# Chapter 14 Sustainable Business Models Implementation in Industry: Strategies and Challenges – A Systematic Review

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#### **ABSTRACT**

To achieve sustainability, organizations need to mutate their entire business logic and strive to balance the so-called triple bottom line, which is economic, environmental, and social values. Sustainable business models (SBMs) combine a triple bottom line approach and take into consideration a wide range of stakeholder interests, including environment and society. However, integrating sustainability into organizations' business functions proved to be a challenging process for practitioners. Sustainable business model archetypes were introduced to depict groupings of mechanisms and solutions that may accelerate building up SBMs, which assisted in developing a common language that can be used to expedite the development of SBMs in research and practice. The purpose of this chapter is to explore the literature and analyze the practices, strategies, and challenges faced by businesses from different industrial sectors that introduced sustainability to their business models.

#### INTRODUCTION

The concept of Sustainable Business Models (SBMs) depicts the rationale of how organizations create, deliver and capture value in the economic, environmental and social contexts, in a sustainable way (Nosratabadi et al., 2019)(Schaltegger, Hansen, & Lüdeke-freund, 2016). This sustainability concept arose as a result of the increasing awareness of environmental issues such as air pollution, climate change and global warming, which affect both humans and environment negatively (Chofreh et al., 2019). For decades, most organizations' business models were not prioritizing sustainability issues, despite their serious environmental and societal effects which influence human beings and nature. However, interna-

DOI: 10.4018/978-1-7998-7513-0.ch014

tionalization, in addition to pressures to keep up with Sustainable Business Goals (SDGs) by international and regional governments programs forced organizations to transform the way they do their businesses toward sustainability outcomes. It resulted in worldwide competition among companies, and the conventional business models were struggling to find appropriate solutions (Dyllick & Hockerts, 2002) (Schaltegger, Hansen, & Lüdeke-Freund, 2016). Consequently, SBMs emerged as alternative concept to bring competitive advantage to organizations, by empowering the traditional business models to meet the SDGs, while preserving productivity and profitability (Goni et al., 2020) (Chofreh et al., 2019).

Schaltegger et. al. (Schaltegger, Hansen, & Lüdeke-freund, 2016) defined Sustainable Business model as "the model that helps describing, analysing, 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". Hence, SBMs are characterized by (Evans et al., 2017) (Lüdeke-Freund & Dembek, 2017):

- 1. high level of integration between economic, social and ecological concerns
- 2. extended value concept
- 3. a multitude of stakeholders with distinct expectations
- 4. a managerial mentality that advocates sustainability-oriented norms and values and
- 5. a need to implicate the wider value creation ecosystem to understand the business models

Consequently, both researchers and practitioners started investigating the development of SBMs, either completely new or modified from the existing ones, in a way that increase economic prosperity, beside reducing negative or creating positive external effects for the natural environment and society (Boons & Lüdeke-freund, 2013). Solutions presented in previous literature highlighted different characteristics for implementing SBMs based on business domain. It is obvious from reviewing the literature that applications of SBMs impose new challenges, innovations, and adaptation of the new notion of sustainability. The transformation from traditional business models to SBM demands practitioners to look beyond the organization, since the sustainability concept involves the triple-bottom-line factors, namely: economy, environment and society.

Bocken et al. (Bocken et al., 2014) conducted extensive literature and practice review and proposed archetypes to depict the tools and solutions to develop SBMs. Those archetypes have been updated in 2016 by Bocken et. al (N. M. P. Bocken et al., 2016) to include a broader scope as illustrated in figure 2 (see appendix for full framework), in which the broad nature of approaches to implement SBMs are grouped into three dimensions, to constitute a fundamental unified framework. Schaltegger et al. (Schaltegger, Hansen, & Lüdeke-freund, 2016) concluded on their research that SBMs composed of three main elements, which are value proposition, value creation and value capture. Evans (Evans et al., 2017) developed five propositions that support the creation of SBMs in a unified perspective, which act as a foundation that assist organizations to investigate and experiment the alternative new business models. Moreover, Florian (Lüdeke-Freund et al., 2017) defined the notion Sustainable Business Model Pattern as "pattern captures the similarities of sustainable business models that are repeatedly followed, i.e. similarities in terms of business model design principles, elements, and their arrangements", and identified 45 patterns that have the potential to assist in solving ecological and social problems, which in turn can be used to support Sustainable Business Models Innovation (SBMI) and Sustainability Innovation (SI). Later, in 2020, Florian (Freund, 2020) developed the Business Models for Sustainability

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