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# A review of sustainable business models and strategic sustainable development

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## Abstract

This paper summarizes sustainable business models by addressing definitions, archetypes and assessments. It then summarizes the framework for strategic sustainable development to highlight its systematic, scientific and social strengths. The discussion combines both concepts to conclude with a research approach that may scientifically and socially enhance sustainable business models.

## Keywords

sustainable business models

strategic sustainable development

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## Introduction

Sustainability issues will not be resolved by the government alone but requires proactive action and innovation from the private sector. Kiron et al. (2017) reported in-depth global research from 2009 to 2016 on how businesses adopt and integrate sustainability into strategies and practices. They concluded that sustainable business practices are not yet widespread and progress needs to be accelerated. Many business leaders execute strategies aligned with global sustainable development goals but not necessarily in sync with their core businesses. There is still a lack of fully understanding that opportunities can be created by embracing a sustainable strategy (Kiron et al., 2017). This need for businesses to embrace sustainability spurred research on the use of business models (BMs) to help drive organizational sustainable development but it is still a new focus. In the summary of a special journal issue on business models for sustainability (BMfS), Schaltegger, Hansen and Lüdeke-Freund (2016) proposed that “a business model for sustainability helps describing, analyzing, managing and communicating: i) a company’s sustainable value proposition to its customers, and all other stakeholders, ii) how it creates and delivers this value, iii) and how it captures economic value while maintaining or regenerating natural, social and economic capital beyond its organizational boundaries” (p.6). They concluded that further integrative research is needed on using BMs to drive industry transformations. Similarly, the framework for strategic sustainable development (FSSD) has proven that science can help business leaders with sustainability transitions. The FSSD is a systematic, comprehensive and scientific approach that enables multilateral and cross-sectoral understanding and collaboration (Broman and Robert, 2017).

## Approach

This paper summarizes the sustainable business model (SBM) literature by addressing definitions, frameworks, archetypes, tools and assessments. The paper then summarizes the FSSD and discusses the limited literature that has combined both concepts. The body of literature was explored using Scopus to first gather data on ‘sustainable business models’ or ‘business models for sustainability’. Due to limited time, the review was not exhaustive and therefore all concepts may not be included. The second search was for ‘business model’ and ‘FSSD’ and returned four (one was redundant) journal articles published in 2017. Overall, the aim is to summarize the two concepts and propose the increased use of their combination to scientifically and socially enhance the development of SBMs.

## Key insights

### Sustainable business models

Lüdeke-Freund (2010) theoretically examined the interrelations between ecological sustainability, business activities and BM components from a strategic management perspective to define an SBM as “a business model that creates competitive advantage through superior customer value and contributes to the sustainable development of the company and society” (Lüdeke-Freund, 2010, p.23). Morioka et al. (2017) explored the use of SBMs to integrate sustainability into core business decisions and defined an SBM as “a representation of business elements, their interrelations and the systemic context that enable sustainable value exchange with stakeholders towards corporate sustainability performance, translating and providing feedback between corporate strategy and operations” (p. 724).

Beyond definitions, some authors proposed frameworks and tools to develop SBMs and describe required components, functions and interrelationships. Stubbs and Cocklin (2008) generated characteristics and components of an ideal SBM to conclude that “an organization adopting an SBM develops internal structural and cultural capabilities to achieve firm-level sustainability and collaborates with key stakeholders to achieve sustainability for the system that the organization is part of” (p. 123). Joyce and Paquin (2016) expanded the original business model canvas (BMC) developed by Osterwalder & Pigneur (2010) to integrate environmental and societal considerations. This ‘triple layered business model canvas’ includes an environmental layer that adds a life-cycle perspective and a social layer that focuses on stakeholder engagement and management. The life-cycle perspective was also used to create the sustainable value analysis (SVA) tool. The tool analyzes the product lifecycle to systematically identify uncaptured value and convert it to opportunity (Yang, Vladimirova and Evans, 2017). Value uncaptured is an alternative way to think about the value creation and capture component of SBMs where four forms – value surplus, value absence, value missed, and value destroyed- are analyzed to generate ideas for SBM innovation (Yang et al., 2017). On the topic of value, the value proposition of the product-service systems (PSS) concept has linked it to SBM literature. PSS focuses on the customer’s usage and satisfaction for product development and requires thinking beyond the boundaries of existing practices (Tukker and Tischner, 2006).

Moving from theoretical concepts to practical transformation, Bocken et al. (2014) developed eight (subsequently nine in Ritala et al., 2018) SBM archetypes to stimulate innovative thinking for the creation of SBMs. Their research considered the entire value network and created new systems as opposed to only focusing on the existing firm and technologies. Following the logic that practice provides evidence of transitions in society and business, Ritala et al (2018) used the archetypes to create keywords for sustainable activities and quantitatively analyzed them to indicate sustainable efforts. They concluded that the majority of sustainable activities were linked to financial value and there was more focus on environmental than social and organizational efforts. Similarly focusing on ways to assess SBMs, Brehmer, Podoyntsyna and Langerak (2018) used Zott & Amit’s (2010) boundary-spanning systems approach to BM design elements -content, structure and governance- as the framework for the creation of sustainability codes and a performance assessment. Tauscher and Abdelkafi (2018) took a strategic management approach to create a simulation model that determines scalability and robustness of SBMs. They utilized feedback loops based on systems dynamics modeling principles in order to capture the complexity of each scenario.

In the theoretical development of SBMs, it can be seen that researchers have tried to embed sustainability into all processes and expand beyond organizational boundaries, embracing systems thinking and wider stakeholder collaboration (Stubbs and Cocklin, 2008; Lüdeke-Freund, 2010; Bocken et al., 2014; Brehmer, Podoyntsyna and Langerak, 2018; Tauscher and Abdelkafi, 2018). However, the research has not yet matured and there is a lack of agreed theoretical concepts and empirical testing (Dentchev et al., 2016; Evans et al., 2017). There is also a need for sustainability research to be more systematic and unified (Broman and Robert, 2017).

## The framework for strategic sustainable development

For over 25 years, the FSSD has undergone continuous development through a rigorous, systematic, and iterative process of peer and practitioner reviewing and testing (Broman and Robert, 2017). Best summarized by Missimer (2015), “...the FSSD has been designed to give guidance on strategically moving any region, organization, project or planning endeavor towards social and ecological sustainability in an economically viable way” (p.2). There are several motivations for the development and use of this sustainability framework. The benefits and opportunities of proactive action need to be understood by and illustrated to organizations. Identifying ‘root causes’ that are often overlooked or underestimated can create possibilities for ‘root solutions’ and eliminate fundamental unsustainable practices. Unsustainable practices become economically riskier as markets shift to be sustainability-driven and thus their elimination is automatically beneficial. The FSSD aims to identify these ‘root causes’ (Broman and Robert, 2017).

The FSSD also aims to provide an overarching multidisciplinary structure that is complimentary to other supportive tools and frameworks. A key outcome of the framework’s development is a science-based definition for sustainability, ‘sustainability principles’, that is adaptable to various disciplines. It is compliant with available relevant scientific knowledge and allows for well-defined and measurable processes, comparisons and outcomes. This enables the quick elimination of scientifically unachievable visions. Many challenges are also faced when trying to solve current problems across various preferences and values, without potentially creating new problems in the future. Therefore, a unifying definition presents a needed agreement on what is essential for the sustenance of social and ecological systems to prevent unsustainable development.

Another key component is backcasting planning that is a strategic planning method at the core of this framework. First the vision is defined that follows the ‘sustainability principles’ and then various scenarios are created in a step-by-step process to reach this vision. The vision must be principle based instead of specific to a scenario because as conditions change, what was previously perceived to be ideal may no longer be relevant and what previously seemed unachievable may become feasible. This is flexible and transferable. Finally the FSSD also includes operational guidelines, ‘ABCD-procedure’, to guide organizations through strategic sustainable transitions (Figure 1).

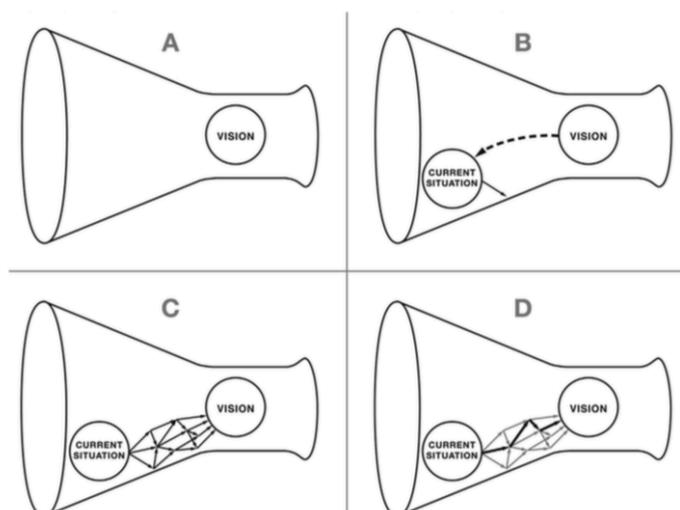


Figure 1. The ABCD-procedure can be described using this funnel metaphor starting with the sustainable vision, highlighting the challenges of the current situation, creating ideas to reach the vision and then structuring these into a strategic plan (Broman and Robert, 2017, pp. 21).

A critique of the FSSD was the weakness of the social attributes in comparison to the ecological and economic attributes. A similar trend was identified in the SBM literature and this seems to be the general case with sustainability transitions

(Adams et al., 2016; Broman and Robert, 2017; Missimer, Robèrt and Broman, 2017; Ritala et al., 2018). To counter this, over the past 10 years, the FSSD has and continues to be socially enhanced by researchers focused on 'social sustainability principles' (Missimer et al., 2017).

There are several examples globally of FSSD applications that have led to comprehensively aiding organizations with the reduction of social and ecological non-compliance along with developing new opportunities. It was designed to unify various supporting mechanisms for sustainable development. Despite this, the uptake of the FSSD has been slow. This could be due to complexity and sophistication as skilled facilitation and significant effort is required to utilize the framework. For a comprehensive description of the FSSD and the most recent version, see Broman and Robert (2017).

## Discussion and conclusions

Three journal articles were found that combine the FSSD and BM concepts. In an effort to enhance strategic sustainable development from a business perspective, Franca et al. (2017) combined the FSSD with the BMC through action research that is still ongoing. The BMC blocks were strengthened by the integration of sustainability-driven thinking towards longer-term market requirements. The FSSD was enhanced by thoroughly integrating a business perspective. The most notable business impacts from the combination were BM scalability to global level, risk identification and avoidance, investment strategy, and enhanced partnerships and social integration. Rauter, Jonker and Baumgartner (2017) used the FSSD to investigate how and why companies integrate sustainability into their BMs. They found that the FSSD provided greater clarity where there was a lack of specific sustainability goals. Kurucz et al. (2017) developed a conceptual model of relational leadership for strategic sustainability and incorporated findings from leadership research on two BM development and assessment tools theoretically aligned with the FSSD. The use of the FSSD appears to be a recent and underdeveloped approach to embedding sustainability into the BM concept. Franca (2013) began research on BM design for strategic sustainable development when there were no other similar tools. Subsequently, as seen in this paper which is not comprehensive, others have and continue to pursue different ways to embed sustainability in BMs (Joyce and Paquin, 2016; Yang et al., 2017) indicating that this topic warrants wider research and validation.

Given that actions in one location can have an impact on the other side of the world, a systematic view is needed for the complex topic of sustainable development (Stubbs and Cocklin, 2008). The FSSD provides a scientific and methodological multidisciplinary process for defining, implementing and analyzing sustainability. This leads to the question: *How can the FSSD as a theoretical framework support the development of SBMs?* This paper concludes by proposing that exploring the interrelationship between SBMs and the FSSD could lead to a systematic, scientific and strategically robust SBM concept that embeds sustainability in the core of organizations. This is because the FSSD focuses on the elimination of fundamental unsustainable practices which if left unchecked, could actually reverse progress. The research could improve the understanding of sustainability challenges and how they may be turned into opportunities. The research may also highlight whether or not current actions are indeed sustainable based on the FSSD definitions. Further, the socially strengthened FSSD could enhance the integration of social sustainability in SBMs. Overall, the research could be useful for organizations and policy makers in regards to guiding sustainability transitions using SBMs.

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