Sustainability and Financial Performance of SMEs: A Bibliometric and Systematic Literature Review

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Abstract

Based on a 20-year dataset collected from the Web of Science database, this study aims to present a comprehensive knowledge map of the intellectual structure of the field of study of sustainability and financial performances in SMEs. A bibliometric analysis and systematic literature review method was employed by analyzing articles published between 1999 and 2018, using the VOSViewer software. The analyses provide an overview of articles, authors, the most influential journals, and themes of research. The results reveal the existence of three themes in research: the role of innovation and entrepreneurship their impact on sustainability in SMEs (cluster 1); CSR in the context of SMEs (cluster 2); and, green management and environmental issues for SMEs (cluster 3). In sum, this paper discusses prominent insights from the research analyses and recommends future research directions for the field.

Keywords: SMEs, sustainability, financial performance, literature review, bibliometric, VOSViewer

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1. Introduction

Small and medium-sized companies (SMEs) currently represent the majority of firms in the world: enterprises employing fewer than 250 persons represented 99 % of all enterprises in the EU in 2015, thus accounting for roughly 70% of jobs on average and generating between 50% and 60% of value added; in contrast, they contribute up to 45% of total employment and 33% of GDP in emerging economies (OECD, 2017). SMEs are deemed as responsible for around 60% of all carbon dioxide emissions and 70% of global pollution (Aragón-Correa, Hurtado-Torres, Sharma, & García-Morales, 2008; European Commission, 2010; Parker, Redmond, & Simpson, 2009). While much attention is devoted to the study of the economics and management of SMEs, vary attention is given to the investigation of their behaviors toward sustainability. In this paper we direct our attention to SMEs, one of the main kinds of actors that can contribute to achieve sustainability, with a comprehensive examination of their behaviors and strategies related to the production of goods and services.

In general, sustainability exemplifies a vastly broad and multifaceted concept which has fostered significant scientific debate recently, thus generating great interest at academic, social and business levels. In 1987, the United Nations Brundtland Commission defined sustainability as “meeting the needs of the present without compromising the ability of future generations to meet their own needs” (Brundtland, 1987). Sustainability can be studied with a macro approach related to the overall economic system, as well as using a micro approach, situating the analysis on specific operators (individuals, companies, governments). With reference to the business level, corporate sustainability can be defined as meeting the needs of a firm’s direct and indirect stakeholders, without comprising its ability to meet the needs of future stakeholders as well (Dyllick & Hockerts, 2002; Porter & Kramer, 2006). Corporate sustainability can be stated in different ways, as companies have to grow and maintain economic, social and environmental resources that are interrelated, especially if the sustainability is projected in a long run (Elkington, 1998). Additionally, Corporate Social Responsibility (CSR) has received eminent attention within academic and professional debates: scholars advocate that companies should improve the social and environmental impacts of their actions, but they efforts should be connected directly to the business and strategy of the single firm (Porter & Kramer, 2006).

Besides, the European Union has recently launched a strategy for a sustainable bio-economy to strengthen the connection among economy, society and the environment (European Commission, 2018). In a contest of scarce resources with a growing population, global challenges like climate change, land and ecosystem degradation compel the search for new ways of producing and consuming, respecting, and preserving natural resources and the environment. But at the same time, the need to achieve sustainability must be combined with the creation of an optimal business environment for sustainable growth, job creation, and innovation to ensure the prosperity of citizens and territories. As a result, all companies need to achieve suitable financial performance, not only to satisfy the legitimate expectations of the owners, but above all to assure businesses’ ongoing viability in a medium-long term perspective and to continue operating in the interest of all stakeholders (Bartolacci, Paolini, Quaranta, & Soverchia, 2018a, 2018b).

Similarly, the importance of sustainability issues is also reflected within corporate reporting (Borga, Citterio, Noci, & Pizzurno, 2009): as a matter of fact, non-financial reporting is becoming a critical component of corporate reporting, communicating, and the Integrated Reporting – which links financial, social, and environmental performance of companies, governments, and non-profit entities –(De Villiers, Unerman, & Rinaldi, 2014). To illustrate, e the Global Reporting Initiative (GRI), an international organization further offers standards on economic, social, and environmental topics to help companies in defining what and how to report for communicating the impact of their activities on critical sustainability issues (Milne & Gray, 2013).

Accordingly, the literature features the two perspectives – sustainability and business financial performance – as a relatively recent research topic. The existing studies are characterized by heterogeneous investigations for issues analyzed, methodologies adopted, and the empirical analyses conducted and, as well as, for conflicting results. For example, Kerr (2006) highlights the organizational dimension by proposing an idealized leadership model to understand how enterprises obtain strategies to manage environmental pressures and how these policies influence the development of enterprise management systems, functions, and culture. The findings highlight the key elements of an SME core competency profile to enable sustainable operations. Whereas, Walker and Preuss (2008) examine the opportunities for fostering sustainable development through public sector sourcing from SME by delivering suggestions on how to overcome some barriers.

There are some papers that conduct literature reviews to investigate sustainability within the SME context, but they mainly focus on different issues and neglect the impacts of corporate initiatives on financial performance: Johnson and Schaltegger (2016), for example, provide a systematic literature review concerning the implementation of sustainability management tools by SMEs, instead Klewitz and Hansen (2014) address the sustainability-oriented innovation concept in the same context.

The complexity and the multidisciplinarity of the approaches followed to analyze sustainability issue, in addition to the limited observation of their impacts on SMEs' financial performance, reveal a scientific gap which can be filled by examining the current scientific knowledge, in terms of main topics, methodologies, and results. In light of the above, the aim of this paper is to deepen the knowledge of two important issues and the connections between them with close attention to the SMEs, answering the following research question: what does the literature suggest about the relationship between sustainability and financial performance of SMEs?

To achieve this aim and overcome the cited limits, we have performed a systematic literature review on 62 articles published between 1999 and 2018 to ensure scientific rigor in mapping the knowledge produced so far about the relationship between sustainability and financial performances of SMEs. Our analysis has been conducted with the aid of the bibliometric method of visualization of similarities, through bibliographic coupling, that resulted in the identification of three themes of research: first theme related to investigating innovation and entrepreneurship and their role in sustainability (Cluster 1); a second theme pertained to CSR in the context of SMEs (Cluster 2); and, a third theme related to green management and environmental issues for SMEs (Cluster 3).

The article is structured as follows. we first explain the methods adopted and the rationality behind them. Then, we provide a summation of the main findings through various statistics about the publications included in the dataset. We then discuss three clusters of studies that represent the main themes of research in the field. Finally, conclusions and future research directions are presented.

2. Method

To provide an accurate analysis of sustainability and financial performance of SMEs, following the most recent developments in bibliographic research (e.g., Caputo, Marzi, Pellegrini, & Rialti, 2018; López-Fernández, Serrano-Bedia, & Pérez-Pérez, 2016), a systematic literature review supported by the bibliometric analysis based on the visualization of similarities (VOS) technique (van Eck *et al.*, 2006; van Eck and Waltman, 2010) was utilized.

The first step involved a comprehensive search of the Thomson Reuters Web of Science Core Collection database (WOS), which is recognized as the most reliable database for bibliometric studies, since it searches across publishers and does not exhibit any bias towards publishers (Ding, Rousseau, & Wolfram, 2014; Falagas, Pitsouni, Malietzis, & Pappas, 2008; Gu, 2004). It further guarantees the inclusion of the most important journals (Kullenberg & Kasperowski, 2016; Leydesdorff, Carley, & Rafols, 2013). Indeed, to ensure high quality WOS results are limited in terms of quantity, the database was deemed the most appropriate also following previous searches of the literature in sustainability (Cohen, 2017).

According to the principles of systematic literature review (Thorpe, Holt, Macpherson, & Pittaway, 2005; Tranfield, Denyer, & Smart, 2003), a panel of expert was consulted to define the search keywords. The search focused on the string *TS=(SME*) AND TS=(sustainab* OR responsib*) AND TS=(financial AND performance*)*, where the “TS” operator allows a search in titles, abstracts, and keywords, as performed on September 25, 2018. The results were then filtered to include only English peer reviewed articles belonging to the following subject areas: management, business, economics, ethics, business finance, and operations and management science. This initial phase resulted in 93 articles. Consistent with previous research (Caputo, Pellegrini, Dabic, & Dana, 2016), the titles and abstracts were then read independently by each researcher and articles unrelated to the topic were classified for removal. Next, all the resulting records were addressed and disagreements were solved through panel discussions to maintain inclusivity and limit human errors. As shown in Table 1, at the end of the process, 62 articles published between 1999 and 2018 were kept.

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The second step consisted of the identification of clusters through a bibliometric analysis using the bibliometric tool VOSviewer 1.6.8, adopting bibliographic coupling as the ratio to aggregate the data (Kessler, 1963). Bibliographic coupling, a form of citation analysis, measures the similarity between two articles by identifying the number of references they share. The assumption is that the degree of overlap of references among two articles indicates similarity in the topic investigated (Vogel & Güttel, 2013). Because the number of cited references in an article does not change over time, bibliographic coupling, compared to other bibliometric tools, is not influenced when the analysis is performed; therefore, it is considered to be particularly useful when adopted to inform systematic literature reviews (e.g., Caputo et al., 2018). The VOSviewer tool allows results from a co-occurrence matrix to be visualized, where co-occurrences emanate from the presence, frequency, and proximity of similar pairs of cited references in the data (van Eck & Waltman, 2014). Through a series of scripts based on mathematical algorithms, please prefer to van Eck and Waltman (2007; 2010), since the program builds a two-dimensional map in which the *N* items are distanced from each other based on the degree of similarity of cited references *X* and *Y*. A cluster density view is also performed, where each cluster is associated to a color, through the computation of a weighted average of the color where the weight of a color equals the item density for the corresponding cluster (van Eck and Waltman, 2010). The result is a graphical plot to depict where more a color is shaded, the lower its density is. In essence, the articles' distance can be interpreted as an indication of the relatedness among the cited references. When articles belong to the same cluster, it suggests they are strongly linked together as a group on the basis of their shared references; indicating that a given cluster represents a stream of research or a particular topic. At the end of the process three clusters based on bibliographic coupling emerged.

The third step involved a close examination of the three clusters to ensure that, from a qualitative point of view, the papers grouped together were actually investigating topics that could be aggregated within a certain stream of research. Consistent with the systematic literature review method, articles were read and analyzed qualitatively (Barclay, Momen, Case-Upton, Kuhn, & Smith, 2011; Pittaway & Cope, 2007; Tranfield et al., 2003). An excel data set was devised to collect all the qualitative information and help the researchers to investigate evolutionary trends and topics of interests through the use of ad hoc pivot tables. While reading each paper, relevant parts of the text were selected and tagged with keywords representing content. A dynamic tagging procedure was adopted, i.e. the researchers allowed new tags to be included during the process of reading articles, and promoted flexibility in categorizing information, helping to reduce possible biases from a rigidly pre-set system (Caputo et al., 2016).

3. Findings

The first analysis addressed the number of publications on sustainability and financial performance of SMEs. Figure 1 confirms the growing interest in understanding this phenomenon within the last few years. While the first article dated back to 1999, more articles were published only after 2014. In particular, the production of research on the effect of sustainability on financial performance of SMEs peaked in 2016 with more than 35 articles of 62 published after that year. This result confirms the novelty of the topic and the elevated interest by management scholars.

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The average number of citations for an article was 12, while the median was 6.00, and the mode 0. For journals, the average number of citations was 20, while the median was 6.00 and the mode 0. These numbers are consistent with niches of studies in management (Caputo, 2013; Caputo et al., 2018) and exhibit how, despite such new research, it is producing a fairly good impact.

- - - Please insert table 2 about here - - -

From the analysis of the citations received by journals shown in Table 2, *Small Business Economics*, *Journal of Business Ethics*, and *Business Strategy and the Environment* emerge as the journals whose papers attracted most citations. *Journal of Small Business Management* and *Corporate Social Responsibility and Environmental Management*, albeit producing less citations, have both welcomed several papers on the topic.

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Looking at the corresponding author's country in Table 3, three countries who produced more articles on sustainability and financial performance of SMEs are Spain, Australia, and Italy. It is surprising and interesting that the USA and England, who usually contribute to the vast majority of published research outputs in the field of business management, are not in the top three. Similarly, if we look at the citations received, Australia (142), Italy (129), and Germany (92) seem to devise the most impactful research on the topic. This picture may also indicate that the level of dialogue about sustainability and SMEs is higher in those countries, who are clearly among those most concerned about the environment and have an economic context where SMEs are predominant.

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The VOS analysis, based on bibliographic coupling, resulted in three clusters that are reported in Table 4. Cluster 1 (Red color) included 30 articles mostly investigating innovation & entrepreneurship and their role for sustainability. The Cluster 2 (Blue color) included 22 articles investigating CSR in the context of SMEs. The Cluster 3 (Green color) included 10 articles exploring green management and environmental issues for SMEs.

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As shown in Figure 2, the clusters are all interconnected, which confirms the effectiveness of the search string aimed at investigating a coherent body of knowledge. As such, their boundaries are quite blurred, with borderline articles that incorporate themes of more than one cluster. Figures are based on bibliographic coupling using normalized citations. The normalized citations of an article are calculated as the number of total citations received by the article divided by the average number of citations of all articles published in the same year in the dataset. This normalization allows researchers to rectify that older documents have had more time to receive citations than more recent documents (Van Eck & Waltman, 2010).

4. Discussion of clusters

4.1 Cluster 1 (Red) – innovation & entrepreneurship and their role for sustainability

This cluster includes 30 articles that emphasize the role of innovation and entrepreneurship for SMEs sustainability. The articles often propose a theoretical analysis based on the examination of empirical data referring to a specific sector and/or country, following a case study approach, or other empirical analysis methods. Specifically, some cases integrate quantitative and/or qualitative data obtained from questionnaires and interviews. Some articles propose an application of the resource-based theory (Wernerfelt, 1984), according to which the long-term competitiveness of a company depends on its endowment of resources that distinguish it from its competitors, which is difficult to imitate and substitute.

Rangone (1999), the most cited in this cluster (with 111 citations), presents a resource-based view applied to the concept of the SMEs sustainable competitive advantage and proposes an approach for the strategic analysis and management founded on such understanding. Other scholars base their researches on the resource-based theory to verify that even the small firms have the potential to pursue business strategies if the appropriate resources and capabilities are available and the natural environment is viewed as a competitive opportunity. These authors state that the implementation of such strategies help to achieve significant positional competitive advantages and, in turn, improve business, market, and financial performance (Leonidou, Christodoulides, Kyrgidou, & Palihawadana, 2017; Reyes-Rodriguez, Ulhoi, & Madsen, 2016). Others (Halme & Korpela, 2014) analyze the role of innovation and entrepreneurship on sustainability to convey that SMEs can create responsible innovations with vastly different resource combinations: the most common comprises equity, research and development cooperation, networks, industry knowledge, and reputation. Continuing on these fields, Amadieu and Viviani (2010) focus on the role of innovation and entrepreneurship in sustainability by also analyzing the effect of the intangible resources used. The authors combine the resource-based view approach with the market orientation theory to empirically examine the relationship between intangible investments and financial performance. Amadieu and Viviani (2010) deliver evidence that intangibles have a negative impact on the firms' financial performance but a positive influence on commercial results.

In this cluster, a part of the literature focuses on the relationship between social responsibility and financial performance by use of empirical analysis. In two articles, among the most cited of this cluster, Torugsa et al. (2012, 2013) employ data collected from a sample of Australian SMEs to contend that social responsibility has a positive influence on SME financial performance (Torugsa et al., 2012). The authors specify the primary relevance of the economic dimension and the key importance of social and environmental elements for a sustainable long-term financial success (Torugsa et al., 2013). Some years later, O'Donohuea and Torugsa (2016) focus on the environmental management practices by investigating the impact on firm performance and reveal that human resources management positively moderates the above mentioned association and increases the financial benefits. From the same point of view, Eugenia López-Pérez et al. (2017a, 2017b) investigate the links between sustainable and social responsible business practices and financial and non-financial outcomes (i.e. image and corporate reputation) for small-to-medium sized Spanish enterprises, also determining whether the impact of such relationships is moderated by firm size. The authors confirm the impacts of those practices on corporate reputation, brand image, and financial value to highlight how causal relations intensify as firm size increases.

Another important topic concerns human resources management and organization regarded as strategic strengths to create substantial opportunities (Alonso & Austin, 2018). In this meaning, Torres et al. (2018) posit that knowledge assets and organizational capabilities can foster business growth and sustainable competitive advantage. Lechuga Sancho et al. (2018) show the direct contribution of socially responsible human resource management on competitive performance and the significant effect of employees' commitment and relational marketing. Upstill-Goddard et al. (2016), following case study approach, understand that strong communication channels and commitment to training programs increase the sustainability standards implementation; nevertheless, they also maintain that SMEs tend only to approach to these standards if they see immediate financial benefits from their implementation. Also, others discuss the importance of implementing sustainability training, not only at universities and business schools, but at all levels of education, as a valuable resource for business management and for society (Eugenia Lopez-Perez et al., 2017b).

Few articles discuss companies' boundaries in their analysis by examining the association between environmental collaboration and financial performance. Mafini and Muposhi (2017) and Epoh and Mafini (2018) highlight the potential financial success that business can achieve with the implementation of sustainable supply chain management practices and, therefore, ecological collaborations. Although the internationalization is long considered a crucial topic in the literature concerning innovation and entrepreneurship, it is unexpectedly debated scarcely in this cluster. There are only two articles focusing on the internationalization issue, among these Hilmersson (2014) examines the relationship between the SMEs international expansion strategies and financial performance during market turbulence by analyzing three main dimensions: scale, scope, and speed of internationalization. In the results, he demonstrates that merely the second and third dimensions generate a positive effect on performance.

Even the service industry is barely observed in this cluster; in fact, only two articles examine the relationship between strategies and performance in the case of the small service businesses and both concern the tourism industry. They verify a positive relationship between pro-environmental strategies and competitiveness in a case (Iraldo, Testa, Lanzini, & Battaglia, 2017) and the benefits of environmental policies on financial performance (Bagur-Femenias, Perramon, & Amat, 2015) in the other.

Some articles employ empirical analysis to the emerging economies by observing interrelationships among resources, capabilities and financial performance, also referring to the issues and theoretical approaches mentioned above (Jain, Vyas, & Roy, 2017). Sok et al. (2016), for example, situate the analysis on the resource-based view, considering product innovation and marketing as resources and capabilities. Using data from manufacturing SMEs, their results suggest that product innovation resource–capability complementarity, marketing resource–capability complementarity, and their interactions are positively related to financial performance through product innovation and customer performance. Ahmad and Ramayah (2012) study the ethical and social practices among entrepreneurial ventures in Malaysian SMEs and the effect of such practices on both financial and non-financial performance to highlight the peculiarities of the emerging economy context. Xie et al. (2013) base their analysis on a survey of Chinese manufacturing SMEs to explore the major impacting factors on innovation performance. Ratnawati et al. (2018) and Rasheed et al. (2017) investigate the role of human resource organization on companies' performances, respectively in Malang and Pakistan. The findings of the Venter et al. (2014) study further confirm positive relationships among employee satisfaction, business reputation, customer loyalty and stakeholder trust and the competitiveness of SMEs in Uganda.

Despite the critical nature of the issue, only few articles include the economic crisis in their analysis and attempt to identify essential factors and resources for SMEs to overcome a crisis. However, they identify that a strategic repositioning is the most influential factor in overcoming a crisis and achieving a sustainable turnaround (Mayr, Mitter, & Aichmayr, 2017; Panwar, Nybakk, Pinkse, & Hansen, 2015).

At this point, some propositions can be summarized from cluster 1:

1. The different implementations of the resource-based theory demonstrate the impact of environmentally and socially responsible investments on SMEs financial performance.
2. Innovation and intangible investments meeting environmental sustainability facilitate the implementations of those changes that can positively improve SMEs performances.
3. Social responsibility can exemplifies one of the key elements for a SME's sustainable, long-term financial success.
4. Human resource and knowledge management can be observed for its impacts on financial and competitive performance in SMEs, both in mature and emerging economies.

4.2 Cluster 2 (Blue) – CSR in SMEs

The second cluster is composed of 22 articles encompassing several issues pertaining to CSR practices in SMEs.

The most cited paper (with 92 citations, triple compared to the second most cited one) is by Hammann et al. (2009), which focuses on socially responsible business practices of SME entrepreneurs or owner–managers. The authors strive to understand how the entrepreneurs' personal values driving these actors' actions impact specific stakeholder groups (employees, customers, and society) and if they yield a firm's improved financial performance. In turn, these practices were assumed to result in perceived positive reactions from the respective stakeholders and subsequently to effectively influence the firm's financial performance, i.e. cost reductions and increase in profits. It was found that socially responsible management practices towards employees, customers, and to a lesser extent society have a positive impact on the firm and its financial performance.

Only several articles deliver a comparative analysis between companies operating in different countries. El Baz et al. (2016), for example, make a comparison between France and Morocco with the objective to explore the influence of national institutions on CSR practices realized by SMEs in the food-processing industries. In particular, CSR practices are defined around two main dimensions: a company's performance (defensive/active) and the CSR approach (defensive/active). Results show that a distinct difference between the CSR practices adopted by SMEs in France and Morocco. Under the French rule-based governance system, most SMEs view CSR as an economic tool, so it is adopted mostly as an opportunity. Instead, Moroccan SMEs mainly deem CSR from a constraint-reducing perspective; however, some Moroccan SMEs have begun to regard the economic opportunities of CSR, especially in accessing foreign markets. Another comparative study (Li, Toppinen, & Lantta, 2016) focuses on China and Finland: it investigates the managers' perceptions of CSR and how CSR engagement can benefit SMEs operating in the mechanical wood processing industry. Findings validate that with a focused stakeholder approach, managers in such industries adopt informal CSR strategies and tools to meet the specific expectations of their key stakeholders. In these studies, the legal aspects were the key drivers of CSR, whereas advanced production technology, efficient wood procurement, customer focus, and a competent workforce formed the four principal elements in their pursuit of competitive advantage. Results also highlight that despite the two vastly different cultural and operational contexts, the importance and the role of CSR were found to follow similar logic in how CSR was understood and implemented with the aim of competitive advantage.

As the latter, only a few articles target merely a specific sector or industry (El Baz et al., 2016; Esteban Sanchez & Benito-Hernandez, 2015; Li et al., 2016; Testa, Battaglia, & Bianchi, 2012).

In some articles, authors focus their attention not only on the impact of CRS strategies on financial performance, but also on the generation of intangible assets. This is the case, for example, of Testa et al. (2012), a paper that referenced the fashion sector to demonstrate the survey results from two Italian industrial clusters and assessed the adoption of CSR initiatives by SMEs in favor of employees, suppliers, and consumers. The authors analyzed both the role of local stakeholders in stimulating the different initiatives and the issues that SMEs consider relevant for their business strategies. The paper evaluates the types of correlations existing between the adoption of CSR initiatives and financial performance. Findings confirm that in a cluster context, the role of secondary stakeholders seems to be relevant in the adoption of CSR initiatives. In particular, for non –final products, public institutions and the local community can significantly push SMEs towards social responsibility. On the contrary, SMEs selling their own products to final consumers seem to be influenced by their primary stakeholders such as clients, suppliers, and employees. Moreover, CSR not only generates intangible benefits such as personnel motivation and improved relationships, but also causes positive financial impacts from increased efficiency and/or improved company image.

Also Herrera Madueno et at. (2016) consider intangible elements in their analysis. This paper aims to study the existence of a relationship between the development of CSR practices (measured with reference to environment, employees, local community, and customers) and competitive performance (measured with reference to some key-items, such as sales, market share, customer satisfaction, profitability, etc.) from a multi-stakeholder perspective. Additionally, the paper investigates whether a particular intangible asset – that is relational improvements, thus firm's capacity to manage stakeholders and achieve competitive advantages – may have a mediating role between CSR and SMEs' competitive performance. Findings show that the development of CSR practices contributes increased competitive performance both directly and indirectly, through the ability of these firms to effectively manage their stakeholders. This study, therefore, supports the social impact hypothesis and offers evidence about some intangibles such as the relational capacity mediate the causal effect between CSR and competitive performance.

This cluster is populated by papers adopting several methodological approaches. Some of them are defined as theoretical/predictive papers, such as Eltantawy et al. (2009), Herrera Madueno et at. (2016), Hou et al. (2016), Stoian and Gilman (2017). The most cited among these (Eltantawy et al., (2009) analyses the impact of supply management ethical responsibility (SMER) on a firm's reputation and performance. In particular, the purpose was to empirically test a conceptual model of the impacts of strategic supply management (SM) skills, SMER, and perceived SM reputation on one another and, ultimately, on SM performance, to the attainment of overall firm's goals. Findings show that strategic supply management skills and perceived reputation have a positive direct impact on performance. SMER is not directly affected by skills and indirectly impacts performance through its positive relationship with perceived reputation. In other words, SMER does not necessarily transform into SM performance. Such results suggest that SMER is limited in its ability to predict performance, but it is a valuable component of building SM perceived reputation.

Other papers in this cluster further follow a theoretical/exploratory approach. Among them the most cited is Tantalo et al. (2012), that tries to investigate the relationship between the CSR and the companies' performance with reference to SMEs, following an empirical approach by targeting a group of Italian SMEs which developed successful CSR strategies. In particular, specific homogeneous categories of CSR activities were investigated (for example, value creation for employees, customers, suppliers, the local community, environmental care, sustainable innovation, etc.). Findings show the existence of a general positive relationship between the strategic CSR involvement of the company and its competitiveness, confirming the benefits of CSR activities on companies' competitiveness. The paper also provides a perception map to show the relation between the involvement of companies in CSR activities and the effects on competitiveness to establish the positive relationship in terms of different nine combinations of three degrees (low, medium, and high) of both firm's efforts in the developed CSR activities and the intensity of their impacts on a firm's competitiveness.

Finally, the literatures mostly confirm a positive relationship between CSR practices and a company's financial performance and, more in general, its competitiveness, also due to the generation of intangible benefits, such as personnel motivation and improved relationships. Therefore, some propositions from cluster 2 can be drawn:

1. Managers' personal values create corporate financial value if CSR is placed at the core of strategic level decision making processes.
2. CSR is analyzed as an economic tool to seek opportunities for obtaining global performance.
3. CSR also generates intangible benefits – motivation and better relationships for example – and offers positive impacts on companies' competitiveness.

4.3 Cluster 3 (Green) – Green management and environmental issues for SMEs

This cluster is composed of 10 articles dealing with several aspects linked in a more or less direct way to environmental and natural resources protection. Namely, they investigate, in a broad sense, how SMEs' behaviors may impact on critical elements for the environment correlated with companies' financial performances.

The most cited study is Uhlaner et al. (2012), which is focused on the prediction of the engagement of SMEs in environmental management practices – actions to reduce the environmental impact of the firm's operations – enhancing knowledge of internal factors. The authors seek to verify if some aspects of the company's organizational context and/or certain environmental attitudes held by their directors may influence practices of SMEs associated with more active engagement in environmental management. The study finds that various endogenous factors – such as tangibility of sector, firm size, innovative orientation, family influence, and perceived financial benefits from energy conservation – predict an SME's level of engagement in selected environmental management practices, which involve monitoring of company waste, producing or selling environmentally friendly products, and searching for more environmentally friendly products, services, or production methods.

Only two articles within this cluster adopt a pure qualitative approach (Karatzoglou & Spilanis, 2010). The first one presents the development of a management tool called Destination Environmental Scorecard, based on the adaptive resource management paradigm. This tool, embedded with activity-based management concepts, provides SMEs with a continuous flow of timely, relevant, and accurate information on the environmental impact of critical corporate activities, thus allowing an estimation of the total resource consumption and waste production within hotel operations. Furthermore, the activities through which all hotels offer utility to their customers can be broken up into their environmental aspects and their efficiency be measured and benchmarked against that of their peers. The second study (Allet, 2017) explores the potential and limitations of microfinance institutions in promoting the spread of environmental risk management techniques and practices in microenterprises. According to the author, such kind of institutions faces difficulties in building internal skills and reconciling its environmental and performance objectives, therefore limiting its ability to assist microenterprises in the area of environmental management. Furthermore, the analyzed pilot program did not sufficiently take the psychological and financial barriers into account that constrain microentrepreneurs' capacities to engage in any meaningful environmental behavior change. Finally, factors such as the lack of an adequate legal framework and local infrastructure also countered the effort of the microfinance institutions and limited the potential of microenterprises for effectively engaging in environmental risk management practices.

Only a couple of articles refer to SMEs operating in different countries (Allet, 2014 and Hoogendoorn, Guerra, & van der Zwan, 2015). The latter focused on 36 countries to develop a better understanding of what drives SMEs to engage in environmental practices and whether the drivers differ across types of practices. Results reveal that firm-level characteristics are relevant when explaining SMEs' environmental behaviors, and different characteristics have dissimilar influences on both the types of environmental practices such as the type of customers served. This finding suggests that the influence of stakeholders varies across types of environmental practices. Stringent environmental legislation encourages firms to actively embrace environmental practices, but only in the case of green products and services. Then, there is a more pronounced positive relationship between firm size and greening product and service offerings. Moreover, the dominant idea that SMEs are reluctant to invest in environmental practices because they perceive it as an additional burden is nuanced: firm size matters most for engagement in greening processes. Also, Allet (2014) investigates a very large number of countries, but it refers only to a specific sector, focusing on microfinance institutions. This study aims at identifying why such particular organizations decide to go green or not, to understand the particular motives of ecological responsiveness in such firms. The analysis, which merges quantitative and qualitative surveys, is based on the model of ecological responsiveness (Bansal & Roth, 2000) which identifies three main drivers: legitimation (stakeholder pressure), competitiveness (strategic and economic benefits), and social responsibility. Results show that institutions that are more proactive in environmental management are primarily motivated by social responsibility, additionally by competitiveness, and only to a lesser extent by legitimation. They tend to be more proactive and develop adapted financial and non-financial services to promote environmentally friendly practices. In contrast, microfinance institutions, for which legitimation is the dominant driver, tend to have a defensive approach when adopting minimal measures to reduce risks for themselves, comply with regulations and stakeholders' requirements, and establish more superficial strategies just to appear green. These findings are also corroborated by Nejati and colleagues (2014), who studied the relationship between stakeholders' influence and environmental responsibility of micro, small, and medium-sized enterprises. These authors emphasize two types of stakeholders, employees and customers, as those significantly influencing environmental responsibility, which then resulted in in financial improvements.

Some propositions emerged from the analysis of cluster 3:

1. Environmental practices are often embedded into the CSR concept in its broader acceptation.
2. Some management tools (such as the Destination Environmental Scorecard) have been developed to support companies in monitoring the financial impacts of their environmental initiatives.
3. Specific firm-level characteristics are relevant when explaining the SMEs' environmental strategies: this is important for companies that want to obtain green results.

5. Conclusion

In essence, this paper dealt with a particular form of entrepreneurial behavior of SMEs, aiming at deepening the knowledge of the relationship between sustainability and financial performances. It delivered some insights on this research issue through a systematic literature review on articles published in the last decade. Most analyzed articles empirically verified a positive relationship between practices that related to corporate sustainability and SMEs' performance and competitiveness. The analysis was conducted with the aid of the bibliometric method of visualization of similarities, through bibliographic coupling, that resulted in the identification of three prevalent themes of research: the first related to investigating innovation & entrepreneurship and their role for sustainability in SMEs (cluster 1); the second concerned CSR in the context of SMEs (cluster 2); and, the third related to green management and environmental issues for SMEs (cluster 3).

Regarding the first cluster, the articles addressed innovation and entrepreneurship in relation to their role for SMEs sustainability. They were published in the last twenty years, even more than half from 2016. This makes the cluster particularly current to observe the most recent trends in the study of the analyzed issue. The internationalization and collaborations in SMEs are crucial aspects that could be more detected in future researches, since only a few authors assessed these issues. Nevertheless, the findings demonstrate interesting results on the importance of this issue. In this context, it could be interesting to deepen the analysis of the effects of collaborations among SMEs to realize sustainable supply chain management practices, with the aim to share relevant benefits and costs. Furthermore, the relationship could be better investigated by also observing the service industry, in addition to the manufacturing ones, which were mainly discussed.

As for the second cluster concerning CSR practices in SMEs, the articles were published in the last decade, starting from 2008. The analysis shows that this topic is a moderately studied issue. Particular attention has been dedicated to which of the main stakeholder groups address social responsibility actions, if, and how they impact companies' financial sustainability efforts, both in terms of cost reductions and in terms of overall profitability. CSR is a really broad concept, thus there is still room for further studies. For example, results suggest a lack in comparative studies, especially when comparing SMEs operating in different countries and sectors. This could be particularly interesting to expand and identify the main recurring CSR activities with a positive impact on business financial sustainability, so that even countries not yet advanced within this aspect can attain useful information.

The third cluster highlighting green management is the one consisting of the lowest number of articles, published since 2010. They deal with several environmental practices, such as waste reduction, resources consumption, and natural resources protection. Since the topic has been studied only recently by scholars, there is a large space for future research. In particular, considering the recent EU environmental strategies, particularly focused on the implementation of sustainable and circular economy (European Commission, 2015, 2018), the relation between companies' environmental and financial performance should be deepened, as firms can operate and produce goods and services respecting the circular economy principles only when sustainable from an financial point of view and, therefore, profitable (Bartolacci et al., 2018b; Hang, Geyer-Klingeberg, & Rathgeber, 2018).

From the overall analysis, some open questions are useful to outline future research developments. These include greenwashing practices of SMEs and their links to financial performances; corporate communication, in particular, the Integrated Reporting should be investigated to understand how it can represent and communicate the impacts of sustainability practices in terms of financial and non-financial benefits for companies; and finally, a comprehensive understanding of sustainable practices of best performing SMEs.

In conclusion, the analyzed topic – the relationship between the companies' sustainable behavior and their financial performance – has been addressed extensively in the literature, and most studies confirm a positive relationship. Accordingly, it is likely time to go deeply and focus on which specific kinds of sustainable behaviors positively impact financial performance: environmental, ethical, social, or which combination of them. Future research results could be particularly useful for managers and companies on the one hand, but also for policy makers, who should choose which kind of companies' behaviors (strategies) align with incentives or other strategic tools to promote the improvement of financial performance of the overall economic system at different level (local, national, and supranational).

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Tables

Table 1 – Search protocol and results

Step	Description	Total articles
Step 1	Articles retrieved from WOS with selected keywords	136
Step 2	Articles in English, peer reviewed, subject areas: management, business, economics, ethics, business finance, and operations and management science	93
Step 3	Articles reading the full text independently, eliminating the non-relevant articles	62
	Final dataset	**62**

Table 2 –Top 10 Journals in the dataset by number of citations received per publication

Rank	Journal	Publications	Citations	Citations per publication
1	SMALL BUSINESS ECONOMICS	2	125	62.50
2	JOURNAL OF BUSINESS ETHICS	9	216	24.00
3	BUSINESS STRATEGY AND THE ENVIRONMENT	3	55	18.33
4	CORPORATE SOCIAL RESPONSIBILITY AND ENVIRONMENTAL MANAGEMENT	3	34	11.33
5	INTERNATIONAL JOURNAL OF TECHNOLOGY MANAGEMENT	2	20	10.00
6	INTERNATIONAL JOURNAL OF HUMAN RESOURCE MANAGEMENT	2	19	9.50
7	JOURNAL OF SMALL BUSINESS MANAGEMENT	5	22	4.40
8	GLOBAL BUSINESS REVIEW	2	7	3.50
9	COGENT BUSINESS & MANAGEMENT	2	3	1.50
10	JOURNAL OF SMALL BUSINESS AND ENTERPRISE DEVELOPMENT	2	2	1.00

Table 3 - Countries with a least 2 publications in the dataset

Rank	Country	Publications
1	Spain	7
2	Australia	6
3	Italy	6
4	USA	5
5	England	4
6	France	3
7	Malaysia	3
8	South Africa	3
9	Belgium	2
10	Finland	2
11	Ghana	2
12	India	2
13	Netherlands	2
14	Peoples R. China	2

15	Portugal	2

Table 4 - 10 Most cited articles by total citations

	Cluster 1 (385 citations, 30 papers)		Cluster 2 (253 citations, 22 papers)		Cluster 3 (108 citations, 10 papers)	
Rank	**Article**	**T.C.**	**Article**	**T.C.**	**Article**	**T.C.**
1	Rangone, A (1999)	111	Hammann, EM; Habisch, A; Pechlaner, H (2009)	92	Uhlaner, LM; Berent-Braun, MM; Jeurissen, RJM; de Wit, G (2012)	43
2	Torugsa, NA; O'Donohue, W; Hecker, R (2012)	67	Eltantawy, RA; Fox, GL; Giunipero, L (2009)	31	Karatzoglou, B; Spilanis, I (2010)	21
3	Torugsa, NA; O'Donohue, W; Hecker, R (2013)	55	Blomgren, A (2011)	24	Allet, M (2014)	15
4	Halme, M; Korpela, M (2014)	34	Madueno, JH; Jorge, ML; Conesa, IM; Martinez-Martinez, D (2016)	16	Hoogendoorn, B; Guerra, D; van der Zwan, P (2015)	14
5	Hilmersson, M (2014)	22	Mankelow, G (2008)	13	Nejati, M; Amran, A; Ahmad, NH (2014)	7
6	Amadieu, P; Viviani, JL (2010)	17	Tantalo, C; Caroli, MG; Vanevenhoven, J (2012)	10	Tang, JT; Tang, Z; Katz, JA (2014)	5
7	Ahmad, NH; Ramayah, T (2012)	11	Testa, F; Battaglia, M; Bianchi, L (2012)	10	Allet, M (2017)	2
8	Reyes-Rodriguez, JF; Ulhoi, JP; Madsen, H (2016)	10	El Baz, J; Laguir, I; Marais, M; Stagliano, R (2016)	9	Tang, Z; Tang, JT (2016)	1
9	Xie, XM; Zeng, SX; Peng, YF; Tam, CM (2013)	10	Hou, MJ; Liu, H; Fan, PH; Wei, ZL (2016)	8	Starcevic, DP; Mijoc, J; Zrnic, A (2017)	0
10	Leonidou, LC; Christodoulides, P; Kyrgidou, LP; Palihawadana, D (2017)	9	Agyemang, OS; Ansong, A (2017)	7	Wong, ESK; Muhamad, R; Yeap, LW (2015)	0

Figures

Figure 1 - Distribution of articles over time

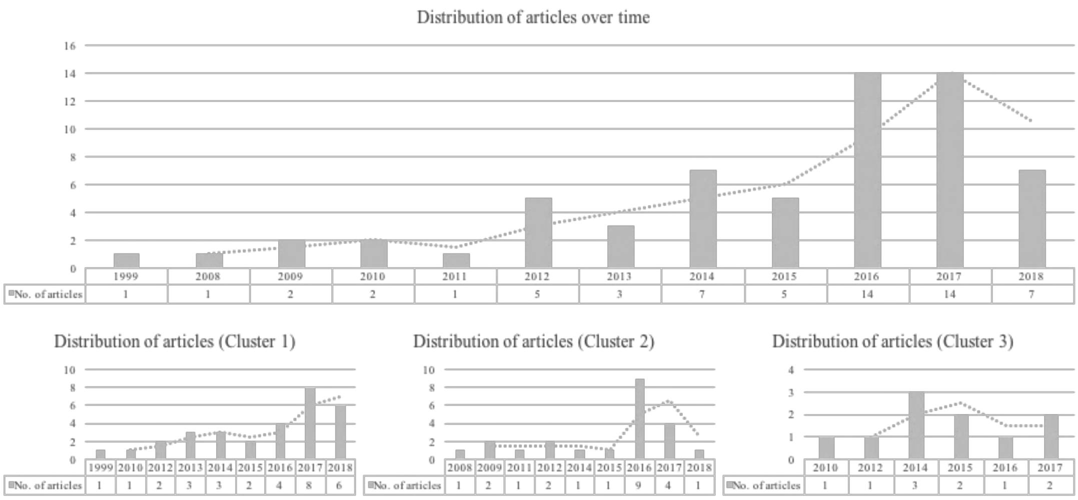

Figure 2 – VOS Results