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Sustainable business model innovation: A review

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ABSTRACT

The capability to rapidly and successfully move into new business models is an important source of sustainable competitive advantage and a key leverage to improve the sustainability performance of organisations. However, research suggests that many business model innovations fail. Despite the importance of the topic, the reasons for failure are relatively unexplored, and there is no comprehensive review of the sustainable business model innovation literature. This research provides a review of the literature, using a systematic database search and cross-reference snowballing. Its key contributions are: (1) a review of the key underlying concepts, discussing their similarities and differences and offer new definitions where there is an identified need; (2) we identify a research gap; and (3) we deduct research questions to address the gap.

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1. Introduction

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Sustainability issues, like growing inequality (Piketty and Saez, 2014) and the deterioration of our natural livelihood (Rockström, Steffen, and Noone, 2009) make the transformation to a more sustainable economic system increasingly desirable. To realise this

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transition, private business is a pivotal stakeholder commanding the most resources and capabilities (Porter and Kramer, 2011). However, technological advances towards sustainability are increasingly incremental, and many companies find it difficult to meet their sustainability targets. Therefore, innovation on the business model level is required to align incentives and revenue mechanisms to leverage sustainable solutions (Rashid et al., 2013).

Business model innovations are suspected to yield higher returns than product or process innovations (Chesbrough, 2007; Lindgardt et al., 2009), and sustainable business models might have the additional benefit of higher risk mitigation and resilience (Choi and Wang, 2009) and yield additional diversification and value cocreation opportunities (Nidumolu et al., 2009; Porter and Kramer, 2011; Tukker and Tischner, 2006). To realise these advantages organisations become increasingly interested in implementing sustainable solutions (Evans et al., 2009).

However, many business model innovations fail (Patel, 2015). This has serious economic implications for companies (Chesbrough, 2007) and leads to considerable delays in the adoption of sustainable solutions (Geissdoerfer et al., 2017a, b). Despite the importance of these issues, the reasons for failure remain relatively unexplored.

To explore this issue, we conducted a comprehensive review of the sustainable business model innovation literature. We identified various definitions of the key underlying concepts, which we interpreted and synthesised into working definitions. We identified essential research gaps and formulated research questions based on our analysis and thinking. We propose that these and similar questions are addressed by the development of research agendas based on the gap and the proposed working definitions.

The paper is structured as follows. First, the employed method for the literature review is described in section 2, before the key underlying concepts for this research are introduced in section 3. This is followed by a description of the research gap in section 4, based on which, research questions are formulated in section 5. The paper concludes with a short discussion of the findings and some final remarks in section 6.

2. Method

The research was based on a structured literature review, following the recommendations of Creswell (2014), Easterby-Smith et al. (2015), and Tranfield et al. (2003). A systematic database search was conducted, followed by cross-reference snowballing, as illustrated in Fig. 1.

In a first step, a systematic literature search was conducted. As shown in Table 1, the search strings, "business model" in 'Title' respectively 'Article title' and "sustainable business model", "business model* for sustainability", "business model innovation" AND sustainab*, "business modelling" AND sustainab*, and "business model design" AND sustainab* in 'Topic' respectively 'Article title, Abstract, Keywords' were used to search for reviews or articles in English on the Thomson Reuters Web-of-Science and Elsevier Scopus databases. Subsequently, the abstracts of the identified publications where scanned to define an initial sample of relevant literature.

In a second step, relevant cross-references were identified in this initial sample by first scanning the publications' title in the reference section and their context and cited content in the text. The abstracts of the identified additional publications were scanned to determine whether the paper was relevant. Relevant references were subsequently added to the sample and analogously scanned for relevant cross-references. This process was repeated until no further relevant cross-references could be identified.

In a third step, the final sample was integrated, synthesised, and compiled into the literature review presented in the following. The process was updated on the day of submission.

3. Underlying concepts

This section presents definitions of the concepts of business models, sustainable business models, business model innovation, and sustainable business model innovation, discusses their similarities and differences and synthesises new definitions where there is an identified need. We also introduce the notion of the design-implementation gap of sustainable business model innovation identified during the review. The first four parts of this section are accompanied with a selection of different definitions, while an overview of all considered definitions can be found in Appendix A to D respectively.

3.1. Business models

The business model concept gained popularity during the dotcom boom of the 1990's with a vibrant and diverse research activity more recently (Zott et al., 2011). This activity led to an extensive special issue in the Long Range Planning journal in 2010 and a considerable range of literature reviews, like Bieger and Reinhold (2011), George and Bock (2011), Massa et al. (2017), Schallmo (2013), and Zott et al. (2011), which were integrated, updated, and synthesised into this literature review, whose result is illustrated in Table 2.

During the e-commerce boom of the 1990's, new innovative revenue mechanisms were introduced. In this context, the business model concept was originally used to communicate complex business ideas to potential investors within a short time frame (Zott et al., 2011). From there, the purpose of the concept developed to be now seen as both a tool for the systemic analysis, planning, and communication of the configuration and implementation of one or more organisational units and relevant parts of their environment in face of organisational complexity (Doleski, 2015; Knyphausen-Aufsess and Meinhardt, 2002), as well as a strategic asset for competitive advantage and firm performance (Afuah, 2004; Casadesus-Masanell and Ricart, 2010; Chesbrough, 2007; Hamel, 2000; Magretta, 2002).

For organisational decision-making and academic research in the context of emerging industrial phenomena, like Industry 4.0 (Bundesregierung, 2014) or Re-Distributed Manufacturing (Srai et al., 2016), the business model concept allows to extrapolate from potential customer and value chain benefits to the required configuration and implementation of the other business model elements (Osterwalder et al., 2014; Yang et al., 2016). The resulting potential business models provide the necessary information about the implementation of phenomena's conceptual and technological implications that is required as a basis for further research in these.

As these definitions show, there are three main groups of understanding of the term business model, as illustrated in Fig. 2. The concept is either described as a model of an organisational system (e.g. Baden-Fuller and Morgan, 2010; Knyphausen-Aufsess and Meinhardt, 2002), as an abstract characteristic of an organisational unit, (e.g. Osterwalder and Pigneur, 2010; Teece, 2010), or with a reduced scope that equates the term with individual elements of other authors' definitions or reduce it to achieve certain means (e.g. Doganova and Eyquem-Renault, 2009). There is a central role of value in most definitions, roughly following the categorisation of Richardson (2008), value proposition, value creation and delivery, and value capture, with some authors also adding the value network (e.g. Zott and Amit, 2010).

Business model working definition

Based on this analysis, we define business models as simplified representations of the value proposition, value creation and delivery, and value capture elements and the interactions between these elements within an organisational unit.

However, since there can be several representations of the same organisational unit, perceptions of the term must be considered Download English Version:

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