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Mapping Theories Within The Literature On Sustainable Business Models: A Systematic Literature Review

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Abstract

The literature on SBMs is recent and evolving. It rests on earlier well-established literature, that of Corporate Social Responsibility (CSR) and Corporate Sustainability (CS). In these fields of research, there are already numerous works that have identified and mapped the relevant and most used theories. On the other hand, much of the literature on sustainable business models (SBMs) has yet to be catalogued. Therefore, to fill this existing gap, this study has undertaken a systematized review of the literature. This review process is based on Denyer and Tranfield's (2009) logical steps with a twofold objective: first, to map existing theories in the field of sustainable business models, starting with the main theories of CSR and CS and studying their uses, and then to explore additional existing theories and how they too are used for explaining some aspects of SBMs. Second, seek to understand whether the use of different theories is complementary within this still emerging and growing literature devoted to SBMs. This systematic review will represent a survey of all existing theoretical perspectives used to date to explain aspects of a sustainable business model, then leave room for further future research in this area.

Keywords

Sustainable business model, corporate social responsibility, theory, sustainability, complementary, systematic literature review

Introduction

The foundation of the literature on sustainable business models (SBMs) can be found within older and more established literatures, such as the literature on Corporate Social Responsibility (CSR) and Corporate Sustainability (CS) (Moratis et al., 2018).

The concepts of CSR and CS have a long history and, over the years, have gained strong centrality and relevance as they provide the framework for addressing the many challenges of sustainability (Lozano et al., 2015; Frynas and Yamahaki, 2016; Mellahi et al., 2016). Various theories have been used to explain CSR and CS at different levels of analysis, ranging from stakeholder theory to institutional theory, agency theory, legitimacy theory, resource-based view (RBV), and resource dependence theory (RDT) (Ashrafi et al., 2020; Frynas and Yamahaki, 2016; Mellahi et al., 2016).

Regarding these concepts, the use of different theories to emphasize specific aspects of sustainability identifies a multi-theoretical approach in CSR and CS studies (Aguinis and Glavas, 2012; Cantele et al., 2022; Mellahi et al., 2016).

In academic research, a clear understanding of existing theoretical perspectives is important because it lends meaning to the complexity of events around us by giving them scientific rigor (Bacharach 1989; Frynas and Yamahaki, 2016).

Considering these considerations and given the longevity of the CSR and CS literature, this study aims to identify how the theories of CSR and CS, which are already widely known, have been used within a more recent and still developing literature, namely the literature on SBMs.

The literature on sustainable business models is recent. It is an area of research that has grown gradually, and especially in recent years it has received much attention from both academia and business (Lüdeke-Freund and Dembek, 2017; Ritala et al., 2018). A sustainable business model is about creating more positive effects and/or reducing negative effects on the natural environment and society through changes in the way a company creates, delivers, and captures value (Lüdeke-Freund et al., 2018; Bocken et al., 2014; Stubbs and Cocklin, 2008). Sustainable business models align the interest of businesses with the principles of sustainable development, to pursue and achieve sustainability goals (Schaltegger et al., 2016) in economic, environmental, and social terms, typical of the Triple Bottom Line (TBL) approach (Elkington, 1998).

Despite growing interest in this field of research, the understanding of some aspects of the topic is still limited and gaps exist (Comin et all., 2020; Lüdeke-Freund and Dembek, 2017). One of these, which is also the purpose of the following literature review, concerns the lack of a desk review of the main theories in this literature.

To fill this gap and following the theoretical foundations of CSR and CS that underlie the literature on sustainable business models (Moratis et al., 2018), the main theories that have already been widely mapped and used by other authors in their previous studies on CSR and CS (Cantele et al., 2022; Frynas and Yamahaki, 2016; Mellahi et al., 2016) were used with the aim of understanding how these are used within the SBM literature. In addition, also within the SBM literature, an attempt was made to identify and present other theories, other than theories of CSR and CS, used to explain additional aspects of a sustainable business model.

Therefore, the research questions we intend to investigate with this study are as follows: *RQ1*. *How are CSR and CS theories used within the SBM literature? Are there any other emerging theories and how are they related to SBM?*

RQ2. Is the use of different theories within the SBM literature complementary? Does each theory cover a research perspective on SBM?

To answer these two key research questions and fill the identified gap, the present study adopted a systematic literature review approach. Through this review, studies in the literature on SBM were considered and analyzed. In this way, this research aims to propose several contributions to the existing literature, examining both existing theories but applied to new contexts and presenting additional theories that sustainability researchers can use to study new aspects of sustainable business models.

The rest of the article is organized as follows. The methodological process used to identify the different theories used in the SBM literature will be presented, detailing the steps followed to compose this systematic literature review. The main findings of the study will then be presented, thus answering the research questions. Finally, the theoretical implications and limitations of the study will be discussed, including opportunities for future research.

Research methodology

A systematic literature review was used in this study to provide an overview of the theories used in SBM studies and to answer the research questions presented above. The systematic literature review was deemed an appropriate methodology because it made it possible to examine the theories of CSR studies and to understand their use in the more recent SBM literature, as well as to identify and map other interesting existing theories (e.g., strategic management theory, sustainability leadership theory, and others to be presented later). It allowed to clearly synthesize existing studies, thereby creating new knowledge, and providing suggestions for future research. A rigorous, valid, and unbiased approach was followed to conduct the literature review, adopting the guidelines proposed by other authors in their previous literature reviews (Tranfield et al, 2003; Denyer and Tranfield, 2009; Gligor et al., 2018; Comin et al., 2020).

Since this is a rigorous and transparent method, the entire search process followed to define the scope of analysis must be clearly and thoroughly traced to ensure replicability of the search (Tranfield et al., 2003). Based on these provisions, the review methodology used in this study followed the five steps suggested by Denyer and Tranfield (2009). These steps include formulation of research questions, location of studies, selection and evaluation of studies, analysis, and synthesis, and finally reporting and use of results. The first three steps are described below. The last two steps (analysis and synthesis; reporting and results), will be described later in a separate section of the results.

Step 1: question formulation

A systematic literature review requires a clear and precise focus (Light and Pillemer, 1984). Therefore, the research questions should be clearly formulated to minimize any possibility of ambiguity or misunderstanding (Gligor et al., 2018). This systematic literature review addressed two previously introduced research questions. The first (RQ1) aimed to identify how CSR and CS theories are used within the SBM literature and whether there are additional theories and how they relate to SBMs. The second research question (RQ2) was asked with

the aim of questioning whether the use of different theories within the SBM literature is complementary and whether each theory covers a research perspective on SBM or not.

Step 2: locating studies

Scopus and Web Of Science (WOS) databases were used to search the studies because of the popularity and breadth of these databases, which publish articles and contain many authoritative journals in the field of research. It was considered important to cover a wide range of sources and to be able to identify as many useful articles as possible for analysis (Comin et al. 2020).

Step 3: study selection and evaluation

At first, two separate research strings were used and then, at a later stage, the results were combined to arrive at a final group of articles that had all the characteristics in line with the research objectives.

The first string used, based on CSR and CS theories (Ashrafi et al., 2020; Frynas and Yamahaki, 2016; Lozano et al., 2015; Mellahi et al., 2016), was composed as follows: (("sustainable business model*" OR "business model* for sustainability") AND ("stakeholder theory" OR "institutional theory" OR "agency theory" OR "legitimacy theory" OR "resource dependence theory" OR "resource-based theory" OR "resource-based vision")) and in each of the above databases this string was searched in the article title, abstract and keywords. Thirty results emerged from Scopus, and forty-four from WOS, for a total of 74 articles. Refining the search by keeping only articles and reviews, written in English, with year of publication year from 2002 to December 2022 and eliminating those in both databases, the final number of articles was 29.

Subsequently, a second, more generic string was composed with the aim of identifying additional theories (different from the previous ones) used always within the literature on SBMs. Therefore, the second string was composed as follows: (("sustainable business model*" OR "business model* for sustainability") AND "theory")). From this second search, 119 results emerged from Scopus, while on WOS we obtained 312 results, for a total of 431 articles. Again, we refined the search by keeping only articles and reviews written in English and limiting the scope of analysis to only the subject areas of business, management and economics, and publications published in the last twenty year (2002-2022) and eliminating those in both databases and those already selected with the first string. The number of final articles for analysis was 36. Then adding up the results obtained from these two strings, the group of articles analyzed was 65.

Then, we continued the process of systematic literature review by examining each article individually to make sure it was in line with our research objective. In accordance with Gligor et al. (2018), articles in which the word "theory" was present but not with the meaning of the specific framework within which the research was developed were removed. When there was no formal, clear, and justified use of the chosen theory the article was not considered. Following this additional screening step, the total number of articles that used a formal theory and analyzed the aspects of the sustainable business model was 60 articles. Each article was analyzed by

precisely researching the theory used and summarizing its specific use. With this selection process in mind, some descriptive statistics on the 60 articles were also constructed below (Table I). Specifically, since this is a recent literature, the evolution in terms of the number of publications published over the past two decades (precisely, from 2002 to December 2022) was presented (Table I), the breakdown of articles based on the two identified document types (how many articles and how many review articles) was shown (Table II), and finally, the most ten frequent keywords were presented (Table III).

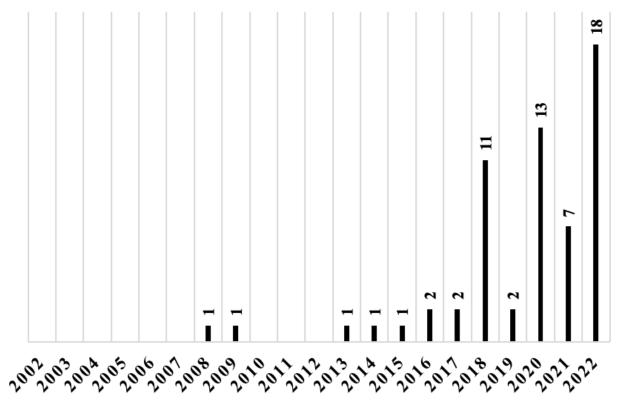


Table I. Number of publications from the years 2002 to 2022

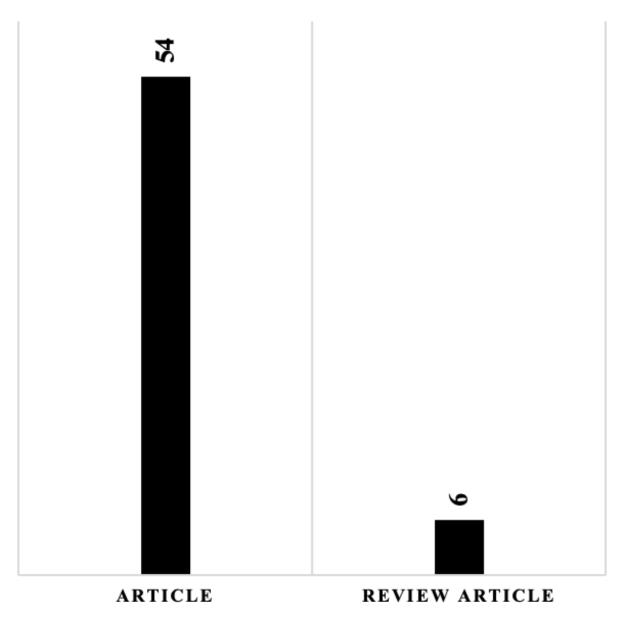


Table II. Type of papers analyzed

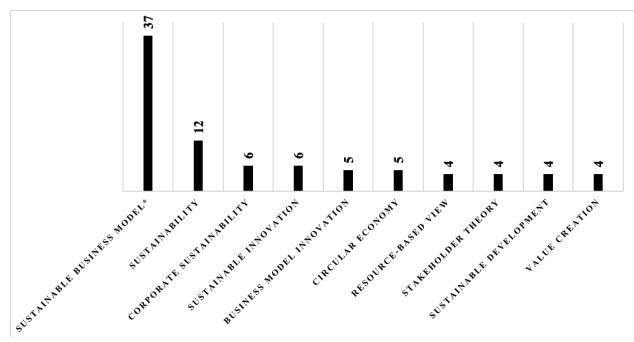


Table III. Ten most frequent keywords

Analysis discussion and findings

In this section, the focus is on answering the research questions and providing the main results of the systematic literature review on the selected and analyzed studies. The latter steps correspond to step 4 of analysis and synthesis and step 5 of reporting and using the results (Denyer and Tranfield, 2009).

CSR and CS theories and how are used in the literature on sustainable business models

The first analysis conducted focused on reading the first 29 articles identified that used within them one of the selected CSR and CS theories and related it to the literature on SBMs to explain a specific aspect of it. The CSR and CS theories researched and already presented within the string described above were the following: stakeholder theory (Freeman, 1984), institutional theory (DiMaggio and Powell 1983), agency theory (Weber, 1947), legitimacy theory (Deegan, 2002), resource dependence theory (Pfeffer and Salancik, 1978), resource-based theory (Barney, 1996) and resource-based view (Priem and Butler, 2001). Each of these 29 papers used a single theory or a combination of multiple CSR theories to achieve their research goals and advance SBM research.

Table IV shows which of the CSR and CS theories were found to be present in the 29 papers analyzed and with what % frequency.

Table IV. Frequency of the CSR and CS theories within the literature on SBMs

Theory	Frequency (n° articles)	Frequency (%)	Cumulative frequency (%)
Stakeholder theory	15	51,8 %	51,8 %
RBV	4	13,8 %	65,6 %
Institutional theory	3	10,3 %	75,9 %
Legitimacy theory	3	10,3 %	86,2 %
RDT	3	10,3 %	96,5%
(RBT + Agency theory) + other theories of CSR/CS	1	3,5 %	100%
Total	29	100%	

The results in Table IV indicate the frequency (both in terms of number of articles and in percentage and cumulative terms) of which theories of CSR and CS were also used within the SBM literature. Most of these theories were used by more than 96 percent of the SBM studies that made use of a CSR theory or a combination thereof. The most widely used theory in the 29 articles analyzed was found to be stakeholder theory (15 articles).

Then, in Table V, we present the article one by one, specifying the theory adopted, its origins, and its use. For quick and easier reference by readers, where the same theory was used in several different articles, these were grouped in terms of common usage by providing a concise definition to identify the same utilization.

Table V. Theories of CSR and CS and its use within the SBM literature

CSR/CS theory and its core assumption	Use of theory in SBM literature	References
"Simultaneously considers value creation and profits, firm performance, social demands, environmental integration, and the ethical values of any group or individual that may influence or be influenced by the achievement of the firm's goals" (Freeman, 1984; Freeman et al.,	. Maximum inclusion of all stakeholders in sustainability decision making	Di Vaio et al., 2020 – Jayashree et al., 2022 – Najmaei and Sadeghinejad, 2022
	Role of stakeholders in value creation within SBMs	Boruchowitch and Fritz, 2022 – Mihailova et al., 2022 – Geldres-Weiss et al., 2021 – Freudenreich et al., 2020 – Fiore et al., 2020 – Evans et al., 2017 – Norris et al., 2021 – Matos and Silvestre, 2013
	Pressures in the creation of SBMs from stakeholder groups	Tan and Salo, 2021 – Galati et al., 2015 – Jabbour et al., 2020 – Sousa-Zomer and Cauchick-Miguel, 2017

Institutional theory "Business survival and growth depend on the presence of a favorable institutional environment and the acquisition of legitimacy within institutional settings" (DiMaggio and Powell 1983)		Favorable institutional conditions for the establishment of SBMs	Stål and Corvellec, 2018 – Laukkanen and Patala, 2014
		Relevance of external institutions to respond to external pressures and to gain greater approval of one's SBM	Martin-de Castro, 2021
Resource-based view (RBV) "The achievement of successful performance among enterprises is influenced by the nonspecific resources and capabilities that each individual enterprise possesses" (Priem and Butler, 2001)	ıd	Identification and capitalization of resources to promote the success of SBMs	Hofmann et al., 2022 – Dicuonzo et al., 2020 – Ordonez-Ponce et al., 2021 – Brenner, 2018
Resource-dependence theory (RDT) "The growth and durability of enterprises depend on access to the necessary resource from outside the enterprise" (Pfeffer and Salancik, 1978)		Dependence on specific resources for the adoption of SBMs	Nkabinde and Mamabolo, 2022 – Rossignoli and Lionzo, 2018 – Bussoli et al., 2022
Legitimacy theory "Firms operate on the basis of a social contract with society and their survival and growth depend on legitimacy" (Deegan, 2002)		Management of legitimacy and rules in the SBM adoption process	Ruhanen and Whitford, 2018 – Biloslavo et al., 2020 – Fiorentino et al., 2020
Mix of multiple theories of CSR/CS (resource-based theory + agency theory + other theories of CSR/CS)		Identification of links to the main components of SBMs	Lahti et al., 2018

The summary presented in Table V provides a mapping of the main uses with which CSR and CS theories have also been transferred within the literature on SBMs.

Stakeholder theory has been applied to sustainable business models in three different ways. The first, also referred to as clustering, has been called "Maximum inclusion of all stakeholders in sustainability decision making" because in the studies conducted by Di Vaio et al. (2020), Yayashree et al. (2022), and Najmaei and Sadeghinejad (2022) the emphasis of the theory has been on the importance of including all categories of stakeholders with whom a firm interacts in order to consider all possible joint sustainability solutions to foster the development of SBMs. The second use was called "Role of stakeholders in value creation within SBMs" since Boruchowitch and Fritz (2022), Mihailova et al. (2022), Geldres-Weiss et al. (2021), Freudenreich et al.

(2020), Fiore et al. (2020), Evans et al. (2017), Norris et al. (2021), and Matos and Silvestre (2013) emphasized the importance of the role that different stakeholder groups play in helping a firm create value and generate sustainability. Finally, the third use of stakeholder theory was called "Pressures in the creation of SBMs from stakeholder groups". Here, Tan and Salo (2021), Galati et al. (2015), Jabbour et al. (2020), and Sousa-Zomer and Cauchick-Miguel (2017) emphasized the relevance of considering the pressures that stakeholders can exert on a firm to urge it to use its business model more sustainably.

Institutional theory, on the other hand, presents a twofold clustering in terms of usage: the first usage "Favorable institutional conditions for the establishment of SBMs" refers to the importance of a favorable institutional environment and conditions for a firm to adopt SBMs (Laukkanen and Patala, 2014; Stål and Corvellec, 2018). The second use "Relevance of external institutions to respond to external pressures and to gain greater approval of implemented an SBM" emphasizes the importance for a firm to gain approval and protection from legal, normative, and stakeholder pressures from the external institutions to which it turns (Martin-de Castro, 2021).

The RBV has been used by Hofmann et al. (2022), Dicuonzo et al. (2020), Ordonez-Ponce et al. (2021), and Brenner (2018) in their studies to define what resources firms need to possess and capitalize on for the success of their SBMs.

The RDT, instead, is used to emphasize how firms are often dependent on certain resources and/or activities for the growth of their SBMs (Nkabinde and Mamabolo, 2022; Rossignoli and Lionzo, 2018; Bussoli et al, 2022).

Legitimacy theory has been adopted by Ruhanen and Whitford (2018), Biloslavo et al. (2020), and Fiorentino et al. (2020) to emphasize the importance for a firm to comply with rules and maintain some degree of legitimacy to grow its business model toward integrated sustainability.

Finally, Lahti et al. (2018) use a multi-theoretical approach, as they introduce the central components of sustainable and circular business models in their study and discuss their linkages by combining multiple CSR theories with others (they use contingency theory, transaction cost theory, resource-based theory, network and industrial economy theory, and agency theory).

The use of different theories to explain different aspects of SBMs seems to indicate that the literature on SBMs also uses a multi-theoretical approach in line with the CSR and CS literatures (Cantele et al., 2022; Mellahi et al., 2016).

Other theories and how are used within the literature on SBMs

The second part of the analysis focused on reading the additional 31 articles identified that used other theories, different from CSR and CS theories, and related them to the SBM literature to explain other aspects of it.

Several other theories used within this literature to address and explain different aspects of the sustainable

business model were identified. In the following, the theories traced are presented, providing attention and some details on the most recurrent, innovative theories used in very different ways from those listed above with CSR and CS theories.

Höse et al. (2022) in their study focused on constructing a method for the strategic evaluation of sustainability-related business models uses strategic management theory and its facets as a theoretical basis for developing a set of criteria suitable for evaluating the potential for strategic success d an SBM. Höse et al. (2022) applied and combined two different approaches from strategic management theory (market-based view and resource-based view) with two methods from business model theory (business model canvas and the process of developing a business model), thus linking both theoretical fields and enriching their tools.

Comin et al. (2020) also draws on management theory to conduct his review on the SBM literature, frames the adoption of a business model as a strategic source of competitive advantage that differentiates one firm from others.

Viciunaite (2022), , uses the translation theory perspective (Callon, 1986), to analyze the concept and methods of communication by companies in explaining and disseminating the structure of their sustainable business models to their consumers.

Another theory that has been widely used has been the theory of planned behavior (Ajzen, 1991). Through this theory, Csutora et al. (2022), Muposhi et al. (2021) and Chen et al. (2020) in their papers have focused on the behaviors and attitudes manifested by consumers at times of purchase from firms that claim to pursue principles of sustainability and adopt sustainable business models. Lemus-Aguilar et al. (2019), Lozano (2018), used organization theory (McAuley et al., 2007) to identify the organizational design elements, present within an SBM. Koistinen et al. (2018), and Mishra et al. (2021), to set up their studies, relied on transition theory (Rotmans et al., 2001), used to identify and understand the transition elements that traditional business models undergo when the company decides to embrace sustainability within its operational, production and decision-making processes.

Finally, the other theories identified and used, albeit less recurrently, as a theoretical lenswithin the literature on SBMs were: sustainability leadership theory (Suriyankietkaew et al., 2022); triple bottom line theory (Mattera et al., 2022; Mattera and Gava., 2022); system theory (Dembek et al., 2022); cultural-historical activity theory (Vetoshkina and Toiviainen, 2022); social reproductive theory (Dal Mas et al., 2020); sustainable design theory (Baldassarre et al., 2020a); SBMI theory (Baldassarre et al., 2020b); social learning theory (Karlusch et al., 2018); network theory (Neumeyer and Santos, 2018); value-belief-norm theory (Abdelkafi and Täuscher, 2016); constraint theory (Birkin et al, 2009); dynamic capabilities theory (Oliveira-Dias et al, 2022); cocreation theory (Rosca and Bendul, 2016); pecking order theory (Islam and Chitakunye, 2017); institutional entrepreneurship theory (Gasbarro et al., 2018); grounded theory (Bocken and Geradts, 2020); pattern theory (Ludeke-Freud et al., 2018).

Regarding these theories, it is worth noting how some papers also present a combination of two or more of these theories to analyze multiple aspects of the sustainable business model (Brenner et al., 2018; DiCuonzo et al., 2020; Evans et al., 2017; Galati et al., 2015; Lüdeke-Freund, 2020; Ordonez-Ponce et al., 2021).

Complementarity of the different theories used within the SBM literature

Recognizing the many theories used in the literature on sustainable business models, the study is faced with the second research question (RQ2) about the complementarity use of different theories and whether these theories cover different research perspectives on SBM. The answer to this question was sought in the established literature and based on the findings from the analysis of the 60 articles presented in the previous sections.

According to previously conducted studies, research on sustainable business models emphasizes the complementarity of theoretical and practical approaches, fostering exchange and cross-fertilization between researchers and different subject areas to promote literature development (Lüdeke-Freund et al., 2018). This search for complementarity could lead to a greater understanding of the types and characterizing aspects of business models for sustainability, also highlighting potential aspects belonging to disciplinary areas other than those strictly related to management.

Based on the results obtained from the analysis of the 60 articles, it appears that the complementarity of theories is verified, as articles emerged that applied different theories and combined them to analyze the nature, types, and numerous aspects of a sustainable business model (Evans et al., 2017; Lahti et al., 2018; Lüdeke-Freund, 2020; Martin-de Castro, 2021; Ordonez-Ponce et al., 2021). The complementarity of theoretical approaches makes it possible to provide a broad and integrated understanding of the existing issues in this field of research. Each theory allows the exploration of individual aspects of a business model, while multiple theories together provide an extended view from multiple different angles of the phenomenon studied.

The authors themselves speak of integration and complementarity of theoretical perspectives, emphasizing that the combination of multiple theories can be a valuable cross-fertilization tool for exploring and deepening new avenues of future research (Martin-de Castro, 2021). It also emerges that the cross-fertilization of different theoretical perspectives provides a complementary perspective on how each specific aspect (resources, activities, strategies, etc.) of an SBM, based on organizational characteristics, can suggest a path forward for companies that are obligated or voluntarily willing to incorporate sustainability into their business models (Bocken and Geradts, 2020). From the in-depth analysis of articles that combined two or more theories (Evans et al., 2017; Lahti et al., 2018; Lüdeke-Freund, 2020; Martin-de Castro, 2021; Ordonez-Ponce et al, 2021), in conjunction with the results in Table V given in Section 3.1, it can be deduced that the use of different theories not only confirms their complementary use, but also allows different aspects and perspectives of research on SBMs to be highlighted. This adds further to the use of a multi-theoretical approach even within the literature on SBMs.

The complementarity that resides in choosing to combine different theoretical perspectives together provides a holistic understanding of the aspects and dynamics that may change when companies move from a linear to a sustainable or circular business model (Lahti et al., 2018). These studies that have taken a multi-theoretical approach, integrating different theories to best meet their intended research objectives, are valuable contributions to support the research question on the complementarity of theories within the literature on SBMs. This aspect of complementarity use could be further explored by comparing future developments in the literature on sustainable business models over the years to see whether there will be changes in the use of existing theoretical approaches and whether the complementarity perspective will be maintained or whether alternative use of theories will be made without combining them.

Contributions, limitations, and future research

This literature review brings different contributions and theoretical implications.

First, a review was conducted of the main and most frequent theories used in the literature on sustainable business models. All theories were mapped, starting with the most popular ones used in CSR and CS studies, analyzing their different uses to explain sustainable business models. The analysis did not stop there, but continued with the identification of additional emerging theories, again focusing on their use, allowing further aspects of sustainable business models that were studied to be mapped.

Furthermore, we came to define a complementary nature of these theories, as often within articles two or more theories were combined to explore the nature and aspects of a business model. This aspect of complementarity gives additional solidity to the studies underlying the literature on SBMs, namely the literature on corporate social responsibility and corporate sustainability, which has already been defined by many other authors as multi-theoretical because it too often combines different theories to study aspects of sustainability.

From this two-pronged review, we were able to answer the two initial research questions we posed, contributing to an advancement of the literature on SBMs. This systematic literature review can also be a valuable tool for other researchers who want to corroborate their studies using suitable theories or a combination of multiple theories.

In the face of the many contributions highlighted, there are also limitations to this research.

A first limitation of this study is to be found within the literature on SBMs, as it is a very recent literature, often with a practice-oriented approach, so that the recognition of theories could be still very limited. A second limitation concerns the methodological approach of the research, which provided a limited view regarding the identification of theories used in the literature on sustainable business models. The definition of database selection criteria and the filters used to select the studies included in the final sample are also related to methodological choice, as they may have excluded relevant information. Therefore, for future research, a

survey including other more general databases, as well as citing studies from relevant journals on sustainability could provide greater depth and broader contributions that would enhance this study.

Finally, given the considerable interest and scientific development that the literature on SBMs is having, further investigation could be related to consolidating the complementarity aspect of theoretical approaches. It would be desirable to analyze whether and how each of the different theories identified in this study links to and explains one or more components of the sustainable business model.

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