



Review

Responsible Innovation in SMEs: A Systematic Literature Review for a Conceptual Model

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Abstract: Responsible innovation has always been an important issue in discourses addressing the major challenges faced by humankind in terms of natural resource degradation, climate change, economic progress and societal well-being. However, its integration into industry is still in its infancy, and even more so when it comes to small and medium-sized enterprises (SMEs). The aim of this research is to use a systematic literature review to develop a conceptual model for responsible innovation and its relationship with SME performance, in connection with sustainable innovation and corporate social responsibility practices. A bibliometric analysis of 102 articles collected between 2000 and April 2020 from the Web of Science database was used, in addition to the systematic literature review using the Gephi and NVivo software. The study presents an overview of the articles, authors, and most influential journals and research clusters identified, and provides a solid conceptual framework to be applied in this field and in the context of SMEs.

Keywords: responsible innovation; responsible research and innovation; corporate social responsibility; sustainable innovation; industry; small and medium-sized enterprises; SMEs

1. Introduction

Growing global concern about environmental degradation, social inequality, and over-consumption of resources has attracted increasing attention in academic literature [1,2]. In light of the current situation, one of the means for working towards the United Nations' 17 proposed Sustainable Development Goals (SDGs) for 2030 regarding the major challenges being faced in terms of natural resource degradation, climate change, economic progress, and society's welfare is "innovation" [3] and the need for it to be "responsible" [4–7].

Responsible innovation has been a topic of discussion because it connects the basic concerns of business with the global challenges of society, i.e., the challenge for companies in this increasingly competitive world to innovate in order to generate economic benefits, but also to generate sustainable social value, meaning that "responsibility" is now deeply rooted in the conscience of entrepreneurs, and consequently in companies' DNA [8]. However, the integration of responsible innovation in business is still in its infancy [5,9]. In other words, there is not yet a clear understanding of what should be "done" [10], especially in small and medium-sized enterprises (SMEs), which are largely unaware of what the concept of responsible innovation implies [6] because, as it is an emerging topic, very little practical research has been done to understand its influence on sustainable development and organisational capacities [11].

On the one hand, Responsible Innovation (RI) and Responsible Research and Innovation (RRI) are a continuous process of aligning research and innovation with the values, needs, and expectations of

society [12]. Although the issue of responsible research and innovation is a topic discussed among several fields and is not new [13], it has only recently gained momentum, especially in such controversial fields of innovation as nanotechnology and geo-engineering [6], and especially since the European Union (EU) mainstreamed the term in programmes such as “Horizon 2020” or “FP7”. In addition to visibility, responsible research and innovation also has the potential to bring this discourse to bear in the early stages of technology development [9], which evokes a shared duty to reflect on such criteria as anticipation and reflexiveness in order to design products and generate policies that can offer a response to the responsible challenges [14]. In order to make this possible, various actors, such as researchers, funders, policy makers, and enterprises, must be aligned in the same direction.

On the other hand, understanding the implications of responsible innovation in industry, especially regarding SMEs, which constitute 95% of all enterprises in the world [15], and their impact represents approximately 64% of pollution and waste in Europe [16], is still novel, and it remains to be understood how RI can be applied by companies [17] and how it relates to business performance [9]. The authors therefore suggest that more attention needs to be paid to SME activities [18,19] because their propensity to adopt responsible innovations could have an equally positive and significant impact [20–22]. Although this last argument is in line with corporate social responsibility (CSR), sustainable innovation (SI), and similar terms to CSR in SMEs [23], it also demands companies to take a step further with a responsible innovation approach that is a transparent and interactive process [10]. Moreover, RI is more specific and refers to mutual responsibility and the early inclusion of different actors in the innovation process. Therefore, it seems that CSR, besides being adopted due to its sustainability-oriented framework, reinforces the potential to promote responsible innovation within firms [9,24]. Therefore, this research aims, based on literature review and bibliometric analysis, to develop a conceptual model that could allow us to explain the drivers of RI in SMEs, its effect on firm performance, and the contingent variables which moderate this relationship.

Section 2 presents the background to the study. This is followed in Section 3 by the methodological approach of a systematic review of the literature. Section 4 presents the results of the research, followed by the theoretical framework in Section 5.

2. Background

Innovation is change. It is a new or improved product, service, or business model [25], i.e., a simple improvement to what we already do, but which makes it better or radically different. However, although such changes have been happening throughout the history of humankind, what they are today are changes in the process of development. That is, despite the fact that innovation is a spectrum of growing novelty, a Darwinian dynamic phenomenon that brings many benefits as well as risks, it could end up failing when ethical and social issues inherent to the innovation process have not been considered [10]. In this line, a key dimension when exploring innovation is the concept of “responsibility”. Responsible research and innovation, which first appeared in the Sixth Framework Programme (EU Regulation No. 1291/2013), is a term which, in order to deepen the relationship between science and society, seeks to ensure that innovation under a framework of democratic governance is better integrated into society to guarantee its contribution and benefits. In this regard, the most relevant definitions of responsible innovation and responsible research and innovation are:

- (a) “A transparent, interactive process by which societal actors and innovators become mutually responsive to each other with a view to the (ethical) acceptability, sustainability and societal desirability of the innovation process and its marketable products (in order to allow a proper embedding of scientific and technological advances in our society)” [26] (p. 9).
- (b) Responsible research and innovation refers to the comprehensive approach of proceeding in research and innovation in ways that allow all stakeholders that are involved in the processes of research and innovation at an early stage (A) to obtain relevant knowledge on the consequences of the outcomes of their actions and on the range of options open to them, and (B) to effectively evaluate both outcomes and options in terms of societal needs and moral values, and (C) to use

these considerations (under A and B) as functional requirements for the design and development of new research, products, and services [27].

- (c) “Responsible innovation means taking care of the future through collective stewardship of science and innovation in the present” [14] (p. 1570).
- (d) Responsible innovation refers to a new or significantly improved product, service, or business model whose implementation at the market solves or alleviates an environmental or a social problem [28] (p. 548).

Although the precise interdisciplinary nature of RRI is a work in progress [29], the above definitions show common recurrent themes such as “sustainable development”. According to the United Nations World Commission on Environment and Development conference described sustainable development as “development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs”. To this end, sustainable development should be adjusted to “societal needs”, and early involvement with “participation of different stakeholders” [30]. For example, the definition by Von Schomberg (2012), which is one of the most widely used, shows that innovation is a process of co-responsibility for ethical acceptability, social coexistence, and the construction of a holistic sustainability. Nevertheless, although similar approaches can also be found in industry such as corporate social responsibility (CSR), the term CSR is used alternatively in the literature, which makes it difficult to consolidate e.g., Sustainable innovations [21], Social Responsibility [31], Responsible Business Practice [32], Responsible Entrepreneurship [33] among others 56 different terms alternatives to CSR in SMEs [23]. Therefore, while CSR cannot be said to have a unified meaning across literature, it is an umbrella term encompassing these sub-terms and seems to act as a driver of responsible innovation in industry [9,24]. Then, with the growing awareness of companies regarding recurring activities to innovate with and for society, the concept of responsible innovation is incorporated in the previous literature along with its dimensions as essential components of this objective, i.e., “innovating with and for society”. On this basis, the research by Stilgoe et al. [14] developed a framework for responsible innovation, which is now a benchmark in the academic literature. It consists of four dimensions—anticipation, reflexiveness, inclusion, and responsiveness—each of which indicates a reflection on the purpose(s) of innovation. There is also the knowledge management dimension proposed by Lubberink et al. [17]. The latter refers to the fact that SMEs lack human resources, and hence are constantly on the lookout for opportunities to expand and build knowledge, as well as to be able to extend it to their employees [20]. Therefore, further research might explore these five dimensions—anticipation, reflexiveness, inclusion, responsiveness, and knowledge management—in greater depth in the SME context.

Anticipation involves systematic thinking, whereby organisations consider uncertainty, the possibility of something happening or not happening, what is possible, and risk [14]. Meanwhile, reflexivity refers to the process of self-awareness, like holding up a mirror in order to scrutinise oneself [14]. Inclusion refers to the participation of stakeholders [14,17,30]. Responsiveness involves responding to newly emerging knowledge, perspectives, users’ views [14], and stakeholders regarding the innovation process in order to gather information from them and thereby adapt innovation to changes and new requirements [9]. Finally, previous research refers to the knowledge management dimension, especially in SMEs that lack resources. For that reason, an owner-manager may wish to invest in developing the capacity of his employees, but is often forced to prioritize investment in more immediate and urgent needs of his company [31] than employee development [34]. Activities that are implemented to develop knowledge, share it, transfer it, and apply it through members therefore help to fill some of the knowledge gaps needed to develop innovation [17].

Section 5 below develops each of the proposed RI dimensions—RI is the term that will be used in this study—and their relationship with SMEs and business performance according to the existing literature.

3. Methodology

We performed a systematic review [35] of the extant literature on practices such as CSR and Sustainable innovations (SI) that might foster the adoption of responsible innovation and performance in SMEs. Systematic review has become an essential activity with regard to the literature because of the analysis and synthesis of articles that underpin it. In this study, content analysis and bibliometrics were thus applied to learn about the evolution of publications and journals, their impact on the field, and the relationship between articles and their references. The study involved four stages [36]. In Stage 1, the questions to be addressed in the systematic literature review were formulated. In Stage 2, relevant articles were located and selected from the extant literature and according to evaluation criteria. In Stage 3, data were analysed and synthesised using various methods appropriate to the research. In Stage 4, significant results and consequences of the proposed conceptual framework were described.

3.1. Question Formulation

Based on the extant literature on RI, a relationship is evident between CSR, SI, and RI that supports the evolution of the concept and the potential impact on business performance. However, although research in this field of responsible innovation is at an early stage [10], it seems to be particularly less developed with regard to small and medium-sized enterprises. Therefore, the systematic literature review is based on underlying practices and activities that come from empirical studies on responsible innovation, sustainable innovation, and corporate social responsibility practices, which, in addition, are related to the performance of small and medium-sized enterprises. More specifically, these are practices with a broader perspective than the social, economic, and/or environmental one, which promote arguments of anticipation, reflexiveness, inclusion, responsiveness, and knowledge management as a basis for putting responsible innovation into practice [17]. In order to achieve the purpose of this study, the following research questions are posed, which this study seeks to answer:

- What are the key dimensions that contribute to the implementation of responsible innovation in SMEs?
- How can activities contributing to the implementation of responsible innovation affect the performance of SMEs?
- What are the contingent variables that influence the relationship between responsible innovation and performance in SMEs?

3.2. Locating and Selection Studies

Figure 1 shows the second step followed a strategy to locate articles in the existing literature. The ISI Web of Science (WoS) database was chosen to perform the keyword search. This database is recognized by academics and professionals as one of the most comprehensive and highest-level databases of scientific information in the world [37]. The search was then performed to bring together articles published in the period from 2000 to April 2020 with such keywords as “small and medium sized enterprises” OR “SMEs” AND “responsible innovation” OR “sustainability” OR “sustainable development” OR “corporate social responsibility” OR “corporate social innovation” AND “firm performance”. The 20-year period was determined because it includes the first article related to responsible research and innovation that appeared in the early 2000s. This resulted in 293 articles (some articles from the Journal of Responsible Innovation were included because of their relevance to the topic). The titles and abstracts of all articles were analysed (see the search sequence in Figure 2). After obtaining that initial sample, the “snowball” technique was applied to the most relevant papers in the initial search to retrieve articles related to the keywords, but not identified in the first search. This expansion allowed the identification of papers related to the evolutionary process of corporate responsibility that precedes the concept of RI itself by adding 25 articles. A database was then created

in Microsoft Excel only with articles that contain the data required for bibliometrics, such as abstracts, authors, keywords, journal, references, and number of citations.

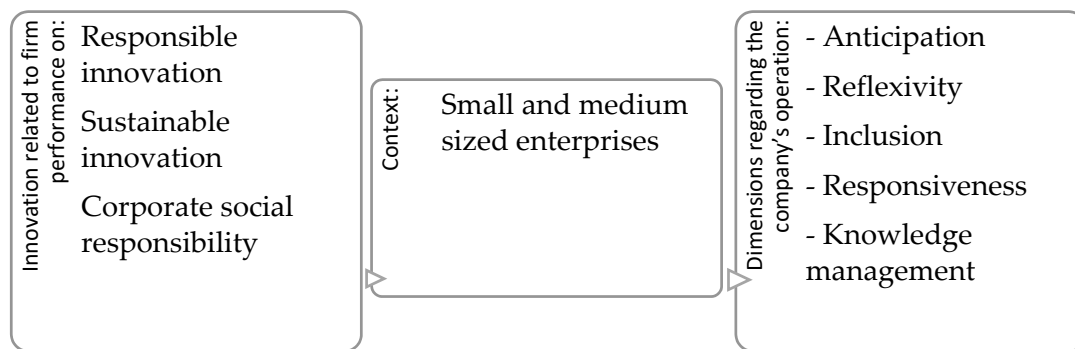


Figure 1. Adapted framework of Lubberink et al. [17] to categorize the indicators.

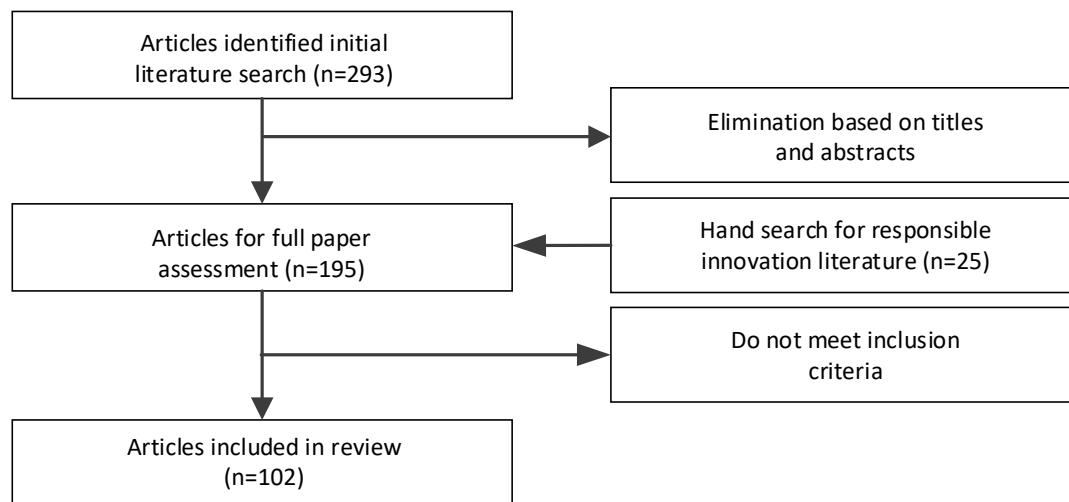


Figure 2. Flow diagram of study selection.

As a result, 195 articles were analysed manually and more precisely. Of these, 80 articles did not meet the criteria for inclusion and were therefore excluded. The inclusion–exclusion criteria were related to innovation and firm performance associated with RI, CSR, and SI in SMEs (see Figure 1). Subsequently, the full texts of the remaining 115 relevant articles were downloaded for full evaluation. In the above process, 13 articles could not be accessed through the above-mentioned database and were instead requested directly from their authors. As a result, and in line with the seven evaluation criteria proposed for the selection of studies—and detailed below—the final number of 102 articles was reached.

- (1) Articles based on empirical and peer-reviewed research;
- (2) that included one of the key words in the title or the abstract;
- (3) articles that consider SMEs as research centres;
- (4) available in the above-mentioned database;
- (5) published between 2000 and 2020;
- (6) articles in English; and
- (7) articles in the areas of business research, economics, social sciences, environmental sciences, or technological science.

The exclusion criteria were articles not related to the keywords; articles that did not contribute to an understanding of responsible innovation in SMEs and therefore did not pass the selection test (see Figure 2); and articles that could not be accessed through the database.

3.3. Data Analysis

The database created with the 102 articles was read in its entirety and analysed using a combination of methods such as bibliometrics and content analysis, then cluster analysis, using the Gephi software (Gephi is available for free at: <https://gephi.org/>) and the BibExcel tool version 2016.

In order to explore the chronology and evolution of the identified academic literature, bibliometric analysis was applied to measure the impact of published articles, the number of citations per year, and the number of publications ordered by journal and year of publication. Furthermore, bibliometrics enabled analysis of the evolution of these publications over time.

In addition, the WoS database was used to extract in CSV format information that was first exported to the BibExcel tool version 2016 for the preparation of the information. Then, the file generated in BibExcel served as input data for the open-source bibliometric tool Gephi. Clustering based on citations was chosen, so the use of the Gephi tool enabled identification of clusters with their complex shared relationships, as well as the modularity and aggregation of communities. That is, through mathematical algorithms such as the Leuven algorithm used by the Gephi software, it is possible to visualize a network node represented by a citation in our case, and each link between two nodes indicates a co-occurrence, which means that the two references appear in the same article. In this study, four clusters emerged. In addition to a full reading, each selected article was also codified following the framework proposed by Lubberink et al. [17] for which the software NVivo 1.2 2020 was used. Therefore, content analysis of each article enabled identification of the practices that contribute to the dimensions of responsible innovation in SMEs, i.e., anticipation, reflexiveness, inclusion, responsiveness, knowledge management and its relation to business performance, as well as the variables used, the models, propositions, definitions, etc. The summary of the resulting codification scheme is shown in Table 1.

Table 1. Content analysis coding scheme.

Coding	
1: Dimensions	3: Contingent variables
Anticipation	Firm size
Reflexiveness	Type of industry
Inclusion	Firm age
Responsiveness	Country
Knowledge Management	Corporate strategy
2: Firm performance	Learning orientation
Sales growth	Employee's commitment
Profitability	Relational marketing
Financial indicators	4: Main Players
Market share	Clients/Customers
Customer satisfaction	Employees
Innovation performance	Environment
RI performance	Suppliers
Environmental sustainability	Community
Social sustainability	Owners/shareholders
Diversity and inclusion	R&D
Anticipation and reflection	Government
	Competitors
	Funding agencies/Investors
	Alliances

4. Results

4.1. Bibliometric Analysis

Bibliometric analysis shows the evolution of published articles, where it was observed that the first publications were from the year 2000. This is justified by the fact that the term “responsible innovation” emerged in 2002 as part of the EU’s Sixth Framework Programme for Research and Technological Development. As shown in Figure 3, there were very few publications between 2000 and 2010, as an average of only twenty articles was published during these ten years. In 2011, the number of publications increased slightly, but it was from 2016 onwards that the number truly started to rise. This increase may be due to RI being promoted by the European Commission through the European framework programmes for research and innovation (e.g., “Horizon 2020” and “FP7”).

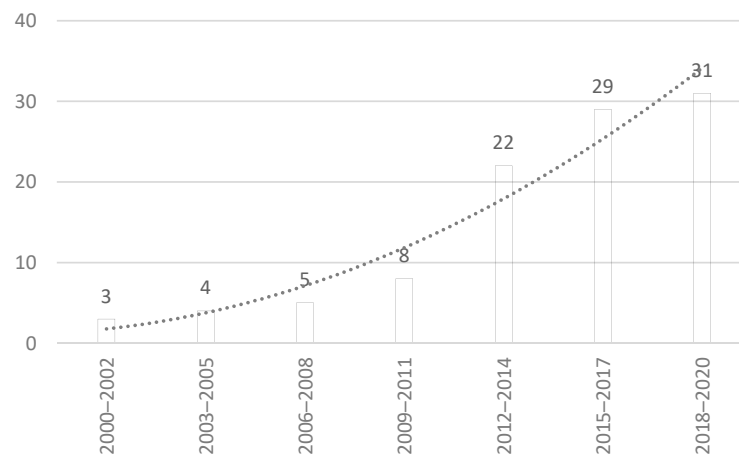


Figure 3. Number of publications per year (2000–2020).

Table 2 shows the number of publications per journal, considering the journals that published at least two articles. Most articles were published in the Journal of Cleaner Production, followed by Business Ethics and Sustainability.

Table 2. Publications and citations per journal.

Journal	Publications	Citations
Journal of Cleaner Production	14	1608
Journal of Business Ethics	14	2095
Sustainability	14	187
Business Strategy and The Environment	9	719
Corporate Social Responsibility and Environmental Management	6	503
Journal of Responsible Innovation	4	25
Journal of Small Business Management	3	38
Strategic Management Journal	2	1764
Research Policy	2	1612
European Management Journal	2	1076
Journal of Management Studies	2	159
Science and Engineering Ethics	2	152
Industrial Management & Data Systems	2	26
Global Business Review	2	15
Technological Forecasting and Social Change	2	15
British Journal of Management	2	7

Note: Minimum of two publications. In descending order of the total number of publications.

The concentration in a few journals indicates that the topic was the subject of intense debate on specific issues such as social responsibility, corporate responsibility, environment, development, society, sustainability, and performance (see Figure 4 with the words highlighted by size according to their frequency of use). All journals are peer-reviewed and indexed with a high impact factor.



Figure 4. Keywords of the responsible innovation research field.

4.2. Research Trends over Time

Four five-year periods were created to analyse trends over time, namely Period 1 (between 2000 and 2005), Period 2 (between 2006 and 2010), Period 3 (between 2011 and 2015), and Period 4 (between 2016 and 2020).

2000–2005: This period witnessed a broadening of the understanding of innovation practices together with corporate social responsibility adapted to the needs of SMEs. It was recognized that both the lack of commitment and the involvement of SMEs in social responsibility activities were debatable. The former has been related to how CSR has been framed from its origins in terms of large companies rather than involving SMEs or being relevant to them. The latter has been somewhat related to the fact that many SMEs participate in responsible activities without knowing it. This prompted academics to work on broadening and understanding the concept of social responsibility from the point of view of SMEs [38–42]. For example, Jenkins (2004) examined the relevance of the social responsibility programme for SMEs. Based on his analysis, the author highlighted the need to develop new terminology and interpretations of CSR that are more relevant to the characteristics of SMEs in order for it to be integrated into everyday life.

2006–2010: This period saw an increase in the academic literature on practices promoting responsible behaviour in SMEs, ranging from reactive compliance practices to proactive responsibility practices. These studies revealed that the unique characteristics of SMEs are correlated with the organizational capabilities that drive the adoption of responsible practices, e.g., closer interactions between SMEs' stakeholders, flexibility, and the founder's vision [20]. The latter is also conditional on individual discretion [18], altruism, and philanthropy [43]. Thus, the social responsibility aspect of SMEs remained largely informal [44] or unintended [45]. At this stage, academics also showed great interest in sustainable innovation practices linked to environmental strategies, such as life cycle analysis to measure environmental impact [21,46] and the performance of SMEs [47].

2011–2015: This period saw the emergence of a theoretical framework for responsible research and innovation [14,26], as well as an increase, with eight articles, in academic interest in demonstrating the impact of practices that promote responsible behaviour in SME performance. The examined studies were on the adoption of pro-environmental practices [22,48,49] and their impact on performance [50,51], and the relationship between CSR and performance in SMEs [52–55], among others.

Particularly prominent among the research during this period were studies to understand the relationship between innovations and sustainability in SMEs [56,57].

2016–2020: This period had the highest number of publications (70 articles) and a growing academic interest in practices related to and promoting responsible innovation in SMEs. During this period, some authors recognized that although SMEs are largely unaware of the concept of responsible innovation, they may be able to identify which current practices share aspects of RI as a starting point [6]. For example, the study by de Poel et al. [9] found that there is a need for a comprehensive vision of responsible innovation, i.e., that in addition to being connected to CSR activities, its contribution in social, environmental, and economic terms can be identified. Regarding the contribution of social, environmental, and economic factors, many authors examined their effect on the performance of SMEs (25 articles). In addition to these studies, this period witnessed the increasing development of models and debates to apply responsible innovation to the business context (6 articles). These models enabled analysis of the dimensions of responsible innovation in the business context [17], as well as the involvement of stakeholders. For example, stakeholders should be included early in the innovation process in order to ensure responsible outcomes [58]. During this period, there was an increase in case studies on CSR and SI to demonstrate that their application is related to SME performance. For example, in a detailed study that examines the relationship between CSR and innovation-mediated business performance of 552 Spanish SMEs, its results may help to understand how CSR strategy is a mechanism that drives the innovation process towards responsible results [59]. Meanwhile, in a study that investigated the relationship between three sustainability factors and their effects on the financial performance of SMEs, arguing that CSR, training, and innovation are significant and correlated factors in the promotion of competitive advantage in SMEs [60]. Although this period saw an increase in RI research and the practices that promote it, in the context of industry it is still in its infancy, and especially when it comes to SMEs.

4.3. Associated Communities

Figure 5 represents a network of references and their relations. The database to create a network of references and their relations was highly relevant for articulating the theoretical foundations of the area. The idea behind this analysis was to explore the clusters that share key references and to understand their relationships. We performed this reference network analysis with the help of the open-source software Gephi. Each colour of the network represents a cluster and each link between two nodes indicates that the reference appears in the same article. The thickness of the link is proportional to the number of times the two references appear in the same article. The results of the Gephi display showed four clusters: The first (C1) is purple and represents 40% of all articles, the second (C2) is green with 30%, the third (C3) is orange with 20%, and the fourth (C4) is light blue with 10%. Based on the results found with the Gephi software, the obtained clusters are described by referring to relevant studies that promote responsible innovation in SMEs such as: C1 responsible innovation drivers in SMEs, C2 genuine silent responsibility practices, C3 innovation framework based on a responsibility approach, and C4 social responsibility practices and performance in SMEs.

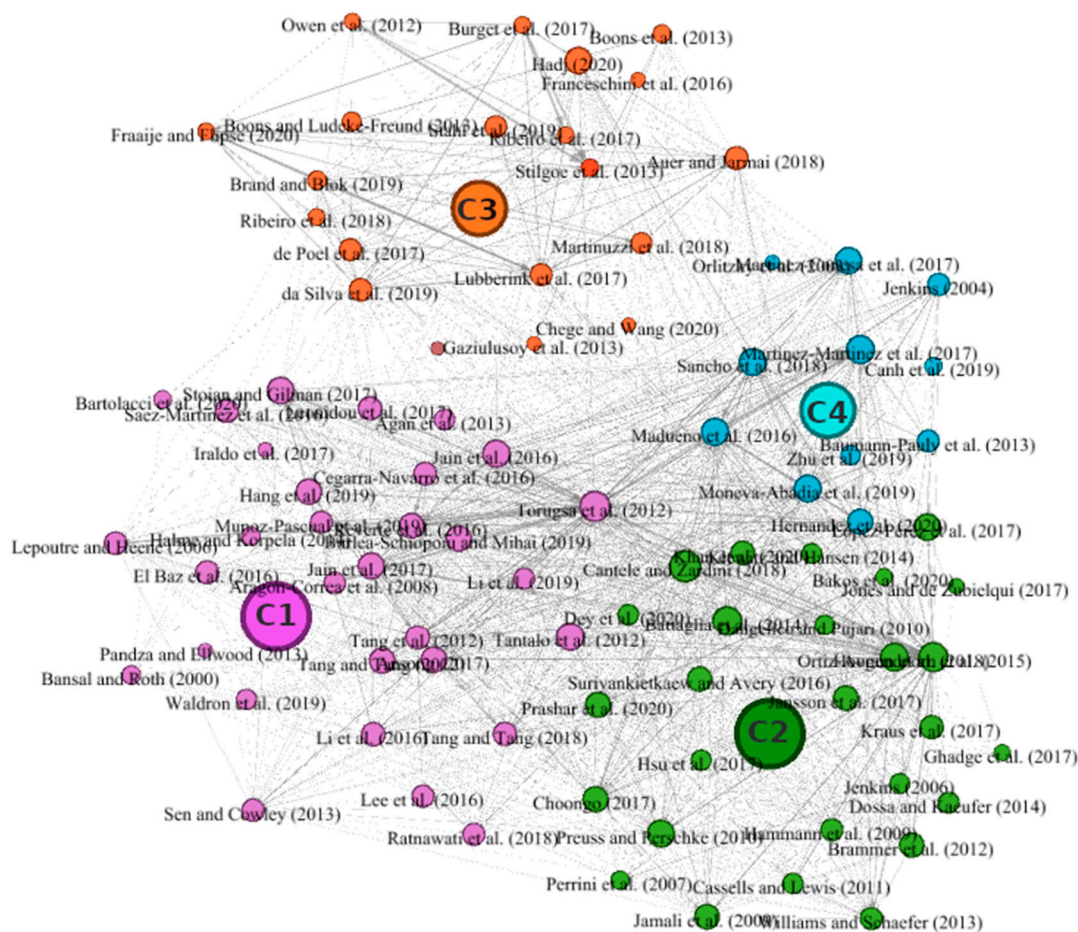


Figure 5. Network of article citations by references.

4.3.1. Cluster 1: Responsible Innovation Drivers in SMEs

Of the 102 articles, C1 are the most cited with 40%. The group with the highest number of key references includes studies on environmental responsibility activities, their impact on performance, and the motivations that promote SMEs to adopt environmentally and socially responsible environmental response practices, ranging from reactive compliance to proactive prevention of environmental pollution, associated with organizational capabilities and that in the long term are conducive to better performance, including image and competitive advantage [20,28,38,51]. An examination of how some stakeholders perceive corporate responsibility has attracted the attention of researchers [11], including the focus and impact among stakeholders, the relationship between corporate performance and stakeholders, and the power differences of stakeholders able to influence corporate responsibility and consequently environmental performance in SMEs [50,61–63]. Some of the associated internal strategic and operational measures include learning orientation, training, regulation, market dynamism, public concern, competitive intensity, and innovation. Several studies related to CSR practices have shown a positive effect on performance and competitive advantage in SMEs [60,64–66]. Importantly, attention has been given to issues related to environmental performance. For example, in a study concluded that causality between environmental and financial performance depends on the time horizon, i.e., while environmental performance has no short-term effect, it will be significant for a company's long-term financial performance, which is significant as it encourages managers to maintain a proactive environmental policy as well as not to abandon investments if financial success is not immediately visible [67]. This can also be illustrated in [65], who found that regulation, market dynamism, public concern, and competitive intensity are all factors that help to positively moderate the effect of green business strategies on a small company's competitive advantage.

4.3.2. Cluster 2: Genuine Silent Responsibility Practices

The nodes identified within this cluster include a different and discrete profile of SMEs when addressing corporate responsibility, sustainability-oriented innovation, and business performance. The authors used various methods to analyse different operational dimensions in the supply chain [68,69] from management practices and environmental sustainability [22,46,48] to sustainability-oriented innovation practices [1,70] that explain the commitment to sustainability in SMEs. An overview of the literature associated with sustainable development in SMEs has attracted major attention see [71], which identified key performance factors (such as reducing employee turnover, increasing employee productivity, and improving manufacturing processes) that are capable of creating business efficiency. Similarly, some authors point out that the environment, social development, and economic development factors, together with multiple stakeholders [15] create economic value in the firm [18,32,72].

Moreover, the discretionary and silent approach by SMEs to corporate social responsibility attracted the interest of several authors. For example, the study [73] found that SMEs involved in CSR activities limit external communication and reporting, unlike large companies. According to the study [74], this is due to the lack of resources and management capacity of SMEs. Moreover, even though many SMEs are involved in CSR activities, these actions have not been thought of in those terms, but rather, have been driven by legitimate individual concerns. In the study [38] which found that the factors motivating companies to respond ecologically are influenced by conditions such as individual concern that respond to proposed values and principles in a gradual manner and inspired by a mix of personal and cultural motivations of SME founders and senior managers, which unknowingly are responsible [40]. In fact, this can be illustrated by the informal, altruistic, and philanthropic nature of these discretionary personal values [43–45,74]. In contrast, see [75] which stated that although there is greater awareness and understanding among SME managers about climate change, translating that awareness into practical action is difficult, mainly because of their scepticism about how their actions “might impact on the big picture”. Therefore, as the study [76] highlighted, it is important for companies to understand that they are not separate from society but part of it. This can be achieved, see [77] which internal discussions among employees in order for them to articulate the reason for the company’s existence and its role in society.

SMEs continuously seek to use simple language such as “operating the business ethically” to explain the concepts related to corporate responsibility [62]. In that regard, the appropriateness of the term “corporate” responsibility in the context of small and medium enterprises that differ in many aspects from large companies has been criticized, while a focus on the practical aspects of its internal application has been suggested, whereby a more suitable terminology for SMEs, such as “responsible business practice”, would improve understanding [32].

4.3.3. Cluster 3: Responsible Innovation Framework

Cluster 3 is composed of 20% of the nodes, which represents the framework for innovation based on a responsibility approach [30] with the proposal of at least four integrated dimensions—anticipation, reflexiveness, inclusion, and responsiveness [14]. The authors also focused on investigating both organisational and sustainable innovations [56], rooted in deeper socio-economic contexts of sustainable products and service developments [78] that help companies of different sizes and sectors think about the challenges and societal values that lead to benefits from the outset, especially when these have been included in the early stages of product development [9]. Although there is still tension between the RI ideal and its application in the business context [79], identification of the main challenges [5] and the drivers that could also become obstacles within the RI process [6], and it has become a shared endeavour, one that could link the innovation process with the concept of responsibility and early stakeholder engagement [58] in order to ensure responsible and sustainable results in the short, medium, and long term [57].

4.3.4. Cluster 4: Social Responsibility Practices and Performance in SMEs

The final cluster with 10% of the references is characterized by studies that analysed the relationship between CSR and performance in SMEs. Previous research has empirically shown that CSR activities in SMEs are a potential driver of a company's performance [63,80,81] and that this positive and significant relationship in micro, small, and medium-sized enterprises is moderated by the size of these organizations; the larger the size, the stronger the relationship [82]. There are also studies that consider this relationship to be partial [59] or even positive but weak [83].

An analysis of the relationship between socially responsible human resources and the competitive performance of SMEs has also attracted the interest of studies see [84]. Related theories, such as stakeholder theory, were investigated. In the new era, a firm's responsibilities have to be extended to other stakeholders, which will help foster positive changes in profits in the long term [85]. Innovation as mediation in the relationship between CSR practices and performance has been studied see [64], where it was found that CSR programming can be used as a means to encourage innovation in SMEs as well as having a significant effect on learning and performance orientation. This is also illustrated in the study [86], which found that innovation is a driver of environmental performance. Similarly, the study [87] found that management innovation and employee involvement in environmental protection practices has a positive impact on SME performance. Other topics in this group included an analysis of stakeholders and their relationship with CSR practices, innovation, and performance in SMEs.

5. Theoretical Framework Based on the Literature

The conceptual model of RI was constructed based on the existing literature as follows. According to Stilgoe et al. [14], a responsible innovation strategy must take into account at least four dimensions of the process, namely anticipation, reflexiveness, inclusion, and responsiveness. In addition to these, there is the knowledge management dimension, which was identified as relevant in the business context in the study by Lubberink et al. [17] and which is included in the analysis of the literature in this study. In fact, and according to De Poel et al. [9], a responsible innovation strategy should not only include the four dimensions, but its use and priority will depend on the technology and company that applies it and could therefore be different in each case. Thus, in this section, on the one hand, we analyse the responsible innovation dimensions in the context of SMEs and, on the other hand, we analyse their relationship with the business performance in SMEs in addition to the other components of the theoretical model proposed in this study, such as the contingent variables, facilitators, and stakeholders identified in the process.

5.1. Dimensions of Responsible Innovation

5.1.1. Anticipation

Anticipation involves systematic thinking in order for organisations to consider uncertainty, the possibility of something happening or not happening, what is possible, risk [14], and an overview of possible outcomes and alternatives [88]. Rogers-Hayden and Pidgeon argued that "anticipation processes must be timely so that they are early enough to be constructive but late enough to be meaningful" (as cited in Stilgoe et al. [14]). In the editorial [7] on RRI in industry, certain challenges, perspectives, and prospects illustrate how systematically anticipating problems helps companies to regain confidence and legitimacy, which drives their capacity for socially responsible impact. Under these circumstances, previous research can show whether determination of the desired impacts and outcomes of innovation is an anticipated activity in SMEs.

Determining the desired impacts and results of innovation: Responsible practices in the context of SMEs are the result of unplanned actions. The study [22] found that although 80% of owner-managers stated that they were aware of the potential environmental risks arising from the work they do, only 87% agreed that regulation alone cannot protect the environment without voluntary actions by

companies. Environmental practices are therefore associated with a potential financial benefit rather than being motivated by environmental protection, so processes are fortuitous rather than expected results. Then, in order to improve the impact of socially responsible activities in SMEs there is a need for specific strategies and policies [89]. This last argument was explored through drivers and barriers to incorporating responsible research and innovation in SMEs [6], of these, for example, laws, regulations, or certifications could be drivers [90,91], but also possible barriers to the implementation of RRI when the regulatory approach is not clear [46], or there is no specific regulation [76], or there is too much legislation to comply with. For example, environmental legislation can lead to owner-manager indecision [22], so the business response appears to be largely regulatory rather than empirical [75]. Moreover, there are limitations on governance models in relation to techno-scientific developments [14]. Consequently, responsible innovation needs to be supported or even initiated by institutionally powerful actors (e.g., government, funding agencies) in order to change perceptions and make it possible to unambiguously articulate the theories with the practice of SMEs [11,28,45,46,50,69]. This last argument is in line with previous research suggesting that “government was expected to take a leadership role in relation to the environment” [31] (p. 268). On the other hand, the implementation of policies and regulations requiring greater consideration of social and environmental sustainability issues could generate serious resistance in SMEs [70], as they are reluctant to adopt regulation on a voluntary basis, and hence respond less proactively [40,50]. However, regulation seems to be a low-level driver because it is drafted in general terms and is often not appropriate for SMEs [51]. Therefore, despite institutional and cultural resistance to anticipation [14], previous research suggests that governments have an important role to play in developing and enforcing its regulation, in addition to the necessary support for socially and environmentally responsible SMEs [32,69].

5.1.2. Reflexiveness

Responsibility requires reflexivity on the part of actors and institutions, and refers to the process of self-awareness, rather like holding up a mirror to scrutinise oneself [14], in order to understand the social aspects of an innovation [88]. The study by Lubberink et al. [17] refers on a practical level to actions such as values and motivations, knowledge, and perceived realities for responsible actions. However, past literature on SMEs refers to values and motivations as perceived realities for their responsible actions.

Values and motivations: SMEs’ motivations for responsible innovation can be manifold [6], including, for example, motivations related to cost reduction practices [22], compliance with standards [46], consumerist or instrumental matters [66], competitiveness, legitimacy, and personal commitment [75]. Based on these ideas, the awareness of the role and power of business in society, mostly based on moral and ethical arguments [32,46], i.e., doing “the right thing”, that “everyone has a responsibility to do what they can”, is significant, because researchers have found that it leads to the recognition of the active and primary role of employees [66]. This moral and ethical culture encourages them to perform their tasks and responsibilities in a more committed and satisfying manner [53,92]. Furthermore, even though some empirical studies indicate that owner-manager values can be a decisive motivation for adopting socially responsible practices [43,44,48,60,61] among others, these individuals do, after all, have the potential to significantly influence company strategies and culture [70]. However, the extent to which this positive attitude is turned into action is not clear [22]. On the other hand, such moral and ethical arguments can also have an impact on social improvement in local communities [43] and vice versa, the latter especially when the cultural influence of the local community is so strong that it is able to displace the personal values of the small business owner-manager [31] (p. 260).

5.1.3. Inclusion

Inclusion refers to stakeholder participation [14,17]. Studies relate inclusion to practices that promote: (a) Stakeholder engagement at different stages; (b) increased commitment and contribution.

The participation of stakeholders at different stages is considered imperative for the responsible innovation process [58]. Previous studies on responsible innovation, sustainable innovation, and corporate social responsibility in SMEs have well established that social interaction and strong owner-manager relations with stakeholders contribute to responsible behaviour and the integration of strategies in SMEs [45,62], which in turn means more opportunities to reap the benefits of such responsible behaviour [31]. This, in turn, will often depend on the responsible behaviour of their peers to generate such behaviour [31], or on the quality of personal relationships between the owner-manager and various stakeholders [40]. Thus, acknowledging the wider circle of influence of decision makers than just the owner-manager is to recognize that responsibility implies involvement of multiple internal and external stakeholders to generate favourable attitudes, as well as better supportive behaviours [44,62,93]. In this line, this inevitably corroborates the relationship between the inclusion process and power issues [14], i.e., the stakeholder's power over the company to engage in responsible behaviour, and the power of a company to counteract that stakeholder [50]. Stakeholders have therefore been defined as "groups that can and may be affected by an organisation's actions because they share with it certain demands or expectations", and they can be internal (owners, employees) and external (customers, government, competitors, suppliers, etc.), and they have been described and analysed in various literature studies such as [43,61,70,94,95], among others.

Increased commitment and contribution: SMEs within their responsibility programmes apply practices that are compatible with stakeholder expectations, which come from someone's personal values can lead to the creation of economic value [18]. That study also found that executives can more easily express their values to internal stakeholders, such as employees, and closer external stakeholders, such as customers, than they can to an abstract group such as society. Previous studies have also recognised that the relationship between owners-managers and stakeholders at all levels is a strategic approach related to increased commitment, trust, a better working environment [44,71] and, consequently, greater competitive advantage [43,84]. However, the literature review also showed that stakeholders are included at a late stage of the innovation process, when the product or service is already on the market, which allows for some adaptation of solutions, but in a limited manner [58]. Therefore, the creation of a design space that allows early inclusion of multiple stakeholders should be included in order to ensure responsible results in the business context and because, they might have divergent opinions in the innovation process [15]. In that line, and even if participants do not undertake social activities on their own, the motivation to do so will underlie the establishment of relationships and networks with other members [62] as "business champions", namely a series of people who give their time, expertise, and support to other businesses [32].

5.1.4. Responsiveness

Responsiveness means responding to newly emerging knowledge, perspectives, users' views [14], and stakeholders on the innovation process in order to make responsible decisions [88], and thus adapt innovation to change and meet new requirements [9]. Responsiveness is explicitly linked to inclusion. However, and given the previous point where the anticipation dimension is an unforeseen process in SMEs, the study by De Poel et al. [9] proposes a conceptual model that integrates responsible research and innovation into corporate social responsibility policies, highlighting that under these circumstances, responsiveness may be a more reliable strategy. Some key activities within this dimension that are likely to improve responsiveness in SMEs are: (1) Ensuring that one can respond to changes in the environment, (2) real response to changes in the environment, (3) addressing major challenges, and (4) mutual response.

Ensuring that one can respond to changes in the environment: The most important factors in priority order are environment, social development, and economic development [71]. In that regard, employees, with the criterion of reducing the incidence of health and safety problems, are a key factor for improving the performance of SMEs [70], especially when they are involved in sustainable and responsible innovation processes [96]. Similarly, the European Commission's

innovation policy recognized that: “Innovation must be organized in a way that not only supports the acceptance of change, but also offers opportunities in human resource management, leading to higher productivity” [97]. Previous studies on this subject state that some organizational and managerial characteristics of SMEs (e.g., informal, flexible communication style, fewer hierarchical levels) are favourable to their responsiveness to the changing needs of the enterprise and its stakeholders [52]. As a result, these personal attitudes may affect the socially responsible behaviour of SMEs [48], as dictated by needs, in addition to improving their capacity for innovation [32], and proactivity responding to socially responsible and environmental activities [20,23,84,94] among others.

Real response to changes in the environment: Sustainable business model is a mediator for innovations in SMEs [56], the latter being able to create “responsible innovations” despite limitations resources such as financial capital, skills, and social capital [28]. For example, a company that produces and sells light bulbs will be able to switch from conventional ones to energy-saving bulbs. Moreover, Starbucks aims to have 100% recyclable or reusable cups, and new standards have come into force in China to encourage the development of sustainable packaging [46]. China is also the first country to ban the production, sale, and use of plastic bags that are less than 0.025 mm thick [50]. On the other hand, studies have also shown that the relationship between awareness, attitude, and responsible adoption practices of many SME owner-managers is not determined by a positive attitude. In fact, some are inclined to shun a responsibility that they feel should be assumed by the government [22]. This is worth mentioning because, three major external drivers, namely government, competitors, and customers, significantly influence and drive the need for improved responsible practices [69].

Addressing the big challenges faced by society promotes responsible innovation in SMEs. Previous research suggests that the driving of social, environmental, and economic activities to incorporate responsible research and innovation in SMEs implies reconsideration of the role of business in society [6,96]. Examples of how previous literature has responded to social, environmental, and economic problems include: The study [28], which showed that despite the limited resources of SMEs, they can create “responsible innovations” by combining resources such as equity, cooperation, networks, knowledge, and reputation. Likewise, see [98], which revealed that one research topic is innovation and impact on the sustainability of SMEs. Also, the effect of environmentally friendly activities influences the performance of service innovation only when it is mediated by advanced dynamic capacity, which is the “ability of the firm to integrate, build and reconfigure internal and external competencies to cope with rapidly changing environments” [66], as well as social responsibility has a significant effect on learning orientation, innovation, and performance [64] and, sustainable innovation can be explained by different levels of sustainability embedded in innovation processes for new product development and cooperation with stakeholders [21]. Furthermore, the transfer of human resources from higher education institutions to SMEs has a significant positive effect on innovation capacity [1], which on one hand is positively related to the company’s performance, and on the other hand supports the argument for sustainability. The energy minimization, materials reduction, and pollution prevention are part of different companies’ motivations to develop green products [46]. Moreover, advanced technology, collaboration with customers and suppliers, innovation capacity, and strategic benefits can provide SMEs with capabilities that help them to address environmental challenges [49] and, training and innovation are significant and correlated factors to promote competitive advantage in SMEs [60].

Mutual response: Responsibility is not only found at the level of government or industrial organizations, but also implies responsibility at the level of individual small businesses [31]. In practice, previous studies showed that SME social responsibility and innovation seem to create a synergy with the strong commitment of stakeholders to contribute to innovation capacity and company competitiveness [96] (p. 2872). Thus, willingness to recalibrate responsibilities in order to maintain stakeholder relations is another example from the previous paragraph to promote a mutual response among SMEs, as they seek to cohere with other SMEs in order to promote better performance in their social practices [50].

5.1.5. Knowledge Management

Previous research shows that although there is a lack of knowledge among SMEs, different activities are undertaken to create, share, transfer, and apply it through their members [92]. The previous literature mainly refers to two key activities in SMEs, which are knowledge creation and development as studied by Lubberink et al. [17].

Knowledge creation and development: While social responsibility activities in SMEs have been recognised as drivers of knowledge creation and exchange [66], it is also recognised that they have the potential to become operational and competitive benefits [93]. For instance, knowledge management and transfer, which together with capacity constitute an opportunity for improvement of employees' skills and knowledge [51,53,84]. Due to the importance of the knowledge management dimension for SMEs, extensive information taken from the literature review is presented in the following paragraphs.

Social responsibility programme is positively related to learning orientation because, improving skills, processes, resources, and services aimed at their adaptation to change [64]. Learning orientation is viewed as a process of developing employees' competences, skills, and knowledge to help SMEs to boost competitiveness [47], and create community and foster their relationships [64] (p. 23S). Likewise, socially responsible activities can promote multidimensional relationships with a variety of external agents (e.g., other private companies, universities, research centres, public authorities, and community leaders) to voluntarily share information, ideas, and knowledge in local networks with their peers [32,60]. They trust the aforesaid agents more than advisory organizations [75] and are therefore more likely to recognize responsibility issues and ways to address them [31], observe trends, and open up markets that otherwise could not be explored [62]. Furthermore, collaborative networks play an important role in the innovation processes because, the more cooperation there is, the greater the impact of sustainable innovations [21].

5.2. Relationship of Responsible Innovation with Performance

Analysis of the articles that measured responsible innovation practices against the organization's performance (37 articles) uses various indicators, including quantitative (e.g., return on assets ROA, productivity, sales growth, market share, etc.) as well as qualitative (e.g., customer satisfaction, brand image and corporate reputation, employee motivation, etc.) performance indicators and from different fields of innovation, such as empirical work and literature reviews. Performance indicators related to responsible innovation practices are less frequent, but previous research has considered these and this study groups them according to the classification proposed by de Poel et al. [9] (see Table 3).

Table 3. Responsible Innovation performance indicators in small and medium-sized enterprises.

Firm Performance
Sales growth
Profitability
Financial indicators
Market share
Customer satisfaction
Innovation performance
Benefits/utility
RI Performance
Environmental sustainability
Social sustainability
Diversity and inclusion
Anticipation and reflection

Responsible innovation efficiency in a company depends on its strategy to seek, on one hand, added value for society, and also to make profits [9]. Moreover, according to the same

article, although strategies linked to practices that drive responsible innovation, such as CSR and SI, promote potential organizational performance, these strategies must shift from their conservative, philanthropic, defensive way of addressing social, environmental, and ethical issues towards a progressive way of “doing good”. For example, some authors measured performance by considering financial and non-financial indicators and revealed a positive causal link. An empirical study revealed that social responsibility practices have a direct, positive, and significant effect on both innovation and organisational performance, covering both financial (such as the level of sales growth; the level of return on equity; ROA; market share; level of productivity) and non-financial (the quality of products and/or services offered) indicators; technological position and coordination of internal processes; coordination and organisation of human resources; degree of customer satisfaction; degree of adaptation to changing market needs; brand image and corporate reputation; employee motivation; staff turnover; and staff absenteeism). They also reported that long-term benefits are reflected either internally, externally, or both: Internally by helping to develop new resources and capabilities that relate to technical knowledge and business culture, and externally by being linked to companies’ reputation, which in turn improves relationships, attracts better employees, or increases their motivation and commitment; or both [96]. Social responsibility hence positively influences organisational performance. In a study see [52] specified capabilities (such as shared vision, stakeholder management, and proactivity) share a positive association with proactive social responsibility, which in turn improves the company’s financial performance. They also reported that SMEs can maximize their financial benefits while proactively moving towards corporate social responsibility. Similarly, a significantly positive relationship between proactive social responsibility related to the environment and financial performance in SMEs was found [20] and, the relationship between socially responsible practices and value creation towards employees, customers and, to a lesser extent, society, have a positive impact on the company and its performance [18].

Previous research also showed a positive but weak relationship between social responsibility activities and financial performance. For example, the studies [61,83] found a significant but weak positive relationship between social responsibility and financial performance. The indicators used were: The company’s profit margin; satisfaction with the change in profit margin; company sales and long-term consequences. The model explained 81% of the variance in customers, 78% of the variance in employees, 82% of the variance in environment, and 67% of the variance in community. Although this last argument showed that corporate social responsibility contributed positively to different stakeholders, it is not designed in terms of money or personnel that can be deployed in such activities. What this means is that CSR is not considered a strategic commitment for most SMEs or a legal obligation, and therefore remains philanthropic and not institutionalised.

Another way of measuring performance has been related to certain indicators of responsible innovation. Previous research has considered aspects related, for example, to diversity and inclusion, and has shown that positively improving employees’ individual performance, satisfaction, and commitment contributes to organizational performance [84]. The study [15] analysed the effect of sustainable social responsibility dimensions related to employees, environment, community, suppliers, and customers on performance in SMEs. The results revealed that managing the relationship with a company’s key stakeholders has a significant positive influence on sustainable competition and business performance. In addition, the need to take multiple stakeholders seriously, and not just owners, was highlighted. Moreover, while the social and environmental dimensions of socially responsible practices in SMEs have a significant impact on financial performance, performance measures related to corporate reputation and employee engagement were only partially significant because employee engagement can be negatively affected when there is no investment in employee training and development [72]. Meanwhile, the effect of learning orientation and innovation in mediating social responsibility on performance and competitive advantage in SMEs revealed that social responsibility activities have a significant effect on learning orientation, innovation, and performance in SMEs [64]. In the same vein, the relationship between three sustainability factors such as employee

training, innovation, and social responsibility practices are significant and correlated factors in promoting competitive advantage in SMEs [60]. To summarise, Table 3 shows the performance indicators identified in the literature review.

5.3. Contingent Variables

The main variables identified and treated in the literature as control variables and mediating variables were included in the relationship between practices that promote responsible innovation and performance in SMEs as: Size [15,20,22,39,44,48–55,60,61,63,72,80,82,84,85,89,94–96,99–101]; industry [38,39,45,49,51,53,54,60,65,89,92,94,96,99–102]; age [15,22,39,49,50,61,72,89,95,96,101,103]; innovation [1,20,64,81,85,86,93,96,102,104]; country [38,45,94]; corporate strategy [89,96]; learning orientation [47,64]; employee's commitment [72,84]; and relational marketing [80,84].

5.4. Responsible Innovation Antecedents and Enablers

Some facilitators were identified in the literature related to the practices that promote RI in SMEs such as, organisational flexibility, shared collective vision, and internal and external drivers. Organizational flexibility allows SMEs to respond more quickly to changing circumstances in the business environment, which is identified as favourable to the implementation of CSR practices because they are not tied to the bureaucracy of relationships in both the internal and external environment [40,60]. Moreover, while most medium-sized enterprises appear to be engaged in a wide range of environmental initiatives (e.g., the development of environmental policies and mission statements, recycling and waste management programmes, and the auditing of environmental impacts.), most small companies are involved in only a few initiatives, which means on the one hand that there is a significant heterogeneity in the participation of SMEs [48], and on the other hand that their flexibility allows them to easily adapt to local market challenges, thus responding to changing environments and competitors' actions [20]. In this line, another identified facilitator is the shared collective vision, environmental strategies adopted by SMEs range from reactive compliance with regulations to proactive prevention of environmental pollution, associated with organizational capacities such as: Shared vision, stakeholder management, and strategic proactivity. It also revealed that the organizational capacities that drive the adoption of environmental strategies are correlated with the unique strategic characteristics of SMEs such as: Shorter communication lines and closer interaction within SMEs, the presence of a founder's vision, and the flexibility [20]. Other identified enablers are internal and external momentum. In the first internal driver, the values and principles proposed in the CSR strategy were driven gradually and according to the personal values of the business owner or manager, which means an internal drive, from an internal champion to the highest level of management [32]. In the analysis [105] management and stakeholder pressure were the main influences on a company's adoption of environmentally responsible practices. Also, the higher the position in SMEs, the greater the willingness to adopt environmentally responsible practices [106]. Another, external driver, which has to do with external pressure such as regulation is an important driver of socially responsible practices [94], similarly, regulation is an effective factor in driving the implementation of responsible research and innovation [6]. Additionally, SMEs will avoid fines if they do adapt their practices to regulation [105]. In contrast, external pressure from both clients and legislation is applicable but weak [32].

As an essential part of responsible innovation strategies, the stakeholders identified in the literature are: Customers, employees, environment, suppliers, community, owners/shareholders, R&D, government, competitors, funding agencies/investors, and alliances [15,18,20,21,32,38,41,43,44,48,49,51–53,59,62,63,68,69,80,81,85,86,91–93,96,99,103,104,106–108].

Based on findings of this section, a conceptual model for responsible innovation and its relationship with performance for SMEs is presented in Figure 6. The activities appear in the model in order of priority, the highest being the ones that appeared in the most studies (see Appendix A for more information).

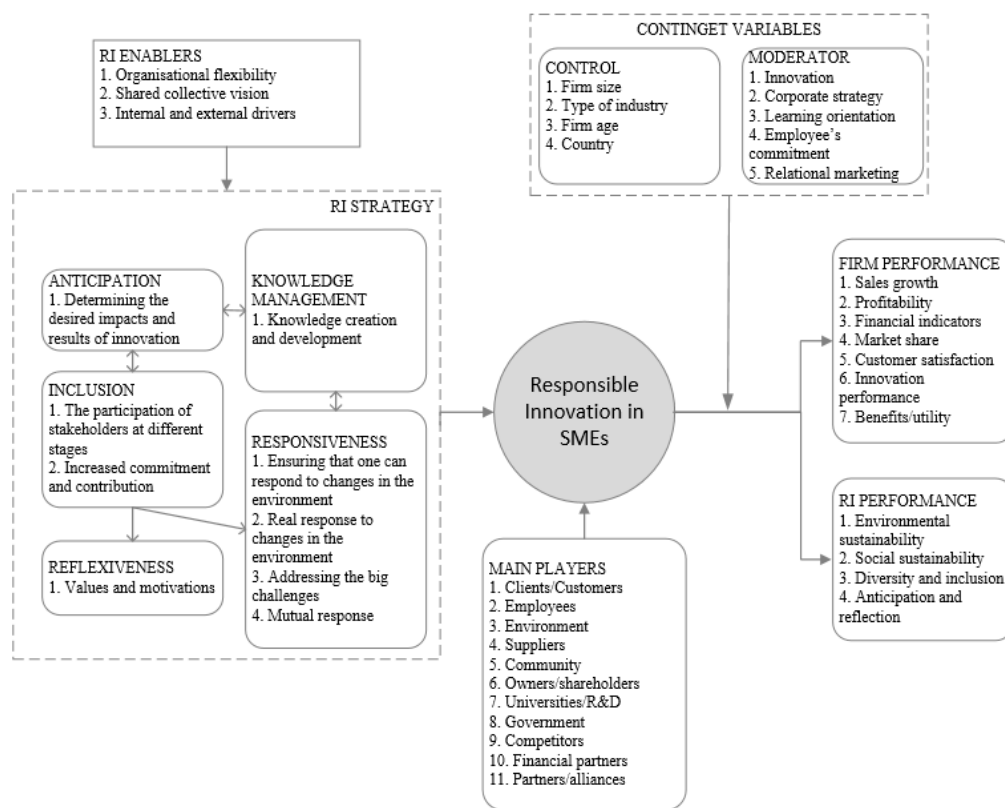


Figure 6. Final conceptual model of Responsible Innovation in SMEs.

6. Conclusions

This study is particularly relevant for small and medium-sized enterprises because it analysed a body of literature and its practical implications for business performance, i.e., it derived a conceptual model of responsible innovation that is based on recent practices and studies on responsible innovation, corporate social responsibility, sustainable innovation practices, and their relationship with business performance in SMEs. In addition, it forms part of the emerging debate on responsible innovation and contributes to the literature in three ways. First, it encourages SME practitioners to engage in responsible innovation activities due to the tangible and intangible benefits to the company that are: Capability to involve internal and external stakeholders; capability to generate favourable attitudes to engage in responsible behaviour; capability to determine desired impacts of innovation; capability to create and develop knowledge; capability to deal with values and motivations; capability to address challenges. Moreover, this conceptual model presents a comprehensive view of RI and past practices together with their potential benefits for the company’s performance. From there, it is possible to consider integrating it systematically in the corporate strategy and not vice versa. In other words, responsible innovation becomes one further theoretical concept that is reinvented with each emerging technology. Secondly, responsible innovation changes the perception with regard to stakeholders, i.e., this study highlights the new direction promoted by RI and in response to stakeholder values [14], whereby stakeholder interests can be unambiguously articulated, without leaving out those who will be affected. These are sustainable solutions that correspond to the impact on society because stakeholders drive responsible innovation strategies, not only because of their advisory role which changes the perception that company is the main driver, but also because of their contribution to the innovation process. Finally, this study could encourage and help small and medium-sized enterprises to make sense of their activities, strategies, and policies linked to sustainable innovation and corporate social responsibility because “responsible innovation” is connected to such strategies. However, this

requires SMEs to think about ways to add value to their strategies in order to positively influence society, but also the performance of their organization.

There are some limitations to this study. First, it examined only 102 journal articles with some impact in the WoS Database. However, some important existing articles may have been unintentionally left out, bearing in mind that the search was restricted to articles in the areas of business research, economics, social science, environmental science, and technological science. Another limitation of this study is that the methods it adopts are not exhaustive, so researchers are encouraged to address the research questions in this study with the use of other research methods. It is also hoped that future research can test the theoretical model empirically in order to contrast its results, which are similar to the theoretical findings of previous studies. Finally, this study concludes by emphasizing directions for future research on responsible innovation. Literature in this field could be improved by researchers including areas of innovation in relation to inclusion such as inclusive innovation, social innovation, and frugal innovation, fields that have been little explored in the literature.

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Appendix A

Table A1. Overview of the main constructs and their references.

Main Code	Strategy	Qty	References
Inclusion	The participation of stakeholders at different stages	18	[13,15,18,28,43,52,53,57,58,61,70,76,77,84,92,94,95,107]
	Increased commitment and contribution	12	[15,18,23,32,43–45,58,62,77,84,109]
Responsiveness	Ensuring that one can respond to changes in the environment	12	[9,13,20,23,32,48,52,70,71,84,94,96]
	Addressing the big challenges	12	[1,6,21,28,46,49,58,60,64,66,96,103]
	Real response to changes in the environment	6	[22,28,46,50,56,69]
	Mutual response	3	[31,50,96]
Reflexiveness	Values and motivations	18	[6,13,17,22,31,32,43,44,46,48,53,60,61,66,70,75,77,92]
Knowledge management	Knowledge creation and development	19	[2,6,17,21,23,31,32,47,51,53,60,62,64,66,75,83,84,92,93]

Table A1. Cont.

Main Code	Strategy	Qty	References
Firm performance	Sales growth	19	[1,15,34,44,61,63–65,67,68,72,84,92–94,96,99,102,110]
	Profitability	21	[1,15,34,38,51,52,55,59–61,63,65,72,82,84,87,92,99,110]
	Financial indicators	15	[20,52,54,55,59,63,65,67,72,82,85,93,96,99,110]
	Market share	13	[15,51,63–65,67,72,76,84,93,96,110]
	Customer satisfaction	10	[15,59,63–65,81,84,96,99,108]
	Innovation performance	7	[15,53,59,64,66,101,107]
	Benefits/utility	6	[20,32,49,63,64,84]
	Productivity	4	[1,39,68,109]
RI performance	Environmental sustainability	27	[2,21,38,46,48–51,53,57,65–69,75,76,86,87,94,101,103,104,106–109,111,112]
	Social sustainability	24	[2,11,13,15,21,31,32,34,39,51,53,57,60,68,76,82,86,89,100,102,104,109,111,112]
	Diversity and inclusion - Engagement	13	[15,18,32,41,59,63,76,81,84,90,99,104,110]
	Anticipation and reflection - Legislative landscape - Assessment - Public and ethical issues - Imagen	11	[21,32,51,63,76,81,87,93,99,104,110]
Main players	Clients/Customers	31	[15,20,21,32,38,41,43,44,48,49,51–53,59,61–63,68,69,80,81,91–93,96,99,103,104,106–108]
	Employees	27	[15,20,21,32,41,43,44,48,49,53,59,61–63,68,80,85,86,91–93,96,99,104,106–108]
	Environment	15	[15,20,21,32,38,43,53,59,61,63,86,92,104,107,108]
	Suppliers	14	[15,20,32,43,48,49,52,53,59,62,68,85,106,107]
	Community	14	[15,32,38,43,52,53,59,61,85,86,92,104,106,107]
	Owners/shareholders	7	[15,20,32,43,52,91,106]
	R&D	7	[1,21,46,55,58,94,100]
	Government	5	[48,52,69,86,106]
	Competitors	4	[20,52,69,108]
	Funding agencies/Investors	4	[52,58,62,69,106]
Alliances	4	[41,46,60,94]	

Table A1. Cont.

Main Code	Strategy	Qty	References
Contingent variables	Size	27	[15,20,22,39,44,48–55,60,61,63,72,80,82,84,85,89,94–96,99–101]
	Type of industry	17	[38,39,45,49,51,53,54,60,65,89,92,94,96,99–102]
	Firm age	12	[15,22,39,49,50,61,72,89,95,96,101,103]
	Innovation	13	[1,20,64,81,85,86,93,96,102,104]
	Country	3	[38,45,94]
	Corporate strategy	2	[89,96]
	Learning orientation	2	[47,67]
	Employee's commitment	2	[72,84]
	Relational marketing	2	[80,84]

References

- Jones, J.; De Zubielqui, G.C. Doing well by doing good: A study of university-industry interactions, innovationness and firm performance in sustainability-oriented Australian SMEs. *Technol. Forecast. Soc. Chang.* **2017**, *123*, 262–270. [[CrossRef](#)]
- Kraus, S.; Burtscher, J.; Niemand, T.; Roig-Tierno, N.; Syrjä, P.; Kraus, S.; Burtscher, J.; Niemand, T.; Roig-Tierno, N.; Syrjä, P. Configurational paths to social performance in SMEs: The interplay of innovation, sustainability, resources and achievement motivation. *Sustainability* **2017**, *9*, 1828. [[CrossRef](#)]
- Porter, M.E. Technology and competitive advantage. *J. Bus. Strategy* **1985**, *5*, 60–78. [[CrossRef](#)]
- Von Schomberg, R. A vision of responsible research and innovation. In *Responsible Innovation: Managing the Responsible Emergence of Science and Innovation in Society*; Wiley: Hoboken, NJ, USA, 2013; pp. 51–74.
- Ribeiro, B.; Bengtsson, L.; Benneworth, P.S.; Bührer, S.; Castro-Martínez, E.; Hansen, M.; Jarmai, K.; Lindner, R.; Olmos-Peñuela, J.; Ott, C.; et al. Introducing the dilemma of societal alignment for inclusive and responsible research and innovation. *J. Responsible Innov.* **2018**, *5*, 316–331. [[CrossRef](#)]
- Auer, A.; Jarmai, K. Implementing responsible research and innovation practices in SMEs: Insights into drivers and barriers from the Austrian medical device sector. *Sustainability* **2017**, *10*, 17. [[CrossRef](#)]
- Martinuzzi, A.; Blok, V.; Brem, A.; Stahl, B.C.; Schönherr, N. Responsible research and innovation in industry—Challenges, insights and perspectives. *Sustainability* **2018**, *10*, 702. [[CrossRef](#)]
- Visser, W. The age of responsibility: CSR 2.0 and the New DNA of Business. *J. Bus. Syst. Gov. Ethics* **2010**, *5*, 7. [[CrossRef](#)]
- Van De Poel, I.; Asveld, L.; Flipse, S.M.; Klaassen, P.; Scholten, V.E.; Yaghmaei, E. Company strategies for responsible research and innovation (rri): A conceptual model. *Sustainability* **2017**, *9*, 2045. [[CrossRef](#)]
- Ribeiro, B.E.; Smith, R.D.J.; Millar, K. A Mobilising Concept? Unpacking Academic Representations of Responsible Research and Innovation. *Sci. Eng. Ethics* **2017**, *23*, 81–103. [[CrossRef](#)]
- Pandza, K.; Ellwood, P. Strategic and ethical foundations for responsible innovation. *Res. Policy* **2013**, *42*, 1112–1125. [[CrossRef](#)]
- European Commission. *Rome Declaration on Responsible Research and Innovation in Europe*; European Commission: Brussels, Belgium, 2014.
- Burget, M.; Bardone, E.; Pedaste, M. Definitions and Conceptual Dimensions of Responsible Research and Innovation: A Literature Review. *Sci. Eng. Ethics* **2017**, *23*, 1–19. [[CrossRef](#)] [[PubMed](#)]
- Stilgoe, J.; Owen, R.; Macnaghten, P. Developing a framework for responsible innovation. *Res. Policy* **2013**, *42*, 1568–1580. [[CrossRef](#)]
- Khan, S.Z.; Yang, Q.; Khan, N.U.; Kherbachi, S.; Huemann, M. Sustainable social responsibility toward multiple stakeholders as a trump card for small and medium-sized enterprise performance (evidence from China). *Corp. Soc. Responsib. Environ. Manag.* **2020**, *27*, 95–108. [[CrossRef](#)]

16. Miller, K.; Neubauer, A.; Varma, A.; Williams, E. *First Assessment of the Environmental Compliance Assistance Programme for SMEs (ECAP)*; Report Prepared for the European Commission, DG Environment and Climate Action; European Commission: Brussels, Belgium, 2011.
17. Lubberink, R.; Blok, V.; Van Ophem, J.; Omta, O. Lessons for responsible innovation in the business context: A systematic literature review of responsible, social and sustainable innovation practices. *Sustainability* **2017**, *9*, 721. [[CrossRef](#)]
18. Hammann, E.-M.; Habisch, A.; Pechlaner, H. Values that create value: Socially responsible business practices in SMEs—Empirical evidence from German companies. *Bus. Ethics Eur. Rev.* **2009**, *18*, 37–51. [[CrossRef](#)]
19. Klewitz, J.; Hansen, E.G. Sustainability-oriented innovation of SMEs: A systematic review. *J. Clean. Prod.* **2014**, *65*, 57–75. [[CrossRef](#)]
20. Aragón-Correa, J.A.; Hurtado-Torres, N.; Sharma, S.; García-Morales, V.J. Environmental strategy and performance in small firms: A resource-based perspective. *J. Environ. Manag.* **2008**, *86*, 88–103. [[CrossRef](#)]
21. Bos-Brouwers, H.E.J. Corporate sustainability and innovation in SMEs: Evidence of themes and activities in practice. *Bus. Strat. Environ.* **2010**, *19*, 417–435. [[CrossRef](#)]
22. Cassells, S.; Lewis, K.V. SMEs and environmental responsibility: Do actions reflect attitudes? *Corp. Soc. Responsib. Environ. Manag.* **2011**, *18*, 186–199. [[CrossRef](#)]
23. Avram, D.O.; Domnanovich, J.; Kronenberg, C.; Scholz, M. Exploring the integration of corporate social responsibility into the strategies of small- and medium-sized enterprises: A systematic literature review. *J. Clean. Prod.* **2018**, *201*, 254–271. [[CrossRef](#)]
24. Valdivia, W.D.; Guston, D.H. *Responsible Innovation: A Primer for Policymakers*; The Brookings Institute: Washington, DC, USA, 2015.
25. Organisation for Economic Cooperation and Development (OECD); Statistical Office of the European Communities. *Oslo Manual: Guidelines for Collecting and Interpreting Innovation Data*; OECD: Paris, France, 2005; Volume 46.
26. Von Schomberg, R. Prospects for technology assessment in a framework of responsible research and innovation. In *Technikfolgen Abschätzen Lehren*; Springer: Berlin/Heidelberg, Germany, 2012; pp. 39–61.
27. European Commission. A collection of good practice cases among small and medium-sized enterprises across Europe: 1–60. *Visited* **2003**, *10*, 2005.
28. Halme, M.; Korpela, M. Responsible innovation toward sustainable development in small and medium-sized enterprises: A resource perspective. *Bus. Strat. Environ.* **2014**, *23*, 547–566. [[CrossRef](#)]
29. Chatfield, K.; Iatrdis, K.; Stahl, B.C.; Paspallis, N. Innovating responsibly in ICT for ageing: Drivers, obstacles and implementation. *Sustainability* **2017**, *9*, 971. [[CrossRef](#)]
30. Owen, R.; Macnaghten, P.; Stilgoe, J. Responsible research and innovation: From science in society to science for society, with society. *Sci. Public Policy* **2012**, *39*, 751–760. [[CrossRef](#)]
31. Lepoutre, J.; Heene, A. Investigating the impact of firm size on small business social responsibility: A critical review. *J. Bus. Ethics* **2006**, *67*, 257–273. [[CrossRef](#)]
32. Jenkins, H. Small business champions for corporate social responsibility. *J. Bus. Ethics* **2006**, *67*, 241–256. [[CrossRef](#)]
33. Fuller, T.; Tian, Y. Social and symbolic capital and responsible entrepreneurship: An empirical investigation of SME narratives. *J. Bus. Ethics* **2006**, *67*, 287–304. [[CrossRef](#)]
34. Suriyankietkaew, S.; Avery, G.C. Sustainable leadership practices driving financial performance: Empirical evidence from Thai SMEs. *Sustainability* **2016**, *8*, 327. [[CrossRef](#)]
35. Tranfield, D.; Denyer, D.; Smart, P. Towards a methodology for developing evidence-informed management knowledge by means of systematic review. *Br. J. Manag.* **2003**, *14*, 207–222. [[CrossRef](#)]
36. Denyer, D.; Tranfield, D. Producing a systematic review. In *The Sage Handbook of Organizational Research Methods*; Sage Publications Ltd.: Thousand Oaks, CA, USA, 2009; pp. 671–689.
37. Aboelmaged, M.G. Six Sigma quality: A structured review and implications for future research. *Int. J. Qual. Reliab. Manag.* **2010**, *27*, 268–317. [[CrossRef](#)]
38. Bansal, P.; Roth, K. Why companies go green: A model of ecological responsiveness. *Acad. Manag. J.* **2000**, *43*, 717–736.
39. Besser, T.L.; Miller, N. Is the good corporation dead? The community social responsibility of small business operators. *J. Socio-Econ.* **2001**, *30*, 221–241. [[CrossRef](#)]

40. Jenkins, H. A critique of conventional CSR theory: An SME perspective. *J. Gen. Manag.* **2004**, *29*, 37–57. [[CrossRef](#)]
41. Castka, P.; Balzarova, M.A.; Bamber, C.; Sharp, J.M. How can SMEs effectively implement the CSR agenda? A UK case study perspective. *Corp. Soc. Responsib. Environ. Manag.* **2004**, *11*, 140–149. [[CrossRef](#)]
42. Salzmann, O.; Ionescu-Somers, A.; Steger, U. The business case for corporate sustainability: Literature review and research options. *Eur. Manag. J.* **2005**, *23*, 27–36. [[CrossRef](#)]
43. Jamali, D.; Zanhour, M.; Keshishian, T. Peculiar strengths and relational attributes of SMEs in the context of CSR. *J. Bus. Ethics* **2009**, *87*, 355–377. [[CrossRef](#)]
44. Preuss, L.; Perschke, J. Slipstreaming the larger boats: Social responsibility in medium-sized businesses. *J. Bus. Ethics* **2010**, *92*, 531–551. [[CrossRef](#)]
45. Perrini, F.; Russo, A.; Tencati, A. CSR strategies of SMEs and large firms. Evidence from Italy. *J. Bus. Ethics* **2007**, *74*, 285–300. [[CrossRef](#)]
46. Dangelico, R.M.; Pujari, D. Mainstreaming green product innovation: Why and how companies integrate environmental sustainability. *J. Bus. Ethics* **2010**, *95*, 471–486. [[CrossRef](#)]
47. Rhee, J.; Park, T.; Lee, D.H. Drivers of innovativeness and performance for innovative SMEs in South Korea: Mediation of learning orientation. *Technovation* **2010**, *30*, 65–75. [[CrossRef](#)]
48. Brammer, S.; Hojmosse, S.; Marchant, K. Environmental management in SMEs in the UK: Practices, pressures and perceived benefits. *Bus. Strategy Environ.* **2012**, *21*, 423–434. [[CrossRef](#)]
49. Hofmann, K.H.; Theyel, G.; Wood, C.H. Identifying firm capabilities as drivers of environmental management and sustainability practices—Evidence from small and medium-sized manufacturers. *Bus. Strategy Environ.* **2012**, *21*, 530–545. [[CrossRef](#)]
50. Tang, Z.; Tang, J. Stakeholder–firm power difference, stakeholders’ CSR orientation, and SMEs’ environmental performance in China. *J. Bus. Ventur.* **2012**, *27*, 436–455. [[CrossRef](#)]
51. Agan, Y.; Acar, M.F.; Borodin, A. Drivers of environmental processes and their impact on performance: A study of Turkish SMEs. *J. Clean. Prod.* **2013**, *51*, 23–33. [[CrossRef](#)]
52. Torugsa, N.A.; O’Donohue, W.; Hecker, R. Capabilities, proactive CSR and financial performance in SMEs: Empirical evidence from an Australian manufacturing industry sector. *J. Bus. Ethics* **2012**, *109*, 483–500. [[CrossRef](#)]
53. Tantaló, C.; Caroli, M.G.; Vanevenhoven, J. Corporate social responsibility and SME’s competitiveness. *Int. J. Technol. Manag.* **2012**, *58*, 129–151. [[CrossRef](#)]
54. Tang, Z.; Hull, C.E.; Rothenberg, S. How corporate social responsibility engagement strategy moderates the CSR-financial performance relationship. *J. Manag. Stud.* **2012**, *49*, 1274–1303. [[CrossRef](#)]
55. Torugsa, N.A.; O’Donohue, W.; Hecker, R. Proactive CSR: An empirical analysis of the role of its economic, social and environmental dimensions on the association between capabilities and performance. *J. Bus. Ethics* **2013**, *115*, 383–402. [[CrossRef](#)]
56. Boons, F.; Lüdeke-Freund, F. Business models for sustainable innovation: State-of-the-art and steps towards a research agenda. *J. Clean. Prod.* **2013**, *45*, 9–19. [[CrossRef](#)]
57. Gaziulusoy, A.I.; Boyle, C.; McDowall, R. System innovation for sustainability: A systemic double-flow scenario method for companies. *J. Clean. Prod.* **2013**, *45*, 104–116. [[CrossRef](#)]
58. Da Silva, L.M.; Bitencourt, C.C.; Faccin, K.; Iakovleva, T. The Role of Stakeholders in the Context of Responsible Innovation: A Meta-Synthesis. *Sustainability* **2019**, *11*, 1766. [[CrossRef](#)]
59. Martínez-Conesa, I.; Soto-Acosta, P.; Palacios-Manzano, M. Corporate social responsibility and its effect on innovation and firm performance: An empirical research in SMEs. *J. Clean. Prod.* **2017**, *142*, 2374–2383. [[CrossRef](#)]
60. Burlea-Schiopoiu, A.; Mihai, L.S. An Integrated Framework on the Sustainability of SMEs. *Sustainability* **2019**, *11*, 6026. [[CrossRef](#)]
61. Jain, P.; Vyas, V.; Chalasani, D.P.S. Corporate social responsibility and financial performance in SMEs: A structural equation modelling approach. *Glob. Bus. Rev.* **2016**, *17*, 630–653. [[CrossRef](#)]
62. Sen, S.; Cowley, J. The relevance of stakeholder theory and social capital theory in the context of CSR in SMEs: An Australian perspective. *J. Bus. Ethics* **2013**, *118*, 413–427. [[CrossRef](#)]
63. Madueno, J.H.; Jorge, M.L.; Conesa, I.M.; Martínez-Martínez, D. Relationship between corporate social responsibility and competitive performance in Spanish SMEs: Empirical evidence from a stakeholders’ perspective. *BRQ Bus. Res. Q.* **2016**, *19*, 55–72. [[CrossRef](#)]

64. Ratnawati Soetjipto, B.E.; Murwani, F.D.; Wahyono, H. The Role of SMEs' Innovation and Learning Orientation in Mediating the Effect of CSR Programme on SMEs' Performance and Competitive Advantage. *Glob. Bus. Rev.* **2018**, *19*, S21–S38. [[CrossRef](#)]
65. Leonidou, L.C.; Christodoulides, P.; Kyrgidou, L.P.; Palihawadana, D. Internal drivers and performance consequences of small firm green business strategy: The moderating role of external forces. *J. Bus. Ethics* **2017**, *140*, 585–606. [[CrossRef](#)]
66. Li, L.; Li, G.; Tsai, F.-S.; Lee, H.-Y.; Lee, C.-H. The effects of corporate social responsibility on service innovation performance: The role of dynamic capability for sustainability. *Sustainability* **2019**, *11*, 2739. [[CrossRef](#)]
67. Hang, M.; Geyer-Klingeborg, J.; Rathgeber, A. It is merely a matter of time: A meta-analysis of the causality between environmental performance and financial performance. *Bus. Strategy Environ.* **2019**, *28*, 257–273. [[CrossRef](#)]
68. Dey, P.K.; Malesios, C.; De, D.; Chowdhury, S.; Ben Abdelaziz, F. The impact of lean management practices and sustainably-oriented innovation on sustainability performance of small and medium-sized enterprises: Empirical evidence from the UK. *Br. J. Manag.* **2019**, *31*, 141–161. [[CrossRef](#)]
69. Ghadge, A.; Kaklamanou, M.; Choudhary, S.; Bourlakis, M. Implementing environmental practices within the Greek dairy supply chain. *Ind. Manag. Data Syst.* **2017**, *117*, 1995–2014. [[CrossRef](#)]
70. Jansson, J.; Nilsson, J.; Modig, F.; Vall, G.H. Commitment to sustainability in small and medium-sized enterprises: The influence of strategic orientations and management values. *Bus. Strategy Environ.* **2017**, *26*, 69–83. [[CrossRef](#)]
71. Hsu, C.-H.; Chang, A.-Y.; Luo, W. Identifying key performance factors for sustainability development of SMEs—Integrating QFD and fuzzy MADM methods. *J. Clean. Prod.* **2017**, *161*, 629–645. [[CrossRef](#)]
72. Choongo, P. A longitudinal study of the impact of corporate social responsibility on firm performance in SMEs in Zambia. *Sustainability* **2017**, *9*, 1300. [[CrossRef](#)]
73. Baumann-Pauly, D.; Wickert, C.; Spence, L.J.; Scherer, A.G. Organizing corporate social responsibility in small and large firms: Size matters. *J. Bus. Ethics* **2013**, *115*, 693–705. [[CrossRef](#)]
74. Lee, K.-H.; Herold, D.M.; Yu, A.-L. Small and medium enterprises and corporate social responsibility practice: A Swedish perspective. *Corp. Soc. Responsib. Environ. Manag.* **2016**, *23*, 88–99. [[CrossRef](#)]
75. Williams, S.; Schaefer, A. Small and medium-sized enterprises and sustainability: Managers' values and engagement with environmental and climate change issues. *Bus. Strategy Environ.* **2013**, *22*, 173–186. [[CrossRef](#)]
76. Stahl, B.C.; Chatfield, K.; Holter, C.T.; Brem, A. Ethics in corporate research and development: Can responsible research and innovation approaches aid sustainability? *J. Clean. Prod.* **2019**, *239*, 118044. [[CrossRef](#)]
77. Dossa, Z.; Kaeufer, K. Understanding sustainability innovations through positive ethical networks. *J. Bus. Ethics* **2014**, *119*, 543–559. [[CrossRef](#)]
78. Boons, F.; Montalvo, C.; Quist, J.; Wagner, M. Sustainable innovation, business models and economic performance: An overview. *J. Clean. Prod.* **2013**, *45*, 1–8. [[CrossRef](#)]
79. Brand, T.; Blok, V. Responsible innovation in business: A critical reflection on deliberative engagement as a central governance mechanism. *J. Responsible Innov.* **2019**, *6*, 4–24. [[CrossRef](#)]
80. Martínez-Martínez, D.; Madueño, J.H.; Jorge, M.L.; Sancho, M.P.L. The strategic nature of corporate social responsibility in SMEs: A multiple mediator analysis. *Ind. Manag. Data Syst.* **2017**, *117*, 2–31. [[CrossRef](#)]
81. Moneva-Abadía, J.M.; Gallardo-Vázquez, D.; Sánchez-Hernández, M.I. Corporate social responsibility as a strategic opportunity for small firms during economic crises. *J. Small Bus. Manag.* **2019**, *57*, 172–199. [[CrossRef](#)]
82. Hernández, J.P.S.-I.; Yañez-Araque, B.; Moreno-García, J. Moderating effect of firm size on the influence of corporate social responsibility in the economic performance of micro-, small- and medium-sized enterprises. *Technol. Forecast. Soc. Chang.* **2020**, *151*, 119774. [[CrossRef](#)]
83. Orlitzky, M.; Schmidt, F.L.; Rynes, S.L. Corporate Social and Financial Performance: A Meta-Analysis. *Organ. Stud.* **2003**, *24*, 403–441. [[CrossRef](#)]
84. Sancho, M.P.L.; Martínez-Martínez, D.; Jorge, M.L.; Madueño, J.H. Understanding the link between socially responsible human resource management and competitive performance in SMEs. *Pers. Rev.* **2018**, *47*, 1211–1243. [[CrossRef](#)]
85. Canh, N.T.; Liem, N.T.; Thu, P.A.; Khuong, N.V. The Impact of Innovation on the Firm Performance and Corporate Social Responsibility of Vietnamese Manufacturing Firms. *Sustainability* **2019**, *11*, 3666. [[CrossRef](#)]

86. Zhu, Q.; Zou, F.; Zhang, P. The role of innovation for performance improvement through corporate social responsibility practices among small and medium-sized suppliers in China. *Corp. Soc. Responsib. Environ. Manag.* **2019**, *26*, 341–350. [[CrossRef](#)]
87. Chege, S.M.; Wang, D. The influence of technology innovation on SME performance through environmental sustainability practices in Kenya. *Technol. Soc.* **2020**, *60*, 101210. [[CrossRef](#)]
88. Fraaije, A.; Steven, F. Synthesizing an implementation framework for responsible research and innovation. *J. Responsible Innov.* **2020**, *7*, 113–137. [[CrossRef](#)]
89. Stoian, C.; Gilman, M. Corporate social responsibility that ‘pays’: A strategic approach to CSR for SMEs. *J. Small Bus. Manag.* **2017**, *55*, 5–31. [[CrossRef](#)]
90. El Baz, J.; Laguir, I.; Marais, M.; Staglianò, R. Influence of national institutions on the corporate social responsibility practices of small- and medium-sized enterprises in the food-processing industry: Differences between France and Morocco. *J. Bus. Ethics* **2016**, *134*, 117–133. [[CrossRef](#)]
91. Li, N.; Toppinen, A.; Lantta, M. Managerial perceptions of smes in the wood industry supply chain on corporate responsibility and competitive advantage: Evidence from China and Finland. *J. Small Bus. Manag.* **2016**, *54*, 162–186. [[CrossRef](#)]
92. Jain, P.; Vyas, V.; Roy, A. Exploring the mediating role of intellectual capital and competitive advantage on the relation between CSR and financial performance in SMEs. *Soc. Responsib. J.* **2017**, *13*, 1–23. [[CrossRef](#)]
93. Cegarra-Navarro, J.-G.; Reverte, C.; Gómez-Melero, E.; Wensley, A.K. Linking social and economic responsibilities with financial performance: The role of innovation. *Eur. Manag. J.* **2016**, *34*, 530–539. [[CrossRef](#)]
94. Sáez-Martínez, F.J.; Díaz-García, C.; González-Moreno, Á. Factors Promoting Environmental Responsibility in European SMEs: The Effect on Performance. *Sustainability* **2016**, *8*, 898. [[CrossRef](#)]
95. Tang, Z. Stakeholder corporate social responsibility orientation congruence, entrepreneurial orientation and environmental performance of Chinese small and medium-sized enterprises. *Br. J. Manag.* **2018**, *29*, 634–651. [[CrossRef](#)]
96. Reverte, C.; Gómez-Melero, E.; Cegarra-Navarro, J.-G. The influence of corporate social responsibility practices on organizational performance: Evidence from Eco-Responsible Spanish firms. *J. Clean. Prod.* **2016**, *112*, 2870–2884. [[CrossRef](#)]
97. European Commission. *Implementing the Partnership for Growth and Jobs: Making Europe a Pole of Excellence on Corporate Social Responsibility*; European Commission: Brussels, Belgium, 2006.
98. Bartolacci, F.; Caputo, A.; Soverchia, M. Sustainability and financial performance of small and medium sized enterprises: A bibliometric and systematic literature review. *Bus. Strategy Environ.* **2019**, *29*, 1297–1309. [[CrossRef](#)]
99. Cantele, S.; Zardini, A. Is sustainability a competitive advantage for small businesses? An empirical analysis of possible mediators in the sustainability–financial performance relationship. *J. Clean. Prod.* **2018**, *182*, 166–176. [[CrossRef](#)]
100. McWilliams, A.; Siegel, D. Corporate social responsibility and financial performance: Correlation or misspecification? *Strategy Manag. J.* **2000**, *21*, 603–609. [[CrossRef](#)]
101. Muñoz-Pascual, L.; Curado, C.; Galende, J. The triple bottom line on sustainable product innovation performance in SMEs: A mixed methods approach. *Sustainability* **2019**, *11*, 1689. [[CrossRef](#)]
102. Hull, C.E.; Rothenberg, S. Firm performance: The interactions of corporate social performance with innovation and industry differentiation. *Strateg. Manag. J.* **2008**, *29*, 781–789. [[CrossRef](#)]
103. Hoogendoorn, B.; Guerra, D.; Van Der Zwan, P. What drives environmental practices of SMEs? *Small Bus. Econ.* **2015**, *44*, 759–781. [[CrossRef](#)]
104. Hadj, T.B. Effects of corporate social responsibility towards stakeholders and environmental management on responsible innovation and competitiveness. *J. Clean. Prod.* **2020**, *250*, 119490. [[CrossRef](#)]
105. Bakos, J.; Siu, M.; Orengo, A.; Kasiri, N. An analysis of environmental sustainability in small & medium-sized enterprises: Patterns and trends. *Bus. Strategy Environ.* **2020**, *29*, 1285–1296.
106. Lee, J.W.; Kim, Y.M. Antecedents of adopting corporate environmental responsibility and green practices. *J. Bus. Ethics* **2018**, *148*, 397–409. [[CrossRef](#)]
107. Battaglia, M.; Testa, F.; Bianchi, L.; Iraldo, F.; Frey, M. Corporate social responsibility and competitiveness within SMEs of the fashion industry: Evidence from Italy and France. *Sustainability* **2014**, *6*, 872–893. [[CrossRef](#)]

108. Iraldo, F.; Testa, F.; Lanzini, P.; Battaglia, M. Greening competitiveness for hotels and restaurants. *J. Small Bus. Enterp. Dev.* **2017**, *24*, 607–628. [[CrossRef](#)]
109. Hsu, C.-L.; Lu, H.-P.; Hsu, H.-H. Adoption of the mobile Internet: An empirical study of multimedia message service (MMS). *Omega* **2007**, *35*, 715–726. [[CrossRef](#)]
110. Ikram, M.; Sroufe, R.; Mohsin, M.; Solangi, Y.A.; Shah, S.Z.A.; Shahza, F. Does CSR influence firm performance? A longitudinal study of SME sectors of Pakistan. *J. Glob. Responsib.* **2019**, *11*, 27–53. [[CrossRef](#)]
111. Prashar, A. A bibliometric and content analysis of sustainable development in small and medium-sized enterprises. *J. Clean. Prod.* **2020**, *245*, 118665. [[CrossRef](#)]
112. Waldron, T.L.; Navis, C.; Karam, E.P.; Markman, G.D. Toward a theory of activist-driven responsible innovation: How activists pressure firms to adopt more responsible practices. *J. Manag. Stud.* **2019**. [[CrossRef](#)]

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