



<http://www.diva-portal.org>

Postprint

This is the accepted version of a paper presented at *International Product Development and Management Conference, June 11-13, 2018, Porto, Portugal..*

Citation for the original published paper:

**Annabeth, A., Ritzén, S. (2018)**

**Creating and capturing sustainable value through business model and service innovation**

**In:**

**N.B. When citing this work, cite the original published paper.**

Permanent link to this version:

<http://urn.kb.se/resolve?urn=urn:nbn:se:kth:diva-250318>

## CREATING AND CAPTURING SUSTAINABLE VALUE THROUGH SUSTAINABLE BUSINESS MODELS AND SERVICE INNOVATION

Annabeth Aagaard<sup>1\*</sup> & Sofia Ritzén<sup>2</sup>

1 Department of Business Development and Technology  
Aarhus University  
Birk Centerpark 15, 7400 Herning, Denmark

2 Department of Integrated Product Development  
KTH Royal Institute of Technology  
Brinellvägen 83, Stockholm, Sweden

\*aaa@btech.au.dk

### ABSTRACT

Numerous researchers and practitioners emphasize the potential in creating value through sustainable business models. However, little attention has been paid to how sustainable value is created and implemented into the organization and how customers perceive sustainable value in service. The aim of this paper is to explore this research gap empirically through a case study of active facilitation and implementation of sustainable business models as experienced internally and externally among two hotels' employees and customers. The contributions of the study relate to the dual perspective (internal and external) on sustainable value creation as well as the development of SBMs in service, as the extent SBM literature is closely related to the creation and delivery of physical goods as in product-oriented industries. The findings reveal different key control mechanisms in sustainable value creation and value capture through sustainable business models and service innovation. The managerial implications for creating and implementing sustainable business models in service stress the need for employee engagement, customer involvement and targeted and personal communication educating internal and external sustainability ambassadors.

**Keywords:** *value creation, value capture, sustainable business models, sustainable service innovation, service industry, case study*

## INTRODUCTION

The last decade has revealed growing interest in various aspects of how to create sustainable values, which is basically driven by the major challenges in achieving sustainable development as a society. There has been a shift from being reactive and focusing on physical products to being proactive and focusing on value (Carrillo-Hermosilla et al., 2010; Pigasso et al., 2015). This shift includes the development of the research on Product Service Systems (PSS), which in many ways has been driven by sustainability issues (Tukker, 2015), the emergence of the concept of sustainable value creation (Hart & Milstein, 2003), and more recently an evolving area of sustainable business models (SBMs) (Schaltegger et al., 2012; Boons & Lüdeke-Freund, 2013; Bocken et al., 2015). The logic in increasing the scope from product to service-including systems is for firms to become competitive by delivering values that are not carried by physical goods demanding energy and resources but by services. This shift requires better understanding of value-creation processes and demands greater emphasis on SBMs, which is why these areas should inform each other. There is a parallel need to increase the research on sustainable services, both since the research on PSS is as much starting from the product perspective and since sustainable services are a less developed research stream (Horng et al., 2017). Numerous researchers stress how product innovation and service innovation are very different and, as such, new theories and models of service innovation are required (e.g., Edvardsson & Olson, 1996; Fitzsimmons & Fitzsimmons, 2000). The service and manufacturing industries would be strengthened by an increased understanding of how to create value through services in order to impact the dominating product-oriented ways of working.

From a sustainability perspective, services are highly interesting. Within the area of PSS, a reduced environmental impact is seen as almost automatically resulting from adding services to customer value delivery: services should reduce the resource consumption and extend product lifetime (Tukker, 2015). For systems of products and services Tukker (2008) described the change in focus in terms of a continuum stretching from sole product focus to sole service focus, where one goes from being goods-oriented, through use-oriented to result-oriented. Parallel to this, the business models are changing, and it is implied that a greater focus on services goes hand-in-hand with a business development that drives producers to reduce environmental loads. However, this is not comparable to service producers who do not have their value delivery based (or partly based) on a product. The linkage between business development and sustainability in the service industry is therefore not as clear. Nevertheless, although the focus on service in the service industry is obvious in their business model, it is not free from causing critical environmental loads that require increased consideration in order to achieve sustainable development. The drivers defining the development of SBMs—also in the service industry—are therefore of specific interest. Moreover, the literature and practice indicate that PSS are not inherently more eco-efficient (Mont & Tukker, 2006), and consumers are unsure as to whether they will live up to their expectations (Catulli, 2012). Careful attention to detail is required to realize the benefits.

In the development of more sustainable services, it is important to highlight the SBMs of service-dominated companies and to understand the critical co-creation of intangible values, but where environmental loads are still produced using tangible goods. This paper therefore investigates a service industry (hotels) using two cases where sustainability has been identified as a business development driver. The paper aims to illustrate and examine the transition to/development of new and sustainable business

models in these cases. In order to highlight the importance of the co-creation of services, both business creators and consumers are included in the study and the perception of the sustainable values is highlighted. Following on this, critical actions or aspects of new sustainable service BMs will be identified for managers to learn from.

With the demands and the quest for competitive advantage still a dominant driver (He, 2012), businesses are forced to find new ways to achieve success and to remain competitive. Businesses are under pressure to use SBMs to respond to social change (Wang et al., 2011). However, little is known about value creation using SBMs in general and in the service industry in specific. As addressed by Tukker and Tischner (2006), Wells (2008), Schaltegger et al. (2012) and Boons and Lüdeke-Freund (2013), there is a need for further SBM research and into how SBMs are constructed by actors involved in the value creation. Moreover, a key challenge and research gap in BM studies relates to the issue addressed by Teece (2010), who emphasizes the lack of theoretical grounding in economic and business studies, which is apparently also relevant for the study of SBMs.

Consequently, there is a need to address these questions to understand how sustainable value is created, implemented and perceived in a business context. The research question of this study is therefore:

*How are sustainable business models created, implemented and perceived in ways that create and capture value internally and externally—and what are the managerial implications thereof?*

This question is explored in a theoretical discussion and two case studies of service industry businesses working with SBMs. The findings reveal how service businesses identify and facilitate value creation, value delivery and value capture using SBMs and sustainable service innovation, and how their customers perceive the sustainable value created, delivered and captured. This article thus aims to relate sustainable business modeling to business studies. Another contribution of the article is to the understanding of SBM design, as numerous researchers stress how this area has been neglected (Tukker & Tischner, 2006; Wells, 2008; Schaltegger et al., 2012; Boons & Lüdeke-Freund, 2013). A third contribution is to the SBM literature in terms of exploring SBMs in the context of the service industry. While we focus on the potentials of SBMs in research, the research question and findings of this study are also highly relevant for practitioners, as the SBM perspective reveals a number of BM components that must be actively managed to “create customer and social value by integrating social, environmental, and business activities,” as stressed by Schaltegger et al. (2012, p. 112).

## **SERVICE INNOVATION**

The growing significance of services (Sheehan, 2006; Bitner et al., 2008) emphasizes the need for a service-oriented approach to value creation (Song et al., 2000; Lusch et al., 2007; Bitner & Brown, 2008). Significant differences exist between product innovation and service innovation (Lusch & Nambisan, 2015), and numerous researchers therefore stress the necessity for newer sets of theories and models of service innovation (e.g. Edvardsson & Olson, 1996; Fitzsimmons & Fitzsimmons, 2000; Sheehan, 2006). Services are fluid, dynamic and frequently co-produced in real time by customers, employees and technology, often with few static physical properties. Many of the invention protocols and prototype design techniques used for physical goods,

hard technologies and software therefore cannot be applied to human and interactive services; or at least they demand significant adaptation to address service innovation challenges. Services are developed more fluently, processes are often less formalized, and many service providers have no R&D department (Sundbo, 1997). Service innovation is created not just by the supplier and customer, but also by a network of activities involving a host of stakeholders (Gummesson, 2008). In relation to goods, services are used to strengthen the value delivery of physical products, while with a service-dominant logic, services have value unto themselves; provided through a joint process of provider and consumer, value is simultaneously produced while being delivered (Vargo & Lusch, 2008). Vargo and Lusch (2008) write that services depend on the competence of the providers, their application of knowledge and skill, and is for the benefit of another party. Services are intangible and dynamic.

Several researchers have described aspects of customer involvement in service innovation (Hertog et al., 2010) and in successful service business models (Bitner et al., 2008). They stress how services are co-produced in real time by customers, employees and technology, and that techniques for designing physical products are not enough for new services. Lush et al. (2007) and Vargo and Lusch (2007) also frame the importance of co-creation in the service-dominant logic, and co-creation is also emphasized as being critical to *sustainable* innovation (Sopjani et al., 2017).

The inclusion of services in product-based systems is seen as driving the definition of new business models and mechanisms for addressing aspects of sustainability; however, the SBM literature is still dominated by a goods-dominant logic. Boons and Lüdeke-Freund (2013) stress the need for further research on SBMs in general and addressing how sustainability is constructed by the different actors involved in value creation. This need also becomes apparent in service innovation in general (Hertog et al., 2010), and service innovation offers an interesting case of value creation produced by producers and consumers together, building on the characteristics of service innovation touched upon briefly above. Hertog et al. (2010) also stress the need to define the service concept (value proposition) conjointly by defining, understanding and interacting in networks and to define the revenue model of new services. Horng (2017), one of few researchers addressing sustainable service innovation, describes how sustainable innovation in the service industry (referring specifically to hospitality providers such as hotels) depends on understanding both sustainability parameters and innovation diffusion parameters. Finding service that exceeds expectations is obviously critical, as in any innovation; their study also reveals the importance of service providers offering sufficient resources within the organization to ensure a creative environment in which employees can engage in developing new services.

#### **SUSTAINABLE VALUE CREATION**

Several researchers address the concept of value and sustainable value creation (e.g., Bowman & Ambrosini, 2000; Makadok, 2001; Makadok & Coff, 2002; Surie & Ashley, 2008; Bruno & Bruno, 2018). From a classical perspective, the value concept is defined as value derived from value-in-use and value-in-exchange. Value-in-use refers to customers'/end-users' subjective perceptions of the value of a product or service, whereas value-in-exchange refers to the transformation of value in use into the monetary achievement of the company (Bowman & Ambrosini, 2000; Makadok, 2001). In this classic economic perspective, the company and its shareholders are able to

capture a certain amount of exchange value as determined by the customers' competitive position and bargaining power (Bowman & Ambrosini, 2000; Makadok & Coff, 2002). Value capture thus refers to economic value gains and is tightly related to value measures and financial performance in the CSR business case logic.

In an elaborate multi-level perspective developed by Lepak et al. (2007), the classic company-centric understanding of value-in-use and value-in-exchange is extended to a holistic approach, including individual, organizational and societal levels. This implies extending the value-in-use concept from customer perceptions as target users into a broader context, where target users and subjective judgements are found among more actors on all levels (i.e., individual, organizational and societal levels). Moreover, in the context of CSR, more scholars reframe the value construct, meaning that the one-dimensional shareholder logic of profit maximization is extended to more stakeholders and levels of attention (Pedersen et al., 2016; Schaltegger et al., 2016; Upward & Jones, 2016).

The value concept is also closely related to the valuable resources companies need to develop, gain access to and bring into play in order to create value through the exploitation of opportunities, eliminate threats and to stay at the competitive forefront (Bowman & Ambrosini, 2000). According to Barney (1991), resources are considered valuable when they are rare, imperfectly imitable and imperfectly substitutable. From a classic economic perspective, resources are only considered valuable when they are exploited into products and services that are perceived valuable by customers/end-users. In sustainable businesses, however, value propositions go far beyond these conventional products, services and process considerations, and are referred to as the triple bottom-line logic (Bocken et al., 2015; Pedersen et al., 2016). Actors and entities at all levels may benefit from the transformation of value-in-use into value-in-exchange, meaning that value beyond purely economic gains may also be captured on more levels (Lepak et al., 2007). This study emphasizes value-in-use and value-in-exchange and how they can be developed by SBMs, which is identified by exploring the businesses' internal understanding of their sustainable value propositions and value creation together with how the customers/users perceive the sustainable value created, delivered and captured.

#### **SUSTAINABLE BUSINESS MODELS**

Business models (BM) and business model innovation (BMI) has gained an increasing amount of attention in management research and among practitioners over the last 15 year. In an elaborate literature review by Foss & Saebi (2016) 150 peer-reviewed scholarly BMI articles published between 2000 and 2015 are identified and analyzed. Their conclusion is that the literature faces problems with respect to construct clarity and has gaps with respect to the identification of antecedent conditions, contingencies, and outcomes. In many ways, it is circling around defining the concept, understanding different aspects of it and illuminating the strengths and challenges of business models as a theoretical concept and a means for developing organizations (Teece, 2010). It is ongoing research, closely related to its implementation and adoption in businesses. There are a number of definitions of what a business model is: a conceptual tool expressing the business logic of a firm (Osterwalder et al., 2005), the articulation of the logic of value delivery (Teece, 2010), a system of interdependent activities that transcends a firm (Zott & Amit, 2010) and more. In all of these definitions, however, the value proposed to a customer is defined and how it is created and captured is described. Another common denominator is that value captured relates to economic

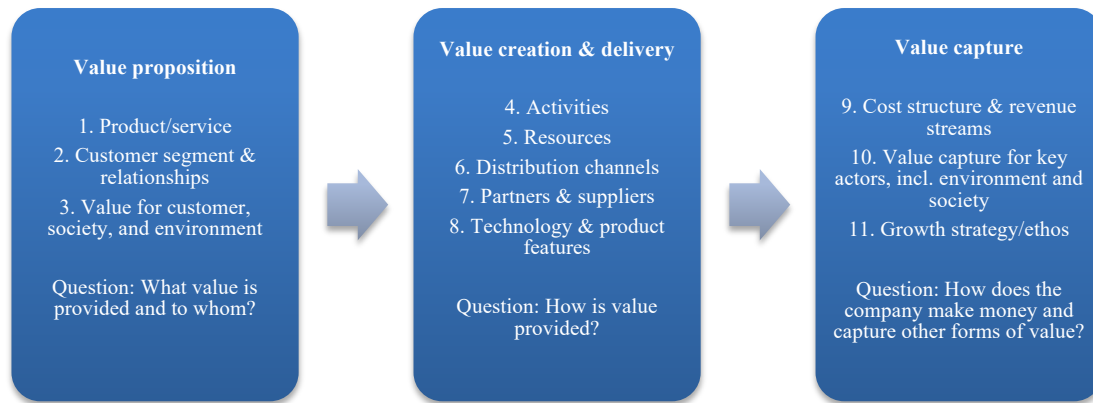
profit or financial consequences. The literature on business models clearly states that whatever is invented in a firm has to be of value to a customer for gaining a profit, which is obstructed by the SBM literature. To achieve sustainable development, it is interesting to understand if this value perspective in the BM literature must be challenged. Innovation is often normative in the sense that financial values and economic profit are the results that count. Sustainable development comprises ecological and social as well as economic values. The innovation stakeholders must be extended to assess what value actually is for sustainable development. In relation to this, the more recently evolving research area of SBMs or “business models for sustainability” is of high interest. The SBM concept seems to be the most widely used (Schaltegger et al., 2016), not to be confused with the endurance of the business model as such.

The research addressing SBMs has produced different types of models; some have a more industrial perspective while others deal with community development (Stubbs & Cocklin, 2008); some challenge the sole economic perspective of business models with adding ecological and social aspects, as in Joyce et al.’s triple-layer business model (2016), while others specifically add social aspects (Yunus et al., 2010) or define a triple bottom-line business model (Osterwalder et al., 2005). SBM studies are either structured in organizational, inter-organizational and societal levels (Boons & Lüdeke-Freund, 2013). They tend to be ad hoc and neither systematic nor systemic (Stubbs & Cocklin, 2008). Consequently, there is a challenge in understanding the area due to its multiplicity (Aagaard, 2016). Bocken et al. (2015) make an important contribution to this understanding by defining nine SBM archetypes that differ in terms of the mechanism for achieving improved sustainability through the business model. While service is an important mechanism or part of a mechanism, these archetypes are all based on the value delivered by physical products. Value in the pure service industry also depends on goods, although it does not hold the core value of, for example, hotels. The SBM literature generally has few examples from the service industry, which is what makes studying the area interesting from a sustainability perspective.

In their work with SBM archetypes, Bocken et al. (2015) apply three key elements in business models, as earlier defined by Richardson (2008): the value proposition, value creation and delivery and value capture (see Figure 1). These elements contain the nine dimensions defined by Osterwalder et al. (2005) in the categorization of BMs and a constructive model for analyzing businesses. We therefore apply this model in our analysis of the cases in this paper.

- *Value proposition*: concerned with the product and service offerings in generating economic return. In a sustainable business, the value proposition provides measurable ecological and/or social value together with economic value (Boons & Lüdeke-Freund, 2013).
- *Value creation*: emphasizes how businesses capture value by seizing new business opportunities, new markets and new revenue streams (Teece, 2010; Beltramello et al., 2013).
- *Value capture*: relates to how a business earns its revenue by providing goods, services and/or data/information to customers and users (Teece, 2010).

Figure 1. Business models' value creation framework



Source: Bocken et al. (2015:71)

## METHODOLOGY

An exploratory case study design was selected to explore 1) how sustainable value is created by service companies through SBMs and sustainable service innovations, and 2) how the sustainable value delivered and captured is perceived by customers. The exploratory case study approach was selected to ensure a methodological fit between the research question and the status of prior theory (Edmondson & McManus, 2007). As such, case study methodology is suitable for acquiring rich, detailed data (Eisenhardt & Graebner, 2007) and for identifying emerging themes and patterns (Eisenhardt, 1989). It is appropriate for creating new knowledge about how and why events occur in situations with little theoretical background (McCutcheon & Meredith, 1993). The rationale behind the selection of the case study design was to explore the concept and practices of sustainable value creation and value capture through sustainable service innovations. Two of the most sustainable hotels and hotel chains in Denmark were selected to explore the concept. In each of the two case studies, data was collected via documentation studies, semi-structured observation and qualitative, semi-structured interviews with 22 informants from among the management, employees and customers at the two hotels to explore the value proposition, value creation and delivery, value capture and value perception of the case companies' SBM innovations.

Table: Case description and data collection overview

Case description—Case company 1	Case description—Case company 2
A sustainable hotel chain with 7 hotels in Denmark, Norway, France and Bali. Founded in 2000, 200 employees.	A traditional hotel and conference center founded in 1966 and completely rebuilt into a sustainable hotel in 2001. 30–50 employees.
<b>Case 1 informants</b>	<b>Case 2 informants</b>
1 manager	1 manager
3 employees	4 employees
7 guests	5 guests



In order to verify the findings across the hotel industry, an individual interview was conducted with the head of the Danish Hotel Industry Association, Horesta.

The interviews with the informants were conducted using a semi-structured interview guide to explore how sustainable value was created as viewed from both the managerial and employee levels and how sustainable value creation, delivery and capture were perceived by guests of the two hotel chains. The interview sessions lasted between 30–60 minutes and were recorded and subsequently transcribed before being incorporated into a case framework. Some of the statements cited in the article have been translated from Danish to English, as the interviews were conducted in the informants' native language (Danish or English).

Moreover, semi-structured observations were carried out in the case companies to view the service innovations in action and the verbal communication and storytelling from the employees to the customers. A document study was also conducted to examine the communication (e.g., website, brochures, poster, signs) of the sustainable services provided by the hotels to the customers. Data analysis was carried out, applying the meaning categorization method (Kvale & Brinkmann, 2008), whereby similar statements from the informant interviews and documentary data sources were coded into meaning categories to map the overall key themes related to sustainable value creation and value delivery and capture as experienced by the managers, employees and hotel guests of the two case companies.

## FINDINGS

In evaluating whether the two case companies' BMs were sustainable or not, the Green Key sustainability measures were applied, as this certification is the leading standard for excellence in the field of environmental responsibility and sustainable operation within the tourism industry; and therefore beyond what is expected of traditional hotels. With this ecolabel case, Companies 1 and 2 must constantly adhere to the strict criteria set by the Foundation for Environmental Education, which are evaluated and maintained through rigorous documentation and frequent audits.

However, The Green Key certification and other ecolabels are becoming increasingly common in Scandinavian hotels. This implies that sustainable hotels must be explorative and radical in their innovation approach to be perceived as sustainable, as what was considered "sustainable" in the hotel industry 1–2 years ago has become mainstream today. Hotel service innovation is easily copied, so creating a first-mover advantage through communication and branding is key to ensuring the value capture of the SBM innovations. This is also why Case Company 1 had moved on to the even more elaborate Green Globe eco-certification, which is probably the most exacting certification available in the hospitality sector, including a 360-degree sustainability management system and yearly audits with demands of a minimum 5% improvement on a given area. In an industry-comparative elaboration of the level of radicality of the SBMs of the two case companies, the hotel association informant emphasized how both hotels *"are considered spearheads within the industry due to their radical initiatives and activities in bringing new sustainable value to their hotel guests."*

## CASE COMPANY 1

### **Value propositions of Case Company 1**

The hotel service offerings of Case Company 1 are certified by Green Key. The manager informant emphasizes how: *“We strive for a very high degree of ecology in the food and beverage offerings at our restaurant, emphasizing the use of local produce and meat, and minimizing food waste and energy use.”* The value of the SBM to society and the environment may therefore be evaluated in terms of reducing waste, energy consumption and pollution/environmental footprint by using local, organic produce and meat with support from small, local, organic farmers. This also means that, as the manager informant emphasizes, the value for the customers is that: *“we’ve taken care of sustainability for our customers so they don’t have to think about it... we consider this a special kind of ‘sustainable customer caring’.”* Another value to the customer when staying at a Green Key hotel is that they know that they are helping to make a difference to the environment. The manager referred to this as the *“feel good about yourself”* value that the hotel attempts to provide for their guests by selecting sustainable options (e.g., organic cola).

### **Customer perceptions of value propositions**

The findings reveal very different perceptions of the case company’s sustainable value positions among the hotel guests/customers. Three of the seven guest informants had specifically selected the hotel due to its *“extensive sustainable and ecological service offerings”* and had used *“the level of sustainability as a key selection criterion when choosing between different hotels.”* Two of the seven customer informants knew that the hotel was sustainable but had primarily selected the hotel because they just *“liked the location,” “liked the look and feel”* and the *“price/quality ratio;”* and finally, the last two informants *“didn’t know”* and did not put *“any specific value”* on an SBM—in some cases finding it *“a bit confusing”* and *“annoying.”*

### **Value creation and delivery of Case Company 1**

The value of the hotel service offerings in hotels is created and delivered to/with the guests through the hotel staff. This is also why Case Company 1 has involved its different personnel groups and employees in identifying and implementing the right sustainable solutions for the many different challenges regarding sustainability when running a hotel: from the pollution resulting from the production and transport of conventional food, food waste from the restaurant, plastic waste from toiletries, use of cleaning chemicals by cleaning staff, extensive use of electricity and hot water by hotel guests etc. Specific activities that have been carried out to accommodate these challenges, including the installment of solar panels on hotel roofs to reduce the use of fossil fuels and electricity to heat water. The hotel owners had motion sensors installed to reduce electricity use from excessive lighting, and even developed and produce their own line of organic toiletries and spa products, including bamboo toothbrushes, toothpaste pills instead of plastic toothpaste tubes as well as organic shampoo, conditioner, body soap and lotion in biodegradable containers.

In addressing all these different sustainable challenges, the manager informant emphasizes how *“we literally had to rethink our entire supply chain and partners to make the transition.”* This included the restaurant manager having to identify local farmers and suppliers who could deliver the requested organic produce, meat and

beverages. She also had to learn how to reuse leftovers and develop new dishes and recipes to reduce food waste: *“If I make lasagna now, I always use the left-over vegetables from yesterday’s dishes.”*

Communication and storytelling is an important part of the sustainable value delivery. For example, “cool” signs have been made, such as “yesterday’s bread—great for toast,” as a way of explaining the hotels “no food waste politics” and why the guests are offered day-old bread in the breakfast buffet. The need for storytelling in sustainable value delivery is further elaborated by the receptionist/bar employee: *“When you serve the organic foods and beverages, you have to explain it... for example, if a Norwegian comes in and we have a homemade snaps, then we have a chat about that, and it becomes part of our sustainable story and provides a seal of quality as ecology is viewed as an extra quality.”* The sustainable value creation and delivery is primarily aimed at the hotel guests. However, the findings reveal that the sustainable activities also create value for the employees, rubbing off on their own sustainable behavior, as explained by one of the maids: *“I try to buy organic when I’m home, and I’m sorting my garbage more than I would if I didn’t work here.”*

### **Customer perceptions of value creation and delivery**

The customer perceptions of the value creation differ depending on the three categorizations mentioned above. The three customer informants who sought out the hotel due to its sustainable business model praised the sustainable ways that value was created and delivered to the customers through the various sustainable activities and offerings. As stressed by Guest Informant #1: *“It’s a luxury that they have made the sustainable choices for me.”* When asking Guest Informant #2 about what she thought of the sign at the morning buffet “yesterday’s bread—great for toast,” she replied: *“It’s cute and makes it personal... one of the things that sets them apart... so that they’re not just a mainstream hotel.”* Guest Informant #3 emphasized how: *“it’s important to know that the hotel takes a responsibility—both in relation to the environment and the employees. It creates credibility.”* One of the hotel guests who was indifferent to sustainability commented: *“I didn’t understand the sign (yesterday’s bread—great for toast). My wife had to explain it to me... I’ve noticed the organic—it’s Danish—it’s not like that [in Belgium]. It’s nice to do—some people feel a need to be more organic.”* This view is supported by another hotel guest: *“I travel 200 days a year... Sustainability isn’t the primary—it’s more the location—it’s more an added bonus. It’s good to know that you’ve done a small part.”* One of the guest informants from the more skeptical group commented: *“If you’re presented with two identical products that cost the same, but one is sustainable, you choose the sustainable option. Otherwise people won’t pay for sustainability.”* However, he ended up concluding the interview with: *“I do feel a little bit better about myself for staying at a sustainable hotel.”*

### **Value capture of Case Company 1**

The price and cost structure of Case Company 1 is a bit higher due to the more expensive choices made (e.g., organic meat is more expensive). Nevertheless, due to the “no food waste” program, smaller portions reducing ingredient usage and food waste, solar panels reducing electricity costs and the fact that procurement can be optimized with seven hotels in the chain, the prices are not much more expensive than in conventional hotels in the same location and at the same 4-star level, as stressed by the manager informant. The value capture for the environment related to the hotel’s development/facilitation of a sustainable supply chain and procurement strategy

emphasizing a low carbon footprint and minimal food waste. In relation to society, the impact is through the “education” of hotel employees and guests who become ambassadors, taking home some of the sustainable ideas, stories and habits. As this case company is at the SBM forefront, they have been able to profit on extensive sustainability branding that attracts a certain segment of demanding hotel guests who only use sustainable hotels. The hotel growth strategy is to develop the concept further, and the management informant stressed that they were already in talks for one or two more hotels. So to capture value in the future optimization of larger, joint procurement and energy and resource usage across the hotels can create a cost/benefit ratio that will benefit growth and future profits.

### **Customer perceptions of value capture**

The customer perception of value capture did not differ visibly between the three categorizations; probably because the cost of staying at the case hotel is comparable to other hotels in the area, which most tourists focus on when visiting Copenhagen. This is a strategic choice made by the owners to ensure that sustainability is an added luxury without posing an added cost. The customers stress that it is not enough to be sustainable if the other key elements of hotel service are not present: *“The feeling of luxury is important—to feel comfortable and that the staff treats you well.”* This is reiterated by another guest: *“You don’t check into a hotel because you want to save the environment.”* This implies that sustainability alone will not cut it. To capture value through an SBM, a sustainable hotel still has to perform on the “old parameters” of great hotel business services delivered by service-minded staff, a great location, delicious food and luxurious, comfortable service targeting the customers’ needs.

## **CASE COMPANY 2:**

### **Value propositions of Case Company 2**

The sustainable value propositions of Case Company 2 are influenced by the hotel being located on the island of Bornholm, which is renowned for its nature. There has been emphasis on the building and its surroundings demonstrating a holistic approach to sustainable design. This hotel building itself has earned certification from the German Sustainable Building Council (DGNB) based on the Active House criteria and inspired by the Cradle to Cradle framework. When choosing resources and suppliers, the hotel prioritizes certifications and environmental labels, recyclability, social responsibility, use of resources, safety of compounds, and energy in production—ranging from recycled glass insulation, air-cleaned carpets, solar panel balconies, intelligent energy use in smart rooms and natural paints. As the hotel manager emphasizes regarding their guests: *“they should just relax and know that we’ve thought about almost everything, which they can find information about in the hotel rooms and in our info room.”* When selecting the best suppliers of sustainable goods and materials, the hotel sends out questionnaires to producers and suppliers to gain knowledge about the ingredients, installation options and production methods. Should the material or product have harmful substances and/or a negative production footprint, more sustainable alternatives are found. Thus, the value of the SBM to society and the environment can be evaluated in relation to the sustainable material use, energy consumption, reduced food waste and pollution/environmental footprint through the use of sustainable building materials, eco-

certified cleaning products, locally produced, primarily organic products. Although the hotel's value propositions stress the reduction of their environmental footprint, the #1 goal is *"to create jobs for people on Bornholm,"* as the hotel manager stresses. The social dimension of the hotel's value proposition and SBM is therefore prevalent, as the location/island is challenged by unemployment.

### **Customer perceptions of value propositions**

The observations from this hotel also reveal different perceptions of the sustainable value positions among the hotel guests. Two of the five customer informants had specifically selected the hotel due to its sustainable profile and offerings: *"My son is 16 and it's good for him to learn about sustainability. I thought a hotel with such a profile sounded exciting, and I'd like to pass that on to him."* Another guest, a grandmother with her children and grandchildren, had selected the hotel after a previous visit and felt that *"it would be interesting to see how far they had gotten and what had happened since my last visit... the family was in on it."* One of the five customer informants knew that the hotel was sustainable but had primarily selected the hotel due to its location. Two of the other guests who had not prioritized the sustainability of the hotel were nevertheless inspired by it: *"If I had to build my house today, I would definitely go for something like this. I see something here that's brilliant."* The other guests (a couple) indicated that they would choose the location first, but potentially also green hotels for future bookings: *"the location probably determines the choice—I would think that you're affected by it [sustainability] and I'd therefore like to choose a green hotel—it's uphill. If we have to save the planet, then we have to do something."* All five informants did indicate that they placed some value on the hotel's sustainable value proposition and SBM. However, the hotel's emphasis on sustainability also triggered a number of critical observations: *"no dual toilet flush—small and large," "no fish on the menu"* (as the island is renowned for its fisheries), and one informant stressed that *"I'm skeptical about all the prizes—it's like the film industry. We got the feeling that it's about giving each other prizes, and then it's easy enough to hang up 10 posters."*

### **Value creation and delivery of Case Company 2**

As identified in the previous case, the hotel staff play a pivotal role in developing and implementing the hotel's SBM. The hotel's value creation and delivery requires the involvement and engagement of the employees, as explained by the kitchen manager when sharing his experience implementing the hotel's SBM: *"It was exciting to help start it all up and to find local ingredients. You go for a drive and find produce and meats. It's been exciting to put together a wine list with organic wines—we now only have four uncertified wines. The hotel's core value is ecology, so we need to push suppliers more... they change with demand."*

The value creation and implementation appears to be a joint trial-and-error learning process. The restaurant manager explains: *"Here, you can present your ideas and they're listened to. Maybe they work, maybe not."* The hotel has over 75 green solutions that help them create and deliver sustainable value to its guests, including a food mill to recycle food waste into energy and an on-site algae water purification system. An interesting bonus resulting from the hotel's SBM is the generation of circles of sustainability, as addressed by the restaurant manager: *"I buy much more organically produced food now and I bring the whole idea home. Even my wife is getting into it."* Storytelling would appear to be a key element in creating and implementing SBMs in service, as the restaurant manager stresses: *"I like to tell the guests about the purification plant and the organic paint on the walls. You quickly see if that's what the*

*visitor wants to hear, but many are interested... it's not just about food or wine. Most people are interested to hear about sustainable initiatives. There are both locals and tourists, and some have followed the construction process along the way, so they would like to hear more about the progress we've made."* In housekeeping, sustainable value creation and delivery is realized through waste selection, cleaning without chemicals or only eco-certified cleaning products, and reusing towels and sheets (for guests with multi-day stays), where the housekeeping also tries to "educate" the guests, as the head of housekeeping explains: *"We sort the garbage [glass bottles and paper] in the rooms and try to get the guests to do so as well, but it isn't easy. It takes time to convert them. We also use eco-friendly cleaning products and no cleaning products at all in some areas—just microfiber cloths and elbow grease."*

### **Customer perceptions of value creation and delivery**

The guests' perceptions of value creation and delivery appear to be influenced by their previous knowledge and awareness of sustainability. The informants that had not selected the hotel due to its sustainable profile were generally pleasantly surprised: *"I had never stayed at a green hotel, but it has made a big impression ... you sense that natural products have been applied, and I think that's really nice and plays along perfectly with the hotel's surroundings [in a natural area]."* The storytelling appears important to how the customers perceive the value creation, as stressed by an informant who chose the hotel due to its green transition: *"It's a hotel with an interesting story. I heard some of it from the receptionist... about how it has transformed into something innovative and experimental—that's fun to be in ... It's a nice place to be, nice nature, and they offer everything that a normal hotel would."* However, sustainable solutions can potentially also raise questions (particularly from non-green customers), as stressed by an informant who did not choose the hotel for its sustainable profile: *"We couldn't understand why they don't have floor heating. Is it because it's a sustainable hotel?"* This statement underlines how failing to provide answers or storytelling can potentially lead to bad customer experiences of the sustainable value creation and delivery, as a "traditional/non-green" hotel guest would expect certain common hotel services and characteristics, which simply are not possible or viable for a hotel with an SBM, which must be explained.

### **Value capture of Case Company 2**

The prices at Case Company 2 are similar to the other hotels in the area, which the management has been deliberate about: *"We shouldn't be elitist, but a nice place, where everybody can come and eat and where the locals can come too."* To ensure a similar level, the case company also had to provide conference facilities: *"To be financially sustainable, we had to build a conference center as part of the hotel. You have to have guests all year ... 40% of our costs are wages, and I can't save in this area if I want to deliver 4-star service and still live up to the collective bargaining agreement."* The value capture for the environment relates to the hotel's low carbon footprint, which is achieved via recycling, solar heating, water purification systems and sustainable buildings that reduce energy use. In relation to society, the impact relates to employment in an area with seasonal unemployment. However, the hotel has also hosted refugees from a Red Cross camp on the island as a way to "pay back to the system." While the optimization of energy and resources saves money, the unique application of technologies (e.g., algae water purification system) and sustainable building materials (e.g., recycled glass in pavement, air-cleaned carpets) has created a brand that attracts funding from industry and companies that would like to test their

sustainable solutions and use the hotel as a showcase and testbed for their new sustainable innovations. The hotel's growth strategy is to develop the concept further with new initiatives and to make the hotel even more economically sustainable over time.

### **Customer perceptions of value capture**

The guest informants had similar perceptions of value capture in relation to price, as the price level of the case hotel was kept at a competitive level to be able to compete with other 4-star hotels and restaurant offerings the same/similar services for the same price. One of the guests who had not selected the hotel due to its green profile stated: *"We're here on vacation. We saw an offer in the newspaper and thought it looked good and sounded interesting, so we decided to try it out."* Another non-green customer explained: *"I tried booking.com and then saw an ad in the newspaper and looked it up. It appealed to me that it was close and offered bike rental, as I don't have a car."* One observation from the findings is that for traditional hotel guests, good offers, advertisements and the traditional hotel services still count. In that sense, sustainable solutions are an add-on that guests either value or not, but they do not want to pay extra for them. This is somewhat different for the "sustainable" guests, as explained here: *"I could live without the Nutella and waffles, but I'd be disappointed if there wasn't hot water, and I think that many people wouldn't choose such a hotel, as you spend a lot of money staying in hotels, so you can't leave out too many of the conveniences. However, I could live with less hot water if I knew it was because the quota for hot water for the day had been used up."* For the "green" guests, sustainability is something you may have to sacrifice other things for, which is acceptable, but only to some extent; and if you change the traditional hotel value created, then you need to communicate why to capture value, to keep guests happy and to keep them coming back.

### **DISCUSSION AND CONCLUDING REMARKS**

With the growing emphasis on the environmental footprint of hotels, more and more hotels are inclined to switch to SBMs and sustainable service offerings. Moreover, due to the fact that sustainable hotels are becoming increasingly mainstream in Western countries, hotels must differentiate themselves by developing their business models, innovating their services and ensuring higher levels of sustainable value creation, value delivery and value capture, as perceived by the customers.

The findings reveal a number of key control mechanisms in creating and capturing sustainable value through SBMs and service innovation. For one, companies need to make a clear distinction between the different types of customers and how they perceive sustainable value creation and the hotels' SBMs differently. Where some customers specifically seek hotels they perceive to be sustainable, others assign no such value to SBMs—some are positively surprised and enlightened while others are annoyed by being unable to get the kind of beef, toiletries or regular cola they want. The managerial implications hereof are that companies must make strategic choices about which customers they want to emphasize and deliver and capture value to/from and how they can diversify their offerings to cater to all segments—those seeking sustainable hotels and those who do not specifically seek sustainability in the hotel offerings—or even become annoyed by the new services. One might speculate if more radical SBMs and service innovations might scare off "traditional customers," who remain the majority of

hotel guests. Thus, as suggested in the findings, a potential solution is that a hotel may choose to apply different “communication models and approaches” for different customer segments depending on their interests in sustainability and requests for information on the hotel’s sustainable activities and offerings.

Proclamations regarding sustainability also foster skepticism and trigger questions among guests. Most of the informants/guests did value the hotels’ sustainable offerings, value propositions and value creations. However, they also questioned why the hotels had not thought of “this and that,” as most hotel guests have visited other hotels and compare services. This underlines the need for hotels to explore the sustainable service offerings of competitors to stay on top of their game. The findings also stress how too much information about sustainability may be viewed as “greenwashing” and/or become a nuisance to hotel guests who are primarily interested in a relaxing vacation. These findings point to two adjacent conclusions.

First, hotels need to be somewhat radical in their development of sustainable values, including the need to educate their staff even more for them to be able to provide solid answers based on valid information, as the informants/hotel guests were slightly critical of the sustainability wave and wanted facts and proof-of-concept. Competent hotel personnel becomes critical, and new competencies related to sustainability are specifically required. The “story” of sustainability must include personal stories and storytelling in explaining the sustainability of the hotel’s specific service offerings and business model, instead of traditional communication channels like posters, brochures and sustainability prices, as these are considered mainstream; particularly the latter makes customers skeptical.

Second, these findings also imply that customers/guests in service companies like hotels play a very potent role in developing the business of the hotel and their sustainable offerings together with the hotel through their questions, feedback and criticism—as the hotel guests are an integral part of the service experience. The findings underline that sustainable value must be co-created with customers, as stated by Vargo and Lusch (2008), and this is a major characteristic of service innovation (Lusch and Nambisan, 2015). Customers eventually become the limiting factor as to how sustainable a hotel/service company can become and be perceived. Critical to sustainable development, however, several of the sustainability improvements that are made in a hotel industry are not directly perceived by the customers (e.g. resource efficiency in buildings and related transports). Sustainable values and ecological and social improvements are not experienced as changes in value-delivering products, such as food and devices in the hotel rooms. The service industry is therefore challenged to develop sustainable values that go beyond service creation and delivery. At best, these changes are great advantages on the value capture side if reduced resource consumption can be accounted as cost savings.

The theoretical contributions from these conclusions relate to the elaboration of how value is created, implemented and perceived in SBMs, as stressed by a number of researchers (e.g. Boons and Lüdeke-Freund, 2013; Bocken et. al., 2015). The dual perspective in this study (internal and external) on sustainable value propositions, value creation and delivery and value capture, stresses the necessity of actively evaluating both the supplying and receiving sides of SBMs, as sustainable service innovation is created in the interaction hereof. Another contribution relates to the development of



SBMs in service, as the extent SBM literature is closely related to the creation and delivery of physical goods as in production/product-oriented industries.

Creating and implementing SBMs in a service industry like hotels requires higher levels of employee and customer involvement than is emphasized in literature on business models in the production industry. This obviously relates to the very nature of service, which occurs as it is produced and used (Sundbo, 1997; Lusch and Nambisan, 2015). In sustainable business modelling in the industrial context of service, the employees therefore become the storytellers and the ones creating the sustainable value, while the customers act as the interpreters of the actual sustainable value being delivered and captured. Communication and storytelling therefore become even more important to educate the customer/hotel guest to better understand and perceive the actual level and quality of sustainability received and captured—and in ways that differentiate the service business model from others.

The managerial implications of the findings stress that the managers and owners of sustainable hotels must make strategic choices in relation to how they want to differentiate themselves from other conventional and sustainable hotels through their SBMs and innovative sustainable service offerings, and which specific segments they want to cater to through their sustainable business models—as one size fits nobody. The diversification of the business model and offerings and targeting the sustainable offerings and the communications hereof towards specific segments therefore become central management decisions to ensure competitive advantages and business performance.

Services are provided in an interaction between service personnel and customer. The managerial implications hereof are that customer and employee involvement become key activities in building and creating value through SBMs. Both employees and customers have to be made into living ambassadors and storytellers of the SBM and its unique and sustainable activities and service offerings. Thus, dialogue, training and knowledge-sharing are an integral part of developing service personnel to be able to deliver the value of the hotel's SBM. The employees should also facilitate inspirational storytelling and knowledge sharing of the hotel's uniquely sustainable activities and offerings to set them apart from competition and build customer loyalty.

Ultimately, the customer decides what they consider sustainable value. Thus, even though the hotel management and staff may have gone out of their way to create the best possible sustainable solution, the customers eventually determine whether they think something is sustainable and whether the specific offering or activity creates sustainable value for them. This places emphasis on the unique need for communication and storytelling in value creation through sustainable business modelling in the service industry.

The limitations of the study also provide new venues for further research. For one, the case study is limited to two sustainable hotels. A comparative study between conventional and sustainable hotels might reveal key similarities and differences in business models and identify the key elements in making the transition to an SBM. The geographical context of the case study among Danish hotels might also influence how hotels' SBMs are created, implemented and perceived, as Scandinavian hotels and countries already have a global brand of sustainability and environmentally friendly

businesses. A cross-national case study would therefore be interesting in terms of further elaborating the global implementation and perception of SBMs and the difference in sustainable value creation, delivery and capture across borders.

## References

- Aagaard, A. (2016). *Sustainable business: Integrating CSR in business and functions*. River Publishers.
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of management*, 17(1), 99-120.
- Beltramello, A., Haie-Fayle, L., Pilat, D., 2013. *Why New Business Models Matter for Green Growth*. OECD Publishing, Paris.
- Bitner, M.J. and Brown, S.W. (2008). The service imperative. *Business horizons*, 51(1), 39-46.
- Bitner, M.J., Ostrom, A.L., and Morgan, F.N. (2008). Service blueprinting: A practical technique for service innovation. *California management review*, 50(3), 66-94.
- Bocken, N.M.P., Rana, P. and Short, S.W. (2015). Value mapping for sustainable business thinking. *Journal of industrial production engineering*, 32(1), 67-81.
- Boons, F. and Lüdeke-Freund, F. (2013). Business models for sustainable innovation: state-of-the-art and steps towards a research agenda. *Journal of cleaner production*, 45, 9-19.
- Bowman, C. and Ambrosini, V. (2000). Value creation versus value capture: Towards a coherent definition of value in strategy. *British journal of management*, 11, 1-15.
- Bruno, D. and Bruno S. (2018). Enhancing socio-ecological value creation through sustainable innovation 2.0: Moving away from maximizing financial value capture. *Journal of cleaner production*, 171, 1593-1604.
- Carrillo-Hermosilla, J., del Rio, P. and Könnölä, T. (2010). Diversity of eco-innovations: Reflections from selected case-studies. *Journal of cleaner production*, 18(10-11), 1073-1083.
- Catulli, M. (2012). "What uncertainty?: Further insight into why consumers might be distrustful of product service systems", *Journal of Manufacturing Technology Management*, 23(6), 780-793.
- Edmondson, A.C. and McManus, S.E. (2007). Methodological fit in management field research. *Academy of management review*, 32(4), 1246-1264.
- Edvardsson, B. and Olsson, J. (1996). Key concepts for new service development. *The service industries journal*, (16:2), 140-164.

- Eisenhardt, K.A. (1989). Building theories from case study research. *Academy of management review*, 14(4), 532-550.
- Eisenhardt, K.A. and Graebner, M.E. (2007). Theory building from cases: opportunities and challenges. *Academy of management journal*, 50(1), 25-32.
- Fitzsimmons, J.A. and Fitzsimmons, M.J. (2000). *New service development: Creating memorable experiences*. Thousand Oaks, CA: Sage.
- Foss, N. J. and Saebi, T. (2016). Fifteen Years of Research on Business Model Innovation: How Far Have We Come, and Where Should We Go? *Journal of Management* 43(1). DOI10.1177/0149206316675927
- Gummesson, E. (2008). Extending the service-dominant logic: From customer centricity to balanced centricity. *Journal of the academy of marketing science*, 36, 15-17.
- Hart, S.L. and Milstein, M.B. (2003). Creating sustainable value, *academy of management. Perspectives*, 17(2), 56-67.
- He, N., 2012. How to maintain sustainable competitive advantages: Case study on the evolution of organizational strategic management. *International journal of business administration*, 3(5), 45-51.
- Hertog, den P., Wietze van der, Aa. And Jong de, M.W. (2010). Capabilities for managing service innovation: Towards a conceptual framework. *Journal of service management*, 21(4), 490-514.
- Horng, J-S., Liu, C-H.S., Chou, S-F., Tsai, C-Y. and Hu D-C. (2018). Developing a sustainable service innovation framework for the hospitality industry. *International journal of contemporary hospitality management*, 30(1), 455-474.
- Joyce, A., Paquin, R., & Pigneur, Y. (2015). The triple layered business model canvas: A tool to design more sustainable business models. Nancy, France, ARTEM Organizational Creativity International Conference.
- Kvale, S and S Brinkmann (2008). *InterViews — Learning the Craft of Qualitative Research Interviewing*, 2nd Edition. Thousand Oaks, CA: SAGE Publications.
- Lepak, D.P., Smith, K.G. and Taylor, M.S. (2007). Value creation and value capture: A multilevel perspective. *Academy of management review*, 32(1), 180-194.
- Lusch, R.F. and Nambisan, S. (2015). Service innovation: A service-dominant logic perspective. *MIS quarterly*, 39(1), 155-176.
- Lusch, R.F., Vargo, S.L. and O'Brien, M. (2007). Competing through service: Insights from service- dominant logic. *Journal of retailing*, 83(1), 5-18.
- Makadok, R. (2001). Appointed commentary on Priem and Butler. *Academy of management review*, 26, 498-499.
- Makadok, R. and Coff, R. (2002). The theory of value and the value of theory: Breaking new ground versus reinventing the wheel. *Academy of management review*, 27(1), 10-13.
- Margolis, J.D. and Walsh, J.P. (2001). *People and profits? The search for a link between a company's social and financial performance*. Mahwah, NJ: Lawrence Erlbaum Associates.

- McCutcheon, D.M. and Meredith, J.E. (1993). Conducting case study research in operations management. *Journal of operations management*, 11, 239-256.
- Mont, O and Tukker, A. (2006). Product Service Systems: reviewing achievements and refining the research agenda. *Journal of Cleaner Production*, 14(17), 1451-1560.
- Osterwalder, A., Pigneur, Y. and Tucci, C.L. (2005). Clarifying business models: Origins, present, and future of the concept. *Communications of the association for information systems*, 16(1), 1-25.
- Pedersen, E.R.G., Gwozdz, W. and Hvass, K.H. (2016). Exploring the relationship between business model innovation, corporate sustainability, and organizational values within fashion industry. *Journal of business ethics*. DOI: 10.1007/s10551-016-3044-7.
- Pigasso, D.C.A., McAlloone, T.C. and Rozenfeld, H. (2015). Characterization of the state-of-the-art and identification of main trends for ecodesign tools and methods: Classifying three decades of research and implementation. *Journal of the Indian institute of science*, 95:4 Oct.–Dec.
- Richardson, J. (2008). The business model: An integrative framework for strategy execution. *Strategic change*, 17, 133-144.
- Schaltegger, S., Hansen, E.G. and Lüdeke-Freund, F. (2016). Business models for sustainability: Origins, present research, and future avenues. *Organization and environment*, 29(1), 3-10.
- Schaltegger, S., Lüdeke-Freund, F. and Hansen, E.G. (2012). Business cases for sustainability: The role of business model innovation for corporate sustainability. *International journal of innovation and sustainable development*, 6(2), 95-119.
- Sheehan, J. (2006). Understanding service sector innovation. *Communications of the ACM*, 49(7), 43-47.
- Song, X.M., Di Benedetto, C.A. and Song, L.Z. (2000). Pioneering advantage in new service development: A multi-country study of managerial perceptions. *Journal of product innovation management*, 17(5), 378-392.
- Sopjani, L., Hesselgren, M., Ritzén, S. and Stier Janhager J. (2017). Co-creation with diverse actors for sustainability innovation. In: *Proceedings of the 21st International Conference on Engineering Design (ICED17)*, Vol. 8: Human behaviour in design, Vancouver, Canada, 21.
- Sundbo, J. (1997). Management of innovation in services. *The service industries journal*, 17(3), 432-455.
- Surie, G. and Ashley, A. (2008). Integrating pragmatism and ethics in entrepreneurial leadership for sustainable value creation. *Journal of business ethics*, 81(1), 235-246.
- Stubbs, W., Cocklin, C., 2008. Conceptualizing a “Sustainability business model.” *Organization & Environment* 21 (2), 103-127.
- Teece, D.J. (2010). Business models, business strategy and innovation. *Long range planning*, 45(2-3), 172-194.
- Tukker, A. (2008). *Perspectives on radical changes to sustainable consumption and production*. Greenleaf, Sheffield.

- Tukker, A. (2015). Product services for a resource-efficient and circular economy: A review. *Journal of cleaner production*, 97, 76-91.
- Tukker, A. and Tischner, U. (Eds.) (2006). *New business for old Europe: Product-service development, competitiveness and sustainability*. Greenleaf, Sheffield.
- Upward, A. and Jones, P. (2016). An ontology for strongly sustainable business models: Defining an enterprise framework compatible with natural and social science. *Organization and environment*, 29(1), 97-123.
- Vargo, S.L. and Lusch, R.F. (2008). From goods to service(s): Divergences and convergences of logics. *Industrial marketing management*, 37, 254-259.
- Wang, W., Lin, C., and Chu, Y., (2011). Types of competitive advantage and analysis. *International journal of business and management*, 6(5), 100-104.
- Wells, P. (2008). Alternative business models for a sustainable automotive industry. In: Tukker, A., Charter, M., Vezzoli, C., Stø, E. and Andersen, M.M. (Eds.), *Perspectives on radical changes to sustainable consumption and production 1. System innovation for sustainability*. Greenleaf, Sheffield, pp. 80-98.
- Yunus, M., Moingeon, B., Lehmann-Ortega, L., 2010. Building social business models: lessons from the Grameen experience. *Long Range Planning* 43, 308-325.
- Zott, C., Amit, R., 2010. Business model design: an activity system perspective. *Long Range Planning* 43, 216-226.