Sveriges lantbruksuniversitet
Swedish University of Agricultural Sciences

Department of Economics

Use-Oriented Business Models - a multiple case study of rental providers within the Scandinavian outdoor apparel industry

Moa Gunnarsson

Master's thesis • 30 credits
Environmental Economics and Management - Master's Programme
Degree project/SLU, Department of Economics, 1250 • ISSN 1401-4084
Uppsala, Sweden 2019

Use-Oriented Business Models - a multiple case study of rental providers within the Scandinavian outdoor apparel industry

Moa Gunnarsson

Supervisor: Cecilia Mark-Herbert, Swedish University of Agricultural Sciences, Department of Forest Economics

Examiner: Richard Ferguson, Swedish University of Agricultural Sciences, Department of Economics

Credits: 30 credits
Level: A2E
Course title: Master thesis in Business Administration
Course code: EX0904
Programme/Education: Environmental Economics and Management - Master's Programme 120,0 hp
Course coordinating department: Department of Economics

Place of publication: Uppsala
Year of publication: 2019
Cover picture: yongxinz, Pixab
Title of series: Degree project/SLU, Department of Economics
Part number: 1250
ISSN: 1401-4084
Online publication: http://stud.epsilon.slu.se

Key words: Business model, canvas, outdoors, lease, product-service systems, rent, servitization, use-oriented

Swedish University of Agricultural Sciences
Faculty of Natural Resources and Agricultural Sciences
Department of Economics

Acknowledgements

I would like to thank several people that have helped me tremendously with this study and inspired me along the whole research process. As the idea for this study started with the opportunity to investigate Fjällräven's tent rental evaluation, I would first like to thank Emma Gustafsson, project manager at Fjällräven, for the support along the way. I am grateful for the confidence and opportunity to develop the idea of investigating use-oriented business models in collaboration with Fjällräven. I also want to express my gratitude to respondents that participated in interviews from the following companies: Aktivt Uteliv, Bergans, Houdini, Naturkompaniet, Re:leased and Rent-a-Plagg. I thank especially my supervisor Cecilia Mark-Herbert for her passionate support and outstanding teaching skills. Without her inputs, challenging questions and constant encouragement, the result of this study would not be possible. Last but not least, I would like to thank my opponent group consisting of Alexandra Mendebaba, Saga Larsson and Stina Laggren for your useful input and critical observation of the research process.

Abstract

Our current production patterns induce high consumption rates and equally high waste generation, which will eventually lead to resource depletion and substantial environmental damages. The concept of a use-oriented product-service system seems promising to encourage resource efficiency. However, it changes the core business and there are few guidelines for practitioners to adopt the concept. Knowledge is scattered in many different places and existing literature lacks a holistic explanation of the use-oriented business logic. By combining two bodies of knowledge, product-service systems and business models, this study aims to identify enabling factors with a use-oriented business model and describe its characteristics, challenges and suggest solutions to the problems. A multiple case study was conducted on seven companies that provide rental or leasing services within the Scandinavian outdoors apparel industry. The key findings indicate that the companies struggle with increased transportation, linear technological systems, large financial capital and cultural barriers. These challenges are met to a large extent through partnerships. In conclusion, the Business Model Canvas framework does not cover all characteristics of the use-oriented business model. This study contributes by illustrating a use-oriented business model and suggests adding three more elements: reduced material flows, reverse logistics and cultural adoption factors.

Sammanfattning

Sedan industrialiseringen är produktionsprocesser ofta fokuserade på stora volymer till minimala kostnader. Det här produktionsmönstret initierar konsumenter till ett köp-och-släng beteende med höga konsumtionsnivåer och motsvarande höga mängder avfall. Forskare, nationer och andra samhällsaktörer varnar nu för att våra nuvarande produktions- och konsumtionsmönster kommer att leda till resursutarmningen och väsentliga negativa miljökonsekvenser. Trots att vi länge varit medvetna om konsumtionens konsekvenser på miljön, ser många företag fortfarande naturen som en gratis tillgång på resurser och produkter används i allmänhet inte till sin fulla potential.

För att skapa ett mer resurseffektivt sätt att konsumera och öka användningsgraden för produkterna verkar begreppet användarorienterade produkt-service system lovande. Att implementera ett sådant system kan dock vara utmanande då det ändrar själva kärnan i affärsverksamheten. Den här studien tillämpar därför teorin om affärsmodeller som analytiskt ramverk. Tidigare studier visar att det finns brist på riktlinjer och verktyg för att etablera produkt-service system i praktiken. Vidare är kunskap om användarorienterade produkt-service system spridda på många olika platser i akademin och befintlig litteratur saknar djupgående undersökningar med en helhetssyn av användarorienterad affärslogik.

Genom att kombinera två kunskapsområden, produkt-service system och affärsmodeller, syftar denna studie till att identifiera framgångsfaktorer med en användarorienterad affärsmodell. Vidare är syftet att beskriva karaktärsdrag, utmaningar och lösningar för en användarorienterad affärsmodell.

En fallstudie genomfördes på sju företag inom den skandinaviska outdoor industrin som hyr ut eller erbjuder leasing av produkter. Ett flertal kvalitativa intervjuer genomfördes med nyckelpersoner på företagen. Resultatet visar att företagen upplever utmaningar i form av ökade transporter, linjära teknologiska system, krav på stort finansiellt kapital samt att influera konsumenter till att våga emotstå individuellt ägande och prova delad konsumtion. Utmaningarna möts till stor del genom partnerskap med bland annat tredje part tjänsteleverantörer, finansiella aktörer och leverantörer.

Den här studien indikerar att ramverket Canvas Affärsmodell inte täcker alla karaktärsdrag i den användningsorienterade affärsmodellen. Studien bidrar därför till forskningsområdet genom att illustrera en användarorienterad affärsmodell och föreslår ytterligare tre element för att beskriva de cirkulära funktionerna: förmåga att minska materialflöden, hantera omvänd logistik och kulturella adoptionsfaktorer. Illustrationen kan användas som ett verktyg till företag som vill starta ett företag inom uthyrning eller introducera en uthyrningstjänst i kombination med deras traditionella produktutbud.

Abbreviations

BM – Business Model
A business model can, in general terms, be understood as a system that captures values and transform it into profit (Afuah 2014). In this report, a business model is understood accordingly with Osterwalder and Pigneur (2010 p. 14) as *"the rationale of how an organization creates, delivers and captures value"*, which is a simple definition that enables a holistic analysis of a company's logic.

BMC – Business Model Canvas
The Business model Canvas is a widely used framework consisting of nine building blocks that illustrates a business ability to create value (Osterwalder & Pigneur 2010).

CE – Circular economy
Ellen MacArthur Foundation (2015 p. 2) a pioneer within the circular economy movement, defines the concept as: *"A circular economy is one that is restorative and regenerative by design and aims to keep products, components, and materials at their highest utility and value at all times, distinguishing between technical and biological cycles"*. When a product reaches the end of its lifecycle, the materials should be used as inputs in the next cycle.

PO – Product-oriented
Product-oriented is one of three different types of product-service systems that is geared towards selling a physical product, but with additional services added to the offer (Tukker 2004).

PSS – Product-service system
In this study a product-service system is defined accordingly with Tukker and Tischner (2006 p. 1552) as: *"a mix of tangible products and intangible services designed and combined so that they are jointly capable of fulfilling final customer needs"*. In this system, transition towards a large amount of service content is key to gain resource efficiency and products are mainly perceived as a mean to deliver the service.

RO – Result-oriented
Result-oriented is one of three different types of product-service systems where the service provider operates the product themselves and sell a finished result (Charter & Polonsky 1999).

UO – Use-oriented
Use-oriented is one of three different types of product-service systems where the service provider retains the ownership of a product and sell its utility (Charter & Polonsky 1999).

Table of contents

List of figures

List of tables

1 Introduction

This first chapter provides a problem background and then a problem statement that aims to explain the relevance and actuality of this study. In order to address the identified problems, the aim is described followed by three research questions. Finally, delimitations are clarified and the structure of the report is illustrated.

1.1 Problem background

Historically, the industrial revolution has induced economic growth through efficient manufacturing processes, automation and economies of scale (Kónya & Ohashi 2004). Business models are traditionally designed according to a linear take-make-dispose logic, which motivates companies to maximize profit by selling high quantities of products that are manufactured to minimal costs (EMF 2013). This product-focused way of doing business induces an unsustainable use of natural resources with increased consumption rates along with equally high waste generation. In Sweden for instance, the amount of clothes and home textiles put on the market increased by 40 percent from 2000 to 2009 (Carlsson *et al.* 2011 p. 17). The reason for the significant increase is assumed to be a combination of growing prosperity and lower prices on clothing. At the same time, 8 kilos of clothing is thrown away in Sweden per person yearly (Tojo 2012 p. 44). It is evident that production of consumer goods contributes significantly to resource depletion and global warming (Schor 2010; Shuk 2016).

Even though awareness about sustainable development is not new (Elkington 1994), many businesses still consider the nature as a free asset without including the ecological price for extracting resources (Mont 2004). We are currently using 50 percent more resources than the earth is able to replicate (Grooten *et al.* 2012 p. 6). With a radical increasing global middle class, the competition over resources is expected to increase more rapidly in the future (WBCSD 2010). The European Union pronounced in their 2020 strategy that resource-efficiency is key to boost sustainable and inclusive growth (European Commission 2011). Since only 1 % of materials in North America is still used after six months from the point of purchase, Hawken and Lovins (1999 p. 81) argue that there are tremendous business opportunities in increasing material efficiency. Products are only used a few percentages of its potential. For instance, the average Belgian consumer have only worn 12 % of their wardrobe the past twelve months (Elven 2018 p. 1), and the majority of American campers uses their camping gear less than 5 days a year, that is 1,4 % of its potential (OIA 2017 p. 10). To induce more efficient resource usage the European Commission (2017) stresses the need for new business models in order to stimulate sustainable consumption and enhance businesses competitiveness.

Business models that shifts focus from selling products to provide services enable firms to create values with less resource usage (Charter & Polonsky 1999). It enables a more circular approach of doing business with multiple material loops of reusing, repairing and remanufacturing a product before it is turned into waste (EMF 2013). Studies indicate that selling reused clothes, for instance, requires 10 to 20 times less energy than to produce new textiles (Fletcher 2012). Therefore, service-focused business models have the potential to intensify product use and minimize waste, which may contribute to financial, social and environmental benefits (Charter & Polonsky 1999; Boehm & Thomas 2013). Moreover,

integrating product and service offerings allows firms to differentiate from companies that offer low-price products and is an increasing trend in the competitive global business environment (Kindström 2010). The phenomenon of making more use of products through services is commonly explained through the concept of product-service systems (Mont 2004; Tukker & Tischner 2006; Baines *et al.* 2007; Tukker 2015). This system entails a mix of products and services that together fulfil customer needs. Instead of maximizing unit-of-products sold businesses maximize profit through units-of-services delivered. In use-oriented product-service systems, the service provider retains the ownership of a product and charges consumers a fee to access it.

Use-oriented business models are commonly founded on principles of leasing, renting or pooling (Tukker 2004), which is not a novel phenomenon and for some product types it is the norm. For instance, outdoors associations commonly offer rentals of ski equipment (Klingelhöfer 2018). However, renting out a wide range of consumer goods for casual use in large scale is a new trend (Åkerlund 2018; Batat 2019). Start-ups are emerging within the Swedish clothes retailing business, for example *Re:leased, Something Borrowed* and *Rent-a-Plagg*, that offers short-term rentals, long-term rentals or subscription based leasing services. New actors that take the lead with innovative service offerings may pressure established manufacturing companies to follow the rental trend in order to stay competitive (Bessant & Davies 2007). Already established manufacturing companies that currently sell products may, however, find it significantly challenging to shift focus to services (Kindström 2010) and (Bocken *et al.* 2014) advocate that it requires fundamental changes of the core business, its purpose and daily processes.

1.2 Problem statement

Due to the challenges in terms of organisational changes required, there are few examples of a product manufacturer that has fully transit into a service provider (Oliva & Kallenberg 2003). Dolva (Pers. Com. 2019), sustainability manager at Fjällräven, highlights that companies that have been congratulated at different sustainability conferences for contributing to a service economy, are those that have applied a service-based business idea already at the start-up phase, for instance Airbnb, Uber or Netflix. Rarely, if ever, is an example presented of a company that previously sold products and have succeeded in shifting to merely renting out or leasing products. There are not sufficient guidelines and tools for practitioners transit from products to services (Baines *et al.* 2009). Integrating services into an existing product offer is a complex process, especially for established product-oriented firms since it requires changes to the organisational structure, management and culture (Kindström 2010; Barquet *et al.* 2013). If these elements are not considered carefully, businesses risk falling into "the service paradox", which entails that the firm has invested heavily in service offerings, the operations requires high costs and no returns are realised (Gebauer *et al.* 2005). Reim *et al.* (2015) argue that companies seeking to make the shift towards services must engage in an organizational transformation in the way it creates, delivers, and captures value.

From a theoretical point of view, most business models assume that profit is made on sales of a product and the ownership by the consumer after the transaction is taken for granted (Bocken *et al.* 2014; Lewandowski 2016). Little emphasis is placed on service aspects in the business model that enables other ownership structures of products. Meier *et al.* (2010) argue that more investigation is needed on how businesses may capture values that are co-created

with consumers meanwhile retaining the ownership of a product. This calls for alternative views of meeting consumer needs, such as that of what the product-service system epistemology offers.

The concept of product-service system has been widely discussed in research during the past decade, but most studies have focused on its design, environmental benefits and strategic business advantages (Tukker 2015). Commonly for the majority of existing papers is their conceptual nature. Boehm and Thomas (2013) argue that many studies present vague results and the research field inquires empirical studies and in-depth investigations in order to deliver concrete outcomes. Accordingly, Baines *et al.* (2009) and Reim *et al.* (2015) advocate that the research field lacks papers with more practical relevance. Despite that product-service systems are supposed to lead to competitive benefits in theory (Mont 2004), it is evident that the concept only had a limited uptake in practice, especially in business-to-consumer markets (Tukker 2015). To stimulate wider diffusion of product-service systems, investigation is needed on the implementation process and how to best manage the transformation from selling products to providing services (Mont 2002; Baines *et al.* 2007; Roy *et al.* 2009; Reim *et al.* 2015). The transition is often perceived as a gradual process (Oliva & Kallenberg 2003) and there is limited research of what constitutes a successful business model within this shift (Kindström 2010). Business models and product service systems are two bodies of knowledge that have not been discussed extensively together (Meier *et al*. 2010; Reim *et al*. 2015). Studies that do use a business model framework, such as Barquet *et al.* (2013) and Kindström (2010), tend to discuss several types of product-service systems, which provides breadth and a general understanding. However, knowledge about the *use-oriented* product-service system in particular is scattered in many different places in literature and few papers presents an in-depth investigation. Certain areas of use-oriented product-service systems have previously been studied such as the use of balance scorecards (Tu & Ngo 2018), consumer adoption (Armstrong *et al.* 2016) and financial scenarios, product design and supply chain (Mont *et al.* 2006). By combining theory on use-oriented product-service systems and business models, this report intends to contribute with a more holistic view of the use-oriented business logic.

1.3 Aim

The aim in this study is to identify enabling factors with a use-oriented business model. Moreover, this project strives to explain the prerequisites for a business to introduce use-oriented services into their existing product offer. The aim will be addressed through the following questions:

What are the characteristics of a use-oriented business model within the Scandinavian outdoor apparel industry?

What are the perceived challenges for companies within the Scandinavian outdoor apparel industry to introduce use-oriented services in combination with their existing product offer?

How are these challenges met?

1.4 Delimitations

Product-service system is a concept that is most commonly studied in research fields of engineering, computer science and business management (Baines *et al.* 2007; Boehm & Thomas 2013; Tukker 2015). This project explicitly focuses on the business administration field since it investigates the concept through the lens of business model theory. The choice of theoretical framework implies a static description of the use-oriented business logic at one point in time. Thus, the study does not intend to study the organisational change process from products to services. Instead, it represents a snapshot of the transition and generates insights about characteristics and challenges of business models that have started this transition. Despite that there are multiple definitions and illustrations of business models, this study does only account for one model, the Business Model Canvas, in order to generate results that can be easily understood and adopted by practitioners. This implies that this study does not include strategic perspectives such as competitive advantages or marketing practices. Instead it intends to provide an overall description of the core use-oriented business logic. Moreover, this study does not investigate all types of product-service systems in detail, but focus particularly on use-oriented systems.

1.5 Structure of the report

This report is structured according to eight chapters illustrated in figure 1. Chapter one introduces the problem, the aim, research questions and declares the delimitations with this study. The research process is described in chapter two that presents the methodological choices, their consequences, ethical aspects and quality assurance. In chapter three, the concepts and theories are explained that together build the conceptual framework used for analyzing the data.

Figure 1. Structure of the report.

Empirics are first presented in chapter four that provides a background of sustainability in the industry and main findings from previous studies on the subject. Furthermore, chapter five presents primary empirics from the case study, which is then analysed in chapter six. The findings in this project are discussed in relation to other studies in chapter seven. Finally, chapter eight presents the key findings, its practical and academic implications and suggestions for future research.

2 Method

In this chapter, the methodological choices taken in this research process are accounted for. Furthermore, this chapter explains the consequences of those choices and how the methods contribute to the desired outcome of this study. The research design, literature review, unit of analysis, data collection and data analysis are described in detail. Finally, this chapter describes quality assurance and ethical considerations.

2.1 Qualitative methodology

Methodology constitutes the strategy, including tools and techniques for data collection and analysis, which should illustrate how the different methods lead to a desired research outcome (Hart 1998). It is an overall design with different methods that should fit the paradigm and chosen theory, and was considered early on in this research process. Robson (2011) characterises two main designs, fixed and flexible. Fixed design departs from a strict and detailed plan when collecting data and flexible design entails a more preliminary and changeable approach. These have similar characteristics to quantitative or qualitative designs, a more common division in the majority of literature.

Since this study aims to contribute with an in-depth investigation about use-oriented business models, a qualitative methodology was chosen for three major reasons. Firstly, to answer the research questions regarding characteristics, challenges and solutions, detailed information, meanings and fruitful answers were desired. Secondly, Gummesson (2006) emphasizes that qualitative designs are preferred in research areas that are complex, context dependent and easily influenced by individuals. Business models is a concept with a high level of complexity and abstraction since various different definitions exists (George & Bock 2011) and researchers from different fields of research do not agree on what the concept includes (Zott *et al.* 2011). Hence, this study uses a qualitative methodology to understand the context in which the business model functions and to gain insights about its value creation. Finally, Robson and Mac Cartan (2016) argue that qualitative research is superior when studying an unexplored field since it allows the researcher to gain deep understandings about a new phenomenon in its real-life context. Selling use-oriented services is not a novel practise for certain product types such as costumes, evening dresses and skis. However, in the outdoor apparel industry it is only recently companies are starting to rent out casual consumer goods used on a more regular basis as a mean to reach a more sustainable development (Lejon 2017; Batat 2019). This study adopts an inductive logic as it seeks to extend the two bodies of knowledge (product-service systems and business models) by investigating the phenomenon of use-oriented business models in the context of the Scandinavian outdoor apparel industry. Hence, this study has an empirical starting point when contributing to existing literature.

2.2 Literature review

Among researchers, there are contradicting views of whether or not to conduct a literature review in qualitative research (Saldaña 2011). Particularly researchers within the grounded theory genre, may argue that using other peoples' concepts and theories can potentially

contaminate the quality of generating new theory that should strictly be grounded in data. However, in case study research Yin (2013) stresses that reviewing literature in the specific field of interest is necessary to gain confidence in the research. Since this project adopts a case study approach, a literature review was conducted in the initial stage of the research project in order to identify gaps of knowledge and find ways to contribute to the field. A preliminary theoretical understanding was developed prior to data collection since the main purpose of a literature review is to *"ensure that you are basically knowledgeable about the topic, potentially making an original contribution to your field, and not reinventing the wheel"* (Saldaña 2011, p. 68). Hence the theoretical framework was not fixed beforehand, but rather preliminary and evolved during the research process to allow for discovery of new empirical insights. In this project, it was valuable to develop a basic understanding of how product-service systems function and identifying definitions and illustrations of business models before collecting the data. Particularly business model literature is a quite diversified, abstract and a large area of research that can be difficult to study in a real-world context if not concrete models and illustrations are understood beforehand. In agreement, Denscombe (2000) emphasizes that in qualitative research, one should have enough knowledge to take on the study, but not to the extent where it is limiting and hindering an open mind. During the research process the literature review was rather iterative and new concepts were studied in parallel with the empirical investigation.

To create the theoretical framework in this study, literature was reviewed in two main bodies of knowledge: product-services systems and business models. Articles were primary searched through the databases Google Scholar, Web of Science and Primo. To gain an inclusive perspective of the phenomena of use-oriented business models a wide range of key words were used in the search: *use-oriented business models, product-service systems, industrial product-service systems, servitization, functional products, integrated product service offering, service transition, shared economy, circular business models, eco-efficient services and service-dominant logic*. A shortage was detected on articles explicitly describing use-oriented business models. Therefore, a literature review was conducted to identify themes specifically related to use-orientation. Since there are not many articles that describe the use-oriented business model and the researcher's previous knowledge in this subject area was limited, gaining a basic understanding was challenging. However, through searching for a large amount of articles that touch upon the subject, allows for a tight and solid conceptual framework in this project. To develop a contextual understanding additional articles on circularity within the fashion industry were used.

Quality in the literature review was assured through the use of well-cited peer-reviewed articles to ensure trustworthiness. Moreover, journals from multiple disciplines were reviewed to ensure that important information was not left out. Most of the articles reviewed are published in Journal of Cleaner Production, European Management Journal and Industrial Marketing Management. Since product-service systems are studied in multiple fields, the majority in engineering, business management and environmental science (Tukker 2015), reviewing different journals helped develop a dynamic theoretical framework to assist frame the empirical findings in this study.

2.3 Case study approach

To answer the research questions, this study aims for a contextual understanding possible through a case study approach. A case study enables investigation of a complex phenomenon in its real-life context (Eisenhardt 1989; Yin 2013). The case study approach helps setting boundaries to the study object and to specify the area of interest (Creswell 2013). In this study, the area of interest is the use-oriented business model within the Scandinavian outdoor apparel industry.

The reason this study focuses on the outdoor apparel industry is twofold. Firstly, a majority of case studies in existing product-service system literature is conducted within the heavy industries of tools and chemicals (Reim *et al.* 2015). Few studies explore the concept within more easily accessible consumer goods where buying decisions are taken more frequently (Mont *et al.* 2006). To enable a wider diffusion of product-service systems, it is interesting to investigate products that are consumed and a more daily basis by a wider range of consumers, such as clothes and other outdoor equipment. Secondly, products within the outdoor apparel industry are generally durable and of high quality, which is suitable when introducing a use-oriented service since it intensifies product use.

It is a multiple case study of several companies offering use-oriented services within the industry. As argued by Yin (2013), a multiple case study is preferred since it enables identifying similarities and differences between the cases. It also allows for the findings to be grounded in multiple sources of empirical evidence, which is desired in this study to describe common features of the use-oriented business model. This case study is of descriptive nature since it aims to describe the use-oriented business model in its specific context. Furthermore, it is an instrumental case study as advocated by Creswell (2013) when using the case as a tool to study the phenomena.

2.3.1 Choice of case companies and unit of analysis

The phenomenon this study aims to describe is the use-oriented business model. As described in more detail in chapter three, use-oriented business models can be categorised into renting, leasing and pooling (Tukker, 2004). In an early stage of this research process, the appearance of use-oriented services within the outdoors apparel industry was investigated. Both leasing and rental arrangements were found available on the market. As defined by Tukker (2004) *leasing* implies unlimited and individual access to a product in exchange for a monthly fee, while *renting* entails limited access where customers pay per use. Since both leasing and renting constitutes interesting empirical examples of use-oriented business models, this case study includes both types of services.

Case companies were selected according to the following criteria: i) the business offers rental- and/or leasing services ii) and ii) the business operates within the Scandinavian outdoor apparel industry. To assure inclusion of multiple views from actors in different positions in the value chain, both manufacturers and retailers were contacted. Seven companies agreed to participate in this case study: Fjällräven, Houdini, Bergans, Naturkompaniet, Rent-a-plagg, Aktivt Uteliv and Re:leased. Since investigating business models requires close investigation of how companies creates, delivers and captures values (Kindström 2010; Osterwalder & Pigneur 2010), the unit of analysis in this study is the firm.

2.3.2 Data collection

This study builds on empirical data primary collected through interviews. As the name signals, the purpose is to bring light to *inter views* (Kvale 1996). In other words, the method refers to interchanging different perspectives of a specific subject. Qualitative research interviews do not aim to contribute with objective facts. Instead it attempts to: *"Understand the world from the subjects' point of view, to unfold the meaning of peoples' experiences, to uncover their lived world prior to scientific explanations"* (Kvale 1996 p. 3). Since this study investigates social constructions, the very aim is to understand people's meanings and perceptions (Lindgren & Packendorff 2009).

In-depth interviews were conducted in this project to gain detailed descriptions of those meanings and perceptions related to the use-oriented business model. When using a case study approach, in-depth interviews is an essential method to provide details and rich descriptions (Yin 2013). However, conducting interviews bears certain requirements to ensure quality. Firstly, it can be a difficult data collection method for researchers that have little experience in interviewing (Creswell 2013). As proposed by Kvale (1996) the interviews in this project were well prepared and the interviewer had a fundamental understanding of the specific topic in order to ensure internal validity. Secondly, there is a risk of receiving biased answers from respondents that want to provide a glorified image of their company. Respondents were, therefore, informed that the aim in this study is not to compare different companies but rather to get an overall picture of the use-oriented business model. Finally, it is important to consider the level of structure (Kvale, 1996). In order to influence the respondents' to tell their own personal views and stories about the use-oriented business model and its challenges, a semi-structure was chosen in this study. Interviews were based on interview guides (see appendix) with several predefined open questions. It allows the researcher to adapt the conversation according to the respondent's answers and ask additional questions about specific issues (Kvale 1996). This was particularly valuable in this study since the theoretical framework was constantly evolving during the data collection process.

Yin (2013) advocates that a wider understanding can be obtained of the phenomenon if conducting multiple interviews with more than one person. In this project, a mix of personal interviews and phone interviews where conducted. Common weaknesses with phone interviews are that they may cause anxiety, shorter answers and irritation due to distraction from the surrounding environment (Novick 2008). In this project, the purpose with the study was explained carefully to avoid anxiety and establish trust between the interviewer and respondent. Moreover, by booking the interviews in advance the level of distraction was minimized. The phone interviews enabled increased anonymity and privacy when discussing sensitive topics as well as smaller interviewer effect (Novick 2008). In addition, three personal interviews were conducted face-to-face enabling observation and visual cues of the context, face expression and body language. The personal interviews were held at respondents' offices and the familiar environment lead to a relaxed atmosphere. Due to time constraints, one of the respondents answered the interview questions by email. Moreover, data was collected from a seminar organized by 3 Step IT, where Gustav Hedström from Houdini talked about their pilot on monthly leasing subscriptions. In total, data was collected from ten people working at seven different companies as illustrated in table 1.

Table 1. Data collection in the case study

Respondent	Role and company	Type of interview	Interview	Validation
Emma Gustafsson	Project Manager Circular business models, Fjällräven	Personal	2019-02-07	2019-02-08
Christiane Dolva	Sustainability Manager, Fjällräven	Personal	2019-02-19	2019-04-18
Peter Trabold	Business Developer, Fjällräven	Personal	2019-02-22	2019-02-26
Johanna Norrman	CEO, Its Re:leased	Phone	2019-02-25	2019-02-26
Martin Axelhed	CEO, Fjällräven	Phone	2019-03-05	2019-03-05
Erik Falk	CEO, Aktivt Uteliv	Phone	2019-03-13	2019-03-13
Yngvill Ofstad	Sustainability Developer, Bergans	Phone	2019-03-21	2019-03-22
Henrik Hoffman	CEO, Naturkompaniet	Phone	2019-03-28	2019-03-28
Magnus Sellberg	CEO, Rent a plagg	Phone	2019-04-02	2019-04-02
Phrida Lindblad	Retail Manager, Houdini	Email	2019-04-02	
Gustav Hedström	Business Developer, Houdini	Seminar	2019-04-04	

In qualitative research the choice of respondents is rarely based on randomness and probability (Kvale 1996). Instead the selection is based on a subjective evaluation of which people are expected to provide fruitful answers to achieve the aim. These key informants were selected in this study according to the following criteria; i) they possess detailed knowledge about the business model and ii) have insight into the use-oriented service. Employees expected to possess this knowledge were for instance the CEO or sustainability manager. People with those positions were primarily contacted and interviewed, but sometimes they referred to a colleague who participated instead. After the interview were conducted, additional questions were asked on email if clarification was needed. All interviews by phone and face-to-face were recorded, transcribed and sent to the respondent for validation on the dates illustrated in table 1.

In addition to interviews, data was collected through secondary sources to enable triangulation. Using a combination of different sources captures more than one perspective and results in a more inclusive outcome (Saldaña 2011). Most importantly, triangulation may confirm the content of data from different sources and, therefore increases internal validity. This is especially important in case studies since the phenomenon often is complex and may be difficult to grasp if not studied through multiple sources (Eisenhardt 1989; Yin 2013). Documents regarding the evaluation of Fjällräven's tent rental pilot project provided useful insights about the first steps of introducing rental services. The evaluation report partly consists of documented interviews with employees in the stores and facilitated an understanding of rental services on an operational level and the working process required in retail stores. Moreover, the companies' CSR reports and information on webpages were scrutinized and additional information was collected through newspapers and other reports. When studying reports, Yin (2013) highlights that researchers should be aware of the underlying purpose why it was produced. Therefore, the data collected from secondary sources was interpreted with consideration to its context where it is created.

2.3.3 Data analysis

Qualitative data analysis implies searching for meanings in texts rather than drawing statistical conclusions from numbers (Van den Hoonaard & Van den Hoonaard 2008; Miles *et al.* 2014). In alignment with suggestions by Yin (2013), data from the case study was

analysed in this study by examination, categorization and charting information in tables. This process helped interpret the meanings from the interviews. A commonly used analysis techniques in qualitative research is content analysis, which was also used in this report. Content analysis is a systematic way to reduce data to concepts that describe the phenomenon and to identify core consistencies and meanings (Schreier 2012). In other words, it implies taking a large amount of data and boiling it down into something meaningful. The analysis technique help withdraw common themes, meanings and patterns by categorizing data into different units (Wildemuth & Zhang 2009). Therefore, the use of codes is a central aspect in content analysis. In this study, the process of content analysis followed the three phases proposed by Elo *et al* (2014): i) preparation, ii) organization and iii) reporting.

i) Preparation involved collecting data, making sense of it and choosing a unit of analysis. However, Yin (2013) emphasize that the analysis starts even before collecting the data. In agreement, the analysis process in this study started already when creating the preliminary theoretical framework that provides the structure for the interview guides and helps focus data collection related to the research questions. Miles *et al.* (2014) highlight that the researcher is the tool to collect data in qualitative interviews. Hence, the data collection and analysis occurred simontainasly in this project when the researcher interpreted the conversations. This iterative process of analyzing and collecting data was assisted in this report through writing memos during the interviews.

ii) The organization phase refers to the analysis when transcribing the interviews. Data was then categorized according to similar features into different themes. The categorization process helped clarify common features of the use-oriented business model and identify the most important challenges perceived by the different companies and how they were met. Departing from the different elements in the canvas model served as a useful tool to code the data and allowed for new themes to emerge inductively during the analysis process as emphasized by Miles and Huberman (1994).

iii) In the reporting phase, the results in this study was described in text and analysed according to the content in the categories. As pointed out by Van den Hoonaard (2008) writing itself was an important tool for analysis since it helped interpret the data, clarify concepts and reconsider what can be concluded. Patton (2002, p. 503) stresses that reporting the analysis should *"provide sufficient description to allow the reader to understand the basis for an interpretation, and sufficient interpretation to allow the reader to understand the description".* Therefore, this study aimed at balancing description and interpretation when reporting the results. Validity was addressed in this project by clearly stating how the results were created so that the reader can follow the logic in the analysis and conclusions, as suggested by Schreier (2012).

The choice of analysis technique bears certain consequences. For instance, it is difficult to analyse a change process through content analysis since it is a rather static approach that highlights the content at a specific point in time. However, in this study does not strive to explain the transition from products to services with a longitudinal approach. Instead, business model theory is used as theoretical framework, which is also fixed in nature and illustrates a business logic at one point in time (Osterwalder & Pigneur 2010). For this purpose, content analysis is desired in this study to withdraw common characteristics of the use-oriented business model.

2.4 Quality assurance and ethical considerations

There are several examples where the scientific value of case studies have been questioned, criticized and misunderstood in the past (Flyvbjerg 2006). Therefore, it is important to declare how this report assures quality. Among researchers, there are different opinions on which terms to use when assessing quality in qualitative research (Koch & Harrington 1998). Validity and reliability is commonly used criteria when assessing quality in the positivistic research paradigm. However, other concepts may be more suitable to evaluate a *content analysis* since it is an interpretative method that has totally different assumptions and purpose (Bradley 1993; Wildemuth & Zhang 2009; Elo *et al.* 2014). To assess qualitative research, Lincoln and Guba (1985) proposed the term trustworthiness. It states how well we can trust that the results are accurate and is established through creditability, transferability, dependability and conformability. Techniques that were used to addresses these quality requirements in this report are listed in table 2.

Table 2. Techniques for establishing trustworthiness (with inspiration from Lincoln & Guba, 1985)

Quality assurance	Examples of techniques	Applied in this project
Credibility	Triangulation	The use of different data sources and interviewing multiple respondents.
	Checking interpretations against raw data.	Transcripts sent for validation.
	Transparency in coding.	Clearly describe the coding process and show how conclusions were drawn.
Transferability	Rich and detailed description of data and research context.	Describe empirical findings and methodology in detail. Present an empirical background. Use of adequate references.
Dependability and conformability	Audit trail	Record interviews, writing memos, justifying codes used in analysis (2.3.3).
	Reflexivity	Adopting a reflexive attitude.

Credibility refers to being confident that the findings are true and valid (Lincoln & Guba 1985), which is addressed in this project through triangulation with multiple sources and through checking the accuracy of the researcher's own interpretations by sending the transcripts from interviews to respondents for confirmation. Moreover, this report thoroughly declares the procedure of the coding process and logically explains how conclusions are drawn from the data.

Transferability implies that the findings are applicable in other contexts (Lincoln & Guba 1985), which is closely related to the concept of generalization. One common misunderstanding with case studies is that its contribution to literature cannot be justified since the results cannot be generalized. Flyvbjerg (2006) argues that although the results cannot be statistically generalized to a large population, it can be generalized analytically. This means that the conclusions drawn in this study can be applied in a greater context than only this case. For instance, other companies can use the illustration of a use-oriented business model and identified challenges and solutions as guidelines when introducing use-oriented services to their business. However, Lincoln and Guba (1985) clarifies that whether the findings are applicable in other contexts or not is ultimately judged by the readers. The researcher can only provide sufficient details of the data and its context to facilitate other researchers' judgement about the level of transferability. In this study, the research context is

described as precisely as possible, in particularly when discussing methodology and empirical findings. Moreover, the empirical background intends to provide a contextual understanding of traditional challenges and new trends for the use-oriented business model in different industries.

Dependability states the level of consistency in the findings and entails that the study can be repeated and *conformability* entails that the findings are neutral and not biased by the researchers own interests (Lincoln & Guba 1985). To establish both of these qualities, the same techniques can be applied. Through audit trail and reflexivity a rationale is presented for the choices made in the research process, which makes it possible to duplicate the research at another time. In this report, all interviews were recorded, interesting topics were written down in memos during data collection and the codes used for analysis are described to enable auditing the research process. A reflexive attitude was adopted during the research process to continuously reflect upon if my own values, background and interests affect the research process. This was especially important since I work at one of the companies where data was collected, Naturkompaniet. However, my previous experiences from the company are merely operative from working as a salesman in their store and I have no strategic interests that affect this project. Moreover, when the idea to this study emerged I intended to merely investigate Fjällräven's tent rental operations and I have therefore had regular contact with my supervisor Emma Gustafsson at Fjällräven. Once the research process developed more companies were included in data collection. Despite that Fjällräven was involved to a greater extent compared to the other companies, I have no intention to interpret the data to favour Fjällräven. Instead I strived for an unbiased interpretation of the result. Since this is perceived as a single case study, focus was placed on gaining a general understanding of the use-oriented business model instead of comparing the companies involved.

To gain valuable data, it is crucial to consider ethical issues and retain a good relationship to respondents and other actors involved in the research process (Kvale 1996). Despite that ethical considerations should be reflected upon during the entire research process, there are many issues that may arise particularly related to the interviews. In this project, all respondents were asked to sign a written consent to confirm that they agree to dispose their name and position in the company. Respondents were informed that the participation is voluntary, that the study is published and that they could withdraw from the project at any time. Since interviews were transcribed and sent to respondents for validation they had the option to mark any information that is sensitive and that they do not wish to make public. An open dialogue and transparency was established with respondents as advocated by Kvale (1996) to avoid mistrust. Other companies that participate were presented to the respondents along with a clear explanation of the purpose with this study. Moreover, integrity was considered through asking permission for recording the interviews.

3 Theoretical framework

This chapter starts with a short introduction of the concept of circular economy, followed by a presentation of several service concepts. Then the two large theoretical areas product-services systems and business models are briefly touched upon. A more detailed description is presented of the canvas business model, product-service system business models and lastly there is a focused explanation of the use-oriented business model. At the end, a theoretical synthesis is described to provide an illustration of the theoretical framework.

3.1 Towards a circular economy

Circular economy, **CE**, implies that resources are used in circular loops (Naturvårdsverket 2019). When a product reaches the end of its lifecycle the materials are used as inputs in the next cycle. In contrast to the take-make-dispose logic that has dominated ever since industrialization and encourages a buy-and-throw away behaviour, circular economy strives to minimize waste. Ellen MacArthur Foundation (2015 p. 2) a pioneer within the circular economy movement, defines the concept as: *"A circular economy is one that is restorative and regenerative by design and aims to keep products, components, and materials at their highest utility and value at all times, distinguishing between technical and biological cycles"*. Materials in the circular economy should be used in as many loops as possible to maximize resource efficiency. Bio-based materials should be cascaded, transformed into biogas or decomposed to nourish the biological cycle. Technical materials should be repaired, reused, remanufactured and recycled before turned into waste. The emphasis on the customer as a user instead of a consumer indicates that companies should focus on providing access to products rather than selling ownership rights. Hence, shifting from selling products to providing services.

3.2 Services

Services may be defined as activities that contains some kind of intangible element (Durugbo *et al.* 2010). Even though physical products may be a part of the offer, there is no transfer of ownership rights. In contrast to products, services are not possible to store because they are produced and consumed at the same time. Hence, customers play an active role in producing the service. There are many concepts that explain increased utility of products through services. For instance, servitization (Vandermerwe & Rada 1988), collaborative consumption (Botsman & Rogers 2010), access economy (Yan *et al.* 2010) and eco-efficient services (Charter & Polonsky 1999). Hence, when discussing how value is created in services, there are two points of departures.

Traditionally, value creation originates from a goods-logic that assumes value is created internally by a company, converted into money at the point of sale and utilized by the customer until there is no value left (Skålén 2018). Hence, the company is perceived as the main value provider and the customer rather destroys value when consuming the product or service. For instance, a car producer creates all the values through internal manufacturing processes and once the customer drives the car its value decreases with each kilometre. The

goods-logic is focused on the producer, the use of operand resources and the unit of exchange is typically the good (Vargo & Lusch 2004). In contrary, a service-logic shift focus to the consumer and operant resources is used to exchange competences, skills and knowledge. Instead of focusing merely on the product, the service components enable companies to sell an experience, in which customers willingness to pay is higher (LaSalle & Britton 2003). The company's role is merely to provide different proposals that are supposed to facilitate value creation (Skålén 2018). The actual value creation takes place when the customer uses the product or service and these values cannot as easily be converted into money. In the car example, a service-logic implies that the car manufacturer provides different proposals of values that may be realised through offering for instance a hybrid car. Value is created every day when the customer enjoys driving the kids to school with less bad conscience for the environmental effects. This requires that the customer tell the car manufacturer that she prefers an environmental friendly car and as Vargo and Lusch (2016) emphasize value is then co-created by customers in collaboration with the company.

Despite that the two logics are commonly represented as two extremes illustrated on opposite ends of a linear scale, not all researchers agree that the relationship between the two is a pure continuum and companies often implement elements from both logics (Windahl & Lakemond 2010; Chathoth *et al.* 2013; Berghäll 2018). However, it is important to declare the point of departure since the logics may illustrate different ontological standpoints (Yan *et al.* 2010; Vargo & Lusch 2017). In this project, value creation in services is assumed to depart from a goods-logic since the aim is to study how existing companies may extend their original product offer through inclusion of services. A concept that expands our understanding of added services, departing from a goods-oriented logic, is product-services system that is explained further in the next chapter.

3.3 Product-service systems

A product-service system, **PSS**, is a system that includes a mix of products and services (Mont 2002; Tukker & Tischner 2006; Boehm & Thomas 2013; Tukker 2015). In this system, services have a substantial role in the product offering. Even though the offer might include both products and services, the product is merely perceived as a mean to deliver the service. For instance, customers signing up for a carpool are not interested in the car itself. Instead, they value the transportation service. Moving away from selling the ownership of products, PSSs enable businesses to make profit from offering the utility of products or selling a finished result (Baines *et al.* 2007). In contrast to the linear models where businesses are encouraged to maximize the number of sold units, Tukker (2015) points out that PSS creates initiatives for the firm to maximize the number of services delivered. On a micro-level this may, according to Halme *et al.* (2004), lead to resource efficiency. Since the producer often owns the products in PSSs it creates incentives use the products as intensively as possible and to prolong the products life cycle. Even at the end of the products' life, the firm has initiatives to reuse the materials in order to minimize costs for extracting new materials. Thus, fewer products are needed to satisfy customer needs. Since materials are then managed in closed loops, PSSs are supposed to lead to reduced material flow in the value chain (Mont 2002; Tukker & Tischner 2006; Tukker 2015). In the long run, PSSs are believed to lead to a more dematerialised future (Cook *et al.* 2006).

Despite its potential for resource efficiency, Tukker (2004) points out that PSSs do not automatically lead to environmental improvements. Bocken *et al.* (2014) highlight that the level of environmental performance when delivering functionality depends on the organisation's ability to reduce production volume and eliminate waste. There are inconsistencies in existing literature in the field regarding sustainability (Tukker 2015). Some researchers includes its environmental benefits in the very definition of a PSS (Mont 2004), while others exclude it in order to ensure the definition applies in different fields of research (Boehm & Thomas 2013; Tukker 2015). In this study, a PSS is defined accordingly with Tukker and Tischner (2006 p. 1552) as: *"A mix of tangible products and intangible services designed and combined so that they are jointly capable of fulfilling final customer needs"*. Existing research indicate that introducing PSS requires substantial changes in value creation, income flows, marketing principles, manufacturing processes, organisational structure and internal culture (Mont 2002; Boehm & Thomas 2013; Tukker 2015). Thus, there are many possible theories within the business administration field to depart from when studying the concept. For instance, exploring the marketing mix (MacCarthy & Perreault 1990; Armstrong *et al.* 2015), competitive strategy (Mintzberg 1987; Porter 1998) or organisational change (Guimaraes & Armstrong 1998; Luecke 2003; Burnes 2004). All of these theories could be suitable when studying specific phases of the transition to services, but they do not explicitly explain the business logic as a whole. Since the introduction of services changes the very core of a business (Mont 2002; Tukker & Tischner 2006; Baines *et al.* 2007), this study aims to gain a more holistic view of product-service systems that the business model theory offers.

3.4 Business models

Although the concept of business model, **BM**, has been widely used during many years (Drucker 1955), existing literature presents inconsistent and poor definitions (George & Bock 2011). Zott *et al.* (2011) argue that researchers from different scholars do not agree what a BM is. The concept may, in general terms, be understood as a system that captures values and transform it into profit (Afuah 2014). In other words, it is a recipe for how to make money. Amit and Zott (2007 p. 181) defines BMs as *"... elucidating how an organization is linked to external stakeholders, and how it engages in economic exchanges with them to create value for all exchange partners"*. Some papers emphasize the role of a BM as a tool to communicate strategic decisions and create competitive advantages (Morris *et al.* 2005; Shafer *et al.* 2005). In contrary, Osterwalder and Pigneur (2010) advocate that BMs and strategies are different entities and should be treated as such. Barquet *et al.* (2013) agree and claim that strategy is rather a driver to develop new BMs, and should be clearly formulated beforehand since it shapes the BM analysis.

Despite apparent differences in attempts to define BMs, there is a consensus in existing literature that the concept tries to frame how an organisation creates *values* from its business activities (Chesbrough 2007; Zott *et al.* 2011). Since value creation is recognized as a central part of the concept, BMs is understood in this report accordingly with the widely accepted definition of Osterwalder and Pigneur (2010 p. 14) as: *"The rationale of how an organization creates, delivers and captures value"*. This definition offers a simplified description that enables a holistic analysis of a company's logic. A broad perspective facilitates identification of the most important factors of the business logic (Barquet *et al.* 2013), which is in alignment with the purpose of this study. Therefore, the analytic framework in this study will be based

on a broad and simple model called Business Model Canvas, explained in detail in the next chapter.

3.4.1 Business Model Canvas

Business model Canvas, **BMC**, is a standardized framework developed by Osterwalder and Pigneur (2010) and consists of nine building blocks illustrated in figure 2. Value proposition constitutes the heart of the BM and is a set of values that seek to satisfy customer needs. It is a collection of benefits, for instance something new, increased performance, design, brand status, low prices or simply "getting the job done". Slightly different value propositions may be delivered to different customer segments, in order to customize the offer and better satisfy the specific customer needs. A customer segment is a group of people that shares similar needs, behaviours and characteristics (Weill & Vitale 2001). Each customer segment can be reached through different channels of distribution, point of sales and communication. Osterwalder and Pigneur (2010) point out that it is important to integrate the channels into customer routines. Companies should carefully consider whether to use in-house channels with higher margins or partner channels to extend its reach. Furthermore, the channels enable different types of customer relationships, which may range from self-service to dedicated personal assistance. Automation is, for instance, a type of relationship that enables customization due to the ability to recognise customer behaviours through digital information recovered from orders or transactions. Delivering the value proposition successfully to customer segments (through channels and relationships) results in revenue streams (Osterwalder *et al.* 2005). Revenue streams may be categorized into transaction-based revenues that is generated at one point of time, or recurring revenues that are on going.

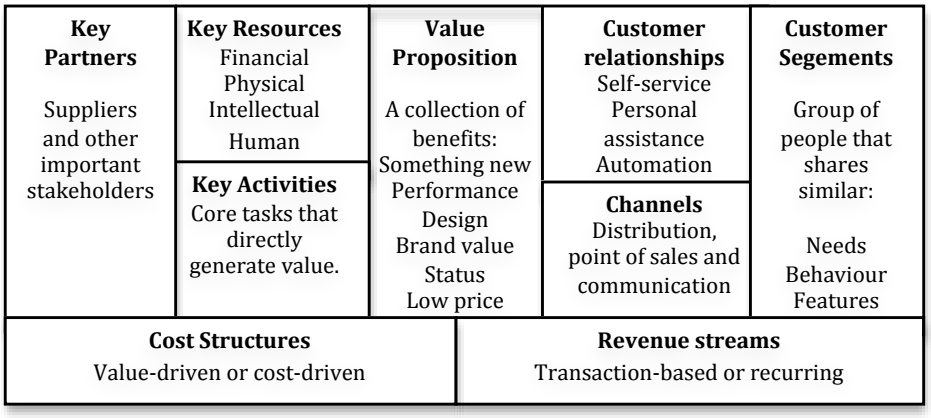

Figure 2. Canvas business model (based on Osterwalder & Pigneur 2013, p. 40).

Delivering the value proposition successfully requires certain resources, activities and partnerships, which then results in the cost structures (Osterwalder *et al.* 2005). Key resources constitute the means needed for the value creation process. For instance, companies often need financial capital, physical resources in terms of facilities or equipment and intellectual resources such as knowledge and patents. Moreover, Osterwalder and Pigneur (2013) highlight the importance of human resources and to employ unique and competent people. Except resources, a BM requires certain key activities that directly generate value. For instance, in product-focused companies, the core task is typically manufacturing, while service-oriented businesses engage in problem-solving activities such as consulting. It is rare that a company owns all resources or perform all activities by themselves (Amit & Zott 2001). Hence, they establish partnerships with important stakeholders that involved in the value creation process. For instance, supplier partnerships may be created to outsource or share infrastructure, which often contribute to reduced costs, access of new knowledge and an

extended customer base. Partnerships may also be established in terms of strategic collaborations with competitors to reduce risks and enhance competitive advantages (Osterwalder & Pigneur 2010). Finally, the elements explained above leads to the cost structures. Costs may be generated from a value-driven model that accepts relatively high costs since it delivers a premium value proposition or from a cost-driven model aims to minimize costs in all possible ways by automation and extensive outsourcing.

The BMC is a tool to illustrate a business ability to create value (Osterwalder & Pigneur 2010). However, Joyce and Piquing (2016) argues that canvas BM merely considers economic values. The triple-layered BM canvas expands the original model by adding social and environmental dimensions. Hence, it consists of three different frameworks and has a more complex approach. The original BMC is used in this study since it is a simpler tool. Critics advocate that BMC lacks dynamics, strategic information and presents a simplified version of the business logic (Hong & Clemens 2013; Romero & Molina 2015; Khodaei & Ortt 2019). However, its simplicity provides many benefits. Firstly, BMs are preferably analysed solely and without competitive strategies since the strategic goals should already be formulated previous to analysing the BM (Osterwalder & Pigneur 2010; Barquet *et al.* 2013). Secondly, BMC is a well-recognised framework that is easy to use (Trimi & Berbegal-Mirabent 2012; Barquet *et al.* 2013). Thirdly, its practical applicability enables a flexible approach that is suitable for many types of businesses (Fritscher & Pigneur 2010). For instance, Lewandowski (2016) emphasizes that sustainable BMs can be analysed. A circular logic can be integrated in the model by adding two more elements: take-back system that explains the reverse logistics and adoption factors that describes the cultural, technological, political and economical incentives required to make the BM work. Lewandowski (2016) presents various examples of circular BM and product-service systems include one of them.

3.4.2 Product-service system business models

PSS are commonly categorized according to three distinct characteristics: product-oriented, use-oriented and result-oriented (Charter & Polonsky 1999; Mont 2002; Cook *et al.* 2006; Baines *et al.* 2007; Belz & Peattie 2012). Tukker (2004) expanded this idea further by developing eight types of BM archetypes illustrated figure 3. The eight models differ in the level of servitization, ranging from pure product to pure service. Moving towards a large amount of service content, the reliance on the product decreases and the customer needs are translated into more abstract contracts.

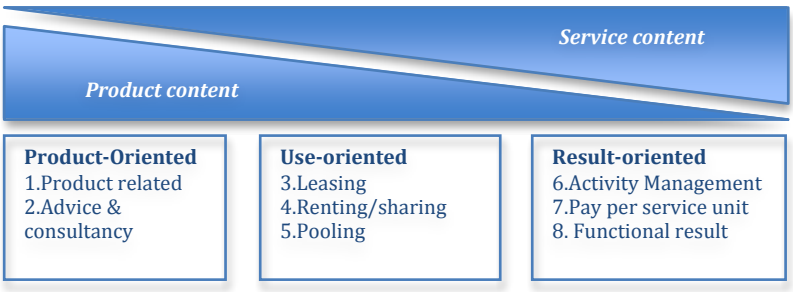

Figure 3. Eight Types of product-service system business models (based on Tukker 2004, p. 248).

Product-oriented, **PO**, PSS is geared towards selling physical products, but with but with additional services added to the offer (Tukker 2004). The type of service added differs in archetype one and two. The product related BM offers services that are directly related to the product and needed during its use phase, for instance, insurance contracts, repairing services to prolong the product-life or a take-back system when the product reaches the end of its

lifecycle. Another example is to provide supply of materials required for the specific product, for instance selling wax to a pair of new leather boots. Advice and consultancy BM implies providing advice on how the product is most efficiently used in order to maximize pleasure for the customer. Training and consultant services often lead to added value for the customer and the environment simultaneously. For instance, Belz and Peattie (2012) describe a case where firms offers education in responsible driving to influence their consumers to drive safer and more eco-efficient, which potentially results in fewer accidents and reduced fuel consumption.

Use-oriented, **UO**, PSS refers to BMs where the company retains the ownership of a product and sell its utility (Charter & Polonsky 1999). UO BMs may be categorized into leasing, renting and pooling (Roy 2000; Tukker 2004). Product lease offers unlimited access to a product that is used individually by a customer in exchange for a monthly fee. Rental implies that customers pay per use to have limited access to a product that is used by other consumers at other times. Product pooling entails that a product is used simultaneous by other consumers, for instance car-pooling where people share the journey with fellow travellers (Williams 2007). The type of customer payments differs from PO BM since they are lower than the capital cost of buying a product. This may require new accounting practices to support the UO cash flow (Mont 2004).

Result-oriented, **RO**, PSS use the product themselves and sell a finished result (Charter & Polonsky 1999). In contrast to UO PSS, customers do not particularly enjoy using the service, only the result of it. As Belz and Peattie (2012 p. 182) express it: "*They only enjoy the fruits of the product: the result"*. The activity management BM implies that an organisation outsources some activities in order to concentrate on the most important things that directly generate value to the firm (Tukker 2004). Pay per service unit BM entails that the provider offers the output of products that are frequently used by consumers (Lay *et al.* 2009). A classic example is Rolls Royce business idea of "power by the hour" that provides flight engines and gets paid each hour the engines are used. In the functional result BM, service providers sell a promise to deliver a specific result, but they have a high degree of freedom to decide how the job is executed (Tukker 2004). Thus, the contract is quite abstract and it may be challenging for the company to translate the agreed result into concrete actions.

3.5 Use-oriented business models

Use-orientation can be implemented in a BM through leasing (unlimited and individual access), renting (limited and shared access) or pooling (simultaneous usage) (Tukker 2004). Common for all three is that customer needs are met through selling the access of a product rather than the ownership rights. The market should therefore be segmented according to ownership preferences and user behaviour instead of product characteristics as in PO BMs (Tukker & Tischner 2006). Value is created through the shift in product ownership from customers to producers (Reim *et al.* 2015). It implies that customers have less responsibility for the product life cycle since they do not have to maintain, repair and recycle the product. However, Tukker and Tischner (2006) advocate the risk for UO services to seem unattractive when owning a specific product is important for intangible values such as status and control. There may be barriers to trust regarding quality issues, maintenance and hygiene of used goods (Rexfelt & Ornäs 2009; Catulli 2012), which may require different business activities and an extended network explained further below.

3.5.1 Business acitivties

Since the service provider retains the ownership of the product, Cook *et al.* (2006) advocate that the most important activities may take place any time before, during and after the product use phase. Grönroos (2011) acknowledges that the service provider must now incorporate activities that previously were conducted by customers, for instance, installing, maintenance and storage. During the whole use phase of products companies interact regularly with customers and employees have a key role to deliver the service (Kindström 2010; Reim *et al.* 2015). Mont (2004) explains that UO PSS entails a more long-term and intensified relationship to its customers compared to PO businesses. The frequent interaction with customers enables access to customer's preferences on product modifications and redesign, which could according to Tukker (2004) potentially lead to faster innovation. Therefore, Parida *et al.* (2014) stress the need for new routines to access customer feedback, organize the information flow and make use of it. Thus, it is important to establish an efficient infrastructure to nourish the collaboration between customers and suppliers (Meier & Massberg 2004). Cook *et al.* (2006) emphasize that UO BMs often requires new skills, additional personnel and new competences in relationship building. Due to the increased customer interaction it is more complex to launch a new service compared to a new product (Kindström 2010) and there may be resistance from actors that are involved in sales (Barquet *et al.* 2013). It is therefore crucial to establish the company as a service provider in the eyes of the customer and to gain new partners (Kindström 2010; Reim *et al.* 2015).

3.5.2 Network and partners

Creating, capturing and delivering value in a PSS is not possible as an isolated actor (Schuh *et al.* 2009; Gao *et al.* 2011). In other words, the functioning of the UO BM is dependent on the business ability to establish a successful service network. A service network is, in this context, defined as the interaction between multiple external stakeholders. Ceschin (2013) argue that the network should not only consist of stakeholders that are directly involved in the PSS such as users, providers and suppliers. Already at the point of the century, Van de Poel (2000) introduced the concept of "outsiders" and acknowledged that they are significantly valuable in contributing to development of innovations. For instance, competing firms can help find mutual resources, scientists can develop new insights and societal pressure groups such as NGO´s can influence decision-making in the top management. In addition, Ceschin (2013) argues that governments can provide legitimacy and support during the up scaling phase of eco-efficient innovations.

A service network for a UO BM should not only link the company to the customer, but it should also include actors that provide a route backwards from the user to the provider (Parida *et al.* 2014). A under-developed infrastructure in both of these two directions forces companies to extend their network and create new partners to compensate for the lack of in-house competences and resources (Williams 2007). Companies must be open to collaborate with actors that are unfamiliar if they possess unique competences missing in the organisation (Evans *et al.* 2007). However, retaining too many relationships is costly (Johnson & Selnes 2004) and the profit must be shared among all the actors (Barquet *et al.* 2013). It is therefore important to select partners carefully. PSS normally requires a new network within the repair and take-back industry (Mont *et al.* 2006). Moreover, firms can collaborate with a third-party responsible for delivering the leasing, renting or pooling service (Tukker 2004). This may help companies reach new markets and enable a wider distribution. However, Mont *et al.* (2006) emphasize that it is important that the service provider manage the reverse logistics.

3.6 Theoretical synthesis

This section aims to explain the theoretical framework that is illustrated in figure 4. Circular economy emphasizes that resources should spin in circular loops (EMF 2015). The concept emphasizes that waste can be minimized by using biodegradable materials and maximizing utility of technical products. Businesses are expected to operate according to the reuse-repair-remanufacture rationale in order to assure that resources are used in multiple cycles. Resource efficiency can be obtained by shifting from selling products to providing services (Charter & Polonsky 1999). Common for most service concepts is the inclusion of intangible elements, no transfer in ownership rights and the aim to maximize utility of products (Durugbo *et al.* 2010). There are, however, two different points of departures when understanding how value is created in services (Skålén 2018). In this project, value creation is assumed to depart from a goods-logic since the aim is to explain how existing companies may extend their original product offer through inclusion of services. A concept that departs from a goods-oriented logic is product-services system, which implies a mix of products and services that together fulfil customer needs (Tukker & Tischner 2006). However, products are merely perceived as a mean to deliver the service. As proposed by Tukker (2004), the concept may be categorised into i) product-orientation that sells products like usual but with added services, ii) use-orientation that sells access of products and iii) result-orientation that sells a finished result.

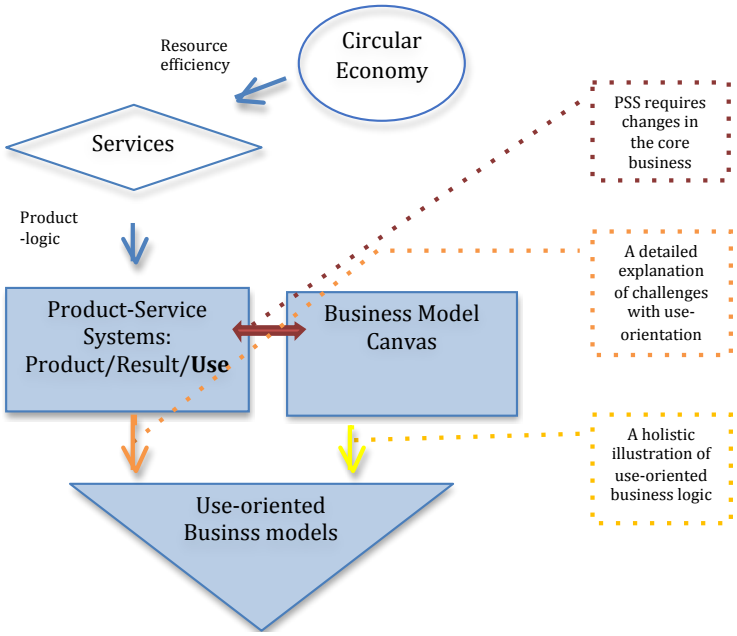

Figure 4. Illustration of the theoretical framework.

Mont (2002) advocates that introducing service elements changes the very core of a business. Therefore, the theoretical framework in this study includes business model theory. Starting with a broad introduction of the business model concept, followed by a concrete presentation of the nine elements of business model canvas (Osterwalder & Pigneur 2010), the business model framework intends to illustrate a holistic approach of a use-oriented business logic. Use-oriented business models may be challenging to adopt since they require another approach of doing business, including different work processes (Parida *et al.* 2014) and an extended network (Reim *et al.* 2015). Hence, in accordance with the aim in this study, the theories provide a solid framework to analyse enabling factors with the use-oriented business model.

4 Empirical background

This chapter presents a background of sustainability measures within the Scandinavian outdoor apparel industry. Common sustainability practices are discussed, followed by a brief explanation of the industry's environmental impact. Furthermore, this chapter presents findings from previous studies that are related to use-oriented business models.

4.1 Sustainability within the outdoor apparel industry

The outdoor apparel industry is defined in this study as companies offering clothes, shoes or any type of outdoor equipment. Products and services produced by the industry are supposed to equip consumers for an outdoor activity. Whether it is walking, skiing or ice-skating, spending time in nature is key (Fenix Outdoor 2017). Sustainability is therefore often a matter of course in the industry. Trabold (Pers.com. 2019) clarifies that Fjällräven's mission is to inspire people to spend more time in nature, which in itself is a sustainabile practice since it has indirect positive effects on the environment. Studies indicates that once people experience outdoor adventures they feel more connected to nature, which leads to more environmentally friendly lifestyle choices overall (Brymer & Gray 2009; Boyes 2013).

Outdoor Industry Association, OIA, (2019) presents common practices that companies should adapt to influence the society and natural environment in a more controlled manner. The industry association recommends implementing monitoring practises to ensure ethically sourced products by considering animal welfare, labour treatment and materials used in the value chain. Despite that outdoors products are generally durable and of high quality (Hodgson 2017), materials used in production are sometimes based on fossil fuels and chemicals to maximize product performance (Dzurik *et al.* 2014). Hence, sustainability strategies within the outdoor apparel industry often consist of finding more eco-friendly materials that can deliver the same high level of performance. In this context, the concept of circularity is frequently discussed as a mean to innovate products that are easily reused, repaired and re-manufactured (Mont *et al.* 2006; Azarenko *et al.* 2009; Hodgson 2017).

The apparel industry is traditionally run by a take-make-dispose logic and is known as one of the world's most unsustainable industries with high pollution rates, water consumption and chemical usage (Boström & Micheletti 2016). Fast fashion trends motivate consumers to buy and throw away. The United Nation stated that the apparel industry generates more greenhouse gas emissions than all international flights and shipping together (Dory 2018). Clothes and equipment of high quality, such as many outdoor products, may not be a part of the fast fashion trend to the same extent since these products are usually durable and designed to last a long time (Hodgson 2017). However, Dolva (Pers. com. 2019), sustainability manager at Fjällräven, acknowledges that in a PO BM the customer still owns the decision rights over the product use. Many outdoors products are season based and are not used on a daily basis by most people. For instance, tents are on average used solely five days per year in America (OIA 2017 p. 10). Durability and low utility rate are two product qualities that hold great potential for UO services such as rental and leasing arrangements (Mont 2002).

4.2 Previous studies related to use-oriented business models

A recent master thesis concluded that UO PSSs leads to resource efficiency and prolonged life cycles of products (Tu & Ngo 2018). However, previous studies reveal that leasing could cause rebound effects where products are used less carful resulting in faster wear and tear (Tukker 2004 2015; Kuo 2011; Reim *et al.* 2015). In contrast, Tukker (2004) points out that even though short-term rental arrangements enables low access barriers for new customers, it entails transaction costs in terms of time and effort required for pick-up and return. This may in fact discourage usage and thereby decrease the environmental impact. A study by Hirschl *et al.* (2003 p. 191) conducted on the ski industry found that privately owned skis are on average used 62,5 days where as rental skis are used 106 days. Thus, rentals increases resource productivity by 1,6 – 1,7. Bocken *et al.* (2014) highlight that the level of environmental performance when delivering functionality rather than ownership depends on the organisation's ability to reduce production volume and eliminate waste. During a two-year project, Mont *et al.* (2006) studied lease of baby prams in Sweden and they argue that the positive environmental effects is determined by three criteria. Firstly, products should not be rented out through a 3:rd party, but instead directly by the manufacturer who should be interested in prolonging the product's life cycle. Secondly, once the product has been used intensively it should not be sold, but instead remain at the producer to be remanufactured or recycled. Thirdly, companies should operate according to the circular waste hierarchy: reduce, reuse and recycle. In a previous study, Mont (2002) emphasizes that companies commonly implement some parts, but there are few examples of a complete PSS that is designed to consider the whole life cycle of products. The reason is that firms often lack a system approach and PSSs have not been studied enough to assist its practical application. Table 3 summarizes the main findings from studies related to UO businesses.

Table 3. Previous studies on use-oriented business models

Focus of investigation	**Main findings regarding UO BM**	**Author & Year**
PSS characteristics, benefits and barriers.	Few examples of complete PSSs, companies lack a system approach.	Mont (2002)
Environmental effects of rentals.	Ski rentals increase resource productivity by 1.6.	Hirschl *et al.* (2003)
Eight archetypes for PSSs BMs.	Rental is inconvenient but low access barriers.	Tukker (2004)
Lease baby prams.	High initial costs but high long-term profit.	Mont *et al.* (2006)
A leasing simulation model.	Leasing can result in rebound effects.	Kuo (2011)
A literature review on PSS BMs and a single case study on machine lease.	Long-term revenues and internal resistance are challenging. Suggest launching UO services under a separate business unit.	Barquet *et al.* (2013)
Manufacturing companies' transition to PSSs	Successful transition requires service innovation and new communication approach.	Parida *et al.* (2014)
Literature review of implementation of PSS	UO models require marketing ownerless consumption and new financial partners.	Reim *et al.* (2015)
Possibilities to introduce rental services into the fashion industry	Rental requires changes in six of nine elements in canvas BM.	Fernandes & Karlsson (2016)
Balance scorecards to evaluate servitization and identify improvement factors	Leasing implies intensified use of resources, new marketing operations, financial partners, profitability strategy and new service design.	Tu & Ngo (2018)

Fernandes and Karlsson (2016) investigated possibilities to rent out clothes within the Swedish fast fashion industry through a case study and the theoretical lens of BM canvas.

Their study indicates that the value proposition should shift focus from selling products to selling access, which will inevitable change the revenue streams. The study suggests that a web shop is a promising distribution channel that could contribute with competitive advantages since rentals have not been offered digitally in the Swedish fast fashion industry previously. Moreover, customers may be perceived as suppliers since they return the clothes to the producer and it is crucial to treat them as partners. Several studies conclude that long-term customer relationships should be created through co-creation activities and employees should be educated in sustainable consumption (Barquet *et al.* 2013; Reim *et al.* 2015; Karlsson & Fernandes 2016). Moreover, research indicates that UO BMs imply new marketing operations to promote ownerless consumption (Barquet *et al.* 2013; Reim *et al.* 2015; Tukker 2015; Tu & Ngo 2018). Reim *et al.* (2015) argue that employees have a key role to promoting the PSS and selling the idea. It is not sufficient to merely list the benefits as when selling a product, but customers need to be able to visualize the advantages with the service. Therefore, Parida *et al.* (2014) suggest that companies should communicate the added values with UO services through demonstrators and calculators.

Fernandes and Karlsson (2016) argues that customer segment, key resources and cost structures are the same in a rental model as when selling products. However, their conceptual framework merely departs from BM theory and do not consider literature on PSS. Another study indicates that all elements should change in a UO model except for the customer segment (Barquet *et al.* 2013). Mont *et al.* (2006) emphasize that UO PSS are characterized by long-term revenues and the cost structures differs, therefore, substantially from PO models. Their study found that the cash flow is negative in the initial stage of leasing (the 10 first months in the baby pram case). To finance the added costs during the first years of implementing a UO model, studies suggest collaborating with a financial actor (Mont *et al.* 2006; Reim *et al.* 2015). However, a case study conducted by Tu and Ngo (2018) shows that a firm's products may not be pledged as loan collateral, which implies that financial actors may not be willing to enter into partnership.

Despite a negative cash flow initially, a financial analysis conducted by Mont *et al.* (2006) indicates that leasing generates higher revenues long-term per product compared to traditional sales. Even so, several studies indicate that employees are unaware of the potential value with UO offers and do not tend to believe in its profitability (Oliva & Kallenberg 2003; Barquet *et al.* 2013; Tu & Ngo 2018). Therefore, there may be internal resistance to introduce rental services as acknowledged by Barquet *et al.* (2013). One of the most significant barriers of companies going from product-focused to service-focused is the cultural change, which requires substantial time and resources (Mont 2002; Martinez *et al.* 2010). For instance, Oliva and Kallenberg (2003) provide an example of engineers that previously got paid full price for selling qualitative product that they spent a lot of time and resources on developing, may not be very excited about the firm receiving a tenth of that only for cleaning and repairing it. Tukker (2015) concludes that managers are commonly afraid to initiate a transition towards services since it requires a large investment that currently is spent on manufacturing and product development, which is the firm's traditional source of gaining competitive advantage. One way for the management team to signal the shift in focus to the rest of the organization is, as proposed by Parida *et al.* (2014), to invest in service innovation. Du to the cultural changes, Barquet *et al.* (2013) conclude that it is preferable to launching the service under a new business unit. Similarly, Mont *et al.* (2006) argue that starting a daughter company to manage the leasing service would reduce the risk to harm an already strong brand name that is closely connected to product innovation.

5 Primary Empirics

This chapter presents the empirical findings from the case study. The use-oriented services offered by the case companies are introduced, followed by a description of their customers, activities, resources and partnerships. Thereafter, the streams of income and costs are illustrated. Finally, attitudes and logistics in the supply chain are explained followed by cultural adoption factors.

5.1 Use-oriented services and distribution channels

The investigated companies have different use-oriented services illustrated in table 4. Aktivt Uteliv opened their shop in Uppsala five years ago and offers rental and sales of a wide range of hard outdoor products, courses in various outdoor activities and repairs in their workshop (Pers. com. Falk 2019). Their rental concept Rent-Try-Buy intends to take the customer all the way from an interest that emerges to rent a product, try it out, improve their techniques in a course, which may then lead to the customer actually buying their own equipment because it is now their new hobby.

Table 4. Use-oriented services and distribution channels

Company	Type of company	Use-oriented service	Distribution channels
Aktivt Uteliv	Retailer Start-up (2014)	Short-term, monthly and seasonal rental	Store and Website
Bergans	Established manufacturer (1908)	Short-term rental	Brand store Oslo and Gjendesheim's cottage
		Leasing subscription	3:rd party provider
Fjällräven	Established manufacturer (1960)	Short-term rental	Brand stores and Naturkompaniet
Houdini	Established manufacturer (1993)	Short-term rental	Brand stores
		Leasing subscription	Headquarters
Naturkompaniet	Retailer	Short-term	Majority of stores
Re:leased	Retailer Start-up (2019)	Leasing subscription and short-term rental	Website
Rent a Plagg	Retailer Start-up (2014)	Short-term, monthly and seasonal rental	Website and Travel Agents

Respondents from the established manufacturers Fjällräven, Bergans and Houdini claim that they sell outdoors products to a wide range of internal and external retailers, but recently they also started to rent out products in their own brand stores. Olfstad (Pers. com. 2019) explains that Bergans started to rent out outdoors products two years ago in their flagship store in Oslo. There is a specific shelf with soft and hard products available for rent, but customers are also allowed to rent any product from the original assortment. Although it is not financially justifiable in the long run, it is perceived as a necessity in order for customers to get used to renting instead of buying. A special collection developed for outdoors activities in the Bessegen area is rented out through Gjendesheim's tourist cottage. Collaborating with a third party enables a wider distribution of the rental service. Bergans recently conducted a pilot in collaboration with a start-up service provider. The idea is to lease snowsuits for children during one season to 30 families in exchange for a monthly fee. Bergans focused on products

adapted to children since they grow out of their clothes quickly and use the clothes intensively. After evaluating the concept, the collaboration may continue. However, Olfstad (Pers. com. 2019) points out that margins are bigger when using own channels since revenues are not distributed among multiple actors. Therefore, they would like to lease out through their own website in the future, which would also generate a spin-off on other products such as wool base layers that are not as suitable for renting.

Three years ago, Fjällräven started to lend out tents, rucksacks and sleeping bags, sleeping mats and portable stoves in their European brand stores in Oslo, Stavanger and Amsterdam, in order to tempt customers to take part in outdoor activities (Pers. com. Gustafsson 2019). The first year, products were lent out during one week in summer, the next year it was extended to one month. In 2018, a pilot project was conducted where products were rented out in a more structured manner during the whole summer. Moreover, a predefined selection of tents was rented out through their internal retailer channel Naturkompaniet. In addition, tents were lent free at charge for some participants in Fjällräven Classic event. The purpose was to test different delivery options in case Fjällräven would create a hub to handle the rentals in one place. Customers preferred delivery to the nearest post office instead of the destination, so that they could check the equipment beforehand. The rental concept at Naturkompaniet will continue in the retailer's own management (Pers. com. Hoffman 2019). During the summer 2019 Fjällräven's tents will be rented out in the majority of their stores. Thus, Naturkompaniet can start the rental machinery on a small scale as they plan to digitalize it in the future.

Houdini has several circular initiatives such as repairing, a collection for old textiles and second-hand sales (Pers. com. Lindblad 2019). Some years ago, they started to offer short-term rentals of outdoor clothes in their brand stores and in collaboration with Cooperhill Lodge in Åre where the rented clothes are delivered directly to customers' hotel room. Moreover, the company recently started a six months pilot program on monthly leasing subscriptions (Pers. com. Hedström 2019). The program is offered to 85 customers who constantly have access to four pieces of clothing in exchange for a monthly fee. When they want to change the clothes, they go to the headquarters in Finnboda to receive a new set of clothes. To ease the pick-up and return, Lindblad (Pers. com. 2019) points out that Houdini will offer the service through their own website in the future. Using a third party is also of interest. In 2017 the company used the external platform Shing, but Houdini experienced that it did not work that well. Renting requires more work than selling, and it can be challenging for a third party to handle.

The start-ups Re:leased, Rent a Plagg and Aktivt Uteliv offers rentals through their websites. Norrman (Pers. com. 2019) acknowledges that although online shopping is becoming increasingly popular, retail cannot totally reject the physical meeting. She points out that: *"The whole experience in a store needs to change drastically. Customers demand service and the possibility to try the clothes. They have no need to shop there"*. However, she acknowledges that Re:Leased will primary focus on their website the upcoming years. Rent a Plagg offers rentals through their website that can be picked up at the warehouse, in one of their delivery points around Åre or be delivered directly to customers' home (Pers. com. Sällberg 2019). Moreover, Rent a Plagg collaborates with several travel agents that offer their rental service in combination with their trips. Sälleberg (Pers. com. 2019) explains that the travel agents have a larger customer base and is more likely to influence customers to ownerless consumption.

5.2 A typical customer

There are several common features of the typical rental or leasing customer and their preferences illustrated in table 5. All respondents agree that rental offers attracts customers that seldom use a certain product. For instance, customers that rarely use formal dresses suited to special occasions such as birthdays, marriages and graduation (Pers. com. Norrman 2019) or customers attending seasonal activities such as ski trips (Pers. com. Lindblad 2019). In their current BM, Trabold (Pers. com. 2019) explains that Fjällräven do not focus on segmenting the market according to different customer groups since they have a wide range of customers. Instead, they distinguish between different environments where the products are used. For instance their collection named Keb has technical features and ventilation possibilities suited for trekking at Kebnekaise. Similarly, Sällberg (Pers. com. 2019) argues that the biggest value proposition with rental is to offer customers a product that is specifically developed for their activity.

Table 5. Customer type and preferences

CUSTOMER TYPE	PREFERENCES
Seldom users and people participating in activities in different environments →	Customization
Beginners with less willingness to pay →	Lower prizes, access to premium quality, spreading knowledge, decreased entry barriers.
Experienced and recurrent customers →	Variation, trying new models and styles
Stressed families →	Simplicity and solutions to ease their life situation
Younger generation →	Ownerless consumption, less responsibilities for maintenance and sustainability

Sällberg (Pers. com. 2019) points out that rentals offer lower prices compared to buying, which enables customers to access premium products that they would not else afford to buy. Moreover, buying premium outdoor products requires a certain level of skills about how they should be used. Spreading knowledge therefore becomes a key value and Dolva (Pers. com. 2019) see many opportunities with connecting Fjällräven's competences into a rental service. Hoffman (Pers. com. 2019) adds: *"I see this as a opportunity to sell service in the form of selling knowledge. We could teach customers how to behave in nature, how to set up their tent, how to pack their backpack and how to light a liquor kitchen".* Thus, Trabold (Pers. com. 2019) explains that the threshold for a beginner to try outdoor activities is considerably lower through renting since consumers do not have to buy expensive products before they are sure that they actually enjoy it. Falk (Pers. com. 2019), experiences that rental appeals to a wide range of people: "*From the mother who cannot afford to buy outdoor equipment for their children's school activities to experienced high-end consumers who are eager to try different models*". Rental enables access to a large range of different products and Norrman (Pers. com. 2019) highlights that customers have the opportunity to vary their wardrobe and try daring clothes that they usually do not wear. It opens up for creativity and design to take place since customers are more likely to rent a piece of clothing that is a bit crazy.

In their pilot project with snowsuits for children, Olfstad (Pers. com. 2019) discovered a great interest from stressed parents that do not have time to investigate which snow suit is best in test, sell used clothes from the siblings or go shopping for new clothes. Thus, rental services can be less time consuming than buying (Pers. com. Norrman 2019) and Olfstad (Pers. com. 2019) expresses that: *"We will take this into account when we continue to develop rental services, they have to solve practical everyday problems".* Customers have high demands on

availability and convenience. Dolva (Pers. com. 2019) explains that companies have to reduce all time-consuming activities that do not create value for customers, for instance the pick up and return of products. She adds: *"If you could only figure out this simplicity".* When Falk (Pers. com. 2019) talks to their customers some say that: *"I want to be able to wake up on Saturday morning and decide that today we are going to ski. Then I do not want to waste two hours to pick up the skis and arrive at the slopes too late".* Falk (Pers. com. 2019) argues that when owning products, it is the freedom that you buy. An opportunity to offer customers the same freedom with renting is to work with digital systems where customers receive a code and can collect their skis in boxes at any time of the day. It must be easy for customers and they should not have to adapt to the store's opening hours.

Ownerless consumption holds the potential to use our products in a more circular way than we do today and Lindblad (Pers. com. 2019) emphasizes that: *"If we can create a model where we have ownership from the beginning to the end of product life and then use the material for new products. Then we have really succeeded".* Especially younger people do no longer have the need to own things (Pers. com. Norrman 2019). Instead, they desire "on-demand" and the ability to have access to all things at all times. Re:leased names this customer segment "The millennial" who wants to support and identify themself with companies that are transparent and have a greater purpose than only to generate profit. Although, Olfstad (Pers. com. 2019) argue that consumer would not choose rentals solely because it is more sustainable. Shifting responsibilities of the product to producers also implies that consumers don't have to worry about storage, washing and repairing. As Norrman (Pers. com. 2019) express: *"It is accessing clothes that is the new thing".* Rentals offer a modern way to fulfil customer needs (Pers. com. Dolva 2019). Fjällräven produce premium products to enhance the experience in nature. Thus, the need itself is a premium nature experience. Gustafsson (Pers. com. 2019) explains that the idea for Fjällräven's pilot project was to offer "circular nights", more specifically the experience of sleeping in a tent, enjoy nature and waking up to bird song.

The interviewed companies describe their existing customer relationships as relation-based instead of transaction-based. Trabold (Pers. com. 2019) explains that Fjällräven do not want to trigger increased consumption. For instance, Fjällräven Classic is an event arranged each year for customers and Trabold (Pers. com. 2019) points out: *"The relationship is thus not just about selling goods, but sharing experiences in nature".* The idea with rentals was to build long-term dialogues with customers. Olfstad (Pers. com. 2019) argues that closer customer contact is particularly evident when providing leasing though subscriptions where customers are recurring: *"In the test project with children's clothes, we get a lot of feedback about the products, what is good, what is bad and how well they function when the children plays in the puddles".* Therefore, providing rental- and leasing services within internal channels enables delivering valuable feedback to the product developers.

Sällberg (Pers. com. 2019) argue that: *"We do not have much more customer contact, but we have more opportunities to give the customer exactly what they need".* In other words, it is the BM itself that enables customization rather than spending more time with the customer. Renting entails that companies withhold information about how much a specific product has been rented out, in what environment and how many times it has been washed, etc. Sällberg (Pers. com. 2019) claims: *"Thus, we have a very unique register that perhaps no one else has".* Hoffman (Pers. com. 2019) acknowledges that offering rental services would provide the conditions for Naturkompaniet to develop a system for Customer Relationship Management. Such a system could capture factors such as which customers rented what, how

often and for how long. Norrman (Pers. com. 2019) adds that renting out is an opportunity to collect information about customer preferences to a greater extent than traditional retailers normally have access to. This enables a more sustainable thinking throughout the whole value chain. For instance, during the spring collection 2019 the majority of brands invested in the colour purple. Re:Leased, on the other hand, demanded yellow clothes because they could see statistics from their website that customers click on everything that is yellow. Therefore, Re:Leased have access to actual figures on customer preferences that they can share with the brands that are able to base their product development decisions on more actual demand rather than an estimation.

5.3 Resources, Activities and Partnerships

Despite that the rental pilot is costly, Olfstad (Pers. com. 2019) explains: *"We do not just want to talk and analyse circular economy without testing it for real"*. It is an opportunity to see how customers react and come up with solutions that work for both all parties. Like all linear businesses, one has to spend time and resources to get the circular business ideas up and running. In agreement, Hedström (Pers. com. 2019) adds that Houdini had to try leasing subscriptions in practice since the idea requires customers to engage in a totally different behavioural pattern. In addition to pilot projects, large financial capital is needed in a rental model since revenues are generated during a longer time period (Pers. com. Olofstad 2019). Bergans investigates if they could develop depreciation rules or collaborate with a financial actor that could help bridging the income gap. Bergans hope that banks may provide better terms on loans and insurance to companies that work with sustainable solutions. However, Lindblad (Pers. com. 2019) points out that the current financial system is based on selling products and credit institutions still use models that account for inventories that quickly are converted into money, not generated over time. Products become a rental business' key asset. This also entails responsibility for maintenance (Pers. com. Sällberg 2019). Washing service and repairing requires investing in multiple machines if it is conducted in-house. Moreover, space is needed in order to dry returned goods and check that they are in a good condition. Hoffman (Pers. com. 2019) believes that: *"It can be difficult to solve in every individual store because the retail space is very expensive and often limited in size"*. Furthermore, the after-treatment of products is time consuming and likely requires extra staff. Moreover, Norrman (Pers. com. 2019) clarifies that to offer rentals through a digital channel requires technological investments since e-comm is normally linear. Weather resources and activities are outsourced to partners is illustrated in figure 5.

Figure 5. Activities, Partners and Resources as interpreted from interviews.

Fjällräven and Bergans are both established manufacturers that produce high quality and technically advanced outdoors products (Pers. com. Trabold 2019; Pers. com. Olfstad 2019). Their core activity is, therefore, product development. Despite that none of them own the factories, they are highly involved in the production process, product design and choice of materials. Trabold (Pers. com. 2019) clarifies that Fjällräven does not sew the clothes or weave the fabric, but are involved in developing the materials and identifies its origin in the value chain. Inclusion of rental services implies a new set of activities. It includes implementing a booking system, signing contracts as well as organizing pick-up and return (Pers. com. Lindblad 2019). Hoffman (Pers. com. 2019) believes that the sales process for Naturkompaniet is probably quite similar regardless of whether the customer chooses to buy it or rent it. The difference takes place after the products are returned. Sällberg (Pers. com. 2019) explains: *"When selling, you receive an item, stock it until it's sold and then it's not your concern anymore"* Unlike when you sell goods, a rental service requires a proper after-treatment of products including washing, drying, check that they are in good condition and repairing.

Since the established brands' core activity is developing high quality products, their suppliers and manufacturers are important partners (Pers. com. Dolva 2019; Pers. com. Olofstad 2019). Moreover, an important network to develop sustainable production is Sustainable Apparel Coalition, SAC, where multiple actors in the industry discuss environmental assessments of *products*. However, there seem to be no such network in the global arena for development of sustainable *services.* Instead, companies may have to collaborate with competitors in order to find common solutions. For instance, Fjällräven has engaged in such collaboration previously when attempting to influence mutual suppliers to apply more sustainable practices. When implementing circular BMs, Olfstad (Pers. com. 2019) argue that one has to find partners to a greater extent. If you do not have the knowledge and skills required in-house, you have to access it via your network and learn from others. Today, all companies in this study handle rentals and washing to a large extent in-house. Reparations, however, are sent by Rent a Plagg to a seamstress or back to their suppliers (Pers. com. Sällberg 2019). In their pilot, Fjällräven sent out spare parts, such as an extra bag of tent sticks and extra tent arch segments so that small damages could be repaired in stores (Pers. com. Gustafson 2019). Larger repairs would have been sent to their own seamstress in Övik or outsourced if it is hard-shell garments since it requires more advanced methods. Since no tents were damaged during the pilot, it is difficult to determine whether repairs are most efficiently conducted in their own workshop or through collaboration with an external company. Olfstad (Pers. com. 2019) explains that if they would provide rental services in larger scale, they would probably need to collaborate with a partner: *"We are not built to have a large warehouse of products in Norway that is required when providing rental services on a large scale. Neither can we build a laundry"*. In the initial stage, however, it is better to do everything yourself in order to increase the company's learning process. In agreement, Gustafson (Pers. com. 2019) explains that handling repairs themselves enables gaining knowledge about how their products are worn out, which can be used in product development.

5.4 Revenues and costs

Revenue streams are generated in two separate ways. Firtsly, Re:Leased, as well as Houdini and Bergans' pilot, offer leasing subscriptions that generate recurring income each month. Secondly, all companies offer short-term rentals or seasonal rentals that are paid at one point

in time. Prices are either the same for all models or as a percentage of the original sales prices. For instance, Fjällräven charges 500 SEK to rent a tent during a weekend, while Bergans charges 10 % of the price for the specific tent model (Pers. com. Gustafson 2019; Pers. com. Olfstad 2019). Generally, pricing is based on expected lifetime, purchase cost and handling cost (Pers. com. Sällberg 2019). However, Norrman (Pers. com. 2019) highlights that one must also consider customers' willingness to pay. Re:Leased bases their prices from a highly customer-focused perspective. The average Swedish person spends 907 SEK on clothes each month and Re:Leased decided to charge 1000 SEK for a monthly subscription of leasing four pieces of clothing since they reach for high-end customers. Dolva (Pers. com. 2019) clarifies that: *"It is important to value the service high enough for customers to understand that it is a premium experience they offer"*.

Common for all types of rental concepts is that the revenue streams are generated during a longer time period compared to selling products, which challenges companies to think long-term (Pers. com. Lindblad 2019). Sällberg (Pers. com. 2019) argues that: *"In the long run, this is a much more sustainable BM since we can earn more money on fewer goods. We are not at all as dependent on margins and seasons as a regular store"*. When the season is closed traditional retailers arrange clearance sales to make room for new collections (Pers. com. Norrman 2019). In contrary, rental BMs retain products for a longer period of time and simply "turn off" at the end of season and "lit up" again next year. After a certain time the product will generate 100 percent profit. Before the products are worn out completely, Lindblad (Pers. com. 2019) explains that an additional income can be generated from selling the products as second-hand. The general revenues and costs are illustrated in table 6.

Table 6. Revenues and costs

Revenues +	**Costs -**
Recurring each month	Maintenance & Storage
At one point in time	Freight
Sales of second hand	IT
Long-term revenues	Labour

Compared to selling, rental services imply added costs for storage, extra staff, IT costs to integrate rentals in the website and high freight costs since products will be returned (Pers. com. Dolva 2019). One has to add costs for maintenance. Sällberg (Pers. com. 2019) express: *"There are very few sports shops that buy a couple of hundred litres of detergent per year"*. Fjällräven investigated a business case on a hub where tents are sent out to customers (Pers. com. Dolva 2019). It is an attractive business case since it can be created separately from their current activities. However, the business case indicated that Fjällräven has to rent out on a large scale to break even. Norrman (Pers. com. 2019) argues that it is incredibly difficult to make a break-even calculation because it becomes very hypothetical. Gustafson (Pers. com. 2019) points out that to launch a new service is similar to launch a totally new BM. She perceives that the requirements are higher for services compared to products. Products are sometimes launched even if they are not profitable because they contribute to increased value for the brand.

5.5 Material flows in the value chain

Since Rent a Plagg started their business five years ago, Sällberg (Pers. com. 2019) has noted a significant difference in suppliers' attitudes towards renting: *"We have gone from being laughed at to the suppliers now contacting us because it turned out that we were on the right track when we started"*. One reason why many suppliers are sceptical is that the apparel industry has struggled to adjust to different societal shifts such as customers' expectations on sustainable production, e-com and delivery-within-the-hour (Pers. com. Norrman 2019). "*When a company like Re:leased says hello we can rent your stuff, it can be seen by some actors as a threat"* (Pers. com. Norrman 2019). Many actors do not see the economic potential with the model and Sällberg (Pers. com. 2019) explains that: *"We intrude on their way of doing business. Business is done in one way and it is about selling as many goods as possible and as soon as possible"*.

In contrast to fast fashion trends, rental services gives incentives for companies to produce products with high quality (Pers. com. Falk 2019). From retailer's perspective, it is difficult to directly influence quality improvements of products from big brands, especially if you are a small player. For instance, close dialogues with Aktivt Uteliv's supplier of kayaks resulted in successful quality improvements, but Falk (Pers. com. 2019) believes that: *"If we would give feedback to Salomon, I do not know if they would care so much"*. Retailers can, however, influence their brands indirectly (Pers. com. Sällberg 2019). For instance, suppliers to rental shops in ski resorts generally provide the shop with low quality skis since they want them to buy new skis each season. Rent a Plagg tries to change this pattern: *"We strive to involve our suppliers in the rental process so they can earn money during the rental period and not only at the point of purchase. This will give them incentives to produce products that lasts longer"*. Many of their suppliers have signed a cooperation agreement that states that the suppliers take responsibility for maintaining the products. Thereby, the contract between retailers and suppliers entails more aspects than merely the initial purchase of new products. For instance, Hoffman (Pers. com. 2019) reflects on alternative models of supplying goods: *"One can imagine other models also where we rent from the suppliers, but I do not know if our suppliers would be ready for it because they are focused on selling products and not on renting them. I think it would suit our industry better to buy the goods"*.

In their current BM, Fjällräven strives to produce the highest possible quality to a reasonable price (Pers. com. Dolva 2019). One has to take into account that customers must be willing to pay for the quality. To secure long-term revenues from rentals, there is an opportunity for manufacturers to produce products with extremely high quality. Olfstad (Pers. com. 2019) experience that Bergans products used for short-term rentals do not wear out quickly. However, wear out rate could be faster for the leasing subscription concept: *"We are eager to see how many seasons a ski suit can handle"* (Pers. com. Olfstad 2019). When Fjällräven started their pilot project, people worried that the products would be worn out quickly (Pers. com. Gustafsson 2019). Axelhed (Pers. com. 2019) describes: *"There is a challenge because the customer has less responsibility when she rents a thing compared to when she owns a thing. Therefore, I believe that the wear rate is higher when renting. Just look at the ski industry where people who rent skis use them much less carefully than those who own the skis"*. Falk (Pers. com. 2019) explains that it is a balance between striving for maximal quantities of rental cycles per product and ensuring that the product is of high performance: *"If skis are still rented out after 7 - 8 years they start to look old, there are deficiencies in quality and they sort of belong in a second hand store"*. Aktivt Uteliv work actively to counter the wear issue through personal customer meetings, establish a genuine family

atmosphere and to try to convey that "take good care of our fine equipment". Their workshop repairs both rentals and private products, and the wear rate is roughly the same in both categories. However, among all the respondents in this study, there are contradictory views of whether wear and tear is a challenge with rentals.

In near future, Bergans plans to launch a basic collection and a limited edition with increased quality specifically developed for renting (Pers. com. Olfstad 2019). Since both Fjällräven and Bergans work closely with suppliers in product development today, Olfstad (Pers. com. 2019) and Dolva (Pers. com. 2019) believe that their suppliers would be willing to increase quality further. However, decreasing production volumes may be more challenging. Factories often have a requirement of a minimum order quantity, MOQ, since small orders entails too much work for the seamstresses. For instance, when a pair of trousers is manufactured, there may be four different production stages where seamstresses sit in four different lines and sew different parts. It is very costly to only start one line since employees have to be taught how a specific product should be sewn, how the threads should be placed in the machines and to ensure that all settings are correct. The consequences on the supply chain indicate the complexity of adopting a rental model and it is difficult to drastically reduce the volume of a large-scale product. However, it would be easier for certain product types, such as tents, that are produced in smaller scale and already struggle with reaching the minimum quantities. One solution to reach the minimum quantities could be to order products less frequently and in low season when the fabrics are less busy. Producing several products from one supplier is another option. Olofstad (Pers. com. 2019) highlights that if Bergans establish a good relationship with the supplier, they might be willing to decrease volume in exchange for a higher price. Decreasing sales volumes is, however, not always the objective for retailers that introduce rental services (Pers. com. Hoffman 2019). Naturkomaniet's main purpose is not to stop selling tents. In contrary, they might be able to sell more tents since people can try different models before investing in their own. Thus, the products that Naturkompaniet rent out will probably be the same as the products sold.

5.6 Managing reverse logistics

Considering the logistical challenges with adopting a circular BM, Dolva (Pers. com. 2019) points out that one must discuss where in the value chain it makes most sense to provide rental services. On one hand, it would be favourable for the manufacturers if they could communicate to customers that they offer rental products exclusively from their own brand. On the other hand, it might be more profitable for a retailer to provide the service since they could rent out many different brands and in larger scale. Gustafson (Pers. com. 2019) believes that offering a tent experience could be equated with launching a new tent model. However, she points out that is can be difficult to pressure retailers since a rental service requires more time and effort from the staff compared to selling products. Hoffman (Pers. com. 2019) explains that Naturkompaniet is positive that their brands want to offer rentals. However, he points out that there are major challenges in coordinating the rental services: *"We have around 600 suppliers and if all of these would like to have a rental service and have their own concepts, it is not manageable for us. We need to build our own model that we can integrate all brands into"*.

Lindblad (Pers. com. 2019) highlights that a circular systems entails that it is more efficient to keep products in few places, as the same products are used over and over again. Therefore,

centralizing the rental services to a separate department could be beneficial. Hoffman (Pers. com. 2019) believes that: *"I think this is the only model for us to get any profitability in such a project"*. Naturkompaniet's goal is to manage rental services integrated with their new project "Care and Repair" from their central warehouse in Germany. Similarly, Bergans also store their products in Germany and Olfstad (Pers. com. 2019) believes that they would perhaps need a new warehouse since sending rented products back and forth to Germany would cause negative environmental impact. It is crucial that deliveries to and from a central warehouse are sustainable so that the entire climate gain with renting is not wasted (Pers. com. Hedström 2019). Therefore, Houdini considers transportation partners like Move By Bike for their leasing initiative "Subscription". In addition, they believe that the customer must get used to paying for the freight in order to put a value on the environmental costs for transportation. Since one must account for 100 percent returns freight is expensive. However, Norrman (Pers. com. 2019) does not agree that customers should pay for it and explains: *"You have to eliminate all occasions when the customer has the chance to stop and say: then it is not for me"*. Since the entire BM is about changing consumer behaviour, one cannot only consider economic calculations, but also pay attention to psychological factors. Thus, finding good transportation partners is crucial.

In the linear model, the inventory is reduced the more customers that purchase from that company (Pers. com. Norrman 2019). In a rental model it is the opposite. The physical inventory grows the more customers the company receives. Having a warehouse that grows with the customer base entails great logistical challenges. It also implies technological challenges since today's system is designed for the product to be purchased and then sold, not several transactions that a rental model requires (Pers. com. Gustafson 2019). For all the established PO firms in this study, the linear IT system is perceived as a significant challenge to introduce rental services. Olofstad (Pers. com. 2019) states: *"The challenge with renting out via our website is that the system is not built for the goods to come back"*. Houdini will launch a new platform this spring in order to offer rentals through their own website in the future (Pers. com. Lindblad 2019). Apart from investing in a new IT system, Dolva (Pers. com. 2019) propose cooperating with an external start-up that can build their technical platform based on rentals from the start. Moreover, Olfstad (Pers. com. 2019) believes that new workplaces must be created in order for this circular BM to work. Several new services are needed such as service providers, technological solutions, logistics and laundry. Norrman (Pers. com. 2019) points out that outsourcing washing and reparation requires a fast service since it creates an additional logistics chain. When Re:Leased investigated washing and repairing services, it would take between three to seven days, which is too long. All the time the product is not rented out is a missed income.

5.7 Cultural change

Ever since the post-war period in Norway, Olfstad (Pers. com. 2019) describes that the norm has been to own things: *"We are born and raised with the importance of owning"*. Some people believe that if you own things you take better care of them and they may establish an emotional bond to their products (Pers. com. Trabold 2019). Rental implies a cultural change in the way we consume and how we perceive ownership (Pers. com. Lindblad 2019). Moreover, it enables a business to disconnect profitability from production and consumption. Companies must, however, challenge consumers in accepting shared ownership. Olfstad (Pers. com. 2019) emphasize the need to educate customers and says*: "We must change*

people's mindset and habits, which is difficult". In agreement, Sällberg (Pers. com. 2019) believes that influencing customers to let go of ownership is crucial to make the rental model work. Norrman (Pers. com. 2019) does, however, point out that it is not possible to educate customers in what is right or wrong because sustainability issues are much more complex then what can be communicated in an Instagram caption or in a blog post. Dolva (Pers. com. 2019) experiences that rentals challenges companies to communicating a premium value since customers normally associate it to something less exclusive than owning. Olfstad (Pers. com. 2019) claims that authorities also have a role to influence consumer behaviour since they have the economic tools to, for instance, implementing tax reductions so that we benefit from repairing things rather than buying new products.

Customers' willingness to rent varies depending on product type. Dolva (Pers. com. 2019) argues that products suitable for renting are expensive, requires a lot of space for storage and are used infrequently but are crucial to get a good experience. For instance, a bad tent and sleeping bag can ruin the whole experience of being in nature. Generally speaking, Sällberg (Pers. com. 2019) experience that hard and expensive products are easier to rent out compared to clothes, sleeping bags and other soft things. Hygiene is a sensitive factor. People believe that clothes that are worn close to the skin should be private and should not shared with others. Falk (Pers. com. 2019) explains that: *"Getting a hiking boot to spin between several users cannot at all be compared to getting a ski boot to spin".* It is necessary for large players such as Stadium and Intersport to take the step forward and offer rentals to be able to influence customer behaviour to a greater extent. Falk (Pers. com. 2019) express: *"It takes an IKEA for people to understand that they can buy cheap furniture".*

Cultural changes may also be needed internally. For a retailer like Naturkompaniet, Hoffman (Pers. com. 2019) does not believe that providing rental services would affect the organizational culture. Since the employees are generally interested in sustainability, their attitudes would probably be positive, unless the workload become too much. At Bergans, the majority of employees are proud to work for a company that takes responsibility for the environment and works actively with sustainable solutions (Pers. com. Olfstad 2019). However, some people think that the company has to sell products in order to preserve the value of the brand. Olofstad (Pers. com. 2019) expresses: *"It is a bit divided. I think all companies that work with sustainability recognize this".* There is a need for increased knowledge in sustainable BMs and long-term profitability in order to convince people that renting is the way forward. Investing in service innovation is a way to signal services importance in the company and Bergans will likely increase those resources in the future. Fjällräven invests a lot in innovation, but it is mainly to develop products and not services (Pers. com. Dolva 2019). There is a discussion within the company if they should start with service innovation, but Dolva (Pers. com. 2019) reflects that: *"Although I would like to say yes yes yes, I believe that in the end we are very traditional: produce products, sell to final consumers or retailers".* Olofstad (Pers. com. 2019) acknowledges that there are challenges to convince everyone about the economic potential with rental services and says that: *"It an internal cultural change that we must do to bring everyone along".*

6 Analysis

In this chapter the empirical results are analyzed according to this study's theoretical framework. The business model canvas is used as a framework to illustrate the use-oriented business model. Furthermore, specific characteristics of the use-oriented business model are analyzed with consideration to literature on product-service systems.

6.1 Business model canvas

Respondents from the established manufacturers claim that they have several circular initiatives. For instance, Houdini collects old textiles, Bergans offer repairing services and Fjällräven educates customers in product care. In that sense, these companies fall under Tukker's (2004) definition of PO BMs that sells products like usual but offers additional services. Introducing rentals and leasing services implies several changes in a firm's BM (Barquet *et al.* 2013). The UO canvas BM is illustrated in figure 6.

<table>
<tr>
<td rowspan="2">Key Partners

Seamstress
Washing service
Financial actor
Service-provider
Competitors
Authorities</td>
<td>Key Resources

Human resources
Machines and space
IT system
Financial capital</td>
<td rowspan="2">Value Proposition

Low prices, high quality and access to knowledge (lower access barrier)

Customization, variation, sustainability and less responsibility for product lifecycle</td>
<td>Customer relationships

Long-term relationships, co-creation and co-production</td>
<td rowspan="2">Customer Segements

According to level of usage</td>
</tr>
<tr>
<td>Key Activities

Dry, wash and repair returned goods.
Influence customers to ownerless consumption.</td>
<td>Distribution Channels

Internal stores,
Provider at tourist destinations
3rd party digital provider,
Own website</td>
</tr>
<tr>
<td colspan="3">Cost Structures
Maintainance costs, staff and freight.
Investments in IT and products.</td>
<td colspan="2">Revenue streams
Transaction-based (short-term and seasonal),
Reccuring each month (subscriptions),
Long-term revenues and sales of second-hand</td>
</tr>
</table>

Figure 6. Use-oriented canvas business model for the case (based on Osterwalder & Pigneur 2013, p. 40).

Customer segment
Companies often segment customers into different groups of people that share similar needs and characteristics (Osterwalder & Pigneur 2010). In UO BMs, Tukker and Tischner (2006) advocates that the market should be segmented according to user behaviour instead of product characteristics. All respondents agree that rentals attract customers that seldom use a certain product. Within the outdoors industry, for instance, rentals are likely to attract beginners (Pers. com. Dolva 2019). However, Falk (Pers. com. 2019) experiences that rental appeals to a wide range of people "*From the mother who cannot afford to buy outdoor equipment for their children's school activities to experienced high-end consumers who are eager to try different models*". Therefore, the empirical findings indicate that segmentation is conducted according to the level of usage, from seldom users to frequent users.

Value proposition
In order to satisfy customer needs, firms should deliver value propositions specifically adapted to the different customer segments (Osterwalder and Pigneur 2010). The empirical result indicates that seldom users desire rental offers due to the low prices and high quality. Respondents at Fjällräven and Naturkompaniet emphasize that the access barrier for a beginner to try outdoor activities is considerably lower through renting. Moreover, they reflect about rentals as an opportunity to share their experiences and knowledge. Hence, the introduction of rental services moves companies towards a more service-dominant logic as proposed Vargo and Lusch (2004) when selling knowledge. Instead of focusing merely on the product, the service components enable companies to sell an experience, in which customers willingness to pay is higher (LaSalle & Britton 2003). For instance, Gustafsson (Pers. com. 2019) explains that the idea for Fjällräven's rental pilot was to offer the experience of sleeping in a tent, enjoy nature and waking up to bird song.

Frequent users, on the other hand, may want to try different models specifically developed to different environments and activities (Pers. com. Sällberg 2019). This enables variation and customization to a larger extent than selling products. Since Fjällräven's products are developed according to specific environments, such as the Keb collection (Pers. com. Trabold 2019), it is a promising point of departure to introduce a UO BM. Even though products in the outdoor apparel industry generally are sustainable (Hodgson 2017), rental services creates additional environmental values through the shift in ownership from customers to producers (Tukker 2004). Moreover, less responsibility for the product life cycle entails that consumers don't have to worry about storage, washing and repairing (Reim *et al.* 2015).

Customer relationships
Companies establish different types of relationships to its customers that may range between self-service to dedicated personal assistance (Osterwalder and Pigneur 2010). In agreement with Mont's (2004) description of UO models, the majority of the interviewees reveal that they have frequent and long-term relationship to their customers. Closer customer contact is, according to Olfstad (Pers. com. 2019), particularly evident in leasing subscription where customers are recurring. The focus on experiences and providing value in use indicates that the companies in this study co-create value with customers as proposed by Vargo and Lusch (2004). Moreover, respondents at Re:Leased, Rent-a-plagg and Naturkompaniet argue that offering a rental or leasing service is an opportunity to collect information about customer preferences and user behaviour to a greater extent than traditional retailers normally have access to. If this information is successfully transferred to the research department, UO BMs may lead to faster innovation (Tukker 2004). It is therefore important to establish an efficient infrastructure to nourish the collaboration between customers and suppliers (Meier & Massberg 2004). It may, according to Parida *et al.* (2014) require new routines to collect customer feedback and organize the information flow.

Distribution Channels
In a BM, the value proposition can be delivered to customers through different distribution channels (Osterwalder & Pigneur 2010). Even though the established manufacturers sell their products to a wide range of internal and external retailers, the empirical result indicates that, to a large extent, the UO services are offered through their internal physical stores. Some external channels are used to reach customers closer to tourist outdoors attractions. For instance, Bergans rent out through Gjendesheim's tourist cottage, Rent-a-Plagg collaborates with several travel agents and Houdini delivers ski clothes directly to Cooperhill Lodge in Åre. Tukker (2004) advocates that using a third-party service provider can help reaching new

markets. Olofstad (Pers. com. 2019) explains that Bergans used an external service provider in order to digitalize the leasing process in their pilot project on subscriptions. It is important to integrate the channels into customer routines (Osterwalder & Pigneur 2010) and Norrman (Pers. com. 2019) acknowledges that online shopping is becoming increasingly popular. According to respondents at the start-ups Aktivt Uteliv, Rent-a-Plagg and Re:Leased, renting out through their own website increases convenience and enables a wider distribution compared to physical stores. It eases the booking, pick-up and return process (Pers. com. Lindblad 2019) and enables a spin-off on other products such as wool base layers that are not as suitable for renting (Pers. com. Olofstad 2019). Therefore, respondents to the established companies show interest in offering UO services through their own websites in the future.

Revenue streams
A firm may either receive transaction-based revenues that is generated at one point of time, or recurring revenues that are on-going (Osterwalder & Pigneur 2010). The empirical result indicates that the revenues from UO services are generated in both of the ways explained above. Firstly, all companies offer short-term rentals or seasonal rentals that are paid at one point in time. Secondly, the leasing subscription arrangement offered by Re:Leased, as well as Houdini and Bergans' pilot, generate recurring income each month. Common for both revenue types is that the revenue streams are generated during a long time period, which challenges companies to think long-term (Pers. com. Lindblad 2019). Norrman (Pers. com. 2019) explains that traditional retailers arrange clearance sales to make room for new collections. In contrary, Re:Leased retain the products and simply "turn off" at the end of season and "lit up" again next year. Before the products are worn out completely, Lindblad (Pers. com. 2019) explains that an additional income can be generated from selling the products as second-hand.

Key resources
Assets required for the particular BM to work is categorized by Osterwalder and Pigneur (2010) as financial, physical, intellectual or human. Cook *et al.* (2006) emphasize that UO companies retain a more frequent interaction with customers, which requires new skills and competences in relationship building. Hoffman (Pers. com. 2019) at Naturkompaniet argues that human resources are important since the after-treatment of products is time consuming and likely to require additional staff. Moreover, space is required to dry returned goods, which can be difficult to solve in individual stores since retail space is very expensive and often limited in size. The maintenance also requires investment in multiple machines for washing and repairing (Pers. com. Sällberg 2019). However, the companies in this study highlight that technological and financial resources are the most evident when introducing rental and leasing services. Firstly, to use digital channels requires technological investments since e-commerce is normally linear. Secondly, financial capital is required in order for the service provider to purchase a wide range of products while the income is received periodically during a long time scale.

Key activities
All businesses have certain core tasks that directly generates value (Osterwalder & Pigneur 2010). Respondents from Fjällräven and Bergans explain that to produce high quality and technically advanced outdoors products, product development is key. Introducing rental and leasing services implies a new set of core activities. In UO BM the service provider retains the ownership of the product and Cook *et al.* (2006) advocate that key activities may take place any time before, during and after the product use phase. Thus, the service provider must incorporate activities that previously were conducted by customers (Grönroos 2011). For

instance, all respondents explain that rental services require a proper after-treatment of goods including washing, drying, check that they are in good condition and repairing. During the whole use phase of products companies interact regularly with customers and employees have a key role to deliver the service (Kindström 2010; Reim *et al.* 2015). Hoffman (Pers. com. 2019) believes that the initial stage of the rental process is quite similar to a regular sales process. Sällberg (Pers. com. 2019) argue that Rent-a-Plagg do not have much more customer contact than a regular retailer. However, the majority of the respondents argue that influencing customers to adopt an ownerless consumption is key. The norm is still to own things and rentals require customers to take part in new consumption habits.

Key-partners
Few companies owns all resources or perform all activities by themselves (Osterwalder & Pigneur 2010) and especially in PSS, Schuh *et al.* (2009) points out that it is not possible to create value as an isolated actor. The UO BM is dependent on the firm's ability to establish a successful service network and being open to collaborate with unfamiliar partners that possess unique competences (Evans *et al.* 2007). Since there are no large networks in the global arena to develop sustainable services (an equivalent to SAC for production), firms may have to collaborate with competitors in order to find common solutions as proposed by Olofstad (Pers. com. 2019). Even though the empirical findings indicate that partnerships are crucial, retaining too many relationships is costly (Johnson & Selnes 2004) and the profit must be shared among all the actors (Barquet *et al.* 2013). It is therefore important to select partners carefully. Mont *et al.* (2006) advocate that PSS normally requires a new network within the repair and take-back industry. According to the respondents, all companies in this study handle washing and minor repairs to a large extent in-house as it helps the organisation's learning process. However, Olofstad (Pers. com. 2019) explains that additional partners will probably be needed if rentals are offered in larger scale. Norrman (Pers. com. 2019) points out that outsourcing washing and reparation requires a fast service since it creates an additional logistics chain and all the time the product is not rented out is a missed income. Moreover, to bride the long-term revenues Olofstad (Pers. com. 2019) explain that Bergans investigates the opportunity to collaborate with a financial service. The empirical findings indicate that on one hand, such collaboration might enable better terms on loans and insurance since rental companies work with a sustainable business idea. On the other hand, the collaboration might be challenging since credit institutions still account for inventories that quickly are converted into money, not generated over time.

Cost structure
All companies in this study seem to have a value-driven cost structure, as proposed by Osterwalder and Pigneur (2010) when offering a premium value proposition. The empirical result indicates that management of the rental and leasing process requires additional costs for labour, storage and maintenance. Since there will be 100 percent returns, there are substantial freight costs. Moreover, if the service would be fully integrated on companies website it would require high IT costs. Olfstad and Norrman (Pers. com. 2019) point out that substantial financial investments are required due to a long back-back time until the capital costs of buying the products are fully covered. Mont (2004) argues that cost structures should be rearranged through new accounting practices to support the cash flow.

6.2 A use-oriented model

CE advocates that products should spin in multiple loops of reuse, repair and re-manufacture (EMF 2013). Thus, circular BM differs from linear models since materials are reused to a larger extent (Bocken *et al.* 2014). Besides the original elements in the canvas model, this study indicates that the UO BM includes three additional dimensions: reduced material flow, reverse logistics and cultural adoption factors illustrated in figure 7.

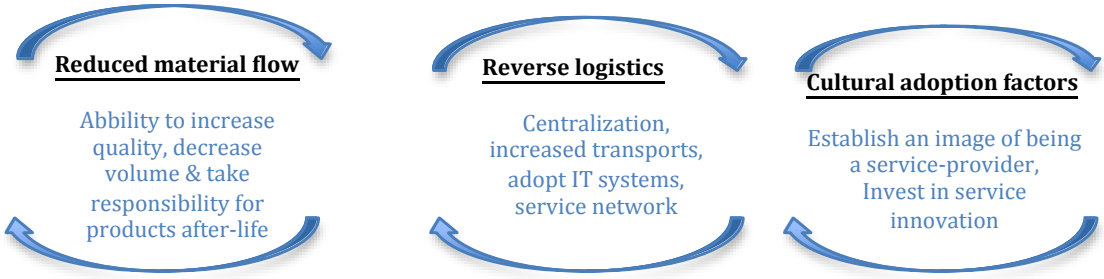

Figure 7. Three additional dimensions to the use-oriented business model.

PSSs are supposed to lead to reduced material flow in the value chain (Tukker 2015). Since products are transported back and forth between companies and customers, it is important to manage reverse logistics (Mont *et al.* 2006). Moreover, changes in consumption patterns may require cultural changes (Barquet *et al.* 2013). These elements are explained in detail below.

6.2.1 Reduced material flow

In contrast to linear BMs, where firms are encouraged to maximize the number of sold units, UO models creates incentives to prolong the product life cycle by producing more durable goods that are easily maintained and remanufactured (Mont *et al.* 2006; Azarenko *et al.* 2009; Hodgson 2017). However, the empirical result indicates that the value chains in the outdoor apparel industry are to a large extent still managed according to a linear logic and focused on selling as many goods as possible. Suppliers' attitudes to the rental concept are not always positive since it intrudes on their way of doing business. To create incentives for manufacturers to increase quality in their products, Rent-a-Plagg tries to involve their suppliers in the rental process through a cooperation agreement stating that the suppliers are responsible for maintaining the products. However, the general impression from the manufacturing companies participating in this study is that they are positive towards improving product quality specifically suited for a rental service.

Since the responsibility of products shifts to producers in a UO BM (Tukker 2004), some of the companies in this study worry about wear and tear. The theoretical understanding is that UO BMs encourage companies to use the products as intensively as possible during its whole life cycle (Tukker 2015). All respondents agree that that there is a balance between striving for maximal utility of products and ensuring that the product is of high performance. Before products are worn out completely, they are likely to be sold as second hand.

Both the empirical and theoretical findings agree that a UO BM breaks the link between profit and production volume. However, Bocken *et al.* (2014) highlight that the environmental benefits depends on the organisation's ability to reduce production volume. Respondents from Fjällräven and Bergans claim that reducing production volume might be challenging. When ordering products from the factories, one has to consider minimum quantity requirements.

Drastically reducing quantities on products that are sold large-scale is therefore not possible. Manufacturers may have to change their purchasing routines and order products less frequently, in low season and from fewer suppliers in order to reduce the production costs. From a retailer's perspective, however, decreasing sales volumes is not always the objective to introduce rental services (Pers. com. Hoffman 2019). Hence, this study indicates that the UO BM does neither automatically lead to increased product quality nor decreased production volume.

6.2.2 Reverse logistics

When companies gain customers in a linear BM, the physical inventory decreases with each purchase (Pers. com. Norrman 2019). When renting, the warehouse increases when the customer base grows. This entails logistical challenges, both to physically manage the goods, but also technologically. Today, IT systems are designed for the product to be purchased and then sold (Pers. com. Gustafson 2019). It is not designed to handle several transactions that a UO BM requires. This force established companies to either invest heavily in IT to create a new platform and digitalize the process in-house or as advocated by Tukker (2004) collaborating with a third-party service provider. Houdini rented out through the external platform Shing in 2017, but Lindblad (Pers. com. 2019) explains that it did not work that well. She emphasizes that rental services can be challenging for a third party to handle since it requires a lot of work. Mont *et al.* (2006) clarifies that it is important that the provider can manage the reverse logistics. Hence, Norrman (Pers. com. 2019) argues that it is beneficial for manufacturers to collaborate with start-ups retailers that build all their systems according to the reversed logistics from start. Olofstad (Pers. com. 2019) perceives that Bergans' collaboration with the start-up service provider works well and they consider continuing their collaboration to offer leasing subscription in the future.

As Dolva (Pers. com. 2019) points out, there are few examples of product manufacturers that have transit to only providing services. In this shift, it is crucial to create a service network that both link companies to customers, but also provide a route backwards from the user to the provider (Parida *et al.* 2014). An under-developed infrastructure in both of these two directions forces companies to extend their network and create new partners to compensate for the lack of in-house competences and resources (Williams 2007). When scaling up the UO services, the empirical result indicates that centralization is key. However, transportation to and from a central warehouse is a challenge since one has to account for 100 percent returns. This may result in high economical and environmental costs. Thus, Hedström (Pers. com. 2019) points out that it is crucial to find sustainable transportation partners, for instance by bike, and let customers pay for the freight. Olfstad (Pers. com. 2019) points out that new workplaces must be created since several new services are needed such as transportation, service providers and technological solutions. However, despite the lack of infrastructure adapted to the reversed logics, companies must dare trying to get the circular business ideas up and running. Olfstad (Pers. com. 2019) explains: *"We do not just want to talk and analyse circular economy without testing it for real"*.

6.2.3 Cultural adoption factors

The norm has always been to own things (Pers. com. Olfstad 2019) and rentals may imply barriers to trust regarding quality issues, maintenance and hygiene of used goods (Rexfelt & Ornäs 2009; Catulli 2012). Especially, soft products that are worn close to the skin (Pers. com. Sällberg 2019) and products that are associated with status and control (Tukker & Tischner 2006). To overcome the cultural barriers, it is crucial to establish the company as a service provider and in the eyes of the customer (Kindström 2010; Reim *et al.* 2015). But

communicating the values with a premium UOservice may therefore be challenging since customers normally associate rentals to something less exclusive than owning (Pers. com. Dolva 019). The empirical result suggests collaborating with third-party providers and other partners to influence consumer behaviour. Rent-a-Plagg for instance collaborates with travel agents that work closely with customers and Sällberg (Pers. com. 2019) believes that they have greater abilities to change attitudes towards rental. Falk (Pers. com. 2019) argues that it is necessary for large players to step forward in order to influence customer behaviour to a greater extent. In agreement, Ceschin (2013) advocates that finding innovative solutions for a PSS may require collaborating with stakeholders that are not directly involved in the company. Since there is no global network for the development of sustainable services, respondents from Fjällräven and Bergans argues that companies may have to collaborate with competitors in order to find common solutions. Moreover, governments can provide legitimacy and support during the up scaling phase of eco-efficient innovations (Ceschin 2013) and authorities have a significant role to influence consumer behaviour (Pers. com. Olfstad 2019).

For an established PO firm to introduce services may induce resistance from actors that are involved in sales (Barquet *et al.* 2013). From a retailer's perspective, Hoffman (Pers. com. 2019) believes that unless the workload is too much, employees at Naturkompaniet are positive towards offering rental services since they are generally interested in sustainability. However, Olofstad (Pers. com. 2019) points out that some people believe that one has to sell products in order to preserve the value of the brand. She explains that investing in service innovation could increase the level of knowledge about rental services and convince employees about its economical potential. However, it may be perceived as a radical change for the manufacturing firms where product development is the key focus (Pers. com. Dolva 2019).

7 Discussion

In this chapter the result from the analysis is discussed to provide a bigger picture. The chapter aims to address the research questions stated in chapter 1. It also includes a critical reflection of the results in relation to other studies within the academic field.

7.1 Characteristics of the use-oriented business model

In contrast to previous research that have analysed rentals through the BMC (Barquet *et al.* 2013; Karlsson & Fernandes 2016), this study suggests that the characteristics of all nine elements differ in a UO BM compared to a PO model. To start with, a UO service implies access to high quality products for reasonable prices. There are possibilities to sell knowledge as a package together with the product use to maximize a customer experience. In agreement, Tukker (2004) found that UO BMs spare consumers the capital cost of buying a product, which leads to lower access barriers for new customers. However, the result in this study indicates that also experienced users demand rentals due to its sustainable benefits, opportunity for variation and to use products customized for a specific activity in a specific environment. Customers should therefore be segmented according to the level of usage where different value propositions can be delivered to seldom users and to frequent users.

Even though this study indicates that ownerless consumption contribute to added values in terms of less responsibility for maintenance, repair and recycling, the value proposition must assure a certain level of convenience. A previous study point at substantial transaction costs with the rental model in terms of time and effort required for pick-up and return, which may in fact discourage usage (Tukker 2004). The case study shows that all companies strive to digitalize the UO service and offer it through online channels to ease access. Hence, renting could become more convenient and time efficient than buying. As discovered in Bergans' pilot project, leasing subscription is a promising arrangement for children clothes since it spares time for stressed parents, decreases transaction costs of having to sell clothes second hand and, thereby, eases everyday life. However, since customers are still not used to rent casual products, the result in this study coincide with previous research (Barquet *et al.* 2013; Reim *et al.* 2015; Tukker 2015; Tu & Ngo 2018) that influencing customers in ownerless consumption is key. Moreover, a new set of core activities related to the after-treatment of products is required specifically in UO BM. To compensate for lack of in-house competences, companies have to collaborate with partners within repairing, washing, service-providers and financial actors.

In alignment with previous studies (Barquet *et al.* 2013; Reim *et al.* 2015; Karlsson & Fernandes 2016), this project indicates that the UO BM is characterised by long-term customer relationships and co-creation of value. UO services enable access to unique information about customers' preferences, behaviour and usage of products that companies could use for innovation purposes. Thus, customers are not merely perceived as the receiver of a service as proposed by the product-dominant logic (Vargo & Lusch 2004), but co-producers or even co-inventors. Another study of clothes rentals acknowledges that customers take the role as suppliers since they return the clothes to the firm and should, therefore, be treated as key partners (Karlsson & Fernandes 2016). This may challenge PO businesses to

establish new routines to better collect customer feedback and new communication channels to intensify customer dialogues.

Considering the circular characteristics of a PSS where companies should encourage re-usage and take back materials (Tukker 2015), this project indicates that the BMC does not cover all aspects of a UO model. Critics advocate that BMC lacks dynamics, strategic information and presents a simplified version of the business logic (Hong & Clemens 2013; Romero & Molina 2015; Khodaei & Ortt 2019). Since BMC mainly covers costs and revenues in economic terms, one may question whether it is a suitable model for sustainability-oriented businesses. A study by Joyce and Paquin (2016) suggests including two more layers of environmental and social values. However, three different frameworks imply a more complex approach and may be too complicated for practitioners to adopt. Lewandowski (2016) suggests that a circular logic can be integrated in the original canvas model by adding the elements take-back system and adoption factors. Similarly, this project indicates that a UO BM includes three additional dimensions to the BMC. The norm is still to own things and renting or leasing require new consumption habits. Introducing UO services in an already established PO firm may also create internal cultural change that must be managed. Certain adoption factors should therefore be declared in a BM. The BM should also clarify how the reversed logistics are managed. The "channel" element in BMC merely describes how products are delivered to customers. In UO BMs products must be delivered back to the firm, both physically through increased transportation and technologically to adjust the stock balance. Moreover, the UO BM should explain a firm's ability to reduce material flows. PSSs should create incentives for companies to manage materials in closed loops and encourage re-usage instead of extracting new resources (Mont 2002; Tukker & Tischner 2006; Tukker 2015). However, this study indicates that the UO BM does not always contribute to reduce material flows in the value chain for two major reasons.

Firstly, a UO BM do neither automatically result in increased product quality nor to decreased production volume. Another case study on leasing baby prams by Mont *et al.* (2006) found that firms are not always interested in prolonging the product's life cycle, especially if rented out through a 3:rd party provider instead of the manufacturer directly. This study confirms that external retailers may find it difficult to directly influence quality improvements in large brands. However, retailers could influence product development indirectly by involving manufacturers in the rental process and signing collaboration contracts that states allocation of ownership rights and responsibilities for repairing. Regarding decreasing production volumes, manufacturers in this study find it challenging since factories have requirements of minimum order quantities. Moreover, from a retailer's perspective the purpose with introducing a UO service may be to increase sales since customers can try different models of products and may be tempted to buy more.

Secondly, there is a balance between striving for maximal quantities of use cycles per product and ensuring that the product is of high performance. Before the products are worn out completely, the case companies tend to sell the products as second-hand. When the product does no longer hold premium quality features, ownership is transferred back to consumers. Hence, companies only take responsibility for parts of the products lifecycle. Similarly, Mont *et al.* (2006) found that products were sold as second-hand instead of remaining at the producer. This contradicts the theoretical understanding of a complete circular economy where businesses are supposed to maximize utility of products and take responsibility for its after-life (EMF 2013). The case companies only follow the first step in the waste hierarchy (reuse) and neglect remanufacturing and recycling. However, even though the UO BM does

not seem to be 100 percent circular in itself, this study indicates that it encourages consumers to think differently about ownership, which may contribute to a more collective consumption of products that is more sustainable. Hence, the existence of UO BMs is a step towards a more circular society, but not a complete circular system. In accordance, a previous study by Mont (2002) found that there are few examples of a complete PSS that is designed to manage the whole life cycle of products. Thus, there is need for further investigation of PSSs to assist its practical application.

7.2 Challenges to introduce use-oriented services

In contrast to the result of Fernandes and Karlsson's (2016) study, this project shows that resources and cost structures in the UO BM differs substantially from PO models. Since a UO BM generates revenues that are received periodically during a long time scale, there is a long pay-back time until the capital costs of buying the products are fully covered. Mont *et al.* (2006) found the cash flow to be negative in the initial stage of leasing (the 10 first months in the baby pram case). Managing this negative cash flow is proven to be significantly challenging according to the companies in this study. However, despite negative cash flow initially, a financial analysis conducted by Mont *et al.* (2006) indicates that leasing generates higher revenues long-term per product compared to traditional sales. In accordance, the companies in this case study explain that the UO BM is not equally as dependent on margins and seasons as when selling products. Even so, some employees do not tend to believe in the profitability with a UO BM, which is in agreement with previous studies (Barquet *et al.* 2013; Tu & Ngo 2018). Respondents in this study experience that the financial requirements for a new UO service are high and there may be resistance from actors that are involved in sales if the work load becomes too much. Moreover, some employees believe that one has to sell products in order to preserve the value of the brand. In accordance with previous research (Mont 2002; Cook *et al.* 2006; Martinez *et al.* 2010; Barquet *et al.* 2013), this study indicates that a challenge with going from product-focused to service-focused is the internal cultural change that requires substantial time and resources. However, introducing a UO service does not only result in a cultural change internally in the organisation. It also implies an external cultural change. There might be barriers to trust regarding quality and hygiene of used goods, especially soft products that are worn close to the skin. Moreover, since customers normally associate rentals to something less exclusive than owning, it may be difficult to communicate the values with a premium rental service. Thus, the result from this study shows that influencing consumers in ownerless consumption is a challenge.

All of the companies in this study show interests in offering UO services online. However, this study indicates that it requires substantial technological investments since e-commerce is normally linear. In the established firms IT systems are designed for the product to be purchased and then sold, not several transactions that introducing a UO service entails. Except technological challenges, the reverse logistics also entails increased transportations resulting in additional freight costs and potential environmental costs. High levels of CO2 emissions from increased transportation could result in no positive environmental effects, which is the whole point for PO firms to introduce UO services. Another environmental argument pointed out by previous research is that UO BM might induce rebound effects where products are used less careful resulting in faster wear and tear (Tukker 2004 2015; Kuo 2011; Reim *et al.* 2015). The respondents in this study show inconsistencies in whether they perceive wear and tear as a challenge with UO services. However, a study conducted on the ski industry

indicates that privately owned skis are on average used 62,5 days where as rental skis are used 106 days (Hirschl *et al.* 2003, s. 191). It is an increase in resource productivity by 1,6 – 1,7. This means that even though rentals might wear out faster which is especially evident in the ski rental industry, it has environmental benefits compared to selling products.

7.3 How the challenges are met

Considering the challenges to introduce a UO service explained previously, one may question whether the service element contributes to efficiency as proposed by Vargo and Lusch (2017), proponents for the service-dominant logic. This study indicates that introducing service elements requires high capital costs initially, could lead to internal resistance, higher work load, difficulties to change customer habits, challenges to manage reverse logistics and to avoid wear and tear. However, the companies in this study present several ways to meet these challenges.

Initial challenges with a negative cash flow are met by the companies in this study by investigating new accounting practises that account products as key assets that can be accrued. Another solution that was discovered in the case study is to let suppliers retain certain ownership rights over the products, which involves them in the rental process and enables shared investments. In agreement with the result from previous research (Mont *et al.* 2006; Reim *et al.* 2015), this study also suggests collaborating with a financial service to bridge the gap of negative cash flow. Even though there is an opportunity to get better terms on loans due to the sustainable features of a UO service, it may be difficult to enter into partnership with a financial actor. A case study conducted by Tu and Ngo (2018) shows that a firm's products may not be pledged as loan collateral. In agreement, the result of this study indicates that credit institutions account for inventories that quickly are converted into money, not generated over time. All solutions discussed above (new accounting practices, supplier contracts and partners) suggest that actors in society must re-value products higher in order for companies to manage the financial challenges with UO services.

In order to prevent internal resistance, the result of this study coincide with previous research by Parida *et al.* (2014) that advocate investing in service innovation to signal that services are of importance within the organisation. It is an opportunity to increase the organisation's knowledge about UO services and influence employees to see its economic potential. However, this study also shows that starting with service innovation may be perceived as a radical change in manufacturing firms where product development is the core focus. One reason for this could be that employees do not see the economic potential with UO services as claimed by previous studies (Oliva & Kallenberg 2003; Barquet *et al.* 2013; Tu & Ngo 2018). Due to the cultural changes required to introduce a UO service, previous studies suggest launching the service under a new business unit (Barquet *et al.* 2013) or starting a daughter company that runs the service independently (Mont *et al.* 2006). On one hand, this solution would reduce the risk to harm an already strong brand name that is closely connected to sales of products. On the other hand, it may be difficult to launch a UO service without the support of a well-known brand. Despite cultural challenges, this study indicates that it is beneficial to launch the service within the organisation in the initial stage to increase the organisational learning. Moreover, the UO service can be launched together with other circular initiatives such as a repairing service. This could create business synergies since managing a repairing

operation is an opportunity to collect unique information about usage behaviour that can be used to induce faster innovation.

The findings in this study indicates that the technological challenges associated with the reversed logistics force established companies to either invest heavily a new IT platform or to collaborate with a third-party service provider. Mont *et al.* (2006) found that companies should be cautious with using an external service provider since they might not be able to manage the reverse logistics. In contrary, this study shows that particularly start-ups have the opportunity to build all their systems according to the reversed logistics from start, which enables significant advantages for established firms to inmate collaborations. Moreover, to meet the challenges associated with increased transportation, it is crucial to find sustainable distribution partners and possibly let customers pay for the freight.

Regarding challenges with the wear rate, Aktivt Uteliv works actively to counter the issue through personal customer meetings, establish a genuine family atmosphere in the shop and to try to convey that "take good care of our fine equipment". This suggests that a personal meeting is required in UO BMs. Thus, it contradicts companies' plan to digitalize the UO service, unless the digital platform enables customization and is designed to mediate a personal meeting with customers. For instance, Re:Leased aims to know a lot about their customers without having to ask too many questions. The UO BM enables gaining information about customer preferences to a larger extent than regular retailers, which may facilitate digital customization and thereby decrease the wear rate.

In order to counter the normative challenges with customers preferring to own things, this study suggests that actively influencing customer behaviour is key. It is crucial to establish the company as a service provider in the eyes of the customers. Previous studies suggest that PSS requires a different sale approach that focuses more on selling a solution and visualizing the added values through demonstrators and calculators (Parida *et al.* 2014; Reim *et al.* 2015). This study indicates that companies must collaborate with actors that have greater potentials to influence customers on a larger scale. For instance, renting products through well-known brands, collaborating with competitors or authorities that can provide legitimacy and support during the up scaling phase.

Creating a service network is crucial to meet the challenges with a UO BM and compensate for the lack of in-house competences and resources. In accordance with many circular BMs (Bocken *et al.* 2014), introducing a UO services demand several new workplaces, such as washing, repairing, service providers, technological solutions and transportation. Despite the lack of infrastructure adapted to the reversed logics, companies in this study argue that pilot projects must be conducted to get the circular business ideas up and running. Since UO services require customers to take part in new consumption habits, pilot projects are an opportunity to see how customers react and to increase the organisational learning.

8 Conclusions

This final chapter presents what we can conclude from previous chapters. It reconnects the aim and summarizes the answers to the research questions. Furthermore, a critical discussion is presented including practical implications and academic contributions followed by suggestions for further research.

8.1 A use-oriented business model

This study aims to identify enabling factors for a UO BM and to explain the prerequisites for a PO business to introduce UO services into their existing product offer. Three research questions are formulated to address the aim: what characterizes a UO BM, what are the perceived challenges to introduce UO services in combination with a product offer and how are these challenges met.

Firstly, a UO BM is characterized by long-term revenues that, in combination with high initial capital costs of purchasing products, results in requirements of financial resources. Moreover, customers are segmented according to level of usage. Lower access barrier is a value proposition that attracts seldom users, while variation and customization attracts frequent users. Since unique information about usage behaviour can be collected through a UO service, customers are perceived as co-inventors. To assure convenience and decrease transaction costs associated with booking, pick-up and return, digital channels are beneficial. Delivering a UO service implies a new set of core activities, including influencing customers in ownerless consumption, where partners and external service-providers are key. This study shows that except changes in the nine elements of the BMC, the UO BM is characterized by three additional elements: ability to reduce material flows, manage reverse logistics and cultural adoption factors.

Secondly, an established PO company within the outdoor apparel industry that introduces a UO service may face several challenges. There is a long pay-back time in a UO BM, which can be difficult to manage financially. Due to doubts about profitability with a UO BM, internal resistance may rise and companies may face challenges to manage the cultural change. Companies may find it challenging to influencing consumer behaviour is since the norm is till to own things. There are economical and environmental challenges to assure efficient transportations since products are delivered back and forth between companies and customers. The reverse logistics implies technological challenges since IT systems and e-commerce are normally linear. Moreover, there is a risk for rebound effects where products are worn out faster than privately owned products.

Finally, the result indicates that these challenges are met to a large extent through partnerships. The financial income gap due to long-term revenues may be supported by financial actors or by signing contracts with suppliers that allocate responsibilities, investments and ownership rights. Multiple actors in society are needed to encourage ownerless consumption and to build the infrastructure needed to support the reverse logistics. By delivering personal meetings prevents wear and tear and choosing sustainable transportation partners, positive environmental gains can be assured. Moreover, companies in this study show that conducting pilot project is key to get the circular business ideas up and running and to increase the organisational learning.

8.2 Contributions and suggestions for future research

Empirically, the result of this study may ease the practical application of a use-oriented business model for two major reasons. The choice of BMC implies a simple and flexible approach. The illustration of the UO BMC can, therefore, be used as a tool for practitioners that want to start providing UO services. Moreover, this case study includes perspectives from different sizes of businesses (start-ups and well-established firms) that have different roles in the value chain (manufacturers and retailers) and the result can be applied in several types of businesses.

Theoretically, this project contributes to the academic field in several ways. Combining the two bodies of knowledge PSS and BM enables a holistic view the UO business logic. Most BM theories assume that profit is made on sales of a product and the ownership by the consumer after the transaction is taken for granted. The result in this study indicates that a UO BM differs substantially from a PO BM in the way it creates, delivers, and captures value. The BMC offers a simple framework and critics advocate that it lacks dynamics and mainly account for economic values. One may question whether the model is suitable to understand sustainable BMs that also create environmental and social values. Accordingly, the result of the case study indicates that not all aspects of the UO business are covered by the BMC. Hence, this report intends to contribute to the research field by illustrating a UO BMC and suggest adding 3 more elements to manage its circular features.

This study indicates that even though a UO service enables increased utility of products and contributes to a CE to some extent, material flows are not managed in complete closed loops. At the end of the products' life cycle products are sold as second-hand, which transfers the responsibility for recycling back to consumers. There are few examples of complete PSS and further research is needed on factors that create incentives for firms to make use of old materials and remanufacture products instead of extracting new resources. An investigation that proves the profitability with remanufacturing could, in turn, contribute to a wider diffusion of the UO BM. Moreover, the BM framework offers a static approach and the result in this study shows a snapshot of the use-oriented business model at one point in time. Hence, it says little about the transition from selling products to renting products. Future research could adopt a longitudinal approach to explain the various stages of this transition. Furthermore, the BMC does not include strategic perspectives and future studies could focus on strategic initiatives to start providing UO services. The BMC provides a business perspective and another suggestion for future research is to investigate customers' opinions about ownerless consumption since the *user* plays a key role in this type of BM.

References

Afuah, A. (2014). *Business model innovation: concepts, analysis, and cases*. New York, NY: Routledge.

Åkerlund, C. (2018). Hyrkläder ger hållbart mode. *Dagens industri*. Available at: https://www.di.se/hallbart-naringsliv/hyrklader-ger-hallbart-mode/ [2019-02-20]

Amit, R. & Zott, C. (2001). Value creation in E-business. *Strategic Management Journal*, vol. 22 (6–7), pp. 493–520.

Armstrong, C.M., Niinimäki, K., Lang, C. & Kujala, S. (2016). A Use-Oriented Clothing Economy? Preliminary Affirmation for Sustainable Clothing Consumption Alternatives: A Use-Oriented Clothing Economy? *Sustainable Development*, vol. 24 (1), pp. 18–31.

Armstrong, G., Kotler, P., Harker, M. & Brennan, G. (2015). *Marketing: an introduction*. Available at: http://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&db=nlabk&AN=1419382 [2019-05-30]

Azarenko, A., Roy, R., Shehab, E. & Tiwari, A. (2009). Technical product-service systems: some implications for the machine tool industry. *Journal of Manufacturing Technology Management*, vol. 20 (5), pp. 700–722.

Baines, T. s., Lightfoot, H. w., Benedettini, O. & Kay, J. m. (2009). The servitization of manufacturing: A review of literature and reflection on future challenges. *Journal of Manufacturing Technology Management*, vol. 20 (5), pp. 547–567.

Baines, T.S., Lightfoot, H.W., Evans, S., Neely, A., Greenough, R., Peppard, J., Roy, R., Shehab, E., Braganza, A., Tiwari, A., Alcock, J.R., Angus, J.P., Bastl, M., Cousens, A., Irving, P., Johnson, M., Kingston, J., Lockett, H., Martinez, V., Michele, P., Tranfield, D., Walton, I.M. & Wilson, H. (2007). State-of-the-art in product-service systems. *Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture*, vol. 221 (10), pp. 1543–1552.

Barquet, A.P.B., de Oliveira, M.G., Amigo, C.R., Cunha, V.P. & Rozenfeld, H. (2013). Employing the business model concept to support the adoption of product–service systems (PSS). *Industrial Marketing Management*, vol. 42 (5), pp. 693–704.

Batat, W. (2019). Customer Experience to Keep Up with Changing Consumer and New Luxury Consumption Trends. In: von Schweinitz, D. (ed.) *Kinderchirurgie*. Berlin, Heidelberg: Springer Berlin Heidelberg, pp. 55–74.

Belz, F.-M. & Peattie, K. (2012). *Sustainability Marketing: A Global Perspective*. Chichester: Wiley.

Berghäll, S. (2018). Service Marketing Phenomena in the Context of Private Forest Owners—a Service Dominant Logic Perspective on Scholarly Literature. *Current Forestry Reports*, vol. 4 (3), pp. 125–137.

Bessant, J., & Davies, A. (2007). Managing service innovation. *Innovation in services*, 61.

Bocken, N.M.P., Short, S.W., Rana, P. & Evans, S. (2014). A literature and practice review to develop sustainable business model archetypes. *Journal of Cleaner Production*, vol. 65, pp. 42–56.

Boehm, M. & Thomas, O. (2013). Looking beyond the rim of one's teacup: a multidisciplinary literature review of Product-Service Systems in Information Systems, Business Management, and Engineering & Design. *Journal of Cleaner Production*, vol. 51, pp. 245–260.

Boström, M. & Micheletti, M. (2016). Introducing the Sustainability Challenge of Textiles and Clothing. *Journal of Consumer Policy*, vol. 39 (4), pp. 367–375.

Botsman, R. & Rogers, R. (2010). *What's Mine Is Yours: The Rise of Collaborative Consumption*. Harper Collins.

Boyes, M. (2013). Outdoor adventure and successful ageing. *Ageing and Society*, vol. 33 (04), pp. 644–665.

Bradley, J. (1993). Methodological Issues and Practices in Qualitative Research. *The Library Quarterly: Information, Community, Policy*, vol. 63 (4), pp. 431–449.

Brymer, E. & Gray, T. (2009). Dancing with nature: rhythm and harmony in extreme sport participation. *Journal of Adventure Education & Outdoor Learning*, vol. 9 (2), pp. 135–149.

Burnes, B. (2004). *Managing Change: A Strategic Approach to Organisational Dynamics*. Pearson Education.

Carlsson, A., Hemström, K., Edborg, P., Stenmark, Å. & Sörme, L. (2011). *Kartläggning av mängder och flöden av textilavfall*. Norrköping: Sveriges Meteorologiska och Hydrologiska Institut.

Catulli, M. (2012). What uncertainty? Further insight into why consumers might be distrustful of product service systems. *Journal of Manufacturing Technology Management*, vol. 23 (6), pp. 780–793.

Ceschin, F. (2013). Critical factors for implementing and diffusing sustainable product-Service systems: insights from innovation studies and companies' experiences. *Journal of Cleaner Production*, vol. 45, pp. 74–88.

Charter, M. & Polonsky, M.J. (1999). *Greener Marketing: A Global Perspective on Greening Marketing Practice*. Routledge.

Chathoth, P., Altinay, L., Harrington, R.J., Okumus, F. & Chan, E.S.W. (2013). Co-production versus co-creation: A process based continuum in the hotel service context. *International Journal of Hospitality Management*, vol. 32, pp. 11–20.
Chesbrough, H. (2007). Business model innovation: it's not just about technology anymore. *Strategy & Leadership*, vol. 35 (6), pp. 12–17.

Cook, M.B., Bhamra, T.A. & Lemon, M. (2006). The transfer and application of Product Service Systems: from academia to UK manufacturing firms. *Journal of Cleaner Production*, vol. 14 (17), pp. 1455–1465.

Creswell, J. (2013). Five qualitative approaches to inquiry. *Qualitative inquiry and research design: Choosing among five approaches*. Sage Publications.

Denscombe, M. (2000). *Forskningshandboken: för småskaliga forskningsprojekt inom samhällsvetenskaperna*. Lund: Studentlitteratur.

Dory, K. (2018-06-27). Why fast fashion needs to slow down. *UN Environment*. Available at: http://www.unenvironment.org/news-and-stories/blog-post/why-fast-fashion-needs-slow-down [2019-03-12]

Drucker, P.F. (1955). *The practice of management*. London: Routledge.

Durugbo, C., Bankole, O.O., Erkoyuncu, J.A., Tiwari, A., Alcock, J.R., Roy, R. & Shehab, E. (2010). *Product-Service Systems across Industry Sectors: Future Research Needs and Challenges. Proceedings of the 2nd CIRP ISP2 Conference*, Linköping, 14-15 April, 2010, pp. 535-542.

Dzurik, M., Gilbride, A. & Gierke, D. (2014). *Purpose beyond Profit : Sustainability in the Outdoor Industry*. Available at: http://urn.kb.se/resolve?urn=urn:nbn:se:bth-4288 [2019-03-12]

Eisenhardt, K.M. (1989). Building Theories from Case Study Research. *Academy of Management Review*, vol. 14 (4), pp. 532–550.

Elkington, J. (1994). Towards the Sustainable Corporation: Win-Win-Win Business Strategies for Sustainable Development. *California Management Review*, vol. 36 (2), pp. 90–100.

Elo, S., Kääriäinen, M., Kanste, O., Pölkki, T., Utriainen, K. & Kyngäs, H. (2014). Qualitative Content Analysis: A Focus on Trustworthiness. *SAGE Open*, vol. 4 (1), pp. 215824401452263.

Elven, M. van (2018-08-16). *People do not wear at least 50 percent of their wardrobes, says study*. Available at: https://fashionunited.uk/news/fashion/people-do-not-wear-at-least-50-percent-of-their-wardrobes-according-to-study/2018081638356 [2019-02-14]

EMF (2013). *Circular Economy Report - Towards the Circular Economy Vol. 1. Ellen Macarthur Foundation*. Available at: https://www.ellenmacarthurfoundation.org/publications/towards-the-circular-economy-vol-1-an-economic-and-business-rationale-for-an-accelerated-transition [2019-02-14]

EMF (2015). *Towards a Circular Economy: Business Rationale for an Accelerated Transition* Available at: https://www.ellenmacarthurfoundation.org/publications/towards-a-circular-economy-business-rationale-for-an-accelerated-transition [2019-03-06]
European Commission (2011). *Single Market Act Twelve levers to boost growth and strengthen confidence 'Working together to create new growth'*. (EUR-Lex, 52011DC0206) Available at: https://eur-lex.europa.eu/legal-

content/EN/TXT/HTML/?uri=CELEX:52011DC0206&from=EN [2019-02-14]

European commission (2017). *Report From The Commission to The European Parliament, The Council, The European Economic and Social Committee and The Committee of The Regions.* Available at: http://ec.europa.eu/environment/circular-economy/implementation_report.pdf [2019-01-05]

Evans, S., Partidário, P.J. & Lambert, J. (2007). Industrialization as a key element of sustainable product-service solutions. *International Journal of Production Research*, vol. 45 (18–19), pp. 4225–4246.

Fenix Outdoor (2017). *CSR-Report 2017* Available at: https://www.fenixoutdoor.se/wp-content/uploads/2018/03/CSR-report_2017.pdf [2019-03-13]

Fletcher, K. (2012). *Sustainable Fashion and Textiles: Design Journeys*. Routledge.
Flyvbjerg, B. (2006). Five Misunderstandings About Case-Study Research. *Qualitative Inquiry*, vol. 12 (2), pp. 219–245.

Fritscher, B. & Pigneur, Y. (2010). Supporting Business Model Modelling: A Compromise between Creativity and Constraints. In: England, D., Palanque, P., Vanderdonckt, J., & Wild, P.J. (eds.) *Task Models and Diagrams for User Interface Design*. Berlin, Heidelberg: Springer, pp. 28–43.

Gao, J., Yao, Y., Zhu, V.C.Y., Sun, L. & Lin, L. (2011). Service-oriented manufacturing: a new product pattern and manufacturing paradigm. *Journal of Intelligent Manufacturing*, vol. 22 (3), pp. 435–446.

Gebauer, H., Fleisch, E. & Friedli, T. (2005). Overcoming the Service Paradox in Manufacturing Companies. *European Management Journal*, vol. 23 (1), pp. 14–26.

George, G. & Bock, A.J. (2011). The Business Model in Practice and its Implications for Entrepreneurship Research. *Entrepreneurship Theory and Practice*, vol. 35 (1), pp. 83–111.

Grönroos, C. (2011). A service perspective on business relationships: The value creation, interaction and marketing interface. *Industrial Marketing Management*, vol. 40 (2), pp. 240–247.

Grooten, M., Alessi, E., Bologna, G. & World Wide Fund for Nature (2012). *Living planet report 2012: biodiversità, biocapacità e scelte migliori*. Gland, Switzerland: World Wide Fund for Nature.

Guimaraes, T. & Armstrong, C. (1998). Empirically testing the impact of change management effectiveness on company performance. *European Journal of Innovation Management*, vol. 1 (2), pp. 74–84.

Gummesson, E. (2006). Qualitative research in management: addressing complexity, context and persona. (Cassell, C., ed.) *Management Decision*, vol. 44 (2), pp. 167–179.
Halme, M., Jasch, C. & Scharp, M. (2004). Sustainable homeservices? Toward household services that enhance ecological, social and economic sustainability. *Ecological Economics*, vol. 51 (1), pp. 125–138.

Hart, C. (1998). *Doing a literature review: releasing the social science research imagination*. London: Sage Publications.

Hawken, P., Lovins, A.B. & Lovins, L.H. (1999). *Natural Capitalism: The Next Industrial Revolution*. London: Earthscan

Heiskanen, E. & Jalas, M. (2003). Can services lead to radical eco-efficiency improvements? - a review of the debate and evidence. *Corporate Social Responsibility and Environmental Management*, vol. 10 (4), pp. 186–198.

Hirschl, B., Konrad, W. & Scholl, G. (2003). New concepts in product use for sustainable consumption. *Journal of Cleaner Production*, vol. 11 (8), pp. 873–881.

Hodgson, N. (2017). *Closing The Loop On a Circular Economy*. *Outdoor Industry Association*. Available at: https://outdoorindustry.org/article/closing-loop-circular-economy/ [2019-03-12]

Hong, Y.C. & Clemens, F. (2013). Criticism, variations and experiences with business model canvas. *International Journal of Small Business and Entrepreneurship Research*, (Vol.1. No.4), pp. 18–29.

Johnson, M.D. & Selnes, F. (2004). Customer Portfolio Management: Toward a Dynamic Theory of Exchange Relationships. *Journal of Marketing*, vol. 68 (2), pp. 1–17.

Joyce, A. & Paquin, R.L. (2016). The triple layered business model canvas: A tool to design more sustainable business models. *Journal of Cleaner Production*, vol. 135, pp. 1474–1486.

Karlsson, M. & Fernandes, C. (2016). Fast Fashion 2.0 : en mer hållbar affärsmodell. Available at: http://urn.kb.se/resolve?urn=urn:nbn:se:hb:diva-10283 [2019-04-29]

Khodaei, H. & Ortt, R. (2019). Capturing Dynamics in Business Model Frameworks. *Journal of Open Innovation: Technology, Market, and Complexity*, vol. 5 (1), p. 8.

Kindström, D. (2010). Towards a service-based business model – Key aspects for future competitive advantage. *European Management Journal*, vol. 28 (6), pp. 479–490.

Klingelhöfer, C. (2018-03-13). *Ski and snowboard rentals are booming*. *Ispo*. Available at: /en/markets/rossignol-salomon-and-co-how-winter-sports-brands-view-rental-skis-and-snowboards [2019-03-12]

Koch, T. & Harrington, A. (1998). Reconceptualising rigour: the case for reflexivity. *Journal of Advanced Nursing*, vol. 28 (4), pp. 882–890.

Kónya, I. & Ohashi, H. (2004). *Globalization and Consumption Patterns Among the OECD Countries*. (ID 558624). Rochester, NY: Social Science Research Network. Available at: https://papers.ssrn.com/abstract=558624 [2019-02-14]

Kuo, T.C. (2011). Simulation of purchase or rental decision-making based on product service system. *The International Journal of Advanced Manufacturing Technology*, vol. 52 (9–12), pp. 1239–1249.

Kvale, S. (1996). *Interviews: an introduction to qualitative research interviewing*. Thousand Oaks, California: Sage Publications.

LaSalle, D. & Britton, T.A. (2003). *Priceless: turning ordinary products into extraordinary experiences*. Boston: Harvard Business School Press.

Lay, G., Schroeter, M. & Biege, S. (2009). Service-based business concepts: A typology for business-to-business markets. *European Management Journal*, vol. 27 (6), pp. 442–455.

Lejon, J. (2017-02-13). *Filippa K och Houdini i nytt samarbete: ”Uppdatera garderoben utan att bidra till överkonsumtion”*. *ELLE*. Available at: https://www.elle.se/filippa-k-och-houdini-i-nytt-samarbete-uppdatera-garderoben-utan-att-bidra-till-overkonsumtion/ [2019-02-14]

Lewandowski, M. (2016). Designing the Business Models for Circular Economy—Towards the Conceptual Framework. *Sustainability*, vol. 8 (1), p. 43.

Lincoln, Y.S. & Guba, E.G. (1985). *Naturalistic inquiry*. Nachdr. Newbury Park, Calif.: Sage.
Lindgren, M. & Packendorff, J. (2009). Social constructionism and entrepreneurship: Basic assumptions and consequences for theory and research. *International Journal of Entrepreneurial Behavior & Research*, vol. 15 (1), pp. 25–47.

Luecke, R. (ed.) (2003). *Managing change and transition*. Boston, Mass: Harvard Business School Press.

MacCarthy, E.J. & Perreault, W.D. (1990). *Basic marketing. Hauptbd. a managerial approach*. 10th ed. Homewood, Ill.: Irwin.

Martinez, V., Bastl, M., Kingston, J. & Evans, S. (2010). Challenges in transforming manufacturing organisations into product-service providers. (Leseure, M., ed.) *Journal of Manufacturing Technology Management*, vol. 21 (4), pp. 449–469.

Meier, H. & Massberg, W. (2004). Life Cycle-Based Service Design for Innovative Business Models. *CIRP Annals*, vol. 53 (1), pp. 393–396.

Meier, H., Roy, R. & Seliger, G. (2010). Industrial Product-Service Systems—IPS2. *CIRP Annals*, vol. 59 (2), pp. 607–627.

Miles, M.B. & Huberman, A.M. (1994). *Qualitative data analysis: an expanded sourcebook*. Thousand Oaks, Califorinia: Sage Publications.

Miles, M.B., Huberman, A.M. & Saldaña, J. (2014). *Qualitative data analysis: a methods sourcebook*. Third edition. Thousand Oaks, Califorinia: SAGE Publications.

Mintzberg, H. (1987). The Strategy Concept I: Five Ps for Strategy. *California Management Review*, vol. 30 (1), pp. 11–24.

Mont, O. (2004). *Product-service systems: Panacea or myth?* (thesis/doccomp). Lund University. Available at: http://lup.lub.lu.se/record/467248 [2019-02-14]

Mont, O., Dalhammar, C. & Jacobsson, N. (2006). A new business model for baby prams based on leasing and product remanufacturing. *Journal of Cleaner Production*, vol. 14 (17), pp. 1509–1518.

Mont, O.K. (2002). Clarifying the concept of product–service system. *Journal of Cleaner Production*, vol. 10 (3), pp. 237–245.

Morris, M., Schindehutte, M. & Allen, J. (2005). The entrepreneur's business model: toward a unified perspective. *Journal of Business Research*, vol. 58 (6), pp. 726–735.

Naturvårdsverket (2019). *EU: s handlingsplan för cirkulär ekonomi*. Available at: https://www.naturvardsverket.se/Miljoarbete-i-samhallet/EU-och-internationellt/EUs-miljooarbete/Cirkular-ekonomi/ [2019-03-06]

Novick, G. (2008). Is there a bias against telephone interviews in qualitative research? *Research in Nursing & Health*, vol. 31 (4), pp. 391–398.

OIA (2017). *American Camper Report 2017*. *Outdoor Industry Association*. Available at: https://outdoorindustry.org/resource/2017-american-camper-report/ [2019-02-14]

OIA (2019). *Sustainability*. *Outdoor Industry Association*. Available at: https://outdoorindustry.org/sustainable-business/ [2019-03-12]

Oliva, R. & Kallenberg, R. (2003). Managing the transition from products to services. *International Journal of Service Industry Management*, vol. 14 (2), pp. 160–172.

Osterwalder, A. & Pigneur, Y. (2010). *Business model generation: a handbook for visionaries, game changers, and challengers*. Hoboken, NJ: Wiley.

Osterwalder, A., Pigneur, Y. & Tucci, C.L. (2005). Clarifying Business Models: Origins, Present, and Future of the Concept. *Communications of the Association for Information Systems*, vol. 16.

Parida, V., Sjödin, D.R., Wincent, J. & Kohtamäki, M. (2014). Mastering the Transition to Product-Service Provision: Insights into Business Models, Learning Activities, and Capabilities. *Research-Technology Management*, vol. 57 (3), pp. 44–52.

Patton, M.Q. (2002). *Qualitative research & evaluation methods: integrating theory and practice*. Third edition. Thousand Oaks, California: SAGE Publications.

Porter, M.E. (1998). *Competitive strategy: techniques for analyzing industries and competitors: with a new introduction*. 1st Free Press ed. New York: Free Press.

Reim, W., Parida, V. & Örtqvist, D. (2015). Product–Service Systems (PSS) business models and tactics – a systematic literature review. *Journal of Cleaner Production*, vol. 97, pp. 61–75.

Rexfelt, O. & Ornäs, V. (2009). Consumer acceptance of product-service systems: Designing for relative advantages and uncertainty reductions. *Journal of Manufacturing Technology*

Management, vol. 20 (5), pp. 674–699.

Robson, C. (2011). *Real world research: a resource for users of social research methods in applied settings*. 3. ed. Chichester: Wiley.

Robson, C. & McCartan, K. (2016). *Real world research : a resource for users of social research methods in applied settings*. Hoboken: Wiley.

Romero, D. & Molina, A. (2015). *A multidisciplinary framework and toolkit to innovate customer-centric new product development. Proceedings of 2015 IEEE International Conference on Engineering, Technology and Innovation/ International Technology Management Conference (ICE/ITMC)*, Belfast, June 2015. pp. 1–10.

Roy, R. (2000). Sustainable product-service systems. *Futures*, vol. 32 (3–4), pp. 289–299.

Roy, R., Azarenko, A., Shehab, E. & Tiwari, A. (2009). Technical product-service systems: some implications for the machine tool industry. *Journal of Manufacturing Technology Management*, vol. 20 (5), pp. 700–722.

Saldaña, J. (2011). *Fundamentals of qualitative research*. Oxford: Oxford University Press.

Schor, J. (2010). *Plenitude: The New Economics of True Wealth*. New York: Penguin Press.

Schreier, M. (2012). *Qualitative content analysis in practice*. Los Angeles: Sage Publications.

Schuh, G., Boos, W., & Kozielski, S. (2009). Life cycle cost-orientated service models for tool and die companies. In *Proceedings of the 19th CIRP Design Conference–Competitive Design*. Cranfield University Press.

Shafer, S.M., Smith, H.J. & Linder, J.C. (2005). The power of business models. *Business Horizons*, vol. 48 (3), pp. 199–207.

Shuk, S.W. (2016-04-21). *Fast fashion is "drowning" the world. We need a Fashion Revolution! Greenpeace International*. Available at: https://www.greenpeace.org/international/story/7539/fast-fashion-is-drowning-the-world-we-need-a-fashion-revolution [2019-02-14]

Skålén, P. (2018). *Service Logic.* Lund: Studentlitteratur.

Tojo, N. (2012). *Prevention of Textile Waste: Material flows of textiles in three Nordic countries and suggestions on policy instruments*. Copenhagen: Nordic council of ministers.

Trimi, S. & Berbegal-Mirabent, J. (2012). Business model innovation in entrepreneurship. *International Entrepreneurship and Management Journal*, vol. 8 (4), pp. 449–465.
Tu, L. & Ngo, M. (2018). Ett styrverktyg för implementering av tjänstefokuserade affärsmodeller - Balanserat styrkort. Available at: https://gupea.ub.gu.se/handle/2077/56810 [2019-04-29]

Tukker, A. (2004). Eight types of product–service system: eight ways to sustainability? Experiences from SusProNet. *Business Strategy and the Environment*, vol. 13 (4), pp. 246–

260.

Tukker, A. (2015). Product services for a resource-efficient and circular economy – a review. *Journal of Cleaner Production*, vol. 97, pp. 76–91.

Tukker, A. & Tischner, U. (2006). Product-services as a research field: past, present and future. Reflections from a decade of research. *Journal of Cleaner Production*, vol. 14 (17), pp. 1552–1556.

Van De Poel, I. (2000). On the Role of Outsiders in Technical Development. *Technology Analysis & Strategic Management*, vol. 12 (3), pp. 383–397.

Van den Hoonaard, D. & van den Hoonaard, W. (2008). Data analysis, entry in Given, L. (ed) *The SAGE Encyclopedia of Qualitative Research Methods*. Sage.

Vandermerwe, S. & Rada, J. (1988). Servitization of business: Adding value by adding services. *European Management Journal*, vol. 6 (4), pp. 314–324.

Vargo, S.L. & Lusch, R.F. (2004). Evolving to a New Dominant Logic for Marketing. *Journal of Marketing*, vol. 68 (1), pp. 1–17.

Vargo, S.L. & Lusch, R.F. (2016). Institutions and axioms: an extension and update of service-dominant logic. *Journal of the Academy of Marketing Science*, vol. 44 (1), pp. 5–23.

Vargo, S.L. & Lusch, R.F. (2017). Service-dominant logic 2025. *International Journal of Research in Marketing*, vol. 34 (1), pp. 46–67.

WBCSD (2010). *Vision 2050: The new agenda for business*. *World business council for sustainable development*. Available at: https://www.wbcsd.org/Overview/About-us/Vision2050/Resources/Vision-2050-The-new-agenda-for-business [2019-02-14]

Weill, P. & Vitale, M.R. (2001). *Place to space: migrating to ebusiness models*. Boston, Mass: Harvard Business School Press.

Wildemuth, B.M. & Zhang, Y. (2009). Qualitative analysis of content. In B. Wildemuth (Ed.). *Applications of Social Research Methods to Questions in Information and Library Science, 2nd Edition*. Westport, CT: Libraries Unlimited.

Williams, A. (2007). Product service systems in the automobile industry: contribution to system innovation? *Journal of Cleaner Production*, vol. 15 (11–12), pp. 1093–1103.

Windahl, C. & Lakemond, N. (2010). Integrated solutions from a service-centered perspective: Applicability and limitations in the capital goods industry. *Industrial Marketing Management*, vol. 39 (8), pp. 1278–1290.
Yan, J., Ye, K., Wang, H. & Hua, Z. (2010). Ontology of collaborative manufacturing: Alignment of service-oriented framework with service-dominant logic. *Expert Systems with Applications*, vol. 37 (3), pp. 2222–2231.

Yin, R.K. (2013). *Case study research: design and methods*. 5. edition. London: Sage Publications.

Zott, C. & Amit, R. (2007). Business Model Design and the Performance of Entrepreneurial Firms. *Organization Science*, vol. 18 (2), pp. 181–199.

Zott, C., Amit, R. & Massa, L. (2011). The Business Model: Recent Developments and Future Research. *Journal of Management*, vol. 37 (4), pp. 1019–1042.

Personal Messages

Christiane Dolva
Sustainability Manager, Fjällräven
Personal interview, 2019-02-19

Erik Falk
CEO, Aktivt Uteliv
Phone interview, 2019-03-13

Emma Gustafsson
Project Manager Circular BMs, Fjällräven
Personal interview, 2019-02-07

Gustav Hedström
Business Developer, Houdini
Seminar, 2019-04-04

Henrik Hoffman
CEO, Naturkompaniet
Phone interview, 2019-03-28

Johanna Norrman
CEO, Re:leased
Phone interview, 2019-02-25

Magnus Sellberg
CEO, Rent a plagg
Phone interview, 2019-04-02

Martin Axelhed
CEO, Fjällräven
Phone interview, 2019-03-05

Peter Trabold
Business Developer, Fjällräven
Personal interview, 2019-02-22

Phrida Lindblad
Retail Manager, Houdini
Email interview, 2019-04-02

Yngvill Ofstad
Sustainability Developer, Bergans
Phone interview, 2019-03-21

Appendix Interview guide

The interview guide builds on the canvas business model and key questions were asked related to all of the nine elements.

Key Partners	Key Resources Financial Physical Intellectual Human **Key Activities** Core tasks that directly generate value.	**Value Proposition** A collection of benefits: Something new Performance Design Brand value Status Low price	**Customer relationships** Self-service Personal assistance Automation **Channels** Distribution, point of sales and communication	**Customer Segements** Group of people that shares similar: Needs Behaviour Features
Suppliers and other important stakeholders				
Cost Structures Value-driven or cost-driven			**Revenue streams** Transaction-based or recurring