Revista de Educação e Pesquisa em Contabilidade
Journal of Education and Research in Accounting

Quarterly journal, digital and free published by
Brazilian Academy of Science in Accounting

ISSN 1981-8610

REPeC, Brasília, v. 11, Special Edition, art. 5, p. 85-103, 2017
Available online at *www.repec.org.br*
DOI: http://dx.doi.org/10.17524/repec.v11i0.1719

What has Been Investigated on Corporate Sustainability and its Disclosure?

Abstract

Objective: To present the evolution of the sustainability development and sustainability concept over the years by means of a literature review, as well as the research trends focused on the intersection between accounting and sustainability.

Method: The study was developed through a literature review of the Brazilian and international literature on sustainability and its relationships with accounting. The selection of the investigated literature prioritized more recente publications; a mixture between empirical research and literature review; journals with some impact factor and Brazilian journals qualified in Qualis Capes.

Results: Studies have advanced particularly in two foci: a) disclosure – many studies aim to verify the quantity and quality of disclosure on sustainability, including suggested models like Integrated Reporting; and b) search for a relation between practices and sustainability indicators with companies' economic-financial performance. The results have often revealed controversies, which opens room for new and more robust research with more consistent underlying theories.

Contributions: Research on the theme sustainability is recent and has gained intensity in the past 20 years, making it importante to develop a study that aims to reflect on how these research findings have evolved, mainly in matters on which no consolidated results exist yet. Hence, this article contributes by structuring the construction of scientific knowledge on sustainability and, thus, highlight gaps that need further research in future studies.

Key words: Sustainability; Integrated Reporting; Sustainability Indicators.

Valcemiro Nossa
Ph.D. in Controllership and Accounting from University of São Paulo (USP) and Professor at Fucape Business School. **Contact:** Av. Fernando Ferrari, 1358. Boa Vista. Vitória (ES). CEP: 29075-505.
E-mail: valcemiro@fucape.br

Victor Rangel dos Santos Rodrigues
Undergraduate Student in Economics at Fucape Business School. **Contact:** Av. Fernando Ferrari, 1358. Boa Vista. Vitória (ES). CEP: 29075-505.
E-mail: victorrangelrodrigues@gmail.com

Silvania Neris Nossa
Ph.D. in Accountancy and Administration from Fucape Business School and Professor at Fucape Business School. **Contact:** Av. Fernando Ferrari, 1358. Boa Vista. Vitória (ES). CEP: 29075-505.
E-mail: silvianossa@fucape.br

Published in Portuguese and English. Original Version in Portuguese.

Received in 11/2/2017. Ask to Revise on 11/13/2017. Resubmitted on 11/15/2017. Accepted on 11/30/2017 by Dr. Márcia Maria dos Santos Bortolocci Espejo (Assistant Editor) and by Dr. Orleans Silva Martins (Editor). Published on 12/7/2017. Organization responsible for the journal: Abracicon

1. Introduction

The idea of sustainable development lies at the heart of humanity's aspirations in this century. This is confirmed by the exponential growth of studies related to the theme, and by the rapid acceptance of movements such as the UN's Sustainable Development Goals and the Millennium Development Goals, due to the urgent need for practices that do not harm the environment and also offer social and economic sustainability (Allen, Metternicht & Wiedmann, 2016; Campbell, 2017; Griggs, Stafford-Smith, Gaffeny, Rockström, Ohman, Shyamsundar & Noble, 2013; Sachs, 2012).

The emergence of the Sustainability concept is intertwined with that of Sustainable Development, which emerged from a context of concerns about the impacts of human production and actions in the environment, the scarcity of natural resources and the future in the world, expressed in documents such as the wellknown report issued by the World Commission on Environment and Development (1987). In this report, sustainable development is defined as "development that satisfies the needs of the present without compromising the ability of future generations to meet their own needs" (Bruntland, 1987, p. 8). Other documents, such as the World Charter for Nature (1982) and Agenda 21 of the Earth Summit (1992) also express the concept of sustainable development (Assembly, 1982; Brundtland, 1987; Hák, Janoušková, & Moldan, 2016; Kopnina, 2015; Redclift, 2005; Summit, 1992; Wood, 1985).

Several inquiries originate in the proposed definition. For example, to prevent the satisfaction of present needs from compromising future generations, it is necessary to know the needs and abilities of the new generations. But if mankind faces many difficulties in developing a global consensus on the needs of the present generation, what is the possibility of developing this same consensus for future generations? Thus, the suggested definition lacks applicability and cannot be the hallmark of political and business decisions (Marshall & Toffel, 2005).

The difficulty to conceptualize sustainability stems from the nature of the problems in this area, being complex systems with variables from several areas of knowledge, non-linearly correlated. For example, the economic mainstream says that the key to sustainable development lies in the Social Welfare Economics approach. Other scientists with different views, such as biologists, institutional and ecological economists, tend to disagree, bringing concepts and theories from their respective bakground areas (Arrow, Dasgupta, Goulder, Daily, Ehrlich & Summer, 2004; Ayres, 2008; Bithas, 2011; de Vries & Petersen, 2009; Goodland & Ledec, 1987; Saunders, 2014; Solow, 1993; Stavins, Wagner & Wagner, 2003; Wagner, 2006).

In the literature, approaches diverge in relation to the method, but they share, even if basically, the same concern that, if they are not protected, future generations will live in a more hostile environment than was experienced in the past or present. Thus, a new area of research emerges, the Science of Sustainability, characterized by its approach to the problems of complex systems of correlated factors linked to sustainability and sustainable development in a transdisciplinary way (Brandt, Ernst, Gralla, Luederitz, Lang Newig & Von Wehrden, 2013; Campbell, 2017; Caniglia, Schäpke, Lang, Abson, Luederitz & Von Wehrden, 2017; Leal Filho, 2000; Gerlagh, 2017; Hellwig, 2005; Jerneck, Olsson, Ness, Anderberg, Baier, Clark & Person, 2011; Kajikawa, 2008; Komiyama & Takeuchi, 2006; Mikhailova, 2004; Miller, Armim, Sarewitz, Robinson, Olsson & Loorbach, 2014; Pappas, Pappas, & Sweeney, 2015; Phillis & Andriantiatsaholiniaina, 2001; Sala, Farioli, & Zamagni, 2013; Vallance, Perkins, & Dixon, 2011).

Thus, the objective of this study is to present the evolution of the sustainable development and sustainability concept over the years and the trends in research focusing on the intersection between accounting and sustainability.

The study was developed through a review of the Brazilian and international literature on sustainability and its relationships with accounting. The investigated literature selection prioritized more recent publications; a mix between empirical research and literary reviews; journals with some impact factor and Brazilian journals qualified in Qualis / Capes.

Considering that research on the theme sustainability is recent and has gained momentum in the last 20 years, it is important to have a study that reflects how the findings of this research are evolving, especially in issues that have not yet been consolidated. Thus, the contribution of this article comes as a way of structuring the construction of the scientific knowledge about Sustainability and, with this, to highlight gaps that still need to be studied without future research.

2. Sustainability and Sustainable Development

The approach of this topic begins with a brief description of the history of the concepts of Sustainability and Sustainable Development, highlighting the main events in time that led to the evolution of the Sustainable Development concept. Next, the different approaches to the concept are discussed and finalized with the Sustainable Development Goals (SDG) proposed by the United Nations.

2.1. Brief History of the Concept

The roots of the sustainability concept can be traced back to Ancient Greece, but it gains prominence in the history of humanity with new issues brought about by technological development, the massive increase in energy consumption and the exponential growth of the population since the First Industrial Revolution (Du Pisani, 2006; Wrigley, 2013).

The term "Sustainability" was coined by Carlowitz and Rohr (1732), in Sylviculture Oeconomica. In understanding that wood was the main input of the eighteenth century, used for both fuel and civil and naval construction, etc., Carlowitz proposes the sustainable use of forests, that is, the existence of a sufficient number of young trees should be ensured to replace the firewood used in the economy's productive processes (Carlowitz & Rohr, 1732; Du Pisani, 2006; Grober, 2007; Klöpffer, 2003).

Another prominent author in the literature on sustainable development was Thomas R. Malthus, who developed an analytical model of population growth and the consequence of this growth rhythm for the scarcity of resources and food (Malthus, 1798).

In Principles of Political Economy (1848), John Stuart Mill devotes a short chapter to the concept of "stationary state", in which the author argues that cultural and moral development was a separate condition of development and economic growth, confronting the contemporary idea that human society could only advance if the economy expanded. Therefore, the author diverges from the idea of continuous growth, arguing that there would be a stationary condition of generation of wealth, consumption, capital and population mass, but not of human development (Mill, 1848 apud Caradonna, 2014; Du Pisani, 2006; Wagner, 2006).

In Man and Nature (1864), Marsh (1965) describes how human intervention has affected different aspects of the environment, and how these disturbances may end up transforming the planet into an uninhabitable place, and may even lead to the extinction of the human race. Marsh's argumentation was meant to show that humanity would not have continuity without caring for the environment (Marsh, 1965, Padua, 2010).

The growth in mineral exploration in the nineteenth century also entailed a growing concern with the energy issue. In The Coal Question (1866), Stanley Jevons argued that the overuse of resources could consume the British coal reserves in about a century (Jevons, 1866 apud Caradonna, 2014, Clark & Foster, 2001). The twentieth century brought a mix of pessimism and optimism regarding the development of humanity and sustainability. The good omens brought about by scientific and technological development resulted from the economic crises and world wars of the first half of the century but, in the second half, the debate about sustainable development gains strength and global importance (Caradonna, 2014).

There was, for example, a divergence within economic doctrine about the role and how economics should approach the Sustainability problem. Then came two main currents: the Environmental Economy and the Ecological Economy. The first applies the framework of the theory of externalities to analyze problems of scarcity and allocation of natural resources, and therefore has a more unidisciplinary and heterodox bias; while the second current has a transdisciplinary approach among economics, ecology, physics, etc., considering the economic system as a part of the ecological system (Costanza, 1989; Costanza, Cumberland, Daly, Goodland, Norgaard, Kubiszewski & Franco, 2014; Cropper & Oates, 1992; Du Pisani, 2006; Field & Field, 1997; Goodland, 1995; Illge & Schwarze, 2009; Romeiro, 2010).

At that time too, several commissions, conferences and agreements took place as part of an effort in pursuit of sustainable development. Table 1 summarizes some of the main events that took place:

Event	Description
1972, Stockholm, UN Conference on the Human Environment and "Stockholm Declaration"	Is considered a landmark in the history of international cooperation on environmental issues. The United Nations Environment Program (UNEP) was created. In addition, a decree was published to safeguard the environment and social issues. In addition, the UN starts to discuss the relation between air pollution from human actions and the consequente global climate changes.
1980, UNEP – World Conservation Strategy	Document created by the International Union for Conservation of Nature, involving scientists and researchers of different nationalities. Supposedly the first international document to use the term "sustainable development".
1982, General Assembly of the UN, "World Charter for Nature"	Argues that humanity is part of nature and that life depends on the uninterrupted functioning of natural systems. Appoints that humanity can change nature and even extract natural resources through its actions or consequences, but that it should also maintain the stability and quality of nature and preserve the natural resources.
1983–1987, World Commission on Environment and Development and "Our Common Future"	Also known as the Brundtland Commission, the proposition was to create a conceptual structure for global sustainable development. The document produced was called "Our Common Future", in which the commission argues that the current generations should use nature without compromising the ability of future generations to provide for its own needs.
1992, Rio de Janeiro, UN Conference on Environment and Development	Eco-92 or the Earth Summit was a large conference in which several global leaders and NGO's participated. The "Rio Declaration" contains 27 guiding principles of the environment and development policy. The "Agenda 21" offers a detailed framework for the implementation of sustainable development.
1997, Kyoto Protocol	An environmental treaty adopted in 1997 and which came into force in 2005, determining that developed countries that adopted the treaty reduce their greenhouse gas emission levels. Covers two emission reduction periods: 2008–2012 and 2013–2020. Thirty seven countries signed the treaty, including exceptions like the USA and Canada. The treaty established new systems and carbon credits for countries that fund emission reduction programs in the developing world.
2009, Copenhagen, UN Climate Change Conference	The disastrous conference was an indicator of developed and developing countries' inability to converge towards a consensus on how to advance in climate change issues. No agreement or action plan was adopted at this conference.
2012, Rio de Janeiro, UN Conference Rio +20 and "The Future we Want"	Many of the discussions during Rio+20 addressed the failed efforts to implemente some kind of global convergence towards sustainable development, idealized in 1992. The report "The Future we Want" presentes this same tone of failure and argues in favor of a renewed political commitment.

Picture 1. Conferences, Commissions and Global Agreements in favor of Sustainable Development.

Source: adapted from Caradonna, 2014; Waas, Hugé, Verbruggen & Wright, 2011

The main events described in Table 1 show the effort in search of sustainable development. The evolution of the sustainable development concept has presented different approaches though, which will be discussed in the next topic.

2.2. Sustainable development

The definition of sustainable development suggested by WCED (1987) is taken as a starting point for the current discussion about the concept of sustainable development. Nevertheless, more than one concept exists, as the expression deals with a juxtaposition of two concepts, "Development" and "Sustainability", which are also constantly developing in the literature reviewed. While the first term can be generalized as the search for a more advanced state of some specific dimension, be it economic, social, institutional, environmental, spiritual, technological, etc.; the second concept is addressed in a complex and transdisciplinary way (Leal Filho, 2000; Mebratu, 1998; Waas *et al*., 2011). Thus, the concept of sustainable development has evolved in accordance with the new discoveries and new conceptual structures, being a field of study that can be approached from several angles and fields of knowledge. Table 2 presents some of the different approaches to the concepts proposed in the literature on sustainable development:

Definition	Author
"Development which meets the needs of the present without compromising the ability of future generations to meet their own needs" (p. 8)	(Brundtland, 1987)
"Sustainable development involves devising a social and economic system, which ensures that these goals are sustained, i.e. that real incomes rise, that educational standards increase, that the health of the nation improves, and that the general quality of life is advanced." (p. 1)	(Pearce, Markandya & Barbier, 1989)
"Improving the quality of human life while living within the carrying capacity of supporting eco-systems" (p. 10)	(Munro, Holdgate & Prescott-Allen, 1991)
"Sustainability is the ability of a human, natural or mixed system to withstand or adapt to endogenous or exogenous change indefinitely"(p. 14)	(Dovers & Handmer, 1992)
"Sustainability is a relationship between dynamics human economic systems and larger dynamics, but normally slower-changing ecological systems, in which (a) human life can continue indefinitely, (b) human beings can flourish and (c) human cultures can develop." (p. 8)	(Costanza, 1992)
"Sustainable development involves the simultaneous pursuit of economic prosperity, environmental quality and social equity." (p. 397)	(Elkington, 1997)
"Sustainable development is a social constructo, referring to the long-term evolution of a hugely complex system – the human population and economy embedded within the eco-systems and biogeochemical flow of the planet." (p. 7)	(Meadows, 1998)
"Sustainable development representes a shift in understanding of humanity's place on the planet, but it is open to interpretation of being anything from almost meaningless to of extreme importance to humanity." (p. 13)	(Hopwood, Mellor & O'Brien, 2005)
"Sustainable development is a normative value system, on a par with human rights, democracy and freedom (and it is closely interlinked with all these systems). Thus, sustainable development is essentially a strong ethical, or moral, pronouncement as to what should be done." (p. 3)	(Holden, Linnerud, & Banister, 2017)

Picture 2. Sustainable Development Concepts

Source: Adapted from Chang, Zuo, Zhao, Ziçcante, Gan and Soebarto (2017) and Duran, Gogan, Artene & Duran (2015).

The most classic and widespread model is the Sustainability Tripod (Elkington, 1997), in which actions are classified by three dimensions: social, environmental and economic. The approach that this model suggests is the reflection of how actions can be economically viable, socially just and environmentally responsible.

Some of the different concepts that are not included in this first approach end up having a direct influence on development though, and the detriment of these concepts in the set of sustainable development dimensions results in an incomplete analysis. Several studies aim to analyze the dimensions of sustainability (Ayres, 2008; Blewitt, 2008; Duran, Gogan, Artene, & Duran, 2015; Gowdy, 2005) and with the development of scientific knowledge in the area, the literature adopts other dimensions besides the three most disseminated, such as: Ethics and Morality: (Aguinis & Glavas, 2012); Political and Institutional: (Acemoglu, Johnson, & Robinson, 2005; Mavragani, Nikolaou, & Tsagarakis, 2016; Ostrom, Schroeder, & Wynne, 1993); Technique: (Pawłowski, 2008; Weitzman, 1997); Culture: (Blewitt, 2008; Lorek & Spangenberg, 2014; Soini & Birkeland, 2014); Sprituality: (Campante & Yanagizawa-Drott, 2015; Carroll, 2004; Rodrigues, 2010)

The concepts and actions that relate to sustainable development can be organized hierarchically, as proposed by Glavic and Lukman (2007), in which the authors use the environmental, economic, social and political dimensions to organize the concepts in the following hierarchical order:

Principles: fundamental concepts for the establishment of a more complex system. They refer to only one action or method and are at the base of the hierarchy;

Approaches: set of principles related to the same topic, building a more complex system. The approaches are broader than the principles;

Sub-systems: consists of a set of approaches. They "introduce strategies that have to be met to achieve full preservation of the environment and contribute to human well-being in the short and long term." (Glavič & Lukman, 2007, p.7);

Sustainable Systems: A system is a set of subsystems that work in synergy. Therefore, a sustainable system is the highest level of activities to progress towards sustainable development. These arrangements are accompanied by a change in the lifestyle and mind-set of society.

2.3. Sustainable Development Goals

In the year 2000, the United Nations General Assembly proposes, in the so-called Millennium Declaration, the Millennium Development Goals (MDGs). The new method, consisting of eight objectives and 22 measurable and well-defined goals, summed up the efforts and agreements that were made among different countries. This new approach, with quantitative and measurable indicators, is trackable and thus effective, and the MDGs achieved a positive balance (Assembly, 2000, 2015).

In December 2015, the Sustainable Development Goals (SDGs) were launched in the 2030 Agenda for Sustainable Development, considered an evolution in relation to the MDGs. The SDGs are 17 objectives, broken up into one 169 goals, which are even more ambitious because they embrace more dimensions of sustainable development (Campbell, 2017; Leal Filho, Azeiteiro, Alves, Pace, Mifsud, Brandli & Disterheft, 2017).

Table 3 shows the evolution in the global vision and cooperation towards sustainable development.

Millennium Development Goals (2000)	Sustainable Development Goals (2015)
1. Eradicate extreme Poverty and Hunger	1. No Poverty
2. Achieve Universal Primary Education	2. Zero Hunger
3. Promote Gender Equality and Empower Women	3. Good Health and Well-Being
4. Reduce Child Mortality	4. Quality Education
5. Improve Maternal Health	5. Gender Equality
6. Combat HIV/Aids, Malaria and Other Diseases	6. Clean Water and Sanitation
7. Ensure Environmental Sustainability	7. Affordable and Clean Energy
8. Global Partnership for Development	8. Decent Work and Economic Growth
	9. Industry, Innovation and Infrastructure
	10. Reduced Inequalities
	11. Sustainable Cities and Communities
	12. Responsible Consumption and Production
	13. Climate Action
	14. Life below Water
	15. Life on Land
	16. Peace, Justice and Strong Institutions
	17. Partnerships for the Goals

Picture 3. MDGs and SDGs

Source: elaborated based on Assembly (2000), Campbell (2017) and Mundo (2016).

The current literature on the theme focuses on assessing existing indicators and developing better indicators, which are quantitative and more measurable (Costanza, Fioramonti, Giovannini, Kubiszewski, Mortensen & Wilkinson, 2016; Engebretsen, Heggen & Ottersen, 2017; Hák *et al.*, 2016; ICSU, 2015). The SDGs can increasingly be aligned in the development of these indicators.

3. Sustainability in the Corporate World

In this topic, we aimed to describe the main indicators of sustainability and business reputation that are used in the research, as well as to evidence research results that relate practices and sustainability indicators with the economic-financial performance of companies. Finally, we intended to discuss research that shows the evolution of sustainability disclosure forms, especially on the new disclosure proposal through Integrated Reporting.

3.1. Sustainability Indicators and Corporate Reputation

Although there are difficulties to obtain a single, unbiased definition, the market has found ways to signal corporate sustainability practices, linking sustainability to corporate reputation, and the most recent research seeks to understand the impact of Corporate Social Responsibility (CSR) on the financial performance of companies in the light of these indices. Among the sustainability and business reputation indicators, the Corporate Sustainability Index (CSI) - BMF & BOVESPA; the Down Jones Sustainability Indices (DJSI); the FTSE4Good of the London Stock Exchange; in addition to the international standard series ISO 14000 and 26000 and the MERCO Reputation Ranking (ABNT, 2004; BOVESPA, 2012; Finch, 2005; Group, 2010; GVces, 2016; INDEXES, 2006; Knoepfel, 2001; Melo & Gomes, 2007; MERCO, 2016). In Picture 4, some of the main sustainability and reputation indices are displayed.

Index	Description
Domini 400 Social Index	Consists of a selection of 400 North American companies, 250 of which figure on the S&P 500. Founded in 1990 by Kinder, Lydenberg Domini Co.
Dow Jones Sustainability Indices	Calculated and analyzed similarly to the Dow Jones Global Indices, and further characterized in two indices: The DJSI World and the DJSI STOXX, the later representing a mix of European companies. Founded in 1999 by the Dow Jones and Sustainable Asset Management Group
FTSE4Good	Designed to measure the performance of companies that demonstrate strong Governance, Social and Environmental Accountability practices. Founded in 2001 by the British Corporate Group.
Ethibel Sustainability Index (ESI)	Consists of four regional indices: ESI Global, ESI Americas, ESI Europe, ESI Asia Pacific. Founded in 2002 by Standard & Poor's.
Socially Responsible Investment (SRI) Index	Launced in South Africa, is considered the first sustainability index in an emerging country. Founded in 2004 by the Johannesburg Stock Exchange.
Calvert Social Index	Consists of 680 companies selected among 1000 of the largest publicly traded companies in the USA. Founded in 2005 by Calvert Co.
Corporate Sustainability Index (CSI)	Originally founded by the International Financial Corporation (IFC), the private-sector branch of the World Bank. It is "a tool for the comparative performance analysis of companies listed on BM&FBOVESPA, considering corporate sustainability based on economic efficiency, environmental balance, social justice and corporate governance". It was designed by GVces and founded by BMF&Bovespa in 2005.
MERCO Reputation Ranking	The MERCO Reputation Ranking started in 2004 and was constructed using a scale from 0 to 10000, aiming to measure the multidimensional concept of corporate reputation, involving measures of economic-financial results, information quality, the company's commitment to society, product-service quality, respect for consumer right, commitment to employees, information disclosure quality and quality in management and innovation. The MERCO ranks the reputation of companies active in the G-20, focusing on Spanish-speaking countries. The countries in which the MERCO verifies the reputation indices are: Colombia, Chile, Argentina, Equador, Bolivia, Mexico, Peru, Germany, Mexico and Brazil since 2013 (Pinto, 2015; MERCO, 2016).

Picture 4. Sustainability Indices

Source: Elaborated based on MERCO (2016), Orsato, Garcia, Mendes-Da-Silva, Simonetti & Monzoni (2015) and Pinto, Freire & Dos Santos (2015).

In the literature, there are studies that search for determinants for the participation of companies in sustainability indices and for the disclosure of social information through financial statements. Thus, some studies find evidence that the companies' characteristics can influence the inclusion in sustainability indices. For example, results suggest that companies with a higher growth potential have higher Corporate Social Responsibility (CSR), as they have more opportunity to adopt sustainable actions in their operations (Artiach, Lee, Nelson & Walker, 2010; Belkaoui & Karpik, 1989; Nunes, Teixeira, Nossa & Galdi, 2010). Another result that is robust, even when analyzing different companies, indices, periods and methods, is that the size of the company can influence the decision to include it in sustainability indices. The argument is that larger companies are more subject to stakeholder scrutiny, and it is a strategic decision to signal corparative social responsibility and concern with sustainable development. Thus, an important factor that leads companies to take voluntary sustainability initiatives is the intangible value created such actions create, including access to new knowledge, innovation, and reputation gains (Andrade, Bressan, Iquiapaza & de Melo Moreira, 2013; Artiach *et al.*, 2010; Nunes *et al.*, 2010; Orsato *et al.*, 2015).

3.2. Sustainability and Economic-Financial Performance of Companies

Although there was already some discussion about the relationship between business and society, the concept of CSR is relatively new in the literature, and many authors consider Howard Bowen's work Social Responsibilities of the Businessman (1953) as the first theorization on the subject, proposing that businessmen should make decisions and follow guidelines that meet the objectives and values of society they are part of. This line of arguments was the main focus of the literature in the 1950s and 1960s (Bowen, 1953; Carroll, 1979; Lee, 2008; Wartick & Cochran, 1985).

Approximately in the period from 1970 to 1980, the self-interest of the economic agents had the sole social responsibility of the company related to the increase of returns for shareholders. In the 1980s, a first model was developed that proposed four categories of social responsibility (economic, legal, ethical and philanthropic) as a natural way to respond to criticisms regarding the lack of analytical rigor. In the 1990s, the Stakeholder theory, which addresses the pressures companiees undergo from different social groups and CSR as part of the company›s strategic management gain momentum (Carroll, 1979; Edward, 1984; Freguete, Nossa & Funchal, 2015; Friedman, 1970; Jones, 1995; Lee, 2008; Matten & Moon, 2008; Wartick & Cochran, 1985).

Despite this evolution, the divergences are still present. A study by Dahlsrud (2008) proposed to analyze the different conceptions of CSR used in the literature. The author identified 37 definitions. By comparing their differences and similarities, he constructed a classification containing the following dimensions of responsibilities of company actions: Stakeholders, Society, Economy, Environment and Volunteering (Dahlsrud, 2008).

By proposing that companies are in a context in which they are under pressure from different social actors, Stakeholder theory predicts that these companies' exercise of CSR can positively influence better financial results of the companies that practise it, qualified by technical standards and indices.

The empirical results on the costs and benefits of participating in indices such as those cited are still contradictory, and there is no consensus in the literature. Several studies suggest that, in the short term, the presence or not of companies in sustainability indices does not indicate a higher financial return (Bansal & Hunter, 2003; Darnall, 2006; Delmas, 2002; Delmas & Montes-Sancho, 2011; Gilbert & Rasche, 2007; King & Lenox, 2001; King, Lenox & Terlaak, 2005; Russo & Fouts, 1997). Many of these studies conclude in their research that they found no relationship between sustainability and financial performance or positive shareholder perception of stock prices. These authors also point out that companies seek to disclose that they are committed to certification or participate in sustainability indices or even reputation due to external forces. Thus, companies invest in sustainability not only because this entails financial results, but rather for survival, depending on the activity area, due to the pressure coming from clients, suppliers and other stakeholders in the process, the legitimacy of the certification and the internal capabilities involved.

Although there is some evidence that sustainability has no positive correlation with better financial performance, as already pointed out in other studies, there are studies that found a positive relation between sustainability and financial performance and stock market perception on sustainability and stock prices (Allouche & Laroche, 2005; Arimura, Hibiki & Katayama, 2008; Darnall & Edwards, 2006; Darnall, Jolley & Ytterhus, 2007; Endrikat, Guenther & Hoppe, 2014; Heras-Saizarbitoria, Molina-Azorín & Dick, 2011; Lu, Chau, Wang & Pan, 2014; Melnyk, Sroufe & Calantone, 2003; Montabon, Melnyk, Sroufe & Calantone, 2000; Nakano & Managi, 2006; Orlitzky, Schmidt & Rynes, 2003; Perez, Amichai-Hamburger & Shterental, 2009; Potoski & Prakash, 2013; Zhao, 2008).

The studies that support the thesis of a positive relationship between sustainability and financial performance suggest that the relationship between the variables is two-way and simultaneous. In other words, the good financial performance of the firm signals a good opportunityto the investors, granting companies more capacity to improve their environmental and social performance. Consequently, the reduction of agency costs and the reduction of informational asymmetry influenced by CSR actions positively impact financial performance and shareholder perception of the stock market (Cheng, Ioannou & Serafeim, 2014; Jo & Harjoto, 2012; Luo, Wang, Raithel & Zheng, 2015; Mishra & Suar, 2010; Orlitzky *et al.*, 2003; Preston & O'bannon, 1997; Scholtens, 2008).

The complexity of conceptualizing sustainability implies a difficulty in defining and measuring the indicators of this concept though, which is a strong point of criticism in the literature. It is worth noting that the disclosure of sustainability through the Social Balance Sheet, GRI, corporate websites, financial statements, Integrated Reporting, etc. can influence the stakeholders' perception of sustainability and company performance. It was verified in the literature that different sources and information were used to measure sustainability. In addition, different methodological scopes were used, and it is known that several methods can influence the research results, often due to the absence of relevant variables in the estimation and unified parameters. In addition to the complexity of the phenomenon, the theory is hardly consistent and vague. As a result of these characteristics, the method used is another factor that influences the relationship among the variables (Borba, 2005; Korhonen, 2003; Van Beurden & Gössling, 2008). Although some research results find empirical evidence that there is no relation between sustainability and economic-financial indicators, it is noted that the initiative of an institution to worry about sustainability is by itself a positive factor for its continuity. In any case, there is room for more robust new research with more consistent baseline theories.

3.3 Integrated Reporting: a new form of accounting disclosure

The Global Reporting Initiative (GRI) has been considered the most widespread sustainability reporting model in the corporate world. The GRI initiated this movement in 1998 and had as its mission "to disseminate globally applicable Sustainability Reporting Guidelines for voluntary use by organizations in reporting on the economic, environmental, and social dimensions of their activities, products and services." (GRI, 2000, p.3). Over the years, the GRI reporting model and guidelines have been evolving and have contributed to improved guidance for the development of sustainability reports by companies (GRI, 2000).

In 2010, a new international debate began around a new form of sustainability disclosure and which was named Integrated Reporting (IR). The initiative comes from the International Integrated Reporting Council (IIRC), which brings together members from various countries (including the GRI) and is led by His Royal Highness the Prince of Wales.

The content elements of Integrated Reporting depart from the following innovative principles, according to Mio (2016, p.5): strategic focus and future orientation; information connectivity; stakeholder relationships; materiality; conciseness; responsibility and integrity; consistency and comparability; organizational vision and external environment; governance; business model; risks and opportunities; strategy and allocation of resources; performance; perspective and basis of preparation and presentation. Also according to Mio (2016), the idea of Integrated Reporting is guided by the integration based on a process that starts with the strategy and restructures the entire corporate disclosure system, according to an integrated thought perspective.

Haller (2016) points out that the main concept of Integrated Reporting is the creation of value generated for the various capitals (financial, manufactured, intellectual, human, natural, social and relationship) evidenced to the stakeholders, shareholders and other users.

Some companies around the world were invited by the IIRC to start developing Integrated Reporting. In Brazil, Ricardino Filho & Carvalho (2016) present the cases of Itaú Unibanco and Natura as the first to adopt this new reporting format. The adoption of Integrated Reporting is expected to bring down the companies' cost of capital. Carvalho and Murcia (2016, p.35) argue that a lower cost of debt in the medium and long terms can result from two factors: "(i) the adoption of a sustainable business model due to integrated thinking and (ii) reduced information asymmetry caused by greater transparency, permitting more accurate forecasts, both leading to positive returns for investors and creditors in the long term".

Research on Integrated Reporting is still in an incipient stage, considering the recent creation of the model, and still lacks a robust conceptual structure. Dumay, Bernardi, Guthrie & Demartini (2016) conclude in their study that, although it seems too early to do research on this topic, it is most welcome, especially because the subject has reached a stage where concept harmonization is possible, which may depend on the creation of international communities bringing together professionals, policymakers and thought leaders around the world, as has happened in the GRI project over the past two decades. Dumay *et al.* (2016) also point out that most research on Integrated Reporting is normative, and this can be seen as natural, considering the different stages in which a research evolves. And this can be a starting point to develop an understanding of the impact of these new technologies on practice through future empirical research.

Also considering the challenges of Integrated Reporting in practice, de Villiers, Rinaldi, & Unerman (2014) argue that the rapid development of the integrated reporting policy and the onset of its development in practice present theoretical and empirical challenges because of the different ways in which the integrated reports are understood and enacted in institutions. The author also points out that this opens space for new academic research to guide the evolution of policies and practice.

Concerning the audit of Integrated Reporting, in the research by Oprisor (2015), it was concluded that a high (or reasonable) level of security is difficult to achieve in the case of integrated reporting in view of the lack of audit regulations, the specific characteristic of the integrated reporting company and key performance indicators for non-financial information. These are also gaps for the development of research on the subject.

4. Final Considerations

The emphasis on the concept of sustainable development began more strongly in the 1980s and 1990s, especially with regard to social and environmental issues, now reaching the UN's Sustainable Development Goals (ODS). This has raised the pressure of the organized society, particularly in relation to the corporate world. Thus, companies started to incorporate concepts related to sustainability that were not previously part of their operations.

In this sense, a process was started to create sustainability indicators with a view to issuing signals to the market regarding companies that incorporated sustainability concepts into their practices. From this point of view, researchers began to develop research relating companies' sustainability practices and indicators with their economic-financial performance. The results of these surveys have followed different directions, often controversial, in some cases due to the adoption of different methods.

The disclosure form of sustainability has also been evolving over the years. The current debate revolves around Integrated Reporting, which is aimed at reporting information in an integrated way and which presents added value for its users and, mainly, aim to reduce information asymmetry in relation to business sustainability.

It should be noted, therefore, that there are many gaps in the sustainability theme that still need advances in research, especially in relation to its measuring and disclosure and its relationships with company performance.

Finally, some limitations of this literature review are highlighted, considering that the idea was to describe the evolution of the sustainability concept and some interfaces with accounting, without any claim on performing a critical analysis of the entire sustainability and accounting literature with all of its methodological aspects.

References

ABNT, N. B. R. (2004). 16001. Associação Brasileira de normas Técnicas. *Responsabilidade Social–sistema de Gestão–requisitos*. Recuperado em 15 de novembro, 2017, de http://www.inmetro.gov.br/qualidade/responsabilidade_social/norma_nacional.asp.

Acemoglu, D., Johnson, S., & Robinson, J. A. (2005). Institutions as a fundamental cause of long-run growth. *Handbook of Economic Growth*, *1*, 385–472. https://economics.mit.edu/files/4469

Aguinis, H., & Glavas, A. (2012). What We Know and Don't Know About Corporate Social Responsibility. *Journal of Management*, *38*(4), 932–968. https://doi.org/10.1177/0149206311436079

Allen, C., Metternicht, G., & Wiedmann, T. (2016). National pathways to the Sustainable Development Goals (SDGs): A comparative review of scenario modelling tools. *Environmental Science and Policy*, *66*, 199–207. https://doi.org/10.1016/j.envsci.2016.09.008

Allouche, J., & Laroche, P. (2005). A meta-analytical investigation of the relationship between corporate social and financial performance. *Revue de Gestion Des Ressources Humaines*, (57), 18.

Andrade, L. P., Bressan, A. A., Iquiapaza, R. A., & de Melo Moreira, B. C. (2013). Determinantes de adesão ao Índice de Sustentabilidade Empresarial da BM&FBOVESPA e sua relação com o valor da empresa. *Revista Brasileira de Finanças*, *11*(2).

Arimura, T. H., Hibiki, A., & Katayama, H. (2008). Is a voluntary approach an effective environmental policy instrument?: A case for environmental management systems. *Journal of Environmental Economics and Management*, *55*(3), 281–295.

Arrow, K., Dasgupta, P., Goulder, L., Daily, G., Ehrlich, P., Heal, G., … Summer, N. (2004). Are We Consuming Too Much ? *The Journal of Economic Perspective*, *18*(3), 147–72. https://doi.org/10.1257/0895330042162377

Artiach, T., Lee, D., Nelson, D., & Walker, J. (2010). The determinants of corporate sustainability performance. *Accounting & Finance*, *50*(1), 31–51.

Assembly, U. N. G. (1982). World Charter for Nature. *United Nations General Assembly Resolution*, *37*(7).

Assembly, U. N. G. (2000). United Nations millennium declaration. *United Nations General Assembly*.

Assembly, U. N. G. (2015). Draft Outcome Document of the United Nations Summit for the Adoption of the Post-2015 Development Agenda.

Ayres, R. U. (2008). Sustainability economics: Where do we stand? *Ecological Economics*, *67*(2), 281–310. https://doi.org/10.1016/j.ecolecon.2007.12.009

Bansal, P., & Hunter, T. (2003). Strategic explanations for the early adoption of ISO 14001. *Journal of Business Ethics*, *46*(3), 289–299.

Belkaoui, A., & Karpik, P. G. (1989). Determinants of the corporate decision to disclose social information. *Accounting, Auditing & Accountability Journal*, *2*(1).

Bithas, K. (2011). Sustainability and externalities: Is the internalization of externalities a sufficient condition for sustainability? *Ecological Economics*, *70*(10), 1703–1706. https://doi.org/10.1016/j.ecolecon.2011.05.014

Blewitt, J. (2008a). *Community, empowerment and sustainable development*. Green books.

Blewitt, J. (2008b). *Understanding sustainable development*. *Vasa*. https://doi.org/10.2139/ssrn.956240

Borba, P. da R. F. (2005). Relação entre desempenho social corporativo e desempenho financeiro de empresas no Brasil. Universidade de São Paulo.

BOVESPA, B. M. F. (2012). Índice de Sustentabilidade empresarial (ISE). *Arquivo Eletrônico. São Paulo*. Recuperado em 15 de novembro, 2017, de http://www.bmfbovespa.com.br/pt_br/produtos/indices/indices-de-sustentabilidade/indice-de-sustentabilidade-empresarial-ise.htm.

Bowen, H. R. (1953). *Social responsibilities of the businessman*. Harper.

Brandt, P., Ernst, A., Gralla, F., Luederitz, C., Lang, D. J., Newig, J., … Von Wehrden, H. (2013). A review of transdisciplinary research in sustainability science. *Ecological Economics*, *92*. https://doi.org/10.1016/j.ecolecon.2013.04.008

Brundtland, G. (1987). Report of the World Commision on Environement and Development: Our Common Future. *Oxford Paperbacks*, *Report of*, 400. https://doi.org/10.2307/2621529

Campante, F., & Yanagizawa-Drott, D. (2015). Does religion affect economic growth and happiness? Evidence from Ramadan. *The Quarterly Journal of Economics*, *130*(2), 615–658.

Campbell, D. A. (2017). An Update on the United Nations Millennium Development Goals. *Journal of Obstetric, Gynecologic & Neonatal Nursing*, *46*(3), e48–e55. https://doi.org/https://doi.org/10.1016/j.jogn.2016.11.010

Caniglia, G., Schäpke, N., Lang, D. J., Abson, D. J., Luederitz, C., Wiek, A., … von Wehrden, H. (2017). Experiments and evidence in sustainability science: A typology. *Journal of Cleaner Production*. https://doi.org/10.1016/j.jclepro.2017.05.164

Caradonna, J. L. (2014). *Sustainability: A history*. Oxford University Press.

Carlowitz, H. Von, & Rohr, J. von. (1732). Sylvicultura oeconomica. Retrieved from https://books.google.com.br/books?hl=pt-BR&lr=&id=bHJDAAAAcAAJ&oi=fnd&pg=PA36&dq=Sylvicultura+Oeconomica&ots=JBBomcnt_1&sig=8Br1uhAp9vwQ0M8QeGMWRD4VSgU

Carroll, A. B. (1979). A three-dimensional conceptual model of corporate performance. *Academy of Management Review*, *4*(4), 497–505.

Carroll, J. E. (2004). *Sustainability and spirituality*.

Carvalho, N., & Murcia, F. D.-R. (2016). The Relationship Between Integrated Reporting and Cost of Capital. In *Integrated Reporting* (pp. 253–268). Springer.

Chang, R. D., Zuo, J., Zhao, Z. Y., Zillante, G., Gan, X. L., & Soebarto, V. (2017). Evolving theories of sustainability and firms: History, future directions and implications for renewable energy research. *Renewable and Sustainable Energy Reviews*, *72*(January), 48–56. https://doi.org/10.1016/j.rser.2017.01.029

Cheng, B., Ioannou, I., & Serafeim, G. (2014). Corporate social responsibility and access to finance. *Strategic Management Journal*, *35*(1), 1–23.

Clark, B., & Foster, J. B. (2001). William Stanley Jevons and The Coal Question An Introduction to Jevons's "Of the Economy of Fuel." *Organization & Environment*, *14*(1), 93–98.

Costanza, R. (1989). What is ecological economics? *Ecological Economics*, *1*(1), 1–7.

Costanza, R. (1992). *Ecological economics: the science and management of sustainability*. Columbia University Press.

Costanza, R., Cumberland, J. H., Daly, H., Goodland, R., Norgaard, R. B., Kubiszewski, I., & Franco, C. (2014). *An introduction to ecological economics*. CRC Press.

Costanza, R., Daly, L., Fioramonti, L., Giovannini, E., Kubiszewski, I., Mortensen, L. F., … Wilkinson, R. (2016). Modelling and measuring sustainable wellbeing in connection with the UN Sustainable Development Goals. *Ecological Economics*, *130*, 350–355. https://doi.org/10.1016/j.ecolecon.2016.07.009

Cropper, M. L., & Oates, W. E. (1992). Environmental economics: a survey. *Journal of Economic Literature*, *30*(2), 675–740.

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

Darnall, N. (2006). Why firms mandate ISO 14001 certification. *Business & Society*, *45*(3), 354–381.

Darnall, N., & Edwards, D. (2006). Predicting the cost of environmental management system adoption: the role of capabilities, resources and ownership structure. *Strategic Management Journal*, *27*(4), 301–320.

Darnall, N., Jolley, G. J., & Ytterhus, B. (2007). Understanding the relationship between a facility's environmental and financial performance. *Environmental Policy and Corporate Behaviour*, 213–259.

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.

de Vries, B. J. M., & Petersen, A. C. (2009). Conceptualizing sustainable development. An assessment methodology connecting values, knowledge, worldviews and scenarios. *Ecological Economics*, *68*(4), 1006–1019. https://doi.org/10.1016/j.ecolecon.2008.11.015

Delmas, M. A. (2002). The diffusion of environmental management standards in Europe and in the United States: An institutional perspective. *Policy Sciences*, *35*(1), 91–119.

Delmas, M. A., & Montes-Sancho, M. J. (2011). An institutional perspective on the diffusion of international management system standards: The case of the environmental management standard ISO 14001. *Business Ethics Quarterly*, *21*(1), 103–132.

Dovers, S. R., & Handmer, J. W. (1992). Uncertainty, sustainability and change. *Global Environmental Change*, *2*(4), 262–276.

Du Pisani, J. A. (2006). Sustainable development – historical roots of the concept. *Environmental Sciences*, *3*(2), 83–96. https://doi.org/10.1080/15693430600688831

Dumay, J., Bernardi, C., Guthrie, J., & Demartini, P. (2016). Integrated reporting: a structured literature review. In *Accounting Forum* (Vol. 40, pp. 166–185). Elsevier.

Duran, D. C., Gogan, L. M., Artene, A., & Duran, V. (2015). The Components of Sustainable Development - A Possible Approach. *Procedia Economics and Finance*, *26*(15), 806–811. https://doi.org/10.1016/S2212-5671(15)00849-7

Edward, F. R. (1984). Strategic Management: A stakeholder approach. *Boston: Pitman*, *46*.

Elkington, J. (1997). Cannibals with forks. *The Triple Bottom Line of 21st Century*, 73.

Endrikat, J., Guenther, E., & Hoppe, H. (2014). Making sense of conflicting empirical findings: A meta-analytic review of the relationship between corporate environmental and financial performance. *European Management Journal*, *32*(5), 735–751.

Engebretsen, E., Heggen, K., & Ottersen, O. P. (2017). The Sustainable Development Goals: ambiguities of accountability. *International Organization*, *108*, 396–405.

Field, B. C., & Field, M. K. (1997). Environmental economics: an introduction. *Sustainable Human Development Review*, 105.

Filho, W. L. (2000). Dealing with misconceptions on the concept of sustainability. *International Journal of Sustainability in Higher Education*, *1*(1), 9–19. https://doi.org/10.1108/1467630010307066

Finch, N. (2005). The emergence of CSR and sustainability indices.

Freguete, L. M., Nossa, V., & Funchal, B. (2015). Responsabilidade Social Corporativa e Desempenho Financeiro das Empresas Brasileiras na Crise de 2008/Corporate Social Responsibility and Brazilian Firms' Financial Performance. *Revista de Administração Contemporânea*, *19*(2), 232.

Friedman, M. (1970). The Social Responsibility of Business is to Increase its Profits.

Gerlagh, R. (2017). Generous Sustainability. *Ecological Economics*, *136*, 94–100. https://doi.org/10.1016/j.ecolecon.2017.02.012

Gilbert, D. U., & Rasche, A. (2007). Discourse ethics and social accountability: The ethics of SA 8000. *Business Ethics Quarterly*, *17*(2), 187–216.

Glavič, P., & Lukman, R. (2007). Review of sustainability terms and their definitions. *Journal of Cleaner Production*. Retrieved from http://www.sciencedirect.com/science/article/pii/S0959652607000029

Goodland, R. (1995). The Concept of Environmental Sustainability. *Annual Review of Ecology and Systematics*, *26*(1), 1–24. https://doi.org/10.1146/annurev.es.26.110195.000245

Goodland, R., & Ledec, G. (1987). Neoclassical economics and principles of sustainable development. *Ecological Modelling*, *38*(1–2), 19–46. https://doi.org/10.1016/0304-3800(87)90043-3

Gowdy, J. (2005). Toward a new welfare economics for sustainability. *Ecological Economics*, *53*(2), 211–222. https://doi.org/10.1016/j.ecolecon.2004.08.007

GRI. (2000). GRI – Global Reporting Iniciative.

Griggs, D., Stafford-Smith, M., Gaffney, O., Rockström, J., Ohman, M. C., Shyamsundar, P., … Noble, I. (2013). Policy: Sustainable development goals for people and planet. *Nature*, *495*(7441), 305–7. https://doi.org/10.1038/495305a

Grober, U. (2007). Deep roots–. *A Conceptual History Of" sustainable development"(Nachhaltigkeit), Wissenschaftszentrum Berlin Fur Sozialforschung*, 8–9.

Group, F. (2010). FTSE4Good Index series inclusion criteria. *London: FTSE Group*.

GVces. (2016). O que é ISE? Recuperado em 7 de outubro, 2017, de http://isebvmf.com.br/o-que-e-o-ise?locale=pt-br.

Hák, T., Janoušková, S., & Moldan, B. (2016). Sustainable Development Goals: A need for relevant indicators. *Ecological Indicators*, *60*, 565–573.

Haller, A. (2016). Value Creation: A Core Concept of Integrated Reporting. In *Integrated Reporting* (pp. 37–57). Springer.

Hellwig, K. (2005). Sustainability revisited. *Economics Letters*, *87*(2), 193–197. https://doi.org/10.1016/j.econlet.2004.10.013

Heras-Saizarbitoria, I., Molina-Azorín, J. F., & Dick, G. P. M. (2011). ISO 14001 certification and financial performance: selection-effect versus treatment-effect. *Journal of Cleaner Production*, *19*(1), 1–12.

Holden, E., Linnerud, K., & Banister, D. (2017). The Imperatives of Sustainable Development. *Sustainable Development*, *25*(3), 213–226. https://doi.org/10.1002/sd.1647

Hopwood, B., Mellor, M., & O'Brien, G. (2005). Sustainable development: mapping different approaches. *Sustainable Development*, *13*(1), 38–52.

ICSU, I. (2015). Review of the sustainable development goals: The science perspective. *Paris: International Council for Science (ICSU)*. Recuperado em 15 de novembro, 2017, de https://www.icsu.org/publications/reports-and-reviews/review-of-targets-for-the-sustainable-development-goals-the-science-perspective-2015.

Illge, L., & Schwarze, R. (2009). A matter of opinion-How ecological and neoclassical environmental economists and think about sustainability and economics. *Ecological Economics*, *68*(3), 594–604. https://doi.org/10.1016/j.ecolecon.2008.08.010

INDEXES, D. J. S. (2006). Indexes. Recuperado em 22 de outubro, 2017, de http://www. sustainability-indexes. com>.

Jerneck, A., Olsson, L., Ness, B., Anderberg, S., Baier, M., Clark, E., … Persson, J. (2011). Structuring sustainability science. *Sustainability Science*, *6*(1), 69–82. https://doi.org/10.1007/s11625-010-0117-x

Jevons, W. S. (1866). *The coal question: an enquiry concerning the progress of the Nation, and the probable exhaustion of our coal-mines*. Macmillan.

Jo, H., & Harjoto, M. A. (2012). The causal effect of corporate governance on corporate social responsibility. *Journal of Business Ethics*, *106*(1), 53–72.

Jones, T. M. (1995). Instrumental stakeholder theory: A synthesis of ethics and economics. *Academy of Management Review*, *20*(2), 404–437.

Kajikawa, Y. (2008). Research core and framework of sustainability science. *Sustainability Science*, *3*(2), 215–239. https://doi.org/10.1007/s11625-008-0053-1

King, A. A., & Lenox, M. J. (2001). WHO ADOPTS MANAGEMENT STANDARDS EARLY? AN EXAMINATION OF ISO 14001 CERTIFICATIONS. In *Academy of Management Proceedings* (Vol. 2001, pp. A1–A6). Academy of Management.

King, A. A., Lenox, M. J., & Terlaak, A. (2005). The strategic use of decentralized institutions: Exploring certification with the ISO 14001 management standard. *Academy of Management Journal*, *48*(6), 1091–1106.

Klöpffer, W. (2003). Life-Cycle based methods for sustainable product development. *The International Journal of Life Cycle Assessment*. Retrieved from http://search.proquest.com/openview/e0b94b6bdaf6c3f94c0da618e273954c/1?pq-origsite=gscholar&cbl=54409

Knoepfel, I. (2001). Dow Jones sustainability group index: A global benchmark for corporate sustainability. *Corporate Environmental Strategy*, *8*(1), 6–15.

Komiyama, H., & Takeuchi, K. (2006). Sustainability science: building a new discipline. Springer.

Kopnina, H. (2015). The victims of unsustainability: a challenge to sustainable development goals. *International Journal of Sustainable Development & World Ecology*, *4509*(November), 1–9. https://doi.org/10.1080/13504509.2015.1111269

Korhonen, J. (2003). Should we measure corporate social responsibility? *Corporate Social Responsibility and Environmental Management*, *10*(1), 25–39.

Leal Filho, W., Azeiteiro, U., Alves, F., Pace, P., Mifsud, M., Brandli, L., … Disterheft, A. (2017). Reinvigorating the sustainable development research agenda: the role of the sustainable development goals (SDG). *International Journal of Sustainable Development & World Ecology*, *0*(0), 1–12. https://doi.org/10.1080/13504509.2017.1342103

Lee, M. P. (2008). A review of the theories of corporate social responsibility: Its evolutionary path and the road ahead. *International Journal of Management Reviews*, *10*(1), 53–73.

Lorek, S., & Spangenberg, J. H. (2014). Sustainable consumption within a sustainable economy - Beyond green growth and green economies. *Journal of Cleaner Production*, *63*, 33–44. https://doi.org/10.1016/j.jclepro.2013.08.045

Lu, W., Chau, K. W., Wang, H., & Pan, W. (2014). A decade's debate on the nexus between corporate social and corporate financial performance: a critical review of empirical studies 2002–2011. *Journal of Cleaner Production*, *79*, 195–206.

Luo, X., Wang, H., Raithel, S., & Zheng, Q. (2015). Corporate social performance, analyst stock recommendations, and firm future returns. *Strategic Management Journal*, *36*(1), 123–136.

Malthus, T. R. (1798). *An Essay on the Principle of Population, as it Affects the Future Imporvement of Society, with Remarks on the Speculations of Mr. Godwin, M. Condorcet, and Other Writers*. The Lawbook Exchange, Ltd.

Marsh, G. P. (1965). *Man and nature*. University of Washington Press.

Marshall, J. D., & Toffel, M. W. (2005). Framing the elusive concept of sustainability: A sustainability hierarchy. *Environmental Science and Technology*, *39*(3), 673–682. https://doi.org/10.1021/es040394k

Matten, D., & Moon, J. (2008). "Implicit" and "explicit" CSR: a conceptual frame- work for a comparative understanding of corporate social responsibility. *Academy of Management Review*, *33*(2), 404–424. https://doi.org/10.5465/AMR.2008.31193458

Mavragani, A., Nikolaou, I., & Tsagarakis, K. (2016). Open Economy, Institutional Quality, and Environmental Performance: A Macroeconomic Approach. *Sustainability*, *8*(7), 601. https://doi.org/10.3390/su8070601

Meadows, D. H. (1998). Indicators and information systems for sustainable development.

Mebratu, D. (1998). Sustainability and sustainable development: Historical and conceptual review. *Environmental Impact Assessment Review*, *18*(6), 493–520. https://doi.org/10.1016/S0195-9255(98)00019-5

Melnyk, S. A., Sroufe, R. P., & Calantone, R. (2003). Assessing the impact of environmental management systems on corporate and environmental performance. *Journal of Operations Management*, *21*(3), 329–351.

Melo, C. M., & Gomes, E. R. (2007). NBR 16001: a norma brasileira de gestão da responsabilidade social.

MERCO. (2016). *Metodologia e informe de Verificacion Merco Empresa Brasil*.

Mikhailova, I. (2004). Sustentabilidade : Evolução Dos Conceitos Teóricos E Os Problemas Da Mensuração Prática. *Revista Economia E Desenvolvimento*, *16*(n°16), 22–41.

Mill, J. S. (1848). Of the stationary state. *Principles of Political Economy Book IV: Influence of the Progress of Society*.

Miller, T. R., Wiek, A., Sarewitz, D., Robinson, J., Olsson, L., Kriebel, D., & Loorbach, D. (2014). The future of sustainability science: a solutions-oriented research agenda. *Sustainability science*, *9*(2), 239-246.. https://doi.org/10.1007/s11625-013-0224-6

Mio, C. (2016). *Integrated Reporting: A New Accounting Disclosure*. Springer.

Mishra, S., & Suar, D. (2010). Does corporate social responsibility influence firm performance of Indian companies? *Journal of Business Ethics*, *95*(4), 571–601.

Montabon, F., Melnyk, S. A., Sroufe, R., & Calantone, R. J. (2000). ISO 14000: assessing its perceived impact on corporate performance. *Journal of Supply Chain Management*, *36*(1), 4–16.

Mundo, T. N. (2016). A Agenda 2030 para o Desenvolvimento Sustentável. Recuperado em 15 de novembro, 2017, de http://artigo19.org/wp-content/uploads/2015/09/ods_transforming_our_world_versc3a3o-final-pt.docx.

Munro, D. A., Holdgate, M. W., & Prescott-Allen, R. (1991). Caring for the earth: a strategy for sustainable living; summary. International Union for Conservation of Nature and Natural Resources, Gland, CH.

Nakano, M., & Managi, S. (2006). The effect of ISO 14001 adoption on firm's productivity. *Kankyo Kagaku Kai Shi*, *19*(5), 385–395.

Nunes, J. G., Teixeira, A. J. C., Nossa, V., & Galdi, F. C. (2010). Análise das variáveis que influenciam a adesão das empresas ao índice BM&F Bovespa de sustentabilidade empresarial. *Revista Base (Administração E Contabilidade) Da UNISINOS*, *7*(4).

Orlitzky, M., Schmidt, F. L., & Rynes, S. L. (2003). Corporate social and financial performance: A meta-analysis. *Organization Studies*, *24*(3), 403–441.

Orsato, R. J., Garcia, A., Mendes-Da-Silva, W., Simonetti, R., & Monzoni, M. (2015). Sustainability indexes: why join in? A study of the "Corporate Sustainability Index (ISE)"in Brazil. *Journal of Cleaner Production*, *96*, 161e170.

Ostrom, E., Schroeder, L., & Wynne, S. (1993). *Institutional incentives and sustainable development: infrastructure policies in perspective*. Westview Press.

Pádua, J. A. (2010). As bases teóricas da história ambiental. *Estudos Avançados*, *24*(68), 81–101.

Pappas, E., Pappas, J., & Sweeney, D. (2015). Walking the walk: Conceptual foundations of the Sustainable Personality. *Journal of Cleaner Production*, *86*, 323–334. https://doi.org/10.1016/j.jclepro.2014.08.077

Pawłowski, A. (2008). How many dimensions does sustainable development have? *Sustainable Development*, *16*(2), 81–90.

Pearce, D. W., Markandya, A., & Barbier, E. (1989). *Blueprint for a green economy* (Vol. 1). Earthscan.

Perez, O., Amichai-Hamburger, Y., & Shterental, T. (2009). The Dynamic of Corporate Self-Regulation: ISO 14001, Environmental Commitment, and Organizational Citizenship Behavior. *Law & Society Review*, *43*(3), 593–630.

Phillis, Y. A., & Andriantiatsaholiniaina, L. A. (2001). Sustainability: An ill-defined concept and its assessment using fuzzy logic. *Ecological Economics*, *37*(3), 435–456. https://doi.org/10.1016/S0921-8009(00)00290-1

Pinto, L. J. S., Freire, F. S., & Dos Santos, M. A. C. (2015). Retorno das ações com status de reputação corporativa no Brasil: Um estudo comparativo entre empresas ranqueadas no MERCO e empresas listadas no ISE BM&F BOVESPA. *RAGC*, *4*(9).

Potoski, M., & Prakash, A. (2013). Do voluntary programs reduce pollution? Examining ISO 14001's effectiveness across countries. *Policy Studies Journal*, *41*(2), 273–294.

Preston, L. E., & O'bannon, D. P. (1997). The corporate social-financial performance relationship: A typology and analysis. *Business & Society*, *36*(4), 419–429.

Redclift, M. (2005). Sustainable development (1987–2005): an oxymoron comes of age. *Sustainable Development*. Retrieved from http://onlinelibrary.wiley.com/doi/10.1002/sd.281/full

Ricardino Filho, A. ., & Carvalho, N. (2016). Integrated Report: The Cases of Itaú Unibanco Holding S/A and of Natura Cosméticos S/A., (In: Mio C. (eds) Integrated Reporting.).

Rodrigues, S. (2010). Espiritual e sustentável. *Vitória: ArtPoint*.

Romeiro, A. R. (2010). *Economia do Meio Ambiente: teoria e prática*. *Economia do Meio Ambiente e Serviços Ambientais*.

Russo, M. V, & Fouts, P. A. (1997). A resource-based perspective on corporate environmental performance and profitability. *Academy of Management Journal*, *40*(3), 534–559.

Sachs, J. D. (2012). From millennium development goals to sustainable development goals. *The Lancet*, *379*(9832), 2206–2211. https://doi.org/10.1016/S0140-6736(12)60685-0

Sala, S., Farioli, F., & Zamagni, A. (2013). Progress in sustainability science: lessons learnt from current methodologies for sustainability assessment: Part 1. *The International Journal of Life Cycle Assessment*, *18*(9), 1653–1672.

Saunders, H. D. (2014). Toward a neoclassical theory of sustainable consumption: Eight golden age propositions. *Ecological Economics*, *105*, 220–232. https://doi.org/10.1016/j.ecolecon.2014.06.011

Scholtens, B. (2008). A note on the interaction between corporate social responsibility and financial performance. *Ecological Economics*, *68*(1), 46–55.

Soini, K., & Birkeland, I. (2014). Exploring the scientific discourse on cultural sustainability. *Geoforum*. https://doi.org/10.1016/j.geoforum.2013.12.001

Solow, R. (1993). An almost practical step toward sustainability. *Resources Policy*, *19*(3), 162–172. https://doi.org/10.1016/0301-4207(93)90001-4

Stavins, R. N., Wagner, A. F., & Wagner, G. (2003). Interpreting sustainability in economic terms: Dynamic efficiency plus intergenerational equity. *Economics Letters*, *79*(3), 339–343. https://doi.org/10.1016/S0165-1765(03)00036-3

Summit, E. (1992). Agenda 21. *The United Nations Programme for Action from Rio*.

Vallance, S., Perkins, H. C., & Dixon, J. E. (2011). What is social sustainability? A clarification of concepts. *Geoforum*, *42*(3), 342–348. https://doi.org/10.1016/j.geoforum.2011.01.002

Van Beurden, P., & Gössling, T. (2008). The worth of values–a literature review on the relation between corporate social and financial performance. *Journal of Business Ethics*, *82*(2), 407–424.

Waas, T., Hugé, J., Verbruggen, A., & Wright, T. (2011). Sustainable Development: A Bird's Eye View. *Sustainability*, *3*(12), 1637–1661. https://doi.org/10.3390/su3101637

Wagner, J. (2006). On the economics of sustainability. *Ecological Economics*, *57*(4), 659–664. https://doi.org/10.1016/j.ecolecon.2005.05.023

Wartick, S. L., & Cochran, P. L. (1985). The evolution of the corporate social performance model. *Academy of Management Review*, *10*(4), 758–769.

Weitzman, M. L. (1997). Sustainability and technical progress. *The Scandinavian Journal of Economics*, *99*(1), 1–13.

Wood, H. W. (1985). The United Nations World Charter for Nature: The Developing Nations' Initiative to Establish Protections for the Environment. *Ecology Law Quarterly*, *12*(4), 977–996.

Wrigley, E. A. (2013). Energy and the English industrial revolution. *Phil. Trans. R. Soc. A*, *371*(1986), 20110568.

Zhao, J. (2008). The effect of the ISO-14001 environmental management system on corporate financial performance. *International Journal of Business Excellence*, *1*(1–2), 210–230.