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Enterprise Sustainability: Literature Review in the Context of SMEs Worldwide

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Abstract

This paper presents the results of a study seeking to identify the main features of worldwide scientific scholarly publications in the field of enterprise sustainability but more specifically, in the area of small and medium enterprises (SMEs). We applied a mixed quantitative-qualitative method for the identification and analysis of writings on principles of sustainability, sustainable enterprise management, and sustainable development. Scientific scholarly journals, books, and reviews were indexed at Scopus Database and being devoted to the field of small and medium enterprises (SMEs), served as primary sources for this study. Historic content, as well as abstracts, co-authorship, titles, and other keywords were further elements restricting this review.

Keywords: Sustainable enterprise, SMEs, literature review, network analysis, sustainable development.

Sostenibilidad empresarial: revisión de la literatura en el contexto de las PYME a nivel mundial

Resumen

Este documento presenta los resultados de un estudio que busca identificar las características principales de las publicaciones científicas mundiales en el campo de la sostenibilidad empresarial,

pero más específicamente, en el área de las pequeñas y medianas empresas (PYME). Aplicamos un método mixto cuantitativo-cualitativo para la identificación y análisis de trabajos sobre principios de sostenibilidad, gestión empresarial sostenible y desarrollo sostenible. Las revistas científicas, los libros y las reseñas se indexaron en la base de datos Scopus y se dedicaron al campo de las pequeñas y medianas empresas (PYME), sirvieron como fuentes principales para este estudio. El contenido histórico, así como los resúmenes, la coautoría, los títulos y otras palabras clave fueron elementos adicionales que restringieron esta revisión.

Palabras clave: Empresa sostenible, pymes, revisión de literatura, análisis de redes, desarrollo sostenible.

1. INTRODUCTION

The business environment has seen major strides in recent years in areas as varied as technology, policy making, quality of service, and financial regulations, all of which have led in a corporate shift from purely financial gains towards the creation of social value. These changes serve as evidence of the practices and strategies put in place through sustainable enterprise (SE) management (Perez, Chumaceiro and Acosta-campos, 2019). As a matter of fact, business approaches and principles steering social sustainability are tied to sustainable development as corporate sustainability mediates both the relation between smart technologies and environmental sustainability, and smart technologies and social sustainability (Saunila *et al.*, 2019). There is a waterfall effect in which organizational leadership sets the attitude towards sustainable practice and the extent to which their product embraces and models sustainability. Consumers interacting with the product identify the underlying attitudes and observe a cultural trend of valuing (or not valuing) sustainability across the

products they use (Luna-Nemecio, J., Tobón, S., Juárez-Hernández, L. J., 2019).

In this sense, it should be noted that ES partakes in three different spheres: environmental, economic and social. In terms of the environment, it focuses on the responsible use of natural resources to avoid future negative effects (UNESCO, 2014). Economically, SE relates to the constant flow of financial resources to develop operational activities and sustain capital growth (Luneva, 2018). As for the social sphere, it considers possible benefits for other stakeholders such as employees and the community (Avram *et al.*, 2019). It is clear that ES contributes to a sense of balance and integration at the environmental, financial, and social levels, as well as to the underlying interrelations enterprises hold with their environments at different periods in time (Linnenluecke *et al.*, 2007). Studies about enterprise sustainability and its implementation provide insights on the social and economic behaviour of specific localities, making scientific research on the issue of ES an area of international relevance (Kiesnere and Baumgartner, 2019).

Moreover, small and medium enterprises (SMEs) make invaluable contributions to the Gross Domestic Product (GDP) and the generation of jobs since they account for more than 90% of the productive sector in countries worldwide (Rodriguez-Baron & Diaz-Ballesteros, 2018). In fact, SMEs play a fundamental role in sustainable development since they dominate the business activity of any given country and therefore have a significant impact on the

national and world economy (Luederitz *et al.*, 2018). Their economic effects demonstrate why it is beneficial to analyze the features of ES in in SMEs.

The challenge for SMEs lies in the integration of sustainability into their economic, social, and environmental development. They face many challenges in creating a decent social working culture and responsible practices, while ensuring that market the enterprise continues to thrive and prosper under intense competition. Bearing in mind that sustainability indicators are positively associated with economic indicators, the adoption of the former can benefit the overall performance of SMEs (Malesios *et al.*, 2018).

However, despite the increase in research publications on the principles of sustainable development and the need for organizations to incorporate sustainability practices into the way they do business, organizational management research has been criticized for its lack of commitment to pressing issues, including the implementation of sustainability practices in organizations (Linnenluecke and Griffiths, 2013). At present, and while considering the multiple demands for enhanced transparency and accountability in view of negative aftermaths on the environment, encouraging enterprises to embrace sustainability and environmental principles is not deemed enough. The development of effective tools to promote the implementation of corporate sustainability is crucial (Gibassier and Alcouffe, 2018). Faced with this challenge, the literary review we propose provides a description of the substantial growth in scientific scholarly production

in the field of ES. Coupled with a mapping of original research outcomes, we hope this study becomes useful for researchers and search engines. We expect that it will also serve as an effective instrument for access to the results of recent research on ES (Toscano-Hernández, Álvarez-González, and Sanzo-Pérez, 2017). In line with the previous paragraphs, the general objective of this research is to complete a bibliographic examination of the main features of worldwide ES-related scientific literature on SMEs. This study is threefold: 1) it describes the historical evolution of research, citations, types of documents, and journals devoted to scientific production; 2) it identifies international collaboration networks for scientific research connected to ES, and 3) it explores thematic clusters and future lines of research in the field of ES.

2. METHODOLOGY

The study implements a mixed, quantitative-qualitative approach for the analysis of the literature samples. Bibliometric tools are used following procedures based on the principles outlined by Tranfield, Denyer and Smart (Tranfield, Denyer and Smart, 2003). As a matter of fact, given that literature review is an important step for any research project, “traditional reviews do not follow methods approaching the same level of methodological rigor used to conduct primary research” (Briner and Walshe, 2014). Obviously, this weakens the usefulness of the review as a research element. The procedures used here then “differ from traditional narrative reviews by adopting a

replicable, scientific, and transparent process. In other words, these procedures provide sound technological grounds that aim at minimizing bias through exhaustive literature searches” (Tranfield, Denyer and Smart, 2003). This type of methodology offers clues as to the decisions, procedures, and conclusions arrived at by researchers (Tranfield, Denyer and Smart, 2003). Our study consists of three stages: planning, completion, and presentation of results. These stages are the result of a reasonable consensus as to which are the desirable methodological traits for a scientific review (SR) (Tranfield, Denyer and Smart, 2003). In addition, the selection of literature on ES considers the methodological proposal of Moher et al. (2009) and the work of (Fuentes-Doria, Toscano H, Escudero Y, Diaz J, 2019).

3.1. Planning

Initially, in the first stage, we defined the objectives of the bibliometric study, identified the sources of information, and pinpointed the criteria used to categorise scientific literature. As mentioned above, we relied on the Scopus Database from Elsevier as our source for the collection of information. Scopus Database is reputed for providing the broadest overview of global scientific data while observing rigorous indexing standards and offering a powerful platform and tools for citation analysis (Falagas *et al.*, 2008; Bartels, 2013). The platform ensures wide citation coverage and minimizes the bias originating from discipline-specific searches.

Considering the objectives of the present bibliometric study, we narrowed down our search terms by article-type, document-type, and field. Then we focused on the topics of management, business, economics, and education. Titles, abstracts, and keywords were searched for targeted items and associated words and phrases including “Enterprise Sustainability”, “SMES,” “sustainable business”, and “small-medium enterprise”. We limited the scope of the review to the last 20 years, covering the period from January 2000 to June 2019.

3.2. Completion

In the second stage, we developed preliminary identification steps for the classification of scientific scholarly publishing matching the search strategy described above. Correspondingly, and as per our criteria, we selected the most relevant scientific scholarly publications to facilitate the analysis of the bibliographic data. As a further step, we established search equations resulting in the identification of a total of 109 related references.

3.3. Report

In the third and final stage, we developed a report with the results from the examination of the bibliographic information extracted out of 109 scientific publications in the area of ES published between January 2000 and June 2019, as stated in the two previous ‘Planning’ and ‘Completion’ subsections. These findings are outlined in the four sections that follow.

The first segment covers a descriptive analysis of scientific production worldwide, based on a quantitative classification of the 109 scholarly publications identified under parameters considering: year of publication, types of documents, and number of citations registered until April 2019. The second part discusses the main attributes of the 109 most relevant publications on a historical axis and describes the evolution of research in the field of SE and the types of scientific journals in which it appears. The third piece delves in the key collaboration networks revealed in the study of our 109-material sample of worldwide scientific literature. The analysis here centred on co-authorship assessment, specifically across the parameters of authors, organizations, and countries. Furthermore, this section of the inquiry was grounded on the co-occurrence of bibliographic descriptive keywords in order to uncover the major thematic clusters in the most relevant publications in worldwide scientific production.

3. RESULTS

109 publications between 2000 and 2019 met the search criteria. Figure 1 shows the increase in publications, from one (1) in 2008, to 24 in 2018, also drawing attention to the fact that in 2019 the cut-off date is June 30.

3.1. Descriptive analysis

Figure 1 shows the increase in research on the topic of SE in SMEs, from one (1) publication in 2000 to 109 in 2019. From 2000 to 2009,

10 publications are indexed, totalling 9.2% of texts, while during the years 2010 to 2019, there are 99 documents amounting to 90.8% of the total number of publications. It is conspicuous that in the period of 2000 to 2010 the publishing average is less than one (1) per year, while in 2009-2010, there are three (3) publications. The 2010-2019 cycle registers an average of more than eight (8) publications per year, which contrasts with three (3) texts in 2010, and five (5) in 2012, respectively. In fact, the growth in publications has soared since 2014 with an average increase of 34%, and a peak in 2018 the year with the largest increase in scientific publishing.

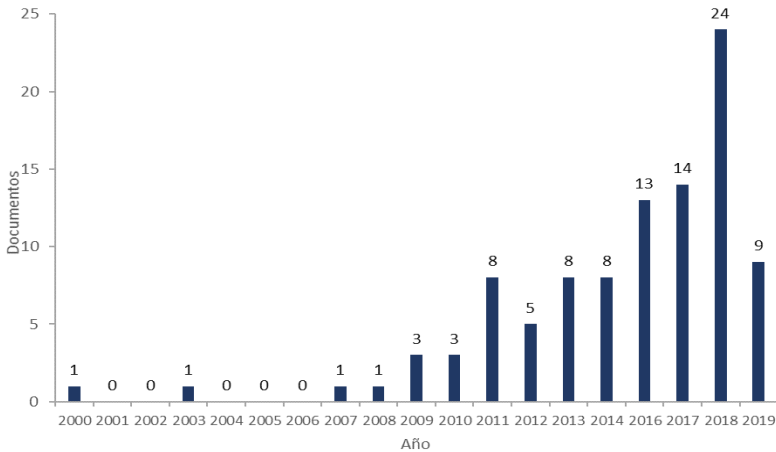


Figure 1. Number of documents in the scientific publishing field of ES in SMEs. 2000-2019Source: Diagram based on information collected from Scopus Database

Table 1 shows the number of research papers and citations by document type. In our samples, it turns out that 66% of the texts falls within the category of scientific articles disseminated in journals;

conference proceedings make up 23%, while the remaining 11% is distributed among books, book chapters, and reviews. Regarding the number of citations indexed until June 2019, out of 109 scientific publications in ES, scientific articles claim the highest percentage with 90.4%, conference proceedings amount to 8.5%; while books, book chapters, and reviews are distributed over the remaining 1.1%.

The results of this literature study show that the most relevant scientific publications in ES appeared in a total of 77 scholarly journals (see Table 2). Of these, three (3) journals contain the most relevant publications: *Sustainability* (Switzerland) gets a share of 8.3%, while both *Business Strategy and the Environment* and *Handbook of Research on Intrapreneurship and Organizational Sustainability in SMEs* account for 3.7%. Ten (10) journals hold the highest number of papers, making up 29.4% of the most relevant records, while the remaining 70.6% is spread out in the additional 68 journals.

Table 1. Percentage distribution of scientific publishing on ES in SMEs, by source and indexed citations. 2000-2019

Document type	Documents		Citations	
	Number	%	Number	%
Article	72	66%	780	90.4%
Presentations and congresses	2	2%	0	0%
Book	3	3%	1	0.1%
Chapter of the book	5	5%	2	0.2%
Conference document	25	23%	73	8.5%
Revisions	2	2%	7	0.8%
Total	109	100%	863	100%

Source: Interpretation based on information retrieved from Scopus Database (2019)

Table 2. Historical evolution of the most relevant publishing on ES in SMEs, by journal. 2000-2019

Name of the magazine	2000-2006	2007-2012	2013-2019	Total	
				Documents	Percentage share
Sustainability (Switzerland) Business	0	0	9	9	8,3%
Strategy and the Environment Handbook of Research on Intrapreneurship and Organizational Sustainability in SMEs ACM	0	1	3	4	3,7%
International Conference Proceeding Series Journal of Cleaner Production International Journal of Supply Chain Management Proceedings of the Annual Hawaii International Conference on System Sciences Organization and Environment European Journal of Innovation Management	0	0	4	4	3,7%
68 other magazines	0	0	3	3	2,8%
	0	0	3	3	2,8%
	0	0	3	3	2,8%
	0	0	2	2	1,8%
	0	0	2	2	1,8%
	0	1	1	2	1,8%
Grand Total	2	21	86	109	100,0%

Source: Analysis arisen from information compiled from Scopus Database (2019)

In contrast with the results above, when comparing the extent of publications by time period, it is clear that 2000 to 2006 appears to be the interval with the lowest number of publications, at 1.8%; the period between 2007 and 2012 registers 19.3%, and the cycle 2013 to 2019 secures 78.9 %. It is worth observing that once again the journals with the largest number of publications are *Sustainability* (Switzerland) with 9 texts, the first of which appeared in 2016; *Business Strategy and the Environment*, 4 texts with first article published in 2010; and *Handbook of Research on Intrapreneurship and Organizational Sustainability in SMEs*, 4 texts, all from 2018.

In this study, 14 authors achieve greater relevance, impact, and visibility. By author and co-authorship, the results highlight the following: 1). Bos-Brouwers H.E.J; 2). Klewitz J., Zeyen A., and Hansen E.G; 3). Hörisch J. and Johnson M.P.; 4). Svensson G. and Wagner B; 5). Thomas A., Francis M., John E., and Davies A.; 6). Urban B. and Naidoo R.; 7). and finally, Schaltegger S. (who counts two publications). The outcomes also indicate that 109 scientific documents are divided among a total of 263 authors. Although 277 authors are identified as having published a text, only 194 authors get at least one (1) citation, which makes up 70% of citations. In Table 3 the visibility indicator used considers the number of citations divided by the number of texts ($n \text{ citations} / n \text{ texts}$). The results ascribe the highest level of visibility to Bos-Brouwers H.E.J. with one (1) publication and 229 citations, which also accounts for top-level visibility and impact, assessed here also as 229. This author is followed by Klewitz J., Zeyen A., Hansen E.G. who achieved 55

citations out of one (1) document, with a corresponding factor of 55 for visibility and impact. Sixty-four and six percent (64.6%) of the total citations on ES in SMEs worldwide belong to the 14 authors highlighted in this survey. The network co-occurrence analysis, based on keywords in the most relevant articles, allows us to visualize the complexity and variety of the findings in ES scientific research. Figure 2 shows a network of 110 keywords with the highest occurrence from a total of 649 keywords featured in the writings analyzed in this study.

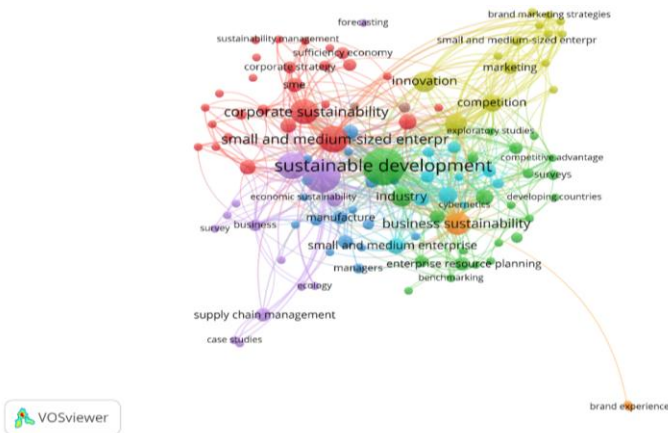


Figure 2. Network of keywords for ES in SMEs scientific research worldwide, 2000-2019
 Source: Diagram based on information collected from Scopus Database

Table 3. Authors of scientific scholarly publications on ES in SMEs, by publications and citations, 2009-2019

Authors	Number of publications	Number of citations	Visibility index
Bos-Brouwers H.E.J.	1	229	229
Klewitz J.,	1	55	55

Zeyen A	1	55	55
Hansen E.G	1	55	55
Hörisch J.,	1	44	44
Johnson M.P.,	1	44	44
Svensson G	1	43	43
Wagner B.	1	43	43
Thomas A., ..	1	33	33
Francis M	1	33	33
John E.,	1	33	33
Davies A.	1	33	33
Urban B., Naidoo R.	1	28	28
Schaltegger S.	2	59	30
Otros autores (263)	102	431	5
Total	109	1218	762

Source: Diagram resulting from information gathered from Scopus Database (2019)

However, excluding the keywords detailed in the methodology, ten (10) keywords stand out because of their closest relationship and greater co-occurrence in the network of keywords distinguishing the most relevant scientific articles on ES in SMEs. These are: sustainable development (40 co-occurrences), sustainability (33 co-occurrences), small and medium (20 co-occurrences), corporate sustainability (18 co-occurrences), business sustainability (15 co-occurrences), innovation (12 co-occurrences), industry (10 co-occurrences), competition (9 co-occurrences), environmental management (8 co-occurrences), economic and social effects (7 co-occurrences).

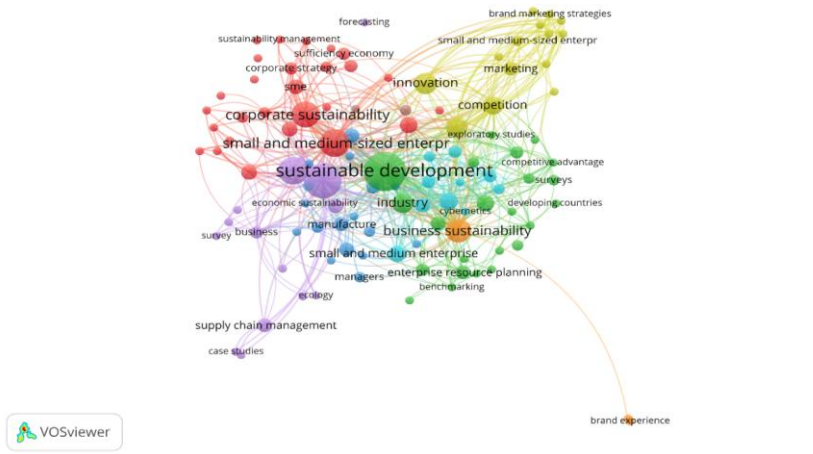


Figure 2. Keyword network of publications on ES in SMEs. 2000-2019
Source: Diagram drawn with information from Scopus Database (2019)

3.2. Network analysis

Our outcomes suggest that the ten (10) countries exhibiting the largest number of publications are: United Kingdom (13 documents), Malaysia (13 documents), China (8 documents), Italy (6 documents), Romania (6 documents), France (5 documents), Spain (5 documents), Thailand (5 documents), United States (4 documents), Germany (4 documents), Taiwan (4 documents), and Indonesia (4 documents). Figure 3 shows the significant relationship between the 46 countries which count at least one (1) publication and one (1) citation. They are grouped into 26 clusters of countries with close relations. Notice the collaborative work of countries classified by cluster 1) the United Kingdom, Germany, Hong Kong, Greece, Romania, Italy, Turkey, United States, Canada, Norway, and France; 2) Egypt and Oman; 3)

Colombia and Spain; 4) Taiwan and Thailand. The other countries work individually, and these include: Afghanistan, Australia, China, Cuba, Finland, Greece, Hungary, India, Indonesia, Ireland, Malaysia, Morocco, New Zealand, Portugal, South Korea, Sweden, and Russia. Regarding the impact and number of citations, the Netherlands (257 citations), United Kingdom (160 citations), Germany (143 citations), Italy (55 citations) and Norway (53 citations) stand as the five (5) countries with the highest figures.

In general, regarding the most relevant aspects of the evolution and academic development of literature on ES, diversity is the common factor. While some documents focused on a specific economic sector, others deal with various aspects revealed in the clusters of studies by authors and countries.

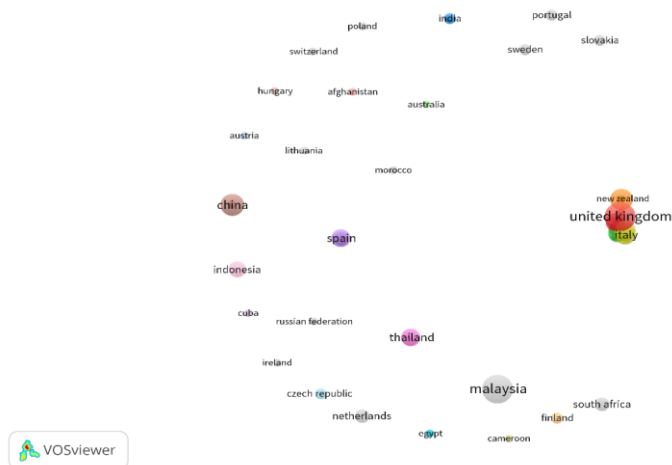


Figure 3. Collaborative network of countries producing research on ES in SMEs. 2000-2019

Source: Graph designed from information taken from Scopus Database (2019)

It goes without saying that collaborative networks between institutions are fundamental for research development. In this context, our review shows evidence that the strongest research groups are situated in: Canada, France, Germany, Greece, Hong Kong, Italy, Norway, Romania, Turkey, the United Kingdom, and the United States. In the same vein, the visibility and impact factor, as well as the highest number of citations are highlighted by author, as cited above in table 3. Bos-Brouwers H.E.J. stands out as the author with the highest number of citations and strongest visibility factor for research on the theme of ES.

3.3. Thematic analysis

Table 4 details the most outstanding publications per year. A summary of the first five articles follows. The first text, “Partnerships between Small and Medium Enterprises and Universities that Add Value” (Freeman, 2000) analyses the association between training and marketing experience in the growth of SMEs, a related aspect of sustainability that generates business growth. “Building a Sustainable Business in China’s Small and Medium-sized Enterprises” (SMEs) (Yu & Bell, 2007) provides an overview of sustainable practices in Chinese SMEs and explores some of the incentives and barriers they face when addressing environmental and social concerns. Stressing that there is a very low level of commitment to sustainable activities, the text contends that corporate interests seem focused on improving the company’s image and complying with government legislation.

Therefore, the problems associated with ES in SMEs are related to low awareness, insufficient resources, lack of external support, and inadequate economic control. “Talking about the Future within an SME?: Corporate Foresight and the Potential Contributions to Sustainable Development” (Will, 2008), presents the results of a study attempting to link sustainable development to SME management and establish strategies with corporate foresight. The article suggests that sustainable development is an essential factor for the future of humanity. By balancing short-term commercial interests and long-term development interests, both society and company could potentially generate value through voluntary social actions. “Research on the Process Model of Open Innovation Based on Enterprise Sustainable Growth” (Zhang and Zhang, 2009) explains that the growth in sustainable management of SMEs arises from innovation processes created with an open frame of mind. The study arrives at the conclusion that innovation, especially technological, provides the driving force for companies to engage in sustainable development and advancing sustainable management models based on said technological innovation. “Corporate Sustainability and Innovation in SMEs: Evidence of Themes and Activities in Practice” (Bos-Brouwers, 2010) creatively combines ideas about innovation theory, sustainable development practices, and small business features to unlock new knowledge about the factors that influence the translation of sustainable innovation in SMEs from theory into practice. The article argues that a better understanding of the innovative characteristics of SMEs, together with the assessment of sustainable innovation efforts, offers opportunities to improve sustainability.

Table 4. Publications on the field of ES in SMEs with greater impact by citations. 2000-2019

Document title	Author	Year	Number of appointments
Partnerships between small and medium Enterprise and universities that add value	Freeman	2000	11
Building a sustainable business in China's small and medium-sized enterprises (SMEs)	Yu J., Bell J.N.B.	2007	23
Talking about the future within an SME?: Corporate foresight and the potential contributions to sustainable development	Will M.	2008	24
Research on the process model of open innovation based on enterprise sustainable growth	Zhang J., Zhang Y.	2009	1
Corporate sustainability and innovation in SMEs: Evidence of themes and activities in practice	Bos-Brouwers H.E.J.	2010	229
Sustainable business practices in Spain: A two-case study	Cambra-Fierro J., Ruiz-Benítez R.	2011	21
Intermediaries driving eco-innovation in SMEs: A qualitative investigation	Klewitz J., Zeyen A., Hansen E.G.	2012	55
Sustainable value creation in SMEs: A case study	Ciasullo M.V., Troisi O.	2013	27
Sustainability and its integration into corporate governance focusing on corporate performance management and reporting	Krechovská M., Procházková P.T.	2014	16
Implementation of Sustainability Management and Company Size: A Knowledge-Based View	Hörisch J., Johnson M.P., Schaltegger S.	2015	44
The Sustainable strategy for small and medium sized enterprises: The	Duygulu E., Ozeren E., Işildar P., Appolloni A.	2016	11

relationship between mission statements and performance			
Exploring corporate sustainability integration into business activities.			
Experiences from 18 small and medium sized enterprises in the Netherlands	Witjes S., Vermeulen W.J.V., Cramer J.M.	2017	18
Critical success factors for the transition to business models for sustainability in the food and beverage industry in the Netherlands	Long T.B., Looijen A., Blok V.	2018	10
Conceptualizing businesses as social actors: A framework for understanding sustainability actions in small- and medium-sized enterprises	Westman L., Luederitz C., Kundurpi A., Mercado A.J., Weber O., Burch S.L.	2019	1

Source: Compilation based on information from Scopus Database (2019)

Comparably, the publication entitled “Sustainable Business Practices in Spain: A Two-Case Study” (Cambra-Fierro and Ruiz-Benítez, 2011), focuses on the sustainable business practices of two companies from different economic sectors. They frame the concept of sustainability as a strategic tool to generate competitive advantage. The study addresses the issue of legislative practices and education in values as two dimensions of ES leading to a balance between the social, environmental, and economic spheres. “Intermediaries Driving Eco-Innovation in SMEs: a Qualitative Investigation” (Klewitz, Zeyen and Hansen, 2012), studies the relationship between sustainability and ecological innovation by identifying the drivers and barriers for

business eco-innovation and the partnership between SMEs and local governments. They show that proactive government intervention drives the development of ecological innovation. However, the push for economic innovation requires both public and private mediators. “Sustainable Value Creation in SMEs: A Case Study (Ciasullo and Troisi, 2013) examines a SME in Italy which has integrated sustainability into its corporate strategy and assesses how corporate sustainability strategies impact intangible assets. Its conclusions suggest that ethics and values are fundamental at the management level for the design of sustainable competitive strategies, innovation, quality, and responsibility. “Sustainability and its Integration into Corporate Governance Focusing on Corporate Performance Management and Reporting (Krechovská and Procházková, 2014), discusses corporate governance and the necessary modifications needed to keep up with trends in society, particularly regarding sustainability. Corporate sustainability is defined in this research as the ability of companies to use their governance practices and market presence to positively influence the environment and further social and economic development. The outcomes of the study show that companies often recognize the importance of sustainable management. Nevertheless, financially driven practices are prevalent. The article recommends that sustainability become an integral part of strategic management and business planning.

In another way, the publication entitled “Implementation of Sustainability Management and Company Size: A Knowledge-Based View” ((Hörisch, Johnson and Schaltegger, 2015), presents data on

empirical surveys of SMEs and large companies in Germany. It considers the size of companies and how this feature affects the implementation and knowledge of sustainability management skills and strategies. Although the results confirm that SMEs appreciate and engage in sustainability through significantly fewer strategies, it is also true that the size of the company does not influence the number of sustainable approaches used once they are recognised. In “The Sustainable Strategy for Small -and -Medium-Sized Enterprises: The Relationship between Mission Statements and Performance” (Duygulu *et al.*, 2016), the author aims to contribute to the literature by empirically examining the relationship between mission statements of SMEs and their performance in formulating sustainable strategies. This inquiry identifies three components of the mission statement: 1) survival, growth, and profit; 2) philosophy and values; and 3) public image. Likewise, common independent variables explaining the performance of SMEs are also studied. “Exploring Corporate Sustainability Integration into Business Activities. Experiences from 18 Small - and Medium-Sized Enterprises in the Netherlands (Witjes, Vermeulen and Cramer, 2017), seeks to understand how SMEs integrate corporate sustainability into their business activities. This research considers the experience of 18 companies. Implementing sustainable practices is used as a platform for discussing future business initiatives and community integration. “Critical Success Factors for the Transition to Business Models for Sustainability in the Food and Beverage Industry in the Netherlands” (Long, Looijen and Blok, 2018), investigates and identifies critical success factors and barriers to the transition from traditional business models to business

models for sustainability. The barriers faced in this transition has been addressed in previous research. Yet, conceptual lenses pinpointing external influences and factors have not been considered. The authors seek to explore the issue from a managerial perspective, and using organizational concepts argue that collaboration, a clear narrative, and vision, are factors contributing to the development of a sustainable base, continuous innovation, and profitability. In “Conceptualizing Businesses as Social Actors: a Framework for Understanding Sustainability Actions in Small- and- Medium- Sized Enterprises” (Luederitz *et al.*, 2018), the text examines the underlying drivers of social and environmental interventions by SMEs by exploring empirical data from a survey of more than 1,600 Canadian SMEs and relying on complementary information from in-depth interviews. This survey argues that these firms function as social actors modelling sustainability since they are embedded in a social environment and share individual values as well as internal and external interpersonal relationships. This conceptualization directs attention to the full range of factors that shape the participation of SMEs in the field of sustainability and highlights strategies frequently overlooked in actions aimed at sustainability.

3.4. Future research venues

As stated previously, SMEs add up to a significant figure within the total number of companies in many countries. They play a considerable role in the economy by contributing to the generation of

employment and supporting dynamic markets. Taking into consideration the outcomes of the above review, and considering the evident scarcity of research in this field of study, we argue for the development and implementation of policies and funding encouraging studies on ES in SMEs worldwide, at the individual, collective, institutional, private, corporate, and government levels. Table 5 references the various angles and directions for future scientific scholarly inquiry.

Table 5. Lines for potential research in the field of ES in SMEs.

Research cluster	Suggestions for future lines of research
Innovation for sustainability	Technological innovation processes in organizations
	Ecological innovation in organizations for the improvement of competitive management.
	Innovation for sustainability in organizations: alternative management mechanisms
	Sustainability based on the size of organizations
Sustainable Marketing	Performance and mission for sustainability
	Economic stability of governments based on the ethical practices of professionals
	SE based on civil integration
Strategic sustainability	Sustainability as competitive management
	Integrity as essential principles to build trust and good reputation in the business environment
	Sustainable strategic management to improve the economic conditions of companies
	Ethics and values for sustainability

Source: Own elaboration

Table 5 suggests research lines for future studies among which the following seem critical: 1) Innovation for sustainability: this angle might combine innovation theory, sustainable development practices, and the particular features of small businesses to unlock new knowledge about the factors that influence the translation of

sustainable innovation into SMEs procedures; 2) Sustainable marketing: ideal for scrutinizing the association between training, marketing experiences, and sustainability to better understand their impact in the success of SMEs; 3) Strategic sustainability: this line of action involves the necessary actions by corporate governance to bring policies up to date with social and environmental shifts, especially considering sustainability as a social responsibility. Here strategic sustainability is understood as the ability of companies to positively influence the environment, along with social and economic development through governance practices and market presence.

3.5. Future of corporate sustainability

Sustainable development has become a concern for organizations conscientious of the future. There is a chance that global markets might be governed by social and environmental principles modelled by these companies. Yet, there are other more present factors such as the dynamic range of information and the increasing volume of data, that call for a deep transformation in organizations. As Alvarez, Carayannis and Sindakis put forward sustainable challenges will be related to volume and information processing (Alvarez, Carayannis and Sindakis, 2017). Initiatives for the development of sustainability for the future must get support from different areas, including technologies, markets, and finances, in the understanding that sustainable practices are connected to the new knowledge revolution (Sierra *et al.*, 2020)

Therefore, rapid technological changes brought about by multiple market adjustments have led to the adoption of sustainable models that cater to the needs of the industry. New business paradigms arise in which each company becomes aware of the need to be sustainable, and collaboration emerges as a possible solution to maximize the use of resources, improve production capacity and increase the company's sustainability (Kohtamäki *et al.*, 2019). It is necessary to focus on the global value chain as a whole, providing companies with the tools they need to manage all their processes. However, the development of new systems is more complex than ever since multidisciplinary knowledge is increasingly available and therefore communication appears as to be the key to success (Cunha *et al.*, 2018)

As a final thought, the integration of state-of-the-art information technologies into ES can lead the way for an information base with the capacity to turn organizations into structures governed by improved principles and sustainable actions. Hence the importance of social networks in which one can share experiences and learn about customers' perception with regards to services (Cortado and Chalmeta, 2016)

4. CONCLUSIONS AND RECOMMENDATIONS

The subject of ES, sustainable management, and implementation has caught the interest of countless researchers who

carry out work in the area of sustainable principles. This review found 109 texts on SE focusing on SMEs, as reported in our findings. Analysis of our data follows criteria proposed by Toscano-Hernández, Castillo-Nuñez, and Fuentes-Doria establishing that ‘greatest impact’ be determined by the quantity of citations by type of text (2014). Accordingly, scholarly articles account for 90.4% of citations; while conference proceedings make up 8.5%; book chapters, 0.1%; books, 0.2%; reviews, 0.8% and newspaper articles, 0%. Scientific scholarly journals with the largest number of papers are: *Sustainability*, featuring nine documents; *Business Strategy and the Environment*, containing 4 documents; *Handbook of Research on Intrapreneurship and Organizational Sustainability in SMEs*, 4 documents published. Nevertheless, when comparing these journals as per the visibility factor ($n \text{ citations} / n \text{ texts}$), it appears that the two journals with the greatest impact are *Business Strategy and the Environment*, at 4 documents claiming 280 citations and a visibility factor of 70.0; and *European Journal of Innovation Management* with two (2) documents, 72 citations, and a visibility factor of 36.0.

Regarding the impact of studies by period, the following texts stand out: “Corporate Sustainability and Innovation in SMEs: Evidence of Themes and Activities in Practice”; “Implementation of Sustainability Management and Company Size: A Knowledge-Based View”; and ‘Intermediaries Driving Eco-Innovation in SMEs: A Qualitative Investigation’. These papers focus on the study of sustainability from the perspective of innovation management, sustainability implementation actions, and ecological innovation.

Postsecondary education institutions, particularly in Colombia are recommended to further promote research in sustainable management, since Colombian universities are not currently part of collaborative networks. On the other side of the equation, the energy mining sector, the agricultural sector, and the intensive fishing sector, among others, should consider implementing sustainability principles and strategies.

It became apparent that in the scientific contributions aimed at improving organizations' transparency and accountability on their environmental effects, it is not enough to simply encourage the implementation of more sustainable productive practices. At this point in time, as this literature review posits, it is necessary to take action on designing and developing effective tools to promote corporate engagement with sustainability. Business sustainability strategies involve actors and stakeholders from spheres as diverse as academia, business, the community, and the local and national government. Developing best practices of production, consumption, and social regulation, is an opportunity to generate a vision for responsible social and economic behavior in any region. Consequently, such foresight might contribute to reducing the gap between theory and practice.

We write in the hopes that this review can become a means for educating and fostering awareness on SE in SMEs in present and future generations. We also hope it can be used as a tool by legislators and officials responsible for public policy as they design and redesign policies for urban and rural development and long-term strategic plans.

In addition, the recommendations emerging from this study encourage SMEs to provide better working conditions for employees and to integrate sustainability into their organizational management structures, as it has been precisely this area which has been criticized for its lack of commitment and effectiveness with regards to sustainability efforts.

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