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Business Models for Sustainability: Origins, Present Research, and Future Avenues

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*Editorial Article for Organization & Environment Special Issue
“Business Models for Sustainability: Entrepreneurship, Innovation and Transformation”*

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Keywords

business model, sustainability, corporate sustainability, sustainability management, innovation, transformation, organizational development, value proposition, sustainable entrepreneurship

Origins of the Theme

While a consensus appears to have evolved among many sustainability researchers and practitioners that sustainable development at the societal level is not very likely without the sustainable development of organizations, the business model as a key initiating component of corporate sustainability has only recently moved into the focus of sustainability management research. Apparently, the usual approaches to sustainable development of philanthropy, corporate social responsibility, and technological process and product innovation are insufficient to create the necessary radical transformation of organizations, industries, and societies toward genuine, substantive sustainable development. More in-depth research is needed on whether both modified and completely new business models can help develop integrative and competitive solutions by either radically reducing negative and/or creating positive external effects for the natural environment and society (cf. Boons & Lüdeke-Freund, 2013; Hansen, Große-Dunker, & Reichwald, 2009; Schaltegger, Lüdeke-Freund, & Hansen, 2012; Stubbs & Cocklin, 2008). One of the first articles in this field was published in *Organization & Environment*. The Stubbs and Cocklin (2008) article titled “Conceptualizing a ‘Sustainability Business Model’” was a seminal study published a few years before the currently emerging wave of academic business model publications.

The Stubbs and Cocklin study revealed a set of normative principles of organizational development that together form an “ideal type” of sustainability-oriented business model. These authors pioneered the field of case-based theory building for sustainability-oriented business models, using Interface Inc. and Bendigo Bank as examples of sustainability-driven organizations. Their ideal type comprised different structural and cultural attributes of an organization, such as developing community spirit, investing in employees' trust and loyalty, and engaging in sustainability assessment and reporting. They also advanced propositions about sustainability-oriented business models dealing with an organization's purpose and goals, its performance measurement approach, the need to consider all stakeholders, how nature should be treated, whether the organization's leaders drive the necessary cultural and structural changes to implement sustainability, and whether a systems-level, as well as a firm-level, perspective should be employed.

While Stubbs and Cocklin's article is embedded in a wider range of management literature on business models and applied analyses of pioneers in the field (e.g., Wells & Nieuwenhuis, 2004, on business models for sustain-

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ability in the automotive sector), more recently, an increasing number of contributions on business models and sustainability have been published in a variety of journals. This special issue is one of the first attempts to dedicate a complete journal issue to this new and emerging field of research.

Appraising the Present Research

Background

The recent global economic and financial crises have raised fundamental questions about the impacts of existing corporate business models on the sustainability of the global economy and society. These crises have prompted various international organizations and researchers to call for reconsidering possible contributions of companies to sustainable development (e.g., United Nations Industrial Development Organization, 2013; World Business Council for Sustainable Development, 2012). Sustainable development was defined nearly 30 years ago as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (World Commission on Environmental Development, 1987, p. 41). On the organizational level, the vision of sustainable development has led to concepts such as sustainability management, corporate sustainability (Dyllick & Hockerts, 2002; Schaltegger & Burritt, 2005), sustainability innovation and sustainable entrepreneurship (Schaltegger & Wagner, 2011), and social business (Yunus, Moingeon, & Lehmann-Ortega, 2010).

Sustainability management refers to approaches dealing with social, environmental, and economic issues in an integrated manner to transform organizations in a way that they contribute to the sustainable development of the economy and society, within the limits of the ecosystem (e.g., Schaltegger & Burritt, 2005; Whiteman, Walker, & Perego, 2013). Today, leaders, managers and entrepreneurs are challenged to contribute to sustainable development on the individual, organizational, and societal levels. Scholars and practitioners are therefore increasingly exploring whether modified and completely new business models can help maintain, or even increase, economic prosperity, by either radically reducing negative or creating positive external effects for the natural environment and society (e.g., Boons & Lüdeke-Freund, 2013; Hansen, Große-Dunker, F., & Reichwald, 2009; Schaltegger, Lüdeke-Freund, & Hansen, 2012; Stubbs & Cocklin, 2008). This perspective covers not only existing organizations and transformations of their business models (e.g., Sommer, 2012) but also entirely new models pioneered by entrepreneurs and intrapreneurs (Hockerts & Wüstenhagen, 2010).

What Is a Business Model?

Early business model concepts emerged at the end of the 20th century, motivated by the need to describe and analyze new forms of business (e.g., e-businesses or virtual organizations; Alt & Zimmermann, 2014; Wirtz, Pistoia, Ullrich, & Göttel, 2015). The notion received attention as a general management concept through the early publications of Chesbrough and Rosenbloom (2002) and Magretta (2002), for example, who linked the business model to strategy and innovation. Since then, business model research has produced numerous approaches to conceptualizing business models. A conventional definition that resonates well with the overall perspective motivating this special issue was provided by Teece (2010), who emphasized a business model’s value creation function:

A business model describes the design or architecture of the value creation, delivery and capture mechanisms employed. The essence of a business model is that it crystallizes customer needs and ability to pay, defines the manner by which the business enterprise responds to and delivers value to customers, entices customers to pay for value, and converts those payments to profit through the proper design and operation of the various elements of the value chain. (p. 179)

A detailed definition focusing on design elements of the value creation function has been proposed by Osterwalder and colleagues with the business model “ontology” and later “canvas” (Osterwalder & Pigneur, 2009; Osterwalder, Pigneur, & Tucci, 2005).

In conventional terms, the business model concept “draws from and integrates a variety of academic and functional disciplines” (Chesbrough & Rosenbloom, 2002, p. 533). Research in sustainability management has a similar interdisciplinary character (Schaltegger, Beckmann, & Hansen, 2013). In this sense, the business model is an excellent unit of analysis for studying and advancing common managerial and entrepreneurial approaches as well as stimulating and revitalizing old and new business philosophies.

Advances Toward Business Models for Sustainability

The business model perspective is particularly interesting in the context of sustainability because it highlights the

value creation logic of an organization and its effects and potentially allows (and calls) for new governance forms such as cooperatives, public private partnerships, or social businesses, thus helping transcend narrow for-profit and profit-maximizing models. The growing concerns with the modus operandi of our capitalist societies and economies (e.g., Porter & Kramer, 2011), including its institutions and organizations, might be one reason for the growing academic and practical interest in alternative business models.

Early work on business models for sustainability dealt with the structural and cultural roots of models that contribute to corporate sustainability (Stubbs & Cocklin, 2008). To analyze business models from a sustainability perspective was also seen as a means to overcome the technology bias of traditional “green” approaches; as a way of sustainability-oriented innovation at the level of use-systems or functions, for example, through product-service systems such as car- or bike-sharing (Hansen et al., 2009); as well as a tool to rescale and localize otherwise monolithic industrial infrastructures (Wells & Nieuwenhuis, 2004). Other researchers started investigating the links between business models and business cases to advance corporate sustainability management (Schaltegger et al., 2012). While extant research on sustainable business models has often been rooted in ecological sustainability, other scholars have seen business models as tools for addressing social needs. For example, Seelos (2014) examined entrepreneurial approaches to improving health care services in poor regions, and Sánchez and Ricart (2010) developed a typology of “isolated” and “interactive” business models in low-income markets.

What these different approaches have in common is their focus on organizational value creation—see Teece’s (2010) definition given above—which has been deliberately extended toward social and ecological values by sustainability researchers. It is this extension and the emphasis given to organizational, market and societal transformations that distinguish the discourse on business models for sustainability from their conventional antecedents, which focus on organizational value appropriation, that is, one-dimensional profit maximization, without considering the consequences for the wider social and ecological contexts. The popularity of the business model concept therefore has two faces: It stimulates new approaches in the fields of corporate sustainability management and sustainable entrepreneurship, but, at the time, its conventional interpretation strengthens the business paradigm of egocentric value creation (cf. Breuer & Lüdeke-Freund, 2014). Here, sustainability researchers and practitioners are challenged to offer strong and attractive alternatives.

Although the scope of issues and methods in this field is expanding continuously (e.g., Bocken, Rana, & Short, 2015; Bocken, Short, Rana, & Evans, 2014), an unequivocally supported definition of business models for sustainability is still missing. Boons and Lüdeke-Freund (2013), based on a literature review, proposed basic normative requirements for each of the constituting elements of business models: The *value proposition* must provide both ecological or social and economic value through offering products and services, the *business infrastructure* must be rooted in principles of sustainable supply chain management, the *customer interface* must enable close relationships with customers and other stakeholders to be able to take responsibility for production and consumption systems (instead of simply “selling stuff”), and the *financial model* should distribute economic costs and benefits equitably among actors involved.

Based on the present literature and what we learned from the authors and reviewers of this special issue, we propose the following definition of a business model for sustainability:

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.

Extending the conventional view of a business model designed around a value proposition for customers, we acknowledge that no sustainable value can be created for customers without creating value to a broader range of stakeholders. A business is carried by a stakeholder network and – in spite of the fact that a business model is a market-oriented approach – particularly a business that contributes to sustainable development needs to create value to the whole range of stakeholders and the natural environment, beyond customers and shareholders.

Articles in This Special Issue

The articles in this special issue address some of the Stubbs and Cocklin (2008) business model traits and normative principles for an “ideal type” of a sustainability-oriented business model (see above), while other topics, such as performance measurement and management or leadership and championship for sustainability-oriented business modelling, have yet to be studied.

Starting from the observation that companies can and must adapt or even transform their existing business models through organizational learning and new routines and knowledge to cope with increasingly sustainability-

driven demands, Nigel Roome and Céline Louche adopt an internal perspective to study the organizational changes leading to more sustainability-oriented business models. Peter Wells emphasizes that understanding such adaptive and transformational organizational processes requires detailed analyses of the architecture, principles, and components of business models. Three further articles show how sustainable business models can be analyzed and developed from different perspectives: Sally Randles and Oliver Laasch discuss a normative business model view representing reflexive institutional entrepreneurialism, and Nizar Abdelkafi and Karl Täuscher take a system dynamics perspective, while Antony Upward and Peter Jones study the business model approach of striving for strong sustainability. Finally, Caroline Gauthier and Bettina Gilomen illustrate that this transformation ideally goes beyond single organizations and may include the provision of collaborative business models influencing, for example, urban districts, regions or even whole economies. While Abdelkafi and Täuscher propose a systems perspective on value creation on both the level of the firm and its environment, Gauthier and Gilomen analyze multi-actor collaborations around business model innovations for urban energy efficiency projects. Interestingly, those articles that address Stubbs and Cocklin's business model propositions in a more integrative manner, such as Upward and Jones, and Randles and Laasch, take rather theoretical or conceptual routes. An exception is Wells's case-based framework, which describes and analyzes business models based on their architecture, the principles of their design, and the components on which they are based.

The articles in this special issue significantly extend and enrich the mainstream business model literature as well as the current sustainability-oriented business model discourse. Using diverse methodological approaches—such as longitudinal comparative case studies by Roome and Louche, engaged scholarship by Wells, system dynamics by Abdelkafi and Täuscher, ontology engineering as used in information systems research by Upward and Jones and conceptual development by Randles and Laasch—our set of authors offer in many ways fundamentally extended and even completely new perspectives on business models for sustainability:

- First, *theoretically and conceptually new approaches and foci* are explored by Roome and Louche by analyzing transformation processes inside the “black box” of existing organizations, offering a model to explain organizational learning and adaptation. New theoretical perspectives on such processes are also proposed by Wells in his investigation of the architectures, principles, and components of business models, and by the application of a system dynamics perspective by Abdelkafi and Täuscher on the interrelations between business models and the natural environment. Finally, theoretical frameworks for strongly sustainable business model innovation (by Upward and Jones) and normatively grounded business models (by Randles and Laasch) are presented.
- Second, *new ontologies*, as a means to structure and describe business models, are proposed by our authors featuring the perspectives of systems dynamics (Abdelkafi and Täuscher), principles of business design (Wells), reflexive institutional entrepreneurialism (Randles and Laasch), and strong sustainability (Upward and Jones). This expansion effort includes the extension of common business model analyses to a multilevel model analyses (Abdelkafi and Täuscher), an embedded view of business within society and the natural environment (Upward and Jones), market and industry dynamics (Wells), and urban districts (Gauthier and Gilomen).
- Third, *in depth empirical examinations of practical cases* are conducted. They illustrate multiple win-win potentials through improved energy efficiency and financial returns to investors (Gauthier and Gilomen) or by applying small-scale and more sufficiency-oriented business principles (Wells). This special issue also analyzes how new business models evolve as a result of striving for new organizational knowledge and routines rather than as a starting point for transformation (Roome and Louche).

While many links between the different foci of these contributions can be drawn, all authors relate their respective works to established discourses in both mainstream and sustainability management research, thus offering direct extensions to what is currently being developed in related fields of research.

From a pragmatic perspective, building bridges to generate real progress in sustainability management is key. One nexus of change inside the organization and a bridge that needs to be crossed, if existing business models are to become more sustainable, is business model transformation. Other bridges relate to the direct market environment of the organization, the consideration of market positions, and the coevolutionary interaction between business models of competitors in a market. Yet another bridge to society and the natural environment requires taking a strong sustainability perspective into account. From a theoretical view, the entrepreneurial role needs to be reflected in the light of creating a normative business model aiming for strong sustainability and acknowledging system dynamics and the societal embeddedness of all business activities.

Future Avenues

While this special issue provides new theoretical and conceptual perspectives as well as empirical cases, more research on business models for sustainability is needed to further develop more integrative theories of sustainability management that can effectively contribute to sustainable development of the economy and society. Some of the issues raised in our call for papers (Schaltegger, Hansen, & Lüdeke-Freund, 2013) were not addressed by our authors and provide an agenda for future research.

For example, how can theories on *the organizational level* (e.g., dynamic capabilities, ambidextrous organization and disruptive innovation), on the *individual level* (e.g., responsible leadership and entrepreneurship) or on *both levels* (e.g., structuration theory, organizational learning, organizational change, and organizational culture) explain the transformation of business models of established firms? How do business models for sustainability *coevolve leading to industry transformations*, both via market interaction alone or through system transitions? Which *learning-action networks* and *cooperative arrangements*, but also political power struggles between stakeholder groups, are involved in the creation of business models for sustainability within or across sectors? Which *management instruments* enable the management of or transition to business models for sustainability? For instance, which tools support innovation (e.g., design thinking, The Natural Step framework, biomimicry) and strategy implementation (e.g., Business Model Canvas) for business models for sustainability, and how can performance and societal impacts be managed or even measured on the business model level (e.g., Sustainability Balanced Scorecard; cf. Lüdeke-Freund, Freudenreich, Saviuc, Schaltegger, & Stock, in press)?

This special issue is meant to provide a snapshot of current research on business models for sustainability and a motivation for other colleagues to join the growing community of sustainability-oriented business model researchers. We hope that this special issue provides a solid bridge between and among the early days of research on business models for sustainability, its present and its future.

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