

Framework for sustainable value creation: a synthesis of fragmented sustainable business model literature

Sustainable
value creation

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Abstract

Purpose – This study aims to synthesize the body of sustainable value creation (SVC) research within sustainable business model literature through a systematic literature review.

Design/methodology/approach – A systematic literature review of 85 research articles of SVC through business models from 2011 to 2020.

Findings – The systematic literature review allowed the authors to identify five core SVC elements: value forms, stakeholders, temporal view, spatial view and tensions and conflicts. Moreover, a conceptual framework presenting the interrelationships of the SVC elements is proposed.

Practical implications – This study carries implications for practitioners in the form of guiding questions provided in the framework. Those questions help responsible managers to plan, identify and choose strategic sustainability actions and to develop companies' business models aiming to lead to the creation of long-term sustainable value in different time frames and locations or different parts of the value network. Additionally, the framework guides managers to identify and manage potential tensions and conflicts which can otherwise hinder SVC.

Originality/value – To the best of the authors' knowledge, this study is the first systematic literature review of SVC through business models with the conceptual development of SVC. The study synthesizes the fragmented literature to identify SVC elements and build basis for conceptualization of SVC through business models.

Keywords Sustainable value creation, Business model, Stakeholders, Conceptual framework, Gioia methodology, Tension, Systematic literature review, Sustainable development, Business ethics and sustainability

Paper type Literature review



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1. Introduction

Sustainable business model (SBM) research has rapidly grown during the past years to find ways to ensure companies' effective contributions to sustainability through the creation of sustainable value (Bocken *et al.*, 2015; Fobbe and Hilletoth, 2021; Lüdeke-Freund and Dembek, 2017; Stubbs and Cocklin, 2008; Upward and Jones, 2016). This has created a fragmented body of literature, which draws from different disciplines, such as corporate sustainability, corporate social responsibility or sustainable design (Lüdeke-Freund and Dembek, 2017). Although different research perspectives generate insightful findings, it can lead to disjointed theoretical development if the key concepts are not thoroughly understood. Knowledge accumulation and further development of theory simply cannot occur without a conceptual framework (Suddaby, 2014). For example, sustainable value creation (SVC), the key concept of SBMs, remains ambiguous in most SBM publications (Lüdeke-Freund *et al.*, 2020; Roome and Louche, 2016), although uniform main concepts would help establish the SBM research as its own discipline (Lüdeke-Freund and Dembek, 2017).

Although in most studies SVC is referred to economic, environmental and social benefits created with and for different stakeholders (Bocken *et al.*, 2014; Cardoni *et al.*, 2020; Freudenreich *et al.*, 2020; Laukkanen and Tura, 2020), an increasing body of SVC literature considers also negative consequences, tensions and conflicting value outcomes between different value forms and different stakeholders that might occur (Biloslavo *et al.*, 2018; Tura *et al.*, 2018). Although much is known about SVC, the knowledge is unstructured, thus leading to misinterpretations about what sustainable value is. Existing reviews have focused more on understanding SBMs as such (Geissdoerfer *et al.*, 2018; Goni *et al.*, 2020; Lüdeke-Freund and Dembek, 2017; Nosratabadi *et al.*, 2019; Pieroni *et al.*, 2019; Shakeel *et al.*, 2020), but there are rare comprehensive studies of SVC with conceptual development. Cardoni *et al.* (2020) discovered how the concept of sustainable value has been used by researchers and how it has been developed within predetermined management- and strategy-related journals. They deductively classified the findings based on the sustainable value framework by Hart and Milstein (2003). The study by Lüdeke-Freund *et al.* (2020) identified the cornerstones for theorizing about SVC regarding the what, who and how of value creation (Lüdeke-Freund *et al.*, 2020). However, to this date, no systematic literature review has inductively gathered the scattered insights of SVC in the context of SBMs. There is a need for conceptual development of SVC to promote theoretical development in SBM field as well as provide new frameworks for responsible managers (Laasch and Conaway, 2015).

To address this gap, the aim of this study is to synthesize the body of SVC research within SBM literature through a systematic literature review (Post *et al.*, 2020; Snyder, 2019; Torraco, 2005). The research question in this study is as follows:

RQ1. What is the SVC about within SBM literature?

As an outcome, we present the SVC elements, which are structured in a conceptual framework, which helps to clarify the current theoretical understanding of SVC within SBM literature. From the theoretical perspective, the paper contributes the conceptual development of SVC combining the scattered views of SVC and clarifying the concept. For managers, the study offers guiding questions, which can help companies in decision-making to plan, identify and choose strategic sustainability actions and to develop companies' business models.

The article is structured as follows. Introduction, given in Section 1, is followed by the research approach and methodological choices presented in Section 2. Section 3 summarizes the findings from the systematic literature review by presenting the SVC elements. The discussion given in Section 4 presents the framework for SVC through SBMs and examines

the contributions and limitations of the study and propositions for future research avenues in Section 5.

2. Methodology

We designed our methodological approach adapting the stages of a systematic literature review suggested by [Tranfield *et al.* \(2003\)](#) and literature reviews published in peer-reviewed journals ([Hofmann, 2019](#); [Williams *et al.*, 2017](#)).

The literature search was conducted using Scopus, which is an extensive and multidisciplinary database suitable for a principal search system, particularly covering articles published since 1995 ([Falagas *et al.*, 2008](#); [Gusenbauer and Haddaway, 2020](#)). The search was limited to titles, abstracts and key words; the language was set to English and the source type to journals. To find articles related to value creation through a business model and in the context of sustainability, the following search string was used: *sustainab** AND “value creat*” AND “business model.” The main inclusion criteria were that sustainability refers to environmental and/or social sustainability (in addition to economic sustainability); the articles discussed value, not *values*; and the articles had a business model and a company and/or organizational perspective. For example, articles that contained the term “sustainability” in the abstract, referring only to economic sustainability (e.g. competitive advantage), were excluded. Related to the business model perspective, articles that discussed a business model trivially were excluded.

This search (March 2021) identified 230 potential articles for further review. To ensure the reliability of the review, the first and second authors read the titles and abstracts and coded them “accept,” “reject” or “further review” based on the inclusion criteria. From this process, 156 articles were coded either “accept” or “further review,” and they underwent full-text analysis. Of the sample of 156 articles, full-text access to eight articles was not available. After full texts were screened, 69 articles were selected for the final data analysis. The second literature search was conducted to find articles that did not include the explicit term “business model” in their titles, abstracts and key words. The focus was still limited to business and management literature, but the search terms included “*sustainab* value*” OR “value for sustainability,” which revealed articles outside the explicit business model context. The second search round revealed 288 articles. The titles and abstracts were read, and full-text articles providing potentially new insights into the topic were screened. Full-text screening resulted in nine new articles for the more detailed data analysis phase. Moreover, seven additional articles were selected through the snowball method by scanning the references of articles found in the database searches and based on the expertise and previous knowledge of the three researchers of this paper. The article sample selection process is described in [Figure 1](#) and the full list of reviewed articles in [Appendix](#).

Two researchers analyzed the full set of 85 articles in detail through iterative data analysis phases. Following the Gioia methodology ([Gioia *et al.*, 2013](#)), a data analysis was conducted to reveal the SVC elements in the context of SBMs. To identify the elements, the questions “what is sustainable value” and “how is sustainable value creation defined” were used. Through an inductive interpretive data analysis approach ([Corbin and Strauss, 2015](#)), we identified five core SVC elements: value forms, stakeholders, temporal view, spatial view and tensions and conflicts. The elements are described in more detail in the specific sections containing the presentation of data-driven first-order concepts and theory-centric second-order themes ([Figures 3–7](#)), revealing the aggregate dimensions, which are called SVC elements in this study ([Gioia *et al.*, 2013](#)).

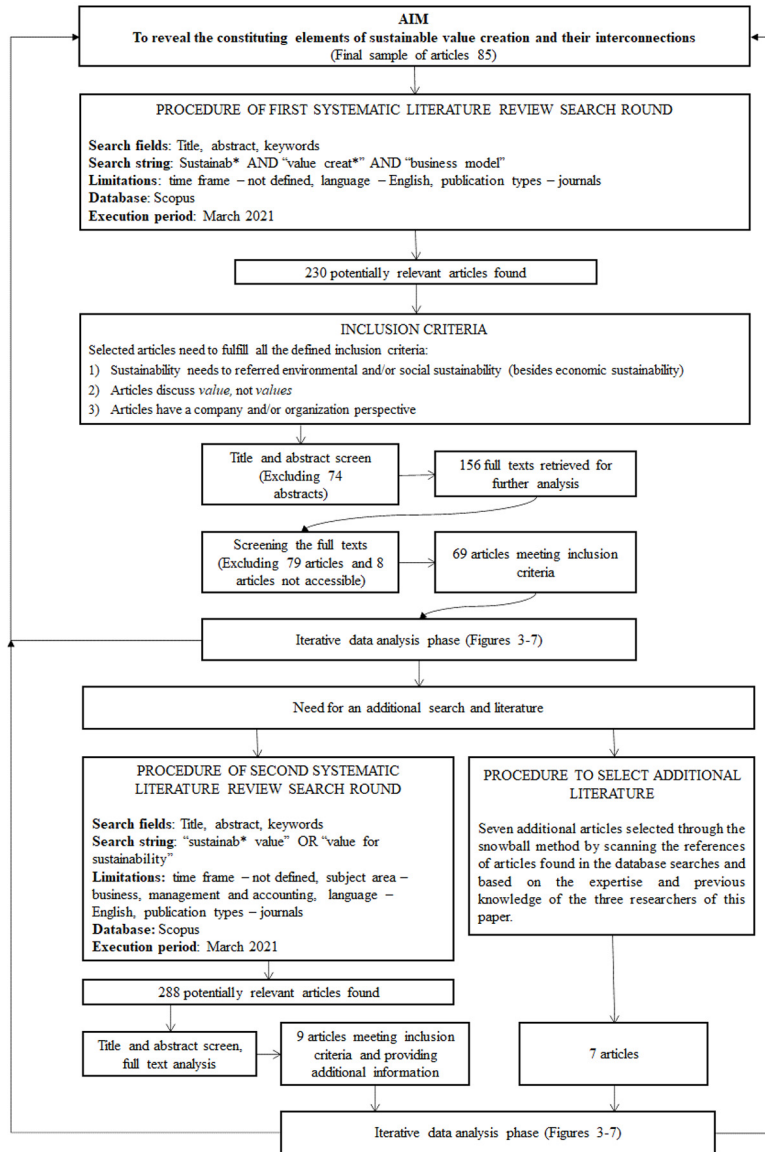


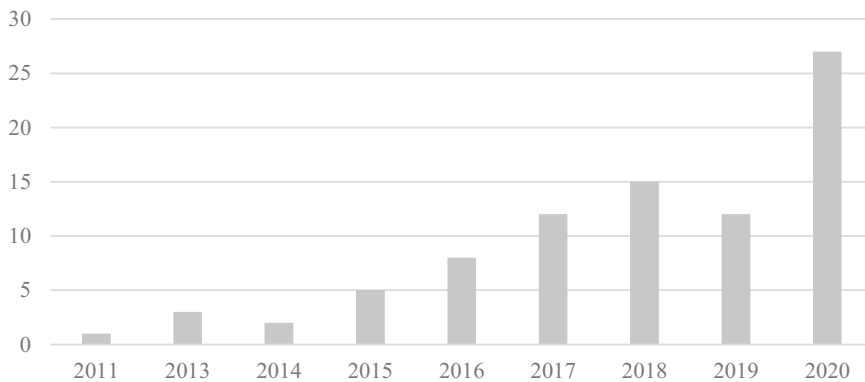
Figure 1.
Article sample
selection processes

Source: Author's creation

3. Findings

3.1 Descriptives

The key publications considering SVC in the context of SBMs are from 2011 and later. In the selected and reviewed sample, one article was published in 2011, but in 2018, 15 articles were published and in 2020, 27 articles (Figure 2).



Source: Author's creation

Figure 2.
Number of reviewed
articles published on
SVC in the context of
SBM

Based on the statistics, the *Journal of Cleaner Production* is highlighted in the review as the leading journal with 34 articles. This was followed by *Sustainability* with 7 articles, *Organization and Environment* with 6 articles, *Business Strategy and Environment* with 4 articles and *Business and Society* with 3 articles. Further, as two articles were found in *Industrial Marketing Management*, the *Journal of Industrial Ecology and Sustainable Production and Consumption*, and each of the remaining 25 articles in different journals, it indicates that the concept of SVC has been broadly adopted in management literature. From the reviewed studies, 21 were conceptual and 64 empirical, of which 62 were qualitative and only two quantitative. Further, most of the empirical studies (51) were single- or multiple-case studies, which reflects the novelty and complexity of SVC.

The theme and focus areas were related, for example, to the clothing and fashion industry (Abreu *et al.*, 2020; DiVito *et al.*, 2020; Hirscher *et al.*, 2018; Niinimäki and Hassi, 2011), bottom-of-the-pyramid business models (Angeli and Jaiswal, 2016; Bittencourt Marconatto *et al.*, 2016; Dembek and York, 2020), the energy sector (Hellström *et al.*, 2015; Rohrbeck *et al.*, 2013; Rossignoli and Lionzo, 2018), the hospitality industry (Aagaard and Ritzén, 2020; Van Riel *et al.*, 2019), new ventures and entrepreneurship (Gregori and Holzmann, 2020; Täuscher and Abdelkafi, 2018), the sharing economy (Ciulli and Kolk, 2019; Laukkanen and Tura, 2020) and the circular economy (Fonseca *et al.*, 2018; Vogtlander *et al.*, 2017). Previous literature has presented different SVC frameworks, such as tools for identifying new value creation opportunities (Baldassarre *et al.*, 2017; Bocken *et al.*, 2013) or identifying potential sustainability impacts and SVC mechanisms (Patala *et al.*, 2016) and frameworks for managing tensions and creating sustainable value (Brennan and Tennant, 2018; van Bommel, 2018).

3.2 Sustainable value creation elements

In the following, we provide the findings of the data analysis (Gioia *et al.*, 2013) and present the core elements used to describe the SVC within SBM literature, and guiding questions to manage these elements. Each of the sections provides data-driven first-order concepts reflecting the actual words from the reviewed literature, and theory-centric second-order themes describing what each element is about (Figures 3–7). All the articles and their contributions to the findings are listed in Appendix.

3.2.1 *Value forms – What are the value sources and what kind of value is created?* The element of value forms (Figure 3) was identified to describe the value sources and what kind of value is created. On the other hand, value forms can be approached through strategic resources, i.e. tangible and intangible value forms (e.g. brand, natural, human capital or cultural resources, physical resources), which are seen as value creation opportunities and involved and combined to enable SVC (Allais *et al.*, 2015; Brennan and Tennant, 2018). On the other hand, SVC can be approached from the perspective of not only multiplicity of value forms perceived, including the triple bottom line point of view, but also several other value

(i) *Value Forms – What are the value sources and what kind of value is created?*

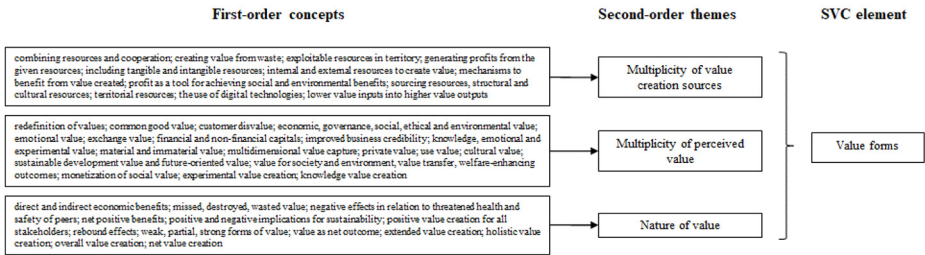


Figure 3. Data-driven first-order concepts and theory-centric second-order themes of aggregate SVC element “value form”

Source: Author’s creation

(ii) *Stakeholders - With and for whom is value created?*

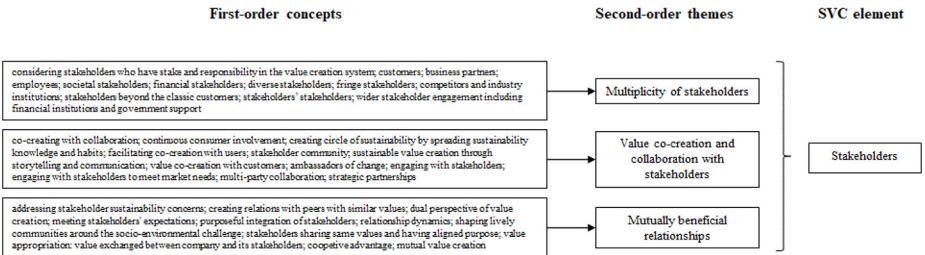


Figure 4. Data-driven first-order concepts and theory-centric second-order themes of aggregate SVC element “stakeholders”

Source: Author’s creation

(iii) *Temporal view - When is value created?*

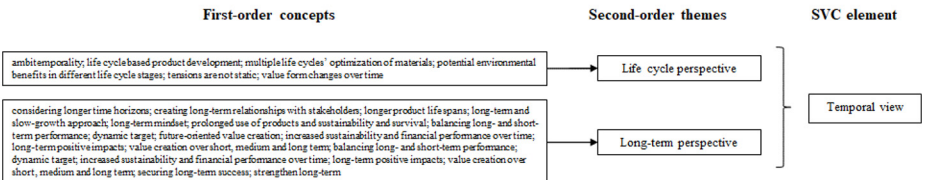


Figure 5. Data-driven first-order concepts and theory-centric second-order themes of aggregate SVC element “temporal view”

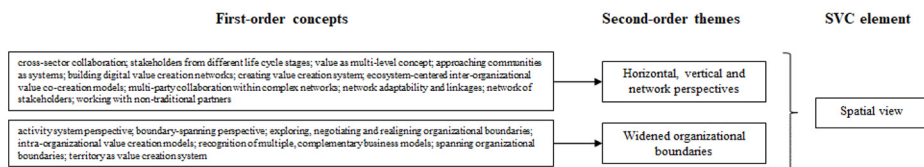
Source: Author’s creation

forms (Bocken *et al.*, 2015; Breuer *et al.*, 2018; Evans *et al.*, 2017; Schneider and Clauß, 2019; Velter *et al.*, 2020).

The studies share the view that SVC refers to including (Alberti and Varon Garrido, 2017; Lüdeke-Freund *et al.*, 2018; Todeschini *et al.*, 2017), integrating (Bocken *et al.*, 2015; Dohrmann *et al.*, 2015; Yang *et al.*, 2017), balancing (Fonseca *et al.*, 2018; Oskam *et al.*, 2018), complementing (Sinthupundaja *et al.*, 2020) or improving (Bittencourt Marconatto *et al.*, 2016) economic, environmental and social value or their combinations (Yang and Evans, 2019). However, the current direction of SVC is toward net-positive benefits, which refers to minimizing negative impacts as well as maximizing positive impacts to create “net-positive” effects, meaning that the business models should give more back to society and nature than they take (Dyllick and Rost, 2017). This requires that both the potential benefits and negative consequences of value creation should be identified and acknowledged (Laukkanen and Tura, 2020; SeEVERS *et al.*, 2018; Slowak and Regenfelder, 2017; Van Riel *et al.*, 2019).

To understand the impacts, the network perspective of different stakeholders must be considered, as what may be beneficial for one stakeholder may be harmful to another (Matos and Silvestre, 2013). Further, the key is to determine how to prevent (Bittencourt Marconatto *et al.*, 2016) or minimize (Van Riel *et al.*, 2019) negative effects for some stakeholders while

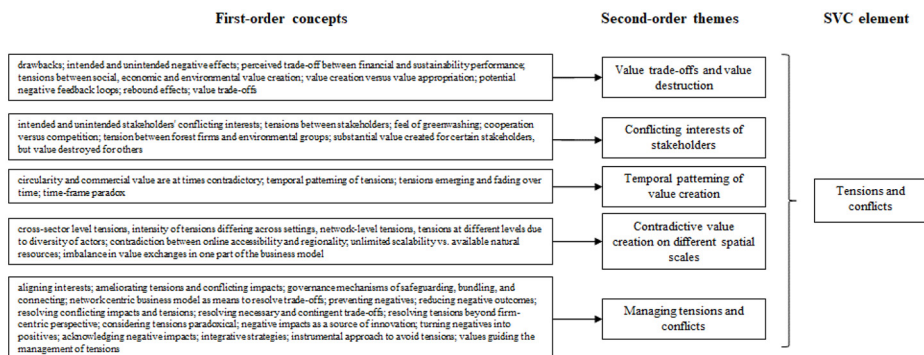
(iv) *Spatial view - Where is value created?*



Source: Author’s creation

Figure 6. Data-driven first-order concepts and theory-centric second-order themes of aggregate SVC element “spatial view”

(v) *Tensions and conflicts - What are the tensions and conflicts in value creation and how to manage them?*



Source: Author’s creation

Figure 7. Data-driven first-order concepts and theory-centric second-order themes of aggregate SVC element “tensions and conflicts”

optimizing value creation for others and improving the overall outcome for stakeholders in the value network – especially for society and the environment.

3.2.2 Stakeholders – With and for whom is value created? The element of stakeholders describes with and for whom value is created (Figure 4). In SBM studies, SVC is related to the multiplicity of stakeholders, which can be defined and categorized in various ways (Bittencourt Marconatto *et al.*, 2016). Stakeholders can be involved in SVC as value co-creators or collaborators, but it is also important to consider multiple stakeholders as value recipients, perceivers or beneficiaries (Freudenreich *et al.*, 2020; Oskam *et al.*, 2018).

Collaboration requires not only recognizing the existence of multiple, complementary business models instead of a single business model (Pedersen *et al.*, 2019; Zufall *et al.*, 2020), for example, integrating stakeholders across the product's life cycle (Reinhardt *et al.*, 2020; Yang and Evans, 2019), but also exploiting stakeholder pressure concerning social and environmental issues (Park *et al.*, 2018) and wider stakeholder engagement, including financial institutions and government support (Abuzeinab *et al.*, 2016). As SVC necessitates multi-stakeholder collaboration, in the creation of mutually beneficial relationships with stakeholders, it is important that all the parties are headed in the same direction (Bittencourt Marconatto *et al.*, 2016; Dembek and York, 2020; Evans *et al.*, 2017; Freudenreich *et al.*, 2020; Sinthupundaja *et al.*, 2020; Van Riel *et al.*, 2019).

3.2.3 Temporal view – When is value created? The element of temporal view considers when value is created (Figure 5). SBMs and SVC require longer time horizons than traditional for-profit business models (Alberti and Varon Garrido, 2017) and balancing short- and long-term business performance (Rezaee, 2016). Moreover, sustainability impacts occur in different life cycles in the long term (Manninen *et al.*, 2018; Yang and Evans, 2019). This necessitates considering longer product lifespans through upgrading, updating, repairing, or modifying products, services or systems (Niinimäki and Hassi, 2011; Pedersen *et al.*, 2019), extending the use of products to multiple life cycles (Slowak and Regenfelder, 2017), developing life cycle-based products (Seevers *et al.*, 2018) and optimizing materials through the full product life cycle (Fonseca *et al.*, 2018). Heading toward sustainable development requires developing new capabilities during value creation processes, which can take time (Weissbrod and Bocken, 2017). Overall, the SVC pathway is a dynamic process where a company responds to emerging market opportunities and threats and flexibly ensures long-term business sustainability (Short *et al.*, 2014).

3.2.4 Spatial view – Where is value created? Because SBM studies apply an extended notion of value forms and stakeholders, value can be created at a greater distance from the core company, and therefore, the element of spatial view considers where is value created (Figure 6). The distance of SVC can be approached through a spatial view, meaning, for example, the horizontal, vertical and network perspectives or widening organizational boundaries. This requires taking a boundary-spanning perspective to see how value is created and captured across organizational boundaries (Brehmer *et al.*, 2018; Breuer *et al.*, 2018; Zufall *et al.*, 2020). Considering society and the environment as independent stakeholders further widens organizational boundaries (Bocken *et al.*, 2013; Dyllick and Muff, 2016; Evans *et al.*, 2017; Schaltegger *et al.*, 2016) and transfers the focus of the company's internal operations to finding SVC opportunities from ecological and social problems outside the core company (Kuckertz *et al.*, 2019). Network participation is even more important when targeting system-level goals, such as SDGs that enlarge the spatial perspective of value outcomes far from the core company.

3.2.5 Tensions and conflicts – What are the tensions and conflicts in value creation and how to manage them? Decision-makers frequently face situations where they need to deal with conflicting sustainability aspects (Hahn *et al.*, 2015). Therefore, the element of tensions

and conflicts considers what the tensions and conflicts are in value creation and how to manage them (Figure 7). SVC combines diverse actors, and therefore, contradictory goals and interests of different stakeholders as well as multiple value forms can cause tensions (Brennan and Tennant, 2018; Patala *et al.*, 2016; Tura *et al.*, 2018; van Bommel, 2018). Additionally, temporal patterning of value creation can exist (DiVito *et al.*, 2020) and contradictory value can be created on different spatial scales (Laukkanen and Tura, 2020). Companies can try to identify, resolve and/or manage tensions and conflicts through different approaches (Alberti and Varon Garrido, 2017; Brennan and Tennant, 2018; Freudenreich *et al.*, 2020; van Bommel, 2018).

Through an instrumental approach (Hahn *et al.*, 2015), tensions and conflicts can be avoided by focusing primarily on sustainability actions that contribute positively to financial outcomes leading to win-win solutions. Following a trade-off strategy, a decision can have negative impacts on the company's financial capital while bringing about environmental benefits. By applying an integrative approach, a company can try finding a balance between actions and create multiple value forms holistically (van Bommel, 2018). The trade-offs or potential value destruction situations can offer companies new business or value creation opportunities (Bocken *et al.*, 2013; Yang *et al.*, 2017). As decisions related to SVC often involve contradictory and interrelated sustainability dimensions, research on paradoxical thinking to manage conflicting sustainability aspects has recently increased. Paradoxical thinking aims to achieve all the sustainability dimensions simultaneously, which can generate creative approaches to managing SVC (Hahn *et al.*, 2015; Morales, 2020; van Bommel, 2018).

4. Discussion and future agenda

Building on the findings from the systematic literature review, we combined scattered insights on SVC within SBM literature and identified five core SVC elements, which are value forms, stakeholders, temporal view, spatial view and tensions and conflicts, and the guiding questions to manage them. We propose that these five elements are fundamental concepts to SVC, describing a phenomenon of theoretical interest (Gioia *et al.*, 2013).

Prior studies defining SVC (Bocken *et al.*, 2013; Schaltegger *et al.*, 2016; Lüdeke-Freund *et al.*, 2020) have pointed out that SVC is about creating benefits and positive impacts for multiple stakeholders, thus aiming to fulfill their fundamental needs. However, these definitions leave room for a variety of interpretations and, in the worst case, can lead to value creation that is not sustainable at all, one of the reasons being tensions and conflicts related to SVC. Studies concerning tensions and conflicts in SVC are rare, although research about the topic within corporate sustainability literature has increased in recent years (Hahn *et al.*, 2015; van Bommel, 2018). Therefore, the identified elements provide a way to approach SVC more holistically and comprehensively by laying a foundation for defining and theorizing SVC in the specific contexts under study.

To summarize, SVC is about using different value sources, which are transformed to multiplicity of value forms, perceived differently by multiple stakeholders. Moreover, SVC is about creating value with and for different stakeholders aiming to create mutually beneficial relationships, as an individual company cannot solve systemic sustainability challenges alone. Further, SVC necessitates considering the life cycle and long-term perspectives, as value can be created on different time scales and life-cycle phases with and for different stakeholders. Additionally, the creation of sustainable value requires the horizontal, vertical and network perspectives as well as widening organizational boundaries because the impacts of SVC must be considered from, for instance, the individual, local, society and biosphere perspectives. The current trend is for SVC to aim for net positive benefits, which

necessitates considering not only the positive impacts but also the potential value trade-offs and value destruction, conflicting interests of multiple stakeholders, temporal patterning of value creation and potential contradictory value creation in different spatial scales.

Based on the identified elements, we propose a conceptual framework (Meredith, 1993) for describing SVC elements and their interrelationships and guiding questions, which help to manage each element to create sustainable value through SBM (Figure 8). In the framework, the SVC elements are the aggregate dimensions identified in the data analysis phase while the second-order themes describe what each element is about (Figures 3–7).

This study offers several possible future directions. First, the framework is meant to be general to be applicable in different contexts. Therefore, the framework could be used for more detailed guidance regarding each element in different types of SBMs. For example, it could be interesting to study what type of value creation in collaboration with stakeholders (Freudenreich *et al.*, 2020) is suitable in the different SBM archetypes (Bocken *et al.*, 2014) to enable SVC. Second, the review was limited to SBM literature. However, it could be useful to carry out a structured search of, for example, corporate sustainability and strategic management studies to better understand how SVC elements should be considered in areas such as companies' strategy planning. Third, the framework provides different angles to study potential tensions and conflicts related to SVC. Therefore, future research could find specific strategies to manage tensions that are caused by, for example, the temporal patterning of SVC to enable SVC in the long term. Especially studies applying paradoxical thinking to manage SVC could offer interesting perspectives on how to create multiplicity of value forms for multiple stakeholders on different temporal and spatial scales to achieve long-term, net-positive benefits.

5. Implications for theory and practice

This study is the first systematic literature review of SVC through business models with the conceptual development of SVC. Through a systematic literature review of 85 research

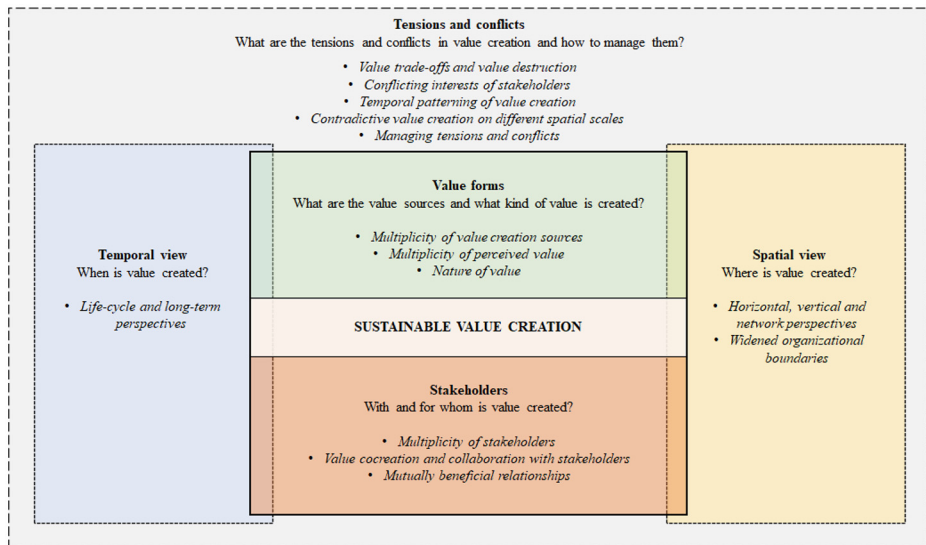


Figure 8.
Conceptual
framework for SVC
through business
model

Source: Author's creation

articles from 2011 to 2020, this study synthesizes the fragmented literature and identify core SVC elements. As main contribution, this study proposes a comprehensive conceptual framework that captures the characteristics of SVC elements and is aimed to facilitate further theorizing about SVC elements “that can later be more narrowly specified, operationalized, and measured” (Gioia *et al.*, 2013, p. 27).

This study carries implications for practitioners in the form of guiding questions provided in the framework. Those questions help responsible managers (Laasch and Conaway, 2015) in decision-making to plan, identify and choose strategic sustainability actions and to develop companies’ business models. This could lead to the creation of long-term sustainable value in different time frames and locations or different parts of the value network. Additionally, the framework guides managers to identify and manage potential tensions and conflicts which can otherwise hinder SVC.

The proposed framework of SVC through business models guides attention from a company-centered business perspective to a company’s role embedded in a wider societal and environmental system (Bolton and Hannon, 2016; Gorissen *et al.*, 2016). The important notion is that SVC should be considered holistically from each element angle to identify tensions and conflicts that can prevent creating net sustainable value.

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Appendix

Table A1.
Final article sample
and their
contributions to the
findings

	Author(s), Year	Type of study	Journal	Value forms	Stakeholders	Temporal view	Spatial view	Tensions and conflicts
1	Niinimäki and Hassi (2011)	Empirical, case study	<i>Journal of Cleaner Production</i>	x	x	x		
2	Bocken <i>et al.</i> (2013)	Empirical, case study	<i>Corporate Governance</i>	x	x		x	
3	Matos and Silvestre (2013)	Empirical, case study	<i>Journal of Cleaner Production</i>	x	x			
4	Rohrbeck <i>et al.</i> (2013)	Empirical, case study	<i>International Journal of Technology Management</i>		x			
5	Bocken <i>et al.</i> (2014)	Conceptual	<i>Journal of Cleaner Production</i>	x				
6	Short <i>et al.</i> (2014)	Empirical, case study	<i>Journal of Industrial Ecology</i>			x		
7	Allais <i>et al.</i> (2015)	Empirical, case study	<i>Journal of Cleaner Production</i>	x	x		x	
8	Bocken <i>et al.</i> (2015)	Empirical, research through design	<i>Journal of Industrial and Production Engineering</i>	x				
9	Dohrmann <i>et al.</i> (2015)	Empirical, case study	<i>Entrepreneurship Research Journal</i>	x				
10	Hellström <i>et al.</i> (2015)	Empirical, case study	<i>Journal of Cleaner Production</i>		x			
11	Jolink and Niesten (2015)	Empirical, case study	<i>Business Strategy and the Environment</i>	x				
12	Abuzemab <i>et al.</i> (2016)	Empirical, case study	<i>Built Environment Project and Asset Management</i>		x			
13	Angeli and Jaiswal (2016)	Empirical, case study	<i>Organization and Environment</i>	x	x	x	x	
14	Bittencourt Marconatto <i>et al.</i> (2016)	Empirical, case study	<i>Journal of Cleaner Production</i>	x	x			
15	Dylick and Muff (2016)	Conceptual	<i>Organization and Environment</i>	x	x		x	

(continued)

Author(s), Year	Type of study	Journal	Value forms	Stakeholders	Temporal view	Spatial view	Tensions and conflicts
16 Patala <i>et al.</i> (2016)	Empirical, case study	<i>Industrial Marketing Management</i>	x	x	x		x
17 Rezaee (2016)	Conceptual	<i>Journal of Accounting Literature</i>	x	x	x		
18 Schaltegger <i>et al.</i> (2016)	Conceptual	<i>Organization and Environment</i>		x		x	
19 Scheepens <i>et al.</i> (2016)	Empirical, case study	<i>Journal of Cleaner Production</i>				x	
20 Alberti and Varon Garrido (2017)	Empirical, case study	<i>Journal of Business Strategy</i>	x		x		x
21 Baldassarre <i>et al.</i> (2017)	Empirical, research through design	<i>Journal of Cleaner Production</i>		x			
22 Dyllick and Rost (2017)	Conceptual	<i>Journal of Cleaner Production</i>	x				
23 Evans <i>et al.</i> (2017)	Conceptual	<i>Business Strategy and the Environment</i>	x	x	x	x	
24 Morioka <i>et al.</i> (2017)	Empirical case study	<i>Journal of Cleaner Production</i>	x	x		x	
25 Rauter <i>et al.</i> (2017)	Empirical, case study	<i>Journal of Cleaner Production</i>	x	x		x	
26 Slowak and Regenfelder (2017)	Empirical, case study	<i>Innovation</i>	x		x		
27 Todeschini <i>et al.</i> (2017)	Empirical, case study	<i>Business Horizons</i>	x				
28 Weissbrod and Bocken (2017)	Empirical, case study	<i>Journal of Cleaner Production</i>			x		
29 Williams <i>et al.</i> (2017)	Conceptual	<i>Journal of Cleaner Production</i>	x				
30 Vogtlander <i>et al.</i> (2017)	Conceptual	<i>Journal of Remanufacturing</i>	x		x		

(continued)

Table A1.

Table A1.

	Author(s), Year	Type of study	Journal	Value forms	Stakeholders	Temporal view	Spatial view	Tensions and conflicts
31	Yang <i>et al.</i> (2017)	Empirical, case study	<i>Journal of Cleaner Production</i>	x				x
32	Brehmer <i>et al.</i> (2018)	Empirical, case study	<i>Journal of Cleaner Production</i>				x	
33	Brennan and Tennant (2018)	Empirical, case study	<i>Business Strategy and the Environment</i>	x	x			x
34	Breuer <i>et al.</i> (2018)	Conceptual	<i>International Journal of Entrepreneurial Venturing</i>	x			x	
35	Fonseca <i>et al.</i> (2018)	Empirical, quantitative study	<i>Sustainability (Switzerland)</i>	x		x		
36	Hirscher <i>et al.</i> (2018)	Empirical, action research	<i>Journal of Cleaner Production</i>	x				
37	Lüdtke-Freund <i>et al.</i> (2018)	Conceptual	<i>Sustainable Production and Consumption</i>	x				
38	Manninen <i>et al.</i> (2018)	Empirical, case study	<i>Journal of Cleaner Production</i>	x	x	x		
39	Oskam <i>et al.</i> (2018)	Empirical, case study	<i>Journal of Cleaner Production</i>		x			
40	Park <i>et al.</i> (2018)	Empirical, case study	<i>Sustainability (Switzerland)</i>		x			
41	Rossignoli and Lionzo (2018)	Empirical, case study	<i>Journal of Cleaner Production</i>		x		x	
42	SeEVERS <i>et al.</i> (2018)	Empirical, case study	<i>International Journal of Product Lifecycle Management</i>	x	x	x		
43	Sulkowski <i>et al.</i> (2018)	Conceptual	<i>Organization and Environment</i>		x			
44	Tura <i>et al.</i> (2018)	Empirical, case study	<i>Industrial Marketing Management</i>					x

(continued)

	Author(s), Year	Type of study	Journal	Value forms	Stakeholders	Temporal view	Spatial view	Tensions and conflicts
45	Täuscher and Abdelkafi (2018)	Empirical, modeling approach	<i>Journal of Cleaner Production</i>			x		x
46	van Bommel (2018)	Empirical, qualitative approach	<i>Journal of Cleaner Production</i>					x
47	Bocken <i>et al.</i> (2019)	Empirical, case study	<i>Journal of Cleaner Production</i>	x				
48	Ciulli and Kolk (2019)	Empirical, qualitative approach	<i>Journal of Cleaner Production</i>	x				
49	Gregori <i>et al.</i> (2019)	Empirical, case study	<i>Sustainability (Switzerland)</i>					x
50	Hu <i>et al.</i> (2019)	Empirical, case study	<i>Sustainability (Switzerland)</i>			x		
51	Jensen <i>et al.</i> (2019)	Empirical, case study	<i>Journal of Cleaner Production</i>		x	x		
52	Kuckertz <i>et al.</i> (2019)	Empirical, quantitative study	<i>Journal of Cleaner Production</i>	x			x	
53	Lee and Chang (2019)	Empirical, qualitative approach	<i>Sustainability (Switzerland)</i>		x	x		
54	Pedersen <i>et al.</i> (2019)	Empirical, case study	<i>Journal of Fashion Marketing and Management</i>		x	x		
55	Schneider and Clauß (2019)	Empirical, case study	<i>Organization and Environment</i>	x	x			x
56	Van Riel <i>et al.</i> (2019)	Conceptual	<i>Journal of Service Management</i>	x	x	x		
57	Yang and Evans (2019)	Empirical, case study	<i>Journal of Cleaner Production</i>	x	x	x		

(continued)

Table A1.

Table A1.

	Author(s), Year	Type of study	Journal	Value forms	Stakeholders	Temporal view	Spatial view	Tensions and conflicts
58	Ünal <i>et al.</i> (2019)	Empirical, case study	<i>Journal of Manufacturing Technology Management</i>		x			
59	Aagaard and Ritzén (2020)	Empirical, case study	<i>Creativity and Innovation Management</i>		x			
60	Abreu <i>et al.</i> (2020)	Empirical, case study	<i>Journal of Business and Industrial Marketing</i>	x	x			
61	Bradley <i>et al.</i> (2020)	Empirical, case study	<i>Sustainable Production and Consumption</i>	x				
62	Cardoni <i>et al.</i> (2020)	Conceptual	<i>Sustainability</i>	x	x			
63	Dembek and York (2020)	Empirical, case study	<i>Business and Society</i>		x			
64	DiVito <i>et al.</i> (2020)	Empirical, case study	<i>Business and Society</i>	x	x			
65	Farrukh and Holgado (2020)	Empirical, participatory research	<i>Technological Forecasting and Social Change</i>		x			
66	Feger and Mermet (2020)	Empirical, action research	<i>Organization and Environment</i>	x				
67	Freudenreich <i>et al.</i> (2020)	Conceptual	<i>Journal of Business Ethics</i>	x	x			x
68	Goni <i>et al.</i> (2020)	Conceptual	<i>Clean Technologies and Environmental Policy</i>	x				
69	Gregori and Holzmann (2020)	Empirical, qualitative approach	<i>Journal of Cleaner Production</i>		x			
70	Hansen and Revellio (2020)	Empirical, case study	<i>Journal of Industrial Ecology</i>				x	
71	Laukkanen and Tura (2020)	Conceptual	<i>Journal of Cleaner Production</i>	x				
72	Lehtimäki <i>et al.</i> (2020)	Empirical, case study	<i>South Asian Journal of Business and Management Cases</i>	x				

(continued)

Author(s), Year	Type of study	Journal	Value forms	Stakeholders	Temporal view	Spatial view	Tensions and conflicts
73 Lüdeke-Freund (2020)	Conceptual	<i>Business Strategy and the Environment</i>	x				
74 Lüdeke-Freund <i>et al.</i> (2020)	Conceptual	<i>Journal of Business Models</i>	x				
75 Mattila <i>et al.</i> (2020)	Empirical, case study	<i>International Journal of Entrepreneurship and Innovation Management</i>		x			
76 Morales (2020)	Empirical, qualitative approach	<i>Sustainability</i> (Switzerland)					x
77 Mähönen (2020)	Conceptual	<i>Accounting, Economics and Law: A Convivium</i>	x				
78 Nußholz <i>et al.</i> (2020)	Empirical, case study	<i>Journal of Cleaner Production</i>	x				
79 Oskam <i>et al.</i> (2020)	Empirical, case study	<i>Business and Society</i>	x	x			
80 Reinhardt <i>et al.</i> (2020)	Empirical, case study	<i>Journal of Cleaner Production</i>		x			
81 Schoneveld (2020)	Conceptual	<i>Journal of Cleaner Production</i>					x
82 Shakeel <i>et al.</i> (2020)	Conceptual	<i>Journal of Cleaner Production</i>	x	x	x		
83 Sinthupundaja <i>et al.</i> (2020)	Empirical, case study	<i>International Journal of Innovation and Sustainable Development</i>	x	x			
84 Velter <i>et al.</i> (2020)	Empirical, case study	<i>Journal of Cleaner Production</i>	x	x			
85 Zufall <i>et al.</i> (2020)	Empirical, case study	<i>Journal of Cleaner Production</i>		x		x	

Source: Authors' creation

Table A1.

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