeting was organized to understand whether and how the integration had occurred. The meeting revealed that the H&S unit operated to promote organizational integration at the operative level. The activities map was used during the training of the workforce to inform all employees of the organizational consequences associated with accidents, underscoring the value-added of an active collaboration during the ex-post analysis of the accident. As reported by the safety manager, the operational workers were astounded when they learned the set of consequences related to an accident. The financial information was also presented to promote more rigorous conduct among the employees. It was expressed that such information could be considered a waste of company resources that could otherwise be used for preventive interventions and actions. According to the H&S unit, the visualization of financial information would encourage the operational staff to pay more considerable attention to specific safety procedures. The internal union representatives also recognized the ability of the activities map to raise awareness concerning accident-related effects.

Also, the H&S unit adopted the accident-cost information to forecast the potential costs of accidents for 2013. The determination and visualization of the incoming costs underlined the importance of searching for new and effective safety operative solutions. The H&S unit also adopted the information to support small investment decisions. It compared the data on the manual handling of loads and door-to-door waste-collection accidents with the potential benefits (measured in terms of cost reductions as a consequence of fewer accidents) derived from increasing the level of safety and technology of the employees' equipment. The data analysis was carried out following a cost–benefit logic in which the measurement of benefits also took into consideration the economic benefits related to the reduction of accidents. Nevertheless, the H&S manager clearly expressed that the financial information was secondary and not the primary criterion on which to make decisions. This point resonates with Hall's (2010) view that accounting information can be used not only in terms of well-defined decision scenarios but also for improving knowledge regarding work environments.

Despite that, the H&S unit recognized a difficulty in regularly updating the instrument when an accident occurred. It revealed that an official tentative update aimed to share some aspects of the data collection process that occurred in collaboration with the accounting unit, but neither the technical unit nor the human resources office replied positively. The technical unit indicated that the tool was not entirely appropriate for analyzing safety aspects, while the human resources office was only willing to act in a supportive role because they did not want to assume any responsibility with respect to the topic. The presence of intertwined technical and organizational barriers and the difficulties of overcoming them prevented the integration of the instrument. On the one hand, the financial information was not powerful enough to enable a robust interaction and discussions concerning employee safety improvement. On the other, the presence of technical and organizational barriers hindered the integration.

Beta—The (no)-integration phase

A one-day meeting was also organized at Beta for more than a year subsequent to the experimental implementation to understand whether and how the integration had occurred. Some steps occurred for sharing the instrument. The activities map related to the accidents was the object of specific training initiatives for the operational-level employees to illustrate the organizational effects of an accident. Although the financial information was not presented, the map was considered an improvement in the process of measuring H&S performance. A technical cost center was also created within the accounting information system to collect financial information related to H&S aspects.

However, the H&S unit at Beta made fewer efforts to adopt and integrate the instrument than the unit at Alpha. A first organizational barrier that emerged was the non-prioritization of the project despite the positive results achieved during the implementation phase. The H&S office concentrated its analysis on waste-management services, which changed progressively from a mixed system of the collection (automatic and door-to-door collection) to a complete door-to-door collection system. This change implied a re-organization of employees' jobs and also an analysis of the implications of such a change on employees' safety owing to the advanced average age of the workforce. The buyer process concerning safety equipment was also changed to reduce the costs of equipment and to increase the delivery aspects. These activities, in addition to ordinary ones, did not allow time to be dedicated to stabilizing the implementation phase and to promoting the integration phase. Also, it emphasized the difficulty of paying sufficient attention (on an ongoing basis) to the new instrument within the company.

Other obstacles were also present. The general director did not consider the idea of promoting economic literacy with respect to employee safety to be relevant. The experimentation and results of the project were finally presented to the general director, who recognized that it was necessary but not sufficiently relevant to promote its regular use. According to the H&S manager, the general director considered the low number of accidents reported over the years to be sufficient information to measure H&S performance and the related effectiveness of the decisions and activities implemented, without the need to commit further resources to develop other tools. Beta's performance safety indexes were better than the national statistics for the sector. A further obstacle was the company's general approach to health and one safety issue, which was normatively oriented. The instruments adopted over time to manage and measure the H&S performance were coherent with the normative requirements of the framework requirements, with a low predisposition toward the adoption of optional tools. The H&S team revealed that the company approach toward safety and the related use of the accident-cost analysis did, in fact, hinder the integration of the instrument. The staff noted the difficulties of using the information and of sharing the information relevance within some company units. The lack of relevant feedback for decision making was stressed as a barrier in promoting future analysis and the use of the instrument (Benn et al. 2009).

5 Discussion and Conclusion

The study sought to determine and analyze the technical, organizational, and cognitive factors that influence the implementation and integration of an accounting instrument for accident-costs analysis within organizational decision making. In particular, it provides specific insights into sociotechnical barriers to, and enablers for, the development of an accounting instrument for employee H&S adds knowledge to the understanding of the technical, organizational, and cognitive aspects as regards the use of financial information for H&S decision making.

The instrument was implemented, yet weakly integrated and then discontinued by the two companies. The instrument supported, in some instances, employee H&S decisions, even though the link between financial information and employee safety was considered ambiguous and not able to support decision making (Battaglia et al.

2014; Jallon et al. 2011; Rikhardsson and Impgaard 2004). The failure of the integration was not due to the inadequacy of the instrument per se but to the ineffective management of the integration phase. While the study provides evidence of the conceptual relevance of the instrument (Mättö and Sippola 2016), the final phase of integration was not managed with the consistency, skill, and care required, so that the various organizational members could derive its expected benefits (Contrafatto 2014).

The cases show similar results. In both companies, economic measurement of the accidents was carried out, but the tool was only occasionally used. Neither of the two companies continued to use the instrument regularly after the initial phase. In the case of Alpha, it was used to support decision analysis concerning the acquisition of new protective equipment for the employees. In both companies, it was then used to show the amount of economic data generated related to the accidents. The similar results of the two cases emphasized that the lack of more systematic and stable integration of the tool was due to the predominance of technical, organizational, and cognitive barriers with respect to the corresponding enablers (Barki and Pinsonneault 2005; Battaglia et al. 2016) (see Table 2 for a summary). From a technical point of view, neither company had an accounting information system nor any procedure in place to collect and emphasize automatically the costs associated with accidents. This point bears some similarities with the Gosselin's (2006) review of activity based on costing adoption and implementation, which revealed that the high costs of acquiring and maintaining adequate information led to instrument abandonment. At the cognitive level, the uncertainty associated with the new type of analysis, as clearly evidenced in the case of Beta, and the confidence in using traditional indicators discouraged the integration of the tool. The cognitive barriers were due to the scarce relevance that accounting information concerning employee H&S had within companies, which influenced employees' decisions concerning the use of the instrument (Klein and

Table 2 Technical, organizational, and cognitive enablers, and barriers identified

Technical enablers	**Technical barriers**
• Availability of accident reports containing qualitative information on the accidents	• Lack of adequate information system for a complete collection of accident data • Lack of skills and training of the operative staff to collect the necessary data
Organizational enablers	**Organizational barriers**
• Organizational commitment toward employee H&S management • Good H&S performance	• Difficulties in sharing information between H&S and other offices regarding the importance of measuring accidents costs • Focus on already existing employee H&S performance and decision-making mechanisms
Cognitive enablers	**Cognitive barriers**
• Desire to experiment with new ways to improve H&S aspects	• Uncertainty by the H&S office in valorizing and using the economic information collected

Sorra 1996). This specific point empirically confirms the argument of Hahn et al. (2014) for which, in the case of high uncertainty related to social and environmental issues, managers prefer to continue with traditional forms of analysis and decision making.

This chapter contributes to advancing accounting and H&S literature and provides an in-depth analysis of how companies have tried to develop a specific accounting tool aimed to support accident-cost analysis and related organization decision making (Battaglia et al. 2014; Frey et al. 2014; Rikhardsson and Impgaard 2004). The findings suggest that integrating an accounting instrument within an organization requires the concurrent presence of technical, organizational, and even cognitive enablers. The three dimensions are interdependent and constitute a unified whole that the new instrument shapes. This argumentation, supported by the empirical analysis, is different from that of Gond et al. (2012), according to which integration can also occur when just one of the dimensions is more developed than the others, and thus can push and drive the others toward integration. As the two cases showed, the integration and use of the instrument require a cognitive understanding, technical feasibility, organizational acceptance, and availability to change. The interplay between the different dimensions and related factors may then support its regular use and the feedback mechanisms to support future decisions, whereas during the implementation phase, the presence of all the dimensions and the related enablers maybe not present or hindered; they need to be managed over the process in order to support the integration (Battaglia et al. 2016). Accordingly, the management of the entire process is a crucial issue to monitor so as to enable a potential integration and use of a new instrument (Anderson 1995; Liu and Pan 2007). In terms of practical implications, the study reveals the complexity involved in supporting H&S analysis with financial information (Jallon et al. 2011). Additionally, it informs on some of the factors that should be considered to support the effective implementation and integration of an accounting instrument for H&S analysis.

However, the research is subject to some limitations. The findings align with the social and organizational context in which they emerged. Also, despite the strategies employed to promote the ethical perspective during the case analyses, some potential biases, such as the selective interpretation of information, may be present owing to the subjectivity of the analyses. While the findings of the study move forward the debate on accounting for employee H&S, there remains a worrying lack of knowledge of what it means to use accounting information in this field. Future research avenues could continue to analyze the three dimensions of factors and how they impact, singularly or collectively, on the implementation and integration of accounting instruments as well as the resistance to change. In particular, the analysis of compatibility between organizational culture and accounting instruments related to employee H&S could be a further avenue to study. The level of adoption of different safety accounting instruments, such as safety performance indicators, accident-cost analysis tools, budget and investment criteria for H&S management, could also be investigated.

Literature

Anderson, S. W. (1995). A framework for assessing cost management system changes: The case of activity based costing implementation at general motors, 1986–1993. *Journal of Management Accounting Research, 7,* 1–51.

Ansari, S. M., Fiss, P. C., & Zajac, E. J. (2010). Made to fit: How practices vary as they diffuse. *Academy of Management Review, 35*(1), 67–92.

Barki, H., & Pinsonneault, A. (2005). A model of organizational integration, implementation effort, and performance. *Organization Science, 16*(2), 165–179.

Battaglia, M., Frey, M., & Passetti, E. (2014). Accidents at work and costs analysis: A field study in a large Italian company. *Industrial Health, 52*(4), 354–366.

Battaglia, M., Passetti, E., & Frey, M. (2015). Occupational health and safety management in municipal waste companies: A note on the Italian sector. *Safety Science, 72*(February), 55–65.

Battaglia, M., Passetti, E., Bianchi, L., & Frey, M. (2016). Managing for integration: A longitudinal analysis of management control for sustainability. *Journal of Cleaner Production*, *136—part A* (10 November), 213–225.

Bebbington, J., & Thomson, I. (2013). Sustainable development, management and accounting: Boundary crossing. *Management Accounting Research, 4*(24), 277–283.

Benn, J., Koutantji, M., Wallace, L., Spurgeon, P., Rejman, M., Healey, A., et al. (2009). Feedback from incident reporting: Information and action to improve patient safety. *BMJ Quality & Safety, 18*(1), 11–21.

Chan, J. L. (1979). Corporate disclosure in occupational safety and health: Some empirical evidence. *Accounting, Organizations and Society, 4*(4), 273–281.

Coetzee, C. M., & Van Staden, C. J. (2011). Disclosure responses to mining accidents: South African evidence. *Accounting Forum, 35*(4), 232–246.

Contrafatto, M. (2014). The institutionalization of social and environmental reporting: An Italian narrative. *Accounting, Organizations and Society, 39*(6), 414–432.

Cooper, C., Coulson, A., & Taylor, P. (2011). Accounting for human rights: Doxic health and safety practices–The accounting lesson from ICL. *Critical Perspectives on Accounting, 22*(8), 738–758.

DeArmond, S., Huang, Y. H., Chen, P., & Courtney, T. (2010). Corporate financial decision makers' perceptions of their company's safety performance, programs and personnel: Do company size and industry injury risk matter? *Work: A Journal of Prevention Assessment and Rehabilitation, 37,* 3–13.

Englund, H., Gerdin, J., & Abrahamsson, G. (2013). Accounting ambiguity and structural change. *Accounting, Auditing & Accountability Journal, 26*(3), 423–448.

European Commission. (2011). *Socio-economics of cost of accident at work and work-related ill health*. Report of European Commission, Directorate-General for Employment, Social Affairs and Inclusion. http://ec.europa.eu/social/publications. Accessed March 9, 2013.

Feng, Y., Zhang, S., & Wu, P. (2015). Factors influencing workplace accident costs of building projects. *Safety Science, 72*(February), 97–104.

Flach, J. M., Carroll, J. S., Dainoff, M. J., & Hamilton, W. I. (2015). Striving for safety: Communicating and deciding in sociotechnical systems. *Ergonomics, 58*(4), 615–634.

Frey, M., Battaglia, M., & Passetti, E. (2014). *Investire in sicurezza nel settore dell'igiene ambientale*. FrancoAngeli.

Golden-Biddle, K., & Locke, K. (1993). Appealing work: An investigation of how ethnographic texts convince. *Organization Science, 4*(4), 595–616.

Gond, J. P., Grubnic, S., Herzig, C., & Moon, J. (2012). Configuring management control systems: Theorizing the integration of strategy and sustainability. *Management Accounting Research, 23*(3), 205–223.

Gosselin, M. (2006). A review of activity-based costing: technique, implementation, and consequences. In S. C. Chapman, A. G. Hopwood, & M.D. Shields (Ed.), *Handbooks of management accounting research* (Vol. 2, pp. 641–671). Elsevier.

Gröjer, J. E., & Johanson, U. (1998). Current development in human resource costing and accounting: Reality present, researchers absent? *Accounting, Auditing & Accountability Journal, 11*(4), 495–506.

Hall, M. (2010). Accounting information and managerial work. *Accounting, Organizations and Society, 35*(3), 301–315.

Hall, M. (2016). Realising the richness of psychology theory in contingency-based management accounting research. *Management Accounting Research, 31*(June), 63–74.

Hahn, T., Preuss, L., Pinkse, J., & Figge, F. (2014). Cognitive frames in corporate sustainability: Managerial sensemaking with paradoxical and business case frames. *Academy of Management Review, 39*(4), 463–487.

Haslam, C., Haefeli, K., & Haslam, R. (2010). Perceptions of occupational injury and illness costs by size of organization. *Occupational Medicine, 60*(6), 484–490.

Huang, Y. H., Leamon, T. B., Courtney, T. K., Chen, P. Y., & DeArmond, S. (2007). Corporate financial decision-makers' perceptions of workplace safety. *Accident Analysis and Prevention, 39*(4), 767–775.

Huang, Y. H., Leamon, T. B., Courtney, T. K., Chen, P. Y., & DeArmond, S. (2011). A comparison of workplace safety perceptions among financial decision-makers of medium-vs. large-size companies. *Accident Analysis Prevention, 43*(1), 1–10.

Ibarrondo-Dávila, M. P., López-Alonso, M., & Rubio-Gámez, M. C. (2015). Managerial accounting for safety management. The case of a Spanish construction company. *Safety Science, 79*(November), 116–125.

Jallon, R., Imbeau, D., & de Marcellis-Warin, N. (2011). Development of an indirect-cost calculation model suitable for workplace use. *Journal of Safety Research, 42*(3), 149–164.

Johanson, U., Ahonen, G., & Roslender, R. (2007). *Work health and management control.* Stockholm: Thomson Fakta.

Jönsson, S., & Lukka, K. (2006). There and back again: Doing interventionist research in management accounting. In S. C. Chapman, A. G. Hopwood, & M. D. Shields (Eds.), *Handbooks of management accounting research* (Vol. 1, pp. 373–397). Elsevier.

Klein, K. J., & Sorra, J. S. (1996). The challenge of innovation implementation. *Academy of Management Review, 21*(4), 1055–1080.

Kleiner, B. M., Hettinger, L. J., DeJoy, D. M., Huang, Y. H., & Love, P. E. (2015). Sociotechnical attributes of safe and unsafe work systems. *Ergonomics, 58*(4), 635–649.

Liu, L. Y., & Pan, F. (2007). The implementation of activity-based Ccosting in China: An innovation action research approach. *The British Accounting Review, 39*(3), 249–264.

Loeppke, R. R., Hohn, T., Baase, C., Bunn, W. B., Burton, W. N., Eisenberg, B. S., et al. (2015). Integrating health and safety in the workplace: How closely aligning health and safety strategies can yield measurable benefits. *Journal of Occupational and Environmental Medicine, 57*(5), 585–597.

Mättö, T., & Sippola, K. (2016). Cost management in the public sector: Legitimation behaviour and relevant decision making. *Financial Accountability & Management, 32*(2), 179–201.

Miller, P., & Haslam, C. (2009). Why employers spend money on employee health: Interviews with occupational health and safety professionals from British industry. *Safety Science, 47*(2), 163–169.

Noy, Y. I., Hettinger, L. J., Dainoff, M. J., Carayon, P., Leveson, N. G., Robertson, M. M., et al. (2015). Emerging issues in sociotechnical systems thinking and workplace safety. *Ergonomics, 58*(4), 543–547.

O'Neill, S., McDonald, G., & Deegan, C. M. (2015). Lost in translation: Institutionalised logic and the problematisation of accounting for injury. *Accounting, Auditing & Accountability Journal, 28*(2), 180–209.

O'Neill, S., Martinov-Bennie, N., Cheung, A., & Wolfe, K. (2013). Issues in the measurement and reporting of work health and safety performance: A review. *Safe Work Australia, Safety Institute of Australia and CPA Australia.*

Parker, L. D. (2005). Social and environmental accountability research: A view from the commentary box. *Accounting, Auditing & Accountability Journal, 18*(6), 842–860.

Reiman, T., & Rollenhagen, C. (2011). Human and organizational biases affecting the management of safety. *Reliability Engineering & System Safety, 96*(10), 1263–1274.

Rikhardsson, P. M., & Impgaard, M. (2004). Corporate cost of occupational accidents: An activity-based analysis. *Accident Analysis and Prevention, 36*(2), 173–182.

Robertson, M. M., Hettinger, L. J., Waterson, P. E., Ian Noy, Y., Dainoff, M. J., Leveson, N. G., et al. (2015). Sociotechnical approaches to workplace safety: Research needs and opportunities. *Ergonomics, 58*(4), 650–658.

Walsh, J. P. (1995). Managerial and organizational cognition: Notes from a trip down memory lane. *Organization Science, 6*(3), 280–321.

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Ethics, Social Responsibility and Tax Aggressiveness. Can a Code of Ethics Absolve a Company?

Francesca Maria Cesaroni, Mara Del Baldo and Francesca Stradini

1 Introduction

The aim of the paper is to contribute to the debate on the relationship between ethics, socially responsible behaviour and tax aggressiveness through the analysis and discussion of a case study. This issue is of particular relevance in Italy, where taxation levels are very high and several Italian companies have been involved in tax aggressive practices in the last years.

The case presented in this paper concerns a famous Italian fashion house—Dolce & Gabbana—well known all over the world, which in recent times was tried in court for a tax inversion operation. D&G Group was involved in a long legal trial, whose outcome has given rise to many discussions. The story definitely ended, and after the final trial the Group was judged innocent. However, this case raised a fervent debate that is still ongoing, and it gives the opportunity to discuss some important issues: What is the boundary between legality and ethics in tax behaviour? Can a company claim to adhere to ethical principles if it adopts aggressive tax practices? Can aggressive tax behaviours be acceptable from an ethical point of view?

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The case also opens questions related to the boundaries between the responsibilities of directors/managers and institutional responsibilities, at both national and supranational level.

The remainder of this paper is structured as follows. In Sect. 2, a brief review of the relevant literature focused on ethics and tax behaviours is presented. Section 3 introduces the methodology, while Sect. 4 describes the case under investigation—Dolce & Gabbana. Sections 5 and 6, respectively, discuss the main findings of the analysis. Finally, the concluding section summarizes considerations and insights to further investigate this emerging research area.

2 Ethics, Corporate Social Responsibility and Tax Behaviour. A Literature Review

Only recently have the ethical implications of corporate tax behaviours been discussed by CSR scholars. The interest in this topic has been raised by the numerous companies in the world that adopt aggressive tax behaviours—tax avoidance, tax inversions, tax mitigation, etc. (Freedman 2003).

The goal of aggressive tax practices is to reduce the corporate tax burden. Many companies consider taxes as a cost that reduces corporate profits (Avi-Yonah 2008, 2014; Hasseldine 2013) and adopt aggressive tax behaviours to erode the tax bases. However, such behaviours cause a decrease in governments' revenues, thus generating conflicts of interests between shareholders and stakeholders.

Mass media increasingly report and shame aggressive corporate tax strategies, and society is demanding companies to be good citizens (also) in tax-related matters. Investors (Brooks et al. 2016), shareholders (Antonetti and Anesa 2017) and consumers (Hardek and Hertl 2014) are also considering negatively corporate tax aggressiveness. For example, shareholders consider less risky investing in companies that pay higher effective tax rates (Brooks et al. 2016), and some scholars have proved that tax aggressiveness may cause falls in the combined market capitalization of companies (Choy et al. 2016). Other scholars have investigated stakeholders' expectations and reactions to corporate tax behaviour (Hillenbrand et al. 2017; Hardeck and Hertl 2014).

In the face of this evidence, corporate taxation has become a social issue (De la Questa and Pardo 2018) and has raised many questions about the link between what corporates do and what the public expects (Huseynov and Klamm 2012). Influential non-governmental organizations have recently drawn attention to the issue of corporate tax behaviour and have campaigned to frame corporate taxation as a CSR issue (Oxfam 2016; Action Aid 2015; Christian Aid 2011; Sustainability 2006; Boerridl et al. 2019). Association between CSR and corporate tax avoidance has also been the subject of several academic analyses and investigations (Avi-Yonah 2008; Col and Patel 2016; Lanis and Richardson 2015; Preuss 2012; Raiborn et al. 2015; Scarpa 2018; Sikka 2010; Stephenson and Vracheva 2015; Su and Tan 2018; Vonwil and Wreschniok 2009).

In this research stream, ethical issues are also involved, as ethics is one of the foundational principles of CSR. Thus, many scholars have questioned the ethical implications of tax aggressiveness and have adopted different theoretical lenses to reflect on the consistency between aggressive tax behaviours, ethics and CSR (Huseynov and Klamm 2012; Park 2017).

In this regard, two opposing perspectives can be identified, based on two different views of the company's objectives and tax payment.

Scholars who adhere to the first perspective believe that it is acceptable for a company to try to lower the tax burden as much as possible (Watson 2011). Some scholars also believe that this behaviour is not contrary to the principles of CSR (Christensen and Murphy 2004). According to Huseynov and Klamm, (2012, p. 825) "Firms with strong CSR that strategize to lower costs may be doing so not only for the benefit of shareholders, but also for the benefit of society". Such firms can in fact be in a better position to join or promote charities and other solidarity initiatives. Authors also claim that firms that reduce tax payment may have strong governance, and an effective management towards community, or diversity objectives, which dispels the notion that shareholders may "be cheated" (Huseynov and Klamm 2012).

Most companies consider taxes simply as operational costs to be minimized in favour of profits and shareholders' value (Timonen 2008). Research proposes that tax avoidance is a tax-saving vehicle that reduces costs and increases shareholders' wealth (e.g. Graham and Tucker 2006; Hanlon and Heitzman 2010; Hanlon and Slemrod 2009; Robinson et al. 2010). This position responds to the so-called shareholder view of the firm (Friedman 1971). It argues that the purpose of the company is to maximize profits for its shareholders. Taxes are simply considered a cost of doing business, and therefore, trying to minimize the tax burden is considered acceptable and consistent with the duties of "good" managers and directors. According to this view, corporates should only be sure to comply with the letter of the law, which means that they can plan aggressive tax strategies to "legally" avoid paying taxes. In this context, the purpose of each company—together with its tax advisors—is to reach the "fair share" of taxation, which "means using all allowable deductions to minimize the tax base by actively organizing the company's affairs to receive the maximum deductions offered in various jurisdictions" (Dowling 2013). For multinational companies, this approach would also lead to consider lawful to choose to pay taxes in countries with the lowest tax rates. From this point of view, the only limit to the freedom of action for directors and managers is the respect of the law, because obviously behaviours and actions contrary to the law (e.g. tax evasion, etc.) cannot be admitted.

In the second group are the scholars who consider tax payments as a moral duty and "a fundamental and easily measured example of a company's citizenship behaviour"

(Dowling 2013). Most scholars in this group take an uncompromising position regarding the relationship between tax behaviour, ethics and social responsibility. This position is well represented by Sikka (2010), who believes that avoiding taxes while considering themselves socially responsible represents a form of "organized hypocrisy" (Sikka 2010), especially if companies publicly declare their commitment to comply with high ethical standards. According to Preuss (2012), tax avoidance practices cannot be morally justified and cannot be considered consistent with ethical principles, regardless of the theoretical lens used to judge them. This perspective is consistent with the stakeholder view of the firm (Freeman 1984; Freeman et al. 2010). According to it, companies are not only responsible to shareholders, but they have also moral obligation towards a wider audience of stakeholders in the jurisdiction where they operate and profits are generated. Corporate taxation has considerable implications for the whole society. This means that companies should pay the due amount of taxes in order to contribute to the government's expenses for social services, like education, transportation and so on. Society is not only interested in knowing whether firms obey tax law but also whether corporate tax payments can be considered "fair and responsible" (Hoi et al. 2013). From this point of view, "tax payments can be considered a clear measure of the direct financial contribution a company makes to an elected govern" (Dowling 2013). According to Sikka (2010), the payment of democratically agreed taxes represents a litmus test for claims of social responsibility. As a consequence, firms that use tax shelters could be considered socially irresponsible (Erle 2008; Schön 2008).

Some authors also argue that adopting a moral behaviour does not only mean obeying the letter of the tax law, as complying with to the spirit of the law is also necessary (Lanis and Richardson 2011). This distinction is required—even if very difficult to outline—as companies can apply a number of solutions to "legally" avoid to pay taxes, also thanks to the high complexity of the tax law in many jurisdictions. This fact gives raise to several problems. In fact, distinguishing between legal and illegal tax behaviour is often very difficult, and it is not easy to identify tax avoidance practices. In many countries, for example, tax avoidance means putting into practice behaviours and actions, legal in themselves, but implemented with the only aim of circumventing the tax law in order to obtain undue benefits through the reduction of the tax burden (Marino 1999; Melis 2007, 2014; Gallo 2016; Corso 2016; Dorigo and Mastellone 2015; Pauro et al. 2012; Santacroce et al. 2013; Ylönen and Laine 2015; Valente et al. 2016). Therefore, in order to ascertain a tax avoidance practice, it is necessary to verify that transactions without economic substance have been implemented, with the only purpose of obtaining tax advantages. This is why these practices give rise to different and often contradictory interpretations, which are often the subject of heated debates and discussions in courtrooms.

Tax avoidance also concerns the existence of the so-called tax haven countries. In this regard, OECD came up with four key factors that identify a territory as a tax haven (OECD 1998, p. 3): no, or only nominal, taxes; lack of effective exchange of information; lack of transparency; no substantial corporate activities required (Levin et al. 2007; OECD 2013; The B Team 2018).

From a legal perspective, many authors claim for a clear and homogeneous definition of tax avoidance, in order to undoubtedly identify conducts aimed at obtaining undue tax benefits by means of a misrepresented use of legal instruments. The ambiguity that currently surrounds the concept of tax avoidance very often does not allow the application of criminal penalties as well as the use of administrative fines to oppose such behaviours. Therefore, some scholars claim that to fight tax avoidance, introducing financial or indirect penalties, such as higher interests rates, should be more effective (Sammartino 2015).

Even more difficult it is to identify the boundary between respecting the letter of the law and the spirit of the law and deciding whether a company's tax behaviour can be considered ethical and consistent with a socially responsible approach to doing business. Nevertheless, many authors believe that respecting the spirit of the law "represents a boundary condition for CSR" (Dowling 2013).

Another problem concerns the relationship between what companies write and claim in their social/sustainability/integrated reports and how they actually behave in doing business. Empirical research on this topic provides different and somehow contradictory findings (Fallan 2015). Lanis and Richardson (2011, 2012, 2013, 2015, 2016) are important contributors in this field. In their early study, they examined the impact of firms' tax policy on CSR performance and empirically proved that the higher the level of CSR performance of a firm, the lower the likelihood of tax avoidance. In other words, firms that performed better with respect to their CSR activities were less likely to be tax aggressive (Lanis and Richardson 2012). They suggested that a high degree of tax aggressiveness was "considered by the public to constitute socially irresponsible or illegitimate activity" (i.e. companies were not paying a fair share of taxes). In a later study (Lanis and Richardson 2015), they wondered whether CSR performance was associated with corporate tax avoidance and empirically verified that more socially responsible firms are likely to display less tax avoidance.

Contrary to Lanis and Richardson's findings are Davis et al.'s (2016) results. The latter points out that a higher rating in CSR is associated with lower taxes paid. They found that more socially responsible firms are more likely to engage in tax lobbying. Socially responsible firms may not consider the payment of corporate taxes to be the best means to accomplish their social responsibility goals. Moreover, they may even believe that "paying taxes detracts from social welfare. Adopting a more cynical interpretation of their research's findings, authors claim that firms engage in CSR to create 'moral capital' to reduce the consequences of their involvement in negative events or publicity". In other words, some firms are supposed to strategically engage in CSR to create a more favourable reputation among various stakeholders and reduce the possibility of negative attention or regulatory action directed at aggressive tax practices.

In line with these contradictory results, Preuss (2010) discovered that a lot of companies based in tax havens actually claimed to have behaviours inspired by CSR principles. He studied the CSR position of a sample of multinational companies (MNCs) based in tax havens and analysed the content of their codes of conducts. Such a document is a tool predominantly adopted in large corporations (Kaptein

2004) to improve legitimacy (Painter-Morland 2010; Adams et al. 2001) and make claims that they engage in socially responsible business practices (Raiborn and Payne 1999), in an "attempt, through communication, to become identified with symbols, values and institutions which have a strong base of social legitimacy" (Preuss 2010, p. 371). According to the author, the risk deriving from the spread of such behaviours is to make the CSR "nothing more than window dressing".

As a consequence, phenomena such as *greenwashing* and *bluewash*[1] arise (Laufer 2003). Such phenomena have been considered unethical and condemned by many authors. They found severe contradictions between what companies declare in their public reporting (Moneva et al. 2006; Diouf and Boiral 2017) and their actual behaviours, as CSR reports and ethical codes are sometimes used to cover non-responsible and unethical behaviour. This risk is even increased when companies exploit CSR activities to their advantage, completely misrepresenting its basic principles. For example, Prior et al. (2008) found that companies active in earnings management practices were also very committed to managing their public image through CSR activities. The latter were mainly implemented in order to avoid being criticized by other stakeholders while maximizing shareholders' financial interests.

In conclusion, although the relationship between tax behaviours, ethics and CSR has recently been the subject of several analyses and investigations, findings provided mixed results. Therefore, some questions still remain open: What is the boundary between legality and ethics in tax behaviour? Can a company claim to adhere to ethical principles if it adopts tax avoidance practices? Can aggressive tax behaviours be acceptable from an ethical point of view?

In order to progress the knowledge in this field, the following case is useful to further get light on these issues by addressing a tax avoidance behaviour in relation to CSR.

3 Method, Case Selection and Data Collection

In order to contribute to the current debate about the relationship between CSR and tax avoidance, this paper presents and discusses a case study concerning an Italian company, owner of a worldwide famous fashion brand, which represents a prestigious "ambassador" of the Italian style.

We selected this company because it can be considered an exemplary case (Eisenhardt 1989). Some years ago, it implemented an operation of tax inversion and was involved in a long judicial procedure, whose outcome has given rise to great discussion. Other reasons behind the choice of this case are the following:

[1] The appearance of the terms "greenwash" and "bluewash" (washing of the reputation according to the United Nations) reflects a growing fear that at least some companies creatively manage their reputations with the public, the financial community and regulators, in order to hide deviance, mislead attribution of responsibility, obscuring the nature of a problem or a call, attributing blame to others, securing a reputation for the institution and, in the end, trying to appear in a leadership position.

- the story has definitely ended, after arriving at the third degree of judgment, and thus it gives us the opportunity to have the complete picture of the story and its final outcome;
- a rich documentation regarding the case is available, as it is a well-known company all over the world.

Information has been collected from different sources: business documentation and website, newspaper articles and online news, court rulings and jurisprudence comments. The case study was analysed adopting an interdisciplinary approach, thus implying the adoption of a management and a law perspective.

4 The Dolce & Gabbana Group: A Brief Description

Established in 1985 and headquartered in Milan (Italy), Dolce & Gabbana Group is a large, private and not listed Italian company. It has a widespread presence on a global scale and represents one of the leading international groups in the fashion and luxury sector. The Group creates, produces and distributes high-end clothing, leather goods, footwear, accessories and watches. The brand is present in the prêt-à-porter segment with men's, women's and children's collections and in the high craftsmanship segment with haute couture and jewellery collections.

The direct control over the entire value chain, from products creation to sales, enables the Group to convey its strongly distinctive style and solid DNA, based on artisan sartorial tradition and Mediterranean culture of Italy. The continuous development at global level lies on the direct control of the production and distribution process, combining the strategic vision of the headquarters in Milan with a widespread presence worldwide, through branches in New York, Tokyo, Hong Kong and Sao Paulo.

Some years ago, the Group corporate structure underwent several changes, thus causing it to be accused of tax fraud, as discussed in next sections in this paper.

With specific regard to CSR, the Group does not publish a social or sustainability report, nor has formally released a CSR strategy. However, Dolce & Gabbana Group has adopted a code of ethics which is published on Dolce & Gabbana institutional website.[2] The code formally states the Group's ethical pillars and rules of conduct (Table 1).

In its code of ethics, the company declares that ”in a constant effort to adopt ethically flawless and law-abiding behaviours”, it “has felt the need to formalize in a corporate document the fundamental values and rules of conduct that guide its responsible action in the relationships with its internal and external stakeholders, for the pursuit of its corporate and social mission”.

A further section of the code of ethics (Sect. 3.6) is devoted to “Protection of intellectual property”. Here, the company declares “to promote the correct use, for

[2] http://www.dolcegabbana.com/corporate/.

Table 1 Pillars of Dolce & Gabbana code of ethics

1	Contrast and harmony
2	Respect for people
3	Creativity and entrepreneurship
4	Integrity and business ethics
5	Responsibility and honesty
6	Respect for the environment

Source our elaboration of "Codice Etico Dolce & Gabbana", available at: www.dolcegabbana.it

any purpose and in any form, of brand, intellectual properties trademarks, distinctive signs and all the assets of a creative nature".

These extracts of the code of ethics are here highlighted, as they are useful in evaluating the recent corporate restructuring of the Group that gave rise to a long legal dispute. The corporate restructuring operations, and the resulting legal dispute, are described below. Then, these operations are discussed in the light of the principles and rules of conduct that the Group states in its code of ethics.

5 The Dispute: Main Steps

In March 2004, Dolce & Gabbana Group was involved in a tax dispute and in a criminal case. The dispute arises after a corporate restructuring, when the Italian tax police carried out a corporate audit at Dolce & Gabbana Group and accused the company of aggravated fraud against the Italian State and unfaithful tax return.

What had happened? Why did the Italian tax police challenge the corporate restructuring? Why was the Group accused of tax fraud? To answer these questions, we have to consider the corporate structure before the restructuring operation and how and why it was modified.

Before the corporate restructuring (Fig. 1), the Group was controlled by Dolce & Gabbana Srl, wholly owned by the two fashion designers—Domenico Dolce and Stefano Gabbana—each with a 50% share. Dolce & Gabbana Srl held 90% of a sub-holding company, which in turn owned 51% of some operating firms. The sub-holding and the operating firms were the licensee of the brands and paid royalties to Domenico Dolce and Stefano Gabbana.

The main weakness of this corporate structure concerned the ownership of the brands, the key asset of the whole group. In fact, the two fashion designers owned the brands and this worried the banks, which feared the consequences of possible conflicts between Dolce and Gabbana. Moreover, the they were planning to list the company and were looking for more attractive markets for their products and brands. For these reasons, the two owners decided to move the headquarters of the Group in another UE country and the choice fell on Luxembourg, which also presented a more favourable corporate tax regime. Thus, a new company—GADO—was set

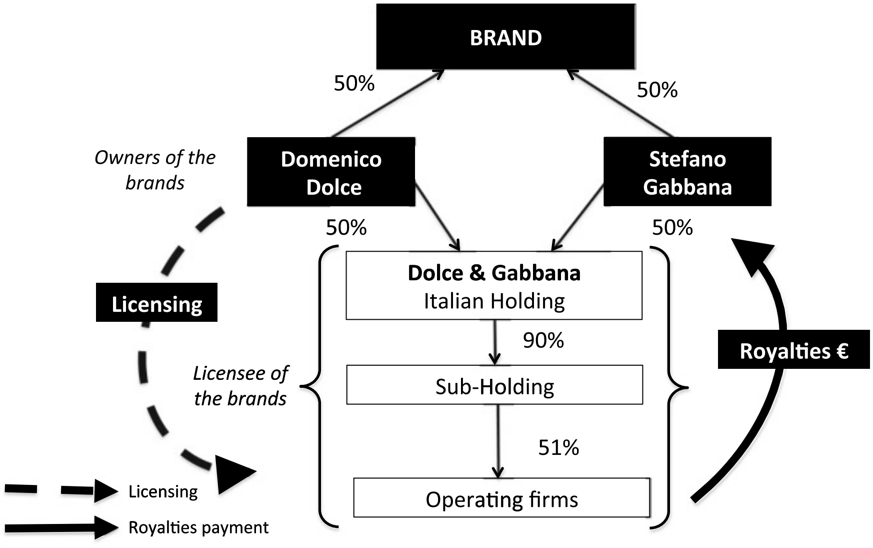
BRAND
50%
50%
Owners of the brands
Domenico Dolce
Stefano Gabbana
50%
50%
Licensing
Dolce & Gabbana Italian Holding
90%
Licensee of the brands
Sub-Holding
51%
Royalties €
Operating firms
Licensing
Royalties payment

Fig. 1 Dolce & Gabbana Group before the corporate restructuring

up in Luxembourg. The latter also asked the Luxembourg tax authority to verify its compliance with the parameters necessary to have a favourable tax treatment. The answer was positive, and the new company GADO got the approval.

GADO was wholly owned by another new Luxembourg company (Dolce & Gabbana Luxembourg), which in turn was controlled by the Italian holding Dolce & Gabbana Srl (Turi 2017). Domenico Dolce and Stefano Gabbana, former owners of the brands, sold them to GADO, at a price of 360 million euros. Then, GADO granted the Italian holding a 12 years exclusive licence for the use of the brands, receiving royalties in return (Fig. 2).

This operation allowed the Group obtaining a considerable tax advantage. In fact, before the operation, the royalties for the use of the brands were directly perceived by the two fashion designers, who paid personal income tax in Italy at a very high marginal tax rate (45%). After the operation, the same royalties were received by the Luxembourg company GADO that was subject to a much more favourable tax treatment (it only paid 4%, as agreed with the Luxembourg tax authorities).

This operation was contested by the Italian tax police, according to which the operation was exclusively aimed at obtaining a huge tax saving, especially for the two fashion designers. In particular, the Italian tax police contested the operation for the following reasons:

– the transfer to Luxembourg was not motivated by any real economic reason;
– the Luxembourg companies had not hired any employees;
– the strategic direction of the Group had remained in Italy;

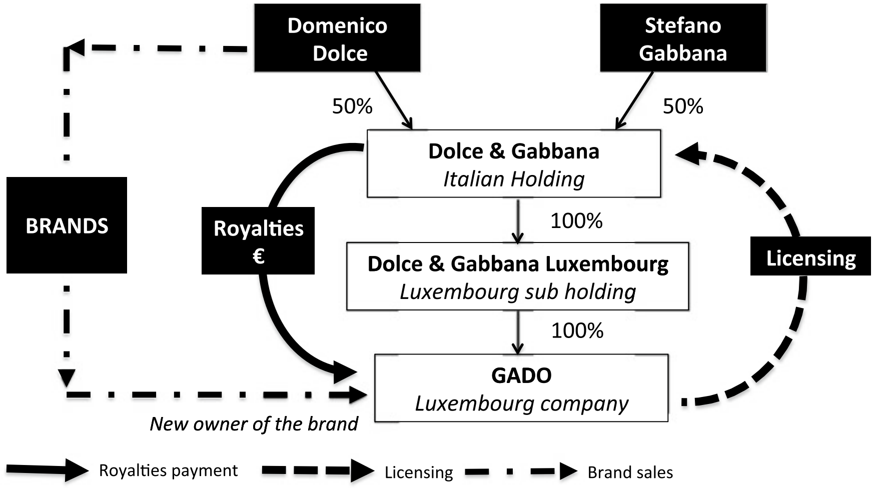
Domenico Dolce
Stefano Gabbana
50%
50%
Dolce & Gabbana
Italian Holding
100%
Dolce & Gabbana Luxembourg
Luxembourg sub holding
100%
GADO
Luxembourg company
BRANDS
Royalties €
Licensing
New owner of the brand
Royalties payment
Licensing
Brand sales

Fig. 2 Dolce & Gabbana Group after the corporate restructuring (March, 2004)

– Domenico Dolce and Stefano Gabbana had sold the brands to GADO at a "disproportionately low" price (Bagarotto 2008).

On the basis of these motivations, in the first and second degrees the Italian court accused the Group of tax inversion, and Domenico Dolce and Stefano Gabbana were asked to pay a fine of 800 million euros.[3]

However, the Court of Cassation reversed the sentence and considered the operation legal.[4] According to the Court of Cassation, in fact, although the transaction allowed Dolce and Gabbana to obtain substantial tax advantages, it had been accomplished with other purposes. The main objective was in fact to create a corporate structure more consistent with the Group's growth ambitions and with its desire to become a leader in the international competitive context.

6 Discussion

The consequences of the restructuring operation can be analysed from a double point of view: legal and ethical.

From the legal point of view, it is interesting to understand why and how this case gave rise to tax and criminal disputes and consequences. Two main aspects should be highlighted.

[3] CTP Milan, sex. XVI, Sentence 4 January 2012, n. 1. CTR Lombardia, Sentence 28/6/2011, n. 67/27/11.

[4] Cassation Court, sez. V, Sentence 21/12/2018 n. 33234.

First, after the restructuring operation, the Luxembourg company GADO was the new owner of the brand and so the royalties were no longer received by the two partners. Thus, royalties were taxed in Luxembourg with a 4% rate, considerably lower to those applied in Italy, where the same royalties were taxed in the hands of the two fashion designers. As a consequence, the tax revenue for the Italian government decreased, as after the restructuring the two designers obtained a lower personal income. For the Italian tax police, the corporate restructuring resulted in undue tax benefits.

Second, the selling price of the brand was not consistent with the market value and income flows.

From the tax point of view, the real problem concerns the tax residence of GADO. In the opinion of the Italian tax police, the creation of a company in Luxembourg was only intended to obtain tax benefits as no other strategic or business reason behind that operation was identified. In this regard, it is important to remember that the choice to locate a company abroad is consistent with the freedom of establishment UE principle. This choice can result in lower taxation, but this does not necessarily mean tax avoidance. A tax advantage is not undue only because a company benefits from opportunities permitted by law, but also if it gets such benefits through a pure artifice. In the D&G case, the core question was the tax inversion construct with respect to the tax residence of companies belonging to the Group. According to the Italian tax police, even after the corporate restructuring, the Italian holding, headquartered in Milan, remained the real head office and the heart of the Group. GADO was not considered the true "centre of strategic decisions", because in Luxembourg there was not a real administrative and management office (in fact only in 2006 GADO hired a secretary).

This is why Dolce and Gabbana were accused of tax inversion. The latter refers to "the fictitious location of tax residence of a company abroad, in particular in a country with a more advantageous tax treatment than the national one, in order to avoid the most onerous national regime" (Cassation Court, Sentence of 7/2/2013 n. 2869).

This situation is an abuse of law if there are two conditions: first, the tax advantage must be contrary to the spirit of tax law; second the only purpose of the operation must be the achievement of an undue tax advantage[5] (Mereu 2012; Pauro et al. 2012; Santacroce and Avolio 2013; Gallo 2016).

As regards the principle of freedom of establishment, a sore point is to identify when there is tax avoidance and consequently tax law abuse. According to the Italian law, a tax abuse exists if there is a real transfer of tax residence and if the operation is a completely artificial arrangement "consisting in the creation of legal form that does not reproduce a corresponding and genuine economic reality". Therefore, it is important to consider both questions of tax avoidance and tax abuse according to the concept of tax residence. In fact for the Italian tax law, it is necessary to consider the legal head/administrative office or place where the main activity is carried out. For

[5] See: CGCE, C-419/14; CGCE, C-255/02; CGCE, C-425/06; CGCE, C.103/09; CGCE, C-277/09; CGCE, C-398/16 e 399/16.

the Italy–Luxembourg Convention, what is relevant is the location of the company's headquarter that is the centre of operations and decision making. Based on this definition, it can be excluded that GADO could be considered the tax residence of the Group, since the control and general management of the Group were carried out entirely in Italy.

While it is difficult to express an unequivocal judgment on the tax aspects of this operation, it is even more difficult to assess the same operation from the ethical point of view. In this regard, the company's behaviour should also be assessed in terms of consistency between what the company "does" and what the company "declares" about the Group's commitment towards ethical standards.

A decoupling arises if one carefully considers the implications of a code of ethics and rules of conduct with regards to all corporate stakeholders (included community and public administration) and their needs. In general terms, the principles stated in a code of ethics represent "soft laws" that should orient and regulate both the company's management and ownership and its internal and external stakeholders. Otherwise, the code would simply act as a promotional document that could be opportunistically used for restoring or promoting the company's reputation, without any actual effect on company's governance and culture. The code represents a disclosure tool and recalls to integrity and business ethics, as well as to responsibility and honesty among the several guiding principles. It declares the Group's "constant endeavour to conform to ethically exemplary conduct and in compliance with legal rules", thus including tax rules. From this point of view, a crucial issue to highlight is that only after the corporate restructuring did the Group adopt a code of ethics, thus raising a serious doubt that its real intention was to repair the Group's reputation (Lanis and Richardson 2012). Indeed this "curious" coincidence of time gives rise to two different and contrasting consequences for the evaluation of the operation. On the one hand, the date of introduction of the code of ethics relieves the Group of the charge of inconsistent behaviour. In fact, before the restructuring operation, the Group had never declared its intention to adhere to ethical principles or to adopt socially responsible behaviour. The Group cannot therefore be accused of inconsistency, even if the morality of the operation remains in doubt. In fact, it is clear that the two fashion designers were the only ones to gain an advantage, while the government and the Italian community paid the negative consequences of the operation, due to the reduction in tax revenues paid in Italy. On the other hand, the introduction of the code of ethics in 2006, shortly after the restructuring operation, inevitably leads us to think that the code had a window-dressing function. It is indeed difficult not to think of the desire to restore the reputation of the Group, put at risk by the legal dispute.

Other considerations concern the perspective of analysis that should be adopted to judge tax avoidance practices and, in general, aggressive tax behaviours. Namely we suggest that a possible interpretative key lies on shifting the attention from the "micro level"—that is the company tax behaviour and its (missed or manifested) ethics and social responsibility (such in the case of Dolce & Gabbana Group)—to address attention to the "macro level"—that is the complex institutional and normative context of the country(ies) where the company operates. When a company is internationally based and competes on a global scale, the problem to fit with national and supranational law frameworks emerges. Moreover, a decoupling between national and supranational (i.e. European) norms arises. Despite contradictory interpretations drawn from our analysis, Dolce & Gabbana tax behaviours were definitely considered consistent with the Italian law. In fact, the Cassation Court's decision, released on 24 October 2014, acquitted Dolce and Gabbana "for not having committed the crime". Moreover, at a macro level the European laws allow the company to set up units in countries characterized by lower levels of taxation, in accordance with the UE principle of freedom of establishment that does not necessarily mean tax avoidance.

According to us, Dolce & Gabbana Group pursued de facto a tax inversion policy. Therefore, from an ethical point of view and adopting a critical perspective, the company's behaviour cannot be considered acceptable and socially responsible. However, we claim that a useful and more correct "key" to interpret the case is to consider not only the company's ethics and social responsibility but also the institutional's social responsibility. In fact, we wonder: Who is responsible whether companies adopt this type of behaviour? Is it the responsibility of the company's directors/owners only? If a company lives in Europe and European laws allow the existence of very different tax systems, and if even tax havens, such as Luxembourg, are admitted in the European territory, how can we then condemn a company's directors/owners if they decide to move company's activities to these countries to reduce the tax burden? Should not this problem be addressed by the EU government, through the harmonization of national tax systems within the European space?

As a consequence, we argue that the problem of responsibility mainly rests on this "institutional" incoherence and should be understood and "fighted" at a macro level, rather than only at the level of business, because it is the system and the regulatory framework that make it possible, if not, sometimes, encourage and facilitate tax aggressiveness behaviours.

7 Conclusions

Traditionally, the debate on corporate tax responsibility has been led by NGOs and multilateral entities (Boerrild et al. 2019; Ylönen and Laine 2015), focusing on the negative impact generated in developing countries by MCNs practices related to corruption and non-payment of taxes. However, in recent years the debate has been broadened to all type of companies, in a context of increasing public awareness of corporate harmful tax practices.

It also represents a relevant and emerging issue within the CSR research field that has not been deeply explored. Despite a growing research effort in the separate areas of tax avoidance and CSR, the link between these two areas is still weak. Research related to corporate tax avoidance is a matter of concern for tax authorities (concerned with tax revenues and consequently interested in tax aggressiveness, tax shelters and tax evasion). At the same time, it represents a relevant topic within the CSR research since companies are called to adopt ethical practices and to be accountable towards all stakeholders. Shareholders are interested in whether firm's management fulfils its responsibility of increasing their wealth, and they expect management to control expenses. In turn, several categories of stakeholders and, among the latter, the general public have an interest in knowing "whether a corporation is a good citizen and pays fair share of taxes" (Huseynov and Klamm 2012, p. 804). Paying taxes is a crucial corporate contribution to society and is considered essential for good governance.[6]

Despite the large number of studies on tax aggressiveness, ethics and CSR, only recently have scholars considered the relationship between CSR them. However, drawing from existing empirical studies (Lanis and Richardson 2011, 2012, 2013, 2015; Davis et al. 2016), different and contrasting results emerge (Fallan 2015).

Due to conflicting perspectives and needs, as the case analysis demonstrates, it is really hard to balance and reconcile the different and often divergent interests (Mereu 2012; Salvini 2012). Notwithstanding the high social impacts resulting from corporations' tax practices, few scholars have adopted a comprehensive approach towards corporate tax responsibility (De la Cuesta González and Pardo 2018) and investigated shareholders and investors' approach, as well as—more generally—stakeholders' approach.

First, prior contributions point out that it is hard to assess and clearly interpret the relationships between ethics, CSR and tax avoidance.

Second, it is sometimes very difficult to understand the different "nuances" of tax aggressiveness, as the case study commented in this paper demonstrates (Park 2017). In other words, it is an under-researched aspect of CSR because currently few researches deep into the controversial relationship between formal and informal CSR behaviour, as well between "sunken" (i.e. more nuanced and implicit) and formal (explicit) tax avoidance forms.

"Current literature seems to present several research paths to be nurtured in order to fill existing gaps: it lacks a solid theoretical framework to define the connection between CSR theories and corporate taxation; it does not provide a guidance on what tax behaviours should be considered as socially responsible; it does not offer insights into how corporates currently respond to the growing social pressure on tax responsibility" (Scarpa 2018, p. 14); it does not investigate "what corporate tax policies are perceived as "fair" and "responsible" and what corporate tax information should be disclosed to the public; what functions, objectives and policies should be implemented by tax management and tax governance to achieve a more responsible approach to tax" (Scarpa 2018, p. 18).

Accordingly, the contribution of our research is to enrich the academic debate with further reflections drawn from the analysis of a case study by pointing out: first, the controversial features of tax aggressiveness—such as tax inversion; second, marking the difficulty to find a consensual definition of tax-related concepts in regard to CSR behaviours and finally, by suggesting to address the attention to the "institutional" responsibility tied to the normative-fiscal institutional framework that can elicit and/or admit tax aggressive behaviours.

[6] Italian Constitution, Art. 53 and 23.

Literature

Action Aid. (2015). *The West African giveaway: Use & abuse of corporate tax incentives in ECOWAS*. Oxford, UK: Action Aid. Available at: http://www.actionaid.org/sites/files/actionaid/the_west_african_giveaway_2.pdf.

Adams, J. S., Taschian, A., & Shore, T. H. (2001). Codes of ethics as signals for ethical behaviour. *Journal of Business Ethics, 29*(3), 199–211.

Antonetti, P., & Anesa, M. (2017). Consumer reactions to corporate tax strategies: The role of political ideology. *Journal of Business Research, 74,* 1–10.

Antonini, M. (2006). Note critiche sulla presunzione in tema di residenza fiscale di società ed enti introdotta dal DL 4 luglio2006, n 223. *Rivista di Diritto Tributario*: 178.

Armstrong, C. S., Blouin, J. L., & Larcker, D. F. (2011). The incentives for tax planning. *Journal of Accounting and Economics, 53,* 391–441.

Avi-Yonah, R. S. (2008). Corporate social responsibility and strategic tax behaviour. In W. Schön (Ed.), *Tax and corporate governance* (pp. 183–198). Heidelberg: Springer.

Avi-Yonah, R. S. (2014). Corporate taxation and corporate social responsibility. *New York University Journal of Law and Business, 11*(1), 1–29.

Bagarotto, E. (2008). *La presunzione di residenza fiscale delle società "esterovestite"*. Padova: Cedam.

Boerrild, T., Kohonen, M., Sarin, R., Stares, K., & Lewis, M. (2019). Getting to good: Towards responsible corporate tax behaviour, Action Aid; Christian Aid; Oxfam International. In P. Alston & N. Reisch (Eds.), *Tax, inequality and human rights*. New York: Oxford University Press.

Brooks, C., Godfrey, C., Hillenbrand, C., & Money, K. (2016). Do investors care about corporate taxes? *Journal of Corporate Finance, 38,* 218–248.

Choy, S.K., Lai, T., & Ng, T. (2016). *Do treasure islands create firm value*? Working Paper. Shanghai University of Finance and Economics, ISEG School of Management and the Chinese University of Hong Kong.

Christian Aid. (2011). *Tax and sustainability: A framework for businesses and socially responsible investors.* Accounting for change, October 2011. Christian Aid, London. Available at: https://www.christianaid.org.uk/sites/default/files/2017-08/accounting-for-change-taxsustainability-october-2011.pdf.

Christensen, J., & Murphy, R. (2004). The social irresponsibility of corporate tax avoidance: Taking CSR to the bottom line. *Development, 47*(3), 37–44.

Clarkson, P., Li, Y., Gordon, R., & Vasvari, F. P. (2008). Revisiting the relation between environmental performance and environmental disclosure: An empirical analysis. *Accounting, Organizations and Society, 33*(4–5), 303–327. https://doi.org/10.1016/j.aos.2007.05.003.

Col, B., & Patel, S. (2016). Going to haven? Corporate social responsibility and tax avoidance. *Journal of Business Ethics, 8,* 1–18.

Corso, P. (2016). "*Ne bis in idem", elusione fiscale e concorso nel reato tributario secondo la sentenza "Dolce e Gabbana*", *Rivista di Giurisprudenza Tributaria*: 67.

Davis, A. K., Guenther, D. A., Krull, L. K., & Williams, B. M. (2016). Do socially responsible firms pay more taxes? *The Accounting Review: A Quarterly Journal of the American Accounting Association, 91*(1), 47–68. https://doi.org/10.2308/accr-51224.

De la Cuesta González, M., & Pardo, E. (2018). *Corporate tax responsibility*. *Do investors care*?, Paper presented at the Fifth International Conference on CSR, Sustainability, Ethics & Governance Santander, Spain, UNED. Faculty of Economy Santander, June 27–29, 2018.

Diouf, D., & Boiral, A. (2017). The quality of sustainability reports and impression management: A stakeholders perspective. *Accounting, Auditing & Accountability Journal, 30*(3), 643–667. https://doi.org/10.1108/AAAJ-04-2015-2044.

Dolce & Gabbana Srl. (2017). *Corporate Report-Report aziendale*. https://www.reportaziende.it/dolce_gabbana_srl, https://www.google.com/search?q=dolce+e+gabbana+report+2017&rlz=1C1FGGD_enIT498IT500&oq=dolce+e+gabbana+report+2017&aqs=chrome..69i57j0.6455j0j7&sourceid=chrome&ie=UTF-8.

Dorigo, S., & Mastellone, P. (2015). L'evoluzione della nozione di residenza fiscale delle persone giuridiche nell'ambito del progetto BEPS. *Rivista di Diritto Tributario*: 35. è sbagliato nel testo correggere con 2013.

Dowling, G. R. (2013). The curious case of corporate tax avoidance: Is it socially irresponsible? *Journal of Business Ethics, 124*(1), 173–184.

Eisenhardt, K. M. (1989). Building theories from case study research. *Academy of Management Review, 14*(4), 532–550.

Erle, B. (2008). Tax risk management and board responsibility. In W. Schön (Ed.), *Tax and corporate governance* (pp. 205–220). Heidelberg: Springer.

Fallan, E. (2015). Corporate social responsibility and tax aggressiveness: A test of legitimacy theory. *Social and Environmental Accountability Journal, 35*(3), 198–200. https://doi.org/10.1080/0969160X.2015.1093778.

Freeman, E. R. (1984). *Stakeholder management: A stakeholder approach*. Boston: Pitman.

Freeman, R. E., Wicks, A., Harrison, J., Parmar, B., & de Colle, S. (2010). *Stakeholder theory: The state of the art*. Cambridge: Cambridge University Press.

Freedman, J. (2003). Tax and corporate responsibility. *Tax Journal, 695*(2), 1–4.

Friedman, M. (1971). The social responsibility of business is to increase its profits. *The New York Times Magazine*, September 13, 1971.

Gallo, F. (2016). L'abuso del diritto in materia fiscale nell'evoluzione della giurisprudenza della Corte di cassazione. *Rassegna Tributaria, 4,* 837.

Graham, J. R., & Tucker, A. L. (2006). Tax shelters and corporate debt policy. *Journal of Financial Economics, 81,* 563–594.

Hanlon, M., & Heitzman, S. (2010). A review of tax research. *Journal of Accounting and Economics, 50,* 127–178.

Hardeck, I., & Hertl, R. (2014). Consumer reactions to corporate tax strategies: Effects on corporate reputation and purchasing behaviour. *Journal of Business Ethics, 123*(2), 309–326.

Hardeck, I., & Kirn, T. (2016). Taboo or technical issue? An empirical assessment of taxation in sustainability reports. *Journal of Cleaner Production, 133,* 1337–1351.

Hanlon, M., & Slemrod, J. (2009). What does tax aggressiveness signal? Evidence from stock price reactions to news about tax shelter involvement. *Journal of Public Economics, 93,* 126–141.

Hasseldine, J., & Morris, G. (2013). Corporate social responsibility and tax avoidance: A comment and reflection. *Accounting Forum, 37*(1), 1–14. https://doi.org/10.1016/j.accfor.2012.05.001.

Hillenbrand, C., Money, K.G., Brooks, C., & Tovstiga, N. (2017). Corporate tax: What do stakeholders expect? *Journal of Business Ethics*, 1–24.

Hoi, C. K., Wu, Q., & Zhang, H. (2013). Is Corporate Social Responsibility (CSR) associated with tax avoidance? Evidence from irresponsible CSR activities. *The Accounting Review, 88*(6), 2025–2059.

Huseynov, F., & Klamm, B. K. (2012). Tax avoidance, tax management and corporate social responsibility. *Journal of Corporate Finance, 18*(4), 804–827.

Kaptein, M. (2004). Business codes of multinational firms: What do they say? *Journal of Business Ethics, 50*(1), 13–31.

Lanis, R., & Richardson, G. (2011). The effect of board of director composition on corporate tax aggressiveness. *Journal of Accounting and Public Policy, 30*(1), 50–70.

Lanis, R., & Richardson, G. (2012). Corporate social responsibility and tax aggressiveness: An empirical analysis. *Journal of Accounting and Public Policy, 31*(1), 86–108.

Lanis, R., & Richardson, G. (2013). Corporate social responsibility and tax aggressiveness: A test of legitimacy theory. *Accounting, Auditing & Accountability Journal, 26*(1), 75–100.

Lanis, R., & Richardson, G. (2015). Is corporate social responsibility performance associated with tax avoidance? *Journal of Business Ethics, 127*(1), 439–457.

Lanis, R., & Richardson, G. (2016). A reply to corporate social responsibility and tax aggressiveness: A test of legitimacy theory. *Social and Environmental Accountability Journal, 36*(1), 90–92. https://doi.org/10.1080/0969160X.2016.1148975.

Laufer, W.S. (2003). Social accountability and corporate greenwashing. *Journal of Business Ethics, 43*(3), 253–261. https://doi.org/10.1023/A:1022962719299.

Levin, C. (2007). Statement of Senator Carl Levin on introducing the stop tax haven act, Office of Senator Carl Levin, Washington, D.C. Available at: http://levin.senate.gov/newsroom/release.cfm?id ¼ 269514. Accessed February 1, 2010.

Marino, G. (1999). *La residenza nel diritto tributario*. Padova: Cedam.

Melis, G. (2007). La residenza fiscale dei soggetti IRES e l'inversione dell'onere probatorio di cui all'art. 73, commi 5-bis e 5-ter T.U.I.R. *Diritto e Pratica Tributaria Internazionale, 3*, 784.

Melis, G. (2014). Le interrelazioni tra le nozioni di residenza fiscale e stabile organizzazione: problemi ancora a certi e possibili soluzioni. *Diritto e Pratica Tributaria, I,* 10029.

Mereu, A. (2012). Abuso del diritto ed elusione fiscale: rilevanza penale o mera mancanza di una explicatio terminorum? Alcune riflessioni a margine del caso 'Dolce & Gabbana'. *Diritto e Pratica Tributaria, I*, 1001.

Moneva, J. M., Archel, P., & Correa, C. (2006). GRI and the camouflaging of corporate un-sustainability. *Accounting Forum, 60,* 121–137.

OECD. (1998). *Harmful tax competition: An emerging global issue, organization for economic co-operation and development, Paris*. Available at: www.oecd.org/dataoecd/33/0/1904176.pdf.

OECD. (2013). *Action plan on base erosion and profit shifting*. OECD Publishing.

Oxfam. (2016). *Tax battle—The dangerous global race to the bottom on corporate tax*. Oxfam Policy Paper 12 December 2016. Available at: https://www-cdn.oxfam.org/s3fs-public/bp-race-to-bottom-corporate-tax-121216-en.pdf.

Painter-Morland, M. (2010). Questioning corporate codes of ethics. *Business Ethics: A European Review, 19*(3), 265–279. https://doi.org/10.1111/j.1467-8608.2010.01591.x.

Pauro, U., Stevanato, D., Lupi, R., & Gargiulo, G. (2012). *Evasione interpretativa, Cassazione penale e motivazione della mancanza di dolo*. Dial. Trib.

Park, S. J. (2017). Corporate social responsibility and tax avoidance: Evidence from Korean firms. *The Journal of Applied Business Research, 33*(6), 1059–1068.

Payne, D. M., & Raiborn, C. A. (2018). Aggressive tax avoidance: A conundrum for stakeholders, governments and morality. *Journal of Business Ethics, 147*(3), 469–487.

Prior, D., Surroca, J., & Tribo, J.A. (2008). Are socially responsible managers really ethical? Exploring the relationship between earnings management and corporate social responsibility. *Corporate Governance. An International Review, 16*(3), 160–177. https://doi.org/10.1111/j.1467-8683.2008.00678.x.

Preuss, L. (2010). Tax avoidance and corporate social responsibility: You can't do both, or can you? *Corporate Governance, 10*(4), 365–374.

Preuss, L. (2012). Responsibility in paradise? The adoption of CSR tools by companies domiciled in tax havens. *Journal of Business Ethics, 110,* 1–14.

Raiborn, C. A., & Payne, D. M. (1999). Corporate codes of conduct: A collective conscience and continuum. *Journal of Business Ethics, 9*(11), 879–889.

Raiborn, C. A., Massoud, M. F., & Payne, D. M. (2015). Tax avoidance: The good, the bad, and the future. *Journal of Business & Management, 21*(1), 77–94.

Robinson, J. R., Kises, S. A., & Weaver, C. D. (2010). Performance measurement of corporate tax departments. *The Accounting Review, 85,* 1035–1064.

Salvini, L. (2012). A margine della sentenza Dolce & Gabbana: la costituzione di parte civile dell'Amministrazione finanziaria. *Direzione e Pratica Tributaria, I,* 987.

Sammartino, S. (2015). Sanzionabilità dell'elusione fiscale. *Rassegna Tributaria, 2*, marzo-aprile: 403.

Santacroce, B., & Avolio, D. (2013). *Esterovestizione e abuso del diritto: la Corte di cassazione si pronuncia sulla "sede effettiva"*. *Corriere Tributario*, 1173.

Scarpa, F. (2018). *Corporate taxation: A new frontier for corporate social responsibility?* Paper presented at the 7th Italian CSEAR Conference, Urbino, September 19–21, 2018.

Schön, W. (2008). Tax and corporate governance. In W. Schön (Ed.), *Tax and corporate governance* (pp. 205–220). Heidelberg: Springer.

Sikka, P. (2010). Smoke and mirrors: Corporate social responsibility and tax avoidance. *Accounting Forum, 34,* 153–168.

Stevanato, D. (2006). La presunzione di residenza delle società esterovestite: prime riflessioni critiche. *Corriere Tributario*, 2952.

Stephenson, D., & Vracheva, V. (2015). Corporate social responsibility and tax avoidance: A literature review and directions for future research. *SSRN Electronic Journal*, January 2015. Available from: https://www.researchgate.net/publication/318007860_Corporate_Social_Responsibility_and_Tax_Avoidance_A_Literature_Review_and_Directions_for_Future_Research.

Su, W., & Tan, D. (2018). Business groups and tax havens. *Journal of Business Ethics, 153*(4), 1067–1081.

Tieghi, R., & Nanetti F. (2015). Dalla "Residenza fiscale" alla "libertà di stabilimento": spunti in tema di "delocalizzazione societaria" ed "esterovestizione". *Rivista di Diritto Tributario, 77*.

The B Team. (2018). *A new bar for responsible tax*. *The B Team Responsible Tax Principles*.

Timonen, V. (2008). *Ageing societies: A comparative introduction*. Berkshire, England: McGraw-Hill Education.

Turi, G. (2017). Trasferimento di sede all'estero di una società: profili civilistici e fiscali. *Diritto e Pratica Tributaria, II,* 408.

Valente, P., & Cardone, M. (2015). *Esterovestizione profili probatori e metodologie di difesa nelle verifiche*. Milano: IPSOA.

Valente, P. (2016). *Esterovestizione delle persone fisiche: centro degli interessi vitali e nomadismo fiscale*. Milano: IPSOA.

Vonwil, M., & Wreschniok, R. (2009). The CSR myth: True beauty comes from within. In J. Klewes & R. Wreschniok (Eds.), *Reputation capital: Building and maintaining trust in the 21st century* (pp. 83–100). New York, NY: Springer.

Watson, L. (2011). Corporate social responsibility and tax aggressiveness: An examination of unrecognized tax benefits. Working paper. Corporate social responsibility and tax aggressiveness: An examination of unrecognized tax benefits. *SSRN Electronic Journal*, November 2011. https://doi.org/10.2139/ssrn.1760073.

Watson, L. (2015). Corporate social responsibility, tax avoidance, and earnings performance. *Journal of the American Taxation Association, 37*(2), 1–21.

Ylönen, M., & Laine, M. (2015). For logistical reasons only? A case study of tax planning and corporate social responsibility reporting. *Critical Perspectives on Accounting, 33,* 5–23.

Tax Law and Articles

Artt. 23 e 53 Costituzione Italiana.

Arttt. 43 – 48 TFUE.

Art. 73 TUIR (Testo Unico Imposte sui Redditi, DPR 917/1986).

L'autogol di Dolce&Gabbana vanifica le azioni di CSR. *Management Sostenibile*, 20 luglio 2013 https://gianlucacravera.com/2013/07/20/lautogol-di-dolcegabbana-vanifica-le-azioni-di-csr/.

Tinti, B. (2014). Il Fatto Quotidiano, January 12, 2014.

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Accounting for Sustainability—Could Cost Accounting Be the Right Tool?

Franco Ernesto Rubino and Stefania Veltri

1 Introduction

The last few decades have witnessed the increasing pressures for organizations to behave in a socially and environmentally responsible fashion, and businesses have started to acknowledge the importance of sustainability, embracing the sustainability rhetoric in their external reporting and in their mission statement (Gond et al. 2012; Ditillo and Lisi 2016). In parallel, sustainability accounting research has attracted increasing scholarly attention (see, e.g., Burritt and Schaltegger 2010; Gray 2010; Hopwood et al. 2010; Songini et al. 2013; Bebbington and Larrinaga 2014) with a focus on external reporting (Hahn and Kunen 2013; Thijssens et al. 2016).

One area that has not yet been investigated in depth is related to the capability of existing corporate accounting systems to measure sustainability (Joshi and Li 2016).

In literature, there is a debate about the usefulness and capability of corporate accounting systems to optimally address sustainability. Some authors believe that it is questionable if firms' accounting systems will ever be able to address these broader system sustainability concerns, because of the primacy of the entity concept in accounting; sustainability is an outcome of aggregate and complex effects of actions of many firms and agents, and characterizing and assessing these sustainability effects are beyond the information generation capabilities of firms' financial accounting systems, which are limited by the entity concept and that focus on monetary transactions (Burritt and Schaltegger 2010).

While the chapter is the result of a joint effort of the authors, the individual contributions are as follows: Franco Rubino wrote Sects. 3, 4 and 6; Stefania Veltri wrote Sects. 1, 2 and 5.

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On the other hand, accountants appear to be comfortable with the concept of a going concern, which is similar to the concept of a sustainable organization. Moreover, environmental accounting at a firm level can provide useful information for managerial decision making.

While the debate is going on, sustainability accounting systems will be needed to meet the information needs of external stakeholders, which will increasingly seek information on the environmental and social effects of business operations and, more importantly, to facilitate strategically material internal decisions by managers (Gond et al. 2012; Caputo et al. 2017).

Development of such instrumental sustainability accounting systems will require the accounting profession to step outside its comfort zone and measure and manage external environmental and social impacts. Extending the boundary of analysis beyond the "entity" has implications for both accounting and management control system design.

The chapter intends to intervene in this lively debate about the usefulness and capability of corporate accounting systems to address sustainability optimally by taking into consideration positive and negative positions as regards the sustainability of accounting. It also aims to imagine if and how an accounting for sustainability might emerge and what possibilities could arise for accounting in the light of a sustainability science approach.

The aim of this contribution is to consider the potential of full-cost accounting for sustainability at organizational level, by exploring the theoretical and empirical literature on the potentiality and the use of full-cost accounting to measure and manage sustainability, the same methodology used by Correa and Larrinaga (2015) for the engagement research.

The rest of the chapter is structured as follows. The next section discusses the notion of sustainability we refer to in the chapter. The third section describes the reasons why we hypothesize a possible link between sustainability and (full) cost accounting, while the fourth section illustrates the methodology followed to address the chapter's aim. Fifth section highlight the results of our review, while the sixth section provides some concluding comments.

2 What We Mean for Sustainability

In the chapter, we refer to sustainability or sustainable development at organizational level. To define sustainability, we refer to Dyllick and Hockerts (2002), who defined sustainability as "meeting the needs of a firm's direct and indirect stakeholders without compromising its ability to meet the needs of future stakeholders as well." This definition is an application at corporate level of the definition of sustainable development given by the World Commission on Environment and Development in the Brundtland Report, according to which a sustainable development is a "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (UN WCED 1987, p. 8). We believe that it is important to underline the differences existing between the concepts of sustainable development, corporate sustainability, and CSR, which are closely related concepts focusing on stakeholder relations management but at different levels of action. Sustainable development is a guiding model at the level of society; corporate sustainability is a sustainable development model at corporate level, while CSR is a management approach for business contribution to sustainable development (Steurer et al. 2005).[1] In more detail, sustainable development is the overarching concept; sustainability is the end point of achieving sustainable development, and organisational sustainability could be understood as the actions that organisations might undertake in accordance with the principles of sustainable development (Bebbington and Larrinaga 2014).

In this context, sustainability and CSR are measured by means of sustainability accounting. Sustainability(-related) accounting thus comprises those information management and accounting methods aimed at the creation of high-quality data supporting internal decision making concerning corporate sustainability and at the internal measurement of organizational sustainability performance (Lamberton 2005). Although sustainability-related accounting and reporting have received increasing importance in business and academia, the focus was on the reporting and only few researches have been carried out on sustainability accounting (Hahn and Kühnen 2013).

At supranational level, the interest toward sustainability and sustainability accounting is testified by several initiatives. Among the last ones, in 2015, United Nations adopted 17 Sustainable Development Goals (SDGs) that are intended to stimulate action over the next 15 years in areas of critical importance for humanity and the planet (UN 2015). While being intergovernmental commitments, the SDGs have rapidly gained attention among a broad range of actors, such as many public sector and private sector organizations and many professional bodies, among which the accountants (Bebbington and Unerman 2018). Furthermore, in 2018, an independent standard setting organization established in 2011, after six years of preparation, issued 77 sustainability accounting standards (SASB) for 77 specific industries, aimed at promoting sustainable development. SASB, including disclosure topics, associated accounting metrics and technical protocol and activity metrics for each industry, could be voluntarily adopted by companies, and by combining industry specificity with financial materiality, they offer investors a tool for comparing the sustainability performance of companies.

[1] As regards the differences between CSR and sustainability, CSR is more specific and is determined more heavily by particular stakeholder claims than sustainability is. In addition, the two terms have a varying temporal scope since sustainability is long-term oriented, while CSR is about meeting the demands of stakeholders today in order to secure vital resources for the future performance of the company. Finally, the two concepts are different as regards the historical path that drove both to address the integration of economic, social, and environmental aspects. Sustainability started out from the environmental dimension, while CSR initially emphasized social issues like human rights and working conditions. For a brief review and a graphical snapshot of the evolution of the CSR notion, see Veltri and Nardo (2013). Nevertheless, although these two concepts are conceptually different, the constructs have converged over the years (Hahn and Kühnen 2013). Nowadays, businesses use the terms interchangeably, and this is also the case in the chapter.

Nonetheless, the social and environmental accounting (SEA) literature strove, from both theoretical and empirical points of view, to find how accounting could help organizations to address sustainable development (Correa and Larrinaga 2015).

In the next section, we thus focus on a peculiar existing area of accounting (that of full-cost accounting), exploring how this kind of accounting could address sustainability issues.

3 (Full-Cost) Accounting and Sustainability: The Rationale Behind

In accounting terms, financial accounting is enabled by, and constitutes, the boundary between an organization and its environment (Bebbington and Larrinaga 2014). This framing of the organization, based on the "entity concept," dictates that accounting should be only interested in some costs (i.e., those borne by the entity) even though this obscures social and ecological effects that arise on a wider scale. By ignoring these wider effects, financial accounting contributes to the construction and maintenance of a bounded organization that ignores its full character (Lohmann 2009). In contrast, external costs are central to full-cost accounting, and hence, it is an approach that addresses the linkages between sustainable development problems and an entity.

In other words, full-cost accounting could be considered a promising accounting tool in dealing with sustainability, as it moves beyond the entity to identify externalities. Furthermore, of the various accounting techniques that have attempted to better expose social, environmental, and economic externalities (at the root of an accounting discourse on sustainability), it has been considered the most promising tool (Bebbington and Larrinaga 2014).

Therefore, in accordance with the two authors, we believe that full-cost accounting could be the potential answer to address sustainable development from an accounting point of view, since full-cost accounting is embedded in the going concern concept of the firm. We also agree with Gray (2010), who highlighted how the baggage associated with conventional accounting is no longer suitable when dealing with accounting for sustainability.

Although full-cost accounting shows potential, it also inherited the limitations of cost–benefit analysis (discussions of which prompted discussions on foundational aspects of post-normal science and ecological economics). These limitations revolve around the extent to which externalities can be defined in multiple ways and are often not easily amenable to ecological, social, or economic modeling (Rockstrom et al. 2009). Several authors accused full-cost accounting of introducing more complexity and being contestable (Niemeyer and Spash 2001; Spash 2007; Söderholm and Sundqvist 2003). It is true, but we believe that this cannot be seen necessarily as a limit, being just a matter of fact that has to be taken into consideration by sustainability accounting. In other words, whether full-cost accounting would contribute to advance sustainable accounting, it should be prepared to deal with uncertain and contestable measures deriving from the complexity of translating into economic and financial terms diverse (environmental and social) values.

4 Methodology

The section provides the methodological note on the selection of articles discussing the suitability of full-cost accounting for sustainability, from both theoretical and practical points of view. To address the aim of the chapter, that is to consider the potential of full-cost accounting for sustainability at organizational level, the authors selected as a reference the article of Bebbington and Larrinaga published in 2014 in that Accounting, Organizations and Society. Articles for the review were selected according to the following steps. First, articles related to the object of our research and quoted in the abovementioned article were considered. Second, we also referenced to the articles related to our research issue cited by the articles quoted in the Bebbington and Larrinaga 2014 article and retrieved. Third, using the bibliographic database Scopus, more recent articles citing papers published in the abovementioned article were also considered. Fourth, from the cited and citing articles, we excluded papers not matching exactly our research aim and only kept those articles that effectively conducted some form of theoretical and/or empirical analysis on the suitability of full-cost accounting for sustainability. Finally, despite the lack of connection through citations, two further papers (Bronzetti and Veltri 2013; Venturelli et al. 2015) were identified and included.

5 (Full-Cost) Accounting and Sustainability: Theoretical Studies and Empirical Applications

Interest in full-cost accounting has its roots in the cost–benefit analysis/externalities valuation literature (Epstein et al. 2011). On the basis of this research, proponents of full-cost accounting suggested that identifying more sustainable ways for obtaining goods and services requires shedding light on the (un)sustainability of activities carried out to produce them, by assigning a value to the use of (otherwise free) environmental and social services. The rationale underlying full-cost accounting is that implicit valuations are already present in decision making (Bebbington et al. 2001).

The first authors searching a link between full-cost accounting and sustainability were Funtowicz and Ravetz (1993, 1994). The two authors underlined the normality of uncertainty in post-modern science. Further, among the more significant piece of work in this stream of literature, we can quote the articles of Atkinson (2000), Bebbington et al. (2007), Bebbington (2009), Figge and Hahn (2004), Frame and Brown (2008), Frame and Cavanagh (2009), and Frame and O'Connor (2011). Atkinson in his 2000 article argues that one of the keys to understanding corporate sustainability is full-cost accounting. Bebbington and others, in their 2007 article, propose sustainability assessment models as a viable alternative to cost–benefit analysis. The sustainability assessment models that the authors propose (and applied to two case studies) are based on an inter-disciplinary approach that recognizes the need for accountings that facilitate more participatory forms of decision making and accountability. Bebbington, in her 2009 article, explores what possibilities emerge for accounting in light of a sustainability science approach, also illustrating for two cases how a sustainability science approach to accounting could develop. Frame and Brown, in their 2008 article, underline the criticality of stakeholder engagement in sustainability issues for the legitimacy and quality of decisions and the admission of complexity in decision-making and accountability processes. Figge and Hahn in their 2004 article propose a new approach to measure corporate contributions to sustainability called Sustainable Value Added, in which sustainable measures are based on opportunity costs. Frame and Cavanagh, in their 2009 article, illustrate the sustainability assessment model, a full-cost-accounting tool that monetizes externalities, also examining its application in two case studies. Frame and O'Connor, in their 2011 articles, outline the principles and methodology for sustainability assessment, using multi-actor, multi-criteria evaluation practices to articulate competing, un-reconciled, and often irreconcilable claims, such as the impossibility of measurement for quantification of opportunity costs in relation to values to be sustained and the status of stakeholders in sustainability.

As about the empirical application of cost accounting to sustainability, we refer to published cases of entities which tried to assign an economic value to the sustainability by employing the full-cost accounting technique. On this issue, we can refer to the case of Spanish Railways (RENFE), included in the Bebbington and Larrinaga (2014) article, to the case of ANPAS Piemonte, included in the Bronzetti and Veltri (2013) article and to the case of GTS Group, included in the Venturelli et al. (2015) article.[2]

The Spanish Railways (RENFE), in its 2010 report, disclosed to its stakeholders that it saved 2297 million euros in external costs (owing to the reductions in air pollution, carbon emission, and noise that resulted from the use of this mode of transportation) that would have otherwise have arisen if all rail traffic had moved by road.

ANPAS Piemonte, an Italian regional branch of ANPAS (Associazione Nazionale Pubbliche Assistenze), the largest volunteer federation of associations providing public interest services in Italy, in its Intellectual Capital (IC) report, issued since 2004, disclose among its organizational indicators, the social value of volunteer work in ANPAS (equal for the 2017 year to €21.419.565). This indicator is calculated as the total amount of the costs that Italian Piemonte region would sustain if it managed the

[2] The GTS Group has also been analyzed to trace the group's pathway to sustainability integration based on the Gond et al. (2012) framework (Caputo et al. 2017).

118 (emergency) service by itself, minus the costs refunded to the ANPAS associates by the Piemonte region (Bronzetti and Veltri 2013).[3]

The GTS Group, a family firm organization operating in intermodal transport, has undergone transformation in the area of sustainability, which brought to the publication, in 2014, of its first sustainability report and to receive a number of environmental sustainability-related awards. The Group in 2014, together with a research team, developed a theoretical framework addressed to measure the economic value in terms of sustainability of carrying on a long-term contract with a strategic client. The GTS with the research team followed an incremental cost–benefit approach defining two intermediate results, the first-level CSR margin (turnover minus operational and CSR direct costs) and the second-level CSR margin (first-level CSR margin minus operational and CSR indirect costs) (Venturelli et al. 2015).[4]

These two first cases (RENFE and ANPAS Piemonte) examined dealt with the "calculation" of a sustainable value. On this point, it is important to underline that a single figure accounting for the value of externalities can vary a lot, as it depends on the different assumptions and bases used for the valuation of externalities (Antheaume 2004). The exercise is worthy but, to be also qualitatively effective, it would need that the sustainability costs derive from a shared process between the organization and its stakeholders, as no particular expertise can deliver certainty in full cost accounts (Niemeyer and Spash 2001). As for the third case (the GTS Group), its repositioning process toward sustainability has been based on the stakeholder engagement (Venturelli et al. 2015). The initiative comes out from the need to evaluate the prospective profitability of long-term commercial contract with a key client. To determine the two CSR margins, GTS management firstly had to identify all the CSR direct costs expressly related to the key client (all the costs related to sustainability sustained for the improvements requested by the client), then has attributed to the key client (under the CSR approach) the percentage of CSR indirect costs sustained for GTS. In the GTS case, the quality of sustainability accounting is thus related to the capability to correctly identify (and economically measure) the direct CSR costs related to the key client, then to the capability to identify the adequate cost driver able to correctly attribute to the key client a share of CSR indirect costs sustained for GTS sustainability initiatives.

The three cases highlight that the attention toward sustainability is present in different kinds of organization (being the first a public organization, the second a non-profit organization, and the third a private organization operating in the intermodal transport sector). From the (brief) analysis of the three cases, we draw some evidences. The first is related to the uncertainty which is an inherent feature of each possible technique that could be used to measure sustainability.[5] This means that the

[3] ANPAS Piemonte discloses its IC indicators according to the well-known tri-partition of IC into human, organizational, and relational capital.

[4] The incremental approach evaluated the costs expressly related to the strategic client under two approaches: CSR-not-oriented and CSR-oriented approach.

[5] Uncertainty in input information must lead to uncertainty in conclusions (Funtowicz and Ravetz, 1994).

aim of such an approach should not be to return precise numbers, instead it should be to implement quality sustainability accounting. The second is related to the meaning of quality in the sustainability accounting, meaning that a good (quality) process in full-cost accounting terms would be addressed to create context in which stakeholders have an opportunity to debate and discuss the construction of the accounts used in such approach (Frame and Cavanagh 2009).

6 Considering Conclusions

Research into the roles of accounting in fostering sustainable development has expanded, and become more sophisticated, over the three decades since the concept of sustainable development was proposed by the seminal Brundtland Report in 1987 (Bebbington and Unerman 2018).

Social and environmental accounting (SEA) literature until now strove to find how accounting could help organizations to address sustainable development; nonetheless, the increasing importance for both companies and stakeholders of sustainability issues cannot allow dismissal of this research stream. The failure of traditional accounting to account for sustainability could mainly be due to the circumstance that the baggage associated with conventional accounting is not more suitable when dealing with accounting for sustainability (Gray 2010).

In accordance with Bebbington and Larrinaga (2014), we believe that accounting for sustainable development implies a research approach that is distinctively different from that of accounting, environmental accounting, and social accounting.

In the chapter, therefore, we refer to an existing area of accounting (that of full-cost accounting) and explore how that a kind of accounting could be a useful tool for a sustainability accounting science approach.

We selected the full-cost accounting as a suitable tool to deal with sustainability as external (environmental, sustainable) costs are central to full-cost accounting, and hence, this approach could be useful deal with linkages between sustainability problems and an organization.

In other words, we refer to an area of accounting investigation (that of full-cost accounting) which is connected to sustainable development concerns (namely the description of externalities), and we analyzed how this accounting area could help in developing sustainability accounting science from both theoretical and practical points of view. Under the empirical profile, we examined three case studies of firms valuing the economic value of sustainability strategy and initiatives through the cost accounting technique.

Of course, it must be underlined that this accounting area is characterized by an unavoidable uncertainty of information, as environmental and social values are imperfectly translated into economic values, originating contestable information. A possible solution to this problem is linked to the quality of full-cost accounting implemented in the company. For quality, we do not intend the precision of numerical calculations, instead we mean the capability to create a context in which stakeholders have an opportunity to debate and discuss the construction of an account (Bebbington et al. 2007; Frame and Cavanagh 2009).

Anyway, we agree with Bebbington and Larrinaga (2014) that the contestability of an account is not a limitation, instead it is a reality with which any account must work. If full-cost accounting research and practice is to make a contribution to debates about sustainable development, it needs to work with uncertain and contestable information imperfectly translated into economic terms. In other words, researchers should bear in mind that such a science is inherently uncertain, and that a quality sustainable accounting science, instead of returning precise arithmetical data with the help of sophisticated calculus, should accept to coproduce the knowledge (to construct the costs) with the organizational stakeholders, who know the context in which the entity operates and decisions are taken. Rather than focusing on the generalization of results, the validity of full-cost accounting is related to the quality of information obtained from experiments and to the type of relations that are established between those involved in the context of the problem.

Nonetheless, to pursue a quality full-cost accounting for sustainability raises challenges such as the representativeness of stakeholders participating in the process, the possibility of allowing different forms of valuation beyond monetary evaluation, and the usefulness of linking full-cost accounting experimentation in accounting to cost–benefit analysis (Frame and Brown 2008; Lohmann 2009; Samiolo 2012), and all of these areas could constitute future research directions.

The challenge for future research in this stream will be whether and how full-cost accounting can "make the normative concept of sustainability operational" (Spangenberg 2011). In our opinion, the discipline of accounting has a contribution to make in this area, and we hope that the ideas developed in the chapter could be a useful starting point to reason about whether and how full-cost accounting could be usefully employed to overcome the limitations of the conventional accounting in dealing with sustainability.

Literature

Antheaume, N. (2004). Valuing external costs–from theory to practice: implications for full cost environmental accounting. *European Accounting Review, 13*(3), 443–464.

Atkinson, G. (2000). Measuring corporate sustainability. *Journal of Environmental Planning and Management, 43*(2), 235–252.

Bebbington, J. (2009). Measuring sustainable development performance: Possibilities and issues. *Accounting Forum, 33*(3), 189–193.

Bebbington, J., Brown, J., & Frame, B. (2007). Accounting technologies and sustainability assessment models. *Ecological Economics, 61*(2–3), 224–236.

Bebbington, J., Gray, R., Hibbitt, C., & Kirk, E. (2001). *Full cost accounting: An agenda for action* (Vol. 73, p. 172). London: Certified Accountants Educational Trust.

Bebbington, J., & Larrinaga, C. (2014). Accounting and sustainable development: An exploration. *Accounting, Organizations and Society, 39*(6), 395–413.

Bebbington, J., & Unerman, J. (2018). Achieving the United Nations sustainable development goals: An enabling role for accounting research. *Accounting, Auditing & Accountability Journal, 31*(1), 2–24.

Bronzetti, G., & Veltri, S. (2013). Intellectual capital reporting in the Italian non-profit sector: Analysing a case study. *Journal of Intellectual Capital, 14*(2), 246–263.

Burritt, R. L., & Schaltegger, S. (2010). Sustainability accounting and reporting: Fad or trend? *Accounting, Auditing & Accountability Journal, 23*(7), 829–846.

Caputo, F., Veltri, S., & Venturelli, A. (2017). Sustainability strategy and management control systems in family firms. Evidence from a case study. *Sustainability, 9*(6), 977.

Correa, C., & Larrinaga, C. (2015). Engagement research in social and environmental accounting. *Sustainability Accounting, Management and Policy Journal, 6*(1), 5–28.

Ditillo, A., & Lisi, I. E. (2016). Exploring sustainability control systems' integration: The relevance of sustainability orientation. *Journal of Management Accounting Research, 28*(2), 125–148.

Dyllick, T., & Hockerts, K. (2002). Beyond the business case for corporate sustainability. *Business Strategy and the Environment, 11*(2), 130–141.

Epstein, P. R., Buonocore, J. J., Eckerle, K., Hendryx, M., Stout Iii, B. M., Heinberg, R., … & Doshi, S. K. (2011). Full cost accounting for the life cycle of coal. *Annals of the New York Academy of Sciences*, *1219*(1), 73.

Figge, F., & Hahn, T. (2004). Sustainable value added—Measuring corporate contributions to sustainability beyond eco-efficiency. *Ecological Economics, 48*(2), 173–187.

Frame, B., & Brown, J. (2008). Developing post-normal technologies for sustainability. *Ecological Economics, 65*(2), 225–241.

Frame, B., & Cavanagh, J. (2009, September). Experiences of sustainability assessment: An awkward adolescence. In *Accounting forum* (Vol. 33, No. 3, pp. 195–208). Taylor & Francis.

Frame, B., & O'Connor, M. (2011). Integrating valuation and deliberation: The purposes of sustainability assessment. *Environmental Science & Policy, 14*(1), 1–10.

Funtowicz, S. O., & Ravetz, J. R. (1993). Science for the post-normal age. *Futures, 25*(7), 739–755.

Funtowicz, S. O., & Ravetz, J. R. (1994). The worth of a songbird: Ecological economics as a post-normal science. *Ecological Economics, 10*(3), 197–207.

Gond, J. P., Grubnic, S., Herzig, C., & Moon, J. (2012). Configuring management control systems: Theorizing the integration of strategy and sustainability. *Management Accounting Research, 23*(3), 205–223.

Gray, R. (2010). Is accounting for sustainability actually accounting for sustainability… and how would we know? An exploration of narratives of organisations and the planet. *Accounting, Organizations and Society, 35*(1), 47–62.

Hahn, R., & Kühnen, M. (2013). Determinants of sustainability reporting: A review of results, trends, theory, and opportunities in an expanding field of research. *Journal of Cleaner Production, 59,* 5–21.

Hopwood, A. G., Unerman, J., & Fries, J. (Eds.). (2010). *Accounting for sustainability: Practical insights*. Earthscan.

Joshi, S., & Li, Y. (2016). What is corporate sustainability and how do firms practice it? A management accounting research perspective. *Journal of Management Accounting Research, 28*(2), 1–11.

Lamberton, G. (2005). Sustainability accounting—A brief history and conceptual framework. In *Accounting forum* (Vol. 29, No. 1, pp. 7–26). Taylor & Francis.

Lohmann, L. (2009). Toward a different debate in environmental accounting: The cases of carbon and cost–benefit. *Accounting, Organizations and Society, 34*(3–4), 499–534.

Niemeyer, S., & Spash, C. L. (2001). Environmental valuation analysis, public deliberation, and their pragmatic syntheses: A critical appraisal. *Environment and Planning C: Government and Policy, 19*(4), 567–585.

Rockström, J., Steffen, W., Noone, K., Persson, Å., Chapin III, F. S., Lambin, E. F., … & Nykvist, B. (2009). A safe operating space for humanity. *Nature*, *461*(7263), 472.

Samiolo, R. (2012). Commensuration and styles of reasoning: Venice, cost–benefit, and the defence of place. *Accounting, Organizations and Society, 37*(6), 382–402.

Söderholm, P., & Sundqvist, T. (2003). Pricing environmental externalities in the power sector: Ethical limits and implications for social choice. *Ecological Economics, 46*(3), 333–350.

Songini, L., Pistoni, A., & Herzig, C. (2013). Accounting and control for sustainability. In M. J. Epstein (Ed.), *Studies in managerial and financial accounting*. Bingley, U.K.: Emerald.

Spangenberg, J. H. (2011). Sustainability science: A review, an analysis and some empirical lessons. *Environmental Conservation, 38*(3), 275–287.

Spash, C. L. (2007). Deliberative monetary valuation (DMV): Issues in combining economic and political processes to value environmental change. *Ecological Economics, 63*(4), 690–699.

Steurer, R., Langer, M. E., Konrad, A., & Martinuzzi, A. (2005). Corporations, stakeholders and sustainable development I: A theoretical exploration of business–society relations. *Journal of Business Ethics, 61*(3), 263–281.

Thijssens, T., Bollen, L., & Hassink, H. (2016). Managing sustainability reporting: many ways to publish exemplary reports. *Journal of Cleaner Production, 136,* 86–101.

United Nations (UN). (2015). *Transforming our world: The 2030 agenda for sustainable development*. New York, NY: United Nations.

Veltri, S., & Nardo, M. T. (2013). The intangible global report: An integrated corporate communication framework. *Corporate Communications: An International Journal, 18*(1), 26–51.

Venturelli, A., Dell'Atti, A., Caputo, F., & Turco, M. (2015). Il riposizionamento strategico verso la corporate social responsibility e la creazione di valore economico: il caso del gruppo General Transport Service. In *Proceedings of the 4th Small Business Conference*, Urbino University, 24–25 September.

Wced, S. W. S. (1987). World commission on environment and development. *Our Common Future, 17,* 1–91.

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CSR and External Communication

Mandatory Disclosure of Non-financial Information: A Structured Literature Review

Fabio Fortuna, Silvia Testarmata, Silvia Sergiacomi and Mirella Ciaburri

1 Introduction

Recently, the disclosure of non-financial information has attracted ever-growing attention. Although non-financial information has become crucial for the disclosure of corporate social responsibility (hereinafter CSR) in the European Union (EU) and not only in EU (De Villiers et al. 2014), the meaning of the term "non-financial information" is not clearly defined (Haller et al. 2017). This term has been used by various reporting models and standards over the last decades, fostering different interpretations that embrace narrative contextual business information (Eccles and Krzus 2010), information on intangible assets and intellectual capital (Dumay 2016), environmental, social, and governance issues (Dumay et al. 2016) and data about KPIs (Carini et al. 2018). However, a precise general accepted definition of the term has evolved in none of these reporting concepts. Thus, the meaning of the term "non-financial information" might be contextually or geographically dependent, and often, its interpretation most likely depends on the perception of the sender of the information (preparer) and its receiver (stakeholder) (Haller et al. 2017).

However, it seems useful to provide the first definition of non-financial information from which to start with the analysis. Non-financial information includes issues concerning a company's environmental and societal impacts and policies (Matuszak

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and Rózanska 2017). Thus, non-financial report is a communication tool that provides internally and externally information about the social and environmental aspects of the companies' operations. Indeed, non-financial reporting aims to meet specific information needs and to respond to external pressures arising from different stakeholders (Dumay et al. 2015). In fact, the non-financial information could facilitate managers, and other stakeholders, to take decisions more consciously (Carini et al. 2018). Furthermore, for companies with superior sustainability performance, the voluntary disclosure of non-financial information could be used to increase their market value (Hummel and Schlick 2016).

The early research on CSR disclosure has primarily focused on financial reports (Deegan and Gordon 1996; Gray et al. 1987, 1995; Guthrie and Mathews 1985). Afterward, studies have shifted their focus on voluntary non-financial reports such as social and environmental reports (Crawford and Clark Williams 2011; Deegan et al. 2002; GBS 2013; Gray et al. 1996; Guthrie and Parker 1990; Roberts 1991), sustainability reports (GRI 2013; Gray 2010; Kolk 2004), and integrated reports (Busco et al. 2013; Cheng et al. 2014; Dumay 2016; IIRC 2013, Eccles and Krzus 2010). But, it is still not clear whether CSR reporting should be based on a voluntary or mandatory basis. This lively debate has been continuing for more than ten years now. In the beginning, companies advocated in favor of voluntary reporting, while non-governmental organizations or other pressure groups expected mandatory reporting (Matuszak and Rózanska 2017).

In Africa, guidelines have already been developed for the purpose of making disclosure of non-financial information mandatory (e.g., integrated reporting is a listing requirement) (De Villiers et al. 2014), while in Europe regulatory action has only recently taken place. After numerous actions aimed at harmonizing the accounting rules for the preparation of financial statements, the EU has begun to regulate the disclosure of non-financial information. Actually, the relevance of the disclosure of non-financial information has been recognized by the EU since 2001 with the Commission Recommendation 2001/453/EC of May 30, 2001, on the recognition, measurement, and disclosure of environmental issues in the annual accounts and annual reports of companies. In this sense, the EU acknowledged that an appropriate analysis of environmental and social aspects is necessary for an understanding of the company's development, performance, and position (EC 2011) and that the disclosure of non-financial information is vital for managing change toward a sustainable global economy by combining long-term profitability with social justice and environmental protection (EU 2013). However, taking into account the evolving nature of this area of reporting and having regard to the potential burden placed on companies below certain sizes, member states have often chosen to waive the obligation to provide non-financial information in the case of the annual report (EC 2011). Therefore, in order to increase the relevance, consistency, and comparability of non-financial information disclosed by large companies and groups across the Union, the EU has decided to make the disclosure of non-financial information mandatory, through the issuing of the Directive 2014/95/EU (Testarmata et al. 2020).

The transition from voluntary disclosure of non-financial information to mandatory regulation in the EU took place due to the growing need for transparency and rigor of information disclosed by companies. Indeed, voluntary CSR reporting presents many aspects of weakness, such as "the ad hoc and arbitrary nature; it risks becoming a "public relations" exercise providing only "good news" stories; it is difficult to compare different companies' information; it is a tool to avoid regulation; there is a lack of enforcement and accountability; and it leads to rhetoric as corporations continue to cause many problems to civil society" (Stubbs and Higgins 2015, p. 492). Therefore, the conviction that the regulation of the disclosure of non-financial information leads to an improvement in terms of quality and comparability of information has become widespread in the last few years. In this respect, "regulation is preferable to voluntary disclosure, as the latter may lack completeness, accuracy, neutrality, objectivity, and comparability" (Venturelli et al. 2017, p. 4). However, despite there being continual calls for over forty years for the inclusion of additional information for investors beyond the financial in external disclosure and reporting, there is still no framework that has succeeded in achieving this target (Milne and Gray 2013).

Therefore, the mandatory disclosure of non-financial information is an emerging field (Dumay et al. 2016) that deserves to be investigated more specifically. Considering the fragmented development of the disclosure of non-financial information briefly described and its move from a voluntary approach to a mandatory one, it would be interesting to see how Academia is responding through research into the mandatory disclosure of non-financial information (<MDNFI>). Stemming from these considerations, the purpose of the study is to provide an overview of the current state of the literature by developing a structured literature review (Massaro et al. 2016) on <MDNFI>.

The remainder of this chapter is structured as follows. Section 2 explains the development process of the structured literature review (SLR) method. Section 3 describes and justifies the use of a SLR method to investigate <MDNFI> research. Section 4 provides insights and a critique of the current literature through descriptive statistics and an analysis of the research findings. Section 5 offers some arguments on the future of <MDNFI> research practice and policy and presents several relevant unanswered research questions. The final section provides some closing remarks and points out the main limitations of the study.

2 The Structured Literature Review Method

Researchers use SLR to map and assess the existing intellectual territory to identify future research needs (Dixon-Woods 2011). Essentially, a SLR is a form of content analysis whereby the unit of analysis is the article, as opposed to words, sentences, or paragraphs, as it is commonly found in content analysis research (Massaro et al. 2016). Accordingly, the review process is conducted in ten different stages as shown in Fig. 1.

The first phase is represented by *The Literature Review Protocol*, which is intended to document the entire procedure followed in order to guide the authors in developing a SLR, providing the basis for increasing results' reliability. In this phase, authors

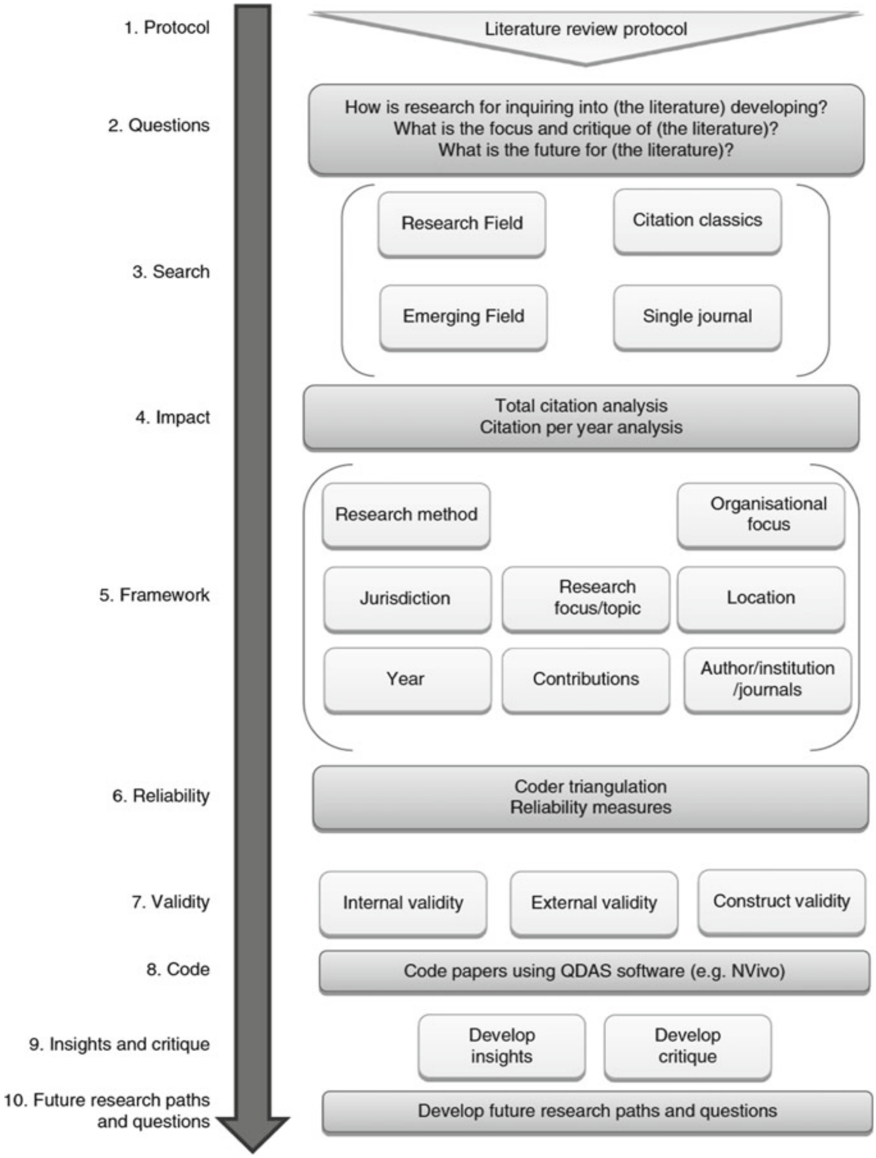
1. Protocol
2. Questions
3. Search
4. Impact
5. Framework
6. Reliability
7. Validity
8. Code
9. Insights and critique
10. Future research paths and questions
Literature review protocol
How is research for inquiring into (the literature) developing?
What is the focus and critique of (the literature)?
What is the future for (the literature)?
Research Field
Citation classics
Emerging Field
Single journal
Total citation analysis
Citation per year analysis
Research method
Organisational focus
Jurisdiction
Research focus/topic
Location
Year
Contributions
Author/institution /journals
Coder triangulation
Reliability measures
Internal validity
External validity
Construct validity
Code papers using QDAS software (e.g. NVivo)
Develop insights
Develop critique
Develop future research paths and questions

Fig. 1 The process to develop the structure literature review. *Source* Massaro et al. (2016)

should present several elements like the description of the review research questions, the methods used, and the details about how different studies will be valued. If the literature review is coauthored, also the literature review protocol should be shared among all the authors in order to guarantee the same standard approach in developing the study.

Define the research questions of the literature review is the second phase of a SLR. According to Alvesson and Deetz (2000, pp. 17–20), there are three tasks of critical research: “insight,” “critique,” and “transformative redefinitions,” that can be transformed into three research questions a SLR has to answer before providing the method section. In relation to the first research question, the “insight,” the SLR provides information about the history of the field under review, in order to answer the question “what has been done?” until this point and which are the most recent literature developments. Some interesting insights also come from citation metrics, like total citations and citations per year, that are able to measure the impact of each single article over the years. The second research question relates to “critique,” which means critically analyzing the existing literature as an emerging, developing, or maturing specific research field. A critical literature review analysis lets the authors avoiding the error of just listing the findings, without any critical review and comment. The last research question deals with “transformative redefinitions,” with a look to future directions of the research field, in order to define potential implications for scholars and practitioners.

The third phase of a SLR is *Determine the type of studies and carry out a comprehensive literature search*. When providing a SLR, authors have to focus only on relevant materials. Four different approaches can be used to asses the validity or the relevance of materials: (i) a keyword search in a particular field, where researcher has to be careful about the choice of the keywords and the set of sources (journals, reports or books); (ii) citation classics, selecting the most relevant articles in a research field using total citations or a citation per year index, in order to understand which are the articles driving the research in that area; (iii) a single journal, where the authors focus their attention on articles published within a single journal to verify the contribution to the research dialog provided by one given source; (iv) an emerging research field, focusing the attention on a new research area, where few contributions exist.

The next SLR phase is related to *Measure article impact* through citations, which are a proxy for the article’s quality. For these reasons, when providing a SLR, authors have to eliminate those articles that are not relevant for the research debate, using several sources like Google Scholar or Scopus. The fifth phase refers to the *Definition of an analytical framework,* where the authors, for each paper considered in the SLR, identify units of analysis and consider them as independent elements to be analyzed, in order to organize the existing literature.

The sixth phase is *Establish literature review reliability,* which focuses the attention on how important is to develop forms of control and triangulation in order to reduce biases and errors, like Krippendorff’s α. The following phase relates to *Test literature review validity,* where authors have to avoid the error of jumping to easy conclusions without providing validity tests. The literature considers three different kinds of validity: the internal one, which aims to establish causal relationships; external one, which verifies if the results of a study can be generalized; and finally, construct validity, which is a quality of the measures used.

Phase number eight refers to *Code data using the developed framework*, where the authors clarify the technology they use for the coding procedure, deciding between manual or computer-aided coding. The following phase deals with *Develop insights* *and critiques through analyzing the dataset*, where the authors use quantitative tools like descriptive statistics, tables, bar graphs frequency distribution, regressions, time series analysis, pivot tables and charts to measure the results and develop insights useful for the existing literature. Moreover, because just presenting data is not enough, the authors of a SLR also have to critically read them. Finally, the last phase of a SLR is the *Development of future research paths and questions*, able to show possible gaps in the literature and to justify using specific research methods, theory, and analytical frameworks in future research.

3 The SLR on Mandatory Disclosure of Non-financial Information

In our study, we adopt an SLR method, as developed by Massaro et al. (2016), to provide insights and critiques that will help identify future research agenda for <MDNFI>. According to Petty and Guthrie (2000), there are two main goals for investigating an emerging field such as <MDNFI>. First, it is necessary to categorize it in a way that provides a useful understanding of how and why the <MDNFI> movement has developed in the way it has and, second, a platform to identify those avenues for future research that we consider likely to deliver results for understanding the nature, the impact, and the value of <MDNFI>. Thus, the aim of the study is to follow these goals and provide empirical justification for the research gaps we discover and the subsequent research questions we outline.

In the first stage, we outline how to set up the research project. To develop our research, we adopt the *structured literature review protocol*, proposed by Massaro et al. (2016), consisting of the following steps: statement of research questions, literature search, articles impact analysis, definition of analytical framework, reliability, validity, articles coding, insights and critique, further research on <MDNFI>.

Subsequently, in the second stage, we adapt the three generic research questions to focus specifically on the <MDNFI> literature. Therefore, our *research questions* are as follows:

1. How is research for inquiring into <MDNFI> developing?
2. What is the focus and critique of the <MDNFI> literature?
3. What is the future for <MDNFI> research?

The third stage is the *literature search*, which involves the selection of data sources for the review. We select articles from internationally recognized academic journals covering different disciplines, including, but not limited to, the accounting literature based on the term "mandatory disclosure of non-financial information" appearing in the title, abstract, or keywords of the article. Indeed, investigating how Academia is responding through research into the emerging filed of <MDNFI> would be interesting considering the different interpretations that the term non-financial information may acquire, the fragmented development of the disclosure of non-financial information and its move from a voluntary approach to a mandatory one in the EU.

We focus on four types of academic publications (based on Google Scholar, the largest abstract, and citation database of peer-reviewed literature): articles by citations, articles in press, conference papers, and Ph.D. theses using specific keywords. In fact, "a keyword search can help researchers to find relevant articles that extend existing topics in a particular field. Although a keyword search is a powerful tool, researchers have to be careful in the keyword selection criteria" (Massaro et al. 2016, p. 777). Furthermore, according to Cronin et al. (2008, p. 40) "keywords need careful consideration to select terms that will generate the data being sought."

Specifically, the keywords used for our analysis are listed below:

(1) "mandatory disclosure" and "non-financial information" or "non financial information" or "no-financial information" or "no financial information";
(2) "mandatory reporting" and "non-financial information" or "non financial information" or "no-financial information" or "no financial information."

We retrieve data from Google Scholar database on July 6, 2018, for a period of ten years and a half. We used January 1, 2008, as a starting date and adopted a cut-off date of June 30, 2018. Actually, considering the very recent emphasis on the issue of <MDNFI>, we included in the analysis half of 2018 as well. As a result, we identify a total of 1,814 articles, including articles by citations, articles in press, conference papers, and Ph.D. theses. It is worth to note that, in this first phase of literature search, the articles' overlaps between the two keywords have not been removed in order to show the relevance of each keyword.

From the analysis, it emerges that recently scholars have paid increasing attention and growing emphasis on the analysis of <MDNFI> as shown in Table 1. It is worth to underline that in 2018 the number of articles is halved because the literature analysis ends on June 30, 2018. For this reason, we can assume that the increasing trend will be steady in 2018 as well as in 2017.

Subsequently, we made a ranking of the articles highlighting the following elements: keywords search, title of the articles, authors, publication year, citations, abstract, and keywords. As a result, we restricted the analysis by selecting only the articles with the title and keywords related to the issue of non-financial information and eliminating articles duplication between the two literature searches. In the end, we identified only 87 articles related to the issue of non-financial information. We then downloaded the PDF versions of these articles and stored them in a Dropbox folder with full referencing details.

In the fourth stage, we determine the *articles' impact*. We use the number of Google Scholar citations to measure the academic impact of the articles and to provide insight into the evolution of the <MDNFI> literature. To do so we downloaded from Google Scholar the articles' citation data as of July 06, 2018.

Google Scholar is one of the most used databases because it is "considered a leading tool in citation analysis because it provides a comprehensive coverage, indexes all categories of publications and counts citations from non-peer-reviewed works, such as practitioner magazines, government documents, and newspapers" (Dumay 2014, p. 5). Additionally, "Google Scholar is a valuable data source for assessing

Table 1 Literature review by year—as at July 6, 2018

Mandatory disclosure keyword											
Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
Articles	50	57	91	82	104	129	155	157	190	186	92	1269
Mandatory reporting keyword												
Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
Articles	16	20	35	31	30	57	59	82	81	103	43	545

Source Our elaboration

impact when conducting a SLR and can help provide valuable insights and critiques of specific issues in a research field" (Massaro et al. 2016, p. 781).

We used the citation metrics to measure the article's impact because interesting insights can come from an analysis of the number of articles in terms of total citations or a citation per year index (Dumay 2014). Citation metrics allow researchers to understand how the literature develops and if the research topic is important, by examining the impact different articles have over time (Massaro et al. 2016). Therefore, understanding which articles are cited more often is a proxy for the article's quality (Serenko and Bontis 2013).

In Table 2, we report the top ten articles by Google Scholar citations, highlighting the author's name, the publication year, the article's title, and the total number of citations. Focusing on the most cited papers allows us to understand how <MDNFI> literature has developed as a discipline and to identify which articles are driving knowledge and research (Serenko and Dumay 2015). For example, the article by Ioannou and Serafeim (2017) has been cited 365 times, indicating that it has a strong impact on the academic <MDNFI> debate (Dumay 2014). The same consideration could be done for the articles by Cheung et al. (2010), Vormedal and Ruud (2009), Arvidsson (2011), and Hassan and Marston (2010) that have been cited more than 100 times.

Subsequently, in Table 3, we report the top ten articles by Google Scholar citations per year (Massaro et al. 2016). We focus on the top ten articles in order to identify which articles are driving knowledge and research in the scientific field. We show two separate rankings because as Dumay and Dai (2014, p. 270) outline "one problem with determining the impact from citations alone is that older articles can accumulate more citations." Therefore, to counterbalance this tendency, we use citations per year (CPY) to analyze the impact of <MDNFI> research. From a comparative analysis with the results of the previous table, we observe that one of the most recent articles, written by Hąbek and Wolniak in 2016, has been cited 45 times, indicating that it has already had an impact on the <MDNFI> debate. The same consideration could be done for the articles by Lee and Yeo (2016) and Lock and Seele (2016) that have already been cited 25 and 19 times, even though they were officially published only in 2016.

To pursue an SLR, we must identify units of analysis within selected papers and treat them as independent elements to be analyzed. Thus, in the fifth stage, we *define an analytical framework*, as shown in Table 4, in order to help us organizing the existing literature on <MDNFI>.

To develop this framework, we adopted the criteria used by Massaro et al. (2016). Particularly, as part of developing the framework, we initially coded five articles to determine the suitability of the adopted framework and to determine if any other criteria or attributes needed changing, adding, or deleting according to the analytical procedure adopted by Dumay et al. (2016).

Also, during and after our initial coding, we reviewed the criteria and attributes again. As a result, we add two additional criteria: E: Academic, practitioners, and consultants (as authors) and F: Academic, practitioners, and consultants (as readers). In addition, we delete year and authors/institutions/journals as criteria, because it

Table 2 Top ten articles by Google Scholar citations—as at July 6, 2018

Number	Reference	Publication year	Article	Google Scholar citations
1	Ioannis Ioannou, George Serafeim	2017	The consequences of mandatory corporate sustainability reporting	365
2	Yan-Leung Cheung, Ping Jiang, Weiqiang Tan	2010	A transparency disclosure index measuring disclosures: Chinese listed companies	124
3	Irja Vormedal, Audun Ruud	2009	Sustainability reporting in Norway—an assessment of performance in the context of legal demands and sociopolitical drivers	121
4	Susanne Arvidsson	2011	Disclosure of non-financial information in the annual report: a management-team perspective	115
5	Omaima Hassan, Claire Marston	2010	Disclosure measurement in the empirical accounting literature—a review article	106
6	Patrycja Hąbek, Radosław Wolniak	2016	Assessing the quality of corporate social responsibility reports: the case of reporting practices in selected European Union member states	89
7	Kin-Wai Lee, Gillian Hian-Heng Yeo	2016	The association between integrated reporting and firm valuation	49

(continued)

Table 2 (continued)

Number	Reference	Publication year	Article	Google Scholar citations
8	Irina Lock, Peter Seele	2016	The credibility of corporate social responsibility (CSR) reports in Europe. Evidence from a quantitative content analysis in 11 countries	38
9	Mingyi Hung, Jing Shi, Yongxiang Wang	2013	The effect of mandatory CSR disclosure on information asymmetry: evidence from a quasi-natural experiment in China	28
10	Tertia Hindley, Pieter Buys	2012	Integrated reporting compliance with the global reporting initiative framework: an analysis of the South African mining industry	27

Source Our elaboration

seems that they are not significant for our analysis. This means there are seven different criteria, with three to seven attributes each.

In the sixth stage, we illustrate the *literature review reliability*. As structured literature review is a form of content analysis, we use subjective coding to analyze the selected articles because the "research is based on data generated by human beings asked to make some kind of judgment" (Hayes and Krippendorff 2007, p. 77). So, it is important to develop particular forms of control and triangulation that reduce the "bias by integrating theories, methods, data sources, and researchers with complementary strengths and non-overlapping weaknesses" (Modell 2009, p. 209). In fact, if researchers could reduce bias, they would be able to argue that their coding and analytical framework are reliable. Thus, the reliability measure can help researchers to demonstrate that their data: "(a) have been generated with all conceivable precautions in place against known pollutants, distortions and biases, intentional or accidental, and (b) mean the same thing for everyone who uses them" (Krippendorff 2013, p. 267).

Table 3 Top ten articles by citations per year (CPY)—as at July 6, 2018

Number	Reference	Publication Year	Article	CPY
1	Ioannis Ioannou, George Serafeim	2017	The consequences of mandatory corporate sustainability reporting	365
2	Patrycja Hąbek Radosław Wolniak	2016	Assessing the quality of corporate social responsibility reports: the case of reporting practices in selected European Union member states	45
3	Kin-Wai Lee, Gillian Hian-Heng Yeo	2016	The association between integrated reporting and firm valuation	25
4	Irina Lock, Peter Seele	2016	The credibility of corporate social responsibility (CSR) reports in Europe. Evidence from a quantitative content analysis in 11 countries	19
5	Susanne Arvidsson	2011	Disclosure of non-financial information in the annual report: a management-team perspective	16
6	Yan-Leung Cheung, Ping Jiang, Weiqiang Tan	2010	A transparency disclosure index measuring disclosures: Chinese listed companies	16
7	Irja Vormedal, Audun Ruud	2009	Sustainability reporting in Norway—an assessment of performance in the context of legal demands and sociopolitical drivers	13
8	Omaima Hassan, Claire Marston	2010	Disclosure measurement in the empirical accounting literature—a review article	13
9	Mingyi Hung, Jing Shi, Yongxiang Wang	2013	The effect of mandatory CSR disclosure on information asymmetry: evidence from a quasi-natural experiment in China	6
10	Tertia Hindley, Pieter Buys	2012	Integrated reporting compliance with the global reporting initiative framework: an analysis of the South African mining industry	5

Source Our elaboration

Table 4 Results of analysis of <MDNFI> articles

Article code	Criterion	Number of articles	Article code	Criterion	Number of articles
A	JURISDICTION		B	ORGANIZATIONAL FOCUS	
A1	Supra-national/international/comparative—general	29	B1	Publicly listed	34
A1.1	Supra-national/international/comparative—industry	8	B2	Private-SMEs	0
A1.2	Supra-national/international/comparative—organizational	2	B3	Private-others	0
A2	National—general	29	B4	Public sector	0
A2.1	National—industry	18	B5	Not-for-profit	1
A2.2	National—organizational	1	B6	General/other	52
A3	One organization	0		Total	87
	Total	87			
C	COUNTRY OF RESEARCH		D	FOCUS OF <SV> LITERATURE	
C1	USA/Canada	9	D1	Accounting	6
C2	Australasia	6	D2	Reporting	35
C3	European Union	58	D3	Auditing and assurance	2
C4	Asia	18	D4	Accountability and governance	12
C5	Africa	8	D5	Public policy	28
C6	Other (including general)	0	D6	Management control and Strategy	1
	Total	99	D7	Performance measurement	3
				Other (including general)	0

(continued)

Table 4 (continued)

Article code	Criterion	Number of articles	Article code	Criterion	Number of articles
				Total	87
E	ACADEMIC, PRACTITIONERS, CONSULTANTS AND REGULATORS (as authors)		F	ACADEMIC, PRACTITIONERS, CONSULTANTS AND REGULATORS (as readers)	
E1	Academic(s)	87	F1	Academic(s)	51
E2	Practitioner(s) and consultant(s)	0	F2	Practitioner(s) and consultant(s)	1
E3	Regulator(s)	0	F3	Regulator(s)	3
E4	Academics, practitioners and consultants	0	F4	Academics, practitioners, and consultants	32
	Total	87		Total	87
G	RESEARCH METHODS		H	<MNDFI> FRAMEWORKS AND MODELS	
G1	Case/field study/interviews	7	H1	No model proposed	74
G2	Content analysis/historical analysis	19	H2	Applies or considers previous models	9
G3	Survey/questionnaire/other empirical	24	H3	Proposed a new model	4
G4	Commentary/normative/policy	35		Total	87
G5	Literature review	2			
	Total	87			

Source Our elaboration

We use Krippendorff's alpha (K-alpha) as the reliability measure (Krippendorff 2013). Accordingly, when coding the first ten articles, the lead author independently read the articles and recorded the codes on a separate spreadsheet and the other authors independently repeated this process. Based on our first attempt at coding, we had a K-alpha score of 0.81, which is just over the recommended score of 0.80. Then, we discuss the coding system together, and after having clarified the questionable issues, we develop the remaining part of the analysis. We did not carry out further reliability checking, as we did not deem it necessary following this discussion.

In the seventh stage, we explain *the validity of our literature review* in terms of internal and external validity (Massaro et al. 2016).

Internal validity seeks to establish causal relationships (White and McBurney 2012, p. 142). We use a pattern-matching logic that compares an empirically based pattern with a predicted one made before collecting data (Yin 2015). Starting with a small group of articles, we analyzed data to develop first conclusions and identify elements for deeper analysis, and then we use the expanded framework to analyze all articles.

External validity is concerned with whether the results of a study can be generalized (White and McBurney 2012, p. 145). In this study, we performed several queries to understand how the selected articles were representative of the available literature. Firstly, we did a content analysis of the selected articles reading the abstracts and, in some cases, the full content of the articles to select the articles that are more representative of the current literature on <MDNFI>. As a result, we identified several articles as being not relevant to the literature review. Starting from 1814 articles identified in the first phase of the literature search, we selected only 87 articles related to <MDNFI>. Rejected articles were either not scholarly articles or articles in which the authors of the article referred to <MDNFI> ambiguously or they use the term in a general or unrelated way. Additionally, because it takes several months to write an SLR, we continued to look for relevant articles and continuously updated dataset as the research developed.

In the eighth stage, after defining the analytical framework and checking the framework's reliability, we *coded the articles* recording the results in an Excel spreadsheet. Furthermore, we retained an open coding approach alongside coding for the preestablished categories in the analytical framework, in case we discovered any relevant new article attributes or categories. As such, we added two extra criteria to the analytical framework, after the first pass at coding, because we found new insights as we read and coded the articles. This highlights how the SLR process is not just a rigid approach, but it is flexible and develops iteratively (Dumay et al. 2016).

4 Insights and Critiques

In this section, that is the ninth stage of the structured literature review protocol, we discuss the research results of our analysis of <MDNFI>'s articles and attempt to answer to the research question one "How is research for inquiring into <SV>

developing?" and two "What is the focus and critique of the <MDNFI> literature?". Thus, we provide some reflections and *insights* on the current state of <MDNFI> literature and offer a *critique* of the field resulting from an in-depth analysis of a defined body of literature.

The research follows the SLR method, classifying the articles according to the SLR schema and the changes we include for analyzing <MDNFI> criteria (see Table 4) and provide insights and critiques into the evolution of the <MDNFI> literature. However, rather than describing the entire SLR framework, we first address each criterion by describing the reason we chose the criteria for our analysis and the insights and the critique we develop from the results. In the next paragraphs, the research results are illustrated as follows: Jurisdiction; Organizational focus; Country of research; Focus of <MDNFI> literature; Academic, Practitioners, Consultants and Regulators; Research methods <MDNFI>; Frameworks and Models.

4.1 Jurisdiction

We adopt the Jurisdiction (A) criterion from Guthrie et al. (2012, p. 71). It shows where the papers are emanated from (Massaro et al. 2016, p. 783) and examines the context of <MDNFI> research. In the "supra-national" perspective, we categorize articles in which authors have compared two or more countries. For example, we classify articles that do not have an empirical based as "supra-national/international/comparative-general," whereas articles focusing on specific nations or regions fall into "national-general" perspective.

We further subclassify these attributes into "industry" or "organizational" subcategories either from "supra-national" or "national" perspective. For example, the subcategory "national-industry" includes papers based on a specific industry belonging to a single country. On the contrary, the "national-organizational" subcategory includes articles whose analysis concerns a single organization belonging to a single country.

As shown in Table 5, in the "supra-national" perspective, the articles analyzed are concentrated in the "general" subcategory that includes, respectively, 29 articles (e.g., Ioannou and Serafeim 2017; Hąbek and Wolniak 2016; Lock and Seele 2016); in the same manner, in the "national" perspective, the majority of articles adopt a general approach because there is a greater concentration in the subcategory "general," with 29 articles (e.g., Lee and Yeo 2016; Cheung et al. 2010). On the contrary, it seems that this type of research is not relevant at organizational level, neither in the supranational perspective nor in the national perspective, whereas some articles investigate the <MDNFI> at industry level in both perspectives.

Therefore, the majority of articles adopt a general approach to <MDNFI>, which we expect because <MDNFI> claims to increase sustainability disclosure and improve transparency around organizations' impact on society of any kind of organization. Indeed, similar to integrated reporting research, many articles adopt a

Table 5 Results of analysis of <MDNFI>—jurisdiction

Jurisdiction							
Supra-national/international/ comparative—general	Supra-national/international/ comparative—industry	Supra-national/international/ comparative—organizational	National—general	National—industry	National—organizational	One organization	Total
29	8	2	29	18	1	0	87.00

Source Our elaboration

Table 6 Results of analysis of <MDNFI>—organizational focus

Organizational focus						
Publicly listed	Private—SMEs	Private—others	Public sector	Not-for-profit	General/other	Total
34	0	0	0	1	52	87.00

Source Our elaboration

top-down perspective, characteristic of the first and second stage research approaches in a developing field (Guthrie et al. 2012).

4.2 Organizational Focus

The Organizational Focus (B) criterion helps to identify the type of organizations that a research paradigm investigates (Massaro et al. 2016). According to Guthrie et al. (2012, p. 71) in our research, this criterion consists of six attributes: "publicly listed," "private-SMEs," "private-others," "public sector," "not-for-profit," "general/other."

As shown in Table 6, we find that the majority of <MDNFI> studies focuses on "general/other," with 52 articles (e.g., Grewal et al. 2017; Hąbek and Wolniak 2016; Hassan and Marston 2010); this evidence confirms that <MDNFI> research regards mainly the managerial approach to business activity. Apart from "general/other," our study finds that the most commonly researched type of organization is "publicly listed" companies with 34 contributes (e.g., Ioannou and Serafeim 2017; Lee and Yeo 2016; Lock and Seele 2016). Unsurprisingly, only one article focuses on "not-for-profit," whereas no articles focus on "public sector" and "private organizations." Specifically, the article of Asri et al. (2016) proposes and discusses the development of an index of Islamic Financial and Social Reporting (IFSR) for Malaysian Islamic banks, due to the growing importance of Islamic banks, not only from the economic perspective but also from the social perspective.

This result highlights the dominance of publicly listed companies in <MDNFI> studies. This finding aligns with the scope of regulation on non-financial information that is written primarily in the context of private sector and, specifically, for-profit companies but it can also be applied, adapted as necessary, by public sector and not-for-profit organizations.

4.3 Country of Research

The Country of research (C) criterion shows what are the geographic areas that are more investigated and if there are other countries/regions that require attention (Massaro et al. 2016, p. 783). We develop this criterion from Guthrie et al. (2012) original classification scheme. However, we change the original attributes because we would expect a significant number of contributions from Asia due to the growing attention to CSR and sustainability disclosure in this region. Additionally, we merge the United Kingdom with Continental Europe, then we change the label to the European Union, so we are more specific and because companies in this area are subject to EU directives. Therefore, we build a classification scheme dividing the country of research in six regions: "USA/Canada," "Australasia," "European Union," "Asia," "Africa," and "other (including general)." If the regional focus or the geographical location of the research cannot be determined, we classify the article in the "other (including general)" category. If the research regards more than one regional focus, we count the article more than one time; this is why the resulting amount of articles related to this criterion is higher than the total amount of the articles.

The results suggest that the most studied locations are the European Union with 59 articles (e.g., Grewal et al. 2017; Hąbek and Wolniak 2016; Arvidsson 2011), followed by Asia, with 18 articles on <MDNFI> (e.g., Wang and Li 2016; Cheung et al. 2010), as shown in Table 7. So, these are the contexts dominating the <MDNFI> research agenda as we expected since the European Union has recently adopted a new directive on mandatory disclosure of non-financial statements. However, Africa, with only 8 articles (e.g., Lee and Yeo 2016; Hindley and Buys 2012), is not at the <MDNFI> research forefront as expected due to the fact that South Africa is the first country where the disclosure of non-financial information has become mandatory. In addition, some research (9 articles) carried out cross-country analysis, making comparative study among Australasia, the European Union, and Asia (e.g., Ioannou and Serafeim 2017) or between USA/Canada and the European Union (e.g., Johansen 2016; Petersen and Svensson 2016). Finally, it is worth noting that the USA/Canada contribute little to <MDNFI> research as we find only 9 articles (e.g., Miller and Loman 2014; Abdel-Rahim and Abdel-Rahim 2010) providing commentary and analysis of the <MDNFI>. This highlights a common divide between US and Canadian research, which tends to focus on positivist capital market research, and European research, which tends to focus on broader research traditions.

Table 7 Results of analysis of <MDNFI>—country of research

Country of research						
USA/Canada	Australasia	European Union	Asia	Africa	Other (including general)	Total
9	6	58	18	8	0	99.00

Source Our elaboration

Table 8 Results of analysis of <MDNFI>—focus of <MDNFI> literature

Focus of <MDNFI> literature							
Accounting	Reporting	Auditing and assurance	Accountability and governance	Public policy	Management control and Strategy	Performance measurement	Total
6	35	2	12	28	1	3	87.00

Source Our elaboration

4.4 Focus of <MDNFI> Literature

We develop the Focus of <MDNFI> literature (D) criterion from Guthrie et al. (2012) original classification scheme. In particular, we change the original format to highlight the specific research topics of our analysis introducing a focus on public policy, so we classify the categories as follows: "Accounting," "Reporting," "Auditing and assurance," "Accountability and governance," "Public policy," "Management control and Strategy," and "Performance measurement."

Unsurprisingly, we find that the most popular category is "Reporting" with 35 articles (e.g., Bianchi Martini et al. 2016; Costa and Agostini 2016; Lock and Seele 2016; Vormedal and Ruud 2009), which we expected because the compulsory revelation of non-financial information, that was previously secret or unknown, is normally made through reporting, that is "a detailed periodic account of a company's activities, financial condition and prospects that are made available to shareholders and investors" (Dumay 2016, p. 178). Additionally, there are 28 articles focusing predominantly on "public policy" (e.g., Ioannou and Serafeim 2017; Camilleri 2015; Hąbek and Wolniak 2013b) as expected. This is due to the fact that the disclosure of non-financial information is required by law, so the issue of <MDNFI> regards the study of global, regional and national policy, and regulation as well. Then, we observe that 12 articles analyze "Accountability and governance" focus (e.g., Hąbek and Wolniak 2016; Arvidsson 2011; Cheung et al. 2010), followed by "Accounting" with six contributes (e.g., Lee and Yeo 2016; Hassan and Marston 2010), as shown in Table 8. A few articles regard "Performance measurement," "Auditing and assurance," and "Management control and Strategy." This is indicative of a lack of research into how organizations apply <MDNFI> in their reporting.

4.5 Academic, Practitioners, Consultants, and Regulators

In our study, we develop the Academics, Practitioners, Consultants, and Regulators (as authors) (E) criterion and Academics, Practitioners, Consultants, and Regulators (as readers) (F) criterion from Dumay et al. (2016, p. 172) classification scheme.

In particular, we change the original format to highlight the different perspective of Academics, Practitioners, Consultants, and Regulators as authors and readers. For

Table 9 Results of analysis of <MDNFI>—academic, practitioners, consultants and regulators (as authors)

Academic, practitioners, consultants and regulators (as authors)				
Academic(s)	Practitioner(s) and consultant(s)	Regulator(s)	Academic(s), practitioner(s) and consultant(s)	Total
87	0	0	0	87.00

Source Our elaboration

Table 10 Results of analysis of <MDNFI>—academic, practitioners, consultants and regulators (as readers)

Academic, practitioners, consultants and regulators (as readers)				
Academic(s)	Practitioner(s) and consultant(s)	Regulator(s)	Academic(s), practitioner(s) and consultant(s)	Total
51	1	3	32	87.00

Source Our elaboration

this reason, we identify four categories: “Academic(s),” “Practitioner(s) and Consultant(s),” “Regulator(s)” and the general category “Academic(s), Practitioner(s), and Consultant(s)” for both criteria.

We find that all articles are written by academics (87 articles), as shown in Table 9.

Concerning the audience of the <MDNFI> literature, we find that the majority of articles is directed solely to “Academic(s)” with 51 articles (e.g., Ioannou and Serafeim 2017; Lee and Yeo 2016; Hąbek and Wolniak 2013b), and to the broad category of “Academic(s), Practitioner(s), and Consultant(s)” with 32 contributions (e.g., Grewal et al. 2017; Wang and Li 2016; Camilleri 2015), as shown in Table 10. Only one article is mainly directed to “Practitioner(s) and Consultant(s),” that is the study of Lock and Seele (2016), whereas three contributions are predominantly addressed to “Regulator(s),” namely the articles of Wagner (2017), Alptekin and Oberer (2012) and Abdel-Rahim and Abdel-Rahim (2010).

On the basis of the examined articles that constitute our sample, the analysis shows that <MDNFI> studies are usually prepared by academics and mostly intended for academics and practitioners. Should <MDNFI> become the corporate reporting norm, we would expect more empirical rather than normative research in the future, given there is a need for developing <MDNFI> theory into practice. Closing the gap between academic research on <MDNFI> and the accounting profession and practice is needed because there is a need to have more communication and coordination between practitioners, policy makers, and academic researchers in general.

4.6 Research Methods

The research method criterion (G) adapted from Guthrie et al. (2012) includes five attributes. The first three attributes relate to studies that are empirical in nature: "case/field study/interviews," "content analysis/historical analysis," "survey/questionnaire/other empirical." The next two attributes are normative in nature and include "commentary/normative/policy" and "literature review."

The results of our analysis show that the research method most commonly employed is "commentary/normative/policy" with 35 articles (e.g., Dumitru et al. 2017; Camilleri 2015; Szabó and Sørensen 2015). Next, "survey/questionnaire/other empirical" has 24 contributions (e.g., Grewal et al. 2017; Ioannou and Serafeim 2017; Hąbek and Wolniak 2013b; Arvidsson 2011) followed by "content analysis/historical analysis" with 19 contributions (e.g., Lee and Yeo 2016; Lock and Seele 2016), so both of them are research methods popular for investigating <MDNFI> as shown in Table 11.

4.7 <MDNFI> Frameworks and Models

We adopt the criterion <MDNFI> frameworks and models (H) from Guthrie et al. (2012). We code the articles as "no model proposed," "applies or considers previous models," and "proposes a new model." The results show that most articles do not propose any model (74 articles) (e.g., Ioannou and Serafeim 2017; Lee and Yeo 2016; Lock and Seele 2016), few articles consider previous models (9 articles) (e.g., Hąbek and Wolniak 2013b; Hassan and Marston 2010) whereas only 4 articles propose new models, namely Appiagyei et al. (2016), Miller and Loman (2014), Abdel-Rahim and Abdel-Rahim (2010), Cheung et al. (2010), which we expected because <MDNFI> is still an emerging phenomenon (see Table 12).

5 Future Research Directions

In section three and four, we answered research question one "How is research for inquiring into <MDNFI> developing?" and two "What is the focus and critique of the <MDNFI> literature?", selecting the most representative articles of the available literature and showing that most of the articles have an international or national perspective, adopt a general approach, are based on publicly listed companies, are located in the European Union, are focused on reporting as specific research topic, are written by academics and intended predominantly for academics and practitioners, apply as research method a commentary, normative and policy approach and do not propose any new theoretical model.

Table 11 Results of analysis of <MDNFI>—research methods

Research methods					
Case/field study/interviews	Content analysis/historical analysis	Survey/questionnaire/other empirical	Commentary/normative/policy	Literature review	Total
7	19	24	35	2	87.00

Source Our elaboration

Table 12 Results of analysis of <MDNFI>–<MDNFI> frameworks and models

<MDNFI> frameworks and models			
No model proposed	Applies or considers previous models	Proposes a new model	Total
74	9	4	87.00

Source Our elaboration

In this section, we answer research question three "What is the future for <MDNFI> research?" and outline the new directions in research on <MDNFI>. There are still significant opportunities for researchers to investigate <MDNFI>, especially if <MDNFI> proliferates and builds a corpus of reports and organizational <MDNFI> practice. Thus, <MDNFI> is a significant movement, and for this reason, its existence and impact merit investigation. However, we see some significant challenges researchers and practitioners need to overcome.

If academics want to make a contribution to <MDNFI> research, then they need to engage more with the practice and the development of <MDNFI>. Accounting researchers have long been accused of doing research that contributes little if anything to accounting practice, and this is one of the major challenges for accounting in general, and research into <MDNFI> is no different (Evans et al. 2011). As exemplified in our findings, there is a disconnection between academics researching <MDNFI> and <MDNFI> practice because the vast majority of <MDNFI> articles do not research practice, specific organizations, or engage practitioners as fellow researchers and authors. However, while case studies of organizations implementing <MDNFI> might prove insightful (e.g., Beck et al. 2017), we argue that just observing practice does not have the power to change much. Thus, we argue there is a need for more performative research and interventionist research.

We would be remiss if we offered the above critique without offering a way forward for <MDNFI> research because the interest in <MDNFI> research is increasing. Thus, based on the results of our research framework and critique, we offer guidelines for future <MDNFI> research. To frame this discussion, we refer to parallels from IC research, which to date has identified four distinct research stages (Dumay and Garanina 2013).

According to Petty and Guthrie (2000), the aim of the first stage is to render the invisible visible by creating a discourse that all could engage in. Through the issue of the regulation on <MDNFI> and the presentation and publication of conference papers and academic articles reviewed in our research, it seems that the first stage has come of age. We argue that since the publication of the current EU rules we question the need for further normative research because it is now time to test the <MDNFI> rhetoric.

According to Guthrie et al. (2012), third stage research is based on a critical and performative analysis of practices in action. We argue this stage of research can coexist with second stage <MDNFI> research because the second stage deals with understanding the ostensive impact of <MDNFI> while third stage research focuses on performative <MDNFI>. However, by acknowledging that the antecedents of today's <MDNFI> movement lie in practice is a reminder of the importance of academic researchers keeping their work focused and relevant to practice.

Despite the fact that we observe that <MDNFI> research is just emerging from first stage research, we believe that it is no premature to talk about fourth stage <MDNFI> research. We argue that the fourth stage <MDNFI> research complements and runs in parallel with the second and the third stage <MDNFI> research because it takes a different perspective to performative research. As Dumay and Garanina (2013) outline, the fourth stage research shifts the focus within a firm to a longitudinal focus of how <MDNFI> is utilized to navigate the value created by countries, cities and communities and advocates how value can be widely developed. Therefore, researchers should view the espoused benefits of <MDNFI> from the perspective of what it can do for an economy, environment and society, and a wider group of stakeholders beyond investors.

Based on the results and analysis, we argue that the way forward for <MDNFI> research is a transformation from its current desk-bound traditions into a modern global discipline. Researchers need to be innovative in searching for <MDNFI>, for example, investigating new media such as news media and social media and providing more empirical rather than normative research. In addition, most studies about <MDNFI> research examine publicly listed companies. This evidence suggests focusing on other organization types. One last comment relates to the synonymous nature of the terms "reporting" and "disclosure." We believe the use of these two terms needs to be further explored.

6 Conclusion

To conclude, this research examines the <MDNFI>'s research foundations and provides an overview of the current state of the literature by developing a structured literature review (Massaro et al. 2016) on <MDNFI>, which offers more reliability than a traditional authorship literature review (Dumay et al. 2016).

The actual mandatory nature of non-financial disclosure can influence the literature on CSR disclosure by directing further research toward the investigation of quantity and quality of non-financial disclosure (e.g., Grewal et al. 2017), and to the effect of non-financial disclosure regulations on firms' disclosure practices and valuations (e.g., Ioannou and Serafeim 2017). In addition, further research should be undertaken into the theoretical and empirical underpinnings of new forms of governance to better understand regulatory trade-offs and how to promote more effective forms of CSR (Jackson et al. 2017). Finally, further research should be conducted in the field of auditing and assurance (e.g., investigating the procedures, the role of CFO, controllers and auditors) and in the sphere of performance measurement (e.g., analyzing the KPI for <MDNFI >).

We are aware that our research reviews the literature on <MDNFI> in its infancy. However, while some scholars may think it is too early for such a review, the tenuous nature of concepts such as <MDNFI> could be fleeting if <MDNFI> turns out to be another management and accounting fad, makes it necessary to begin to explore how <MDNFI> research is evolving. Doing so at an early stage is valuable because it exposes how early research into new management and accounting technologies evolves. As we highlight several times, most early research into <MDNFI> is normative in nature, but if other scholars are aware of the different stages which research evolves, they may be better able to develop understanding about the impact of these new applications of scientific knowledge in practice.

The conclusion of this research should be considered after taking into account the following limitations. First, the selection of articles was restricted to articles published, articles in press, conference papers, and Ph.D. theses. Results could vary if other forms of scholarly activities were included (e.g., monographs, books, book chapters, etc.). Second, although the coding process was performed systematically with utmost care to allow consistency, there could be errors of omission and coding could have also been affected by coder bias. Third, the addition of "other" and "other general" classifications in selecting the coding criteria may have camouflaged some interesting findings especially with respect to the organizational focus criterion. Finally, as with all interpretive research, the findings are limited to the breadth and depth of the data analyzed and our interpretation of the results. While the SLR method employed offers more reliability than a traditional authorship literature review, researchers using the same method may interpret the results differently. Thus, we take all responsibility for our interpretation of the findings including any errors or omissions.

Appendix: <MDNFI> Publications Reviewed (2008–2018)

Abdel-Rahim, H. Y. M., & Abdel-Rahim, Y. M. (2010). Green accounting—A proposition for EA/ER conceptual implementation methodology. *Journal of Sustainability and Green Business, 5*(1), 27–33.

Abu, R. K. (2018). Factors that influence non-financial disclosures: Evidence from Jordan. *Research Journal of Finance and Accounting, 9*(8), 57–62.

Ackers, B. (2015). Ethical considerations of corporate social responsibility: A South African perspective. *South African Journal of Business Management, 46,* 11–21.

Agostini, M., & Costa, E. (2012). Mandatory disclosure about environmental and employee matters in Italian listed corporate groups' reports. *Working Papers 6*, Department of Management, Università Ca' Foscari Venezia.

Ahern, D. (2016). Turning up the heat? EU sustainability goals and the role of reporting under the non-financial reporting directive. *European Company and Financial Law Review, 13*(4), 599–630.

Alptekin, E., & Oberer, B. J. (2012). Responsible business: The European Union is driving forward the European strategies on corporate social responsibility. *IBIMA Publishing Journal of EU Research in Business, 2012,* 1–15.

Appiagyei, K., Djajadikerta, H., & Xiang, E. (2016). Integrated reporting and firm performance: A research framework. *ECU Business Doctoral and Emerging Scholars Colloquium, 2016,* 123–219.

Arifin, J. (2014). *Isomorphic pressures influencing the level of mandatory disclosure within financial statements of Indonesian Local Governments* (Ph.D. Dissertation, School of Accounting, Curtin University).

Arvidsson, S. (2011). Disclosure of non-financial information in the annual report: A management-team perspective. *Journal of Intellectual Capital, 12*(2), 277–300.

Asri, R., Hairul Azlan, A., Abdul, R., & Rahman, Abdul. (2016). The formulation of financial, governance and social index of Malaysian Islamic Banks: An integrative approach. *Risk Governance and Control: Financial Markets & Institutions, 6,* 64–70.

Barth, M. E., Cahan, S. F., Chen, L., & Venter, E. V. (2017). The economic consequences associated with integrated report quality: Capital market and real effects. *Accounting, Organizations and Society, 62,* 43–64.

Beck, C., Dumay, J., & Frost, G. (2017). In Pursuit of a 'Single Source of Truth': From threatened legitimacy to integrated reporting. *Journal Business Ethics, 141*(1), 191–205.

Biswas, U. A., Garg, S., & Singh, A. (2016). The need for regulatory intervention in corporate social responsibility in India: Evidence from corporate social disclosures. *International Journal of Indian Culture and Business Management, 12*(3), 293–317.

Bizzarri, K. (2013). Refusing to be accountable. In *Business hollows out new EU corporate social responsibility rules*, pp. 1–13.

Bora, B. J., & Das, T. C. (2013). Corporate environmental reporting in the context of recent changes in regulatory framework with special reference to India. *CLEAR International Journal of Research in Commerce & Management, 4*(9), 32–38.

Camilleri, M. A. (2015). Environmental, social and governance disclosures in Europe. *Sustainability Accounting, Management and Policy Journal, 6*(2), 224–242.

Camilleri, M. A. (2017). Case study 2: Environmental, social and governance reporting in Europe. In *Corporate sustainability, social responsibility and environmental management*. Cham, Switzerland: Springer.

Černe, K., Hasić, T., & Galant, A. (2017). Implications of "Directive on Disclosure of Non-Financial and Diversity Information" on Croatian companies' reporting system. In *Management International Conference*, Monastery di Treviso (Venice), Italy, May 24–27, 2017.

Chambers, R., & Yilmaz Vastardis, A. (2016). The new EU rules on non-financial reporting: Potential impacts on access to remedy? *Human Rights and International Legal Discourse, 10*(1), 18–40.

Chersan, I. C. (2018). Integrated reporting in Europe-from voluntary to mandatory? *Journal of Public Administration, Finance and Law, 3,* 19–30.

Cheung, Y. L., Jiang, P., & Tan, W. (2010). A transparency disclosure index measuring disclosures: Chinese listed companies. *Journal of Accounting and Public Policy, 29*(3), 259–280.

Chiu, I. H. Y. (2017). Unpacking the Reforms in Europe and UK relating to mandatory disclosure in corporate social responsibility: Instituting a hybrid governance model to change corporate behaviour? *European Company Law, 14*(5), 193–208.

Chousa, J. P., González, M. V., López-Cabarcos, M. A., & Romero-Castro, N. (2017). Managing reputational risk through environmental management and reporting: An options theory approach. *Sustainability, 9*(376), 1–15.

Cominetti, M., & Seele, P. (2016). Hard soft law or soft hard law? A content analysis of CSR guidelines typologized along hybrid legal status. *uwf UmweltWirtschaftsForum*, *24*(2–3), 127–140.

Costa, E., & Agostini, M. (2016). Mandatory disclosure about environmental and employee matters in the reports of Italian-listed corporate groups. *Social and Environmental Accountability Journal, 36*(1), 10–33.

Cronin, P., Ryan, F., & Coughlan, M. (2008). Undertaking a literature review: A step-by-step approach. *The British Journal of Nursing*, *17*(1), 38–43.

Dixon-Woods, M. (2011). Systematic reviews and qualitative methods. In Silverman, D. (Ed.), *Qualitative research: Issues of theory, method and practice* (3rd ed., pp. 331–346). London, UK: Sage.

Dumitru, M., Dyduch, J., Gușe, R. G., & Krasodomska, J. (2017). Corporate reporting practices in Poland and Romania—an ex-ante study to the new non-financial reporting European Directive. *Accounting in Europe, 4*(3), 279–304.

Einwiller, S., Ruppel, C., & Schnauber, A. (2016). Harmonization and differences in CSR reporting of US and German companies: Analyzing the role of global reporting standards and country-of-origin. *Corporate Communications: An International Journal, 21*(2), 230–245.

Fiechter, P., Hitz, J. M., & Lehmann, N. (2018). *Real effects in anticipation of mandatory disclosures: Evidence from the European Union's CSR Directive*. Available at SSRN: https://ssrn.com/abstract=3033883 or http://dx.doi.org/10.2139/ssrn.3033883.

Gray, R. (2010). A re-evaluation of social, environmental and sustainability accounting. *Sustainability Accounting, Management and Policy Journal, 1*(1):11–32.

Greco, G. (2012). The management's reaction to new mandatory risk disclosure: A longitudinal study on Italian listed companies. *Corporate Communications: An International Journal, 17*(2), 113–137.

Grewal, J., Riedl, E. J., & Serafeim, G. (2017). Market reaction to mandatory nonfinancial disclosure. *Management Science* (Forthcoming). Available at SSRN: https://ssrn.com/abstract=2657712 or http://dx.doi.org/10.2139/ssrn.2657712.

Gulin, D., Hladika, M., & Mićin, M. (2018). Disclosure of non-financial information: The case of Croatian listed companies. In M. Bilgin, H. Danis, E. Demir, & U. Can (Eds.), *Consumer behavior, organizational strategy and financial economics*. *Eurasian Studies in Business and Economics* (Vol. 9). Cham, Switzerland: Springer.

Hąbek, P., & Wolniak, R. (2013a). Analysis of approaches to CSR reporting in selected European Union countries. *International Journal of Economic Research, 4,* 79–95.

Hąbek, P., & Wolniak, R. (2013b). European Union regulatory requirements relating to Sustainability Reporting. The case of Sweden. *Scientific Journals, 34*(106), 40–47.

Hąbek, P., & Wolniak, R. (2016). Assessing the quality of corporate social responsibility reports: The case of reporting practices in selected European Union member states. *Quality & Quantity, 50*(1), 399–420.

Haller, A., Link, M., & Groß, T. (2017a). The term "Non-financial Information"—A semantic analysis of a key feature of current and future corporate reporting. *Accounting in Europe, 14*(3), 407–429.

Hassan, O. A. G., & Marston, C. L. (2010). *Disclosure measurement in the empirical accounting literature—A review article*. Working Paper No. 10–18, Economics and Finance Working Paper Series, Brunel University, London. Available at SSRN: https://ssrn.com/abstract=1640598 or http://dx.doi.org/10.2139/ssrn.1640598.

Hindley, T., & Buys, P. (2012). Integrated reporting compliance with the Global Reporting Initiative framework: An analysis of the South African mining industry. *International Business & Economics Research Journal, 11*(11), 1249–1260.

Holt, Z., Yasseen, Y., & Padia, N. (2015). A comparison of non-financial strategy disclosure in the annual reports of South African and Indian listed companies. *Southern African Business Review, 19*(3), 48–77.

Hung, M., Shi, J., & Wang, Y. (2013). The effect of mandatory CSR disclosure on information asymmetry: Evidence from a quasi-natural experiment in China. In *Asian Finance Association (AsFA) 2013 Conference*. Available at SSRN: https://ssrn.com/abstract=2206877 or http://dx.doi.org/10.2139/ssrn.2206877.

Hussain, A., & Jan, S. (2017). The extent of information disclosure in commercial banks of Pakistan: A comparative analysis of large commercial banks and small commercial banks. In *Conference on Global Development in Humanities, Education and Civilization*. Available at: http://www.qurtuba.edu.pk/jms/default_files/JMS/special_edition/4%20GDHEC/27%20(AIC-GDHEC%202017)%20497-508%20Arif%20Hussain.pdf.

Ioannou, I., & Serafeim, G. (2017). *The consequences of mandatory corporate sustainability reporting*. Harvard Business School Research Working Paper No. 11-100. Available at SSRN: https://ssrn.com/abstract=1799589.

Jackson, G., Bartosch, J., Kinderman, D. P., Knudsen, Jette S., & Avetisyan, E. (2017). *Regulating self-regulation? The politics and effects of mandatory CSR disclosure in comparison*. Available at SSRN: https://ssrn.com/abstract=2925055 or http://dx.doi.org/10.2139/ssrn.2925055.

Jeffery, C. (2017). *Comparing the implementation of the EU non-financial reporting directive*. Frank Bold.

Johansen, T. R. (2016). EU regulation of corporate social and environmental reporting. *Social and Environmental Accountability Journal, 36*(1), 1–9.

Kawuzi, B. (2016). *The perspective of sustainability reporting phenomena in Finnish real estate markets* (Master thesis).

Kawuzi, B., Rashidfarokhi, A., Toivonen, S., & Viitanen, K. (2016). *The perspective of sustainability reporting phenomena in the real estate markets*. European Real Estate Society *(ERES)*.

Kaya, I. (2016). The mandatory social and environmental reporting: Evidence from France. *Procedia—Social and Behavioral Sciences, 229,* 206–213.

Kühn, A. L., Stiglbauer, M., & Heel, J. (2014). Does mandatory CSR reporting lead to higher CSR transparency? The case of France. *Corporate Ownership & Control, 11*(2), 29–45.

Lambooy, T., Hordijk, R., & Bijveld, W. (2014). Communicating about integrating sustainability in corporate strategy: Motivations and regulatory environments of integrated reporting from a European and Dutch perspective. In *Communicating Corporate Social Responsibility: Perspectives and Practice (Critical Studies on Corporate Responsibility, Governance and Sustainability*) (Vol. 6, pp. 217–255). Bingley: Emerald Group Publishing Limited.

Lee, K. W., & Yeo, G. H. H. (2016). The association between integrated reporting and firm valuation. *Review of Quantitative Finance and Accounting, 47*(4), 1221–1250.

Leino-Sandberg, P., Asselt, V. H., & Romppanen, S. (2017). *CSR reporting in the EU under directive 2014/95/EU: A case study of Danish influence on EU CSR policy* (Master's Thesis, University of Eastern Finland Department of Law).

Liana, G. (2016). Responsability and transparency on non-financial reporting. *Annuals of Economy Series, 3,* 291–293.

Lock, I., & Seele, P. (2016). The credibility of CSR (corporate social responsibility) reports in Europe. Evidence from a quantitative content analysis in 11 countries. *Journal of Cleaner Production, 122,* 186–200.

Lu, H. (2016). The "legalisation" of corporate social responsibility: Hong Kong experience on ESG reporting. *Asia Pacific Law Review, 24*(2), 123–148.

Maguire, M. (2013). From private regulation to public policy: The case of corporate non-financial reporting. *Perspectives on Europe, 43*(2), 67–71.

Maguire, M. (2014). Governance beyond governments? The regulation of corporate non-financial reporting. In A. Lisiak & N. Smolenski (Eds.), *What do ideas do*? (Vol. 33). Vienna: IWM Junior Visiting Fellows' Conferences.

Martini, S. B., Corvino, A., Doni, F., & Rigolini, A. (2016). Relational capital disclosure, corporate reporting and company performance: Evidence from Europe. *Journal of Intellectual Capital, 17*(2), 186–217.

Matuszak, L., & Rózanska, E. (2017a). CSR disclosure in Polish-listed companies in the light of directive 2014/95/EU requirements: Empirical evidence. *Sustainability, 3*(2304), 1–18. https://doi.org/10.3390/su9122304.

Menzies, M. (2015). *Evaluating the governance of sustainability reporting: Assessing mandatory and voluntary sustainability reporting policies and practices around the world* (Master thesis).

Miller, A., & Loman, M. (2014). Measuring and reporting sustainability: The role of the public sector. In *Sustainability Metrics White Paper Series: 2 of 3* (pp. 1–12).

Monciardini, D. (2016). The 'Coalition of the Unlikely' driving the EU regulatory process of non-financial reporting. *Social and Environmental Accountability Journal, 36,* 76–89.

Needles, E., Frigo, B., Powers, M., & Shigaev, S. A. (2016). Integrated reporting and sustainability reporting: An exploratory study of high performance companies. In *Performance measurement and management control: Contemporary issues* (Studies in Managerial and Financial Accounting, pp. 41–81).

Paulucci, G., & Cerioni, E. (2017). Integrated reporting and Italian companies: An empirical investigation. *International Journal of Business and Management, 12*(9), 221–230.

Petersen, H., & Svensson, J. (2016). *Intellectual capital disclosures: The effect of mandatory integrated reporting*. (Ph. D. dissertation). Available at http://urn.kb.se/resolve?urn=urn:nbn:se:hj:diva-30103</div>.

Pichler, K., & Lehner, O. M. (2017). European Commission—new regulations concerning environmental and social impact reporting. *ACRN Oxford Journal of Finance and Risk Perspectives, 6*(1), 1–54.

Pineiro-Chousa, J., & Gonzalez, V. M. (2017). Determinants of mandatory reporting: The influence of emerging markets. *International Journal of Business and Emerging Markets, Inderscience Enterprises Ltd, 9*(1), 33–47.

Quinn, J., & Connolly, B. (2017). The non-financial information directive: An assessment of its impact on corporate social responsibility. *European Company Law Journal, 14*(1), 15–21.

Rahim, M., & Vicario, V. (2015). Regulating quality in CSR reporting in Australia (2015). *New Zealand University Law Review, 26,* 1–31.

Refait-Alexandre, C., Farvaque, E., & Gainet, S. C. D. (2009). *Is corporate disclosure necessarily desirable? A survey*. Paris December 2009 Finance International Meeting AFFI—EUROFIDAI. Available at SSRN: https://ssrn.com/abstract=1494238 or http://dx.doi.org/10.2139/ssrn.1494238.

Reverte, C. (2014). The new Spanish corporate social responsibility strategy 2014–2020: A crucial step forward with new challenges ahead. *Journal of Cleaner Production, 91,* 327–336.

Rybalko, M. (2016a). The state's influence on the development of corporate social responsibility in Russia. In *The 9th International Conference for Entrepreneurship, Innovation and Regional Development* (ICEIRD 2016) "Responsible Entrepreneurship. Vision, Development and Ethics", National University of Political Studies and Public Administration (SNSPA), Bucharest, Romania, June 23–24, 2016.

Rybalko, M. (2016b). International experience of the development of corporate social responsibility: Comparative analysis of the influence of the state. *Management Dynamics Knowledge Economy Journal, 4*(3), 427–447.

Seethamraju, R., & Frost, G. (2016). *Information systems for sustainability reporting—A state of practice*. AMCIS: Accounting Information Systems (Sigasys).

Situ, H., & Tilt, C. (2018). Mandatory? Voluntary? A discussion of corporate environmental disclosure requirements in China. *Social and Environmental Accountability Journal, 38*(2), 131–144.

Sneidere, R. (2014). Legislative basis for corporate social responsibility reporting. *Economic Annals-XXI, 1*(3–4), 58–62.

Steyn, M. (2014). Senior executives' perspectives of integrated reporting regulatory regimes as a mechanism for advancing sustainability in South African listed companies. *Southern African Business Review, 18*(3), 142–174.

Sultana, S. (2015). *Corporate governance disclosures—A comparative analysis of countries at different stages of economic development.* (Ph.D. dissertation).

Symes, H., Sharma, U., & Davey, H. (2017). The impact of accounting regulations on annual report length. *International Journal of Economics and Accounting, 8,* 3–4.

Szabó, D. G., & Sørensen, K. E. (2015). New EU Directive on the disclosure of non-financial information (CSR). *European Company and Financial Law Review, 12*(3), 307–340.

Tiwari, B. (2016). *Canadian corporate securities disclosure and sustainability reporting.* (Ph.D. dissertation).

Tschopp, D., & Huefner, R. J. (2015). Comparing the evolution of CSR reporting to that of financial reporting. *Journal Business Ethics, 127*(3), 565–577.

Venturelli, A., Caputo, F., Cosma, R., Leopizzi, R., & Pizzi, P. (2017a). Directive 2014/95/EU: Are Italian companies already compliant? *Sustainability, 9*(1385), 1–19.

Vormedal, I., & Ruud, A. (2009). Sustainability reporting in Norway—An assessment of performance in the context of legal demands and socio-political drivers. *Business Strategy and the Environment, 18*(4), 207–222.

Wagner, C. Z. (2017). *Evolving Norms of corporate social responsibility: Lessons from the European Union Experience with non-financial reporting*. Saint Louis University Legal Studies Research Paper No. 2017-6.

Wang, K. T., & Li, D. (2016). Market reactions to the first-time disclosure of corporate social responsibility reports: Evidence from China. *Journal of Business Ethics, 138*(4), 661–682.

Wang, M. C. (2015). The relationship between environmental information disclosure and firm valuation: The role of corporate governance. *Quality & Quantity, 50*(3), 1135–1151.

Wolniak, R., & Hąbek, P. (2013). CSR reporting in France and the Netherlands. *Scientific Journals, 34*(106), 91–96.

Literature

Alvesson, M., & Deetz, S. (2000). *Doing critical management research*. London, UK: Sage.

Busco, C., Frigo, M. L., Quattrone, P., & Riccaboni, A. (2013). *Integrated reporting-reflections on the concepts, principles, elements and case studies that are redefining corporate accountability*. Cham, Switzerland: Springer.

Carini, C., Rocca, L., Veneziani, M., & Teodori, C. (2018). Ex-ante impact assessment of sustainability information—The directive 2014/95. *Sustainability, 10*(560), 1–24.

Cheng, M., Green, W., Conradie, P., Konishi, N., & Romi, A. (2014). The international integrated reporting framework: Key issues and future research opportunities. *Journal of International Financial Management & Accounting, 25*(1), 90–119.

Crawford Perrault, E., & Clark Williams, C. (2011). Communication corporate social responsibility through nonfinancial reports. In O. Ihlen, J. L. Barlett, & S. May (Eds.), *The handbook of communication and corporate social responsibility* (pp. 338–357). Chichester, UK: Wiley.

De Villiers, C., Rinaldi, L., & Unerman, J. (2014). Integrated reporting: Insights, gaps and an agenda for future research. *Accounting Auditing & Accountability Journal, 27*(7), 1042–1067.

Deegan, C., & Gordon, B. (1996). A study of the environmental disclosure practices of Australian corporations. *Accounting and Business Research, 26*(3), 187–199.

Deegan, C. M., Rankin, M., & Tobin, J. (2002). An examination of the corporate social and environmental disclosures of BHP from 1983–1997—A test of legitimacy theory. *Accounting, Auditing and Accountability Journal, 15*(3), 312–343.

Dumay, J. (2014). 15 years of the journal of intellectual capital and counting: A manifesto for transformational IC research. *Journal of Intellectual Capital, 15*(1), 2–37.

Dumay, J. (2016). A critical reflection on the future of intellectual capital: From reporting to disclosure. *Journal of Intellectual Capital, 17*(1), 168–184.

Dumay, J., Bernardi, C., Guthrie, J., & Demartini, P. (2016). Integrated reporting: A structured literature review. *Accounting Forum, 40,* 166–185.

Dumay, J., & Dai, T. M. X. (2014). Integrated thinking as an organisational cultural control? In *Critical Perspectives on Accounting Conference*.

Dumay, J., Frost, G., & Beck, C. (2015). Material legitimacy: Blending organisational and stakeholder concerns through non-financial information disclosures. *Journal of Accounting and Organizational Change, 11,* 2–23.

Dumay, J., & Garanina, T. (2013). Intellectual capital research: A critical examination of the third stage. *Journal of Intellectual Capital, 14*(1), 10–25.

EC. (2001). Recommendation 2001/453/EC on recognition, measurement and disclosure of environmental issues in the annual accounts and annual reports of EU companies. European Commission, Brussels.

EC. (2011). A renewed EU strategy 2011–14 for Corporate Social Responsibility, COM(2011) 681 final. European Commission, Brussels.

Eccles, R., & Krzus, M. P. (2010). *One report: Integrated reporting for a sustainable strategy*. Chichester, UK: Wiley.

EU (2013) Directive 2013/34/EU of the European Parliament and of the Council of 26 June 2013 on the annual financial statements, consolidated financial statements and related reports of certain types of undertakings, amending Directive 2006/43/EC of the European Parliament and of the Council and repealing Council Directives 78/660/EEC and 83/349/EEC. *Official Journal of the European Union (OJ)* L 182, 29.6.2013: 19–76.

Evans, E., Burritt, R., & Guthrie, J. (2011). *Bridging the gap between academic accounting research and professional practice*. Sydney and Adelaide: Institute of Charted Accountants in Australia, Sydney and Centre for Accounting, Governance and Sustainability, University of South Australia.

GBS—Gruppo di studio per il Bilancio Sociale. (2013). *Il Bilancio Sociale, GBS 2013 Standard*. Available at: http://www.gruppobilanciosociale.org/wp-content/uploads/2014/02/Standard-GBS-2013-Principi-di-redazione-del-Bilancio-Sociale.pdf. Accessed April 19, 2015.

Gray, R., Kouhy, R., & Lavers, S. (1995). Corporate social and environmental reporting: A review of the literature and a longitudinal study of UK disclosure. *Accounting, Auditing & Accountability Journal, 8*(2), 47–77.

Gray, R. H, Owen, D. L., & Adams, C. A. (1996). Accounting and accountability: Changes and challenges. In *Corporate social and environmental reporting*. Hemel Hempstead, UK: Prentice Hall.

Gray, R. H., Owen, D. L., & Maunders, K. T. (1987). *Corporate social reporting: Accounting & accountability*. Hemel Hempstead, UK: Prentice-Hall.

GRI—Global Reporting Initiative. (2013). *G4 sustainability reporting guidelines*. Available at: https://www.globalreporting.org/reporting/g4/Pages/default.aspx. Accessed April 19, 2015.

Guthrie, J., Ricceri, F., & Dumay, J. (2012). Reflections and projections: A decade of intellectual capital accounting research. *The British Accounting Review, 44*(2), 68–82.

Guthrie, J. E., & Mathews, M. R. (1985). Corporate social accounting in Australasia. *Research in Corporate Social Performance and Policy, 7*(1), 251–277.

Guthrie, J. E., & Parker, L. D. (1990). Corporate social disclosure practices: A comparative international analysis. *Advances in Public Interest Accounting, 12*(2), 123–142.

Haller, A., Link, M., & Groß, T. (2017b). The term “Non-financial Information”—A semantic analysis of a key feature of current and future corporate reporting. *Accounting in Europe, 14*(3), 407–429.

Hayes, A. F., & Krippendorff, K. (2007). Answering the call for a standard reliability measure for coding data. *Communication Methods and Measures, 1*(1), 77–89.

Hummel, K., & Schlick, C. (2016). The relationship between sustainability performance and sustainability disclosure—Reconciling voluntary disclosure theory and legitimacy theory. *Journal of Accounting Public Policy, 35,* 455–476.

IIRC—International Integrated Reporting Council. (2013). *The international <IR> framework*. Available at: http://www.theiirc.org/wp-content/uploads/2013/12/13-12-08-THE-INTERNATIONAL-IR-FRAMEWORK-2-1.pdf. Accessed April 19, 2015.

Kolk, A. (2004). A decade of sustainability reporting: Developments and significance. *International Journal of Environment and Sustainable Development, 3*(3), 1–64.

Krippendorff, K. (2013). *Content analysis: An introduction to its methodology*. Thousand Oaks, CA: Sage Publications.

Massaro, M., Dumay, J., & Guthrie, J. (2016). On the shoulders of giants: Undertaking a structured literature review in accounting. *Accounting, Auditing & Accountability Journal, 29*(5), 767–801.

Matuszak, L., & Rózanska, E. (2017b). CSR disclosure in Polish-listed companies in the light of directive 2014/95/EU requirements: Empirical evidence. *Sustainability, 3*(2304), 1–18.

Milne, M. J., & Gray, R. (2013). W(h)ither ecology? The triple bottom line, the global reporting initiative, and corporate sustainability reporting. *Journal of Business Ethics, 118*(1), 13–29.

Modell, S. (2009). In defence of triangulation: A critical realist approach to mixed methods research in management accounting. *Management Accounting Research, 20*(3), 208–221.

Petty, R., & Guthrie, J. (2000). Intellectual capital literature review: Measurement, reporting and management. *Journal of Intellectual Capital, 1*(2), 155–176.

Roberts, C. B. (1991). Environmental disclosures: A note on reporting practices in Europe. *Accounting, Auditing & Accountability Journal, 4*(3), 62–71.

Serenko, A., & Bontis, N. (2013). Global ranking of knowledge management and intellectual capital academic journals: 2013 update. *Journal of Knowledge Management, 17*(2), 307–326.

Serenko, A., & Dumay, J. (2015). Citation classics published in knowledge management journals. Part II: Studying research trends and discovering the Google Scholar effect. *Journal of Knowledge Management, 19*(6), 1335–1355.

Stubbs, W., & Higgins, C. (2015). Stakeholders' perspectives on the role of regulatory reform in integrated reporting. *Journal of Business Ethics, 147,* 1–20.

Testarmata, S., Ciaburri, M., Fortuna, F., & Sergiacomi, S. (2020). Harmonization of Non-financial Reporting Regulation in Europe: A Study of the Transposition of the Directive 2014/95/EU. In S. Brunelli & E. Di Carlo (Eds.), *Accountability, ethics and sustainability of organizations, accounting, finance, sustainability, governance & fraud: Theory and application* (pp. 67–88). Cham, Switzerland: Springer.

Venturelli, A., Caputo, F., Cosma, R., Leopizzi, R., & Pizzi, P. (2017b). Directive 2014/95/EU: Are Italian companies already compliant? *Sustainability, 9,* 1–19.

White, T., & McBurney, D. (2012). *Research method* (9th ed.). Belmont, CA: Wadsworth.

Yin, R. K. (2015). *Case study research: Design and methods* (5th ed.). Thousand Oaks, CA: Sage Publications.

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Searching for Social and Environmental Accountability in Integrated Reporting: A Stewardship Approach

Miriam Corrado and Paola Demartini

1 Introduction

In the last decade, we assisted in the growing attention to environmental, social and governance (ESG) issues, calling on managers to adopt a holistic and more sustainable perspective to ensure business accountability in the long run and greater reporting transparency (De Villiers and Maroun 2017). From the rise of reporting guidelines from both internal and external perspectives, the most recent development in ESG reporting is represented by the <IR> Framework, which claims to be the "holy grail" of corporate reporting (Gleeson-White 2015; Eccles and Krzus 2014).

The <IR> Framework was issued in 2013 with the aim to "align capital allocation and corporate behaviour to wider goals of financial stability and sustainable development" (IIRC 2013), receiving the attention of several researchers and institutions.

It is possible to distinguish two prominent views about the role of integrated reporting (hereafter <IR>) as far as social accountability is concerned: the detractors and the supporters' perspective.

The first view opts for a critical approach against the <IR> aptitude to increase corporate social accountability and give useful and reliable information for broader stakeholders' needs. Lai et al. (2018), for example, sustained that the idea of <IR> to enhance corporate accountability remains conceptual due to its focus on the core business and corporate strategy instead of sustainability matters. Other researches reveal that integrated reporting is adopted to distract users from low sustainable performance, hiding relevant information (Stacchezzini et al. 2016), and as a managerial

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instrument to improve legitimacy through social trust and good reputation (Casonato et al. 2019). Some studies highlight the increasing difficulties in implementing the "IR myth" (Kiliç and Kuzey 2018; Gibassier et al. 2018), deriving mainly from higher cost, lack of adequate information systems and deep preparers' knowledge about the framework (Adhariani and de Villiers 2019).

Conversely, there is a research stream that claims that <IR> goes beyond traditional financial statements (De Villiers and Sharma 2017). According to some authors, <IR> has the potential to change the thinking of corporate management by increasing their awareness of the corporate value process and improving the way organisations report (Argento et al. 2018; Adams et al. 2016). Furthermore, despite its focus on business and capital providers, <IR> has the potential to shift capital markets towards a longer-term view, coherently with sustainable purposes (Tweedie and Martinov-Bennie 2015, p. 58).

It is clear how sustainability concerns in <IR> mentioned above potentially affect users' trust in this form of reporting by questioning how managers interpret it and how organisations really implement it. Focusing on this current debate, the study aims to understand how the <IR> Framework can pursue social and environmental accountability purposes.

With the term "accountability", we refer to the concept proposed by Gray et al. (2014, p. 50), who define "accountability" as "the duty to provide an account or reckoning those actions for which one is held responsible". According to the authors, accountability involves two responsibilities or duties, namely: (*i)* the responsibility to undertake certain actions; (*ii)* the responsibility to account for those actions.

According to Parker (2005), accountability is partially determined by the society itself through legal statutes, regulations and standards. In fact, an organisation should be accountable to stakeholders, not only in terms of their financial accounts, but should also give an ethical, social, environmental and sustainability accounts (Adams 2001). However, social and environmental accounting is not always able to respond promptly to stakeholders' needs.

From a theoretical perspective, different academics have tried to explain the reason underlying voluntary social and environmental disclosure. However, a shift towards the stewardship theory has become a requirement, and in particular, a major focus has been put on management behaviour, rather than on different forms of voluntary disclosure (Dumay et al. 2019). Traditional theories have a negative impact on management behaviour leading to an increase of distrust in businesses (Dumay et al. 2019). In fact, the legitimacy theory represents a response for organisations to maintain or repair their corporate reputation and a way to manage external perception to increase trust. According to the institutional theory, managers' behaviour and voluntary disclosure are primarily driven by external pressures, while for the stakeholder theory, management actions aim to improve stakeholders' interests towards the organisation by pursuing their needs and expectations. Alternatively, from the agency theory perspective, managers are usually rewarded through an incentive system to act in the best interest of investors. However, these mechanisms have led managers to be less likely to reveal negative corporate performance in business reports to pursue their own interest.

By adopting the managerial and organisational approach and the social accounting approach defined within the stewardship theory by Contrafatto (2014), our study aims to examine the role of integrated reporting as a part of the corporate reporting systems contributing to more accountable and sustainable processes and behaviours.

The study adopts a qualitative method based on the Delphi technique, which allows us to obtain a holistic view of these complex and multi-dimensional issues, such as the <IR> Framework, through different perspectives and experiences of research participants (Worrell et al. 2013). The selected participants boast years of experience in CSR and most recently in the <IR> field, contributing directly to the consultation process set up by IIRC and dealing with these topics in their professional activity.

Our findings support a potentially positive impact of <IR> within corporate reporting systems thanks to its innovative characteristics. This study contributes to the need to support <IR> by examining its impact on management thinking and internal transformations (Adhariani and de Villiers 2019) and encouraging behaviours consistent with organisations' sustainability objectives (De Villiers and Maroun 2017).

The sections are structured as follow: Sect. 2 defines the theories considered in prior studies on social and environmental practices and the theoretical framework on which we base our study; Sects. 3 and 4 outline, respectively, the methodology and the findings; Sects. 5 and 6 present the discussion and conclusions, providing an agenda for further research.

2 A Picture of the Last 30 Years: From Economic Theories to the Stewardship Theory

Since the rise of corporate social and environmental reporting, academics have highlighted the lack of a substantive and systematic view of CSR, calling for a systemic theorising of CSR (Ullmann 1985; Parker 2005). In the early 90s, Gray et al. (1995) identified three main sets of theories able to explain the meaning and relevance of CSR.

First, the "decision-usefulness approach" is primarily related to the effect of social and environmental information on share price and the perception of CSR relevance within the financial community (Belkaoui 1984; Benjamin and Stanga 1977; Chenall and Juchau 1977).

Second, CSR studies based on the economic theories, such as the agency theory and the positive accounting theory (Belkaoui and Karpik 1989; Mak 1991; Ness and Mirza 1991; Shane and Spicer 1983), for the author, represent highly contestable perspectives due to their short-term and self-interest characteristics.

Third, studies based on the social and political theories, such as the stakeholder theory and the legitimacy theory, offer a better understanding of CSR by taking into account the political, social and institutional framework in which the organisation operates. Generally, political economy, as defined by Jackson (1982, p. 74), "analyses the relationship between social institutions such as government, law and property rights, each fortified by power and the economy, i.e. the system of producing and exchanging goods and services". In this framework, academics notably opted for the stakeholder and legitimacy theories, which both concur to explain the need for a better social disclosure practice. According to the stakeholder theory, companies seek the approval of its stakeholders, and to do so, they adapt their activities to gain such approval (Gray et al. 1995, p. 53). Stakeholders hold a legitimate interest in the activities carried out by a company, and they can directly or indirectly influence actions they undertake. From this perspective, social disclosure covers a significant role in the dialogue between the company and its stakeholders (Tregidga et al. 2006, p. 4; Guthrie et al. 2007, p. 6). Alternatively, according to the legitimacy theory, social reporting was born from the need to maintain or repair corporate reputation (Dowling and Pfeffer 1975; Suchman 1995; Michelon et al. 2015).

Based on Gray's research (1995), Parker (2005) analysed and critiqued the existing theories in social and environmental accounting, identifying two different theories:

– the augmentation theories (Ulmann 1985; Deegan 2002), which gather the more ethical and managerial theoretical approaches able to reflect the embedding of CSR within corporate strategies and the responsiveness to key stakeholders' demand and
– the heartland theories (Guthrie and Parker 1990; Arnold 1990), which are based on the significant role played by social and environmental disclosure in the relationship between organisations and society.

However, as suggested by Adams (2002, p. 245), the mainstream social reporting theories demonstrated a limited explanatory power of the nature of corporate social reporting, claiming "no conclusive evidence in supporting any one of them".

In the last decade, the increasing awareness of the potential value embedded within intangible assets has lead to growing relevance of non-financial reporting to meet societal needs (Dumay 2016) and stakeholders' interests, which demand more transparent information (De Villiers and Maroun 2017). Traditional financial reporting is therefore unable to provide a complete image of the company and catch its full value (Simnett et al. 2009), and we are assisting in the emergence of new forms of reporting and guidelines, such as the recent <IR> Framework (IIRC 2013).

De Villiers and Maroun (2017) offer a holistic view of sustainability accounting and integrated reporting. They explain, through the multiple lenses of legitimacy, institutional and agency theory, why organisations voluntarily report. According to the authors, the legitimacy theory represents a response for organisations to maintain or repair their corporate reputation and a way to manage their external perception to increase trust. According to the institutional theory, instead, voluntary disclosure is primarily driven by social pressures (Jensen and Berg 2012). In this context, there seems to be a convergence of disclosure practices in organisations with similar external pressure. Under an agency theory perspective, managers should act in the best interest of investors, but due to information asymmetries and moral hazard phenomena, they are reluctant to disclose negative and complete information (Jensen 1994).

Recently, academics have called for the adoption of alternative theoretical frameworks able to guide management behaviour towards trustworthiness and accountability, rather than explain and promote the improvement of disclosure that does not necessarily lead to an increasing level of trust. Indeed, some authors (Dumay et al. 2019; Camilleri 2018; Adams et al. 2016) propose the stewardship theory as a framework to understand the dynamics of corporate disclosure, providing an interesting viewpoint on management behaviour and sustainability disclosure. Conversely, mainstream theories "encourage a symbolic and superficial approach" to CSR (Boiral 2013, p. 1040) since management behaviour is only potentially driven by opportunistic and convenient actions, aimed at maximising personal and shareholders' benefits.

The stewardship theory assumes that the steward acts in the interest and on behalf of the others, adopting a longer-term view and preserving organisational resources (Keay 2017; Contrafatto and Bebbington 2013). From the stewardship perspective, executive management does not act with opportunistic intentions but "wants to do a good job, to be a good steward of the corporate assets" (Donaldson and Davis 1991) since it is motivated by "collectivism, pro-organisational and trustworthy" purposes (Davis et al. 1997a, b). Defined as "the collective-serving model" (Adams et al. 2016), the stewardship theory leads us to obtain what is best for society and gain a collective intrinsic value, representing the basis of an ethical governance and organisations' commitment to sustainability (Dumay et al. 2019).

According to Adams et al. (2016, p. 285), the stewardship theory is perfectly aligned to the <IR> principles thanks to its long-term focus and more integrated and collective management, which is expected to be more accountable for social and environmental matters. In line with this view, Haller and van Staden (2014, pp. 1195–1198) highlighted the ability of <IR> to accomplish the aim of enhancing "accountability and stewardship with respect to the broad base of capitals and promote understanding of the interdependences between them", as well as its ability to create and distribute value by applying the concept of *integrated thinking*. The rise of the <IR> Framework in corporate reporting scenarios demonstrates how the initiative is not only limited to improving corporate disclosure but, through the concept of integrated thinking, would change managers' behaviour (Dumay et al. 2019).

Therefore, based on these assumptions, our study aims to answer the following research question:

> *RQ: How can <IR> Framework support CSR purposes and social and environmental accountability?*

2.1 Theoretical Framework: A Stewardship Approach

> The stewardship theory holds, essentially, that directors act as stewards and will not be concerned about fostering their own economic interests, as the agency theory maintains, but

> are willing to act in the best interests of their company, and they will act in a way that leads to collectivist/organisational utility rather than self-serving benefits (Keay 2017, p. 6).

The substantially new element of the stewardship theory is given by the manager's vision as a steward and by the belief of a possible alignment between the interests of the *agent* and the *principal*, rather than a conflictual relationship as in the agency theory. Compared to the latter, the stewardship theory promotes a cooperative and collective behaviour aiming to achieve broader organisational objectives instead of individual ones (Albanese et al. 1997; Davis et al. 1997a, b). The ethics underlying the stewardship model contributes to the response for the need for a more cooperative rather than conflicting vision of corporate governance (Sciarelli 2005), as well as to the management of the psychological, sociological and economic aspects concerning relationships with stakeholders (Davis et al. 1997a, b; Dumay et al. 2019).

From this perspective, the stewardship theory plays a relevant role concerning issues related to sustainable development, corporate social responsibility and accountability, and the literature provides different approaches to this theoretical framework (Contrafatto and Bebbington 2013).

Contrafatto (2014) identified four different variants to the stewardship theory that will be analysed in the following section.

First, the *traditional accounting and finance approach* considers stewardship as a form of accountability. Corporate reporting is then an instrument to evaluate and control the actions of managers, who are responsible for economic and financial resources concerning their shareholders. This perspective is primarily related to the agency relationship in the use and control of the resources entrusted.

Second, the *theological perspective* bases the concept of environmental and social responsibility on a normative framework set on moral and ethical issues. According to this perspective, "Stewardship involves a duty for taking care of, nurturing and conserving resources" (Contrafatto 2014, p. 184), providing a broader focus of social and environmental accountability (i.e. towards human beings, non-human creatures and creation itself).

Third, the *managerial and organisational approach* is based on the assumption that managers act in the interest of organisations "by having a collectivistic and pro-organisational behaviour in order to achieve the objectives of the organisation" (Contrafatto 2014, p. 187). Managers' behaviour is mainly oriented to maximise organisational economic and social wealth, as well as to maximise their personal benefits.

Finally, the *social accounting approach* conceptualises stewardship as an "extension" of social accountability able to "driving economic and organisational transformation towards sustainable development" (Contrafatto 2014, pp. 188–191) and assumes that the steward acts in the interest and on behalf of the others, adopting a longer-term view and preserving organisational resources. In particular, this approach depicts a longer-term outlook, a more extensive range of stakeholders and a "distinctive ethos" (Contrafatto and Bebbington 2014), which entails a major management emphasis and interest in respecting and preserving the resources entrusted by society.

By examining the role of the <IR> Framework with the lens of the stewardship theory, our study aims to examine the role of integrated reporting as part of the corporate accounting and reporting systems, contributing to more accountable and sustainable processes and behaviours. The stewardship theory, indeed, offers a clue to analyse the ability of <IR> in response to the social accountability and transparency needs by creating social and sustainable value.

In particular, our analysis focuses on the social accounting approach and the managerial and organisational approach, which, in our opinion, are best suited to the purposes of this paper and the actual context in which the <IR> Framework is adopted. Indeed, while the traditional accounting and finance approach seems to not respond to the shift required in order to supersede the limits and the negative impacts of traditional theories (Dumay et al. 2019), the theological perspective would require more philosophical and ethical considerations that the authors do not address in this study.

3 Methodology

The research adopts a qualitative approach based on the Delphi method, offering an explorative study on the emerging role of <IR> as a social accountability enabler tool. The Delphi method allows us to understand a complex issue through a structured group communication process that highlights the different perspectives and experiences of research participants (Linstone and Turoff 1975). It consists of anonymously interviewing a panel of experts called to express their opinions and views on a specific theme and validate them through a reciprocal comparison. The presence of contrasting opinions in the literature on the role of <IR> makes this method suitable for our study (Worrell et al. 2013; p. 198). Moreover, the Delphi method can be combined with other both qualitative and quantitative approaches, considering it as an input for other methods (Rowe and Wright 2011, p. 1488).

The mainstream technique in adopting the Delphi method consists in obtaining "the most reliable consensus of opinion of a group of experts" (Dalkey and Helmer 1963, p. 458). However, different forms of the Delphi technique exist, not always aspiring to achieve consensus (Hasson and Keeney 2011, p. 1696). According to Keeney (2009, p 231), "there is flexibility in the design and format of the Delphi [method] and it often depends on the study's aims and objectives". Indeed, the Delphi technique may allow the researchers to use their discretion in defining the process design, such as the number of rounds and experts' selections (Hasson and Keeney 2011, p. 1696). In particular, there are no strict rules on the correct number of rounds, which can depend on the time available and the type of questions defined by the researcher (Keeney 2009, p 230).

In line with the different Delphi designs outlined by Hasson and Keeney (2011), our research aims to expose not necessarily a shared opinion on a specific single issue but to identify relevant arguments underlying the role of <IR> Framework in corporate reporting, even if based on divergent views (Turoff 1970; Kuusi 1999).

In our inquiry, information was collected through one round of interviews with the experts. It was then integrated with the analysis of documents and direct observations during the roundtable on IAASB Discussion Paper (2016), in which most of the selected experts have been involved.

Research developments in the last decade have not yet covered the entire "IR journey", and, in particular, little research has focused on the "impacts phase" of the <IR> idea (Rinaldi et al. 2018), calling for the in-depth understanding of <IR> implementation through a performative approach (La Torre et al. 2019). Therefore, the researchers opted for semi-structured interviews, as one of the most important data sources in our qualitative study. Compared to a survey, a semi-structured interview consists of an open-ended and flexible tool that allows us to identify research issues more systematically and consistently and collect more elaborate answers (Qu and Dumay 2011; Ritchie and Lewis 2003). The participants were invited to express their own opinion based on a questionnaire (see Appendix 1) designed as a "guided conversation" (Yin 2014, p. 110) after a review of the emerging <IR> literature and the research context.

Research participants have been selected from the IIRC database, identifying a panel of 10 experts who are directly involved in the debate on the <IR> Framework through participation in institutional meetings, providing feedback in the IIRC's consultation processes or taking part in the IIRC's networks. The selected participants cover the following roles: (i) practitioners (consultants or member of professional associations/standard setters) and experts in sustainability reporting, (ii) academics and researchers in accounting and sustainability fields, (iii) ESG analysts and investor advisors that are part of the <IR> Investors Network (see Table 1).

Table 1 Panel of the experts

Experts' code	Participant's role	Experts' code	Participant's role
E1	Senior sustainability manager and consultant	E6	Associate professor and researcher in accounting information systems and <IR>
E2	Executive director and member of international standards setter board	E7	Senior lecturer and researcher in ethics and CSR
E3	Controller and accountant for financial and sustainability corporate reporting	E8	Professor and member of the international standards setter board
E4	Member of international standards board and researcher in the <IR> field	E9	ESG investors' advisor and member of IIRC Investor Network
E5	Associate lecturer in accounting and sustainability reporting	E10	ESG and corporate governance senior analyst

Further data have been collected from other sources, such as responses given by the research participants and provided to the IIRC's consultation process, documents and direct observations from the institutional roundtable. Interviews were recorded and transcribed, and the main topics were coded in order to answer our RQ. Consequently, these multiple sources have been analysed through a triangulation process to examine the evidence, validate the findings and detect, according to the Delphi method, a comprehensive view.

4 Findings

An overview of our findings is outlined in the following section. From the evidence that has emerged from the interviews, we identified the following four themes that facilitate the analysis of the role of the <IR> Framework as a social accountability enabler/hindering tool.

4.1 The Emergence of Integrated Reporting in Sustainability Reporting Practices

The first theme that emerged from our interview is related to the opinion of <IR> as a consequent evolution, or as Stubbs and Higgins (2014) argue, a "transition" of the main sustainability guidelines (i.e. the Triple Bottom Line, the Global Reporting Initiative, the UN Global Compact ones) (Idowu et al. 2016).

E2 outlines the main characteristics that differentiate integrated reporting to the traditional form of corporate reporting:

> There are probably three aspects in the IR Framework that facilitate a different approach in presenting all material issues and information. One would be the value creation focus. When organisations are presenting their strategies to you and their business model into the IR, they are presenting it in light of the value that it is created in the business model and for whom that value is created. […] The second thing I like is the connectivity. That is fundamental. It is one of the guiding principles for IR in the Framework. That is absolutely fantastic because it encourages those who carry out IR to think about how a strategy is connected to real issues and whether the material issue is addressed by the strategy or not. Moreover, it is also connecting to risk, the business model and the strategy. That is a new approach coming through the IR Framework. The third thing is the six capitals. So, one of the fundamental concepts of IR is thinking about the six capitals. In the past, in SR and the annual report, we thought about financial capital and maybe human capital, but some of the others would have limited coverage. To place them in this context, [it means] moving toward integrated thinking on all the issues that can be addressed. I think those three things, value creation, connectivity and six capitals, facilitate a different approach to reporting, resulting in different information being presented in IR.

Thus, according to E2, the <IR> Framework has the potential to offer a more comprehensive and more in-depth understanding of business activities to capital providers and a tool through which companies can narrate their value creation story (Adams et al. 2016). In the literature, some authors already considered <IR> as a communication tool able to "bridge the gap" between non-financial information and business strategies (Burke and Clark 2016, p. 274) and to shift capital markets towards a longer-term view necessary for "more sustainable corporate practices" (Tweedie and Martinov-Bennie 2015).

Referring to <IR>, E3 stated that:

> I think it is useful and relevant because it goes back to a) sustainability and b) if I was an investor, and someone gave me a value creation approach and strategic focus, etc., then I would…look for sustainability earnings and, secondly, I would also find it useful to know how the organisation is positioning itself for the future […]. So, therefore, IR would definitely give users more useful information about how an organisation is thinking about the future and how it's positioning itself.

According to Simnett and Huggins (2015, p. 30), <IR> differs from the current financial and sustainability reporting frameworks, which are both unable to provide an integrated view of organisations. In line with this, one of our interviewees offered an example:

> For example, health and safety stuff would not be disclosed. [Within IR] they might be disclosed in a more linked way and in relation to human capital. So, there is more information around employees and the future prediction of your business. In the management report and the traditional annual report, you would probably find them to be vaguer and high-level statements compared to IR […], where it is expected to talk about what impacts your business has on the environment to disclose some sort of future predictions (E5).

By offering a different perspective, two of our interviewees stressed the importance of <IR> in meeting investors' expectations. In particular, E9, an investment advisor, outlines the process and major elements to consider in analysing an ESG investment.

> I prefer to go to the company that doesn't produce excessive pollution, or they provide a lot of value to the community, and I invest in this. I think that this incremental information is for different users […] and it's a kind of information that you cannot just make up. (E4)
>
> We start to work on our analysis in a very entity-centric way, we start with the business, [we] understand what the strategies for creating value are, what assets allow us to achieve sustainability […]. In the future, what things we are expecting to manage. We will need information about this to decide whether or not we think this is a good investment and if there is an opportunity. […] Communication should be as close as possible to the board's communication, obviously bearing in mind that the board has confidential information. […] You will expect that the board has the information that looks at how strategies have been executed and whether they are on track to achieve the strategic confidence that would not be only financial information, they would be more effective. (E9)

The focus of the <IR> Framework on providers of financial capital (Adams et al. 2016, p. 284) represents an important difference from the main sustainability guidelines and also from the early form of integrated reporting adopted in South Africa (De Villiers et al. 2014, p. 1049). However, this aspect moves some criticisms towards integrated reports under a social accountability perspective as outlined in the following paragraph.

4.2 Business-Centric View Versus Stakeholders Engagement

Before the <IR> Framework was released in 2013 (IIRC 2013), the GRI represented the commonly used guideline for CSR reporting, providing information on how businesses contribute to the improvement of economic, social and environmental matters together with key indicators, with a strong focus on non-financial information (GRI 2013; Dumay et al. 2015).

Indeed, the GRI Corporate Leadership Group underlines how the GRI and <IR> Frameworks have been issued to meet different reporting needs: the <IR> Framework aims to meet investors' needs, while the GRI guideline aims to meet the broader information needs of all stakeholders (GRI 2016).

However, some scholars believe that even following the GRI guidelines is not enough to comply with the objectives of social and environmental accounting. Indeed, Bebbington et al. (2017) stress out that accounts are often dominated by the corporate focus on GRI indicators, rather than on the accountability relationship between organisational practice and environmental resources. The authors highlight the need to study and understand accounting "in the context of the global climate change and its impact on science, politics and governance" (Bebbington et al. 2017, p. 23).

Against this broader and societal perspective and due to its business-centric view and investors' focus, some scholars criticise the failure of <IR> as an instrument to enhance corporate social accountability (Milne and Gray 2013; Brown and Dillard 2014; Flower 2015; Thomson 2015).

This concern is also conveyed by E1:

> Companies think that what matters to them is important for its stakeholders too. Companies operating in Greenhouse Gases (GHG) sectors, for example, provide information their business's local impacts rather than on the wider problem of climate change.

However, some of our interviewees highlight a different perception of <IR>, extending its usefulness to a broader range of stakeholders besides investors.

> I think that what the IR Framework does is focus on producing something that it is useful, valuable and concise for shareholders and investors in particular for making decisions […] telling stakeholders what is most important for the business and for stakeholders and how they are practicing that through their business model (E2)

> Companies are doing IR well and have enough…better ability from the point of view of the stakeholders to engage with what the companies are trying to communicate. […] Hopefully what is happening will end up within a system that develops benefits for the company and the stakeholders…we should not just be adding value from the point of view of profit but from the point of view of social benefits. So…in a normative sense, I know what should be, but I do not know if that is actually happening (E6).

4.3 Management Discretion and the “Greenwashing” Mechanism

Another focus of attention regards the discretion of voluntary reports. Indeed, Gray demonstrated that the adoption of SR is not always synonymous with a trustworthy and accountable management team (Gray 2012). Similar concerns emerge as far as the <IR> Framework is concerned (Flower 2015, p. 4; Adams 2015, p. 26). According to these opinions, experts E5 and E10 seem to be sceptical and critical about the role of <IR>:

> SR is not a new phenomenon. It has been around for about 15 years in various forms. It has added different levels along the way. Those who are genuine in the belief the companies should report more than just financial information, may, and I’m using the word consciously, do a good job trying to report about sustainability. However, they cherry pick what they are willing to report […]. The measurement is often inconsistent and ambiguous. […] That does not mean to say that some companies are not trying to do the right thing, but let us be realistic. Companies are investing time, energy and resources into this to get a better return from their investment and to attract more investments. They are certainly not doing this from their goodness of heart or to be a good corporation. There is a return for the company and they invest in that because, I think, the investment community has become more aware and there is probably a level of consciousness (E5).
>
> [As an investor] I will look at other sources because…well…some of the things that companies say are not necessarily trustworthy […]. Any information that a company provides, I guess and I assume, is accurate, but I also assume that they are telling me the story that they want to me to hear. With the <IR> Framework, I think the more information we have, the better it is. […] If [companies] are not disclosing the whole picture you can’t really involve credible information. For example, global companies do an engagement survey with their staff. Very few companies publish the final numbers. […] That is not the whole picture. It is one piece of the puzzle. So, we do need this kind of information, but we don’t rely on it exclusively. (E10)

Hence, the voluntary nature of non-financial reports does not ensure a complete and transparent image of the business (Jones et al. 2016; Braam et al. 2016; Michelon et al. 2015). Indeed, companies do not necessarily report a complete and fair image of their business, as E4 states:

> You can’t force management to report something that they don’t want to because it is up to them to decide what they report both in sustainable and integrated reports. […] You can’t decide for the company what they should report. It is at the director’s discretion […] (E4).

These findings are in line with other prior studies on CSR practices, which highlight the managerial use of sustainable and integrated reporting to avoid a bad reputation and the lack of objectiveness in materiality processes (Bepari and Mollik 2016; Cohen and Simnett 2015; O’Dwyer and Owen 2007; Perego and Kolk 2012; Wong and Millington 2014).

4.4 Education and Business Culture as a Future Agenda

In recent studies, more academics are putting a strong effort into educating the future generation about sustainable development challenges. Indeed, Bebbington et al. (2017) call for the contribution to the broader sustainable development agenda by educating future accountants, managers and citizens to pursue better sustainable outcomes and interests. In the same way, our interviews underline the importance and the impact of education in the evolution of corporate governance mechanisms:

> Only more enlightened companies, a more enlightened board and even more enlightened and educated board directors really understand the importance of non-financial information. […] The directors look at the big picture in terms of what is real and the impact on the future of their performance reputation (E2).
>
> We need to start from the education perspective and get a much better grounding in how to provide confidence around these sorts of processes that lead to [non-financial] statements (E6).
>
> There is a shift. Maybe it is a small group, but there is a group of enlightening investors in the investment community, and even investment organisations, that put environmental and social evidence into their formulas when they are calculating or making a decision about organisations. […] It may not have a great weight, but it has a weight, maybe very light, but it is there. (E5)

In line with this view, Dumay et al. (2019) stress the need to change the business culture and encourage a new way of thinking and an honest behaviour through the education of future managers based on the stewardship perspective. As stated by the authors: “we need to teach the virtues of stewardship in our universities rather than teach students how to obtain and control information to serve their needs”.

5 Conclusions in the Light of the Stewardship Theory

By examining the role of <IR> Framework in CSR practices within the stewardship theory by Contrafatto (2014), our study aims to respond to the following question:

> *RQ: How can <IR> Framework support CSR purposes and social and environmental accountability?*

While the IIRC boasts the achievement of the third stage of the “Breaking through phase” (IIRC 2018), some authors have criticised the failure of the new framework as a sustainability accounting enabler and an accountable instrument towards a wider range of stakeholders (Milne and Gray 2013; Brown and Dillard 2014; Flower 2015; Thomson 2015).

Our findings suggest a potentially positive view of integrated reporting within corporate reporting systems thanks to the focus on value creation and integrated thinking concepts (Dumay et al. 2017; Adhariani and de Villiers 2019).

The emerging role of <IR> in sustainability reporting practices, here outlined as a first theme of discussion, is in line with what has been expressed by the current literature. Indeed, the concept of "integrated thinking", if translated into effective processes and managerial practice could change the existing "silos" of culture and behaviour within organisations, (Dumay and Dai 2017; La Torre et al. 2019). Meanwhile, Eccles and Serafeim (Eccles and Serafeim 2014) highlight the potential of <IR> as a mechanism to improve the information and transformation functions of corporate reporting. Companies moving towards an IR approach could communicate to their stakeholders through a clearer and articulated communication of social investments and sustainable practices, associated to the notion of value creation and corporate strategies (Adams et al. 2016).

However, moving on to the second theme, concerning the <IR> business-centric view, our findings on one side outline the potential of IR as a narrative source of accountability; on the other hand, it is evident that financial stakeholders remain the main addressee of <IR>, and this highlights the risk that sustainability issues remain marginalised (Lai et al. 2018).

The third theme deals with the concerns related to the managerial discretion entrusted to managers in <IR> and the "greenwashing" mechanisms. Recent studies have demonstrated the lack of adherence of corporate reports to the <IR> Framework (i.e. lack of information on company-specific risks, bad events, strategic focus and forward-looking information) (Kiliç and Kuzey 2018; Casonato et al. 2018), leading directors to implement their own version of integrated reports (Gibassier et al. 2018). For this reason, Busco et al. (2019) highlighted the need for a tailored approach rather than "a one size fits all" for the future development of integrated reporting (Busco et al. 2019).

Finally, regarding future challenges and developments towards more accountable reporting, our interviews confirmed the need to encourage a new way of thinking by educating future generations to possess more sustainable and accountable behaviour.

In summary, what emerges is that IR has the potential to be a tool that, thanks in particular to the principle of integrated thinking and the focus on value creation, can be the engine to trigger an organisational and managerial change aimed at stimulating sustainability initiatives within the company. These initiatives can also result in more transparent reporting aimed at illustrating how the company truly works to meet the expectations (not only for information) of the stakeholders and the society at large, as conceived by the *social accounting approach*.

However, in the light of the stewardship theory, it should also be said that this opportunity can translate into practice only where the management operates in the interest of the community, not necessarily pursuing to the first place organisational objectives, as per the *managerial and organisational approach*. This is due to the voluntary character of <IR> and the managerial discretion in applying the framework. <IR> can become social and environmental reporting only if managers do not aim to directly, or indirectly, protect their own interests by drawing up corporate reporting for appearance rather than substance, led by brand reputation rationales, even if not according to a greenwashing purpose.

Undoubtedly, this presupposes an attitude that is already present in the behaviour of the management team or that can be stimulated by examples and best practices or, again, by educational activities on business ethics, which, as academics and teachers, involves us in the first person.

6 An Agenda for Further Research on <IR> Versus SDGs

This research contributes to the emerging <IR> literature by analysing how the new framework can satisfy social and environmental accountability needs. The study aims to respond to the need to support <IR> by examining its impact on the top management thinking and internal transformations (Adhariani and de Villiers 2019) and encouraging behaviours consistent with organisations' sustainability objectives (De Villiers and Maroun 2017). However, if on the one hand, a panel of multiple experts holds a higher and deeper knowledge within a specific context, allowing us to obtain a holistic view of complex and multi-dimensional issues concerning <IR> practices (Worrell et al. 2013), on the other hand, the Delphi method takes in consideration a non-representative sample of stakeholders, and we cannot generalise our findings based on their opinions (Worrell et al. 2013, p. 206).

Further developments are required with a particular focus on how the concept of sustainability is defined and embedded within organisations, given the ability of organisations to resist to substantive change and act through an apparent transformation (Tregidga et al. 2014). Indeed, Busco et al. (2018) demonstrated how accounting and reporting practices, such as <IR>, allow a meaningful implementation of sustainability concepts, stimulating the managers towards a better and aspirational future.

Future research can be focused on the substantive social, environmental and economic development linked to Sustainable Development Goals (SDGs), part of the 2030 Agenda for Sustainable Development, which allow for multi-dimensional and multi-disciplinary approaches (Bebbington et al. 2017). Academics and institutions recognise the relevance of the advancement of the Sustainable Development Agenda and try to facilitate organisations in contributing to the SDGs.

Rosati and Faria (2019) demonstrated that organisations are more likely to report on SDGs if they operate in countries showing more sensitivity and vulnerability towards climate change, employment and CSR issues. However, barriers and governance challenges could limit and make implementation of SDGs difficult (Bowen et al. 2017). In collaboration with the IIRC, Adams (2017) provided a framework for embedding sustainable development issues within the organisation's decision-making, strategies and business model, thus facilitating a "high-level" engagement and the alignment with the "multi-capital" <IR> Framework. It could be interesting to understand how the IIRC and GRI will take into account this emerging trend in sustainability reporting.

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Appendix 1

Introduction questions—Interviewees' background:

a. What is your current position and how many years of experience have you got?
b. What experience have you got in integrated reporting and the CSR field?

Understanding the role of the <IR> Framework in CSR context and sustainable development:

a. What role does <IR> Framework play in CSR practices? Is it different from the role of traditional sustainability and financial reporting?
b. What kind of information does or should <IR> provide compared to sustainability reporting?
c. Whom do you consider the principal users of <IR> reporting?
d. Companies in <IR> supposedly disclose their value creation story, adopting a more strategic focus and forward-looking approach. Which consequences could this approach have?
e. How do these approaches ensure reliable and useful information for users' decision-making processes?
f. Some studies suggest that companies adopt voluntary disclosure to enhance their reputation and legitimacy. Can you tell us your point of view?
g. Do you think voluntary disclosure is a pretext for management to hide some relevant information or to attempt greenwashing?

Closing question:

a. What do you see as the key challenges in <IR> moving forward? How can they be resolved?
b. Are there any issues you think we should have covered but have not?

References

Adams, C. A. (2001). A critique of reporting on ethical, social and environmental issues: The case of ICI. In *APIRA Conference* (pp. 15–17) Adelaide.

Adams, C. A. (2002). Internal organisational factors influencing corporate social and ethical reporting: Beyond current theorising. *Accounting, Auditing & Accountability Journal, 15*(2), 223–250.

Adams, C. A. (2015). The international integrated reporting council: A call to action. *Critical Perspectives on Accounting, 28,* 23–28.

Adams, C. A. (2017). *The Sustainable Development Goals, integrated thinking and the integrated report*. Published by the IIRC and ICAS.

Adams, C. A., Potter, B., Singh, P. J., & York, J. (2016). Exploring the implication of integrated reporting for social investment (disclosure). *The British Accounting Review, 48,* 283–296.

Adhariani, D., & de Villiers, C. (2019). Integrated reporting: Perspective of corporate report preparers and other stakeholders. *Sustainability Accounting, Management and Policy Journal, 10*(1), 126–156.

Albanese, R., Dacin, M. T., & Harris, I. C. (1997). *Agents as stewards*.

Argento, D., Culasso, F., & Truant, E. (2018). From sustainability to integrated reporting: The legitimizing role of the CSR Manager. *Organization and Environment, 32,* 1–24.

Arnold, P. J. (1990). The state and political theory in corporate social disclosure research: A response to Guthrie and Parker. *Advances in Public Interest Accounting, 3*(2), 177–181.

Bebbington, J., Russell, S., & Thomson, I. (2017). Accounting and sustainable development: Reflections and propositions. *Critical Perspectives on Accounting, 48,* 21–34.

Belkaoui, A. (1984). *Socio-economic Accounting*. Connecticut: Quorum Books.

Belkaoui, A., & Karpik, P. G. (1989). Determinants of the corporate decision to disclose social information. *Accounting, Auditing & Accountability Journal, 2*(1), 36–51.

Benjamin, J. J., & Stanga, K. G. (1977). Difference in disclosure needs of major users of financial statements. *Accounting and Business Research, 7,* 187–192. (Summer).

Bepari, M. K., & Mollik, A. T. (2016). Stakeholders' interest in sustainability assurance process: an examination of assurance statements reported by Australian companies. *Managerial Auditing Journal, 31*(6/7), 655–687.

Boiral, O. (2013). Sustainability reports as simulacra? A counter-account of A and A + GRI reports. *Accounting, Auditing & Accountability Journal, 26*(7), 1036–1071.

Bowen, K. J., Cradock-Henry, N. A., Koch, F., Patterson, J., Häyhä, T., Vogt, J., et al. (2017). Implementing the "Sustainable Development Goals": Towards addressing three key governance challenges—Collective action, trade-offs, and accountability. *Current opinion in environmental sustainability, 26,* 90–96.

Braam, G., Uit de Weerd, L., Hauck, M., & Huijbregts, M. (2016). Determinants of corporate environmental reporting: The importance of environmental performance and assurance. *Journal of Cleaner Production, 129,* 724–734.

Brown, J., & Dillard, J. (2014). Integrated reporting: On the need for broadening out and opening up. *Accounting, Auditing & Accountability Journal, 27*(7), 1120–1156.

Burke, J., & Clark, C. (2016). The business case for integrated reporting: Insights from leading practitioners, regulators, and academics. *Business Horizons, 59,* 273–283.

Busco, C., Giovannoni, E., Granà, F., & Izzo, M. F. (2018). Making sustainability meaningful: Aspirations, discourses and reporting practices. *Accounting, Auditing & Accountability Journal.*

Busco, C., Malafronte, I., Pereira, J., & Starita, M. G. (2019). The determinants of companies' levels of integration: Does one size fit all? *The British Accounting Review, 51,* 277–298.

Camilleri M. A. (2018). Theoretical insights on Integrated reporting: The inclusion of non-financial capitals in corporate disclosures. *Corporate communications: An International Journal.*

Casonato, F., Farneti, F., & Dumay, J. (2018). Social capital and integrated reporting: Losing legitimacy when reporting talk is not supported by actions. *Journal of Intellectual Capital, 20*(1), 144–164.

Casonato, F., Farneti, F., & Dumay, J. (2019). Social capital and integrated reporting: Losing legitimacy when reporting talk is not supported by actions. *Journal of Intellectual Capital, 20*(1), 144–164.

Chenall, R. H., & Juchau, R. (1977). Investor information needs: An Australian study. *Accounting and Business Research, 26,* 111–119. (Spring).

Cohen, J. R., & Simnett, R. (2015). CSR and assurance services: A research agenda. *Auditing: A Journal of Practice & Theory, 34*(1), 59–74.

Contrafatto, M. (2014). Stewardship theory: Approaches and perspectives. In *Accountability and social accounting for social and non-profit organizations* (pp. 177–196). Emerald Group Publishing Limited.

Contrafatto, M., & Bebbington, J. (2013). Developing techniques for stewardship: A Scottish study. In *Accounting for social value* (pp. 31–54). Toronto, Buffalo, and London: University of Toronto Press.

Davis, J. H., Schoorman, F. D., & Donaldson, L. (1997a). Davis, Schoorman, and Donaldson reply: The distinctiveness of agency theory and stewardship theory. *The Academy of Management Review, 22*(3), 611.

Davis, J. H., Schoorman, F. D., & Donaldson, L. (1997b). Toward a stewardship theory of management. *Academy of Management Review, 22*(1), 20–47.

Deegan, C. (2002). Introduction: The legitimising effect of social and environmental disclosures—A theoretical foundation. *Accounting, Auditing & Accountability Journal, 15*(3), 282–311.

De Villiers, C., & Maroun, W. (Eds.). (2017). *Sustainability accounting and integrated reporting*. Routledge.

De Villiers, C., & Sharma, U. (2017). A critical reflection on the future of financial, intellectual capital, sustainability and integrated reporting. *Critical perspectives on accounting*.

De Villiers, C., & Maroun, W. (2017). The future of sustainability accounting and integrated reporting. In C. De Villiers & W. Maroun (Eds.), *Sustainability accounting and integrated reporting*. Routledge: Abingdon, UK.

De Villiers, C., Rinaldi, L., & Unerman, J. (2014). Integrated reporting: Insights, gaps and an agenda for future research. *Accounting, Auditing & Accountability Journal, 27*(7), 1042–1067.

Donaldson, L., & Davis, J. H. (1991). Stewardship theory or agency theory: CEO governance and shareholder returns. *Australian Journal of Management, 16*(1), 49–64.

Dowling, J., & Pfeffer, J. (1975). Organizational legitimacy: Social values and organizational behavior. *The Pacific Sociological Review, 18,* 122–136.

Dumay, J. (2016). A critical reflection on the future of intellectual capital: From reporting to disclosure. *Journal of Intellectual Capital, 17*(1), 168–184.

Dumay, J., & Dai, T. (2017). Integrated thinking as a cultural control? *Meditari Accountancy Research, 25*(4), 574–604.

Dumay, J., Frost, G., & Beck, C. (2015). Material legitimacy Blending organisational and stakeholder concerns through non-financial information disclosures. *Journal of Accounting & Organizational Change, 11*(1), 2–23.

Dumay, J., Bernardi, C., Guthrie, J., & La Torre, M. (2017). Barriers to implementing the international integrated reporting framework: A contemporary academic perspective. *Meditari Accountancy Research, 25*(4), 461–480.

Dumay, J., La Torre, M., & Farneti, F. (2019). Developing trust through stewardship: Implications for intellectual capital, integrated reporting, and the EU Directive 2014/95/EU. *Journal of Intellectual Capital, 20*(1), 11–39.

Eccles, R. G., & Serafeim, G. (2014). Corporate and integrated reporting: A functional perspective. In E. Lawler & S. Mohrman, & J. O'Toole (Eds.), Corporate stewardship: achieving sustainable effectiveness. Greenleaf, 2015.

Eccles, R. G., & Krzus, M. P. (2014). *The integrated reporting movement: Meaning, momentum, motives, and materiality*. London: Wiley.

Flower, J. (2015). The international integrated reporting council: A story of failure. *Critical Perspectives on Accounting, 27,* 1–17.

Gibassier, D., Rodrigue, M., & Arjaliès, D. L. (2018). "Integrated reporting is like God: no one has met Him, but everybody talks about Him" the power of myths in the adoption of management innovations. *Accounting, Auditing & Accountability Journal, 31*(5), 1349–1380.

Gleeson-White, J. (2015). *Six capitals, or can accountants save the planet? Rethinking capitalism for the twenty-first century*. WW Norton & Company.

Gray, R. (2012). *Corporate impact: Measuring and managing your social footprint*.

Gray, R., Adams, C., & Owen, D. (2014). *Accountability, social responsibility and sustainability: Accounting for society and the environment*. Pearson Higher Education.

Gray, R., Kouhy, R., & Lavers, S. (1995). Corporate social and environmental reporting: A review of the literature and a longitudinal study of UK disclosure. *Accounting, Auditing & Accountability Journal, 8*(2), 47–77.

GRI. (2013). *G4 Sustainability Reporting Guidelines. Global Reporting Initiative*.

GRI. (2016). *Forging a path to integrated reporting. Insights from the GRI Corporate Leadership Group on Integrated Reporting*. Available at https://www.globalreporting.org/resourcelibrary/GRI-CLG_IntegratedReporting.pdf.

Guthrie, J., Cuganesan, S., & Ward, L. (2007). Legitimacy theory: A story of reporting social and environmental matters within the Australian food and beverage industry. In *5th Asian Pacific Interdisciplinary Research in Accounting (APIRA) Conference*.

Guthrie, J., & Parker, L. D. (1990). Corporate social disclosure practice: A comparative international analysis. *Advances in public interest accounting, 3,* 159–175.

Haller, A., & van Staden, C. (2014). The value added statement—An appropriate instrument for integrated reporting. *Accounting, Auditing & Accountability Journal, 27*(7), 1190–1216.

Hasson, F., & Keeney, S. (2011). Enhancing rigour in the Delphi technique research. *Technological Forecasting and Social Change, 78*(9), 1695–1704.

Idowu, S. O., Dragu, I. M., Tiron-Tudor, A., & Farcas, T. V. (2016). From CSR and sustainability to integrated reporting. *International Journal of Social Entrepreneurship and Innovation, 4*(2), 134–151.

IAASB. (2016). *Supporting Credibility and Trust in Emerging Forms of External Reporting: Ten Key Challenges for Assurance Engagements*. Available at https://www.ifac.org/publications-resources/discussion-paper-supporting-credibility-and-trust-emerging-forms-external.

IIRC. (2018). *Breaking Through. IIRC Integrated Reporting 2017*. UK: International Integrated Reporting Council.

IIRC. (2013). *The International <IR> Framework*. International Integrated Reporting Council.

Jackson, P. M. (1982). *The political economy of bureaucracy*. Oxford: Philip Allan.

Jensen, M. C. (1994). Self-interest, altruism, incentives, and agency theory. *Journal of applied corporate finance, 7*(2), 40–45.

Jensen, J. C., & Berg, N. (2012). Determinants of traditional sustainability reporting versus integrated reporting. An institutionalist approach. *Business Strategy and the Environment, 21*(5), 299–316.

Jones, P., Comfort, D., & Hillier, D. (2016). Managing materiality: a preliminary examination of the adoption of the new GRI G4 guidelines on materiality within the business community. *Journal of Public Affairs, 16*(3), 222–230.

Keay, A. (2017). Stewardship theory: Is board accountability necessary? *International Journal of Law and Management, 59*(6), 1292–1314.

Keeney, S. (2009). The Delphi technique. In K. Gerrish & A. Lacey (Eds.), *The research process in nursing*. London: Blackwell Publishing.

Kılıç, M., & Kuzey, C. (2018). Assessing current company reports according to the IIRC integrated reporting framework. *Meditari Accountancy Research, 26*(2), 305–333.

Kuusi O. (1999). *Expertise in the future use of generic technologies—Epistemic and methodological considerations concerning Delphi studies*. (VATT-Research Report). Helsinki:Government Institute for Economic Research.

La Torre, M., Bernardi, C., Guthrie, J., & Dumay, J. (2019). Integrated reporting and integrating thinking: Practical challenges. In S. Arvidsson (Ed.), *Challenges in managing sustainable business*. Cham: Palgrave Macmillan.

Lai, A., Melloni, G., & Stacchezzini, R. (2018). Integrated reporting and narrative accountability: The role of preparers. *Accounting, Auditing & Accountability Journal, 31*(5), 1381–1405.

Linstone, H. A., & Turoff, M. (Eds.). (1975). *The Delphi method* (pp. 3–12). Reading, MA: Addison-Wesley.

Mak, Y. T. (1991). Corporate characteristics and the voluntary disclosure of forecast information: A study of New Zealand prospectuses. *British Accounting Review, 23*(4), 305–328.

Michelon, G., Pilonato, S., & Ricceri, F. (2015). CSR reporting practices and the quality of disclosure: An empirical analysis. *Critical Perspectives on Accounting, 33,* 59–78.

Milne, M. J., & Gray, R. (2013). W(h)iter ecology? The triple bottom line, the global reporting initiative, and corporate sustainability reporting. *Journal of Business Ethics, 118,* 13–29.

Ness, K. E., & Mirza, A. M. (1991). Corporate social disclosure: A note on a test of agency theory. *British Accounting Review, 23*(3), 211–218.

O'Dwyer, B., & Owen, D. (2007). Seeking stakeholder-centric sustainability assurance. An examination of recent sustainability assurance practise. *The Journal of Corporate Citizenship, 25,* 77–94.

Parker, L. D. (2005). Social and environmental accountability research: A view from the commentary box. *Accounting, Auditing & Accountability Journal, 18*(6), 842–860.

Perego, P., & Kolk, A. (2012). Multinational accountability on sustainability: The evolution of third-party assurance of sustainability reports. *Journal of Business Ethics, 110,* 173–190.

Qu, S. Q., & Dumay, J. (2011). The qualitative research interview. *Qualitative Research in Accounting & Management, 8*(3), 238–264.

Rinaldi, L., Unerman, J. & De Villiers, C. (2018). Evaluating the integrated reporting journey: Insights, gaps and agendas for future research. Accounting, Auditing & Accountability Journal, 31(5) (Forthcoming).

Ritchie, J., & Lewis, J. (2003). Qualitative Research Practice. SAGE.

Rosati, F., & Faria, L. G. (2019). Addressing the SDGs in sustainability reports: The relationship with institutional factors. *Journal of cleaner production, 215*, 1312–1326.

Rowe, G., & Wright, G. (2011). The Delphi technique: Past, present, and future prospects—Introduction to the special issue. *Technological Forecasting and Social Change, 78*(9), 1487–1490.

Sciarelli, S. (2005). Il governo dell'impresa: processo decisorio ed etica aziendale. Cedam.

Shane, P., & Spicer, B. (1983). Market response to environmental information produced outside the firm. *The Accounting Review, 58,* 521–538.

Simnett, R., & Huggins, A. L. (2015). Integrated Reporting and assurance: where can research add value? *Sustainability accounting Management and Policy Journal, 6*(1), 29–53.

Simnett, R., Vanstraelen, A., & Chua, W. F. (2009). Assurance on sustainability reports: An international comparison. *The Accounting Review, 84*(3), 937–967.

Stacchezzini, R., Melloni, G., & Lai, A. (2016). Sustainability management and reporting: the role of integrated reporting for communicating corporate sustainability management. *Journal of Cleaner Production, 136,* 102–110.

Stubbs, W., & Higgins, C. (2014). Integrated Reporting and internal mechanism of change. *Accounting, Auditing and Accountability Journal, 27*(7), 1068–1089.

Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. *Academy of Management Review, 20*(3), 571–610.

Thomson, I. (2015). "But does sustainability need capitalism or an integrated report" a commentary on "the international integrated reporting council: A story of failure" by Flower, J. *Critical Perspectives on Accounting, 27,* 18–22.

Tregidga, H., Milne, M., & Kearins, K. (2006). Organisational legitimacy and social and environmental reporting research: The potential of disclosure analysis. In *5th Australian Conference on Social and Environmental Accounting Research.*

Tregidga, H., Milne, M., & Kearins, K. (2014). (Re) presenting 'sustainable organizations'. *Accounting, Organizations and Society, 39*(6), 477–494.

Turoff, M. (1970). The design of a policy Delphi. *Journal of Technological Forecasting and Social Change, 2*(2), 149–171.

Tweedie, D., & Martinov-Bennie, N. (2015). Entitlements and time: Integrated reporting's double-edged agenda. *Social and Environmental Accountability Journal, 35*(1), 49–61.

Ullmann, A. A. (1985). Data in search of a theory: A critical examination of the relationships among social performance, social disclosure, and economic performance of US firms. *Academy of Management Review, 10*(3), 540–557.

Wong, R., & Millington, A. (2014). Corporate social disclosures: A user perspective on assurance. *Accounting, Auditing and Accountability Journal, 27*(5), 863–887.

Worrell, J. L., Di Gangi, P. M., & Bush, A. A. (2013). Exploring the use of the Delphi method in accounting information systems research. *International Journal of Accounting Information Systems, 14*(3), 193–208.

Yin, R. (2014). Case Study Research. SAGE.

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CSR and Greenwashing: A Matter of Perception in the Search of Legitimacy

Federica Balluchi, Arianna Lazzini and Riccardo Torelli

1 Introduction

Corporate social responsibility (CSR) implies a willingness to respond to the requests and expectations of various stakeholders who each have a different nature, as well as characteristics (Freeman 1984; Donaldson and Preston 1995; Mitchell et al. 1997; Garriga and Melé 2004; Werther and Chandler 2006). The relation between society and business has been theorized for the first time by Bowen (1953), Carroll (1998), Wartick and Cochran (1985); however, in the 1960s, interest in CSR began to emerge when the idea that firms, though primarily economic institutions, also exert significant influence within society (Roberts 1992). Furthermore, in the twenty-first century, the number of studies on CSR has increased significantly (Lyon and Montgomery 2015; Wagner et al. 2009). Some studies (e.g. Aguinis and Glavas 2012; Carroll and Shabana 2010) analyse CSR literature in general, while others focus on CSR theories (e.g. Lee 2008; Frynas and Yamahaki 2016). From this perspective, the contributions of Garriga and Melé (2004) tried to classify the main CSR theories and related approaches. In particular, the authors identified four groups of theories (Garriga and Melé 2004: 52–53), including:

Instrumental Theories: Because the firm is an instrument for wealth creation, any supposed social activity is accepted if, and only if, it is consistent with wealth creation;

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Political Theories: The company accepts social duties and rights or participates in certain social cooperation because of its responsibility in the "political arena" associated with its social power, specifically in its relationship with society;
Integrative Theories: Firms need to integrate social demands into their business because they depend on society for their existence, continuity and growth;
Ethical Theories: The relationship between the company and society implies ethical values; in this sense, these firms ought to accept social responsibilities as ethical obligations.

In this final perspective, CSR needs to be considered by firms in their strategy and thus, can be a real source of social progress. Firms as social actors play a primary role in ensuring that present and future generations apply resources, expertise and insights into activities that benefit society (Porter and Kramer 2006).

Nevertheless, there has been a worrying increase in the amount of misleading information produced by companies, including information on environmental and social aspects (Lydenberg 2002). In different quarters, particularly among social and environmental activists, concerns are being increasingly raised about corporate deception, which is sometimes imbedded in rhetoric (McQuarrie and Mick 2003). There is increasing the apprehension that some companies may be creatively managing their reputations with their stakeholders (customers, financial community, regulators, society, etc.) to hide faults and problems, improve their reputation or appear more competitive.

In the existing literature, interest in greenwashing has increased, although there is currently no single accepted definition of the term. Different definitions and perspectives have been put forward and adopted (Seele and Gatti 2017; Wilson et al. 2010), but in general, it is recognised as a misleading communication practice concerning environmental issues (Torelli et al. 2020). Numerous studies focus on different types of corporate engagements in greenwashing (Du 2015; Testa et al. 2018; Vries et al 2015) and have found that one of the most frequent reasons is to attain legitimacy (Walker and Wan 2012). This is because legitimacy leads to stronger relationships, and thus, companies try to achieve or preserve it through disclosure and may pursue strategies to influence stakeholder perception. Moreover, numerous studies find that information about the social and environmental responsibility of a company influences stakeholders (customers, employees, investors, communities, etc.), which means that legitimacy is a critical feature (Walker and Wan 2012). The only other way to legitimisation for a firm is to use credibility (Coombs 1992; Seele and Lock 2015), which exists when stakeholders' expectations coincide with what companies actually do (Lock and Seele 2016; Sethi 1975).

The aim of this study is twofold. Firstly, it aims to review the different definitions and perspectives used in management literature to study and analyse greenwashing. Secondly, it traces the relationship between the concepts of communication, credibility, legitimacy, greenwashing and perceptions through the lens of legitimacy theory, starting from Habermas's communicative action theory (1984).

The study is comprised of three main sections. The first focuses on the definition of greenwashing and the different perspectives in which it is analysed in current literature. The second describes the relationship between greenwashing and four key variables (communication, credibility, legitimacy and perceptions). In the final section, some conclusions are drawn.

2 Misleading Corporate Communication: Towards a Definition of Greenwashing

Corporate social responsibility represents a voluntary approach taken by an enterprise to meet stakeholder expectations, taking into account their different features (Donaldson and Preston 1995; Freeman 1984; Mitchell et al. 1997; Werther and Chandler 2006). Engaging in corporate social responsibility initiatives is the main corporate response by stakeholders and society in general to the call for action.

CSR initiatives are extremely varied. They can be taken at different levels of corporate organisation and strategy, and can be voluntary or in response to an obligation, short, medium or long term, and targeted at different goals (profit, environmental protection, ethical, social behaviour). Organisations engage in certain CSR initiatives (e.g. environmental) to attain corporate legitimacy (Walker and Wan 2012; Seele and Gatti 2017), but in reality, the engagement may in fact be purely symbolic. Simply giving the impression of being socially responsible can be easier, cheaper and more flexible for companies, and at first, may bring the same benefits as true commitment (Walker and Wan 2012). However, when companies act through misleading communication only at a symbolic level with the aim of strategically influencing stakeholder perceptions, *greenwashing* acts in pragmatic legitimacy context (Seele and Gatti 2017).

The debate on greenwashing first appeared in the 1960s because of the growth of environmentalism. Environmentalists termed corporate greenwashing actions and strategies "eco-pornography". However, the first to coin the term "greenwashing" was biologist and environmental activist Jay Westerveld, who, in 1986, interpreted an invitation about towel use in his hotel room[1] as the hotel trying to save money rather than protecting the environment by reducing water consumption.

Academic studies on greenwashing started only in the mid-1990s, when Greer and Bruno (1996) discussed it in their book on environmental marketing (Laufer 2003). Because it has many impacts and practical applications in the real world and because it offers important spaces for research, lying at the intersections of various academic disciplines, greenwashing has become an increasingly significant topic in academic literature over the last decade. From 1995 to 2014, a total of 105 full-length peer-reviewed articles in academic journal articles focused on greenwashing from various perspectives. That number increased rapidly after 2007, particularly in 2011 (Lyon and Montgomery 2015).

[1] "Save Our Planet: Every day, millions of gallons of water are used to wash towels that have only been used once. You make the choice: A towel on the rack means, 'I will use again.' A towel on the floor means, 'Please replace.' Thank you for helping us conserve the Earth's vital resources".

Some studies focus on the *impact on financial performance* of both substantial and symbolic actions (Du 2015; Walker and Wan 2012). These studies discuss not only greenwashing but also the consequences of true positive environmental actions and performance properly advertised and disclosed. Walker and Wan (2012) call this "green-highlighting". These studies prove the negative effect of greenwashing on financial performance when it is discovered, but they do not agree on the impact of good environmental performance.

Other works analyse the importance of *motivation* (economic or true environmental motivation) in an investment in environmental performance (Vries et al. 2015). These authors find that there is a lower perception of greenwashing when there is an economic incentive for environmental investment. However, suspicion of strategic behaviours and scepticism can mediate this relationship.

The concept of greenwashing is also studied from a *marketing* perspective:

- Nyilasy et al. (2014) focused on the impact on brand attitude and the purchase intentions of green claims and true positive environmental performance;
- Guo et al. (2017) analysed the effect of decoupling "green promises" from brand trust, brand legitimacy and brand loyalty;
- Wilson et al. (2010) discussed how consumer perception and attitude can change towards a company, focussing on recent environmental scandals affecting actively socially responsible companies.

Some researchers focus on the impacts of *cultural beliefs* concerning competition and individual responsibility on corporate social actions (Roulet and Touboul 2015). Others describe the effects of different types of corporate leadership (e.g. ethical or authoritative) and on corporate conduct and actions (Blome et al. 2017), finding that authoritative leadership is associated with a higher number of cases of greenwashing.

Two recent studies investigate the concept of greenwashing, looking at the *process of accusation* after the discovery of misleading communication (Seele and Gatti 2017) and the new aspects of illegal/irresponsible actions in greenwashing based on the detailed case study of a high-profile emission scandal (Siano et al. 2017).

Through the lens of signalling and institutional theory, Berrone et al. (2017) analyse the *impact of environmental actions* as signals on environmental legitimacy, exploring the case of positive signals of firm's environmental stance and poor environmental performance (greenwashing). Research findings highlight the positive impact on the corporate legitimacy of some types of environmental actions (e.g. patents, pay policies and trademarks), but also on the fact that pay policies and trademarks can only increase environmental legitimacy when companies have strong credibility. Berrone et al. (2017) also stress the role of environmental NGOs, which have a negative moderating effect on environmental performance impact and on corporate legitimacy.

Some studies analyse how and why *disclosure* on activities in environmental measures provided by firms can affect stakeholder perception of corporate greenwashing. In particular, Vries et al. (2015) found that people often see company disclosure about environmental issues and performances as communicative fashion rather than being truthful. They emphasise that the perception of corporate greenwashing is highly influenced by the typology of communication about investments and commitments towards environmental responsibility. Other studies (Forehand and Grier 2003; Vries et al. 2015; Yoon et al. 2006) observe that people may suspect of the truthfulness of claims and hypothesise underhanded purposes. Furthermore, some researchers show (Cho et al. 2009; Milne and Patten 2002) that in some context transparent environmental communications have successfully offset public perception of the deteriorating effects of liability exposures. This phenomenon frequently occurs when companies take purely symbolic actions in signalling to stakeholders their values and refer to the environment and green issues in a misleading way, choosing to engage in "green talk" without a "green walk" (Ramus and Montiel 2005; Torelli et al 2020).

Nowadays, the attention towards corporate *environmental responsibility and performances* is very high, and environmental scandals are highly regarded topic (Siano et al. 2017). Some studies have focused on the effects of stakeholder discovery of greenwashing (Torelli et al. 2020); other have highlighted the effects on financial performance (Du 2015; Walker and Wan 2012), while others have examined the impact on trust and loyalty (Guo et al. 2017).

Some studies (Cho et al. 2006, 2009; Patten 2002) have analysed the impact of industry on stakeholder perceptions: in the case of firms operating in Environmentally Sensitive Industries (ESI), firms with poor environmental performance may engage in misleading environmental communication to gain legitimacy, reputation, trust and reduce the suspicion of environmentally despicable behaviour

Several studies have analysed the relationship between social accountability transparency and audits. From this perspective, some authors consider social auditing as a way to promote transparency and accountability (e.g. Zadek and Raynard 1995; Gonella et al. 1998); furthermore, the study of Owen et al. (2000) was very interesting, as this article aims to identify fundamental values for conventional social audits and to analyse the developments that underpin "new" social audits (p. 82).

Up to this point, the literature has noted different perspectives of greenwashing studies. Further studies can be classified into two levels: firm-level and product-level.

At the *firm-level*, greenwashing is related to a distorted disclosure of environmental topics concerning the whole firm. At the firm-level, greenwashing is a sizeable phenomenon associated with distortive and selective disclosure, whereby companies divulge good environmental strategies and actions and conceal negative ones. This is done to create a positive but misleading impression of the firm's real environmental performance (Lyon and Maxwell 2011). Nowadays, firm-level greenwashing is significant because of increasing stakeholder demand for high levels of accountability and transparency (Bromley and Powell 2012) and because of the emergence and growing diffusion of "environmental greenwashing" frequently used by organised crime, eco-mafia and eco-criminals (Massari and Monzini 2004; Rege and Lavorgna 2017). At the firm-level, greenwashing can be regarded as a specific strategy that companies adopt to engage in symbolic communications of environmental issues without translating them into actions (Walker and Wan 2012). It can be associated with symbolic actions, referring to plans, or with substantive actions, referring to what a firm is currently doing. At the *product-level,* greenwashing is associated with an explicit marketing strategy, in which firms publicise elusive environmental benefits of a specific product or service to customers (Delmas and Burbano 2011; TerraChoice 2009).

To conclude this literature review, note that there is no single accepted definition of greenwashing. Delmas and Burbano (2011) define greenwashing as “poor environmental performance and positive communication about environmental performance”. Lyon and Montgomery (2015), in their review of the cross-disciplinary literature on greenwashing, state, “The word greenwash is used to cover any communication that misleads people into adopting overly positive beliefs about an organization’s environmental performance, practices, or products”. Other researchers have focused on the concept of accusation to define greenwashing. Seele and Gatti (2017) say that, “Greenwashing is a co-creation of an external accusation toward an organization with regard to presenting a misleading green message”. Walker and Wan (2012) focused on the difference between symbolic and substantive actions, and define greenwashing as “a strategy that companies adopt to engage in symbolic communications of environmental issues without substantially addressing them in actions”. Many other definitions have recently been put forward by NGOs (e.g. Greenpeace) and the mainstream media. In particular, TerraChoice Group Inc. (2009) defined greenwashing as “the act of misleading consumers regarding the environmental practices of a company (firm-level greenwashing) or the environmental benefits of a product or service (product-level greenwashing)”. This definition covers only one category of stakeholders (consumers) interested in greenwashing and only two levels of greenwashing (firm and product levels).

In conclusion, note that because the concept is vast, complex and interdisciplinary, a clear definition of the concept of greenwashing would probably be of limited usefulness.

3 The Search for Legitimacy: The Role of Greenwashing, Credibility and Perception

Greenwashing is rooted in the firms’ need for legitimation, in the essential perception that the actions of a firm are desirable, proper or appropriate within a socially constructed system of norms, values and beliefs (Suchman 1995; Torelli et al. 2020). Dowling and Pfeffer (1975) and Lindblom (1994) highlighted that companies that intend to maintain or increase their legitimacy have a greater propensity to implement communication practices related to the concept of greenwashing influencing stakeholders’ perception. Alniacik et al. (2011) have found that purchase, employment, and investment intentions of various stakeholders are significantly influenced by the communication of information, whether negative or positive, regarding social and environmental responsibility. Legitimacy represents a key issue for companies because it can lead to significant improvement in, job applicants, access to resources, market reputation and financial performance (Aldrich and Fiol 1994; Babiak and Trendafilova 2011; DiMaggio and Powell 1983; Deephouse 1999; Oliver 1991; Walker and Wan 2012).

Thus, recent studies (Cho et al. 2009; Forehand and Grier 2003; Milne and Patten 2002; Patten and Crampton 2003; Vries et al. 2015; Yoon et al. 2006) have analysed the importance of affecting stakeholder perception of corporate communication, social and environmental responsibility and corporate greenwashing.

These studies reflect greater attention to CSR and CSR disclosure by academics and corporate management, while CSR reports are acknowledged to be the most effective CSR communication tool (Hooghiemstra 2000); however, perceptions of credibility remain a poorly understood issue. As such, this section proposes a basic theoretical model of the relationships between the concepts of corporate communication, credibility, legitimacy, perception and greenwashing.

To obtain legitimacy, corporate communication and disclosure requires a sufficient level of credibility (Coombs 1992; Seele and Lock 2015). However, there is frequently a credibility perception gap (Dando and Swift 2003): a discrepancy between what stakeholders expect and what companies do, or rather what they perceive companies do (Sethi 1975). Thus, credibility has a key role as a basis of trust and in particular, of legitimacy (Coombs 1992). The same item of CSR communication can be considered believable at first sight in the eyes of the company and its managers, but at the same time, can be perceived as not credible (Lock and Seele 2016; Seele 2016), as a sort of fashionable distraction, or an attempt at greenwashing by a stakeholder.

Habermas's communicative action theory (1984) is very useful in analysing corporate communication. Furthermore, Habermas considers social action based on two main components: strategic action and communicative action. Strategic action is regarded as an action oriented to success and achieved by influencing the actions of other rational actors, while communicative action is oriented towards reaching mutual understanding. Through communicative action, the actors cooperate to define the context of their interaction with the aim of pursuing their own objectives. Habermas (1984) argues that communication is a process based on a set of norms, or validity claims, accepted by all communicators to develop and maintain a correct and ideal communication process and to construct a common understanding. The main norms in a communication process are:

- *Understandability*: Ensures that the statement is clearly understandable by the actors;
- *Truthful*: The communicator provides a true and correct message. He/She does not deliberately give misleading information;
- *Sincere expression*: The communicator is truthful and believable. This norm is connected to the subjective beliefs underlying the statements;
- *Appropriateness* (social order): Communication is related to the social order that each actor is part of. The actor takes a position with respect to the normative or legitimate social order (Fig. 1).

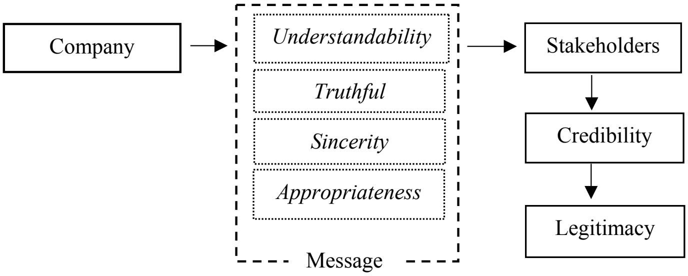

Fig. 1 From communication to legitimacy. *Source* Our elaboration

A critical role in corporate communications is played by stakeholder perception (for details, see Wagner et al. 2009; Lock and Seele 2017). If it is true that to obtain legitimacy, a communication must have credibility (Lock and Seele 2017; Seele and Lock 2015; Lock and Seele 2016) and be built on the presence of all four of Habermas's principles, it is equally important to fully evaluate and consider the role of perception (in this stakeholder context) as a moderator or amplifier both in achieving credibility and in obtaining legitimacy. Thus, the concept of credibility can be considered as a multidimensional perception construct (Jackob 2008). Likewise, the concept of legitimacy can be considered to be based on, or to be, a perception construct. Actually, the legitimacy of an organisation is considered as its perceived conformity with norms, traditions and social rules (Suchman 1995).

If we include in the model the concept of greenwashing as a misleading environmental communication based on either negative or partially positive environmental performance (Walker and Wan 2012; Delmas and Burbano 2011; Lyon and Montgomery 2015), the role of stakeholder perception in the transition from communication to legitimacy becomes decisive. Starting from Habermas's communication theory, we assume that greenwashing is the result of a strategic action, which, through the communication process, aims to give stakeholders a misleading perception of environmental corporate performance to obtain legitimacy. Therefore, legitimacy is achieved if stakeholders perceive that the message communicated by the company is credible. Greenwashing is thus generated when there is a gap between the reality and the perception induced in the stakeholder by corporate disclosure; in other words, when the norms of truthful and sincerity are violated, the message communicated expressly contains misleading elements.

Figure 2 shows the main relationships between the concepts of communication, credibility, legitimacy, greenwashing and perception, while certain key aspects are highlighted. In a corporate disclosure, the first validity claim proposed by Habermas (1984), understandability, can be considered a precondition (Zinkin 1998), or a necessary condition for the proper functioning of communication between sender and receiver, which in this case, is the company and stakeholders. Without understandability, there is no basis for communication (Lock and Seele 2016). Thus, for company disclosure to satisfy Habermas's conditions of appropriateness and sincerity, it needs to be reliable, responsive and exhaustive. The concept of truth, on the

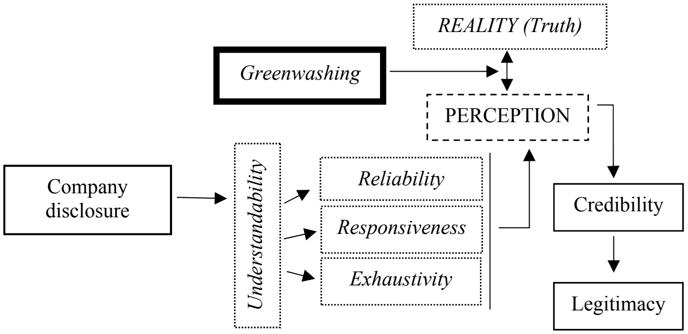

Fig. 2 Role of perception. *Source* Our elaboration

other hand, is very difficult to measure and is present only in real life; in other words, it is what stakeholders use to evaluate the corporate communication received.

Misleading communication, such as greenwashing, can be an attempt by the sender to bypass the respect for the conditions set out by Habermas for correct communication, which leads to credibility (Connelly et al. 2011; Berrone et al. 2017). Through the phenomenon of greenwashing, the company tries to communicate something that does not actually exist, or exists in part, or that exists but not as it is communicated (Walker and Wan 2012; Ramus and Montiel 2005). The communication is therefore artificial, not sincere, not true and not appropriate, but in some cases, it can still be considered as credible.

The concept of perception comes into play at different times in the act of communication. In the transition from Habermas's validity claims to the concept of credible communication, the perception by the receiver (stakeholder) plays a key role (Cho et al. 2009; Vries et al. 2015; Wilson et al. 2010). Apart from the objective truth of what communication deals with, the other two validity claims are subject to a subjective judgement, for example the perception of the individual receiver (Suchman 1995; Seele and Gatti 2017). Therefore, the same communication can be taken as appropriate and sincere by one receiver and not credible by another.

As Jackob (2008) pointed out, credibility is the outcome of a subjective evaluation process carried out by the receiver on the message and, above all, on its content, so that the result of this process can differ each time. Even if a company tries to go beyond the steps of a correct communicative process (Habermas 1984) and uses greenwashing (e.g. Berrone et al. 2017), the message still has to be perceived by the receiver who receives the message and evaluates its credibility (Lock and Seele 2017). Here, the risk for the company of gaining negative evaluation by stakeholders on communication is likely to be greater because in not meeting the four validity claims, it is based not on facts and appropriateness but on artefact, fashion and impression management (Mahoney et al. 2013; Neu et al. 1998; Seele and Gatti 2017). Whether it is sincere and credible communication or deceptive communication that has obtained credibility from the receiver, perception still has a role in the transition from credibility to legitimacy (Jackob 2008). However, this is not immediately obvious. Furthermore, the transition cannot be attributed only to the presence/absence of the perception of credibility, but needs to be considered from the point of view of perception. This is particularly true given that stakeholders often consider CSR communication not credible but only a strategic tool from the start (Elving 2013; Illia et al. 2013; Milne and Gray 2013). A communication evaluated as credible, whether it is objectively credible or not, passes through further consideration, evaluation and discernment by the receiver in obtaining legitimacy. Here, once again, perception has an important role. Moreover, even the concept of legitimacy should not be considered as objective and as a certain concept, but as a construct of perception (Suchman 1995). The issue of communication credibility is accentuated by the fact that stakeholders often see a lack of credibility in CSR communication (Coombs and Holladay 2013) and by general cynicism towards CSR communication (Illia et al. 2013).

When situations occur in which corporate communication is not credible (credibility gap) or, although considered credible, fails to reach the concept of legitimacy (legitimacy gap), there is often inconsistency between what the company says and what the company does, or seems to do (Basu and Palazzo 2008). Thus, it is important to assess the role played by perception among stakeholders. In these cases, the role of the moderator/amplifier of perception is crucial. As such, the case of greenwashing is very interesting and complex because, in the case of misleading communication, the sender will base the entire communication on the exploitation of perception (Seele and Gatti 2017; Suchman 1995) in his/her role as an amplifier of credibility. If this role of perception does not work as expected, the construct of communication fails, because the four validity claims are lacking as supporting pillars (Habermas 1984; Lock and Seele 2017). Through misleading stakeholders, a company tries to meet the stakeholder requirement for the legitimacy of the firm in society, but will not respond truthfully or completely (Claasen and Roloff 2012). Neither will it succeed in filling the credibility gap that is only deepened by CSR communication and by corporate hypocrisy (Dando and Swift 2003; Wagner et al. 2009).

CSR perception has an important role in affecting trust, reputation, firm image, propensity of consumers/investors and financial performance (Luo and Bhattacharya 2006). Vague or empty communications, in other words communication without real performance, generate stakeholder perception of corporate hypocrisy (Wagner et al. 2009). Greenwashing is a perfect example of this process. CSR communication and CSR perception are affected negatively by inconsistency. Perception of corporate hypocrisy, i.e. the difference between a statement and the real action, appears to be stronger when companies focus first on the statement by publishing it and only later, the real action. This *proactive CSR strategy* (Wagner et al. 2009) is more damaging than a reactive CSR strategy, where actions are made before statements appear. Greenwashing could be considered as an extreme case of corporate hypocrisy because misleading stakeholders here is crucial (see Seele and Gatti 2017 and Delmas and Burbano 2011). In the intention of disseminating positive CSR communication, a company attempting greenwashing focuses exclusively (or almost exclusively) on issuing its statement, as well as on perception and not (or not exclusively) on performance (Delmas and Burbano 2011; Lyon and Montgomery 2015). This is the problem of "talking the talk without walking the walk" (Ramus and Montiel 2005).

4 Conclusions

After having analysed and classified different definitions of greenwashing in extant literature, this study focused on the relationships between greenwashing and legitimacy. In literature, it is commonly recognised that credibility (Dando and Swift 2003) has become a critical feature for companies to gain trust and legitimacy. Nowadays, because of the increasing expectations of stakeholders, there is a high risk that corporate communication will be considered unreliable, creating a real gap in trust and legitimacy.

Starting from these assumptions and based on previous research (Habermas 1984; Lock and Seele 2017; Patten and Crampton 2003; Cho et al. 2009; Vries et al. 2015), this work has analysed the role of information disclosure in gaining legitimation and improving stakeholder perceptions.

Misleading communications—greenwashing—can be used by companies to meet stakeholder expectations by avoiding the correct rules of communication, with the aim of communicating something that is not really true or only partially true (Walker and Wan 2012; Ramus and Montiel 2005). Thus, stakeholder perception plays a decisive role in the process because the same message can be considered appropriate and sincere by one receiver, but not credible by another. Because credibility derives from a subjective evaluation process (Jackob 2008), companies using greenwashing risk negative evaluation by stakeholders, as well as losing their legitimacy. This kind of risk is particularly real because stakeholders often consider CSR communication as a strategic tool, which is not in itself wholly credible. When there is a credibility gap between companies and stakeholders, there is a problem of inconsistency and perception, which comes to play a crucial role. If perception does not work as expected, the whole construct of communication fails. By adopting greenwashing practices, companies aim to disseminate positive CSR communication by "talking the talk without walking the walk" (Ramus and Montiel 2005).

A critical role in the communication process is played by the perception of credibility generated by stakeholders. The perception of credibility seems to be affected by four fundamental conditions: comprehensibility, reliability, responsiveness and exhaustiveness. Although it is complex and difficult to identify possible solutions to the problems of misleading communication, which are often rooted in the culture of corporate management, we can consider a first attempt to limit these practices in the adoption of an in-depth process of external verification of data and information reported by companies (Owen et al. 2000).

The main limitation of this study is the lack of practical application and empirical verification of the theoretical concepts developed and proposed. Moreover, the work does not explore possible solutions or methods to limit situations of misleading communication.

Future empirical research will be useful to develop methods of measuring stakeholder perception of disclosure and its credibility. It would also be interesting to investigate the level of credibility of corporate environmental disclosure in different contexts and industries.

Literature

Aguinis, H., & Glavas, A. (2012). What we know and don't know about corporate social responsibility: A review and research agenda. *Journal of Management, 38*(4), 932–968.

Aldrich, H. E., & Fiol, C. M. (1994). Fools rush in? The institutional context of industry creation. *Academy of Management Review, 19,* 645–670.

Alniacik, U., Alniacik, E., & Genc, N. (2011). How corporate social responsibility information influences stakeholders' intentions. *Corporate Social Responsibility and Environmental Management, 18*(4), 234–245.

Babiak, K., & Trendafilova, S. (2011). CSR and environmental responsibility: Motives and pressures to adopt green management practices. *Corporate Social Responsibility and Environmental Management, 18,* 11–24.

Basu, K., & Palazzo, G. (2008). Corporate social responsibility: A process model of sensemaking. *Academy of Management Review, 33*(1), 122–136.

Berrone, P., Fosfuri, A., & Gelabert, L. (2017). Does greenwashing pay off? Understanding the relationship between environmental actions and environmental legitimacy. *Journal of Business Ethics, 144*(2), 363–379.

Blome, C., Foerstl, K., & Schleper, M. C. (2017). Antecedents of green supplier championing and greenwashing: An empirical study on leadership and ethical incentives. *Journal of Cleaner Production, 152,* 339–350.

Bowen, H. (1953). *Social responsibilities of the businessmen*. New York: Harper and Brothers.

Bromley, P., & Powell, W. W. (2012). From smoke and mirrors to walking the talk: Decoupling in the contemporary world. *The Academy of Management Annals, 6*(1), 483–530.

Carroll, A. B. (1998). The four faces of corporate citizenship. *Business and Society Review, 100*(1), 1–7.

Carroll, A. B., & Shabana, K. M. (2010). The business case for corporate social responsibility: A review of concepts, research and practice. *International Journal of Management Reviews, 12,* 85–105.

Cho, C. H., Patten, D. M., & Roberts, R. W. (2006). Corporate political strategy: An examination of the relation between political expenditures, environmental performance, and environmental disclosure. *Journal of Business Ethics, 67*(2), 139–154.

Cho, C. H., Phillips, J. R., Hageman, A. M., & Patten, D. M. (2009). Media richness, user trust, and perceptions of corporate social responsibility: An experimental investigation of visual web site disclosures. *Accounting, Auditing and Accountability Journal, 22*(6), 933–952.

Claasen, C., & Roloff, J. (2012). The link between responsibility and legitimacy: The case of De Beers in Namibia. *Journal of Business Ethics, 107*(3), 379–398.

Coombs, W. T. (1992). The failure of the task force on food assistance: A case study of the role of legitimacy in issue management. *Journal of Public Relations Research, 4,* 101–122.

Coombs, W. T., & Holladay, S. J. (2013). The pseudo-panopticon: The illusion created by CSR-related transparency and the internet. *Corporate Communications: An International Journal, 18*(2), 212–227.

Connelly, B. L., Certo, S. T., Ireland, R. D., & Reutzel, C. R. (2011). Signaling theory: A review and assessment. *Journal of Management, 37*(1), 39–67.

Dando, N., & Swift, T. (2003). Transparency and assurance minding the credibility gap. *Journal of Business Ethics, 44,* 195–200.

Deephouse, D. L. (1999). To be different, or to be the same? It's a question (and theory) of strategic balance. *Strategic Management Journal, 20,* 147–166.

Delmas, M. A., & Burbano, V. C. (2011). The drivers of greenwashing. *California Management Review, 54*(1), 64–87.

DiMaggio, P., & Powell, W. W. (1983). The iron cage revisited: Collective rationality and institutional isomorphism in organizational fields. *American Sociological Review, 48*(2), 147–160.

Donaldson, T., & Preston, L. E. (1995). The stakeholder theory of the corporation: Concepts, evidence, and implications. *Academy of Management Review, 20*(1), 65–91.

Dowling, J., & Pfeffer, J. (1975). Organizational legitimacy: Social values and organizational behavior. *Pacific Sociological Review, 18,* 122–136.

Du, X. (2015). How the market values greenwashing? Evidence from China. *Journal of Business Ethics, 128*(3), 547–574.

Elving, W. J. (2013). Scepticism and corporate social responsibility communications: The influence of fit and reputation. *Journal of Marketing Communications, 19*(4), 277–292.

Forehand, M. R., & Grier, S. (2003). When is honesty the best policy? The effect of stated company intent on consumer skepticism. *Journal of Consumer Psychology, 13,* 349–356.

Freeman, E. R. (1984). *Strategic Management: A stakeholder approach*. Marshfield (Mass): Pitman.

Frynas, J. G., & Yamahaki, C. (2016). Corporate social responsibility: Review and roadmap of theoretical perspectives. *Business Ethics: A European Review, 25,* 258–285.

Garriga, E., & Melé, D. (2004). Corporate social responsibility theories: Mapping the territory. *Journal of Business Ethics, 53*(1–2), 51–71.

Gonella, C., Pilling, A., & Zadek, S. (1998). *Making values count: Contemporary experience in social and ethical accounting, auditing and reporting*. London: Association of Chartered Certified Accountants.

Greer, J., & Bruno, K. (1996). *Greenwash: The reality behind corporate environmentalism. Reality behind corporate environmentalism*. New York: Apex Press.

Guo, R., Tao, L., Li, C., & Wang, T. (2017). A path analysis of greenwashing in a trust crisis among Chinese energy companies: The role of brand legitimacy and brand loyalty. *Journal of Business Ethics, 140*(3), 523–536.

Habermas, J. (1984). *The theory of communicative action*. Boston: Beacon Press.

Hooghiemstra, R. (2000). Corporate communication and impression management—New perspectives why companies engage in corporate social reporting. *Journal of Business Ethics, 27,* 55–68.

Illia, L., Zyglidopoulos, S. C., Romenti, S., Rodriguez-Canovas, B., & del Valle Brena, A. G. (2013). Communicating corporate social responsibility to a cynical public. *MIT Sloan Management Review, 54*(3), 15–18.

Jackob, N. (2008). Credibility effects. In W. Donsbach (Ed.), *International encyclopedia of communication* (pp. 1044–1047). Malden, MA: Blackwell.

Laufer, W. S. (2003). Social accountability and corporate greenwashing. *Journal of Business Ethics, 43*(3), 253–261.

Lee, M.-D. P. (2008). A review of the theories of corporate social responsibility: Its evolutionary path and the road ahead. *International Journal of Management Reviews, 10,* 53–73.

Lindblom, C. K. (1994). The implications of organizational legitimacy for corporate social performance and disclosure. In *Critical Perspectives on Accounting Conference*, New York.

Lock, I., & Seele, P. (2016). The credibility of CSR (corporate social responsibility) reports in Europe. Evidence from a quantitative content analysis in 11 countries. *Journal of Cleaner Production, 122,* 186–200.

Lock, I., & Seele, P. (2017). Measuring credibility perceptions in CSR communication: A scale development to test readers' perceived credibility of CSR reports. *Management Communication Quarterly, 31*(4), 584–613.

Luo, X., & Bhattacharya, C. B. (2006). Corporate social responsibility, customer satisfaction, and market value. *Journal of Marketing, 70*(October), 1–18.

Lydenberg, S. D. (2002). Envisioning socially responsible investing. *Journal of Corporate Citizenship, 7,* 57–77.

Lyon, T. P., & Maxwell, J. W. (2011). Greenwash: Corporate environmental disclosure under threat of audit. *Journal of Economics and Management Strategy, 20*(1), 3–41.

Lyon, T. P., & Montgomery, A. W. (2015). The means and end of greenwash. *Organization and Environment, 28*(2), 223–249.

Mahoney, L. S., Thorne, L., Cecil, L., & LaGore, W. (2013). A research note on standalone corporate social responsibility reports: Signalling or greenwashing? *Critical Perspectives on Accounting, 24*(4/5), 350–359.

Massari, M., & Monzini, P. (2004). Dirty businesses in Italy: A case-study of illegal trafficking in hazardous waste. *Global Crime, 6*(3–4), 285–304.

McQuarrie, E. F., & Mick, D. G. (2003). The contribution of semiotic and rhetorical perspectives to the explanation of visual persuasion in advertising. In L. G. Scott & R. Batra (Eds.), *Persuasive imagery: A consumer response perspective* (pp. 191–221). Mahwah, NJ: Erlbaum.

Mitchell, R. K., Agle, B. R., & Wood, D. J. (1997). Toward a theory of stakeholder identification and salience: Defining the principle of who and what really counts. *Academy of Management Review, 22*(4), 853–886.

Milne, M. J., & Gray, R. (2013). W(h)ither ecology? The triple bottom line, the global reporting initiative, and corporate sustainability reporting. *Journal of Business Ethics, 118,* 13–29.

Milne, M. J., & Patten, D. M. (2002). Securing organizational legitimacy: An experimental decision case examining the impact of environmental disclosures. *Accounting, Auditing and Accountability Journal, 15*(3), 372–405.

Neu, D., Warsame, H., & Pedwell, K. (1998). Managing public impressions: Environmental disclosures in annual reports. *Accounting, Organizations and Society, 23*(3), 265–282.

Nyilasy, G., Gangadharbatla, H., & Paladino, A. (2014). Perceived greenwashing: The interactive effects of green advertising and corporate environmental performance on consumer reactions. *Journal of Business Ethics, 125*(4), 693–707.

Oliver, C. (1991). Strategic responses to institutional processes. *Academy of Management Review, 16*(1), 145–179.

Owen, D., Swift, T. S., Humphrey, C., & Bowerman, M. (2000). The new social audits: Accountability, managerial capture or the agenda of social champions? *The European Accounting Review, 9*(1), 81–98.

Patten, D. M. (2002). The relation between environmental performance and environmental disclosure: A research note. *Accounting, Organizations and Society, 27*(8), 763–773.

Patten, D. M., & Crampton, W. (2003). Legitimacy and the internet: An examination of corporate web page environmental disclosures. *Advances in Environmental Accounting and Management, 2,* 31–57.

Porter, M. E., & Kramer, M. R. (2006). The link between competitive advantage and corporate social responsibility. *Harvard Business Review, 84*(12), 78–92.

Ramus, C. A., & Montiel, I. (2005). When are corporate environmental policies a form of greenwashing? *Business and Society, 44*(4), 377–414.

Rege, A., & Lavorgna, A. (2017). Organization, operations, and success of environmental organized crime in Italy and India: A comparative analysis. *European Journal of Criminology, 14*(2), 160–182.

Roberts, R. W. (1992). Determinants of corporate social responsibility disclosure: An application of stakeholder theory. *Accounting, Organizations and Society, 17*(6), 595–612.

Roulet, T., & Touboul, S. (2015). The intentions with which the road is paved: Attitudes to liberalism as determinants of greenwashing. *Journal of Business Ethics, 128*(2), 305–320.

Scherer, A. G., & Palazzo, G. (2011). The new political role of business in a globalized world: A review of a new perspective on CSR and its implications for the firm, governance, and democracy. *Journal of Management Studies, 48*(4), 899–931.

Seele, P. (2016). Digitally unified reporting: How XBRL-based real-time transparency helps in combining integrated sustainability reporting and performance control. *Journal of Cleaner Production, 136,* 65–77.

Seele, P., & Gatti, L. (2017). Greenwashing revisited: In search of a typology and accusation-based definition incorporating legitimacy strategies. *Business Strategy and the Environment, 26*(2), 239–252. (Wiley).

Seele, P., & Lock, I. (2015). Instrumental and/or deliberative? A typology of CSR communication tools. *Journal of Business Ethics, 131*(2), 401–414.

Sethi, S. P. (1975). Dimensions of corporate social performance: An analytical framework. *California Management Review, 17*(3), 58–64.

Siano, A., Vollero, A., Conte, F., & Amabile, S. (2017). "More than words": Expanding the taxonomy of greenwashing after the Volkswagen scandal. *Journal of Business Research, 71,* 27–37.

Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. *Academy of Management Review, 20*(3), 571–610.

TerraChoice. (2009). *The seven sins of greenwashing*. Available at http://sinsofgreenwashing.com/findings/greenwashing-report-2009/index.html. Accessed 28 March 2018.

Testa, F., Boiral, O., & Iraldo, F. (2018). Internalization of environmental practices and institutional complexity: Can stakeholders pressures encourage greenwashing? *Journal of Business Ethics, 147*(2), 287–307.

Torelli, R., Balluchi, F., & Lazzini, A. (2020). Greenwashing and environmental communication: Effects on stakeholders' perceptions. *Business Strategy and the Environment, 29*, 407–421.

Vries, G., Terwel, B. W., Ellemers, N., & Daamen, D. D. L. (2015). Sustainability or profitability? How communicated motives for environmental policy affect public perceptions of corporate greenwashing. *Corporate Social Responsibility and Environmental Management, 22*(3), 142–154.

Wagner, T., Lutz, R. J., & Weitz, B. A. (2009). Corporate hypocrisy: Overcoming the threat of inconsistent corporate social responsibility perceptions. *Journal of Marketing, 73,* 77–91.

Walker, K., & Wan, F. (2012). The harm of symbolic actions and green-washing: Corporate actions and communications on environmental performance and their financial implications. *Journal of Business Ethics, 109*(2), 227–242.

Wartick, S. L., & Cochran, P. L. (1985). The evolution of the corporate social performance model. *Academy of Management Review, 10*(4), 758–769.

Werther, W. B., & Chandler, D. (2006). *Strategic corporate social responsibility. Stakeholder in a global environment*. Thousand Oaks: Sage Publications.

Wilson, A., Robinson, S., & Darke, P. (2010). When does greenwashing work? Consumer perceptions of corporate parent and corporate societal marketing firm affiliation. *Advances in Consumer Research, 37,* 931–932.

Yoon, Y., Gürhan-Canli, Z., & Schwarz, N. (2006). The effect of corporate social responsibility (CSR) activities on companies with bad reputations. *Journal of Consumer Psychology, 16,* 377–390.

Zadek, S., & Raynard, P. (1995). Accounting works: A comparative review of contemporary approaches to social and ethical accounting. *Accounting Forum, 19,* 164–175.

Zinkin, M. (1998). Habermas on intelligibility. *Southern Journal of Philosophy, 36*(3), 453–472.

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Social/Critical/Emancipatory Accounting Research: Its Failure and Prospects for Redemption

Wm. Dennis Huber

1 Introduction

Social, critical, and emancipatory accounting research has been around for half a century. But while SCE accounting research is not totally devoid of success, not only has it failed to achieve its ultimate objective, it has not made any noticeable progress toward achieving its ultimate objective. While SCE accounting research may have achieved some successes in its quest for social justice, equity, and democracy, the victories it claims to have achieved are mostly self-proclaimed, little recognized by anyone outside the SCE accounting research community, and tangential to its ultimate objective—to ultimately change existing social relations, move toward a more equitable social order (Catchpowle and Smyth 2016), and participate in an actual transformation of the system (Tilling and Tilt 2004) by incorporating non-GAAP social costs and benefits into financial statements (Tinker et al. 1988).

The purpose of this paper is first to identify the reasons for the failure of social, critical, and emancipatory accounting research to make any progress toward achieving its ultimate objective. Second, it is an appeal to SCE accounting researchers to redirect and refocus their efforts into research that is more relevant to achieving the ultimate objective.

The rest of the paper is organized as follows. First, the importance and contribution of the paper are explained. Second, the idea of social, critical, and emancipatory accounting research is briefly reviewed. Next, the ultimate objective of SCE accounting research is considered. Fourth, the reasons for the failure of SCE accounting research in achieving its ultimate objective are analyzed. Fifth, ways in which SCE accounting researchers can redeem SCE accounting research from languishing in a state of irrelevancy by redirecting their energies into research more germane toward achieving its ultimate objective are discussed.

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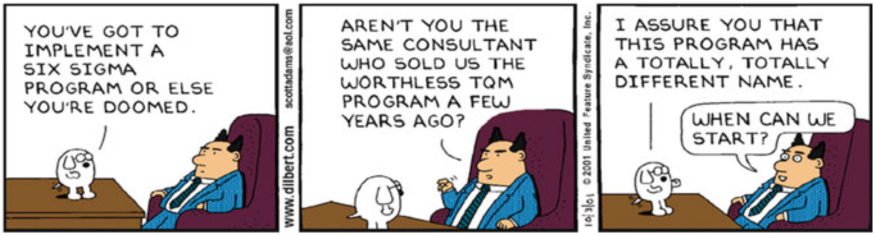
2 Importance and Contribution

SCE accounting research has taken upon itself the task of performing the complete transformation of the social forms associated with capitalism (Catchpowle et al. 2004). Granted it has other objectives, some of which it has achieved to various degrees of success, but the transformation of the social forms associated with capitalism has been and remains its ultimate objective. However, after half a century it has not made any progress toward achieving that objective. Its failure to achieve its ultimate objective has been attributed to factors such as institutional inertia, communication lapses, lack of knowledge of best practice reporting, and a lack of time and resources (Brown and Dillard 2013). In other words, if researchers could have overcome institutional inertia, prevented communication lapses, improved their knowledge of best practice reporting, and had sufficient time and resources, SCE accounting research would have made progress toward achieving its ultimate objective.

Yet the real reasons have, with few exceptions, been overlooked. Much like the person who blames his lack of success on circumstances external to himself, SCE accounting researchers have neglected to identify the real reasons for their failure—themselves. While there has been cursory and inconsequential examination of SCE accounting research, SCE accounting researchers have eschewed a critical examination of SCE accounting research itself which has diverted their attention from recognizing the reasons for its failure and prevented them from making progress toward achieving its ultimate objective.

The importance of this paper is that it identifies the reasons for the failure of SCE accounting research to achieve its ultimate objective by undertaking a critical examination of SCE accounting research. When the real reasons for the failure of SCE accounting research have been identified, SCE accounting researchers can take action to redirect their efforts into avenues of research more relevant to achieving the ultimate objective.

3 Social, Critical, and Emancipatory Accounting Research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I ASSURE YOU THAT THIS PROGRAM HAS A TOTALLY, TOTALLY DIFFERENT NAME.
WHEN CAN WE START?

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In order to understand the failure of social, critical, and emancipatory accounting research in achieving its ultimate objective, it is obviously important first to understand its ultimate objective. It is therefore important to understand the context and origins of social, critical, and emancipatory accounting research as it has developed over the last 50 years. The intent is not to provide a comprehensive chronological analysis of the SCE accounting research movement.[1] Rather, this brief review is only for the purpose of establishing the context for understanding the failure of social, critical, and emancipatory accounting research in achieving its ultimate objective.

According to Deegan (2017), social and environmental accounting (SEA) is a nebulous term and takes many different forms. What is known as social accounting has taken a variety of forms and labels, including social responsibility accounting, corporate social reporting, and environmental accounting and reporting, among others. Gray (2002) categorizes social accounting as "Social Responsibility Accounting; Total Impact Accounting; Socioeconomic Accounting and Social Indicators Accounting." Gray et al. (1997), note that "social accounting" has also been referred to as "social audits," "social responsibility accounting," and "corporate social reporting," among others. Likewise, Gray et al. (2014) recognize that the term "social accounting" is a generic term that includes social, environmental, and sustainability reporting, accounting, and audit. Spence (2009) uses "social accounting" to refer to all aspects of social, environmental, and sustainability accounting and reporting that are prepared by corporations. "Emancipatory accounting" is the latest iteration in the evolution of social and critical accounting research.

Contemporary social accounting had its genesis in the social conflicts of the 1960s and 1970s with the increasing criticism of capitalism when "social interest groups developed a concern about a range of social costs incurred by corporate actions, and pressure mounted for corporations to account for those costs" (Parker 1986, p. 70). To understand the failure of SCE accounting research in achieving its ultimate, then, it is important to recognize that social accounting referred to the critique of orthodox financial statements prepared using GAAP[2] and the efforts to reform financial statements by incorporating non-GAAP social costs and benefits into financial statements (Tinker et al. 1988).

Modell (2017) traced the emergence of critical accounting research to the late 1970s, while Gendron (2018) deems critical accounting research to have emerged in the 1980s. The growth of critical accounting research is exemplified by the founding of journals dedicated to critical accounting research such as *Critical Perspectives on Accounting*; *Accounting, Auditing and Accountability Journal; International Journal of Critical Accounting*; and *Social and Environmental Accountability Journal*. Journals not specifically dedicated to SCE accounting research but nevertheless important in the development of SCE accounting research include *Accounting, Organizations, and Society*. Critical accounting research published in these journals was instrumental in "highlighting accounting's role as an ideological weapon" (Brown and Dillard 2013, p. 12) and while the number of critical accounting research papers published

[1] For those who may be interested in an historical analyses of SCE accounting research see, e.g., Gray et al. (1997, 2009), Mathews (1997), and Owen (2007).

[2] In this context GAAP is used here to refer not only to rules-based accounting standards but also to principles-based accounting standards.

by these journals over a period of 50 years is impressive its efficacy must be questioned when judging the failure of SCE accounting research to achieve its ultimate objective.

Gallhofer and Haslam (2018) place the beginnings of using the construct of emancipatory accounting in Tinker's (1984, 1985) works, although they admit that they cannot be certain of the earliest published usage of the term "emancipatory accounting." Gallhofer and Haslam's (2018) review of the emancipatory accounting literature focuses mainly on the explicit usage of the term "emancipatory accounting." They explain that

> If one were to survey the entire terrain of discourse on accounting accessible to us today, one would find relatively little in the way of explicit reference to 'emancipatory accounting', or an accounting that is seen as engendering emancipation—even in the work of academics engaged explicitly in critical and interdisciplinary research (p. 2).

In addition to Tinker's (1984, 1985) works, Gallhofer and Haslam (2018) find early explicit usage of the term "emancipatory accounting" in Gallhofer and Haslam (1991) and Dillard (1991). As with social accounting and critical accounting, emancipatory accounting has no definition. They acknowledge there is a "shifting meaning in the construct of emancipatory accounting" (p. 5) and provide a list of published works using the term. They note more than once that the earliest usage of the construct of emancipatory accounting is manifested in Marxist inspired accounting analysis.

In summary, SCE accounting research has been around for a half a century or more under various labels. Yet, as explained below, after 50 years it has failed to achieve its ultimate objective.

The following section discusses the ultimate objective of SCE accounting research. Given that SCE accounting research has been inconsistent in its labels social, critical, and emancipatory accounting research will at times be referred to simply as "SCE accounting research," and at other times under the umbrella of "critical accounting research."

4 The Ultimate Objective of Social, Critical, and Emancipatory Accounting Research

Although critical accounting research has benefited from the incorporation of diverse philosophical approaches (Modell 2017), much of SCE accounting research relies on Marxist economic and political theory. While the relative extent to which Marxist theory is relied on SCE accounting research compared to other social theories can be debated, its overwhelming presence in SCE accounting research cannot be denied. This is not surprising given that SCE accounting research sees itself in an ideological conflict with capitalism and its ultimate objective of transforming the social forms associated with capitalism.

McKernan (2001) considered the implications of Habermas' (1973) exposition of the crisis tendencies immanent to advanced capitalism for critical accounting.

Since growth in consumption is an imperative of capitalism, growth is not sustainable without damage to the environment. (Whether this is an accurate assessment of capitalism. and the environment is beyond the scope of this paper.) Therefore, according to this view, capitalism and those concerned with environmental preservation are in conflict and emancipatory accounting researchers must work with groups who oppose capitalism.

Critical accounting research "draw[s] on Marxist social theory as a basis for critiquing accounting practice and the modes of research" (Richardson 2015, p. 68; see also Gendron 2018; Gallhofer and Haslam 2018) and represents a substantive portion of critical accounting research (Gallhofer and Haslam 1997, p. 74). Cooper (1997) boldly proclaimed twenty years ago that her purpose was to "promote Marxist class based theoretical accounting research by arguing that a Marxist perspective would give a voice to working-class people in the critical accounting literature and provide a theory of praxis which would make action more effective" (p. 15).

Cooper et al. (2005) bluntly declare "The theoretical framework used both in the production of the Social Account and the paper's discussion of some of the issues surrounding Social Accounting is Marxist" (p. 952). They go on to say that, "The second element which informs the Social Account is the Marxist dialectical understanding that society is animated by the incommensurable interests between capital and labour" (p. 952). Furthermore, Marxist social theory in social and environmental accounting literature sees the production of social and environmental accounting as having potential to create a fairer more just society (Cooper et al. 2005, p. 952).

The intent, then, of social accounting research is "radical and emancipatory" (Spence 2009). Emancipatory social accounting operates autonomously from the economic base and "actively exposes the contradictions of the current [accounting] hegemony" (p. 205). Tinker et al. (1988) argue that the current hegemony of accounting focuses almost exclusively on the interests of capital providers. Critical accounting research is "concerned with the social dislocations and environmental degradation that arise from advanced capitalism" (Spence 2009, p. 206) and emancipatory accounting "reinterprets and reconstructs social history to reveal what is currently hidden" by the current hegemony of accounting (Shapiro 2009, p. 950).

The heart of critical accounting research recognizes that financial statements "create and sustain problematic social orders when they focus attention on some dimensions of social experience and render other dimensions invisible" (Shapiro 2009, p. 950). Thus, the ultimate objective of SCE accounting research then is nothing less than the transformation of social forms produced by GAAP financial statements associated with capitalism.

Lehman and Tinker (1987) stress that accounting plays a part as an hegemonic force in struggles over the distribution of social income. It is thus "inextricably infused with interests, such that its very nature is constructed by the exercise of social and political power" (p. 503).

More importantly, accounting is an established system which is "sovereign, absolute, and universal" in its claims which monopolizes social thought by denying a presence to other systems of beliefs. In this way, accounting has a special and protected relation to the state by legitimizing its ideologies and assisting "in the fulfillment of the state's role in organizing conditions necessary for long run capital accumulation" (Lehman and Tinker 1987, pp. 516–518). Miller (1990) views the relationship between accounting and the state as reciprocal. Catchpowle et al. (2004) agree, adding that the state cannot escape from its responsibility of maintaining the overall conditions for capital accumulation since the state is structurally dependent upon the activities of capitalism for its revenue (p. 1048).

It can be seen that accounting and the state are inseparable. If the state is responsible for maintaining the overall conditions for capital accumulation, it can only do so by creating and enforcing standards for financial accounting reporting. Thus, any change in the financial accounting reporting standards can only be accomplished by the state or its agencies, a factor almost totally ignored by SCE accounting researchers.

Parker (1986) evaluated "the themes of social accounting with respect to their impact on the efficacy of the accounting profession issuing social accounting standards" (p. 88). While he concluded there is justification for accounting standards in social accounting, it is not the profession that issues accounting standards.

The following section discusses the failure of SCE accounting research in achieving its ultimate objective.

5 The Failure of Social, Critical, and Emancipatory Accounting Research in Achieving Its Ultimate Objective

Before the failure of SCE accounting research in achieving its ultimate objective is examined two things must be considered. First, Gray and Milne (2015) question whether researchers "who know patently little or nothing about society, the natural environment, or sustainability" can, or even should, be involved in SCE accounting research. The question echoes a commentary made by a committee of the American Accounting Association forty years prior.

The committee was charged "to identify one or more of the most critical accounting issues that currently face those who are teaching and/or doing research in the area of social costs and prepare (or commission) brief statements setting forth the alternative positions with respect to those issues…" (American Accounting Association 1974). The committee concluded

> Accountants typically are not prepared by training or experience to deal with social measurements…Accountants who involve themselves in social accounting are straying far from the area of their own skill and knowledge. When we assume for ourselves responsibility for devising measurement constructs for social costs/benefits which have not been internalized by the corporate entity, we presume omniscience (pp. 101–102).

If it is true that accountants know patently about society or the environment, it is equally true that sociologists and philosophers know patently little about accounting. The dilemma cannot be solved here.

The second thing that must be noted prior to examining the failure of SCE accounting research in achieving its ultimate objective is that some SCE accounting researchers argue that SCE accounting research has achieved some small successes (Allen 2014), while others maintain that the achievements of critical accounting research to date have been "impressive" (Carter and Toms 2010). Gray et al. (2009) suggest that "whatever else it is, the social accounting project is no failure" (p. 554).

Two examples of claimed successes by SCE accounting researchers are disclosures of transactions in conflict minerals and South African investment.

Gray (2002) understands that

> …the most systematically developed area of social accounting is… social and environmental disclosures. These teach us much about the phenomena and raise the profile of the new(er). accountings but do not, directly, advance those accountings—and nor is it obvious that the primary motivation behind such research is to do so (p. 698).

In the first example, Tenant (2017) examined the development of conflict mineral reporting requirements required by the Dodd–Frank Act. He found that a convergence of diverse organizations and individuals found common ground regarding conflict minerals and worked together toward supporting the SEC's adoption of disclosure requirements for corporate reporting of their involvement in commercializing mineral deposits in Africa. Those diverse organizations and individuals included religious groups, various nonprofit organizations, and even manufacturers, along with politicians. Neither SCE accounting research nor SCE accounting researchers were among those identified as influential in convincing the SEC to adopt disclosure requirements.

The SEC's adopting disclosure requirements was a political process with no discernible connection to SCE accounting research. Furthermore, according to Solomon (1998), "the critical accounting school suggests that voluntary corporate environmental disclosure represents nothing but crumbs from the capitalists' table, arguing that environmental disclosure is used to pacify the population" (p. 152), especially since SCE accounting researchers admit that "voluntary disclosure has been exposed as cherry picking" (Gray et al. 2009, p. 558).

The second example of alleged SCE accounting research is related to South African investment.

Heard and Bolce (1981) reported on the political significance of corporate social reporting in the USA as it related to business practices in South Africa. They noted that advocacy groups and research organizations that concentrate on corporate social performance had "a substantial impact on the development of social measurement and social reporting by major corporations in the United States" (p. 248); in particular, there was a significant increase in the number of disclosures relating to corporate business practices in South Africa during the apartheid era.

Arnold and Hammond (1994) examined the role of accounting and corporate social disclosure in the South African divestment controversy in the USA in the 1970s and 1980s. While an accounting and auditing system was established to monitor compliance with anti-apartheid disinvestment, it was used only to issue disclosures; it was not incorporated into audited, publicly issued financial statements prepared according to GAAP.

However, neither disclosures of transactions in conflict minerals nor of South African investment resulted in transformed financial statements. Was there an improvement in social reporting? Yes, but if SCE accounting research played a role in disclosures, this brought it no closer to achieving its ultimate objective. Disclosures do not transform financial statements or transform society.

Morales and Sponem (2017) provide a catalogue of the role of critical accounting research on major sociopolitical trends of the 1980s including the privatization processes, the managerialization of public action, and the financialization of businesses which constituted "an economic, political and social project promoting privatization and deregulation to enforce market-led economic and social restructuring, and legitimized through a political economic theory supporting free trade, free markets and low state intervention" (Morales and Sponem 2017, pp. 156–157). But, as with conflict minerals and South African investment, even a cursory inspection shows that none of these successes are related to the ultimate objective of transforming financial statements and certainly not of the complete transformation of the social forms associated with capitalism. None are related to corporate financial statements prepared in accordance with GAAP. No social costs have been incorporated into the financial statements.

If the objective of SCE accounting research were to contribute to the literature of SCE accounting research, then SCE accounting research has been extremely successful (Gray et al. 2009). But SCE accounting research does not exist merely to contribute to the literature. (No accounting research should merely contribute to the literature.) SCE accounting research has an ultimate objective. And whether its successes have been small or impressive, none reveal any progress toward achieving that objective.

The failure of SCE accounting research to achieve its ultimate objective has not gone completely unnoticed. Gray et al. (2009) note that there have been "a series of formal and informal discussions around the possibility that 'the social accounting project' as generally understood in our literature might have failed" (p. 547). In particular, while they do not see it as an abject failure, they admit that that SCE accounting research has not succeeded in "the global reformation of capital." Neu et al. (2001) acknowledge that critical accounting scholars have not been successful in transforming accounting practices.

Beck and Lehman (2014) questioned why the critical and social accounting project has not been successful. But instead of looking inward, they turn to Heidegger for answers. On the other hand, Allen (2014) recently warned that "SEA is at risk of becoming a hollow edifice" (p. 279) and finds that SCE accounting researchers are themselves at least partly to blame.

Thomson (2014) notes that critical and social accounting researchers have created a compelling and comprehensive account of what is wrong with conventional accounting. But he found there was limited evidence of a coherent body of research that sought to create pressure for change or develop social accounting practices to be used in programs of sustainable transformation. Owen (2007) lamented that “the apparent failure of SEA research to influence practice does raise serious questions as to whether our efforts amount to nothing more than ‘chronicles of wasted time’” (p. 254).

So, the question is, why has SCE accounting research failed to achieve its ultimate objective?[3] There are three reasons for its failure, none of which are what Brown and Dillard (2013) claim are the results of institutional inertia, communication lapses, lack of knowledge of best practice reporting, or a lack of time and resources. If it is indeed a conflict of ideologies, the failure of SCE accounting research in achieving its ultimate objective is the culmination of a series of wrong choices made by SCE accounting researchers to win the ideological battle.

SCE accounting researchers are not targeting the source of the problem it has identified. They have chosen the wrong enemy, the wrong battleground, and the wrong weapons. An integral part of choosing the wrong enemy, the wrong battleground, and the wrong weapons is the persistent and universal tendency to confuse who is responsible for what.

I examine each separately while keeping in mind they are in fact inseparable.

5.1 The Wrong Enemy

As discussed above, the “enemy” as proclaimed by SCE accounting research is capitalism, at least the dark side of capitalism. Yet, the enemy of choice among SCE accounting researchers targeted for attack is the accounting profession,[4] blaming the profession for the ills of capitalism. For example, Laughlin (1999) considers critical accounting research as, “A critical understanding of the role of accounting processes and practices and the accounting profession in the functioning of society and organisations with an intention to use that understanding to engage (where appropriate). in changing these processes, practices and the profession” (p. 73).

More recently “radical” accounting researchers have linked the profession in the USA and UK to exploitation, racism, money laundering, bribery, price-fixing, and tax evasion schemes (see, e.g., Catchpowle and Smyth 2016). While those claims are neither contested nor debated here, linking the profession to the ills of capitalism and the social dislocations enabled by capitalism decried by critical accounting researchers undermines SCE accounting researchers’ crusade to reform financial statements prepared according to GAAP and transform the social forms associated with capitalism.

[3] Gallhofer and Haslam (2018) suggest that the ultimate objective of emancipatory accounting is no longer a “grand transformation.” If this is true, which is questionable, it is an acknowledgment of defeat, a surrender to the capitalist forces which it opposes, and tantamount to an admission of failure.

[4] By profession, it is assumed that licensed certified or chartered public accountants constitute the accounting profession.

The profession is responsible only for auditing financial statements, not for establishing the financial accounting reporting standards that are the embodiment of capitalist society.

A more specific example is found in Hamilton and hÓgartaigh (2009) who implicate the accounting profession in their evaluation of the true and fair view in an auditor's report. Their paper contributes to the critical literature not just on TFV but on "accounting more generally." "Prior literature," they state, "has contributed to our understanding of the accounting profession. For example, Marxist perspectives have given primacy to the antagonistic relationships between labor and capital." They continue, "true and fair view" (EU), or "present fairly, in all material respects" (USA), means compliance with GAAP as determined by accounting standards. But Hamilton and hÓgartaigh fail to distinguish between accounting standards which are a reflection of the ideological conflict between labor and capital, and the profession which "merely" opines that in their judgment financial statements comply with accounting standards. It was not the profession that determined the standard for TVF.[5]

Laughlin (1999) defined critical accounting research as, "A critical understanding of the role of accounting processes and practices and the accounting profession in the functioning of society and organisations with an intention to use that understanding to engage…in changing these processes, practices and the profession" (p. 73). "First and foremost," says Laughlin,

> critical accounting is always contextual. It maintains that accounting, whether as a practice or as a profession, is a phenomena [sic] which has social, economic and political consequences and needs to be understood (and changed). in this context. When thinking of context we cannot but be aware of the fragility of our world and how much we as accountants or more generally as part of the human race have seriously plundered our planet (p. 73)

Particularly on point is Richardson's (1987) reminder that "the [accounting] profession's…standard setting activities are subject to criticism" (p. 351). But as noted above the accounting profession is not involved in standard-setting activities. Changing the profession will not reform financial statements and certainly will not change society because, to reiterate, the accounting profession has nothing to do with establishing accounting standards and reporting requirements for financial statements. Thus, when critical accounting research targets the accounting profession as contributing to the hegemony of "accounting proper," the criticism is misdirected. There is nothing the accounting profession can do to change the standards of financial reporting, let alone transform the capitalist system.

By law, the profession may only attest to the fact that financial statements are prepared according to GAAP according accounting standards adopted by the FASB (see below). The profession neither creates nor enforces accounting standards and reporting requirements. Yet, it is the accounting standards and reporting requirements

[5] The profession is certainly not without fault. It is laden with its own set of problems part of which is that the profession is responsible for interpreting accounting standards. However, the problems of the accounting profession are beyond the scope of this paper.

that created and maintained the social divisions between labor and capital that have been the target of criticism of SCE accounting research.

5.2 The Wrong Battleground

The battleground chosen by SCE accounting researchers is the university which goes along with the wrong weapons discussed in the next section. It is as if SCE accounting researchers believe that academicians have the power to accomplish the ultimate objective set forth by SCE accounting research.

Neu et al. (2001) state that, with exceptions, SCE accounting researchers "might be accused of slipping into the same sort of endless descriptive games and exercises that Neimark (1990, p. 110) suggests characterize other research programmes." (p. 736). In other words, the only ones who read academic research are other academic researchers, what Huber (2015) refers to as the "research-publication complex" in what amounts to little more than "preaching to the choir." The enemy cannot be engaged in the university because the enemy is not at the university.

5.3 The Wrong Weapons

Part and parcel with choosing the wrong battleground is choosing the wrong weapons. The weapons of choice among SCE accounting researchers are academic journals, especially academic journals dedicated to publishing SCE accounting research. As noted above, the only ones who read academic research journals are, almost exclusively, other academics (Huber 2015). The weapons simply do not reach the enemy.

Furthermore, in tandem with the choice of academic journals as the wrong weapons is the failure to propose meaningful arguments. Jacobs (2011), for example, comments that "Molisa (2011) criticises SCE accounting researcher's use of metaphysical ideals such as justice, equality and democracy as the basis for the critical accounting project" (p. 512). Rather, Molisa (2011) sees the limitations of SCE accounting research as "the way in which much emancipatory accounting research and practice does not make spiritual enlightenment (the realization of the egoless state of consciousness). The fundamental purpose of its engagements and interventions" (p. 455). What is required, according to Molisa, is love ("'love'—arguably one of the greatest values humanity has come up with…is almost completely absent from their accounting discourse" p. 456). and "becoming intensely aware of the present moment and coming fully into the Now" (p. 471).

All you need is love was the rallying cry for the age of Aquarius but such arguments are unrealistic for supporting endeavors to reform financial statements prepared in accordance with GAAP and transform capitalism. The enemy cannot be engaged, let alone defeated, with such weapons (arguments).

Troubling is Saravanamuthu's (2006) assertion that "emancipatory accounting should allow for moral development of the individual (by caring for the needs of the other)" (p. 234). How financial statements could allow for moral development of the individual is perplexing. Yet more troubling is his insistence that the "emancipatory accounting framework definition of sustainability should transcend the narrow interpretation of individual property rights." (p. 234)

Molisa (2011), and Gallhofer and Haslam (2011) introduce spiritual aspects into SCE accounting research, while Moerman (2006), Gallhofer and Haslam (2004), and Shapiro (2009) relate SCE accounting research to religion and theology. Saravanamuthu (2006) proposed using Vedic principles in SCE accounting research.[6] One could just imagine the problems of a financial accounting reporting standard based on justice and religious/spiritual principles. Whose justice? Which religion?

SCE accounting research is filled with appeals to philosophers and sociologists such as Marx, of course, but also to Habermas, Foucault, Bourdieu, Giddens, Derrida, Lukács, Comte, Parsons, Satre, Hobbs, Hegel, Rawls, Bentham, Deleuze, Lacan, Gramsci, Rousseau, Kant, Berger and Luckmann, Weber, Durkheim, Saint Simon, Nietzsche, and others, as well as modern, postmodern, linguistic relativity and sociolinguistics, gender and feminism, structural, and post-structural sociological theories, among others. How are standard setters supposed to make sense of that and adopt standards based on philosophy and social theories rather than evidence?

So, who is the enemy?

The Financial Accounting Standards Board (FASB), along with its oversight agency the Securities Exchange Commission (SEC), since they are responsible for developing financial reporting standards (Nurnberg 2015). The only body authorized by law to create accounting standards is the FASB.[7]

When this paper was presented at a CSEAR conference, it was heavily criticized for being "too American." However, the SEC and FASB are justified as the primary targets in the ideological war of social, critical, and emancipatory accounting research and capitalism. First, given the size of the American capital market the authority and power of the FASB are too great to be ignored, and its jurisdiction too extensive to be "too American."

Second, the importance of the SEC in matters affecting corporate social reporting was documented more than 40 years ago (Epstein et al. 1976). Third, Heard and Bolce (1981) recognized the political significance of corporate social reporting in the USA.

Fourth, in his book review Dezalay (1997) commented that the author states that the definition of accounting standards "takes place essentially in the United States." Fifth, Collison et al. (2010) examined Anglo-American capitalism in particular and the potential role of social accounting in Anglo-American capitalism. Sixth Nurnberg (2015) analyzed the changing perceptions of the members of the FASB because the perceptions of the basic objectives of financial statements are largely driven by the SEC and FASB.

[6] I could not find any reference to Islamic principles used in SCE accounting research.

[7] Subject to oversight by the SEC.

Finally, Hines (1991) implicates the FASB in the creation and maintenance of the social world encompassed by capitalism. Parker (1986), too, implicitly recognizes the FASB's involvement in standard setting within social and critical accounting.

> …securing of agreement on a conceptual framework as a basis for social accounting standards might not be as difficult as it would at first appear. Thus while standards setters would still have to contend with the difficult problems of scope and measurement, their task of arriving at a generally accepted conceptual base would appear to be well within the bounds of possibility…and it would be plausible for standards setters to arrive at a conceptual framework that would be reasonably likely to achieve general acceptance (pp. 75, 88)

Thus, the FASB and its oversight agency, the SEC, are seen as the dominant force and principal guardian of the capitalist system which is the focal point of the criticism of SCE accounting research.

6 US Securities Laws and the Financial Accounting Standards Board

6.1 US Securities Laws

SCE accounting researchers, with sparingly few exceptions, have ignored attacking the source of the problem they criticize and want emancipation from. That is, while the criticize capitalism, they essentially ignore the source. Obviously, if capitalism is the acknowledged enemy, then the vanguard of capitalism must take center stage—the FASB. However, the power and authority of the FASB are derived from the US securities laws.

The capitalist system has been enshrined in law. Social and economic class divisions—i.e., those who control economic resources vs. those who do not—have been codified in statutes and enforced by threats of financial penalties and even prison for violating them.

In 1933, the United States Congress enacted the Securities Act of 1933 (15 United States Code §77a et seq). 15 USC §77s states

> The [Securities Exchange] Commission shall have authority from time to time to make, amend, and rescind such rules and regulations as may be necessary to carry out the provisions of this title, including rules and regulations governing registration statements and prospectuses for various classes of securities and issuers, and defining accounting, technical and trade terms used in this title. Among other things, *the Commission shall have authority, for the purposes of this title, to prescribe the form or forms in which required information shall be set forth, the items or details to be shown in the balance sheet and earning statement, and the methods to be followed in the preparation of accounts*, in the appraisal or valuation of assets and liabilities, in the determination of depreciation and depletion, in the differentiation of recurring and nonrecurring income, in the differentiation of investment and operating income…(15 USC §77s(a), emphasis added.)

Furthermore,

> "CONSIDERATIONS.—In developing *any* rules under paragraph (1), the [Securities Exchange] Commission *shall consider* whether the rules will promote investor protection, efficiency, competition, and *capital formation*" (15 U.S. Code 77o(n)(2), emphasis added). (Huber 2016a)

The Securities Exchange Act of 1934 (15 United States Code §78a), the companion of the Securities Act of 1933, created the Securities and Exchange Commission. The SEA states

> …transactions in securities as commonly conducted upon securities exchanges and over-the-counter markets are effected with a national public interest which makes it necessary to provide for regulation and control of such transactions and of practices and matters related thereto, including transactions by officers, directors, and principal security holders, to require appropriate reports, to *remove impediments to and perfect the mechanisms of a national market system for securities* and a national system for the clearance and settlement of securities transactions and the safeguarding of securities and funds related thereto, and *to impose requirements necessary to make such regulation and control reasonably complete and effective*, in order to protect interstate commerce, the national credit, the Federal taxing power, to protect and make more effective the national banking system and Federal Reserve System, and to insure the maintenance of fair and honest markets in such transactions." (15 U.S.C. §78(b), emphasis added). (Huber 2016a)

Both the SA of 1933 and the SEA of 1934 give the SEC the authority to impose civil fines to corporations and directors who violate any law or regulations.

> the Commission may impose a civil penalty on a person if the Commission finds, on the record, after notice and opportunity for hearing, that—(A) such person—(i) is violating or has violated any provision of this title, or any rule or regulation issued under this title; or (ii) is or was a cause of the violation of any provision of this title, or any rule or regulation thereunder; and (B) such penalty is in the public interest (15 USC §77(g)(1).)

However, and more importantly, criminal penalties may be imposed in a federal court for violations of the law and regulations.

> Any person who willfully violates any of the provisions of this title, or the rules and regulations promulgated by the Commission under authority thereof, or any person who willfully, in a registration statement filed under this title, makes any untrue statement of a material fact or omits to state any material fact required to be stated therein or necessary to make the statements therein not misleading, shall upon conviction be fined not more than $10,000 or imprisoned not more than five years, or both (15 USC §77(x).)

From 1934 to 1972, the American Institute of Certified Public Accountants (AICPA), i.e., the profession, was recognized by the SEC as the de facto standard setter. That is, although the SEC had statutory responsibility and authority to set financial accounting and reporting standards, it unofficially delegated that authority to the AICPA (Chatov 1973; Nurnberg 2015)

In 1973, the Financial Accounting Standards Board (FASB), an independent, private sector organization was organized to replace the AICPA as the agent of the SEC for establishing standards of financial reporting that governs the preparation of financial statements issued by nongovernmental entities. Like the AICPA, the FASB was recognized by the SEC as the de facto standard setter. Although the SEC retained its statutory standard-setting authority and could overrule the FASB, it rarely did so.

Beginning with the Sarbanes–Oxley Act of 2002, however, Congress authorized the SEC to explicitly recognize accounting standards established by a private standard-setting body provided it met certain criteria. The only private standard-setting body recognized by the SEC since 2002 is the FASB.[8] (See Huber (2016b) for a discussion of how the SEC's recognition of the FASB was an *ultra vires* act.)

Even prior to the advent of SCE accounting research the SEC was not blind to the relationship of social issues to corporate financial statements. For example, in April, 1975 the SEC began holding hearings on the possibility of requiring disclosures of social matters such as environmental policy and other socially significant matters rather than just financial (Epstein et al. 1976). But as with conflict minerals, the hearings dealt only with disclosure, not with financial statements per se.

Thus, the SEC has the power and authority to prescribe and enforce the form in which the required information must be set forth in the financial statements (i.e., GAAP) under threat of both civil and criminal penalties. Therefore, under the threat of significant financial penalties for companies and company directors, and the risk of prison for company directors, corporations must comply with accounting standards set by the FASB.

6.2 *The Financial Accounting Standards Board*

The Financial Accounting Foundation (FAF) appoints the members of the FASB. The FAF Board of Trustees is made up of between 14 and 18 members consisting of users, preparers, and auditors of financial statements; state and local government officials; academics; and regulators.[9] The FASB consists of seven members only two of whom are currently identified as members of public accounting with the four others consisting of academics (1), users (2), and preparers (1).[10] Thus, again, the profession is the wrong target for SCE accounting research criticism as the profession does not control accounting standards.

The purpose of the FASB is to

> establish and improve standards of financial accounting and reporting that foster financial reporting by nongovernmental entities that provides decision-useful information to investors and other users of financial reports.[11]

[8] The FASB does not have the authority to impose disclosure requirements for items that are not directly related to financial statements. Thus, for example, while the FASB can impose a requirement that corporations that issue publicly traded securities must disclose contingent liabilities, since contingent liabilities directly affect financial statements, it cannot require corporations to disclose transactions in conflict minerals or investments in South Africa.

[9] https://www.accountingfoundation.org/jsp/Foundation/Page/FAFLandingPage&cid=1176164681018.

[10] https://www.fasb.org/facts/index.shtml. There is on vacancy as of this writing.

[11] https://www.fasb.org/facts/index.shtml.

The FASB alone has the power (subject to SEC oversight) to create and modify the manner in which financial statements are reported. The FASB is the only SEC designated accounting standard setter for public companies.[12] "The FASB develops and issues financial accounting standards through a transparent and inclusive process intended to promote financial reporting that provides useful information to investors and others who use financial reports."[13]

The next section discusses the prospects for redemption.

7 Prospects for Redemption

Social, critical, and emancipatory accounting research has failed to achieve its ultimate objective, and if it continues on its current path its objective will in all certainty never be achieved. Why?

If there is an ideological conflict as SCE accounting researchers contend, then in order to be successful in achieving its ultimate objective, SCE accounting research must target the source of the ideologies. It must target the cause, not the symptom.

Brown and Dillard (2013) maintain that critical accountants[14] "seek to pressure decision makers through confrontation and taking the offensive. Their emphasis is on developing dialectical awareness of, and support for, social conflicts and struggles, highlighting accounting's role as an ideological weapon" (Brown and Dillard 2013, p. 12).

What decision-makers? Take the offensive how? Confront them how? With what? Pressure them to do what?

Regardless how these questions are answered, the proposition that "critical accountants" seek to pressure decision-makers through confrontation and taking the offensive is meaningless rhetoric. It misdirects SCE accounting researchers because decision-makers refer to market participants. Decision-makers cannot, and will not, be pressured into making any decision that is not economically and financially advantageous to them. Tactics such as confronting them and pressuring them are futile and explain in part the failure of SCE accounting research to achieve its ultimate objective.

As Catchpowle et al. (2004) and Lehman and Tinker (1987) argue accounting involves the state. Therefore, SCE accounting research must unquestionably involve the state and the state's role in establishing financial accounting reporting standards. And if the state and the agencies authorized and empowered by the state to create financial accounting and reporting standards must be involved, then the FASB must be convinced, not with love, and not with some undefined sense of justice, confrontation, or pressure, but with evidence.

[12] https://www.fasb.org/facts/index.shtml.

[13] https://www.fasb.org/facts/index.shtml.

[14] While there are critical accounting *researchers*, whether there are actually critical *accountants* is debatable.

Parker (1986) comments that social accounting research has quite often been the product of researchers' generalizations or personal assertions but little supporting evidence. The only way for SCE accounting research to redeem itself and begin to achieve the ultimate objective of transforming the social forms associated with capitalism is for SCE accounting researchers to convince with evidence those who establish financial accounting and reporting standards, i.e., the members of the FASB, that financial statements that make visible that which is now hidden by current accounting standards, and that incorporating social costs (and benefits?) into financial statements. Nurnberg (2015) strongly suggests that

> As long as the FASB remains the U.S. standard setter, it is unlikely that legislation or regulation will result in a long lasting consensus on the basic objectives of financial reporting. Legislators and regulatory authorities consider all sorts of economic and social policies issues that are defined away by the FASB as not relevant to the basic objectives of financial reporting (p. 79)

One step in redirecting its efforts into research more relevant to achieving its ultimate objective is to abandon its reliance on philosophers and sociologists that the members of the FASB may not even have heard of, let alone understand. Neither the SEC nor the FASB gives heed to philosophies and sociological theories that undergird much or SCE accounting research. To the extent that standard setters might be aware of SCE accounting research and some of the philosophies and sociological theories relied on by SCE accounting researchers, the reception of SCE accounting research by standard setters amounts to little more than, "That's nice, Johnny. Now, go outside and play. The grown-ups are talking."

Gray et al. (2009) suggest "social accounting may need to hitch Habermas, Gadamer, Taylor, et al. to a more violently liberationist wagon." Such rhetoric is irresponsible. It only serves to underscore the charge that social accounting is Marxist and moves SCE accounting research further away from being accepted by standard setters who are the only ones who matter if the ultimate objective is to be achieved.

It seems clear that the FASB is the proper target in the ideological conflict since the weapons must be evidence, not philosophy and sociology. One can envisage a series of experiments, for example, where subjects are given two identical sets of financial statements except one includes social costs and the subjects are asked to choose which set of financial statements provides better information for making market-based decisions. If the subjects choose the financial statements that include social costs as providing better information for making market-based decisions, such evidence could bolster the argument that financial statements that incorporate social costs are at least worthy of serious consideration. There is nothing in the securities laws or the FASB mission that would prohibit social cost information to be incorporated into financial statements. But it must be based on evidence, not philosophy and sociology.

8 Conclusion

The ultimate objective of SCE accounting research remains elusive.

Sikka and Willmott (1997) observed that “as contemplation and scholarship proceeds, the practices addressed and critiqued by critical accounting academics continue unchecked and unabated” (p. 161). Nothing had changed in the thirty or so years of SCE accounting research prior to Sikka and Willmott’s observation, and nothing has changed in the last two decades. Tilling and Tilt (2004) ask, “Can we show society why critical accounting is important?” To show why critical accounting is important and for SCE accounting research to redeem itself requires first and foremost choosing the right enemy; second, choosing the right battleground; and third, choosing the right weapons. SCE accounting research requires more than just adding to the literature and boilerplate appeals to further research if it is to become relevant and make progress toward achieving its ultimate objective. It demands evidence that financial statements that incorporate social costs is in the best interest of the market and decision-makers. It necessitates research that will convince the FASB to adopt standards of financial reporting to reveal that which is currently hidden and to make visible dimensions of social and economic experience that are currently invisible.

Literature

Allen, B. G. (2014). What’s new about new accounts? Assessing change proposals for social and environmental accounting. *Accounting Forum, 38*(4), 278–287.

American Accounting Association. (1974). Report of the committee on the measurement of social costs. *The Accounting Review, 49*(4), 99–113.

Arnold, P., & Hammond, T. (1994). The role of accounting in ideological conflict: Lessons from the South African divestment movement. *Accounting, Organizations and Society, 19*(2), 111–126.

Beck, C., & Lehman, G. (2014). On Gray, Malpas, and Brennan’s “The role of social accounts: Situating political ideas”. *Accounting Forum, 38*(4), 291–295.

Broadbent, J. (2002). Critical accounting research: A view from England. *Critical Perspectives on Accounting, 13,* 433–449.

Brown, J., & Dillard, J. (2013). Agonizing over engagement: social and environmental accounting and the ‘death of environmentalism’ debates. *Critical Perspectives on Accounting, 24*(1), 1–18.

Carter, C., & Toms, S. (2010). The contours of critical accounting. *Critical Perspectives on Accounting, 21*(3), 171–182.

Catchpowle, L., Cooper, C., & Wright, A. (2004). Capitalism, states and accounting. *Critical Perspectives on Accounting, 15*(8), 1037–1058.

Catchpowle, L., & Smyth, S. (2016). Accounting and social movements: An exploration of critical accounting praxis. *Accounting Forum, 40*(3), 220–234.

Chatov, R. (1973). *The collapse of corporate financial standards regulation: A study of SEC-accountant interaction*. (Unpublished doctoral dissertation). University of California, Berkeley.

Collison, D., Dey, C., Hannah, G., & Stevenson, L. (2010). Anglo-American capitalism: the role and potential role of social accounting. *Accounting, Auditing and Accountability Journal, 23*(8), 956–981.

Cooper, C. (1997). Against postmodernism: class oriented questions for critical accounting. *Critical Perspectives on Accounting, 8*(1–2), 15–41.

Cooper, C., Taylor, P., Smith, N., & Catchpowle, L. (2005). A discussion of the political potential of social accounting. *Critical Perspectives on Accounting, 16*(7), 951–974.

Deegan, C. (2017). Twenty five years of social and environmental accounting research within critical perspectives of accounting: Hits, misses and ways forward. *Critical Perspectives on Accounting, 43,* 65–87.

Dezalay, Y. (1997). Accountants as "new guard dogs" of capitalism: Stereotype or research agenda? *Accounting, Organizations and Society, 22*(8), 825–829.

Dillard, J. (1991). Accounting as a critical social science accounting. *Auditing & Accountability Journal, 4*(1), 8–28.

Epstein, M., Flamholtz, E., & McDonough, J. J. (1976). Corporate social accounting in the United States of America: State of the art and future prospects. *Accounting, Organizations and Society, 1*(1), 23–42.

Gallhofer, S., & Haslam, J. (1991). The aura of accounting in the context of a crisis: Germany and the first world war. *Accounting, Organizations and Society, 16*(5/6), 487–520.

Gallhofer, S., & Haslam, J. (1997). Beyond accounting: The possibilities of accounting and "critical" accounting research. *Critical Perspectives on Accounting, 8*(1–2), 71–95.

Gallhofer, S., & Haslam, J. (2003). *Accounting and emancipation: Some critical interventions*. London: Routledge.

Gallhofer, S., & Haslam, J. (2004). Accounting and liberation theology: Some insights for the project of emancipatory accounting. *Accounting, Auditing & Accountability Journal, 17*(3), 382–407.

Gallhofer, S., & Haslam, J. (2011). Emancipation, the spiritual and accounting. *Critical Perspectives on Accounting, 22,* 500–509.

Gallhofer, S., & Haslam, J. (2018). Some reflections on the construct of emancipatory accounting: Shifting meaning and the possibilities of a new pragmatism. *Critical Perspectives on Accounting* (in press).

Gendron, Y. (2018). On the elusive nature of critical (accounting) research. *Critical Perspectives on Accounting, 50,* 1–21.

Gray, R. (2002). The social accounting project and Accounting, Organizations and Society Privileging engagement, imaginings, new accountings and pragmatism over critique? *Accounting, Organizations and Society, 27,* 687–708.

Gray, R., Brennan, A., & Malpas, J. (2014). New accounts: Towards a reframing of social accounting. *Accounting Forum, 38*(4), 258–273.

Gray, R., Dey, C., Owen, D., Evens, R., & Zadek, S. (1997). Struggling with the praxis of social accounting: stakeholders, accountability, audits and procedures. *Accounting, Auditing and Accountability Journal, 10*(3), 325–364.

Gray, R., Dillard, J., & Spence, C. (2009). Social accounting research as if the world matters. *Public Management Review, 11*(5), 545–573.

Gray, R., & Milne, M. J. (2015). It's not what you do, it's the way that you do it? Of method and madness. *Critical Perspectives on Accounting, 32,* 51–66.

Habermas, J. (1973). *Legitimationsprobleme im Spatkapitalismus*. Berlin: Suhrkamp (T. McCarthy, [Trans.]. [1975]. *Legitimation crisis*. Boston: Beacon Press)

Hamilton, G., & hÓgartaigh, C. Ó. (2009). The third policeman: "The true and fair view," language and the habitus of accounting. *Critical Perspectives on Accounting*, *20*(8), 910–920.

Heard, J. E., & Bolce, W. J. (1981). The political significance of corporate social reporting in the United States of America. *Accounting, Organizations and Society, 6*(3), 247–254.

Hines, R. D. (1991). The FASB's conceptual framework, financial accounting and the maintenance of the social world. *Accounting, Organizations and Society, 16*(4), 313–331.

Huber, W. D. (2015). The research-publication complex and the construct shift in accounting research. *International Journal of Critical Accounting, 7*(1), 1–48.

Huber, W. D. (2016a). The myth of protecting the public interest: The case of the missing mandate in federal securities laws. *Journal of Business & Securities Law, 16*(2), 401–423.

Huber, W. D. (2016b). The SEC's *ultra vires* recognition of the FASB as a standard-setting body. *Richmond Journal of Law & the Public Interest, 19*(2), 120–152.

Jacobs, K. (2011). Enlightenment and emancipation: Reflections for critical accounting research. *Critical Perspectives on Accounting, 22,* 510–515.

Laughlin, R. (1999). Critical accounting: Nature, progress and prognosis. *Accounting, Auditing & Accountability Journal, 12*(1), 73–78.

Lehman, C., & Tinker, T. (1987). The "real" cultural significance of accounts. *Accounting, Organizations and Society, 12*(5), 503–522.

Mathews, M. R. (1997). Twenty-five years of social and environmental accounting research Is there a silver jubilee to celebrate? *Accounting, Auditing & Accountability Journal, 10*(4), 481–531.

McKernan, J. F (2001). *Truth, objectivity and subjectivity in accounting* (Doctoral dissertation). Retrieved from Dissertation Publishing (U139746).

Miller, P. (1990). On the interrelations between accounting and the state. *Accounting, Organizations and Society*, *15*(4), 315–338.

Modell, S. (2017). Critical realist accounting research: In search of its emancipatory potential. *Critical Perspectives on Accounting, 42,* 20–35.

Moerman, L. (2006). People as prophets: Liberation theology as a radical perspective on accounting. *Accounting, Auditing & Accountability Journal, 19*(2), 169–185.

Molisa, P. (2011). A spiritual reflection on emancipation and accounting. *Critical Perspectives on Accounting, 22*(5), 485–491.

Morales, J., & Sponem, S. (2017). You too can have a critical perspective! 25 years of critical perspectives on accounting. *Critical Perspectives on Accounting, 43,* 149–166.

Neimark, M. (1990). The king is dead. Long live the king! *Critical Perspectives on Accounting, 1*(1), 103–114.

Neu, D., Cooper, D., & Everett, J. (2001). Critical accounting interventions. *Critical Perspectives on Accounting, 12*(6), 735–762.

Nurnberg, H. (2015). Changing perceptions of U.S. standard setters concerning the basic objectives of corporate financial reporting. *Accounting Historians Journal*, *42*(1), 61–83.

Owen, D. (2007). Chronicles of wasted time? A personal reflection on the current state of, and future prospects for, social and environmental accounting research. *Accounting, Auditing & Accountability Journal, 21*(2), 240–267.

Parker, L. D. (1986). Polemical themes in social accounting: A scenario for standard setting. *Advances in Public Interest Accounting, 1,* 67–93.

Richardson, A. J. (1987). Accounting as a legitimating institution. *Accounting, Organizations and Society, 12*(4), 341–356.

Richardson, A. J. (2015). Quantitative research and the critical accounting project. *Critical Perspectives on Accounting, 32,* 67–77.

Saravanamuthu, K. (2006). Emancipatory accounting and sustainable development: A Gandhian—Vedic theorization of experimenting with truth. *Sustainable Development, 14,* 234–244.

Shapiro, B. (2009). A comparative analysis of theological and critical perspectives on emancipatory praxis through accounting. *Critical Perspectives on Accounting, 20*(8), 944–955.

Sikka, P., & Willmott, H. (1997). Practising critical accounting. *Critical Perspectives on Accounting, 8*(1/2), 149–165.

Solomon, A (1998). *An investigation into a conceptual framework for corporate environmental reporting* (Doctoral Dissertation). Retrieved from ProQuest Dissertations Publishing (U111812).

Spence, C. (2009). Social accounting's emancipatory potential: A Gramscian critique. *Critical Perspectives on Accounting, 20*(2), 205–227.

Tenant, R. (2017). *The expansion of financial regulation to include humanitarian issues: An examination of the development of conflict mineral reporting requirements using actor-network theory* (Doctoral dissertation). Retrieved from Electronic Theses and Dissertations (5359).

Thomson, I. (2014). Responsible social accounting communities, symbolic activism and the reframing of social accounting. A commentary on new accounts: Towards a reframing of social accounting. *Accounting Forum*, *38*(4), 274–277.

Tilling, M. V., & Tilt, A. (2004). Alas poor critical accounting, we knew him, Karl. *Critical Perspectives on Accounting, 15*(4/5), 557–563.

Tinker, T. (Ed.). (1984). *Social accounting for corporations: Private enterprise versus the public interest*. New York: Markus Wiener.

Tinker, T. (1985). *Paper prophets: A social critique of accounting*. London: Holt, Rinehart and Winston.

Tinker, T., Lehman, D., & Neimark, M. (1988). Marginalizing the public interest: A critical look at recent social accounting history. In K. Ferris (Ed.), *Behavioral accounting research* (pp. 117–143). New York: Century VII Publishing Co.

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Empirical Analysis of CSR Reports

Are HEIs' Intellectual Capital Disclosures Consistent with the Sustainability Integrated Reporting Trend?

Adriana Tiron-Tudor, Tudor Oprisor and Gianluca Zanellato

1 Introduction

The role of higher education institutions (HEIs) in the development of the social and economic environments is considered to be a critical one, is an essential source of knowledge and innovation (Jongbloed et al. 2008) developed through its intellectual capital (IC).

In a contemporary organization, that activate in nowadays knowledge-based society, IC plays a vital role (Low et al. 2015). Previous literature highlights the connection between different sectors development and the amount of IC disclosed (Abeysekera and Guthrie 2005; Sujan and Abeysekera 2007). The competitive environment can be an explanation (Low et al. 2015). Through the NPM theories, the transformation of public institutions into entrepreneurial ones, support the idea that disclosure of intangibles are necessary for making universities more flexible, competitive, and connected with the real societies evolution (Sanchez and Elena 2006).

Based on this approach, the primary objective of this paper is to investigate the IC disclosure of HEIs, concerning their sustainable development through the lens of the integrated reporting elements. In this vein, different scholars (Low et al. 2015; Sangiorgi and Siboni 2017) have recently carried out empirical research on this topic, even though the IC reporting is not mandatory. They usually examined the type and the amount of the IC disclosure provided by universities through different accounting sources (websites, annual reports, performance plans, and social reports).

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Moreover, other authors (Ramirez and Gordillo 2014; Ramirez et al. 2016) have directly investigated the IC elements, most demanded by a university stakeholder, as well as the adequacy of the current reporting tools in satisfying their information needs about IC.

In the last decade, HEIs started to adapt their disclosure to the users' needs by adding more and more elements concerning human, intellectual, and social aspects of third activities. All of these elements, together with other like financial, manufactured, and environment, are considering as components of integrated thinking that should be revealed to the interested parties by producing an integrated report (IR).

Recently developed and yet very discussed by scholars, IR has been attracting the interests of different organizations as it aims to "provide insight about the resources and relationships used and affected by an organization—these are collectively referred as 'the capitals' (International Integrated Reporting Council (IIRC) 2013, p. 4). To this extent, many scholars outlined the opportunity given by the International Integrated Reporting Framework (IIRF) to disclose relevant IC information in their IR (Abeysekera 2013; Beattie and Smith 2013; Bisogno et al. 2018). In particular, Melloni (2015; p. 664) outlines that the presence of IC 'is at the core IR.' With other words, the IR can represent a useful instrument to disclose IC (Nielsen et al. 2017), an essential element of value creation (Santis et al. 2019).

This paper makes an original approach of the top-ranked public HEIs' IC disclosure, using content analysis (Boubaker al. 2011; Gallego-Alvarez et al. 2011) with references to the information and the content provided by their websites from the IC perspective. The IC checklist was based on Sanchez et al. (2006), Schneider and Samkin (2008), Yi and Davey (2010) and Low et al. (2015) research.

From the empirical perspective, we successfully combine the qualitative analysis performed for developing the IC disclosure index based on an existing theoretical framework, to which we add elements from a new reporting trend—namely IR. The validation of the obtained results is a point of reference in approaching the HEIs IC disclosure in an integrated manner. This study addresses a broad range of users: to theorists who wish to understand the link between HEIs and IC, IC and his influence on research and society's needs. To practitioners who have the chance to familiarise themselves with the implications of the topic analyzed through the eyes of a specialist. To professional bodies/legislators/societies as a whole, who will have a concrete and precise basis for the future analysis oriented to the acceptance and inclusion of these new approaches in regulations or specific actions.

Our research is timely and provides answers to current questions on the impact of HEIs on local, national, and regional environments. Consequently, we argue that in today's context of higher education without borders and the recently created global academic market, it is crucial to understand how HEIs' contributions to society are regarded the IC in an integrated manner.

Consequently, we frame our research endeavors to provide an answer to the following research question:

To what extent is intellectual capital (IC) considered a dynamic disclosure proxy in the case of HEIs through the lenses of both an existing theoretical model, as well as new reporting trends?

In this sense, first, we provide the theoretical background for the HEIs environment evolution in connection with HEIs' scope, from the IC perspective, highlighting the latest scientific literature' approaches regarding the IC disclosure. Then, we develop our IC university disclosure framework based on specific literature on IC and IR-related capitals, underpinning them on the theoretical and conceptual delineations. Afterwards, we present the methodology framework focused firstly on presenting the research design (methods used: sampling, variable measurement, disclosure index development), followed by an econometric analysis performed for developing the proposed model. Finally, we provide our discussions and conclusions highlighting that there is a strong connection between the IC disclosure and IR-related capitals disclosure, knowing that HEIs are the promoters of innovations and by this can contribute to a durable economic environment. Based on the top-ranked public HEIs' position, we identify and discuss the factors influencing the IC disclosures based on our framework, which can offer the perspective of implementing IR in HEIs, having the integrated thinking approach as a focus point.

2 Literature Review

2.1 An Emphasis on the Role of Universities

Three core activities define HEIs: teaching, research, and interaction with the socio-economic environment. In today's competitive academic environment, HEIs have naturally built their mission statements and their strategies around one or more of the activities mentioned above (Urdari et al. 2017), depending on which of these areas are more focused. Nevertheless, nowadays, the most competitive ones include all three activities in a balanced manner.

If the first two activities are not so new, the third one even is also not new, it started just in the second part of the twentieth century (Laredo 2007), to be debated in the literature. At that time, governments realized that collaboration between industry and HEIs would allow companies to access to the latest research results, as well as infrastructure and human resources (Urdari et al. 2017). So, the 'third mission' of HEIs includes the transfer of knowledge, innovation, and entrepreneurship (Montesinos et al. 2008).

Theoretically, all three of these missions have become equally important and distinctive on their own (Neave 2000), but some researchers claim that some of these goals matter more than others (TerBogt and Scapens 2012) depend on the HEIs goals.

The current literature emphasizes the knowledge transfer between HEIs and government and industries under the so-called triple-helix relationship (Leydesdorff 2018). In this relationship, HEIs' should be able to meet the needs of regional and national economy, developing high-level skills for work, play a more active role in job creation and the processes of welfare and prosperity of its context; concrete results to the region so it can be seen as a useful entity" (Camargo 2010, p. 5).

The development of a knowledge economy along with the growing recognition of universities as the drivers of progress, due to their creative potential available, has led to increasing awareness of their role as producers of knowledge and innovation for a sustainable economy.

Nowadays, the fundamental task of universities focused on the aim of our paper is to generate knowledge through education, development of research, and interaction with the local economic and social environment, and to transfer it to the industry. In this way, the HEIs IC, alongside other local and regional players, contributes to regional economic development. The knowledge transfer could extend the universities' collaboration opportunities with the industry by exploring the human resources, commercializing innovative ideas, intellectual property (e.g., inventions, patenting, and licensing) spin-off organizations, business incubators or accelerators and new contracts with companies and individuals. Taking into consideration all the three components of IC, human capital, relational capital, and structural capital (Dumay 2016), in the context described below, allow us to consider that for HEIs, IC is one of the most valuable resources even its intangible nature.

Although universities are defined as a significant research area and as critical players in the knowledge-based society, some authors (Secundo et al. 2015; Guthrie and Dumay 2015) perceive the public sector HEIs from a holistic point of view as one of the least addressed areas of IC research. Moreover, literature recognizes that the public sector (including public HEIs) are an ideal epicenter for the request of the IC concept because they make rigorous use of intangible assets such as human resources, skills, abilities, and knowledge (Cohen and Vlismas 2013; Manes Rossi et al. 2018).

2.2 Highlighting IC in Universities

IC appears as an intangible potential of an organization, including knowledge management that has developed as a practical response to the need to identify and benefit from the most efficient methods of using knowledge. IC can be defined as "the collection of intangibles which allows an organization to transfer a collection of material, financial and human resources into a system capable of creating value for the stakeholders" (EC 2006a, p. 4).

Thus, in the educational environment, IC is both the result of research and development activities and the driver that leads to the creation of higher value from those activities. More specifically, universities fundamentally create knowledge through their three missions: teaching (students trained and educational relationships with their stakeholders); scientific and technical researches (the results of an investigation, publications, patents, trademarks, scientific discoveries), and entrepreneurial activities (technology transfer, licensing, the spin-off).

Thus, in the university context, the IC "is a term used to cover all the institution's non-tangible or non-physical assets, including processes, capacity for innovation, patents, the tacit knowledge of its members and their abilities, talents and skills, the recognition of society, its network of collaborators and contacts" (Ramirez and Gordillo 2014; Ramirez et al. 2016).

The universities' IC components are usually grouped into the following three main categories (Leitner 2004; Ramirez and Gordillo 2014; Ramirez et al. 2016; Secundo et al. 2017) that correspond to the missions of HEI inside (the first two) and outside (the third one) academic environment. (Laredo 2007; Molas-Gallart and Castro-Martínez 2007, Manes Rossi et al. 2018):

(1) *Human Capital* is composed by both the explicit and tacit knowledge of the university staff (teachers, researchers, Ph.D. students, managers, administration, and service staff), developed through formal and non-formal education and learning processes embedded in their activities. It is also identifiable in the knowledge that stands behind their expertness, which individuals take with them when they leave the institution, such as the expertise, knowledge and experience of researchers, professors, administrative and technical staff, as well as Ph.D. and students' competencies.

(2) *Internal Capital* is referred to the explicit knowledge related to the internal processes of diffusion, production, communication and management of a university's education and research activities. It embeds the patents rights, publications, procedures, research projects, research infrastructures, university culture, and management outline. It is also recognizable in the knowledge that remains within the institution at the end of the working day.

(3) *External Capital* is represented by the complex bundle of economic, political, and institutional relations developed and consolidated to create value between the university and its wide range of partners. It mainly comprises quality standards, students (database, satisfaction, and international mobility programs), companies, non-profit organizations, local and regional governments, research centers, consortia and technological clusters, citizens community (postgraduation, higher education and specialization programs) and society in general. It also includes the other's perception of the university: its image, appeal, reliability, and so on.

In the last decades, universities have been affected by several economic, political, and social changes (NPM, Bologna process, Lisbon strategy, emerging of the third mission) that have contributed to change their role, structure, mission, and organizational models by reinventing the whole higher education system (Altbach 2006; Brusca et al. 2019). NPM movement has fostered the "marketization" and "corporatization" of universities by placing a strong emphasis on efficiency, effectiveness, and performance measurement systems (Parker 2011). Furthermore, the Bologna Process has imposed the creation of a global market, in which universities compete to reach the best results in terms of teaching and research and attract more funds but also to attract more students and well-known researchers (Sangiorgi and Siboni 2017). Moreover, universities are key factors in the pursuit of the European Agenda, Lisbon Strategy, and Europe 2020 (Ramirez et al. 2016). The "Europe 2020" strategy recognized explicitly the central role of universities in helping Europe to become a smarter, greener, and more inclusive economy by 2020 (EC 2006b). Moreover, universities have a pivotal role in regional development (Secundo et al. 2015). These changes, aimed at increasing the autonomy, comparability, competitiveness, efficiency, and effectiveness of universities, have definitively contributed to emphasize the overall importance of IC in this sector. In addition, the need for new management and reporting systems, including IC components, as argued above, represents the "heart beating" of this type of public organizations. These are meant to enhance institutional accountability and transparency toward stakeholders such as citizens, taxpayers, students, research centers or governments, as well as to improve their decision-making process.

Nevertheless, despite the awareness of the essential role played by the IC in universities and the overwhelming need to develop specific IC reports, no country (except Austria) has such an obligation. Moreover, according to prior literature, there are insufficient instruments to manage and report the IC in universities (Leitner 2004; Sangiorgi and Siboni 2017).

As a consequence, regulators, accounting profession bodies, observatories, and accounting scholars have developed proper guidelines and frameworks to support the correct identification of the IC components and stimulate the diffusion of common practices of managing and reporting IC within universities (Ramirez et al. 2016, Sangiorgi and Siboni 2017). In particular, the empirical studies on intellectual capital—especially on its disclosure—are still limited and offer considerable room for the future investigations.

Society demands that entities should be accountable toward stakeholders and be transparent about their activities (Eccles and Krzus 2010; Abeysekera 2013; Veltri and Silvestri 2015). The IC disclosure, defined as the pillar of public accountability and sustainability (Sonnier et al. 2007; Low et al. 2015), would have a favorable impact among public stakeholders (Sonnier et al. 2007) at least in the following aspects. Firstly, the management process would control the needs and opportunities for developing their human capital with impact on high-quality activities' results. Secondly, it would increase (Low et al. 2015) the attractiveness of individuals with higher skills and experiences for an alliance with the public interest (e.g., private–public partnership, common research objectives). Thirdly, it would support a modern approach to global essential development topics as the most significant challenge to universities in the twenty-first century.

IC literature recognizes several benefits related to the IC disclosure, which are very relevant for its connection with the whole economy. For example, it helps to create a performance-oriented culture, to increase the learning and innovation or to improve collaborative activities and knowledge, all these based on the better evaluation of such secret or unknown assets (Dumay 2016). As a consequence of the previous ideas, our study creates an IC disclosure model based on Sanchez et al. (2006), Schneider and Samkin (2008), Yi and Davey (2010), embedded in the framework devised by Low et al. (2015).

2.3 Connecting the Dots Between IC and IR

In theory and practice, there is a huge variety of frameworks and guidelines for the external reporting of IC (Abhayawansa 2014), none of them being an official one. Guthrie and Petty (2000) IC framework is considered as one of the many frameworks to report IC, which, is also included in the category frameworks that comprehensively explain firm value creation processes and highlight corporate objectives and business strategies (International Integrated Reporting Council (IIRC) 2013). For this reason IR seems a relevant vehicle to disclose IC elements. As the IIRC in its framework, embraces the disclosure of IC aspects connected to the financial information relevant to outline the value creation potential of the organization (IIRC 2013). According to Dumay (2016), removing the physical, financial, manufactured, and natural capitals from the IIRF, the remaining capital is in line with the three elements of IC. In this vein, scholars have seen in the development of the IIRF in 2013 "an opportunity for IC reporting to reinvent itself and to facilitate a more balanced approach to reporting" (Abhayawansa 2014; p. 137). While, long before the development of the IIRF, Alwert et al. (2009) proposed, for efficient communication with the capital market, to combine the annual report with the IC report.

Many IC practitioners and researchers also see IR as one way to advance IC reporting (Dumay 2016; Feng et al. 2017). As emphasized in the IR framework, the IC is composed of three key capitals: human capital, relational capital, and structural capital (Dumay 2016). IR and IC also share a common focus on value creation (Dumay 2016). IR's purpose is to connect a corporation's strategy, governance, business model, and capitals and communicate value creation to stakeholders (Feng et al. 2017). IC reporting also focuses on value creation, albeit within a more limited domain of intangible resources. Consequently, IR's success or failure has implications for IC research, especially for third-stage research into how concrete IC reporting strategies or processes impact organizations (Dumay 2013; Dumay et al. 2016).

Dumay et al. (2016) identify key parallels between IR and IC research concerning different research stages. If in the case of IC research, there are four stages, the IR research currently occupies the middle ground between the second (assessing impact) and third (critical and performative) stage academic research.

From a theoretical point of view, this work contributes to prior research on how to enact IC concepts. More precisely, considering IR as a form of IC reporting, the study contributes to what Guthrie et al. (2012) consider third-stage IC research, which aims to develop "a critical and performance analysis of IC" practices in action.

3 Theoretical Model

Following previous IC studies developed by several scholars (Guthrie et al. 2004; Steenkamp and Northcott 2007; Dumay and Cai 2015), the improvement of reliability and comparability of research outputs require the selection of an IC theoretical framework, thoroughly grounded in the literature. Thus, we ground our research on the theoretical framework developed by Low et al. (2015), adapted from Yi and Davey (2010), Schneider and Samkin (2008) and Sanchez et al. (2006). In a nutshell, Low et al. (2015) investigate—using a qualitative approach—the level of voluntary IC reporting in New Zealand, Australia and United Kingdom universities, on a template of 19 disclosure items divided between the three main categories (as we can notice in Table 1).

Additionally, considering suggestions from other scholars (Guthrie et al. 2006; Steenkamp and Northcott 2007; Dumay and Cai 2015), the accuracy of the analysis is prone to improvement, as the list of disclosure items proposed by Low et al. (2015) was subject to modifications to adapt the framework to the peculiarities of the context and data sources analyzed. More specifically, in the "Internal Capital" category, we acknowledge a proposal to split "Information Systems/networking system" in two subsequent items, namely: "Infrastructural facilities" (which includes the essential equipment like classes, laboratories, libraries) and "Infrastructural ICT," (including technologies: database, connections, new technologies, and so on).

In the "External Capital" category, scholars propose three new items to be added, respectively: "Mobility programs for students" (such as: Erasmus programs); "Post-graduation, high education and specialization programs" (masters, training, specializations for students who have finished their studies), and "GSR" (for the universities that prepare the Global Social Report), in which information about IC are often included.

Also, the "Human Capital" category is extended as a result of further studies with five new items. "Mobility programs for researchers and professors" is one of the added disclosure items, alongside "Ph.D. Student information" (information about current courses, programs, funds, and so on). Moreover, a new disclosure items target the "Database of employee as professors and researchers" (more specifically, information about the number of full professors, associate professors, and researchers), as well as the "Database of staff and administration" (information about the number of staff and administrative employees divided by categories and directors). Last, but not least, IC disclosure is supposed to include "Recruitment plans of new employees/Turnover" (namely, policies about turnover and recruitment of new employees). The corresponding studies offer measurement tools (metrics and markers) in this sense, as the structured framework is subject to ongoing consolidation.

Moreover, to the model derived from Low et al. (2015), improved through the input and insights of other scholars, the literature tackles other disclosure items connected to IC, such as academic research. This item is generally defined only through the number of articles published and the number of citations per article, not taking into account the social and economic utilities of the research (Djelic 2008; Beyer

Table 1 Original IC theoretical framework proposed by Low et al. (2015)

IC category	Description
(I) *Internal capital*	
1. Intellectual property	All copyright (in relation to phonograms and broadcasts), patent rights, plant varieties, registered and unregistered trademarks, and publications (journal, books, e-journals, chapters, etc.) held by sample university
2. University culture	Comprising the vision, attitudes, experiences, beliefs, and values of a university
3. Management philosophy	Information referred to in mission statement
4. Management processes	Information relating to the process in the university
5. Information systems	Information on the development, use of networking system application, and influence of systems
6. Research projects	Research projects conducted by a university
7. Financial relations	Information referring to the relationships between the university and its financial supporters
(II) *External capital*	
1. Brands	Information on brands associated with the university
2. Students/student satisfaction	Information relating to students and their information relating to students and their satisfaction about learning
3. Business/university partnership	All the activities and collaboration between universities and other organizations (firms, non-profit organizations, public authorities, local government, and society as a whole)
4. Student database	Database of all students
5. Quality standards	All the activities and collaboration or partnership between universities and other organizations (Other universities, non-profit organizations, local governments, firms, and so on)
(III) *Human capital*	
1. Work-related knowledge/know-how	Individual competencies of researchers, knowledge or skill obtained from the job or training
2. Employees	Information regarding staff, researchers, lecturers, Ph.D. students, and administrative personnel
3. Employee's experience in profession	Information referring to employees' international or national experiences in their profession
4. Employee qualification	Information relating to employees' qualifications
5. Employee compensation or benefit	Information referring to welfare or other benefits for employees and Ph.D. students provided by a university
6. Cultural diversity	Demographic information of employees

Source Low et al. (2015)

et al. 2010; Willmott 2011; TerBogt and Scapens 2012; Gendron 2015). Moreover, Montesinos et al. (2008) emphasize that the innovation indicators can themselves comprise new services, products, or processes that are transferred to society by HEIs' research groups. These indicators can represent the number of invention disclosures (Ken et al. 2009), the number of patents filed, or other forms of intellectual property protection (Zhu et al. 2010). This knowledge transfer generates income for HEIs and is closely related to the HEI's quality, as perceived by its stakeholders (Cohn et al. 1989). However, this type of indicator should show up in HEI financials, which institutions are hesitant to release; as a result, this data is hard to collect.

However, IC disclosure is not approached solely in the context of traditional reporting, but also the context of new reporting trends. Within the integrated reporting (IR) system, we note that the model comprising of the six capitals is nothing more than a reshaping of the classic production factors from an economic entity (more clearly identified and with higher specificity). The model does not omit resources in the context of the organization's environment, but it divides them more analytically. Hence, we find that the six capitals (among which we also find the human, intellectual and social and relationship capitals) are assumedly anchored in the existing disclosure frame, with a pool of data that is readily used within the reporting set.

Evidence from the literature shows that the six capitals have gained much attention, in the current six-tier structure (Coulson et al. 2015), questioning the structure and the applicability of the concept. Furthermore, Alexander et al. (2015) investigate whether the capitals are taken in high regard by reporting entities and develop a 12-point matrix to assess the disclosure of the use and effects on the six capitals, using a case study approach. Results show that even though disclosure does occur for most of the elements, each entity perceives the capitals in its way and do not have similar reporting patterns.

The IR conceptual framework (International Integrated Reporting Council (IIRC) 2013) offers tentative definitions and conceptual extensions for the three capitals which encompass IC (namely, human, intellectual, and social and relationship). The conceptual delineations (as we can observe in Table 2) are derived from the mainstream literature and encompass the well-known sense of each concept.

For instance, we can observe that human capital exhibits the key conceptual characteristics connected to the intrinsic traits of the individuals—as parts of the organization. In contrast, intellectual capital (as a standalone concept) focuses on a multifaceted extension of intellectual property, as well as the so-called organizational capital.

Having analyzed and compacted the IC theoretical framework based on Low et al. (2015)—with further additions from the other scholars—we cross-check the elements identified with the ones from the IR conceptual framework and background paper (as presented in Fig. 1). We find that there is—to some extent—a conceptual overlapping (mainly if we cross the internal capital from the mainstream IC layer with the intellectual capital from IR, concerning patents, copyrights or some instances of organizational capital). However, to a great extent, the IR framework adds new elements to the existing IC theoretical framework. Thus, given the conceptual matching observed in Fig. 1, we construct a three-layer disclosure checklist by compacting

Table 2 Markers concerning capitals drawn from the IR conceptual framework

Capital	Conceptual extension (according to the IR framework)	Marker/metric (KPIs)
Human	People's competencies, capabilities and experience, and their motivations to innovate, including their: • alignment with and support for an organization's governance framework, risk management approach, and ethical values • ability to understand, develop, and implement an organization's strategy • loyalties and motivations for improving processes, goods and services, including their ability to lead, manage, and collaborate	• Number of employees • Diversity • Total investment in training • Employees in corporate e-learning • Average age • Average training days per employee • Employee survey results • Injuries per million working hours • Rate of absenteeism • Severance rate • Minimum wage ratio
Social and relationship	The institutions and the relationships within and between communities, groups of stakeholders and other networks, and the ability to share information to enhance individual and collective well-being. Social and relationship capital includes: • shared norms, and common values and behaviors • key stakeholder relationships, and the trust and willingness to engage that an organization has developed and strives to build and protect with external stakeholders • intangibles associated with the brand and reputation that an organization has developed • an organization's social license to operate	• "Great place to work" ranking • Number of volunteers • Claims/lawsuits • Involvement in social actions • Involvement in cultural projects • Customer satisfaction index • Provision for social projects • "Social investment" (money spent on philanthropy)
Intellectual	Organizational, knowledge-based intangibles, including: • intellectual property, such as patents, copyrights, software, rights, and licenses • "organizational capital" such as tacit knowledge, systems, procedures, and protocols	• Number of patent applications filed • Money spent on R&D • Number of tests with new technology • Brand awareness • Other elements (non-exclusive): – number of new products developed – expenditure on organizational change/process development – expenditure on software development for internal systems – sales generated by R&D-derived products

Source International Integrated Reporting Council (IIRC) (2013), ACCA and NBA (2013)

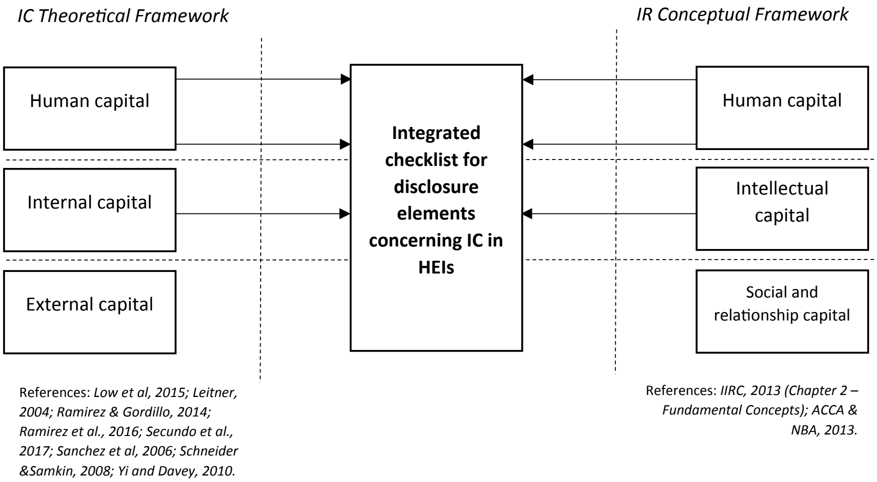
IC Theoretical Framework
IR Conceptual Framework
Human capital
Internal capital
External capital
Integrated checklist for disclosure elements concerning IC in HEIs
Human capital
Intellectual capital
Social and relationship capital
References: Low et al, 2015; Leitner, 2004; Ramirez & Gordillo, 2014; Ramirez et al., 2016; Secundo et al., 2017; Sanchez et al, 2006; Schneider &Samkin, 2008; Yi and Davey, 2010.
References: IIRC, 2013 (Chapter 2 – Fundamental Concepts); ACCA & NBA, 2013.

Fig. 1 Theoretical and conceptual grounds for the disclosure checklist

elements from both frameworks, ensuring redundancy minimization (by singling matching elements) and complementarity on each layer from both frameworks. The full disclosure checklist is available in Appendix.

4 Research Design

4.1 Sample Selection

To fulfill our research objective, we conduct the testing of our index on a sample of public universities. We select this target group with the justification that higher education and research institutions can unfold a clear distinction of their range of capitals and are prone to exhibit higher disclosure levels as their purpose is to attract students, academics, and funding agencies. In this sense, we find that bringing IR on the "turf" of higher education has some initial endeavors, using a case study approach (Veltri and Silvestri 2015).

A recent study marks the strategic focus of driving higher education institutions from the UK toward IR (BUFDG 2016). Such shift toward IR can be considered as a landmark on the path of IR implementation in universities and points out how this new reporting system would contribute to a "better storytelling." Also, it places a great emphasis on the transition from a historical perspective to future orientation and reveals the importance of principles, content elements, and the intelligibility of such a report.

Globalization has inferred a significant impact within the higher education field as interested parties acquired a more extensive range of choices (in comparison with past periods) in terms of studying, teaching, research, and funding opportunities. An informed decision requires stakeholders to gather information about the nature and the quality of the institutional and program settings (Williams and Van Dyke 2008).

In this respect, we note that the status quo has shifted and generated a demand for international rankings (also derived from stakeholders, as students, employers, supranational institutions, scholars, funding and governmental agencies are involved in the ranking process of universities) (Williams 2008).

International university rankings have become a mechanism that reflects the reality of higher education (Wedlin 2006). They play an active role in defining the academic environment, and the performance measurement of HEIs at a global level and they also play a decisive role in forming a global market for higher education (Marginson 2007). Although the use of these rankings has created many controversies (Bador and Lafouge 2005), they are nonetheless used as a benchmark for the quality of higher education.

Consequently, we argue that in today's context of higher education without borders and the recently created global academic market, it is crucial to understand how HEIs' contributions to society are regarded by external evaluation systems such as international university rankings. In this sense, IC is one of the most relevant outputs of HEIs, being subject to measurement within the international ranking systems.

We find multiple ranking systems which are employed in practice, but three of them are the most emphatic, namely: Academic Ranking of World Universities—abbreviated ARWU (developed by The Center for World-Class Universities of Shanghai Jiao Tong University); Times Higher Education Ranking (THE); QS World University Ranking System. The THE and QS systems were formerly components of the same system, but they were split as the managing organizations winded up to a conceptual divergence.

Even if all the mentioned systems are considered state of the art, none of them is entirely perfect as we have an ongoing debate over which one is considered better in the literature and practice (Marginson 2014; Williams 2008). Analytically, each one of the three systems has received criticism (Marginson 2007) or variation proposals and, ultimately, the stakeholders' choice of ranking will be based on which criteria suit their needs (either reputational or performance-based).

However, recent evidence shows that the ARWU Shanghai ranking has gained more focus in terms of methodological analysis (Docampo and Cram 2015) and it is used in other analytical studies (such as Jabnoun 2009) as a reference for university classification. According to Marginson (2007), the Shanghai index "is more soundly based than that of the THE system, for it measures only real outputs and not reputation, its methods are transparent, and it creates a positive relationship between improved research performance relative to others and a higher ranking." In other words, the methodology used for scoring and ranking universities in the ARWU Shanghai system (based on an award factor system) is considered more performance-oriented than the methodologies used by the THE and QS systems, which are relying on surveys and reputational measures, thus being more sensitive and prone to inconsistencies.

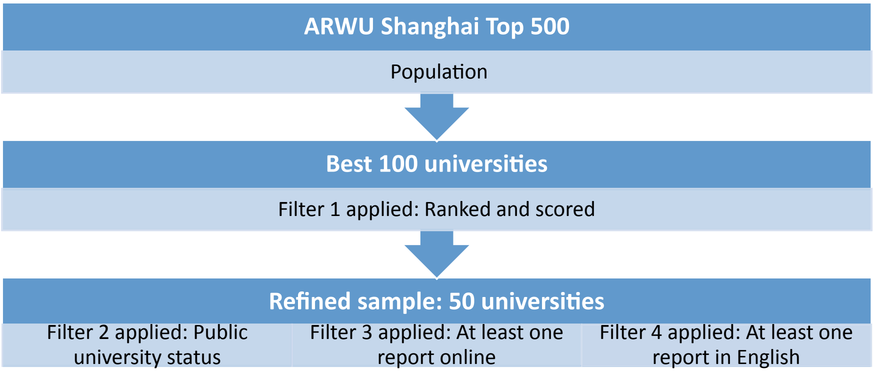
ARWU Shanghai Top 500
Population
Best 100 universities
Filter 1 applied: Ranked and scored
Refined sample: 50 universities
Filter 2 applied: Public university status
Filter 3 applied: At least one report online
Filter 4 applied: At least one report in English

Fig. 2 Sample refinement process

Within our study, we base our selection on the ARWU Shanghai ranking (as a reference for universities' inclusion in the sample) mainly based on the outlined preference from the literature. Also, the fact that its performance-oriented approach (with a higher level of objectivity in comparison with THE and QS) aligns the reporting entities to the IR model. Furthermore, within the ARWU ranking, we find a high number of native English-speaking reporting entities, which would allow us to analyze the reports with a higher level of understanding (regarding the disclosed information).

In terms of sample refinement, as graphically presented within Fig. 2, we consider our population as the entire ARWU Shanghai Top 500. From this figure of **500 top universities**, we applied several subsequent filters. First, from the first 500 universities, we considered only the ones which are ranked and scored (namely, the **first 100 universities** from the top), in order to have an objective measurement of their prestige. Afterwards, to meet the purpose of our study, we narrow down the number of universities by applying several consecutive filters. From the top 100, we focus on public universities, as they have a myriad of interactions with a large number of stakeholders, as well as a more positive accountability trait (as they are subject to public funding), which is prone to be discharged by an enhanced level of transparency. The last two filters applied simultaneously are the publication of at least one annual report online (in an accessible format) and the issuance of at least one report in English (to have a proper understanding of the contents and accurately encode information in our DI). Thus, we remain with a final refined sample of **50 public universities**.

4.2 Methodology

In recent years, Guthrie et al. (2004, p. 287) referred to content analysis as a useful method to inquire into IC reporting state, "As a technique for gathering data, it involves codifying qualitative and quantitative information into pre-defined categories in order to derive patterns in the presentation and reporting of information. Content analysis (CA) seeks to analyze published information systematically, objectively and reliably". Thus, considering the specific peculiarities, the content analysis has been considered as the most suitable research method in order to carry out the empirical research based on the investigation of a different data source as annual reports and websites in order to find IC information.

According to McMillan (2000), the content analysis advantages could be extended equally to the Web content analysis. More specifically, by considering the IC disclosure research field, this method seemed to be particularly suitable. Indeed, the structured literature review on IC disclosure studies conducted by Cuozzo et al. (2017) has revealed that the content analysis is the most commonly utilized research method by confirming a data already highlighted by other authors (Dumay 2014; Dumay and Guthrie 2017). Despite the drawbacks related to the subjectivity and the possible absence of comparability and reliability (Dumai and Cai 2014, 2015), the content analysis is considered as an accessible and empirically valid research method in this field (Guthrie et al. 2004; Goebel 2015; Low et al. 2015).

According to Guthrie (2014), "disclosure studies and the use of content analysis is a legitimate method of collecting data. They make possible the understanding of certain research issues in the IC field, in ways that other methods cannot." Furthermore, this method has several advantages: is not overly time-consuming; is less costly than other methods, and is mainly a deskbound activity with immediate access to data source and which can be applied to different geographical settings, organizational form, and type of documents (Guthrie 2014; Cuozzo et al. 2017; Dumay and Guthrie 2017). Conversely, Steenkamp and Northcott (2007, p. 12) "two generic approaches to content analysis can be identified: 'form oriented' (objective) analysis, which involves the routine counting of words, concepts or themes; and 'meaning oriented' (subjective) analysis, which focuses on inferring the underlying meanings present in the texts being investigated." By considering the necessity to investigate a social phenomenon, particularly the subjective and abstract nature as IC, (Low et al. 2015, p. 784), which is not explicitly designed to convey IC information in data sources (Dumay and Tull 2007), it was fundamental to adopt an interpretative approach by analyzing the specific meaning of sentences in relation to the context, the discourse or the purpose. In this sense, it was possible to draw the specific inferences IC-based from the data sources analyzed by avoiding the risk of utilizing simple words, concept, or themes which were not linked to the phenomenon examined (Steenkamp and Northcott 2007). Moreover, a correct content analysis process involves different phases: (1) the selection of a theoretical framework employed to classify information and derive the items list; (2) the definition of the unit of analysis; (3) the definition of rules for the coding process; and (4) the assessment of the level of reliability achieved.

To measure the amount of information presented in the reporting sets, we utilize a disclosure index. This research tool embeds a series of pre-selected items which provide an assessment of the level of disclosure (when scored) in the specific context for which the index was designed (Coy 1995; cited by Guthrie and Abeysekera 2006).

The disclosure index has extensive use in the literature, being to measure the extent, but not necessarily the quality of the disclosure (see Marston and Shrives 1991).

Our construct validity is enabled by other studies which use similar research techniques, employing the lens of new reporting trends, and assessing disclosure levels using specific markers. In this sense, we find that capital disclosure caught researchers' attention, with content analysis employed and disclosure indices constructed, and calculated by cross-matching the items of the drafted checklists with actual disclosure markings from official reports of different types of organizations (Williams 2001; Guthrie and Abeysekera 2006), hence determining the aggregate disclosure level for each component.

Moreover, this research approach was employed by Ştefănescu et al. (2016) to develop as an assessment tool for transparency in the case of public sector entities. The authors leave from the prerequisite stating that integrated reporting could represent an adequate frame for this transparency assessment process. The critical difference between this study and the current research is that it uses both a quantitative and a qualitative assessments (in terms of disclosure components), whereas our study focuses mainly on a quantitative intake. Also, when drafting the architecture of the index, Ştefănescu et al. (2016) use a mix of references for disclosure proxies and markers (from GRI, IIRC and the literature). In our own index architecture, the main focus is placed on the IC theoretical framework and the IR conceptual framework, with precise emphasis on the complementarity between the two, as well as the construction of an integrated checklist (drawing markers and items from both sources to comprise a mixed measurement tool for IC disclosure in current reporting set).

Hence, outlining the architecture of our aggregate disclosure index, we emphasize sub-index structures, with three significant layers, based on the layers of IC matched between the frameworks: human capital (existing in both outlets), intellectual capital (in connection to internal capital from the IC literature), and social and relationship capital (in connection to external capital from the IC literature). For each one of the sub-indices, we devise a part of the checklist with specific items, by pinpointing and grouping (if they have similar provisions or characteristics) disclosure elements from the two previously mentioned frameworks. Each item from the devised checklist has specific markers (keywords, metrics, KPIs) which are due to be identified in the current reporting structure for the organizations. The markers are based on (and can be identified within) the IC theoretical framework and the IR conceptual framework (International Integrated Reporting Council (IIRC) 2013), as well as the corresponding capitals background paper (ACCA and NBA 2013).

Within the calculation of our index, the encoding is binary. Hence, if we identify the markers in the selected reporting set, and we find evidence of disclosure, we attribute the value 1. If we do not identify any instances of the mentioned markers within the reporting set, and we find no evidence of disclosure according to our checklist item, we attribute the value 0. The calculation of the value in the case of each sub-index requires the division of the sum of attributed values to the total number of constituting items from the sub-index.

Within the fuller output of the aggregate disclosure index, the weights of the sub-indices are proportional to the number of included markers. Thus, we have 26 markers for the human capital, 22 markers for the intellectual capital (the layered match to the internal capital from the IC theoretical framework), as well as 38 markers for the social and relationship capital (the layered match to the external capital).

The markers may correspond on a one-to-one match with respective disclosure items, or more markers may be aggregated into one disclosure item (if they have similar measures). Disclosure items are aggregated within specific categories and the categories within the three main sub-indices. The aggregation within the superior indicator is conducted by calculating a simple mean of the inferior indicator. The index has a feature of analytical tracking, with the ability to show which IC elements have the most significant emphasis in the reporting sets (and, by contrast, which elements are negligible or absent from the reporting frame). This analytical tool would provide the grounds to measure in comparison to what extent are mainstream IC markers embedded in the reporting sets as opposed to IR-drawn markers.

In the context of new communication tools (primarily based on the Internet and online data), printed reporting sets are no longer the sole sources of information. Evidence from the literature shows that—although disclosure quality is a current issue (Fasan and Mio 2016)—information is present on many communication means. The online environment is increasingly important as a mean for disclosure (Brusca et al. 2016; Gallego-Alvarez et al. 2011). Moreover, the connection of existing online disclosure to the IR model is addressed in a preliminary state, using a qualitative approach (Trpeska et al. 2016).

In the case of each university included in our sample, we connected to their official website and sought the reporting section, where we found the appropriate sets of information as the pool of data for the analysis. Alongside existing reports, we also admit e-disclosure (information available from the website) is the sole cause of a clear indication/identification of the source. Afterwards, we analyze the content of the documents and identify the existence of markers for each item.

5 Results and Discussion

The cross-analysis and calculations of the disclosure levels from the reporting set of public universities against our checklist (refined from the theoretical and conceptual frameworks of IC and IR) revealed a series of interesting results.

If we break down our analysis on sub-indices (as we can observe in Table 3), we notice that there is a significant interval of disclosure values (ranging from markers disclosed by only one or a few universities, to markers identified in almost all analyzed reporting sets). This reveals a polarization in terms of IC elements' importance within the reporting sets of public universities (as some elements are generally perceived as good points where transparency is enhanced, whereas others do not catch the spotlight in such an emphatic manner). This heterogeneity of disclosure practices provides further validation to the findings of Leitner (2004) and Sangiorgi and Siboni

Table 3 Descriptive statistics on sub-indices

Indicator/sub-index	Human capital	Intellectual capital	Social and relationship capital
Max. DI (marker level)	0.98	0.96	0.98
Min. DI (marker level)	0.02	0.06	0.04
Average DI	0.57	0.60	0.46
Standard deviation	0.29	0.32	0.26

(2017), acting as a call to provide a better framing of IC reporting delineation within universities (as this reporting objective is at the moment voluntary—leading to a myriad of practices and disclosure patterns).

On average, the markers of disclosure from the intellectual capital sub-index are more present in the reporting sets, whereas the markers (and, consequently, disclosure items) from the social and relationship capital are present in less than half of the analyzed reporting sets. The lower average emphasized by the social and relationship capital has a potential explanation in the marker structure of the sub-index (which includes a considerable number of IR-drawn markers, with low disclosure levels—as most of these elements are connected to new disclosure trends, not necessarily embedded in current reporting sets).

On the other hand, the lower standard deviation value for the social and relationship sub-index reveals a disclosure pattern as marker identification values are not distanced—on average—from the mean value as much as the other sub-indices. Although it has the narrower range of disclosure index values, the intellectual capital sub-index shows the highest standard deviation (revealing inconsistencies in identifying disclosure patterns across the checklist concerning the constituent elements).

If we focus our analysis on a university level (as seen in Table 4), we find that the range of disclosure levels varies from more than a quarter of disclosed items (at the university with the highest asymmetry concerning IC information) to less than three quarters of the items from our checklist (at the most transparent university in terms of IC).

Overall, we find that the public universities from our sample disclose a bit more than half of the items from our integrated checklist with IC elements. Consequently, this reveals the fact that IC elements are held in considerable regard by universities when preparing their reporting sets. However, the cap of DI at 0.74 is evidence that

Table 4 Descriptive statistics—disclosure index by universities

Indicator	Value
Max. DI	0.74
Min. DI	0.28
Average DI	0.53
Standard deviation	0.13

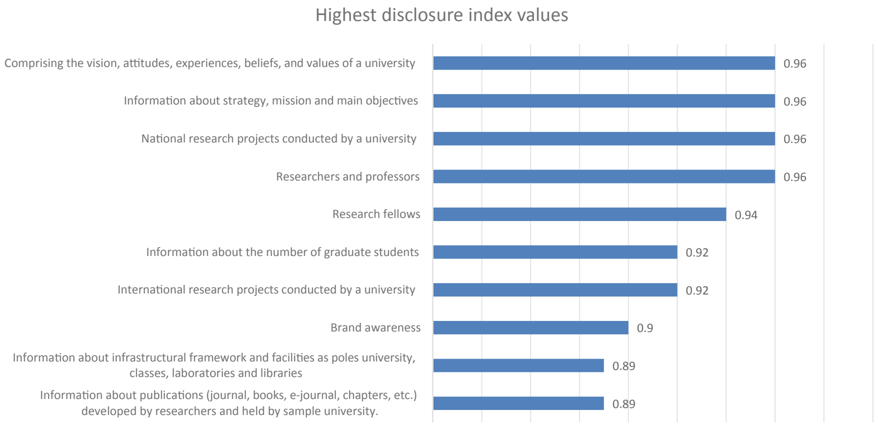

Fig. 3 Highest levels of IC disclosure—by items

there are still aspects concerning IC disclosure which can be improved by public universities to enhance their overall transparency level.

The low value for standard deviation concerning the DI values is a measure of comparable overall disclosure levels exhibited by the universities in our sample. However, connected to the standard deviation marker-wise, we notice that disclosure patterns are not necessarily formed, and the amount of disclosure is comparable across universities mainly on a quantitative level (as a similar number of markers exist within the reporting set, but not always the same ones).

From Fig. 3, we can find that the highest ten disclosure items are presented by 89–96% of the public universities from our sample. The top disclosure items range from all three sub-indices, as most encountered are very common pieces of information disclosed online by most organizations (such as vision, strategy, and mission). This finding comes in line with the conclusions expressed by Dumay (2016) and Feng et al. (2017)—as these are main components within the IR framework within the value creation fundamental concept. Also, academic research catches the spotlight in terms of disclosure (e.g., the disclosure levels concerning publications and research projects—whether national or international—are high, as 9 out of 10 public universities present considerable amounts of information in their reporting outlets).

The result concerning the disclosure levels connected to publications brings further confirmation of previous findings from the literature (Djelic 2008; Beyer et al. 2010; Willmott 2011; TerBogt and Scapens 2012; Gendron 2015), placing academic research output on a high level of importance in the context of IC disclosure. Also, from a performance point of view, the enhanced transparency levels concerning the research output and projects are of paramount importance in the context of attaining a higher ranking among universities from around the world (mainly since we chose the ARWU Shanghai ranking—which is performance-oriented). However, most of the universities from our sample are part of other reputational-oriented rankings as well. Thus, we find that brand awareness is also among top disclosure items.

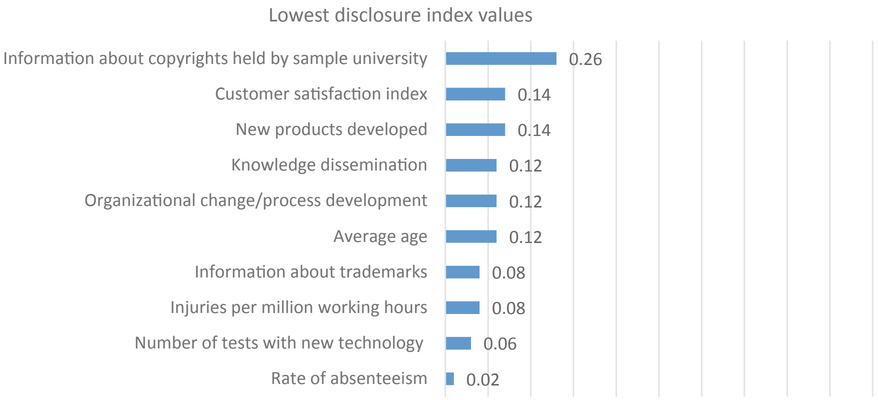

Fig. 4 Lowest levels of IC disclosure—by items

On the other side of the marker classification, in Fig. 4, we can observe the items which exhibit the lowest disclosure levels. An interesting finding is that most of these items are drawn from the IR system (using metrics and markers from the framework and corresponding background papers). Thus, specific and technical disclosure items (such as the rate of absenteeism or customer satisfaction index) are not embedded in many reporting sets. This disclosure measure concerning these items is proof of the novelty of integrated reporting, which—consequently—implies that some of the corresponding disclosure items are still to be implemented in the existing reporting setting.

This finding is also connected to the lack of formalization concerning IC disclosure requirements—emphasized by Leitner (2004) and Sangiorgi and Siboni (2017). It offers further incentives and room to build a comprehensive reporting framework (which could fill the gaps concerning the presentation of these disclosure items in the current reporting set).

Continuing the dichotomous analysis of IC and IR markers, we find in Table 5—using descriptive statistics—that mainstream IC markers, mainly drawn from the existing theoretical framework (derived from Low et al. 2015, with further additions) show higher overall disclosure levels than IR markers. This finding can be outlined by the range limits of DI from the two subsets. Overall, approximately 58% of the mainstream IC markers are found in the reporting sets from our sample, whereas only 41% of the newer IR markers occur (less than half of the benchmark disclosure level).

Table 5 Comparison between mainstream IC and IR markers—descriptive statistics

Mainstream IC markers	Indicator	IR markers
0.04	Min. DI	0.02
0.98	Max. DI	0.90
0.58	Average DI	0.41
0.28	Standard deviation	0.26

This a measure of the ongoing adoption of integrated thinking, showing that elements which expand the concepts of the capitals (as an IR fundamental concept) are still finding their way onto the reporting set and are an active part of the transition toward new reporting trends. However, we find a certain level of closeness between the disclosure patterns (emphasized by the standard deviation indicators) which enables and consolidates the outlook provided by Dumay et al. (2016), as well as Guthrie et al. (2012) concerning IC practices in the context of integrated reporting.

6 Conclusions

In the current socio-economic context, the HEIs are perceived as an essential resource for innovation and seek to support innovative activities. In this sense, the main outputs provided by this type of entities are closely connected to intellectual capital (IC). In the corresponding literature, a key focus is oriented toward how HEIs to report about this type of capital and how are disclosures structured in the fuller context of the organization.

Considering intellectual property as the currency of today's knowledge economy and technology transfer, we note an increasing relevance and emphasis placed on IC information within the reporting set (whether we discuss traditional reporting or news reporting sets—such as integrated reporting). The mainstream theoretical framework concerning IC—developed by Low et al. (2015), as an adaptation from previous research from Yi and Davey (2010), Schneider and Samkin (2008) and Sanchez et al. (2006)—is the cornerstone of our research, as we construct a checklist to assess IC disclosure in public universities. The main addition to the ever-morphing theoretical framework is the view of IC through the lens of integrated reporting.

Hence, our cross-analysis is based on the IC framework proposed by Low et al. (2015)—with further additions from other scholars, in contrast with the IR conceptual framework—noting that the layers from the mainstream theoretical framework have correspondents within the capitals model from IR. From a conceptual point of view, although we find a small number of similar elements between the two frameworks, we provide additions (in terms of markers and disclosure items) which unveil different sides and intakes on the layers of IC.

Methodologically, we employ content analysis of reporting and information sets available online for each public university from our sample (by verifying the existence of disclosure markers or metrics and encoding the values binary). Based on the encoding, we calculate and aggregate disclosure levels for items and sub-indices. Our findings show that overall, sample-wise, the amount of information disclosed concerning IC (using our checklist) is a bit more than half of the information embedded in the benchmark model. The descriptive statistics show differences between the three sub-indices, with intellectual capital having the highest mean for the disclosure index, but also the highest standard deviation (outlining the assumption that the disclosure patterns are to some extent erratic).

Also, the descriptive statistics on the analysis on universities show a cap of disclosure level at three-thirds of the benchmark information amount—signalling that some IC aspects are still not held in high regard by HEIs. On the other hand, on an item level, our findings reveal that the mainstream elements from the IC theoretical framework from Low et al. (2015)—with further additions from other research—are more consolidated within the reporting set than the newer disclosure elements from the IR model (as the corresponding delineations and implementation is an ongoing process). This is evidence of the strength exhibited by an existing robust framework compared to an emerging reporting system. Other specific elements found in the reporting set—such as disclosure on publications—are in line with previous research (such as Djelic 2008; Beyer et al. 2010), placing these elements in the spotlight of IC disclosure. Nevertheless, by the similarities in layers and extensions between the two selected frameworks, we can assert that IC disclosures are on a parallel path with IR, as the latter presents functional implementation perspectives and a view on IC disclosure through the lens of different markers.

Concerning our research question, we find that overall IC disclosure levels in HEIs exhibit proper results, but mainly based on markers from the IC framework (with more than half of the elements disclosed, on average), as IR markers show lower average disclosure levels. This offers room for improvement in delineation concerning this type of reporting, as well as further developments in terms of IR dynamics in the following years.

We acknowledge that our paper, at this point, has some limitations. We have the language limitation for our benchmark sample, as we include in our sample only reports written in English, which could be addressed by merely extending our sample to another interval in the ranking, e.g., 100–150, and including more public universities. Also, since we employ content analysis and we process each reporting set manually, our research is prone to a certain level o subjectivity (which could be overcome through the potential employment of disclosure analysis software).

Last, but not least, our research provides a touch of added value to the field, as we bring further development of an IC disclosure assessment framework, by combining the existing theoretical framework refined in the literature with delineations and extensions of IR (creating a more comprehensive disclosure assessment tool). We tested our IC disclosure assessment model on public universities, but the methodology can be replicated on other samples (either on private HEIs or on other types of reporting organizations).

Appendix

Disclosure Checklist (In Full)

Sub-index	Category	Disclosure items	Metrics and markers
Human capital	Employees	Information regarding staff	Total number
		Cultural diversity	Demographic information of employees
		Researchers and professors	Number of researchers and professors
			Number of full-time researchers and professors
			Percentage change in researchers and professors
			Average duration of researchers and professors as employees
			Name, qualification, and department of affiliation
		Average age	Average age
		Minimum wage ratio	Minimum wage ratio
		Research fellows	No research fellows
		Ph.D. students	Number of Ph.D. students
			Name and department of affiliation
		Administrative personnel	Name, qualification, and department of staff and administrative employees employed by the university
		Recruitment of new employee—turnover	Information about turnover, recruitment of new employee as staff, researchers, or professors

(continued)

(continued)

Sub-index	Category	Disclosure items	Metrics and markers
		Mobility programs for employees	Information about mobility programs for researchers and professors and international programs (e.g., Erasmus)
		Employee compensation/benefit	Information referring to welfare or other benefits for employees and Ph.D. students provided by a university
	Invited staff	Internationalization of teaching staff	Information about visiting professor or researcher at university
	Work-related knowledge/know-how	Staff training expense	Staff training expense
		Individual competencies of researchers, knowledge or skill obtained from training	Individual competencies of researchers, knowledge or skill obtained from training
	Employee qualification	Information relating to employees' qualifications	Information relating to employees' qualifications
	Employee's experience in profession	Information referring to employees' international or national experiences in their profession	Information referring to employees' international or national experiences in their profession
	Training programs	Education or training programs for employees provided by a university	Education or training programs for employees provided by a university
	Other information about employees (IR-drawn markers)	Employee survey results	Employee survey results
		Injuries per million working hours	Injuries per million working hours
		Rate of absenteeism	Rate of absenteeism
		Severance rate	Severance rate
Intellectual capital (internal capital)	Patents right	Information about patents held by sample university	Number of patents
	All copyright	Information about copyrights held by sample university	Number of copyrights

(continued)

(continued)

Sub-index	Category	Disclosure items	Metrics and markers
	Registered and unregistered trademarks	Information about registered and unregistered trademarks	Number of trademarks
	Licenses and software	Licenses	Number of licenses
		Software	Number of software
	Publications	Information about publications (journal, books, e-journal, chapters, etc.) developed by researchers and held by sample university	Information about publications (journal, books, e-journal, chapters, etc.) developed by researchers and held by sample university
	National Research projects	Research projects conducted by a university	Research projects conducted by a university
	International Research projects	Research projects conducted by a university	Research projects conducted by a university
	University Culture	Comprising the vision, attitudes, experiences, beliefs, and values of a university	Comprising the vision, attitudes, experiences, beliefs, and values of a university
	Management outline	Information about strategy, mission and main objectives	Information about strategy, mission, and main objectives
	Management Processes	Information about university processes	Information about university processes
	Infrastructural facilities	Information about infrastructural framework and facilities as poles university, classes, laboratories and libraries	Information about infrastructural framework and facilities as poles university, classes, laboratories, and libraries
			Libraries: Books, e-books, database expense
	Infrastructural/network connections	Information about the university's infrastructural development/ICT technologies	Database, connections, new technologies, new instruments, software
	Other IC disclosure elements (IR-drawn markers)	Expenditure information on R&D	Money spent on R&D

(continued)

(continued)

Sub-index	Category	Disclosure items	Metrics and markers
		Tests with new technology	Number of tests with new technology
		Brand awareness	Brand awareness
		New products developed	Number of new products developed
		Organizational change/process development	Expenditure on organizational change/process development
		Software development for internal systems	Expenditure on software development for internal systems
		R&D-derived products	Sales generated by R&D-derived products
	Brand and reputation that an organization has developed	Intangibles associated with the brand and reputation that an organization has developed	Intangibles associated with the brand and reputation that an organization has developed
Social and relationship (external capital)	Collaborations with NGOs	Collaborations with NGOs	Collaborations with NGOs
	Collaborations with public institutions	Collaborations with public institutions	Collaborations with public institutions
	Collaboration between universities and other groups	All other activities and collaboration between universities and other groups (firms, non-profit organizations, public authorities, local government, and society as a whole)	Number of publications with a co-author coming from business world
	Funds raised from non-institutional funders (research contracts, etc.)	Funds raised from non-institutional funders (research contracts, etc.)	Amount of funds raised from non-institutional funders (research contracts, etc.)
	Spin-offs	Spin-offs	Number of spin-off
			Number of employees from spin-off
	Incomes from intellectual rights	Income from licenses, brands and patents developed in the university	Income from licenses, brands, and patents developed in the university

(continued)

(continued)

Sub-index	Category	Disclosure items	Metrics and markers
	Financial supporters	Financial relations Information referring to the relationships between the university and its financial supporters	Number of contracts
	Research consortia and technological clusters	Information about research consortia and technological clusters	Information about research consortia and technological clusters
	Student database	Database of all students	Number of graduated students
			Average duration of the course of study
			Average number of professors per student
			Number of retirements
			Number of master and doctorate thesis
	Student metrics	Information about students and their satisfaction with the learning/researching process	Information about students and their satisfaction with the learning/researching process
		Information about the number of students per faculty or department	Information about the number of students per faculty or department
	Graduate students information	Information about the number of graduate students	Information about the number of graduate students
	International programs for students' mobility	Information about mobility programs for students and international programs (e.g., Erasmus)	Erasmus
			CEEPUS
			Others
	Post-graduation, high education, and specialization programs	Information about agreements with companies and public institutions for students' placements as well as masters, training, collaboration, post graduate or post doctorate and specialization programs	Number of new partners
			Number of researchers and professors as employees involved in European programs
			Number of researchers and professors as employees in committees, etc.

(continued)

(continued)

Sub-index	Category	Disclosure items	Metrics and markers
			Number of conferences attended by researchers and professors as employees
			Number of researchers and professors as employees funded by external sources
			Foreign researchers and professors as employees (number of months)
	Knowledge dissemination	Knowledge dissemination	Number of university website visits
			Number of lessons and seminars (extra-institutional)
	Services	Services	Number of consulting, technical appraisal, and laboratory services
			Lease of rooms, structures, and facilities
	Other social and relationship disclosure elements (IR-drawn markers)	"Great place to work" ranking	"Great place to work" ranking
		Number of volunteers	Number of volunteers
		Claims/lawsuits	Claims/lawsuits
		Involvement in social actions	Involvement in social actions
		Involvement in cultural projects	Involvement in cultural projects
		Customer satisfaction index	Customer satisfaction index
		Provision for social projects	Provision for social projects
		"Social investment" (money spent on philanthropy)	"Social investment" (money spent on philanthropy)

Note The full dataset can be provided on request

Literature

Abeysekera, I. (2013). A template for integrated reporting. *Journal of Intellectual Capital, 14*(2), 227–245.

Abeysekera, I., & Guthrie, J. (2005). An empirical investigation of annual reporting trends of intellectual capital in Sri Lanka. *Critical Perspectives on Accounting, 16*(3), 151–163.

Abhayawansa, S. (2014). A review of guidelines and frameworks on external reporting of intellectual capital. *Journal of Intellectual Capital, 15*(1), 100–141.

ACCA & NBA. (2013), *Capitals. Background paper for <IR>*. Available online http://www.theiirc.org/wp-content/uploads/2013/03/IR-Background-Paper-Capitals.pdf. Accessed February 20, 2015.

Alexander, D., Fărcaş, T. V, Oprişor, T., & Tiron-Tudor, A. (2015). Challenging the capitals: An investigation of the concept of capitals in the <IR> framework. *Studia Universitatis Babes Bolyai – Oeconomica, 60*(3), 3–21.

Altbach, P. (2006). The dilemmas of ranking. *International Higher Education, 42*.

Alwert, K., Bornemann, M., & Will, M. (2009). Does intellectual capital reporting matter to financial analysts? *Journal of Intellectual Capital, 10*(3), 354–368.

Bador, P., & Lafouge, T. (2005). Authors' affiliations and addresses in published articles. Lack of care penalizes French universities in international rankings. *Pressemedicale (Paris, France: 1983)*, *34*(9), 633–636.

Beattie, V., & Smith, S. J. (2013). Value creation and business models: Refocusing the intellectual capital debate. *The British Accounting Review, 45*(4), 243–254.

Beyer, A., Cohen, D. A., Lys, T. Z., & Walther, B. R. (2010). The financial reporting environment: Review of the recent literature. *Journal of Accounting and Economics, 50*(2), 296–343.

Bisogno, M., Dumay, J., Manes Rossi, F., & Tartaglia Polcini, P. (2018). Identifying future directions for IC research in education: A literature review. *Journal of Intellectual Capital, 19*(1), 10–33.

Boubaker, S., Lakhal, F., & Nekhili, M. (2011). The determinants of web-based corporate reporting in France. *Managerial Auditing Journal, 27*(2), 126–155.

Brusca, I., Cohen, S., Manes-Rossi, F., & Nicolò, G. (2019). Intellectual capital disclosure and academic rankings in European universities. *Meditari Accountancy Research,* 28(1), 51–71.

Brusca, I., Manes Rossi, F., & Aversano, N. (2016). Online sustainability information in local governments in an austerity context: An empirical analysis in Italy and Spain. *Online Information Review, 40*(4).

BUFDG. (2016). Integrated Reporting <IR> in HE. Helping universities tell their stories better. Available online http://www.efficiencyexchange.ac.uk/wp-content/uploads/Integrated-Reporting-IR-in-HE-Web-v3-5.pdf. Accessed December 17, 2017.

Camargo, L. C. A. (2010). The role of the university and its relationship university-industry-state and impact on regional innovation projects: Case Study Universidad Tecnológica de Bolívar (Colombia). In: *Book of Abstracts* (p. 21).

Center for World-Class Universities of Shanghai Jiao Tong University—CWCU. (2017). Academic ranking of world universities 2017. Available online http://www.shanghairanking.com/ARWU2017.html. Accessed May 26, 2018.

Cohen, S., & Vlismas, O. (2013). Analysing the relationship between intellectual capital and performance in local governments. *Global Business and Economics Review, 15*(2–3), 233–250.

Cohn, E., Sherrie, L., Rhine, L., & Santos, M. (1989). Institutions of higher education as multiproduct firms: Economies of scale and scope. *The Review of Economics and Statistics, 71*(2), 284–290.

Corbella, S., Florio, C., Sproviero, A. F., & Stacchezzini, R. (2018). Integrated reporting and the performativity of intellectual capital. *Journal of Management and Governance*.

Coulson, A. B., Adams, C.A., Nugent, M. N., & Haynes, K. (2015). Exploring metaphors of capitals and the framing of multiple capitals: Challenges and opportunities for <IR>. *Sustainability Accounting, Management and Policy Journal, 6*(3), 290–314.

Cuozzo, B., Dumay, J., Palmaccio, M., & Lombardi, R. (2017). Intellectual capital disclosure: A structured literature review. *Journal of Intellectual Capital, 18*(1), 9–28.

Djelic, M. L. (2008). Sociological studies of diffusion: Is history relevant? *Socio-Economic Review, 6*(3), 538–557.

Docampo, D., & Cram, L. (2015). On the effects of institutional size in university classifications: The case of the Shanghai ranking. *Scientometrics, 102*(2), 1325–1346.

Dumay, J. (2013). The third stage of IC: Towards a new IC future and beyond. *Journal of Intellectual Capital, 14*(1), 5–9.

Dumay, J. (2014). Reflections on interdisciplinary accounting research: The state of the art of intellectual capital. *Accounting, Auditing & Accountability Journal, 27*(8), 1257–1264.

Dumay, J. (2016). A critical reflection on the future of intellectual capital: From reporting to disclosure. *Journal of Intellectual Capital, 17*(1), 168–184.

Dumay, J., Bernardi, C., Guthrie, J., & Demartini, P. (2016). Integrated reporting: A structured literature review. *Accounting Forum, 40*(3), 166–185.

Dumay, J., Bernardi, C., Guthrie, J., & La Torre, M. (2017). Barriers to implementing the international integrated reporting framework. *Meditari Accountancy Research, 25*(4), 461–480.

Dumay, J., & Cai, L. (2014). A review and critique of content analysis as a methodology for inquiring into IC disclosure. *Journal of Intellectual Capital, 15*(2), 264–290.

Dumay, J., & Cai, L. (2015). Using content analysis as a research methodology for investigating intellectual capital disclosure: A critique. *Journal of Intellectual Capital, 16*(1), 121–155.

Dumay, J., & Guthrie, J. (2017). Involuntary disclosure of intellectual capital: Is it relevant? *Journal of Intellectual Capital, 18*(1), 29–44.

Dumay, J. C., & Tull, J. A. (2007). Intellectual capital disclosure and price-sensitive Australian Stock Exchange announcements. *Journal of Intellectual Capital, 8*(2), 236–255.

EC. (2006a). Encourage corporate measuring and reporting on research and other forms of intellectual capital [online]. Available at http://ec.europa.eu/invest-in-research/pdf/download_en/2006-2977_web1.pdf. Accessed April 12, 2018.

EC (2006b). Ricardis: Reporting intellectual capital to augment research, development and innovation in SMEs. Available at https://op.europa.eu/en/publication-detail/-/publication/60cbf27c-5552-429f-a077-44135a97cc27/language-en. Accessed May 18, 2018.

Eccles, R. G., & Krzus, M. P. (2010). *One report: Integrated reporting for a sustainable strategy*. Wiley.

Fasan, M., & Mio, C. (2016). Fostering stakeholder engagement: The role of materiality disclosure in integrated reporting. *Business Strategy and the Environment* 1–18.

Feng, T., Cummings, L., & Tweedie, D. (2017). Exploring integrated thinking in integrated reporting—An exploratory study in Australia. *Journal of Intellectual Capital, 18*(2), 330–353.

Gallego-Alvarez, I., Rodriguez-Dominguez, L., & Garcia-Sanchez, I. M. (2011). Information disclosed online by Spanish universities: Content and explanatory factors. *Online Information Review, 35*(3), 360–385.

Gendron, Y. (2015). Accounting academia and the threat of the paying off mentality. *Critical Perspectives on Accounting, 26,* 168–176.

Goebel, V. (2015). Estimating a measure of intellectual capital value to test its determinants. *Journal of Intellectual Capital, 16*(1), 101–120.

Guthrie, J. (2014). In defence of disclosure studies and the use of content analysis: A research note. *Journal of Intellectual Capital, 15*(2).

Guthrie, J., & Abeysekera, I. (2006). Content analysis of social, environmental reporting: What is new? *Journal of Human Resource Costing & Accounting, 10*(2), 114–126.

Guthrie, J., & Dumay, J. (2015). New frontiers in the use of intellectual capital in the public sector. *Journal of Intellectual Capital, 16*(2), 258–266.

Guthrie, J., & Petty, R. (2000). Intellectual capital: Australian annual reporting practices. *Journal of Intellectual Capital, 1*(3), 241–251.

Guthrie, J., Petty, R., & Ricceri, F. (2006). The voluntary reporting of intellectual capital: Comparing evidence from Hong Kong and Australia. *Journal of Intellectual Capital, 7*(2), 254–271.

Guthrie, J., Petty, R., Yongvanich, K., & Ricceri, F. (2004). Using content analysis as a research method to inquire into intellectual capital reporting. *Journal of Intellectual Capital, 5*(2), 282–293.

International Integrated Reporting Council (IIRC). (2013). The international IR framework. Available at www.theiirc.org/wp-content/uploads/2013/12/13-12-08-THE-INTERNATIONALIR-FRAMEWORK-2-1.pdf. Accessed May 20, 2018.

Jabnoun, N. (2009). Economic and cultural factors affecting university excellence. *Quality Assurance in Education, 17*(4), 416–429.

Jongbloed, B., Enders, J., & Salerno, C. (2008). Higher education and its communities: Interconnections, interdependencies and a research agenda. *Higher Education, 56*(3), 303–324.

Ken, Y., Huang, T., Wu, C. H., & Shiu, S. H. (2009). Super-efficiency DEA model for evaluating technology transfer performance of US university. In: *Portland International Conference on Management of Engineering & Technology (PICMET)*, in Portland, USA, 2–6 August 2009.

Laredo, P. (2007). Revisiting the third mission of universities: Toward a renewed categorization of university activities? *Higher Education Policy, 20*(4), 441–456.

Leitner, K. H. (2004). Intellectual capital reporting for universities: Conceptual background and application for Austrian universities. *Research Evaluation, 13*(2), 129–140.

Leydesdorff, L. (2018). Synergy in knowledge-based innovation systems at national and regional levels: The Triple-Helix model and the fourth industrial revolution. *Journal of Open Innovation: Technogy, Market and Complexity, 4*(16).

Low, M., Samkin, G., & Li, Y. (2015). Voluntary reporting of intellectual capital: Comparing the quality of disclosures from New Zealand, Australian and United Kingdom universities. *Journal of Intellectual Capital, 16*(4), 779–808.

Manes Rossi, F., Nicolò, G., & TartagliaPolcini, P. (2018). New trends in intellectual capital reporting: Exploring online intellectual capital disclosure in Italian universities. *Journal of Intellectual Capital, 19*(4), 814–835.

Marginson, S. (2007). The public/private divide in higher education: A global revision. *Higher Education, 53*(3), 307–333.

Marginson, S. (2014). University rankings and social science. *European Journal of Education, 49*(1), 45–59.

Marston, C. L., & Shrives, P. J. (1991). The use of disclosure indices in accounting research: A review article. *The British Accounting Review, 23*(3), 195–210.

McMillan, S. J. (2000). The microscope and the moving target: The challenge of applying content analysis to the World Wide Web. *Journalism & Mass Communication Quarterly, 77*(1), 80–98.

Melloni, G. (2015). Intellectual capital disclosure in integrated reporting: An impression management analysis. *Journal of Intellectual Capital, 16*(3), 661–680.

Molas-Gallart, J., & Castro-Martínez, E. (2007). Ambiguity and conflict in the development of "Third Mission" indicators. *Research Evaluation, 16*(4), 321–330.

Montesinos, P., Carot, J. M., Martinez, J. M., & Mora, F. (2008). Third mission ranking for world class universities: Beyond teaching and research. *Higher Education in Europe, 33*(2–3), 259–271.

Neave, G. (2000). *The universities' responsibilities to society: International perspective* (p. 289). Oxford: Pergamon.

Nielsen, C., Roslender, R., & Schaper, S. (2017). Explaining the demise of the intellectual capital statement in Denmark. *Accounting, Auditing & Accountability Journal, 30*(1), 38–64.

Parker, L. (2011). University corporatisation: Driving redefinition. *Critical Perspectives on Accounting, 22*(4), 434–450.

Ramirez, Y., & Gordillo, S. (2014). Recognition and measurement of intellectual capital in Spanish universities. *Journal of Intellectual Capital, 15*(1), 173–188.

Ramirez, Y., Tejada, A., & Manzaneque, M. (2016). The value of disclosing intellectual capital in Spanish universities: A new challenge of our days. *Journal of Organizational Change Management, 29*(2), 176–198.

Sanchez, M. P., Castrillo, R., & Elena, S. (2006). Intellectual capital management and reporting in universities. In: *The International Conference on Science, Technology and Innovation Indicators. History and New Perspectives*. Lugano, Italy, 15–17 November 2006.

Sanchez, M. P., & Elena, S. (2006). Intellectual capital in universities: Improving transparency and internal management. *Journal of Intellectual Capital, 7*(4), 529–548.

Sangiorgi, D., & Siboni, B. (2017). The disclosure of intellectual capital in Italian universities: What has been done and what should be done. *Journal of Intellectual Capital, 18*(2), 354–372.

Santis, S., Bianchi, M., Incollingo, A., & Bisogno, M. (2019). Disclosure of intellectual capital components in integrated reporting: An empirical analysis. *Sustainability, 11*, 62; https://doi.org/10.3390/su11010062.

Schneider, A., & Samkin, G. (2008). Intellectual capital reporting by the New Zealand local government sector. *Journal of Intellectual Capital, 9*(3), 456–486.

Secundo, G., Beer, C., & Passiante, G. (2017). Mobilising intellectual capital to improve European universities' competitiveness: The technology transfer offices' role. *Journal of Intelectual Capital, 18*(3), 607–624.

Secundo, G., Elena-Perez, S., Martinaitis, Ž., & Leitner, K. H. (2015). An intellectual capital maturity model (ICMM) to improve strategic management in European universities: A dynamic approach. *Journal of Intellectual Capital, 16*(2), 419–442.

Sonnier, B. M., Carson, K. D., & Carson, P. P. (2007). Accounting for intellectual capital: The relationship between profitability and disclosure. *Journal of Applied Management and Entrepreneurship, 12*(2), 3.

Steenkamp, N., & Northcott, D. (2007). Content analysis in accounting research: The practical challenges. *Australian Accounting Review, 17*(43), 12–25.

Ştefănescu, C. A., Oprişor, T., & Sîntejudeanu, M. A. (2016). An original assessment tool for transparency in the public sector based on the integrated reporting approach. *Journal of Accounting and Management Information Systems, 15*(3), 542–564.

Sujan, A., & Abeysekera, I. (2007). Intellectual capital reporting practices of the top Australian firms. *Australian Accounting Review, 17*(42), 71–83.

TerBogt, H. J., & Scapens, R. W. (2012). Performance management in universities: Effects of the transition to more quantitative measurement systems. *European Accounting Review, 21*(3), 451–497.

Trpeska, M., BozinovskaLazarevska, Z., & Atanasovski, A. (2016). Towards integrated reporting: Analysis of information published on the companies' websites that could be part of the integrated reporting. *CEA Journal of Economics, 11*(2), 73–89.

Urdari, C., Farcas, T. V., & Tiron-Tudor, A. (2017). Assessing the legitimacy of HEIs' contributions to society: The perspective of international rankings. *Sustainability Accounting, Management and Policy Journal, 8*(2), 191–215.

Veltri, S., & Silvestri, A. (2015). The Free State University integrated reporting: A critical consideration. *Journal of Intellectual Capital, 16*(2), 443–462.

Wedlin, L. (2006). *Ranking business schools: Forming fields, identities and boundaries in international management education*. Edward Elgar Publishing.

Williams, R. (2008). Methodology, meaning and usefulness of rankings. *Australian Universities' Review, 50*(2), 51–58.

Williams, S. M. (2001). Is intellectual capital performance and disclosure practices related? *Journal of Intellectual Capital, 2*(3), 192–203.

Williams, R., & van Dyke, N. (2008). Reputation and reality: Ranking major disciplines in Australian universities. *Higher Education, 56,* 1–28.

Willmott, H. (2011). Journal list fetishism and the perversion of scholarship: Reactivity and the ABS list. *Organization, 18*(4), 429–442.

Yi, A., & Davey, H. (2010). Intellectual capital disclosure in Chinese (mainland) companies. *Journal of Intellectual Capital, 11*(3), 326–347.

Zhu, D., Zeng, D., & Ren, L. (2010). R&D efficiency evaluation on innovation entities in China: The use of DEA model. In: *International Conference on e-Product-Service and eEntertainment (ICEEE)*, in Henan, China, 7–9 November 2010.

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Can Graphs in Sustainability Reports Actually Manage Impressions? An Analysis from the Investors' Perspective

Caterina Pesci, Luca Fornaciari, Alice Medioli, Silvia Triani and Teerooven Soobaroyen

1 Introduction

Within the field of research on accounting, accountability, and sustainability disclosures, the study of the role of 'visuals' is increasing in importance. Over the last few years, a number of articles have focused on the use of visuals (e.g., pictures, graphs, and drawings) in company annual reports and on their implications in the analysis of the form and content of organizational communication and disclosure and the motivations thereof (Davison 2007, 2009, 2011; Parker and Guthrie 2009; Cho et al. 2012a, b; Pesci et al. 2015). In respect of the latter, one contemporary framework of classification and analysis relates to the concept of 'impression management,' which originates from the studies of the sociologist Goffman (1959) who describes each individual as an actor in a theater whose main objective is to 'impress' viewers. Impression management encompasses a number of possible strategies aimed at

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favorably impressing upon the receivers of accountability public information (Brennan et al. 2009; Merkl-Davies and Brennan 2011; Merkl-Davies et al. 2011). In the majority of accounting studies, the preparers of financial reporting or social and environmental reporting are conceptualized as rational organizational actors who seek to influence the target audience of the disclosure.

In this regard, and reminiscent of a commonly held view that '*a picture is worth a thousand words*,' *impression management* has become a notable perspective seeking to conceptualize the use of visuals in accounting disclosure and narratives (Pesci et al. 2015). This perspective asserts that a visual disclosure contained in accounting reports can be a powerful device to manage, distort, and direct readers' attention with a view to convey a positive image of the organization in relation to a given subject matter or more generally about the organization itself. The motivations for impression management can be diverse and could, for instance, be associated to managerial self-interests (i.e., in line with classical agency theory predictions) or to ensure the organization is seen to operate in line with society values and expectations (e.g., legitimacy theory; Suchman 1995). So far, the evidence on the use of visuals in annual reports has addressed the role of graphs (Beattie and Jones 1992; Jones 2011; Cho et al. 2012a). These studies typically found high levelof graph distortions and associated the distortion to impression management techniques aimed at legitimating the companies' actions (Suchman 1995; Hrasky 2012; O'Donovan 2002). However, the vast majority of these studies have tended to rely on an analysis of the disclosures per se and the impact on users is presumed rather than being actually observed (e.g., Craig and Brennan 2012); i.e., it is far less evident from extant research whether what researchers identify as an impression management strategy does *actually* influence readers such as investors, lenders, employees, and other stakeholders. This gap in the literature is pertinent because arguably, this relates to whether there is a material role (or not) for visual impression management strategies and thereby this warrants further discussion and implications for readers, preparers, and policy-makers. Currently, studies considering the readers' point of view are rare (Diouf and Boiral 2017). Consequently, we raise the following research question: What is the relevance of graph distortion as an impression management strategy for investors?

We, therefore, adopt a value relevance approach to study the investors' reaction to the use of visuals, and specifically in relation to graph distortions in annual reports. While the role of graph distortions has been studied in a number of cases (Beattie and Jones 1992; Jones 2011; Cho et al. 2012a), the emphasis has been rather exclusively on the supposed managerial intent of managing impressions, but not in relation to their potential impact on investors. If visual impression management (such as graph distortions) does not produce the expected effects, further questions may arise as to why managers seek to distort this information and/or whether some visuals can be more 'effective' than others and under which conditions these visual tools could be potent or impotent. In this regard, recent studies showed that stakeholders' needs for information can be deeply different (Fornaciari and Pesci 2018; Costa et al. 2019) and consequently information can produce different effects on different stakeholders. We focus on investors because they are stakeholders who are keenly interested in financial information and generally more skilled in reading such information, arguably even when presented in different forms (i.e., in the graphical form). Furthermore, an investor can be seen as the most important stakeholder for a listed company and we could contend that the vast majority of the disclosure tactics would be directed to these particular stakeholders. An absence of value relevance can indicate that distortion is unnecessary for investors and/or that this type of visual tactic may be aimed at impress different stakeholder(s).

To address the research question, we rely on a sample of 105 European listed companies (Italian, Spanish, and French) that have adopted GRI guidelines and we adopt Ohlson's (1995) modified value relevance approach to model for an analysis of the relationship between market value and graph distortion contained in social and environmental information. The research methodology is based on a mixed method (i) a content analysis (Krippendorff 2004; Unerman 2000) to determine the level of graph distortion/discrepancy (Beattie and Jones 1992) and (ii) an estimation of value relevance coefficients by considering Ohlson's (1995) modified model inclusive of a graph distortion index. Our results support the idea that while visual impression management is value relevant, it paradoxically has a negative association to market value. This paper contributes to the literature by offering a multifaceted explanation of the use of graph distortion and on the possible impressions generated by such a visual 'tactic.' It enriches the impression management literature by seeking evaluating the actual impact of an impression management strategy (the graph's distortion) on investors' decisions.

The remaining paper is articulated as follows: the following section shows the literature review on the topic of visual impression management by highlighting its effect on the readers' decision-making process, followed by a methodological section describing the sample and the mixed method used for the analysis. Thereafter, the findings and the discussion are presented, and finally the paper concludes with the key contributions, implications, and limitations of the study.

2 Literature Review: Visuals as Impression Management Tools in Accounting and Accountability, The Role of Graphs

The research attention to visual forms of communication has increased as demonstrated by the advent of 'visual disciplines' (Pieters and Wedel 2007). Visual representations are often used as a vehicle to present quantitative data about performance and as a way to frame or reflect a given narrative. Accounting and accountability scholars have also recognized that visual disclosures play an important role in conveying financial and socio-environmental information and evidence of corporate 'visual narratives' (Warren 2005; Davison 2007, 2009, 2011, 2014; Bernardi et al. 2002, 2005; Brown 2010; Parker 2009; Hrasky 2012; Pesci et al. 2015) has been extensively reported. These authors contend that visuals could have a strong impact on readers.

An interesting perspective for analyzing the effect and the use of visuals originates from Goffman's (1959) sociological notion of 'impression management' which refers to the possibility of one impressing on others' minds in order to be perceived in a favorable light. Goffman's (1959) 'impression management' perspective originally attributed to human behavior has been transposed to the field of organizational and corporate behavior, including in terms of how they might report or disclose information in different media (e.g., annual reports, press releases, and Web sites). Within this perspective, it has been argued that the use of visuals can be powerful in terms of its ability to impress upon cognitive memory (Davison 2014).

Brennan et al. (2009) explicitly list visuals as a tactic that should be investigated in accounting and accountability statements. According to the authors, a number of tactics can be used to distort information in an attempt at impression management: syntactical manipulation, rhetorical manipulation, attribution of organizational outcomes, thematic manipulation, selectivity, visual/presentation effects (including also visual images), and impression management using performance comparisons. Focusing on the case of visual representation, an emphasis can be created when companies use presentation techniques to make a piece of information more obvious to readers (Brennan et al. 2009). In addition, the use of visuals as a technique of impression management can be achieved through the use of colors (So and Smith 2002; Courtis 2004a, b) or a repetition of the narratives together with visuals (Courtis 1996; Pesci et al. 2015).

Informed by the above consideration, many scholars link the role of images, picture, and graphs to an intent by preparers to impress upon the receivers of the disclosed information (Brennan et al. 2009; So and Smith 2002; Courtis 2004a, b; Beattie and Jones 1997; Beattie and Jones 2008; Jones 2011; Cho et al. 2010, 2012a). Some of these scholars focus on the selectivity tactic of impression management, with particular attention paid to the role of graphs (Beattie and Jones 1997; Jones 2011; Cho et al. 2012a). The potential of graphs to improve the effectiveness of communication in external financial reporting has been well established. According to Lee and Tweedie (1975), humans have more capacity to remember visual patterns than memorize textual or numerical tabulations. In this regard, graphs are more visually appealing than the (text) readability of information in the annual reports, and thus the former is more likely to be remembered (Paivio 1971; Bettie and Jones 1992).

Furthermore, graphs have the advantage of attracting and holding the attention of readers (Usmani et al. 2019) and are able of increasing the speed of decision making (Sullivan 1988). Considering the importance and the effectiveness of graphs as tools of communication and learning, some authors investigated the 'real purpose' of graphs, the way they are designed, and their power to impress the readers. Graphs represent ideal impression management vehicles to mislead the readers by producing a favorable image of companies and by distorting information both in annual and in sustainability reports (Beattie and Jones 1992, 2002, 2008; Godfrey et al. 2003; Merkl-Davies and Brennan 2007, 2011; Falschlunger et al. 2015; Jones 2011; Hrasky 2012; Cho et al. 2012a, b). The early contributions to the accounting literature relate to graph misrepresentation practices (Beattie and Jones 1992, 1997).

The authors conduct studies about the use and abuse of graphs showing that companies consciously exaggerate rather than understate time trends, empathize good news, obfuscate bad news, and use a confused language to give a more favorable portrayal to the company. Other studies suggest an active manipulation by the preparers of graphs and find that companies usually portray the good news more than the bad news (Jones 2011) and that companies in less restrictive reporting regulatory environments appear to be more likely to engage in impression management through the use of graphs (Cho et al. 2012a). Although graphical manipulation is well documented, it remains that these studies do not consider how the readers (i.e., the receivers of the distorted information) and their decision-making process are actually influenced by these tactics. The issue of understanding if the impression management tactics are able to achieve their aim or not is crucial, especially given the ample resonance the literature assigns to the efforts of managers in distorting accounting and accountability information (Beattie and Jones 1992, 2008; Godfrey et al. 2003; Merkl-Davies and Brennan 2007, 2011; Falschlunger et al. 2015; Jones 2011; Hrasky 2012; Cho et al. 2012a, b).

In this regard, Beattie and Jones (2008) expressed the need to investigate more on the 'human data processing context' such as shareholder's investment decisions. Moreover, Merkl-Davies and Brennan (2011) recognize that if there is a managerial intent to impress the readers of the disclosure documents, there should also be a receiver's reaction in response to this (perceived) managerial attitude. In other words, if readers/receivers are aware of the misleading intent, do they actually care and react accordingly? In this way, the receivers' reaction determines whether visual impression management leads to a substantive change or whether managerial efforts to manage impressions are not effective.[1] In this regard, Diouf and Boiral (2017) conduct an experimental study on the quality of sustainability reports by focusing on the stakeholders' perspective. The authors give a fundamental and inspiring contribution by interviewing the main recipients of the sustainability reports, namely the stakeholders. The interview involves practitioners of socially responsible investments in order to evaluate their perceptions of the quality of sustainable reports. They find that these stakeholders are 'aware of the limitations of the sustainability reports' (Diouf and Boiral 2017) and they are not swayed by the company's attempts to impress them.

In line with the last stream of research, this study aims to extend our understanding of the reader's reactions to the use of graph distortion and whether impression management tactics are able to impact on the decision-making processes of the receivers. With the aim of progressing the literature toward a better understanding of the visual power of graphs, this study focuses on a practice involving less restrictive reporting regulatory environments (Cho et al. 2012a), namely sustainability reporting practices (Diouf and Boiral 2017).

[1] A similar discussion exists in the earnings management literature and in relation to stock market efficiency/reactions. In a similar vein therefore, we ask whether the market value 'impounds the manipulated information' or does it 'see through' the attempts by the company to apply an accounting sleight of hand?

To investigate the reader's reactions to the use of graphs, we focus our attention on the case of investors and rely on the value relevance methodology because it is '*designed to assess whether particular accounting amounts reflect information that is used by investors in valuing firms' equity*' (Barth et al. 2001a). The ascertaining of the existence of a statistically significant relationship between some measure of the value of the company (usually the stock exchange price) and the financial and non-financial statement values as well as the existence of the disclosures/information can be considered as evidence that the information is useful to investors for decisions relative to the allocation of their resources (Mechelli 2013), i.e., the information or disclosure is value-relevant.

The value relevance approach is one of the most researched and cited areas in capital market research in accounting (Kothari 2001), whose beginning dates back to the work of Ball and Brown (1968), Beaver (1968) and Ohlson (1995). Many researchers have analyzed the relevance of financial information focusing, for example, on the adoption of different accounting standards (Barth et al. 2008; Bartov at el. 2005; Devalle et al. 2010) or on specific accounting values (Aboody and Lev 1998). Furthermore, others have studied the value relevance of non-financial information. For example, Amir and Lev (1996) examined value relevance of accounting and non-financial information disclosed by the sample companies. While they found that financial information was largely irrelevant for investors, non-financial indicators (such as market penetration data) were actually highly value relevant. Carnevale et al. (2012) also found that value relevance could be attributed to social reporting, and Clarkson et al. (2013) observed that clearly set out voluntary environmental disclosures were incrementally informative. This was confirmed by Hassel et al. (2005). Lastly, Gamerschlag (2013) focused on the case of human capital information and demonstrated that disclosures about the qualification and competence of the workforce were considered value-relevant.

The above confirms the notion that non-financial information does have implications for investors and markets. Of particular note however is that, as opposed to financial reporting information whose presentation and disclosure are often framed on the basis of mandatory requirements (e.g., accounting standards), there is still a variety of ways (e.g., narratives, graphs, tables, diagrams, and images) in which companies can voluntarily report on non-financial, social, environmental, and other types of governance aspects, such as those communicated in sustainability reports. Evidence from studies investigating such types of disclosures has highlighted this diversity of disclosure, as well as concerns that there may be attempts to manage impressions vis-à-vis stakeholders (Merkl-Davies and Brennan 2007). Hence, beyond the information that is provided in relation to legal requirements or in relation to voluntary standards relating to social and environmental disclosure, we contend that visuals can play a prominent role (Lightstone and Driscoll 2008; Linsley and Kajüter 2008; O'Keefe and Conway 2008; Dumay 2012).

In sum, based on Goffman's notions of impression management and its theoretical implications for organizational accounting and disclosure (Merkl-Davies and

Brennan 2011), this study investigates whether readers react on non-financial information documents (Diouf and Boiral 2017) containing visual impression management devices (Brennan et al. 2009), among which graphs play a prominent role (Cho et al. 2012a; Jones 2011; Beattie and Jones 2008). In the absence of prior empirical insights, we formulate non-directional and alternative hypothesis as follows:

H1 Distortions in graphs relating to social and environmental information in company sustainability reports are significantly value relevant.

3 Methodological Design

3.1 Sample and Data Selection

This study investigates listed firms that have adopted Global Reporting Initiatives (GRI) guidelines (which are considered to be one of the most used and authoritative sustainability reporting guidelines) and it is based on a sample of listed companies from three continental European countries: Italy, France, and Spain for the period 2004–2013. The GRI report can be used for displaying data other than the ones required by law and while the guidelines focus on the content of the narrative/numerical disclosures (e.g., carbon emissions data; workers' rights), there is little in the way of requirements for how this data can be presented. Therefore, this allows for the possibility of an extensive use of visuals designed to enhance communication and learning (Pesci et al. 2015), or could be used for impression management purposes (Merkl-Davies and Brennan 2011).

More specifically, the information used for the regression models is collected from annual reports and from sustainability reports. The accounting and market price data are collected using a two-stage process, firstly from the Datastream/Compustat databases, and secondly any missing data is extracted collected from the consolidated financial statements of listed companies (for accounting information) at the Milan, Madrid, and Paris Stock Exchange Web sites (for market values). The resulting final sample is composed of companies that publish sustainability reports on their Web sites for at least two consecutive years and that disclose financial and market information necessary for the regression model. For the period under investigation, there are 516 firm-year observations, consisting of 243, 123, and 150 firm-year observations, respectively, for Italy, Spain, and France. Table 1 describes the composition of the sample for each year.

Earnings, book value, and number of shares are based on the figures at December 31 for each year considered. Since there is a time lag between market values and accounting information, the market values for April 30 of each year (following the date of the financial statements) are instead selected (Barth et al. 2008; Harris and Muller 1999). According to Barth and Clinch (2009), a deflated specification of the modified Ohlson (1995) model is the most effective way to mitigate the potential of

Table 1 Sample composition

Year	Italy	Spain	France	Total
2004	11	5	1	17
2005	13	7	2	22
2006	17	10	6	33
2007	20	11	6	37
2008	24	16	7	47
2009	22	14	12	48
2010	31	15	20	66
2011	32	13	29	74
2012	36	16	35	87
2013	37	16	32	85
Total	243	123	150	516

incorrect inferences based on size differences (scale effect). Considering the above-mentioned works, the authors deflate all accounting variables by a number of shares (Barth and Clinch 2009).

3.2 Research Methodology

The study can be considered as mixed methods because the regression model contains both qualitative information based on a manual content analysis and quantitative data retrieved by databases. In the first phase, a content analysis index is developed, and in the second stage, the index that measured the graphs discrepancy of sustainability reporting is regressed in the model. By following Beattie and Jones (1992, 1997, 2008) and Jones (2011), we use the graph discrepancy index to measure the visual power of the graphs:

$$\text{Graph Discrepancy Index} = [(a/b)-1]$$

where:

- a percentage change (in cm) depicted in graphs;
- b percentage change in data.

To determine the graph discrepancy index, we have developed a manual content analysis to collect the necessary information to apply to the previous formula. In particular, we have manually measured the change depicted in graphs and the change in data for each graph in each sustainability report of the sample companies. Finally, to measure the level of discrepancy for each sustainability report, we have calculated the average of the graph discrepancy index. We call this average a Visual Graphs Discrepancy Index (VGDI) and use it as a variable, expressing the level of discrepancy, in the regression model.

In the second phase, this research analyzes the value relevance of earnings and graphs of the sustainability report by using the Ohlson's model (1995). In this study, a price specification is used (Easton 1999; Kothari and Zimmerman 1995; Barth et al. 2001b; Barth 2006). Following Barth et al. (2008), our metric for value relevance is the explanatory power of a regression of the share price of the company on book value of equity per share and earnings per share. This model derives from Ohlson's (1995) linear information model (LIM) (Devalle et al. 2010). In particular, in this model, the residual income is replaced by the net income in order to reduce the measurement errors that may lead from the first estimate. Some studies have also demonstrated, even empirically, that such a replacement represents the best possible approximation (Penman 1997, 2012).

As previously highlighted, in recent years, numerous researchers have evaluated the relevance of non-financial information. In this respect, the Olshon's model is structured by included three independent expressive variables of both financial and non-financial information. In particular, the linear representation of this model is as follow (Olshon 1995):

$$P_t = y_t + \alpha_1 x_t^a + \alpha v_t$$

where:

P_t is the share market value of the company;
y_t is the book value in t;
x_t^a is the earnings in t;
v_t is all non-accounting information used in the prediction of future earnings.

The variable v_t is therefore expressive, in studies of value relevance, of all those information not expressed by the financial statements that nevertheless influence the economic values of the company. From variable v_t, many researchers (Amir and Lev 1996; Carnevale et al. 2012; Clarkson et al. 2013; Hassel et al. 2005; Gamerschlag 2013) also include environmental and social information due to the significant impact they have in economic terms in the short and medium long term. Our model thus examines whether the combined effect of financial accounting information with graphs' sustainability disclosure explains market values better than an exclusive focus on financial accounting information. The authors follow two steps to achieve their objective (Hassel et al. 2005).

The first step is to examine whether financial accounting information is associated with share price (see Eq. 1). The second step is to add the Visual Graphical Discrepancy Index (*VGDI*) to represent other non-accounting value-relevant information in the regression model (see Eq. 2). For steps 1 and 2, the research estimates the following equations:

$$P_{it} = \beta_0 + \beta_1 \text{BVPS}_{it} + \beta_2 \text{EPS}_{it} + \text{Year dummies} + \text{Industry dummies} + \varepsilon_{it} \quad (1)$$

$$P_{it} = \beta_0 + \beta_1 BVPS_{it} + \beta_2 EPS_{it} + \beta_3 VGDI_{it} + Yeardummies + Industrydummies + \varepsilon_{it} \quad (2)$$

where P_{it} is the share price four months after the end of the year; β_0 is the constant; BVPS$_{it}$ is the book value per share at 31/12/*t*; EPS$_{it}$ is the earning per share at 31/12/*t*; VGDI$_{it}$ is the Visual Graphical Discrepancy Index at 31/12/*t*; and β_1, $\beta_{2,}$ and β_3 are the coefficients of independent variables.

Basing their analysis on the previous literature (Barth et al. 2008; Harris and Muller 1999), we investigate if β_3 is positively or negatively (and significantly) associated with share price. Also, of interest is whether the explanatory power of our model (measured in terms of the *adj. R*^{2}) increases when VGDI$_{it}$ is added to the regression as an independent variable. To analyze the usefulness of graphs, the study uses an incremental F-test (Stock and Watson 2009) to measure the statistical significance of the introduction of a new variable (VGDI$_{it}$) to the model (1). In particular, this test examines whether the change in the *adj. R*^{2} is significant.

The authors study these associations in a pooled model, controlling both for the year (year dummies included) and for the industry effects (industry dummies). The coefficients in the equations are estimated using the ordinary least-squares technique. Heteroscedasticity-consistent standard errors using White's procedure are estimated to allow for any non-constant residual variance (White 1980).

One issue discussed in this study concerns the multicollinearity of the model's variables (Verbeek 2006). To measure the existence and intensity of multicollinearity, a variance inflation factor (VIF) is estimated. As a general rule, it is common to consider VIF score of no more than 4. Consequently, we determine and assess this indicator to measure the level of collinearity between independent variables, and we determine and analyze the correlation matrix.

Furthermore, the researchers introduce two control variables to analyze the impact of firms that are loss-making in a given year and firm size in assessing value relevance. Following other researchers (Mitra and Hossain 2009; Entwistle et al. 2010), each model is corrected by adding a dummy variable. Loss, i.e., equal to 1 if earnings are negative and 0 otherwise. In addition, another control variable for size is included, i.e., the natural logarithm of the book value of the total assets (So and Smith 2009; Bartov et al. 2005).

4 Findings and Discussion

4.1 Descriptive Statistics and Correlation Matrix

The descriptive statistics are presented in Table 2 for the full period. In particular, this table shows a high standard deviation for price and BVPS.

Table 2 Descriptive statistics

	Mean	Stand. Dev.	Min.	Max.
P	21.414	27.774	0.01	172.75
EPS	1.277	2.258	−13.873	12.462
BVPS	12.791	16.499	0.088	115.105
VGDI	−1.039	0.383	−2.964	−0.501
LNTA	16.637	2.134	9.954	27.235
LOSS	0.0988	0.298	0	1

Table 3 Correlation matrix

	P	EPS	BVPS	VGDI	LNTA	LOSS
P	1					
EPS	**0.591**	1				
BVPS	**0.578**	**0.608**	1			
VGDI	**−0.156**	**−0.161**	**−0.083**	1		
LNTA	0.040	**0.103**	**0.180**	**−0.122**	1	
LOSS	**−0.170**	**−0.364**	**−0.10**	**0.103**	0.006	1

Significance at 10% in bold text

The correlation matrix (Table 3) shows that there is no noticeable problem of multicollinearity between the variables. These results are also confirmed by the calculation of the VIF, in terms of being less than 4. P is statistically correlated with EPS, BVPS, and VGDI in this univariate test. This suggests that the accounting value and discrepancy index of European listed companies is relevant to investors.

4.2 Regression Model and Discussion

Table 4 shows the results of the regressions calculated in order to investigate the research question. The table shows the results of the equations with and without control variables. In addition, in the last line of the table, the authors show the incremental F-test, used to assess the statistical significance of the change in the R^2 of the two models that differs by one variable. Using this test, the significance of the introduction of the VGDI in model (1) is evaluated. The introduction of a new variable produces a statistically significant increase in R^2. This means that, albeit in a limited way, the VGDI affects stock price variability and is therefore value-relevant. For example, 3.39 is the incremental F-test value used to measure the significance of the introduction of VGDI in model (1) (without control variables) and the relevance of this information to investors.

Table 4 Regression model

	Model 1		Model 2	
COST	6.504 (5.50)***	1.898 (0.69)	18.252 (2.44)**	14.703 (1.939)*
EPS	4.924 (8.34)***	4.771 (8.03)***	5.133 (7.94)***	4.991 (7.71)***
BVPS	0.607 (8.00)***	0.610 (8.06)***	0.610 (7.83)***	0.614 (7.91)***
VGDI		−4.569 (−1.84)*		−5.167 (−2.07)**
LNTA			−0.733 (−1.64)	−0.837 (−1.86)*
LOSS			2.433 (0.71)	2.784 (0.82)
	0.448***	0.452***	0.450***	0.454
	3.39*		2.47*	

t-statistics in parentheses; $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$

The coefficient for EPS and for BVPS is significant with the expected sign; this means that earning and equity affect positively the variability of listed companies prices. In particular, the EPS coefficient takes on significantly higher values than the BVPS coefficient. This result is consistent with what is specified in the main literature (Barth et al. 2008; Harris and Muller 1999) and it shows that the variability of the price is positively influenced by the variability of EPS.

For Model 1, the adjusted R^2 equals 0.4487 and the F-statistic is significant; the adjusted R^2 equals to 0.4501 for the model with control variables. Adding the VGDI variable, the adjusted R^2 increases and the incremental F-test is statistically significant for each model. In general, this indicates that not only graphical information is value-relevant for investors but also when the information relates to social and environmental information. H1 is therefore supported.

Focusing on the VGDI, there are two noteworthy points: (1) the visual index is value relevant; (2) it shows a coefficient that is negative for both models. The fact that the VGDI is value-relevant means that it is observed to influence investment decisions. The negative sign of the coefficient for VGDI, however, is the most significant finding of this research. Indeed, this result highlights an important implication in terms of a better understanding of visual impression management tactics' achievement. In particular, the negative sign shows that the investors have a negative consideration of the use of graph distortion by companies. The graph distortion can be interpreted as an attempt to manage impressions (Cho et al. 2012a; Bettie and Jones 2008). Consequently, the fact that it negatively impacts on prices means that this impression management tactic does not produce the expected result of swaying readers to perceive the company's social and environmental efforts in a more favorable light. This finding is somewhat surprising given the resonance attributed to the impression management strategies, including the use of visuals and graph distortions (Cho et al. 2012a; Jones 2011; Bettie and Jones 2008). It does therefore imply that attempts to influence the readers' perceptions through the use/abuse of graphs do not appear to have the intended effect. Instead, it may be argued that investors are able to detect the graphs discrepancy and impound such instance as a negative attribute in the decision-making process. Relatedly, this may that investors are skillful readers (Fornaciari and Pesci 2018) that are able of detecting impression management tactics adopted by managers who prepare the sustainability reports (Diouf and Boiral 2017). The idea that investors are able to detect impression management tactics also sheds light on the necessity of further investigations on other stakeholders' perceptions of the disclosed and potentially distorted information. The visual power of graph distortions (Usmani et al. 2019) does appear to show any ability to influence investors in conveying a good impression of the company. Contrastingly, our study indeed shows that investors positively react to financial information. Furthermore, due to the interest of investors in financial performance, they might be less inclined to trust information contained in sustainability reports (Diouf and Boiral 2017), whose content is only partially linked to financial results.

The surprising finding of the negative impact of graphs' distortion is important because it helps to distinguish among different types of stakeholders when impression management tactics are applied (Fornaciari and Pesci 2018; Costa et al. 2019). In addition, this study underscores the importance of investigating both the preparers' perspective and the readers' perspective (Merkl-Davies and Brennan 2011) for a better understanding of impression management supposed results and use.

Finally, comparing the coefficients of the proposed models, a further important result of this research is that by adding the VGDI, the EPS coefficient decreased. In reading this finding within the impression management framework, it is important to look at the global impact of the distorted information, because it signals that when impression management techniques are detected by skilled stakeholder the result could influence readers to take more skeptical look at the other information disclosed by companies. Our results, indeed, seem to show that the visual impression management tactics, detected and recognized by investors, may need the perceptions of untrustworthiness about the company's information set, particularly in relation to earnings performance—albeit that such information is subject to audit and regulatory scrutiny.

5 Conclusions

This paper sought to analyze the readers' reaction to the use/abuse of visuals, in particular of graphs, by relying on the interpretive lens of impression management (Brennan et al. 2009; Merkl-Davies and Brennan 2011). In particular, our data interpretation focuses on investors as reader of the disclosure of big listed companies and such companies are supposed to have the willingness of influencing the reaction of their more salient stakeholders (Mitchell et al. 1997).

Prior researchers focus their analysis on the preparers/managers effort to impress readers by producing a favorable perception of the organization, but little attention is paid to the concrete results of these efforts. If the effort does not lead to a 'real' consequence, i.e., if readers' decision-making process is not influenced by the tactics, there is a question as to why companies should distort visual/graphical information. More concretely, this study accepts the Beattie and Jones (2008) recommendations to investigate more on the 'human data processing context', such as shareholders' investment decisions and it address a gap in the literature in relation to the possible consequences of corporate impression management techniques. Despite the preparers' behavior and the efforts done by scholars to understand it (Cho et al. 2012a; Jones 2011), we argue that graph distortion is a concrete impression management tool only if it is able to influence the investors' decisions.

Following the impression management literature, there is an implication that graph distortion would positively impress upon readers and thereby achieving in this way the preparers' aims. Our results contradict this expectation, showing that graph distortion has a significant and negative impact on market value and upon the investors' decision-making process. On one hand, therefore, visual impression management tactics seem value relevant, but on the other hand, it does not have the intended effect. Despite the potential of graphs to improve the effectiveness of communication (Lee and Tweedie 1975; Paivio 1971; Bettie and Jones 1992), these findings seem to suggest that sophisticated users (e.g., investors) are able to read and recognize distorted information, thereby Diouf and Boiral's (2017) findings.

The implication of these results is that the impression management literature needs to pay more attention to the readers' reactions to complement the well-established work on the preparers' intent(s). In fact, even though the literature does emphasis graph distortions as a key impression management technique (Beattie and Jones 1992 and 1997; Jones 2011; Cho et al. 2012a), the distortion tactic appears to have been 'found out' thereby leading to a significant negative influence on the investors' decision-making process. Hence, if as intended, the managers appear to have failed in their attempts to create favorable impressions in the minds of the receivers of the disclosed information.

This study represents a first attempt of evaluating the impression management effects on the receivers of different disclosure documents. Its key contribution leads to three important implications for the existing literature and for the managers responsible for corporate disclosure. First, this research shows the necessity of considering both the preparers and the receivers' perspectives when evaluating impression management techniques (Merkl-Davies and Brennan 2011). In evaluating graph distortion as an impression management strategy (Cho et al. 2012a; Jones 2011), the literature appears to have so far missed a crucial point as to the real power of distortion, namely that, if detected, impression management strategies can produce the opposite effects. Second, in this study, it is shown that there is a concrete effect of visual disclosures (Brennan et al. 2009; Cho et al. 2012a; Jones 2011; Pesci et al. 2015) and this should be further evaluated in relation to the stakeholders who receive the distorted information. Arguably, investors (and/or their advisers, such as analysts) are skilled stakeholders (Fornaciari and Pesci 2018) that would have the ability of detecting visual impression management techniques. Third, the distorted information, if detected, can affect the general trust as to the reliability of the company's disclosure. This last observation is particularly worthy of attention because corporate disclosure does still on trust and can positively influence the decision-making process, only if it is considered reliable. This last implication should be carefully evaluated by mangers, who are responsible for the companies' disclosure.

Finally, we acknowledge that this analysis is subject to some limitations. It considers only one type of visuals (i.e., graph distortions). It does not consider other typologies of disclosure documents or communication tools used by companies that can contain graphs and it is based on a sample of three European countries. In this regard, it is argued that the development of the mixed method (manual content analysis and use of the regression model) is time-consuming while allowing researchers to test their research question under the above-mentioned specific conditions. The sample data could certainly be extended in future studies in terms of more recent years and number of countries and include additional typologies of visual information or impression management tactics.

Literature

Aboody, D., & Lev, B. (1998). The value relevance of intangibles: The case of software capitalization. *Journal of Accounting Research, 36,* 161–191.

Amir, E., & Lev, B. (1996). Value relevance of non financial information: The wireless communication industry. *Journal of Accounting and Economics, 1–3*(22), 3–30.

Ball, R., & Brown, P. (1968). An empirical evaluation of accounting income numbers. *Journal of Accounting Research, 6*(2), 159–178.

Barth, M. E. (2006). Research, standard setting, and global financial reporting. *Foundations and Trends in Accounting, 1*(2), 71–165. https://doi.org/10.1561/1400000002.

Barth, M. E., Beaver, W. H., & Landsman, W. (2001a). Value relevance of banks fair value disclosures under SFAS 107. *The Accounting Review, 71*, 513–537.

Barth, M. E., Beaver, W. H., & Landsman, W. (2001b). The relevance of the value relevance literature for financial accounting standard setting: Another view. *Journal of Accounting and Economics, 31*.

Barth, M. E., & Clinch, G. (2009). Scale effects in capital markets-based accounting research. *Journal of Business Finance and Accounting, 36*(3–4), 253–288. https://doi.org/10.1111/j.1468-5957.2009.02133.x.

Barth, M. E., Landsman, W. R., & Lang, M. H. (2008). International accounting standards and accounting quality. *Journal of Accounting Research, 46*(3), 467–498. https://doi.org/10.1111/j.1475-679X.2008.00287.x.

Bartov, E., Goldberg, S. R., & Kim, M. (2005). Comparative value relevance among German, U.S., and International accounting standards: A German stock market perspective. *Journal of Accounting, Auditing & Finance, 20*(2), 95–119. http://doi.org/10.1177/0148558X0502000201.

Beattie, V., & Jones, M. J. (1992). The use and abuse of graphs in annual reports: A theoretical framework and an empirical study. *Accounting and Business Research, 22*(88), 291–303. https://doi.org/10.1080/00014788.1992.9729446.

Beattie, V., & Jones, M. J. (1997). A comparative study of the use of financial graphs in the corporate annual reports of major U.S. and U.K. companies. *Journal of International Financial Management and Accounting, 8*(1), 33–69.

Beattie, V., & Jones, M. J. (2002). Measurement distortion of graphs in corporate reports: An experimental study. *Accounting, Auditing and Accountability, 15*(4), 546–564.

Beattie, V., & Jones, M. J. (2008). Corporate reporting using graphs: A review and synthesis. *Journal of Accounting Literature, 27*(June), 71–110.

Beaver, W. H. (1968). The information content of annual earnings announcements: Empirical research in accounting selected studies. *Journal of Accounting Research, 6,* 67–92.

Bernardi, R. A., Bean, D. F., & Weippert, K. M. (2002). Signaling gender diversity through annual report pictures. *Accounting, Auditing & Accountability Journal, 15*(4), 609–616. https://doi.org/10.1108/09574090910954864.

Bernardi, R. A., Bean, D. F., & Weippert, K. M. (2005). Minority membership on boards of directors: The case for requiring pictures of boards in annual reports. *Critical Perspectives on Accounting, 16*(8), 1019–1033. https://doi.org/10.1016/j.cpa.2004.02.009.

Brennan, N. M., Guillamon-Saorin, E., & Pierce, A. (2009). Impression management: Developing and illustrating a scheme of analysis for narrative disclosures—A methodological note. *Accounting, Auditing & Accountability Journal, 22*(5), 789–832.

Brown, J. (2010). Accounting and visual cultural studies: Potentialities, challenges and prospects. *Accounting, Auditing & Accountability Journal, 23*(4), 482–505. https://doi.org/10.1108/09574090910954864.

Carnevale, C., Mazzuca, M., & Venturini, S. (2012). Corporate social reporting in European banks: The effects on a firm's market value. *Corporate Social Responsibility and Environmental Management, 19,* 159–177.

Cho, C. H., Freedman, M., & Patten, D. M. (2012a). Corporate disclosure of environmental capital expenditures: A test of alternative theories. *Accounting, Auditing & Accountability Journal, 25*(3), 486–507.

Cho, C. H., Michelon, G., & Patten, D. M. (2012b). Impression management in sustainability reports: An empirical investigation of the use of graphs. *Accounting and the Public Interest, 12*(1), 16–37. https://doi.org/10.2308/apin-10249.

Cho, C. H., Roberts, R. W., & Patten, D. M. (2010). The language of US corporate environmental disclosure. *Accounting, Organizations and Society, 35*(4), 431–443. https://doi.org/10.1016/j.aos.2009.10.002.

Clarkson, P. M., Fang, X. H., Li, Y., & Richardson, G. (2013). The relevance of environmental disclosures: Are such disclosures incrementally informative? *Journal of Accounting and Public Policy, 32*(5), 410–431.

Costa, E., Pesci, C., Andreaus, M., & Taufer, E. (2019). Empathy, closeness, and distance in non-profit accountability. *Accounting, Auditing & Accountability Journal, 32*(1), 224–254.

Courtis, J. K. (1996). Disclosure redundancy in annual reports. *Accountability and Performance, 2*(3), 1–16.

Courtis, J. K. (2004a). Colour as visual rhetoric in financial reporting. *Accounting Forum, 28*(3), 265–281. https://doi.org/10.1016/j.accfor.2004.07.003.

Courtis, J. K. (2004b). Corporate report obfuscation: Artefact or phenomenon? *British Accounting Review, 36*(3), 291–312. https://doi.org/10.1016/j.bar.2004.03.005.

Craig, R. J., & Brennan, N. M. (2012). An exploration of the relationship between language choice in CEO letters to shareholders and corporate reputation. *Accounting Forum, 36*(3), 166–177.

Davison, J. (2007). Photographs and accountability: Cracking the codes of an NGO. *Accounting, Auditing & Accountability Journal, 20*(1), 133–158. https://doi.org/10.1108/09574090910954864.

Davison, J. (2009). Icon, iconography, iconology visual branding, banking and the case of the bowler hat. *Accounting, Auditing & Accountability Journal, 22*(6), 883–906. https://doi.org/10.1108/09574090910954864.

Davison, J. (2011). Barthesian perspectives on accounting communication and visual images of professional accountancy. *Accounting, Auditing & Accountability Journal, 24*(2), 250–283. https://doi.org/10.1108/09574090910954864.

Davison, J. (2014). Visual rhetoric and the case of intellectual capital. *Accounting, Organizations and Society, 39*(1), 20–37. https://doi.org/10.1016/j.aos.2014.01.001.

Devalle, A., Onali, E., & Magarini, R. (2010). Assessing the value relevance of accounting data after the introduction of IFRS in Europe. *Journal of International Financial Management Accounting, 2*(21), 85–119.

Diouf, D., & Boiral, O. (2017). The quality of sustainability reports and impression management. A stakeholder perspective. *Accounting, Auditing & Accountability Journal, 30*(3), 643–668.

Dumay, J. C. (2012). Grand theories as barriers to using IC concepts. *Journal of Intellectual Capital, 13*(1), 4–15. https://doi.org/10.1108/14691930210412827.

Easton, P. D. (1999). Security returns and the value relevance of accounting data. *Accounting Horizons, 13*(4), 399–412.

Entwistle, G. M., Feltham, G. D., & Mbagwu, C. (2010). The value relevance of alternative earnings measures: A comparison of pro-forma, GAAP and I/B/E/S earnings. *Journal of Accounting, Auditing & Finance, 25*(2), 261–288. https://doi.org/10.1177/0148558X1002500205.

Falschlunger, L., Elsl, C., Losbichier, H., & Greil, A. M. (2015). Impression management in annual reports of the largest European companies. *Journal of Applied Accounting Research, 16*(3), 383–399.

Fornaciari, L., & Pesci, C. (2018). Global financial crisis and relevance of GRI disclosure in Italy. Insights from the stakeholder theory and legitimacy theory. *Financial Reporting, 1,* 67–102.

Gamerschlag, R. (2013). Value relevance of human capital information. *Journal of Intellectual Capital, 2*(14), 325–345.

Godfrey, J. M., Mather, P., & Ramsay, A. L. (2003). Earnings and impression management in financial reports: The case of CEO changes. *Abacus, 39*(1), 95–123.

Goffman, E. (1959). *The presentation of self in everyday life*. New York: Doubleday.

Harris, M. S., & Muller, K. A. (1999). The market valuation of IAS versus US-GAAP accounting measures using form 20-F reconciliations. *Journal of Accounting and Economics, 26*(1–3), 285–312. https://doi.org/10.1016/S0165-4101(99)00003-8.

Hassel, L., Nilsson, H., & Nyquist, S. (2005). The value relevance of environmental performance. *European Accounting Review, 14*(1), 41–61. https://doi.org/10.1080/0963818042000279722.

Hrasky, S. (2012). Visual disclosure strategies adopted by more and less sustainability-driven companies. *Accounting Forum, 36*(3), 154–165. https://doi.org/10.1016/j.accfor.2012.02.001.

Jones, M. J. (2011). The nature, use and impression management of graphs in social and environmental accounting. *Accounting Forum, 35*(2), 75–89. https://doi.org/10.1016/j.accfor.2011.03.002.

Kothari, S. P. (2001). Capital markets research in accounting. *Journal of Accounting and Economics, 1*(31), 105–231.

Kothari, S. P., & Zimmerman, J. L. (1995). Price and return models. *Journal of Accounting and Economics, 20*(2), 155–192.

Krippendorff, K. (2004). *Content analysis: An introduction to its methodology*. Thousand Oaks, CA: Sage.

Lee, T. A., & Tweddie, D. P. (1975). Accounting information: An investigation of private shareholder usage. *Accounting and Business Research, 5*(20), 280–291.

Lightstone, K., & Driscoll, C. (2008). Disclosing elements of disclosure: A test of legitimacy theory and company ethics. *Canadian Journal of Administrative Sciences, 25*(1), 7–21. https://doi.org/10.1002/cjas.50.

Linsley, P., & Kajuter, P. (2008). Restoring reputation and repairing legitimacy: A case study of impression management in response to a major risk event at Allied Irish Banks plc. *International Journal of Financial Services Management, 3*(1), 65–82.

Mechelli, A. (2013). *La value relevance del bilancio di esercizio*. Torino: Giappichelli Editore.

Merkl-Davies, D. M., & Brennan, N. M. (2007). Discretionary disclosure strategies in corporate narratives: Incremental information or impression management? *Journal of Accounting Literature, 27,* 116–196.

Merkl-Davies, D. M., & Brennan, N. M. (2011). A conceptual framework of impression management: New insights from psychology, sociology and critical perspectives. *Accounting and Business Research, 41*(5), 415–437.

Merkl-Davies, D. M., Brennan, N. M., & McLeay, S. (2011). Impression management and retrospective sense-making in corporate narratives: A social psychology perspective. *Accounting, Auditing & Accounting Journal, 24*(3), 315–344. https://doi.org/10.1108/09513571111124036.

Mitchell, R. K., Agle, B. R., & Wood, D. J. (1997). Theory of stakeholder identification and salience: Defining the principle of who and what really counts. *The Academy of Management Review, 22*(4), 853–886.

Mitra, S., & Hossain, M. (2009). Value relevance of pension transition adjustments and other comprehensive income components in the adoption year of SFAS No. 158. *Review of Quantitative Finance and Accounting, 33*(3), 121–137. https://doi.org/10.1007/s11156-009-0112-4.

O'Donovan, G. (2002). Environmental disclosure in the annual report. Extending the applicability and predictive power of legitimacy theory. *Accounting, Auditing & Accountability Journal, 15*(3), 344–371. http://doi.org/10.1108/09574090910954864.

O'Keefe, P., & Conway, S. (2008). *Impression Management and Legitimacy in an NGO Environment*, UTAS working paper series, 1–27.

Ohlson, J. A. (1995). Earnings, book values and dividends in security valuation. *Contemporary Accounting Research, 11*(2), 661–687. https://doi.org/10.1111/j.1911.3846.1995.tb00461.x.

Paivio, A. (1971). Imagery and language. In: S. J. Segal (Ed.), Imagery. *Current Cognitive Approach*. Elsevier.

Parker, L. (2009). Photo-elicitation: an ethno-historical accounting and management research prospect. *Accounting, Auditing & Accountability Journal, 22*(7), 1111–1129. https://doi.org/10.1108/09574090910954864.

Parker, L., & Guthrie, J. (2009). Championing intellectual pluralism. *Accounting, Auditing & Accountability Journal, 22*(1), 5–12. https://doi.org/10.1108/MBE-09-2016-0047.

Penman, S. (1997). A synthesis of equity valuation techniques and the terminal value calculation for the dividend discount model. *Review of Accounting Studies, 2*.

Penman, S. (2012). *Financial Statement Analysis and Securities Valuation*. New York: McGraw-Hill.

Pesci, C., Costa, E., & Soobaroyen, T. (2015). The forms of repetition in social and environmental reports: Insights from Hume's notion of "impressions". *Accounting and Business Research, 45*(6–7), 765–800. https://doi.org/10.1080/00014788.2015.1084224.

Pieters, R., & Wedel, M. (2007). Goal control of attention to advertising: The Yarbus implication. *Journal of Consumer Research, 34*(2), 224–233. https://doi.org/10.1086/519150.

So, S., & Smith, M. (2002). Colour graphics and task complexity in multivariate decision making. *Accounting, Auditing & Accountability Journal, 15*(4). http://doi.org/10.1108/09574090910954864.

So, S., & Smith, M. (2009). Value-relevance of presenting changes in fair value of investment properties in the income statement: Evidence from Hong Kong. *Accounting and Business Research, 39*(2), 103–118. https://doi.org/10.1080/00014788.2009.9663352.

Stock, J. H., & Watson, M. W. (2009). *Introduzione all'econometria*. Milano: Pearson Addison Wesley.

Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. *The Academy of Management Review, 20*(3), 571–610.

Sullivan, J. J. (1988). Financial presentation format and managerial decision making tables versus graphs. *Management Communication Quarterly, 2*(2), 194–216.

Unerman, J. (2000). Reflection on quantification in corporate social reporting concent analysis. *Accounting, Auditing & Accountability Journal, 13*(5), 667–680. https://doi.org/10.1108/09574090910954864.

Usmani, M., Davison, J., & Napier C. (2019). *The production of stand alone sustainability reports: Visual impression management, legitimacy and "functional stupidity"*. Working paper.

Verbeek, M. (2006). *Econometria*. Bologna: Zanichelli.

Warren, S. (2005). Photography and voice in critical qualitative management research. *Accounting, Auditing & Accountability Journal, 18*(6), 861–882. https://doi.org/10.1108/09574090910954864.

White, H. (1980). A heteroscedasticity consistent covariance matrix estimator and a direct test for heteroscedasticity. *Econometrica, 48*(4), 817–838.

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What Drives the Level of Non-financial Assurance in PIEs? Empirical Evidence on the European Firms Listed on Forbes 2000

Andrea Venturelli and Simone Pizzi

1 Introduction

Since 2017, the Member States was involved by the Directive 2014/95/EU. The Directive presented a very high level of innovation in the European context due to the lack of regulations regards non-financial reporting (Steurer et al. 2012). Specifically, before its implementation, only a few numbers of Member States (e.g., France and Italy) presented specific regulation (Venturelli and Caputo 2017). Although in the absence of regulations, the non-financial reporting activities were characterized by rapid growth in Europe (KPMG 2017) due to the strategic role recognized by firms and investors to them. However, this increase was not supported by a subsequentially increase in the number of third-party assurance statement (CSRA) published by the firms (KPMG 2017).

The aim of the Directive 2014/95/EU was to increase the harmonization's degree of the non-financial information produced by the Public Interest Entities (PIEs) through a mandatory legal provision. However, this process of harmonization was characterized by physiological difficult connected to the possibility for the Member States to transpose the Directive into their legal systems in a different way respect the original provisions with the only limit of the "Gold Plating" rule. Also, another problem of harmonization was the possibility for the firms to adopt different standard setters for their activities of accounting and auditing. These possibilities contrast to the original concept of *de jure* harmonization. In fact, previous studies show how the accounting harmonization needs the provision of common accounting method (Archer et al. 1995; Canibano and Mora 2000). For this reason, we can say how the

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harmonization of the non-financial reporting in Europe is not following an effective standardization.

These problems of comparability of the information are more relevant regards the legal provisions of a CSRA. In fact, only 20 countries have fully transposed this aspect into their national legal systems while the other 10 countries transposed this aspect in a different way (CSR Europe and GRI 2017). Also, the CSRA presents other complications due to the coexistence of different standard and due to the absence of a specific standard for the <IR>. In fact, the CSRA's market is characterized by the large diffusion of the ISAE 3000 and AA1000AS. The ISAE3000 is the standard setter provided by the IAASB (2013) while the AA1000AS is the standard setter developed by AccountAbility (2008). Whatever their differences, these standards can be used together in the same assurance process (Boiral et al. 2019). However, previous studies highlight how the use of common standards does not produce the same level of transparency of the third-party assurance statement due to the possibility for the auditor to report their activities in a different way (Perego and Kolk 2012).

The aim of this study is to evaluate the level of CSRA's harmonization after the implementation of the Directive 2014/95/EU through the evaluation of the degree of transparency connected to the third-party independent assurance statements published by a set of European Public Interest Entities. Specifically, our research questions will be connected to the exigence to understand which organizational and institutional factors impact positively or negatively on firms' approach to CSRA.

The first part is statistical descriptive, and its aim is to evaluate the level of transparency of the information reported by the auditor into the CSRA's statement. The second is statistical inferential and its aim is to evaluate which factors impact on the average level of transparency of the CSRA's statement provided by the firms. In this second analysis, we make an analysis who considers itself the effects connected to the country of origin and to the sector of activity.

2 Theoretical Framework

Several empirical studies investigate the impact of the Directive 2014/95/EU on the quality of the CSR disclosure produced by the European PIE (Venturelli et al. 2018; Dumitru et al. 2017; Venturelli et al. 2017; Manes Rossi et al. 2018; Matuszak e Rozanska 2017; Sierra Garcia et al. 2018). However, there aren't specific studies about the impact of the Directive on the external assurance documents provided by the third-party independent auditors. The comprehension of the phenomenon in the European context needs the contemporary analysis of different theories because the implementation of the Directive 2014/95/EU into the national legal systems of the country was characterized by different provisions regards this topic (Venturelli and Caputo 2017; CSR Europe and GRI 2017).

The literature about the role of the CSRA is characterized by several approaches regards the reasons and the effects connected to the adoption of these practices by the firms (Cohen and Simnett 2014; Tarquinio 2018). The process of understanding the effect connected to the introduction of a mandatory CSRA in Europe needs the analysis of several theoretical paradigms in order to understand the real effects of the rule. In fact, according to prior studies, the analysis of Directive 95/2014/EU needs an adequate approach by academics due to the coexistence of several criticisms in its implementation (Dumay et al. 2019). In fact, our analysis is influenced by the coexistence of voluntary and mandatory items on CSRA. An example is represented by the presence of a specific legal provision to assure the non-financial report and by the absence of a common assurance standard (CSR Europe and GRI 2017). This evidence represents criticisms in order to achieve an adequate degree of information's harmonization due to the possibility for the assuror to provide reports characterized by different levels of transparency (Perego and Kolk 2012).

One of the most common theories adopted by academics to analyze phenomenon connected to corporate social responsibility is the legitimacy theory (Guthrie and Parker 1989). Specifically, CSRA's could be analyzed through the lens of the theoretical framework proposed by Suchman (1995). From the perspective of Suchman, legitimacy consists of a general perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms and value. Thus, the author suggests two different approaches to achieve these targets. These two approaches establish a theoretical distinction between institutional legitimacy and strategic legitimacy.

The institutional legitimacy is common of the firms who operate in countries with a high level of regulation about the assurance of the non-financial disclosure (Martinez Ferrero and Garcia Sanchez 2017). According to several authors (Suchman 1995), institutional legitimacy represents an independent theory from strategic legitimacy due to its characteristics. In fact, this approach is characterized by a strong relationship between firms' behaviors and context (Matten and Moon 2008). Furthermore, prior studies evidenced how firms usually adopt behaviors and organization similar to their competitors in order to increase their legitimacy (Deegan 2002).

Regard the specific topic of CSRA, firms look at the assurance processes like a "set of constitutional beliefs" where a central role is covered by the rules, the social norms and the cultural framework (Tarquinio 2018). Regard the role of the regulation, previous studies highlight how the mandatory assurance of the non-financial information could produce different effects. Part of these results follow the skepticism of the academic regard the effect of the regulation on the CSR's orientation by the firms (Vormedaal and Ruud 2009) and specifically regard the Directive 2014/95/EU (La Torre et al. 2018). In fact, the literature shows how, in the large part of the cases, the regulation produces an increase of the quantity of information provided by the firms but not a substantial increase of the quality due to a "tick-box" approach by the management (Ackers and Eccles 2015).

HP1: *The "hard" regulation increases the quantity of information's provided by the assuror into the third-party assurance statement.*

Also, previous studies highlight how the introduction of specific regulation about ESG reporting does not improve the quality of the disclosure produced by the firms. A previous study conducted before the implementation of the non-financial directive in the European countries shows how a “soft” regulation could produce a higher level of compliance about non-financial reporting than a “hard” regulation (Bebbington et al. 2012). Further implications related to the adoption of mandatory ESG reporting are connected to the risks of standardization of the documents; Husted and Salazar (2006). In fact, the coercive nature of the third-party assurance would promote the standardization of practices. However, the quantitative increase would not follow a qualitative increase since the use of a standardized framework would penalize the use of specific indicators and information related to the specific business sector (Brown et al. 2009; Chauvey et al. 2015; Luque-Vílchez and Larrinaga 2016).

HP2: The “hard” regulation increases the standardization of the information’s provided by the assuror into the third-party assurance statement.

Regard the specific field of the third-party assurance statement, previous studies highlight how this area is characterized by a short number of standard setter (e.g., GRI Guidelines, AA1000AS, ISAE3000) and a market share characterized by the domain of the Big 4 (Sierra et al. 2013; Soh and Martinov-Bennie 2018). However, the use of common frameworks is not always associated with a systematic standardization of the third-party assurance statement (O’Dwyer and Owen 2005). Regard the use of common standard setter, previous studies highlight the possibilities for the assuror to provide a different level of assurance (Fuhrmann et al. 2017). Specifically, they could produce assurance statements characterized by a different number of information provided in the third-party statements (Perego and Kolk 2012). Also, other studies highlight how the nature and the perspective of the assurance provider could impact in a different way on the transparency of the information disclosed in the reports (Perego 2009; Pflugrat et al. 2011).

HP3: The nature of the assuror impact on the level of transparency of information’s provided by the assuror into the third-party assurance statement.

The strategic approach is common of the firms who work in countries with low level, or absence, of regulation about the assurance of the non-financial disclosure (Martinez Ferrero and Garcia Sanchez 2017). Also, previous studies evidenced how the firms who operate in “stakeholder-orientated countries” are, on average, more CSR oriented than the firms who operate in “shareholder-orientated countries” (Simnett et al. 2009; Kolk and Perego 2010). In fact, the choice to assure their report in voluntary way derives from the possibility to engage with the stakeholder better than the firms who provide non-financial disclosure without any form of assurance (Bagnoli and Watts 2017). The opportunity to engage better with the stakeholder could produce an increase of trust regards the social responsibility activities implementing by the firms. From the perspectives of the stakeholders, previous researches show how the CSRA present similar effects to the financial statements certification processes (Hay and Davis 2004; Moroney et al. 2012). In fact, the strategies connected to the stakeholder engagement process are value relevant for the firms due to the risks of greenwashing (Casey and Grenier 2014; Flasher et al. 2018). This phenomenon, defined as the gap between the results obtained and the results presented, appears to be able to alter market conditions and consumer preferences because of opportunistic behavior displayed by companies (Siano et al. 2017) and due the possibility to identify different degrees of reliability of their reports (Michelon et al. 2015).

HP4: The risk of greenwashing increases the level of transparency of information's provided by the assuror into the third-party assurance statement.

From this perspective, the CSRA could produce positive effects due to the possibility for the management to decrease this risk through the ex-ante definition of their level of reliability (Bagnoli and Watts 2017). For this reason, the competitive advantage connected to the use of external assurance is typical for the firms that operate in a market characterized by a high level of compliance by the competitor or by a high level of environmental risks (Simnett et al. 2009; Fernandez-Feijoo et al. 2014). In fact, previous empirical studies show how the firms who work in a sector characterized by these characteristics are more CSR's oriented from the perspective of the reporting activity (Lock and Seele 2015; Venturelli et al. 2018). According to the framework proposed by DiMaggio and Powell (1983), in these contexts, it is easy to find firms that try to respect the expectative of their stakeholders through a "normative" or a "mimetic" isomorphism (Beddewela and Fairbrass 2016). However, this approach could produce a "reverse expectation gap" by the stakeholder through the overvaluation of the external assurance provided by the assuror and the possible undervaluation of the internal assurance practices involved by the audit committees (Tarquinio 2018).

HP5: The sensitivity of the sector increases the level of transparency of information's provided by the assuror into the third-party assurance statement.

Also, other academics highlight how the external third-party assurance could drive the increase in the market value of the firms. Specifically, for the investors is it possible to find a double-way relationship between the CSRA and the economic aspects connected to the firms (Farooq and De Villers 2017). The first perspective of analysis regards the relationship between the economic and financial performances of the firms and their level of CSRA. From this perspective, previous empirical analysis highlights how is it possible to find a different relation between the CSRA and the financial performance (Sierra et al. 2013; Simmnett et al. 2009). The second perspective of analysis regards the costs connected to the processes of external assurance. In fact, from the perspective of the firms, the costs connected to these practices could be too expensive (De Moor and Beelde 2005). This evidence confirms the other results provided by the academics regards the CSRA of the sustainability reports provided by the MNCs. These results evidence how the cost of the assurance could be a negative driver for the implementation of this process by the firms with less economic resources because the managers usually do not recognize the added value to these practices (Park and Bronsors 2005; Farooq and De Villers 2017).

HP6: The firm size increases the level of transparency of information's provided by the assuror into the third-party assurance statement.

The academics analyses the CSRA of the <IR> as an autonomous field of study (Simnett and Huggins 2015; Simmnett et al. 2016b; Velte and Stawinova 2017b). The independence of this field of studies respects the traditional forms of non-financial reporting are based on the absence of a specific standard of assurance about this form of reporting (Simmnett and Huggins 2015). From this perspective, the inclusion of the <IR> into the content of the Directive 2014/95/EU could represent a way to encourage the IIRC to establish a set of rules for the assurance of their report (Dumay et al. 2017). Previous studies highlight how in countries characterized by voluntary adoption of the <IR> by the firms, the most common assurance methodology consists in a separate assurance by the external auditors regards the financial and the sustainability aspects (Eccles et al. 2012). However, the respondents to an international query about the adoption of a specific standard of assurance for the <IR> confirm the exigence of its introduction. In fact, a pioneer study about the impact of CSRA on a sample of US firms shows how the investor prefers a separate analysis of the financial and non-financial information to a mixed analysis conducted using a common assurance's standards (Dilla et al. 2015). According to the studies that regarding the traditional non-financial report, the practical implications connected to these preferences by the investor is an increase of the demand of external assurance by the firms to improve the perceived reliability of their report.

HP7: The publication of an integrated report increases the level of transparency of information's provided by the assuror into the third-party assurance statement.

3 Research Methodology

3.1 Data Collection and Sample Description

The analysis was carried out on a sample of 284 European firms involved by EU Directive 95/2014. Specifically, we have considered in our research European firms listed on the Forbes Global 2000 index (Table 1). The choice to considered Forbes Global 2000 Index as source allowed us to analyze the largest European firms in term of sales, profit, assets and market value. The analysis covers the fiscal year 2017, indeed the first year of application of the Directive in the European system.

We conducted two further classifications aimed to identify the sector's sensitivity of the firms and the level of regulation about CSRA of the country. The reason behind this further classification is connected to the opportunity to evaluate the differences within our sample.

The sector's sensitivity has been evaluated through the degree of controversiality connected to the firms. The choice to observe the sector's effects through the distinction between controversial and non-controversial firms follow as evidenced in prior studies about corporate social responsibility. Several studies denoted how controversial firms' approach to corporate social responsibility is different for controversial

Table 1 Sample representation

Country	Level of regulation about CSRA	Employees	Controversial sectors firms (%)	Observation
Austria	Low	28,542	100	6
Belgium	Low	55,840	80	10
Czech Republic	Low	427,268	0	1
Denmark	Hard	88,973	67	12
Finland	Low	41,250	50	8
France	Hard	57,486	47	45
Germany	Hard	74,004	56	41
Greece	Low	67,636	100	3
Hungary	Low	18,178	100	1
Ireland	Low	86,890	80	10
Italy	Hard	81,919	70	20
Luxembourg	Low	60,567	43	7
Netherlands	Low	29,701	62	13
Norway	Low	139,660	71	7
Poland	Low	45,136	67	3
Portugal	Low	72,595	75	4
Spain	Low	38,230	53	17
Sweden	Low	33,870	38	26
UK	Hard	57,407	46	50
Total		61,684	56	284

firms (Vollero et al. 2018). In fact, prior studies reveal how controversial firms are more interested to adopt these practices in order to mitigate stakeholders' skepticism on their ethical behavior (Lindorff et al. 2012). Moreover, the relationship between CSR and firm's risks is more significant and economically relevant for them (Jo and Na 2012). In this sense, according to prior studies about the role of third-party independent assurance on stakeholder's trust on non-financial reports' contents (Farooq and De Villiers 2017), their orientation to CSRA could be different due to the positive externalities connected to the adoption of these practices.

The evaluation of the level of the regulation about CSRA was conducted through the analysis of the transposition of the European Directive into the national legal systems. In fact, according to previous research (CSR Europe and GRI 2017), the transposition of the regulation about the assurance was different within the countries because they were authorized to apply changes of requirements regarding specific aspects of the Directive with the respect of the principle of "Gold Plating". Also, according to prior literature about non-financial regulation (Bebbington et al. 2012), the different transposition of the topics connected to the CSRA activities imply a passage from a "soft regulation" to a "hard regulation" caused by an increase

Table 2 Matrix representation of the sample

	Sector's sensitivity		
		Non-controversial sectors	Controversial sectors
Degree of regulation about CSRA	Soft law	64 companies operating in non-controversial sectors and in countries that have fully transposed the Directive 2014/95/EU as regards the CSRA theme	93 companies operating in controversial sectors and in countries that have fully transposed the Directive 2014/95/EU as regards the CSRA theme
	Hard law	61 companies operating in non-controversial sectors and in countries that have not fully transposed the Directive 2014/95/EU as regards the CSRA theme	66 companies operating in controversial sectors and in countries that have not fully transposed the Directive 2014/95/EU as regards the CSRA theme

of the number of legal requirements about non-financial reporting. According to La Torre et al. (2019), the comprehension of this aspect is relevant in Directive 95/2014/EU because only nine states have adopted "hard regulation" about CSRA through the explicit provisions of specific practices while the others have adopted a "soft regulation" through a formal check of the information provided. In this sense, the different institutional context impacts on assuror's approach to CSRA (Andon et al. 2015).

From the combined analysis of the sample regards the sensitivity of the sectors and the level of regulation, we can find how it is characterized by a good level of heterogeneity (Table 2). This evidence admits the possibility to structure analysis in different steps who regards the regulation and the sector effects connected to the level of assurance provided by the firms.

3.2 Model Specification

The methodology involved two different levels of analysis. According to previous research (Kolk and Perego 2012), the first one is an activity of content analysis provided by the researchers based on the framework proposed by O'Dwyer and Owen (2005). This method consists in the evaluation of the degree of transparency of the information's provided by the assuror into the third-party assurance statements. Specifically, the framework consists in an assessment grid composed by 19 items and 3 sub-items in order to evaluate an assurance score (AS) that can take values between 0 (not transparency) and 27 (excellent). As describe prior, the legal imposition of a third-party assurance does not provide equal degree of transparency because within the same standards is possible to find different types of processes conducted and a different quantity of information reported by the assuror (Hasan et al. 2005; Simnett 2012). In fact, it is possible to found a lack of information's between the substantial activities involved by the assuror and formal reporting activities. In this sense, the aim of the assessment grid is to provide a detailed analysis about the implementation of the assurance process through the evaluation of specific aspects connected to the principles of comparability, credibility and stakeholder responsiveness through the attribution of a score for each item (Perego and Kolk 2012).

The analysis was conducted on the documents provided by the firms on their Web site. Specifically, we analyzed the legal documents who respond to the legal requirement provided by the regulators regard the transposition of the Directive 2014/95/EU into the national regulation of the countries (CSR Europe and GRI 2017). However, this approach was limited due to the physiological risks connected to the research of data the Web sites (Vijiyarani and Suganya 2015).

The second part of the analysis was conducted through an empirical approach with the construction of a statistical model to evaluate the impact of the factors on the AS. Specifically, we analyze the impact of the factors for the full sample and for the four clusters previous highlighted. The empirical approach is typically in the fields of studies who regard the adoption by the firms of a third-party assurance on their non-financial information (Simmnett et al. 2016b; Velte and Stawinoga 2017a). In the construction of the two empirical models, we have considered, as dependent variable the AS. The selection of the independent variables was conducted through the analysis of the previous literature (Perego and Kolk 2012; Gürtürk and Hahn 2016; Martinez-Ferrero and Garcia-Sanchez 2017; Mock et al. 2007; Soh and Martinov-Bennie 2018; Seguí-Mas et al. 2015; Sethi et al. 2015; Simnett et al. 2009; Gillet-Monjarret, 2015; Simmnett and Huggins 2015; Simmnett et al. 2016a. b). We found three different types of factors who could impact on the level of transparency of the firms. The first type is the variables connected to the firm size and they are expressed using the natural logarithm of the average number of employees (EMP) involved in 2017 and the market capitalization (MKT) of the firms at the end of the fiscal year. The choice to use the natural logarithm of these variables is connected to the risk of outliers (Barrow 2009). The second type is the variables connected to the reporting's strategies of the firms. Specifically, for the first model, we use two dummy variables that regards the choice to assure their reports through a Big 4 (Big 4) and IIRC who represents the adoption, or not, of an integrated report. The third type is the variables connected to the internal CSR's factor connected to the firms. Specifically, we use the data provided by Thomson Reuters ASSET4 to identify the, respectively, environmental (ENV), social (SOC) and governance (GOV) scores of the firms. Also, with the use of the same database, we extract the data who regards the level of ESG controversies (ESG_C) of the firms (Table 3).

The functional form of the model is:

$$\begin{aligned}\mathrm{AS}_i = {} & \beta_1\mathrm{ENV} + \beta_2\mathrm{SOC} + \beta_3\mathrm{GOV} + \beta_4\mathrm{EMP} + \beta_5\mathrm{MKT} + \beta_6\mathrm{ESG}_C \\ & + \beta_7\mathrm{IIRC} + \beta_8\mathrm{BIG4} + \varepsilon\end{aligned}$$

Table 3 Variables description

Code	Description	Value
AS	Assurance score	From 0 to 27, where 0 means "no transparency" and 27 means "high level of transparency"
ENV	"Environmental score" of the firm	From 0 (Good) to 100 (Bad). Source: Thomson Reuters ASSET4
SOC	"Societal score" connected to the firm	From 0 (Good) to 100 (Bad). Source: Thomson Reuters ASSET4
GOV	"Governance score" connected to the firm	From 0 (Good) to 100 (Bad). Source: Thomson Reuters ASSET4
EMP	Number of employees involved in 2017	Natural logarithm of the average number of employees involved in 2017. Source: Asset4
MKT	Market capitalization achieved at the end of the fiscal year 2017	Natural logarithm of the market capitalization achieved at the end of the fiscal year 2017. Source: Asset4
ESG_C	"ESG controversial score" connected to the firm	From 0 (Good) to 100 (Bad). Source: Thomson Reuters ASSET4
IIRC	IIRC framework adoption	1 the firm publish an integrated report; 0 if not
Big 4	Type of assuror	1 if the firm's assuror is a Big 4; 0 if not

Table 4 Descriptive statistics connected to the variables

Independent variables	Obs	Min	Max	Mean	St. Dev
ENV	269	4.79	33.74	25.90	5.66
SOC	269	3.74	34.95	26.10	5.73
GOV	269	1.40	29.84	18.30	6.33
EMP	284	6.41	13.37	10.24	1.36
MKT	282	19.15	25.69	23.32	1.04
ESG_C	269	0.31	73.71	32.02	26.00
Big 4	284	0.00	1.00	0.70	0.46
IIRC	284	0.00	1.00	0.13	0.34

The descriptive statistics of variables are (Table 4).

4 Results

Results evidence an average AS equal to 13.61 points (Table 5). Italy, Spain, and France drive this result with an average AS, respectively, at 18.85, 18.53 and 18.51

Table 5 AS of the firms

Country	CSRA law	Controversial firms (%)	N	Mean	Median	Min	Max	St. Dev.
Austria	Low	100	6	8	9.75	0	19	8.967
Belgium	Low	80	10	6.7	3.67	0	16	6.75
Czech Republic	Low	0	1	0	0	0	0	–
Denmark	Hard	67	12	7.58	2.57	0	23	9.08
Finland	Low	50	8	18.13	19	0	25	8.149
France	Hard	47	45	18.51	18.62	16	20	1.1
Germany	Hard	56	41	13.73	17.75	0	20	7.553
Greece	Low	100	3	12.67	12.67	0	19	10.97
Hungary	Low	100	1	22	22	22	22	–
Ireland	Low	80	10	14.9	17.6	0	24	8.171
Italy	Hard	70	20	18.85	18.89	17	19	0.489
Luxembourg	Low	43	7	3.29	2.67	0	15	5.964
Netherlands	Low	62	13	14.38	17.67	0	21	7.556
Norway	Low	71	7	10.57	12	0	19	7.3
Poland	Low	67	3	2	2	0	6	3.464
Portugal	Low	75	4	16	16.5	6	25	7.789
Spain	Low	53	17	18.53	19.8	0	25	7.366
Sweden	Low	38	26	12.23	14	0	19	5.928
UK	Hard	46	50	10.9	15.08	0	23	8.267
Total	5/19	56	284	13.61	17.05	0	25	7.78

Analysis by country

points. The worst results were achieved by Poland, Luxembourg and Belgium with, respectively, an AS at 2, 3.29 and 6.7 points. Regards the relationship between regulations and AS, the table shows how we can find ranked Spain in the second position. In addition, the Spanish position is similar to the result achieved by both the Italian and French Companies. Furthermore, excluding both the Czech and Hungarian Companies, due to the lack of representativity (only 1 observation for each), we can find in the last four positions in Denmark. This result is relevant because the Danish government provides specific CSRA Regulations. In addition, the UK and German Companies are less transparent than other firms, which operate, for example, in Finland, Portugal or Ireland. These results do not confirm the HP1. Indeed, the analysis highlights how the over regulations produced by the countries during the transposition of the Directive 2014/95/EU does not provide in all the countries an increase of transparency in the documents provided by the firms. However, the HP2 is supported by these results. Indeed, it is possible to observe how the country with a "hard" CSRA Regulations shows a standard deviation smaller than the others. Specifically, the value of the standard deviation confirms the skepticism by the academics concerning the real effect of the Directive on the CSR's orientation of the firms due the risk of a "tick-box" approach (Ackers and Eccles 2015). The "thick box" approach by the firms is confirmed by the analysis of the Spearman Index (Barrow 2009) about the relationship between the percentage of controversial firms in the country and the respective AS. The statistical analysis presents a Spearman Index equal to 0181. This result confirms the HP5, but its small impact on the AS confirms how the strategic value recognized by the firms to the third-party assurance is limited. This result does not confirm in part the previous analysis conducted in the absence of legal requirement regard the CSRA. In fact, these studies evidence how the implications connected to the sector of origin are a positive driver in terms of voluntary adoption of these practices (Martínez-Ferrero and García-Sánchez 2018; Ruhnke and Gabriel 2013).

Preliminary to the multivariate analysis, we analyze the relationship of causality within the variables to exclude the existence of heteroscedasticity and multicollinearity. We evaluated the absence of heteroscedasticity through Breusch-Pagan/Cook-Weisberg test using STATA. Our test reveals the absence of heteroscedasticity of our data. Furthermore, despite the physiological criticism connected to the presence of unobserved variables, we assessed through the correlation analysis the absence of multicollinearity. In fact, according to Kalnins (2018) the representations of variables' relationship through a correlation analysis provided to the readers the possibility to understand the goodness of the data due to the presence of numerical information about them. Moreover, according to prior quantitative studies in accounting research, the absence of correlation higher than 0.800 exclude the presence of multicollinearity (Haniffa and Cooke 2002). In this sense, our results show a positive relationship between the AS and the choice to assure the report with a Big 4 firm and the voluntary adoption of IIRC. We did not find a significant relationship between the AS and the other variables included in the research. However, we discovered a positive relationship between Big 4 and IIRC (Table 6).

The multivariate analysis highlights how the sample is characterized by different factors of influence regards the average level of transparency of the AS. We analyzed the sample distinguish by sector of activity and level of regulation.

The first part of analysis conducted on the firms who operate in countries with a "hard" regulation shows how the controversial firms are influenced by more factors than the non-controversial firms. Specifically, we found how the Big 4 increase the AS of the firms, but the controversial firms are also influenced in a positive way by the IIRC and in a negative way by MKT. These results confirm the HP3 and the HP4 while the HP6 is not supported. The result about HP6 confirms as evidenced in prior studies. Specifically, prior studies denoted how stakeholder perception is more influenced by the sector of activity than the country where the firms operate (Gianfelici et al. 2018). In this sense, controversial firms that operate in a context characterized by hard regulation are typically more interested to engage in an effective way with their stakeholders than non-controversial firms due to the positive externalities connected to the adoption of socially responsible practices. In fact, according to prior literature, CSRA represents an effective tool to increase stakeholders' trust in the information

Table 6 Correlations analysis of the variables

	AS	ENV	SOC	GOV	EMP	MKT	ESG_C	IIRC	Big 4
AS	1	0.050	0.053	−0.053	−0.057	−0.065	0.006	0.246^{**}	0.632^{**}
ENV		1	0.516^{**}	0.100	0.239^{**}	0.192^{**}	-0.167^{**}	0.096	0.086
SOC			1	0.189^{**}	0.375^{**}	0.376^{**}	-0.164^{**}	−0.021	0.032
GOV				1	0.030	−0.018	0.455^{**}	-0.153^{*}	−0.037
EMP					1	0.523^{**}	-0.257^{**}	0.056	−0.002
MKT						1	-0.270^{**}	0.050	0.023
ESG_C							1	−0.074	0.007
IIRC								1	0.159^{**}
Big 4									1

**Correlation is indicative at 0.01 (two tails)
*Correlation is indicative at 0.05 (two tails)

provided by firms perceived by them as unethical (Cohen and Simnett 2014). Also, the negative relationship between AS and MKT could mean how the CSRA is perceived by the smallest firms how an instrument to increase their legitimacy. This result contrast part of the previous literature who highlights how the CSRA is perceived by the firms how a process characterized by several "internal" and "external" costs (Jones and Salomon 2010).

The second part of the analysis conducted on the firms who operate in countries with "soft" regulation shows how the two clusters are influenced by different factors. As shown before regards the firms who operate in countries with "hard" regulation, the variable Big 4 increase the level of AS. However, we found different results concerning the other variables included in the models. Regards the firms who operate in controversial sectors, we found a negative connection between ENV and the AS. This negative connection confirms the HP5 and is supported by prior evidence collected in previous studies about the connection between environmental practices and external assurance. Indeed, previous studies highlight how the firms with a high level of environmental impact are more transparency than the others are, and in absence of regulation prefer to make a voluntary external assurance of their environmental information (Braam et al. 2016). In this sense, firms characterized by low environmental impact are paradoxically less interested to assure their reports in order to increase their legitimacy. According to the results concerning the controversial firms who operate in countries with "hard regulation," we found a negative relation between the MKT and the AS for the non-controversial firms.

Finally, the analysis conducted on the full sample highlights a positive relationship between AS and the variables SOC, IIRC and Big 4. The positive impacts connected to SOC and IIRC confirm, respectively, HP4 and HP7. The verification of the HP4 and HP7 follows the previous literature about the strategic approach of the management regarding the CSR. In fact, the adoption of an integrated report and the activity of community engagement are typically voluntary, and they could be connected to an ethical behavior not related to an external pressure made by regulators (De Villers et al. 2014). In this sense, this evidence could be extended to the European context where the regulator did not provide specific regulation about the mandatory adoption of an Integrated Report in response to Directive 2014/95/EU (Table 7).

5 Conclusions

The aim of the Directive 2014/95/EU was to improve the level of harmonization regard the non-financial information in Europe. However, this result was not fully achieved by the legislator due to the absence of mandatory adoption of the specific standard setter. Thus, the transposition of the Directive into the national legislation was characterized by some differences in terms of content of the non-financial statement and requirement. The study shows how regards the third-party assurance statement the harmonization of the information is not fully achieved. We noted how

Table 7 Multivariate analysis

	Hard regulation-controversial firms		Hard regulation-non-controversial firms		Soft regulation-controversial firms		Soft regulation-non-controversial firms		Full	
	β	*p.*	*β*	*p.*	*β*	*p.*	*β*	*Sig.*	*β*	*p.*
(Costante)	32.006**	0.022	−11.560	0.636	9167	0.613	41.933*	0.060	19.471**	0.032
ENV	0.060	0.720	0.067	0.694	−0.243*	0.074	−0.065	0.731	−0.070	0.368
SOC	0.107	0.476	0.182	0.370	0.240	0.120	0.015	0.944	0.165*	0.051
GOV	−0.175	0.121	−0.119	0.460	−0.101	0.389	−0.079	0.587	−0.089	0.160
EMP	−0.066	0.908	0.074	0.923	−0.732	0.206	1257	0.178	−0.245	0.446
MKT	−1.064*	0.091	0.556	0.620	0.197	0.822	−2.062*	0.069	−0.523	0.229
ESG_C	−0.001	0.964	0.028	0.341	−0.038	0.157	0.021	0.558	−0.002	0.867
IIRC	4.523***	0.008	1.278	0.588	3.466	0.163	3.808	0.120	3.874***	0.000
Big 4	9.091***	0.000	10.405***	0.000	12.445***	0.000	11.826***	0.000	10.674***	0.000
R-squared	*0.537*		*0.516*		*0.496*		*0.574*		*0.466*	
Adj R-squared	*0.468*		*0.437*		*0.446*		*0.504*		*0.45*	

Dependent variable: AS

$^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.001$

the overregulation of the topic by the national regulators does not provide ever an increase of the degree of transparency of the information provided to the stakeholder.

The study shows how the involvement of the Big 4 firms into the assurance processes is a relevant driver for the achievement of a better level of transparency. However, the division in a cluster of the sample shows how the comprehension of which drivers drive the achievement of a better level of transparency needs an analysis who regards the country and sector effects. In fact, results highlight how for the same level of regulation is possible to find different effects connected to the inclusion of the firms in controversial, or not, sectors. Specifically, we can find how the size of the firms expressed by the variable MKT impact in a different way on the sample. In fact, the firm's size impact in the opposite way in the two kinds of countries. In particular, in countries with a low level of regulation, its impact regards the non-controversial firms while in the country with a high level of regulation its impact regards the controversial firms. Another important aspect is linked to the relevance of the IIRC on the AS. In fact, IIRC present an indicative impact in the context of firms who operate in the controversial sector and in countries with a high level of CSRA Regulations. On balance, the result confirms the strategic role of the <IR> into the process of legitimization of the firms.

The theoretical implications connected to our research are represented by the exigence to identify a common theoretical framework to analyze the voluntary aspects connected to a mandatory provision of specific regulation about non-financial reporting. Specifically, our result confirms the academic's skepticism about Directive 2014/95/EU effects (La Torre et al. 2018). In fact, as evidenced by our results, the introduction of a set of common rules about non-financial reporting is not even followed by an effective standardization. In this sense, despite a possible theoretical distinction between "soft" and "hard" regulation, our results denote different results about AS within our sample and within the same countries.

The practical implications connected to our research regard the possibility for practitioners to identify new assurance's standards in order to sustain the process of non-financial harmonization. Specifically, our findings suggest how, even if in absence of specific standards, the European firms that adopt Integrated Reports in order to respect the legal requirement connected to Directive 95/2014/EC provided more details about their assurance processes. In this sense, a central role is covered by practitioners and academics in order to identify a new assurance framework to reduce the risks of over-experimentation by IR's adopter.

The limitations of this research consist in a short period of analysis due to the short period of introduction of the Directive 2014/95/EU. The future researches could cover a higher number of countries and could consider a different period of analysis. Thus, the possible introduction of a specific standard of assurance regards the <IR> could represent an important extension of this work.

Literature

AccountAbility. (2008). AA1000 Assurance standard 2008. Available at: http://www.accountability.org/images/content/0/5/056/AA1000AS%202008.pdf. Accessed June 18 2019.

Ackers, B., & Eccles, N. S. (2015). Mandatory corporate social responsibility assurance practices: The case of king III in South Africa. *Accounting, Auditing & Accountability Journal, 28*(4), 515–550.

Andon, P., Free, C., & O'Dwyer, B. (2015). Annexing new audit spaces: challenges and adaptations. *Accounting, Auditing & Accountability Journal, 28*(8), 1400–1430.

Archer, S., Delvaille, P., & McLeay, S. (1995). The measurement of harmonisation and the comparability of financial statement items: Within-country and between-country effects. *Accounting and Business Research, 25*(98), 67–80.

Bagnoli, M., & Watts, S. G. (2017). Voluntary assurance of voluntary CSR disclosure. *Journal of Economics & Management Strategy, 26*(1), 205–230.

Barrow, M. (2009). *Statistics for economics, accounting and business studies*. Pearson Education.

Beddewela, E., & Fairbrass, J. (2016). Seeking legitimacy through CSR: Institutional pressures and corporate responses of multinationals in Sri Lanka. *Journal of Business Ethics, 136*(3), 503–522.

Bebbington, J., Kirk, E. A., & Larrinaga, C. (2012). The production of normativity: A comparison of reporting regimes in Spain and the UK. *Accounting, Organizations and Society, 37*(2), 78–94.

Boiral, O., Heras-Saizarbitoria, I., Brotherton, M. C., & Bernard, J. (2019). Ethical issues in the assurance of sustainability reports: Perspectives from assurance providers. *Journal of Business Ethics, 159*(4), 1111–1125.

Braam, G. J., de Weerd, L. U., Hauck, M., & Huijbregts, M. A. (2016). Determinants of corporate environmental reporting: The importance of environmental performance and assurance. *Journal of Cleaner Production, 129,* 724–734.

Brown, H. S., de Jong, M., & Levy, D. L. (2009). Building institutions based on information disclosure: Lessons from GRI's sustainability reporting. *Journal of Cleaner Production, 17*(6), 571–580.

Canibano, L., & Mora, A. (2000). Evaluating the statistical significance of de facto accounting harmonization: A study of European global players. *European Accounting Review, 9*(3), 349–369.

Casey, R. J., & Grenier, J. H. (2014). Understanding and contributing to the enigma of corporate social responsibility (CSR) assurance in the United States. *Auditing: A Journal of Practice & Theory*, *34*(1), 97–130.

Chauvey, J. N., Giordano-Spring, S., Cho, C. H., & Patten, D. M. (2015). The normativity and legitimacy of CSR disclosure: Evidence from France. *Journal of Business Ethics, 130*(4), 789–803.

Cohen, J. R., & Simnett, R. (2014). CSR and assurance services: A research agenda. *Auditing: A Journal of Practice & Theory*, *34*(1), 59–74.

CSR Europe and GRI. (2017). *Member State Implementation of Directive 2014/95/EU*. Available at: https://www.globalreporting.org/resourcelibrary/NFRpublication%20online_version.pdf. Accessed June 18 2019.

De Moor, P., & Beelde, I. D. (2005). Environmental auditing and the role of the accountancy profession: A literature review. *Environmental Management, 36*(2), 205–219.

De Villiers, C., Rinaldi, L., & Unerman, J. (2014). Integrated Reporting: Insights, gaps and an agenda for future research. *Accounting, Auditing & Accountability Journal, 27*(7), 1042–1067.

Deegan, C. (2002). Introduction: The legitimising effect of social and environmental disclosures–a theoretical foundation. *Accounting, Auditing & Accountability Journal, 15*(3), 282–311.

Dilla, W. N., Janvrin, D., Perkins, J. D., & Raschke, R. L. (2015). *Integrated reporting: The influence of non-financial assurance report level and format on investor judgments*. Working paper: Iowa. Google Scholar.

DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American sociological review,* 147–160.

Dumay, J., Bernardi, C., Guthrie, J., & La Torre, M. (2017). Barriers to implementing the international integrated reporting framework: A contemporary academic perspective. *Meditari Accountancy Research, 25*(4), 461–480.

Dumay, J., La Torre, M., & Farneti, F. (2019). Developing trust through stewardship: Implications for intellectual capital, integrated reporting, and the EU Directive 2014/95/EU. *Journal of Intellectual Capital, 20*(1), 11–39.

Dumitru, M., Dyduch, J., Gușe, R. G., & Krasodomska, J. (2017). Corporate reporting practices in Poland and Romania—An ex-ante study to the new non-financial reporting European directive. *Accounting in Europe, 14*(3), 279–304.

Eccles, R. G., Krzus, M. P., & Watson, L. A. (2012). Integrated reporting requires integrated assurance.

Farooq, M. B., & De Villiers, C. (2017). The market for sustainability assurance services: A comprehensive literature review and future avenues for research. *Pacific Accounting Review, 29*(1), 79–106.

Fernandez-Feijoo, B., Romero, S., & Ruiz, S. (2014). Effect of stakeholders' pressure on transparency of sustainability reports within the GRI framework. *Journal of Business Ethics, 122*(1), 53–63.

Flasher, R., Luchs, C. K., & Souza, J. L. (2018). Sustainability assurance provider participation in standard setting. *Research in Accounting Regulation, 30*(1), 20–25.

Fuhrmann, S., Ott, C., Looks, E., & Guenther, T. W. (2017). The contents of assurance statements for sustainability reports and information asymmetry. *Accounting and Business Research, 47*(4), 369–400.

Gianfelici, C., Casadei, A., & Cembali, F. (2018). The relevance of nationality and industry for stakeholder salience: An investigation through integrated reports. *Journal of Business Ethics, 150*(2), 541–558.

Gillet-Monjarret, C. (2015). Assurance of sustainability information: A study of media pressure. *Accounting in Europe, 12*(1), 87–105.

Gürtürk, A., & Hahn, R. (2016). An empirical assessment of assurance statements in sustainability reports: Smoke screens or enlightening information? *Journal of Cleaner Production, 136,* 30–41.

Guthrie, J., & Parker, L. D. (1989). Corporate social reporting: A rebuttal of legitimacy theory. *Accounting and Business Research, 19*(76), 343–352.

Haniffa, R. M., & Cooke, T. E. (2002). Culture, corporate governance and disclosure in Malaysian corporations. *Abacus, 38*(3), 317–349.

Hasan, M., Maijoor, S., Mock, T. J., Roebuck, P., Simnett, R., & Vanstraelen, A. (2005). The different types of assurance services and levels of assurance provided. *International Journal of Auditing, 9*(2), 91–102.

Hay, D., & Davis, D. (2004). The voluntary choice of an auditor of any level of quality. *Auditing: A Journal of Practice & Theory*, *23*(2), 37–53.

Hill, C. W., & Jones, T. M. (1992). Stakeholder-agency theory. *Journal of Management Studies, 29*(2), 131–154.

Husted, B. W., & de Jesus Salazar, J. (2006). Taking Friedman seriously: Maximizing profits and social performance. *Journal of Management Studies, 43*(1), 75–91.

International Auditing and Assurance Standards Board (IAASB). (2013). ISAE 3000 (Revised). Assurance engagements other than audits or reviews of historical financial information international framework for assurance engagements ISAE 3402, assurance reports on controls at a service organization exposure draft of proposed. Available at: www.ifac.org/sites/default/files/publications/exposure-drafts/IAASB_ISAE_3000_ED.pdf.

Jo, H., & Na, H. (2012). Does CSR reduce firm risk? Evidence from controversial industry sectors. *Journal of Business Ethics, 110*(4), 441–456.

Jones, M. J., & Solomon, J. F. (2010, March). Social and environmental report assurance: Some interview evidence. In *Accounting forum* (Vol. 34, No. 1, pp. 20–31). Elsevier.

La Torre, M., Sabelfeld, S., Blomkvist, M., Tarquinio, L., & Dumay, J. (2018). *Harmonising non-financial reporting regulation in Europe*. Meditari Accountancy Research.

Kalnins, A. (2018). Multicollinearity: How common factors cause type 1 errors in multivariate regression. *Strategic Management Journal, 39*(8), 2362–2385.

Kolk, A., & Perego, P. (2010). Determinants of the adoption of sustainability assurance statements: An international investigation. *Business Strategy and the Environment, 19*(3), 182–198.

KPMG. (2017). *The road ahead. The KPMG survey of corporate responsibility reporting 2017.*

La Torre, M., Sabelfeld, S., Blomkvist, M., Tarquinio, L., & Dumay, J. (2018). Harmonising non-financial reporting regulation in Europe: Practical forces and projections for future research. *Meditari Accountancy Research.*

Lindorff, M., Jonson, E. P., & McGuire, L. (2012). Strategic corporate social responsibility in controversial industry sectors: The social value of harm minimisation. *Journal of Business Ethics, 110*(4), 457–467.

Lock, I., & Seele, P. (2015). Analyzing sector-specific CSR reporting: Social and environmental disclosure to investors in the chemicals and banking and insurance industry. *Corporate Social Responsibility and Environmental Management, 22*(2), 113–128.

Luque-Vílchez, M., & Larrinaga, C. (2016). Reporting models do not translate well: Failing to regulate CSR reporting in Spain. *Social and Environmental Accountability Journal, 36*(1), 56–75.

Manes-Rossi, F., Tiron-Tudor, A., Nicolò, G., & Zanellato, G. (2018). Ensuring More Sustainable Reporting in Europe Using Non-Financial Disclosure—De Facto and De Jure Evidence. *Sustainability, 10*(4), 1162.

Martínez-Ferrero, J., & García-Sánchez, I. M. (2017). Coercive, normative and mimetic isomorphism as determinants of the voluntary assurance of sustainability reports. *International Business Review, 26*(1), 102–118.

Martínez-Ferrero, J., & García-Sánchez, I. M. (2018). The level of sustainability assurance: The effects of brand reputation and industry specialisation of assurance providers. *Journal of Business Ethics, 150*(4), 971–990.

Matten, D., & Moon, J. (2008). "Implicit" and "explicit" CSR: A conceptual framework for a comparative understanding of corporate social responsibility. *Academy of Management Review, 33*(2), 404–424.

Matuszak, Ł., & Różańska, E. (2017). CSR disclosure in Polish-listed companies in the light of Directive 2014/95/EU requirements: Empirical evidence. *Sustainability, 9*(12), 2304.

Michelon, G., Pilonato, S., & Ricceri, F. (2015). CSR reporting practices and the quality of disclosure: An empirical analysis. *Critical Perspectives on Accounting, 33,* 59–78.

Mock, T. J., Strohm, C., & Swartz, K. M. (2007). An examination of worldwide assured sustainability reporting. *Australian Accounting Review, 17*(41), 67–77.

Moroney, R., Windsor, C., & Aw, Y. T. (2012). Evidence of assurance enhancing the quality of voluntary environmental disclosures: An empirical analysis. *Accounting & Finance, 52*(3), 903–939.

O'Dwyer, B., & Owen, D. L. (2005). Assurance statement practice in environmental, social and sustainability reporting: A critical evaluation. *The British Accounting Review, 37*(2), 205–229.

Park, J., & Brorson, T. (2005). Experiences of and views on third-party assurance of corporate environmental and sustainability reports. *Journal of Cleaner Production, 13*(10–11), 1095–1106.

Perego, P. (2009). Causes and consequences of choosing different assurance providers: An international study of sustainability reporting. *International Journal of Management, 26*(3), 412–425.

Perego, P., & Kolk, A. (2012). Multinationals' accountability on sustainability: The evolution of third-party assurance of sustainability reports. *Journal of Business Ethics, 110*(2), 173–190.

Pflugrath, G., Roebuck, P., & Simnett, R. (2011). Impact of assurance and assurer's professional affiliation on financial analysts' assessment of credibility of corporate social responsibility information. *Auditing: A Journal of Practice & Theory*, *30*(3), 239–254.

Ruhnke, K., & Gabriel, A. (2013). Determinants of voluntary assurance on sustainability reports: An empirical analysis. *Journal of Business Economics, 83*(9), 1063–1091.

Seguí-Mas, E., Bollas-Araya, H. M., & Polo-Garrido, F. (2015). Sustainability assurance on the biggest cooperatives of the world: An analysis of their adoption and quality. *Annals of Public and Cooperative Economics, 86*(2), 363–383.

Siano, A., Vollero, A., Conte, F., & Amabile, S. (2017). "More than words": Expanding the taxonomy of greenwashing after the Volkswagen scandal. *Journal of Business Research, 71,* 27–37.

Sierra, L., Zorio, A., & García-Benau, M. A. (2013). Sustainable development and assurance of corporate social responsibility reports published by Ibex-35 companies. *Corporate Social Responsibility and Environmental Management, 20*(6), 359–370.

Sierra-Garcia, L., Garcia-Benau, M. A., & Bollas-Araya, H. M. (2018). Empirical Analysis of Non-Financial Reporting by Spanish Companies. *Administrative Sciences, 8*(3), 29.

Simnett, R. (2012). Assurance of sustainability reports: Revision of ISAE 3000 and associated research opportunities. *Sustainability Accounting, Management and Policy Journal, 3*(1), 89–98.

Simnett, R., & Huggins, A. L. (2015). Integrated reporting and assurance: Where can research add value? *Sustainability Accounting, Management and Policy Journal, 6*(1), 29–53.

Simnett, R., Vanstraelen, A., & Chua, W. F. (2009). Assurance on sustainability reports: An international comparison. *The Accounting Review, 84*(3), 937–967.

Simnett, R., Zhou, S., & Hoang, H. (2016a). Assurance and other credibility enhancing mechanisms for integrated reporting. In *Integrated Reporting* (pp. 269–286). London: Palgrave Macmillan.

Simnett, R., Carson, E., & Vanstraelen, A. (2016b). International archival auditing and assurance research: Trends, methodological issues, and opportunities. *Auditing: A Journal of Practice & Theory*, *35*(3), 1–32.

Soh, D. S., & Martinov-Bennie, N. (2018). Factors associated with internal audit's involvement in environmental and social assurance and consulting. *International Journal of Auditing*.

Steurer, R., Martinuzzi, A., & Margula, S. (2012). Public policies on CSR in Europe: Themes, instruments, and regional differences. *Corporate Social Responsibility and Environmental Management, 19*(4), 206–227.

Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. *Academy of Management Review, 20*(3), 571–610.

Tarquinio, L. (2018). *Corporate Responsibility Reporting e Assurance Esterna.: Profili teorici, criticità e prospettive* (Vol. 10). G Giappichelli Editore.

Velte, P., & Stawinoga, M. (2017a). Empirical research on corporate social responsibility assurance (CSRA): A literature review. *Journal of Business Economics, 87*(8), 1017–1066.

Velte, P., & Stawinoga, M. (2017b). Integrated reporting: The current state of empirical research, limitations and future research implications. *Journal of Management Control, 28*(3), 275–320.

Venturelli, A., & Caputo, F. (2017). *Informativa non finanziaria e regulation: tendenze evolutive e relative implicazioni alla luce dell'emanazione del D. Lgs 254/16*. McGraw-Hill education.

Venturelli, A., Caputo, F., Cosma, S., Leopizzi, R., & Pizzi, S. (2017). Directive 2014/95/EU: Are Italian companies already compliant? *Sustainability, 9*(8), 1385.

Venturelli, A., Caputo, F., Leopizzi, R., & Pizzi, S. (2018). The state of art of corporate social disclosure before the introduction of non financial reporting directive: A cross country analysis, *Social responsibility journal*, in press.

Vijiyarani, S., & Suganya, E. (2015). Research issues in web mining. *International Journal of Computer-Aided Technologies (IJCAx), 2,* 55–64.

Vollero, A., Conte, F., Siano, A., & Covucci, C. (2018) Corporate social responsibility information and involvement strategies in controversial industries. *Corporate Social Responsibility and Environmental Management*.

Vormedal, I., & Ruud, A. (2009). Sustainability reporting in Norway—An assessment of performance in the context of legal demands and socio-political drivers. *Business Strategy and the Environment, 18*(4), 207–222.

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Review and Reflections

Jesse Dillard

1 Introduction

Our purpose in editing this volume continues in the Centre for Social and Environmental Research (CSEAR)[1] tradition of mobilizing accounting and accountability scholarship to enable a more sustainable and just society and to stimulate further dialog and debate regarding corporate social responsibility (CSR), sustainability, ethics and governance. The Italian CSEAR conference at which these studies were initially presented provided an interdisciplinary forum for encouraging and facilitating research and debate in social and environmental accounting and accountability. The vibrance and diversity of that community of scholars were evidenced at the conference as well as in the selection of papers presented herein.

The preceding chapters reflect a shared recognition of the need for, and issues associated with, expanded accounting and accountability systems. The authors address the implications of social, environmental accounting by examining the conceptual and practical application of accountability at various levels and in various contexts. The issues considered include the perspectives and potentials of voluntary and mandatory reporting and the increasing role of non-financial factors in evaluating the success of companies as well as the related risks. The impact of organizations' actions on society and the environment in areas such as biodiversity degradation, climate change, immigration, human rights and cultural, racial and gender diversity has gained increased relevance not only to civil society and the state, but also to management and corporate boards. These reflect elements that must be addressed in bringing about the changes

[1] CSEAR is an international membership-based network supporting conferences, research workshops and emerging scholars colloquia, that have been organized in numerous universities and research centers around the world.

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necessary for creating more sustainable and just work organizations, and ultimately, a more sustainable and just world.

The new millennium has seen an emerging mandate for non-financial disclosure through the issue of regulations or listing requirements. After many years of laissez-faire, regulation began to be considered as necessary, and the European Union responded by issuing the EU Directive no. 95/2014, which requires large public interest companies to publish information and metrics on environmental, social and governance (ESG) issues, which have been conveyed by firms on a voluntary basis in ad hoc reports (e.g., sustainability, social and/or environmental statements). These regulations and the resulting reporting requirements are fostering the demand for, and the supply of, non-financial information. Generally, the preceding chapters explore the critical aspects raised in the application of accountability tools that organizations can/must adopt to disclose their value creation process and the implementation of CSR and sustainability-oriented strategies (i.e., greenwashing, assurance on sustainability disclosure, tax avoidance, etc.). These explorations reflect conventional and emerging theoretical developments, employ case studies and archival methods and draw on the extant literature to extend the research addressing managerial and policy implications.

Next, a brief review and synthesis of the preceding chapters are presented followed by some thoughts on the future development of social and environmental accounting and accountability systems.

2 Review and Synthesis

The first section begins by situating the current debates in its historical context. Sandro Bunelli provides a narrative historical account of the academic debates concerning accounting and accountability tools and practices. Four main periods are identified. In the 1990s, the debate centered around accounting issues such as recognition, realization and valuation of environmental disclosure. In the late 1990s and early 2000s, the proposals, models and tools from the first period were criticized and refined. In the third period extending to the late 2010s, Bunelli sees the environmental debate instigated by climate change and associated extreme events as the primary motivating factor. The most recent debates concern whether it is desirable to initiate and engage integrated reporting and harmonization, standardization, compulsory reporting rules and voluntariness, and, if so, how should they be designed, implemented and evaluated. The author argues for fixed milestones in evaluating proposed achievements associated with environmental accounting and recognizes the need for more progressive and innovative criteria regarding efforts to improve sustainability accounting. An informed understanding of the prior debates needs to provide context for further development of sustainability measures. Specifically, Bunelli suggests the United Nation's Sustainable Develop Goals might provide a fruitful focus for future inquiry as representative of a general and somewhat universal statement of criteria to which work organizations should be held accountable.

In Chapter "The Management Process Underpinning the Non-financial Reporting: A Case Study of a Listed Italian Company", Ciambotti, Palazzi, Sentuti, Sgrò and Chamochumbi report on an extensive case study of an Italian manufacturing firm. Their analysis provides an in-depth depiction of the management processes initiated in responding to the European Union's mandated reporting of non-financial information. The processes comprised a complex network of individuals with different roles involved at different phases in the process. The internal audit team appeared to have a coordinating role throughout the process. Six process phases were identified beginning with identifying and understanding the methodology and ending with the drafting the report. The major challenges faced were developing the internal procedures and guidelines necessary for gathering, processing and summarizing the non-financial information. The process appeared to expand management's perspectives regarding the business and how they relate to their primary constituencies. It also illustrates the difficulties and opportunities associated with expanded reporting requirements and how these challenges and opportunities might be positively addressed.

In Chapter "A Sociotechnical Analysis of Accounting for Employee Health and Safety: Evidence from a Multiple Case Study", Emilio Passetti reports on an interventionist field study at two Italian firms over a two year period as they struggle to adopt an accounting tool associated with employee health and safety decision making. This socio-technical analysis identified what factors influenced the implementation and integration of an accounting instrument for accident costs analysis. The study points out that although the accounting instrument was not inadequate, the implementation was not successful because of the lack of attention in managing the integration phase in the presence of institutional barriers and enablers.

Chapter "Ethics, Social Responsibility and Tax Aggressiveness. Can a Code of Ethics Absolve a Company?" addresses the ongoing debates surrounding tax avoidance versus tax evasion, how this relates to corporate social responsibility and accountability, and the role of governance in resolving the issues. In an interesting and complex case study of a famous Italian fashion house, Cesaroni, Del Baldo and Stradini investigate both ethical and legal issues as they relate to an organization's social responsibility, using publicly available data including extensive legal proceedings. The authors argue that while legal, the tax strategy employed by the organization cannot be considered socially responsible. However, recognizing the often overlooked relationship between the micro (company) level and the macro (institutional context) level, significant responsibility is placed on the state for enacting and sustaining a legal context that would facilitate and support such actions. An informed analysis of ethical and responsible behavior must address both levels. The in-depth analysis of the case suggests that it is difficult to specify the relationship between corporate social responsibility and tax avoidance as well as to ascertain the "true" motives of corporate management regarding restructuring that results in changes in the organization structure as well as provides significant tax advantages. The authors conclude that there is a need to more fully explore the differences between tax avoidance and tax evasion that would lead to a more meaningful understanding about what constitutes responsible behavior. Society has a responsibility to more clearly articulate its expectations and specify the criteria for determining responsible tax strategy. The authors' treatment of this controversial case facilitates their aim of stimulating dialog and debate regarding the ethicality of tax avoidance and the related rights and responsibilities of the entity, the state as well as civil society.

Chapter "Accounting for Sustainability—Could Cost Accounting Be the Right Tool?" is the final study in section one. Based on a review of the literature and reasoned argument, Rubino and Veltri consider whether full-cost accounting for sustainability can be used as an appropriate tool for motivating responsible behavior. Can the corporate accounting system be enlisted to measure sustainability and thus provide a means for holding the organization accountable? The authors present an interesting comparison between the conceptualization of a "going concern" and the conceptualization of sustainability. In light of the pros and cons discussed, the authors consider the possibilities associated with using a sustainability science approach, specifically a full costing approach. In spite of its imprecision, full costing can be usefully employed for evaluating sustainability both internally and externally as a means for overcoming the current information limitations.

Section two is made up of four studies that address corporate social responsibility and accountability and external communication. In Chapter "Mandatory Disclosure of Non-financial Information: A Structured Literature Review", Fortuna, Testarmata, Sergiacomi and Ciaburri undertake a structured literature review of work addressing mandatory disclosures of non-financial information. The structured analysis investigated how the mandatory disclosures of non-financial information are developing; what is the focus and critique of the literature and what are the needed areas of future research? An extensive analysis of this literature was undertaken. The authors point out that normative arguments tend to dominate the literature with little work addressing practice. The results highlight the need for research into the presentation, purpose and practice of mandatory disclosure of non-financial information. Researchers need to get out into the field and investigate what is being done, how it is being done and what is needed to do it better. It might be pointed out that an earlier chapter by Ciambotti, et al. explicitly addresses the gaps identified regarding the practice of mandatory disclosure. The Fortuna, et al. article provides an excellent bibliography of the work in this field.

In Chapter "Searching for Social and Environmental Accountability in Integrated Reporting: A Stewardship Approach", Corrado and Demartini propose a stewardship approach as a legitimating basis for integrating social and environmental accounting and accountability with the traditional economic measures of performance into integrated reporting. A Delphi approach is employed soliciting inputs from 10 experts. The question asked is how can integrated reporting support corporate social responsibility purposes and social and environmental accountability? The authors conclude that there is a need to support integrated reporting because of its focus on value creation and integrated thinking. Because of the dominance of the business case, sustainability risk remains marginalized. Because of its flexibility, integrated reporting does not substantially reduce the opportunity for greenwashing. There is a need to encourage new ways of thinking about means for holding corporations accountable for their social and environmental behavior. The authors propose stewardship theory because of its alinement with possibilities of integrated reporting.

In Chapter "CSR and Greenwashing: A Matter of Perception in the Search of Legitimacy", Balluchi, Lazzini and Torelli develop a framework for analyzing sustainability report content based on a review of the extant literature and logical argument with the objective of holding the reporting entity responsible of the contents for their report. The authors review the definition and perspectives of greenwashing and trace the relationship using a legitimacy theory lens. The authors claim to provide a model grounded in the theory of communicative action that suggests a relationship between communication, credibility, legitimacy and perceptions and greenwashing. The resulting model provides a basis for future empirical investigation.

In Chapter "Social/Critical/Emancipatory Accounting Research: Its Failure and Prospects for Redemption", Dennis Huber undertakes a critique of the interdisciplinary accounting project regarding its influence, or not, on financial accounting as well as social and environmental reporting standard setting. The project's quest for enhancing "social justice" as well as its attempts to retard environmental degradation has not met with the anticipated success. The author claims that the interdisciplinary accounting project has not changed existing social relationships, moved toward a more sustainable order or participated in systems transformation by incorporating social costs and benefits into the published financial statements. The suggested response is to focus on the Financial Accounting Standards Board in USA and similar international rule-setting bodies in order to overcome past failures and to focus, for example, on empirical research that provides "evidence" that subjects chose the social and environmental costs statements for decision making.

Section 3 contains three chapters that provide empirical analyses of various components of corporate social responsibility reports. In Chapter "Are HEIs' Intellectual Capital Disclosures Consistent with the Sustainability Integrated Reporting Trend?", Tiron-Tudor and Zanellato employ integrated reporting elements in analyzing the intellectual capital disclosures by higher education institutions. A benchmark model is developed and employed in evaluating 50 higher education institutions. A content analysis of these reports is carried out. The universities evaluated disclosed approximately half the intellectual capital items identified in the benchmark model. The authors conclude that intellectual capital disclosures by higher education institutions are moving toward being consistent with the current integrated reporting conceptualizations.

In Chapter "Can Graphs in Sustainability Reports Actually Manage Impressions? An Analysis from the Investors' Perspective", Pesci, Fornaciari, Triani, Medioli and Soobarooyen take an investor's perspective and ask the question of whether visuals in accountability reporting can manage impressions? Using publicly available reports, the authors undertake a markets study. Agency theory provides the theoretical context, and Ohlson's model is employed in estimating salient variables. Specifically, the authors investigate whether graphs have effects on investors' investment decisions and thereby market value. The regression results suggest that investors can detect distortion in data presentations, and if they do so, their overall trust in management's reporting is reduced with negative market consequences for the firm.

In Chapter "What Drives the Level of Non-financial Assurance in PIEs? Empirical Evidence on the European Firms Listed on Forbes 2000", Andrea Venturelli and Simone Pizzi attempt to understand what drives the level of assurance for non-financial disclosures in the reports of public interest enterprises. An archival investigation of the European firms listed on Forbes 2000 is undertaken. Country and sector effects are reported as being important. Harmonization of information is hampered by the lack of mandatory standards across countries, and in that each country is allowed to choose their own compliance requirements for reporting non-financial information. Third-party assurance did not seem to overcome the lack of consistent standards. The author surmises that over regulation does not increase transparency. The findings are interpreted as confirming the skepticism about the European Union's mandatory reporting directive regarding non-financial information by public interest entities.

A common theme that seems to run through most of the studies is the ultimate goal of holding powerful actors accountable for their actions as they affect social and environmental outcomes. The primary focus in the studies reported herein is generally work organizations and most often some form of a for-profit enterprise. The papers in the first section are generally concerned with actions within an entity associated with making ethical decisions and/or the process and content of providing information useful for evaluating the extent to which the entities are fulfilling their social, environmental and economic responsibilities both internally and externally. Literature reviews and empirical studies provide insights into the debates and difficulties that accompany corporate responsibilities in such areas as employee health and safety, tax avoidance and full-cost sustainability accounting and various tools that might be applicable in measurement and valuation. The studies also provide valuable insights into the process of developing non-financial reporting systems. The second section addresses issues related more specifically to external reporting, the purpose of which is to hold the entities accountable for not only their economic actions, but also their social and environmental impacts as well. The third section considers issues related to the veracity, context and attestation of the external reports.

3 Reflections[2]

I wish to propose extending the conversation regarding accountability as it relates to social and environmental issues, and in doing so, to more generally contextualize and reorient the focus from what is exhibited in the work presented herein. I propose that the objective of our research should be to: understand the meaning given to the reality created by the social actors (enlightenment); clarify and deliberate about the problems, possibilities and risks (empowerment) and analyze and interpret the status of values and interests aimed at social commentary and social action (emancipation).

[2] The ideas presented here are more fully developed in Brown (2009), Brown and Dillard (2013), Dillard and Vinnari (2019), Vinnari and Dillard (2016).

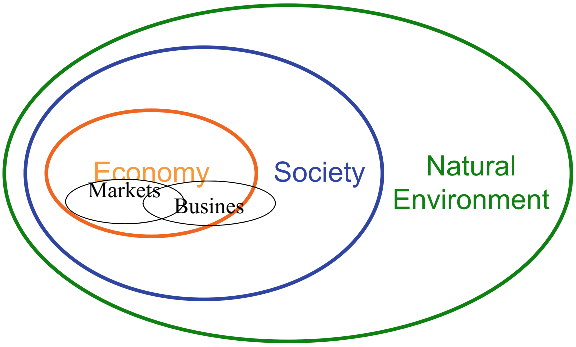
Following Flyvbjerg (2001: 60), I want to suggest that we undertake social and environmental accounting and accountability research that matters. Flyvbjerg proposes four salient questions for undertaking social science that matters: Where are we going? (description) Is it desirable? (values) who gains, who loses by what mechanisms of power? (politics) and, in light of these, what should be done? (action/praxis). This discussion is undertaken within a context of agonistic indeterminacy with full awareness that there is neither one set of ultimate answers to the questions nor even a definitive version of what the correct questions are.

Where are we going?

So, briefly, where are we going? It appears that as the world as currently constructed is dominated by the economic sector, the primary players being multinational corporations tend to dominate economic markets. These capitalistic, market-based economic systems take precedence over natural and social systems. Is this privileging hierarchy desirable? If corporations go away, would there still be an economic system? If the current economic system goes away, would there be a social system, and if the social system went away, would there be a natural system? Seems the hierarchy might be inverted. If the natural system is destroyed, then there will be none of the other systems. So, it seems what we are trying to do is to salvage the natural and social systems for the destructive effects of the current economic system by holding the various players accountable for their actions. Figure 1 suggests a more desirable relationship among these various systems.

The studies presented in this volume generally address some means by which to hold work organizations accountable and are reflective of the traditional research undertaken in the area of corporate social responsibility and social and environmental accounting and accountability.[3] The research tends to work within the current institutional structures. For example, reporting proposals are an extension of the current financial accounting reporting regime based on a general set of standards established by standard setters and communicated through company-generated reports based on

Fig. 1 Hierarchy of systems



[3] For example, see Adams (2015), Adams and Larrinaga-Gonzàlez (2007), Adams and McNicholas (2007), Aras and Crowther (2009), Burritt and Schaltegger (2010).

extant information systems. The logic seems to be to “speak truth to power”. If we can make corporate behavior transparent through disclosure, then responsible action will follow. However,

> *Power concedes nothing without demand. It never did and it never will…*
> *Without a struggle, there can be no progressive social progress*
> *Fredrick Douglass* (1817–1895).

Several literature surveys suggest that a good deal of time and effort has been, and is being, directed toward social and environmental reporting and related representational and disclosure issues reflected in sustainability reports, triple bottom line and integrated reporting. Some have raised questions as to the efficacy of these devices.[4] Unfortunately, even though the external reporting of corporate social responsibility has increased, the degree of change regarding social and environmental responsibility has not reached the level necessary to adequately respond to the social and environmental issues being faced.

> *What albatross around our necks doth hang?*
> *Disclosure, disclosure everywhere,*
> *We scream with all our might.*
> *Disclosure, disclosure everywhere,*
> *Nor any change insight.* (Dillard and Vinnari 2019:17)

Is it desirable?

Why has our call for increased disclosure not been more effective? Brown and Dillard (2013) suggest that the field may be suffering from some form of mental illness as reflected by the observation that we keep doing the same thing over and over again and seem to be expecting a different outcome. What might a medical report of our current efforts look like? The symptoms appear to be myopic delusions that “if we disclose it, responsible action will follow”. The diagnosis is *disclosure-sclerosis*. Treatment calls for intellectual therapy replacing pathological accounting-based accountability with an enabling accountability-based accounting and a constant monitoring for symptoms of relapsing into disclosure myopia or solidifying an accountability fetish. The antidote for disclosure-sclerosis includes the recognition of the need for alternative institutional arrangements if the public interest is to be adequately served within the current socio-economic context. This includes (re)conceptualizing alternative pluralistic governance and accountability regimes and (re)conceptualizing related accounting systems which would mean reorienting our perspectives from accounting-based accountability (Fig. 2) to accountability-based accounting (Fig. 3) via critical dialogic accountability.

Currently, traditional reporting requirements consider the information needs (i.e., decision usefulness) of decision makers. The standard-setting bodies privilege the

[4] For example, see Brown and Dillard (2013, 2015), Brown et al. (2015), Deegan (2017), Dillard and Vinnari (2017), Gray et al. (2014), Milne and Gray (2013), Milne and Tregidga (2009) and Owen (2008).

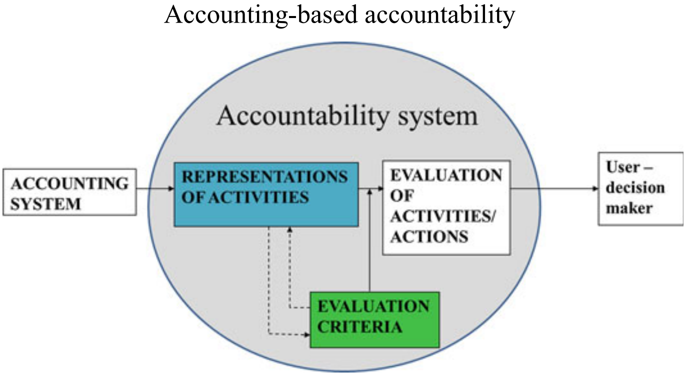

Accounting-based accountability
Accountability system
ACCOUNTING SYSTEM
REPRESENTATIONS OF ACTIVITIES
EVALUATION OF ACTIVITIES/ ACTIONS
EVALUATION CRITERIA
User – decision maker

Fig. 2 Accounting-based accountability

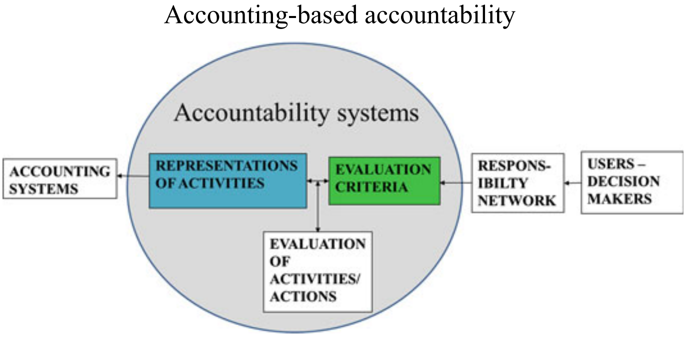

Accounting-based accountability
Accountability systems
ACCOUNTING SYSTEMS
REPRESENTATIONS OF ACTIVITIES
EVALUATION CRITERIA
RESPONS-IBILTY NETWORK
USERS – DECISION MAKERS
EVALUATION OF ACTIVITIES/ ACTIONS

Fig. 3 Accountability-based accounting

needs of the investors over other users. The information needs (responsibility networks) of investors are recognized as the criteria by which organizations are to be held accountable. The accountability systems compare expectations regarding the criteria with measures of these criteria that are related to the actions of the organization. The traditional accounting system is designed and evaluated in terms of its ability to provide adequate disclosures to render transparent activities of the organization relevant to the investors.

When we consider expanding the evaluation criteria set to include social and environmental responsibilities associated with various interested parties, the tendency is to begin with the traditional accounting systems and the associated reporting formats. The social and environmental accountability systems tend to be designed based on what information can be attained from the extant accounting system, not necessarily on the needs of the affected stakeholders. At best, a little bit more is added to the traditional accounting, reporting and accountability systems. The focus of this accounting-based accountability tends to be on what can be disclosed, given the current accounting system with maybe a little bit more added on, not the needs of the users. This focus on what can be disclosed with a little bit added on is a significant impediment to meaningful accountability systems beyond the current dominant investor orientation. A continued focus on accounting-based accountability in developing social and environmental accountability systems sustains, reinforces and obscures the privileging of financial capital providers' needs and interests and reinforces the status quo. Accountability is relegated to the status of a unidimensional outcome of the accounting system, and this relegates accountability research to a response to "where is the accounting?"

What should be done?

What should be done? I propose reframing how we conceptualize the development of accountability systems. We need to take the needs of those other than financers seriously when developing accountability systems. Instead of focusing on what can be disclosed, given the traditional accounting system with maybe a little bit more added, we need to focus on what should be disclosed based on the evaluation criteria salient to the various interested constituencies and develop accounting systems that can provide the necessary information. That is, the focus needs to shift from accounting-based accountability to accountability-based accounting as part of implementing critical dialogic accounting and accountability. This reframing requires moving beyond the current boundaries that reinforce the status quo and imagining pluralistic governance and accountability systems and the necessarily related alternative accounting systems. These new imaginings must be undertaken in conjunction with the creation of alternative institutional arrangements that facilitate the public interest within the current socio-political and economic context.

Critical Dialogic Accountability

Critical dialogic accounting and accountability (CDAA) has been proposed and developed by Professor Judy Brown and her colleagues over the past decade.[5]The ideas are grounded in the political theory of agonistics (e.g., Mouffe 2013) following from the seminal work by Laclau and Mouffe (2001). CDAA presumes an ongoing dialog among all relevant parties having a stake in the outcome with particular attention to traditionally underrepresented groups such as indigenous peoples, future generations and non-human animals. The actors recognize their rights and responsibilities as members of an ongoing community as well as the rights of others. CDAA requires a commitment to seriously engage and accurately communicate on the part of all participants. The dialog among the relevant parties increases understanding among the participants and establishes the criteria of appropriate action on the part of each of the participating groups. These provide the criteria to which the account provider is to be held accountable. The proper functioning of the accountability systems requires institutional mechanisms designed which monitor the consequences associated with the functioning of the accountability system.

[5] Brown (2009), Brown and Dillard (2013, 2014, 2015), Brown et al. (2015), Dillard and Brown (2012, 2014, 2015), Dillard and Roslender (2011), George (2015), Sorola (2017), Tanima (2015), Vinnari and Dillard (2016).

The agonistic contextualizing premises recognize the presence of multiple, incommensurable ideological orientations (radical negativity). Asymmetrical power relationships exist among the various participants (hegemonic regimes). Given the socially constructed nature of the relationships involved, deciding is a political process always, already open to question. Agonistics is committed to pluralistic democratic governance systems, the constructive character of social divisions and the transformative potential of agonistic discourse.

Dialogic process principles encourage participatory processes that recognize the connections among humans as well as humans and non-human animals. Monetary and anthropocentric forms as well as other forms of reductionism limit the dialogic engagement and are guarded against. In addition, processes should be in place to ensure accessibility to the dialog and debate for non-experts and non-humans. The culturally embedded and constructed nature of both facts and values require the support of political processes necessary in making a decision confident in the transformative potential present at the intersection of the social and the technical.

CDAA follows from the political engagement of the interested parties undertaken within the context of a dialogic process where all have access to information and are free and able to participate in the dialog and debate. CDAA recognizes that the accounting systems, accountability systems and responsibility networks are socially constructed, therefore, are not immutable and can be changed. Accountability relationships arise from asymmetric power relationships. These systems are a means for constraining power and are meaningless without the ability to impose consequences in light of the account provider's behavior. Without normative direction, accountability is a vacuous concept having the propensity for both good and evil. There is an inverse relationship between trust and accountability, and paradoxically, accountability can facilitate trust over time. Accountability is always a means to higher-level objectives such as responsibility, trustworthiness, autonomy, pluralism, democracy and/or justice and not end in and of itself.

Critical dialogic accountability focuses on advancing economic, social and environmental justice. There is a presumption of an ever-changing social context that recognizes social reality as a reflection of actions, attitudes and values that take place within a social, political and historical context. It critiques capitalism as the dominant socio-political and economic system. Power is explicit as the interested (political) nature of social relationships. The application of critical dialogic accountability is emerging under the rubric of social and environmental sustainability. The emerging research is broadening out and opening up, including both qualitative and quantitative methods and methodologies, and representing a range of ontological and epistemological positions. The work is grounded in the social sciences including sociology, philosophy, political science, psychology, history, political economy and linguistics.

Power and asymmetrical power relationships are central and assumed to be ever present. Fundamental differences among various interested groups are irresolvable, but this does not prevent these groups from forming temporary coalitions around specific issues. Power, by its nature, is inclined toward abuse. Legitimate power cannot be unrestricted power. Effective accountability systems based on legitimately developed evaluation criteria are a means of constraining power. Critical dialogic accountability enables account holders to oversee power by placing limits on its use, preventing the abuse of power. Critical dialogic accountability ascribes responsibility to power and recognizes the requirement for institutions that facilitate imposing consequences that follow from the implementation of the accountability system. Also, power and asymmetric power relationships are not necessarily negative, and appropriately designed accountability systems can facilitate the positive possibilities as well as legitimate asymmetric power relationships.

It is time to move beyond our current fixation on disclosure and accounting-based accountability and move toward accountability-based accounting and reporting systems that are better tailored to meet the needs of the various interested constituencies. Critical dialogic accountability can facilitate the requisite reframing of our conceptualization of accounting and accountability. Critical dialogic accountability systems are defensive in that they can prevent the abuse of power. They are emancipatory in that they are predicated on listening to a plurality of voices. They are technical in that they can facilitate the capacity to make wise substantive decisions, and they can be strategic in fostering public trust.

4 Summary

My purpose in this concluding chapter, as with the editing in this volume, is to stimulate further dialog and debate regarding CSR, sustainability, ethics and governance. In undertaking research that matters, the research presented herein has provided descriptions of various segments of the field (where are we going?). Given the values associated with corporate social responsibility and sustainability, the trajectory in terms of its anticipated implications and outcomes has been considered (is it desirable?). The political dimensions and responsibilities also become evident (who wins; who loses?) as one contemplates what actions are desirable and realistic (what should be done?). The objective of the research is to explain the realities created by social actors and to better understand the meanings given to those realities (enlightenment). Based on this understanding, we, as a research community, attempt to clarify and deliberate about problems, possibilities and risks and analyze and interpret the status of values and interests (empowerment). This dialog and debate should provide a basis for social commentary and plans for social action (emancipation). As stated above, this program should be undertaken in the spirit of agonistic indeterminacy with full knowledge that we cannot find the ultimate answers to these questions or even agree to a single version of what the questions are. This chapter has not been titled "conclusions" in that the purpose for presenting this volume is to encourage and facilitate ongoing dialog and debate, research, and the dissemination of knowledge concerning CSR, sustainability, ethics and governance as we attempt to mobilize accounting and accountability scholarship so as to enable a more sustainable and just society.

Literature

Adams, C. (2015). The International Integrated Reporting Council: A call to action. *Critical Perspectives on Accounting, 2,* 23–28.

Adams, C., & Larrinaga-González, C. (2007). Engaging with organisations in pursuit of improved sustainability accounting and performance. *Accounting, Auditing & Accountability Journal, 20*(3), 333–355.

Adams, C., & McNicholas, P. (2007). Making a difference: Sustainability reporting, accountability and organisational change. *Accounting, Auditing and Accountability Journal, 20*(3), 382–402.

Aras, G., & Crowther, D. (2009). Corporate sustainability reporting: A study in disingenuity? *Journal of Business Ethics*, *87*(S), 279–288.

Brown, J. (2009). Democracy, sustainability and dialogic accounting technologies: Taking pluralism seriously. *Critical Perspectives on Accounting, 20*(3), 313–342.

Brown, J., & Dillard, J. (2013). Agonizing over engagement: SEA and the "death of environmentalism" debates. *Critical Perspectives on Accounting, 24*(1), 1–18.

Brown, J., & Dillard, J. (2014). Integrated Reporting: On the need for broadening out and opening up. *Accounting, Auditing & Accountability Journal, 27*(7), 1120–1156.

Brown, J., & Dillard, J. (2015). Dialogical accountings for stakeholders: On opening up and closing down participatory governance. *Journal of Management Studies, 52*(7), 176–190.

Brown, J., Dillard, J., & Hopper, T. (2015). Accounting, accountants and accountability regimes in pluralistic societies: Taking multiple perspectives seriously. *Accounting, Auditing & Accountability Journal, 28*(5), 626–650.

Burritt, R., & Schaltegger, S. (2010). Sustainability accounting and reporting: Fad or trend? *Accounting, Auditing & Accountability Journal, 23*(7), 829–846.

Deegan, C. (2017). Twenty-five years of social and environmental accounting research within *Critical Perspectives of Accounting*: Hits, misses and ways forward. *Critical Perspectives on Accounting, 43,* 65–87.

Dillard, J., & Brown, J. (2012). Agonistic pluralism and imagining CSEAR into the future. *Social and Environmental Accountability Journal, 32*(1), 3–16.

Dillard, J., & Brown, J. (2014). Taking pluralism seriously within an ethic of accountability. In S. Mintz (Ed.), *Accounting for the Public Interest: Perspectives on Accountability, Professionalism and Role in Society* (pp. 75–90). New York: Springer.

Dillard, J., & Brown, J. (2015). Broadening out and opening up: An agonistic attitude toward progressive social accounting. *Sustainability, Accounting, Management and Policy Journal, 6*(2), 243–266.

Dillard, J., & Roslender, R. (2011). Taking pluralism seriously: Embedded moralities in management accounting and control systems. *Critical Perspectives on Accounting, 22*(2), 135–147.

Dillard, J., & Vinnari, E. (2017). A case study of critique: Critical perspectives on critical accounting. *Critical Perspectives on Accounting, 43,* 88–109.

Dillard, J., & Vinnari, E. (2019). Critical dialogical accountability: From accounting-based accountability to accountability-based accounting. *Critical Perspectives on Accounting, 62,* 16–36.

Flyvbjerg, B. (2001). *Making Social Science Matter*. Cambridge, UK: Cambridge University Press.

George, S. (2015). *Democratising accounting and accountability: An exploration of social movement counter-accounting practices and engagement strategies* (Ph.D. Dissertation). Victoria University of Wellington. Wellington, New Zealand.

Gray, R., Adams, C., & Owens, D. (2014). *Accountability, social responsibility and sustainability: Accounting for society and the environment*. Harlow, UK: Pearson.

Laclau, E., & Mouffe, C. (2001). *Hegemony and socialist strategy: Towards a radical democratic politics* (2nd ed.). London: Verso.

Milne, M. J., & Gray, R. (2013). W(h)ither ecology? The triple bottom line, the Global Reporting Initiative, and corporate sustainability reporting. *Journal of Business Ethics, 118*(1), 13–29.

Milne, M., & Tregidga, H. (2009). Words not actions! The ideological role of sustainable development reporting. *Accounting, Auditing & Accountability Journal, 22*(8), 1211–1257.

Mouffe, C. (2013). *Agonistics: Thinking the world politically*. London: Verso.

Owen, D. (2008). Chronicles of wasted time?: A personal reflection on the current state of, and future prospects for, social and environmental accounting research. *Accounting, Auditing & Accountability Journal, 21*(2), 240–267.

Sorola, M. (2017). *Assessing the Potential for Agonistic Engagement Among Accountants: A quasi-experimental, repeated measures Q study of social and environmental reporting* (Ph.D. Dissertation) Victoria University of Wellington. Wellington, New Zealand.

Tanima, F. (2015). *Microfinance and women's empowerment in Bangladesh: A study of 'competing logics' and their implications for accounting and accountability systems* (Ph.D. Dissertation). Victoria University of Wellington. Wellington, New Zealand.

Vinnari, E., & Dillard, J. (2016). (ANT)agonistics: Pluralistic politicization of, and by accounting and its technologies. *Critical Perspectives on Accounting, 39,* 25–44.

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Correction to: Ethics, Social Responsibility and Tax Aggressiveness. Can a Code of Ethics Absolve a Company?

Francesca Maria Cesaroni, Mara Del Baldo, and Francesca Stradini

Correction to:
Chapter "Ethics, Social Responsibility and Tax Aggressiveness. Can a Code of Ethics Absolve a Company?" in: M. Del Baldo et al. (eds.), *Accounting, Accountability and Society*, CSR, Sustainability, Ethics & Governance, https://doi.org/10.1007/978-3-030-41142-8_4

The original version of the book was inadvertently published without adding attribution to a couple of quotes in the chapter "Ethics, Social Responsibility and Tax Aggressiveness. Can a Code of Ethics Absolve a Company?". The chapter and book have now been updated with the changes.

The updated version of this chapter can be found at
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