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**BUSINESS MODEL INNOVATION FOR SUSTAINABILITY:
A single case study
exploring the barriers within this continuous process**

Authors: Jossue Castro and Nicky Lilja

Supervisor: Joakim Winborg

Examiner: Ass. Professor Sotaro Shibayama

Abstract

Title: BUSINESS MODEL INNOVATION FOR SUSTAINABILITY: A single case study exploring the barriers within this continuous process.

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Author: Jossue Castro and Nicky Lilja

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Keywords: Business Model; Activity System; Business Model Innovation; continuous Business Model Innovation; Business Model Innovation for Sustainability; Barriers

Research question-/s: What are the barriers for a company to do BMI for sustainability and how do these barriers influence BMI for sustainability?

Methodology: The study applies a single case study design on the case of business model innovation for sustainability conducted at a case company in Lund. The study applied a qualitative research strategy followed by inductive design with influences of deduction. The main source of primary data comes from semi-structured interviews to gain an in-depth understanding of the phenomenon, with the aim to let theory emerge from the raw data a systematic and transparent approach to data analysis is applied

Theoretical perspectives: the theoretical concept paramount to the study is business model innovation which is anchored in an activity system to understand the concept of business models. Furthermore, business model innovation is conducted with the aim to create economic, social and environmental value in this way innovate the business model for sustainability. Lastly, business model innovation for sustainability is perceived as a continuous process over time.

Conclusions: The case company under study has conducted a continuous process of business model innovation for sustainability since 2007, but is suffering from barriers present in the process. The limited amount of literature on business model innovation for sustainability provides little guidance on barriers. Therefore, this research aims to contribute to the literature by identifying what barriers are present when a company innovates the activity system for sustainability. Moreover, it explores how these barriers influence the continuous process. Evidence show that some barriers are more significant than others and that there are dynamic relationships between barriers.

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Chapter 1: Introduction

1.1. Background

Competitive advantage remains the ultimate goal for companies striving to succeed in an ever-changing global landscape, and doing so whilst maintaining innovation as a building block of a firm's strategic structure becomes a growing concern at any organizational level. While product and service innovation are kept as pillars for growth and market exploration (Tidd & Bessant, 2014), these often require large expenditures into research and development, specialized knowledge, or resource acquisition to provide sufficient return on investment (Amit & Zott, 2012). Thus, there exists a growing trend to pursue business model innovation (BMI) as a tool to achieve long term competitive advantage by moving beyond changes in value propositions (Bocken et al. 2014), and instead provide a grander focus on all activities of the business architecture of a firm.

Therefore, BMI requires an organisational shift from existing activities to new performance paradigms across all segments of a business model. Business model (BM) definitions are widespread and diverse, but a more specific and accepted definition of BM relies on Amit and Zott (2001) use of design elements regarding Content, Structure and Governance of transactions that are designed to generate value through business opportunities. Centered in this definition, BM in the context of this thesis will be conceptualized as an activity system, which can be described as a “set of interdependent organizational activities centered on the focal firm” (Zott and Amit, 2010:217), as well as the linkages between them. Moreover, we follow Cavalcante et al. (2011) definition on “business model revision” to describe BMI as changing existing processes, where change is incremental and guided towards developing a BM that is new to the firm.

In general, BMI is often explained as a radical one-time event that completely transforms the current business model (Hansen 2009; Adams et al. 2016). However, this implies that a company can reach increased competitive advantage through a radical transformation of the business model overnight. We argue that this perspective is lacking in its definition and instead we

perceive BMI as a continuous change process. Villinger (2015) and Demil and Lecocq, (2010) argue that a company that continuously improves and renews its business model through BMI, will outperform its competitors. BMI is therefore as a continuous process needs to be innovated constantly (Demil & Lecocq, 2010; Villinger, 2015).

While still largely unexplored, BMI for sustainability can yield important advantages to firms that adequately pursue a business design that focuses on capturing value across the triple-bottom-line to benefit company, customers, society, and the environment (Elkington, 1994). Consequently, the literature on sustainable business models (SBM) is fragmented due to lack of consensus in the field (Boons & Ludeke-Freund, 2013) which stresses the need for this thesis to adopt a clear definition. We adopt the definition of SBM as “a business model that creates competitive advantage through superior customer value and contributes to the sustainable development of the company and society” Lüdeke-Freund (2010:23).

Thus, we ground our definition on BMI for sustainability on the interpretation on BMI set forth by Cavalcante et al. (2011) and Ludeke-Freund (2010) description of a SBM aimed at serving the triple-bottom-line. Hence, for the purposes of this thesis, BMI for sustainability is a continuous process that involves change in two or more design elements (Content, Structure or Governance) of a firm’s activity system, that are aimed at creating economic gain, while focusing on the environmental concerns and social benefits.

Moreover, constraints in materializing BMI for sustainability can hinder the development of a long-term competitive advantage for a firm, and create limitations in the extent that a firm can transform the components and activity system of their BM. Therefore, identifying the barriers and their effect becomes a vital aspect of performing BMI for sustainability, as this is the first step into overcoming these obstacles and achieving a continuous process of BM renewal.

1.2. Problem discussion

Currently there is a strong interest among companies to innovate their business models to avoid being “Uberised” or “Netflixed” and avoid being outcompeted by new BM that delivers, creates and captures value in a different and smarter way (BM Sandbox 2017). The trend for BMI and the stressing demand to integrate sustainability in BM have introduced the field of BMI for sustainability. Thus, to generate value through the triple-bottom-line companies need to fundamentally transform the way they are creating value by the means of BMI (Clinton & Whisnant, 2014). Consequently, research on BMI for sustainability is emerging but has not yet reached maturity, resulting in shortcomings in terms of providing a clear definition on what constitutes a SBM and how to innovate for sustainability in a firm’s business model (Hvass, 2015; Sosna et al. 2010; Bocken et al. 2014).

Moreover, the integration of sustainability into the firm’s activity system creates an important opportunity for innovation across all business dimensions (França et al. 2016). The increasing trend of embedding sustainability into a company’s business architecture promotes new alternatives to capture market value and create a positive impact on a social and environmental level. Thus, incorporating sustainability into the BM, creates unique opportunities for companies to innovate and expand their competitive advantage by means of BMI itself (Boons and Lüdeke-Freund, 2013). The current BM design struggles to accurately include the sustainability dimension. This is often a result of sustainability not being understood deeply enough, planning horizon is insufficient, or competences towards sustainable business are too low (França et al. 2016). These struggles leave a wide gap for research in terms of BMI for sustainability.

One field of research address sustainable-oriented innovation and ranks 3 types of innovation for sustainability: technological innovation, product-service system innovation, and lastly and defined as most radically, BMI (Adams et al., 2016; Hansen, 2009). However, researchers in the field on BMI for sustainability, have strived to fill the research gap in search for a concise definition of BMI for sustainability and its components, but these have failed in articulating the actual process on how a company achieves BMI for sustainability (França et al. 2016; Yang et al. 2017; Bocken et al. 2014). A recent study brought forth by Yang et al. (2017), proposes an empirical framework which aims to exploit new sustainable business opportunities through value

uncaptured in their current business model. Nevertheless, this study focuses exclusively on opportunity recognition but does not provide a decisive construct on how to conduct BMI for sustainability. Consequently, there is a need for more studies to shed light on how BMI for sustainability is taking place in companies to contribute to the research field.

One framework provided by Bocken et al. (2014) conceptualizes BMI for sustainability as 8 SMB archetypes in attempt to illustrate how BMI for sustainability can materialize into sustainable offerings inside a company. This framework is argued to be a good starting point for future research to explore BMI for sustainability in companies (Laukkanen & Patala 2014; Morioka & de Carvalho 2015). Nevertheless, the research gap on how BMI for sustainability is conducted in practice, highlights the need for a qualitative in-depth study to understand this phenomenon and the barriers existing within this process.

In the literature on BMI, companies are facing some challenges when dealing with BMI which hinders them from capturing value. The barriers appear from a wide array of sources and dimensions, that can range from cognitive acts such as dominant logic (Chesbrough, 2010), to lack of knowledge (Coed et al. 2016), and even appear in the form of cost barriers (Pinget et al. 2015). Thus, identifying barriers and analyzing their effect, will lead to a better understanding of the constraints currently present in BMI and initiate processes to overcome them, and fully capture value from endeavors related to BMI. Consequently, while literature on barriers, specifically situated in the context of innovation and BM is growing, the current research has yet to anchor these constraints into BMI for sustainability.

Therefore, the aim of this thesis is to contribute to the body of knowledge on the fragmented area of research within BMI for sustainability, as well as addressing the specific barriers bounded inside this process, their influence and significance. Additionally, we intend to increase the empirical evidence on the barriers emerging inside the continuous process of BMI for sustainability, and explore their linkages across the whole activity system both inside the focal firm and towards external governance factors. Finally, we seek to provide a more robust explanation of the most prevalent constraints and barriers shown in the continuous process of BMI for sustainability within the case company, as to offer valuable insights for managerial implications for companies trying to implement and develop sustainability embedded BMI.

1.3. Purpose and Research Question

We aim to focus this thesis on the process of change and innovation that occurs in the components of a SBM and the barriers that are present during this process of transformation. We achieve this analysis of BMI for sustainability by examining the case company's process of integrating activities of sustainability into their activity system. Moreover, we explore the barriers that are present in the process of BMI for sustainability and aim to explain the effects that these specific barriers have in BMI for sustainability. Therefore, the research question for this thesis becomes two-fold:

What are the barriers for a company to do BMI for sustainability and how do these barriers influence BMI for sustainability?

The purpose of this study is to explain how BMI for sustainability is performed in a firm and explore the barriers around this process. While the literature on BM is growing in interest (Joyce & Paquin, 2016), the aim of this thesis is specific to BMI confined to sustainability. This research question is designed to contribute to the research gap in literature and provide recommendations to further research on implications of different barriers in performing BMI for sustainability. The contribution relies on a novel activity-based perspective, which allows us to identify changes in a firm's interdependent activity system, providing a deeper understanding of BMI for sustainability.

1.4. Case Company

The design of the present thesis is a single case study on BMI for sustainability. The case company provides an interesting case because they have conducted BMI for sustainability since 2007. The case company is in the promotional merchandise industry. In favour of providing background data and contextual information on the present research, the following section contributes a general panorama of the company, its origin, and its current activities relevant to the present field of study.

Originally created as a sportswear distributor in 1983 in Sweden, the case company grew rapidly to become one of the strongest competitors in the promotional merchandise industry in the

country, with a product portfolio that includes Brand Items in several categories to cater consumers beyond their initial sports market segment. Its Headquarter is in Borås, Sweden with two more offices in Lund and Stockholm. The company possess international presence and global market reach by establishing sales offices in Shanghai, Asia and Los Angeles, North America. Altogether, the case company is a small firm with 42 employees and quite a few of the employed have worked there for more than 10 years. Furthermore, the case company functions as a Brand Item distributor, but performs activities in product design and maintains strong upstream systems in their supply chain that allow for a broader market reach without increasing their cost model. Moreover, the case company performs under market oriented profile, as it mainly focuses on consumers and is externally guided (Jansson et al. 2017), meaning that decisions on innovation and BM adjustments are mainly based on market information.

In terms of sustainability, the case company first introduced sustainability to its BM based on a customer demand from one large client. After this initial event, the company started an office in Shanghai with the objective to gain more control over and transparency in the supply chain. Moreover, introduce measures for sustainability into their upstream value process, with the ISO 14001 certification, and implement some levels of sustainable design into the customer interface of the BM. The case company strives to offer sustainable, as well as organize their activities and processes within the organization to reduce their negative environmental impact, and increase their social benefits.

Additionally, the company has invested in ventures that deliver social value beyond financial gain. They have incorporated UNICEF's web shop into their business activities, and provide resources into the development of this social venture, with all profits going directly to UNICEF. These activities serve as evidence to the commitment of the company to provide value across the triple-bottom-line.

In 2013, the case company acquired Stadium Promotion as a long-term economic investment. Stadium Promotion had deep knowledge on compliance within ISO 14001, and they collaborated with Nattvandrarna, which is a social initiative aiming to create a safe night environment for youth and the society. This added to their extensive portfolio focus on providing value across the triple-bottom-line.

Evidently, the case company has conducted a continuous BMI process which has been iterative and continuous, with the purpose to deliver social, environmental and economic value, meaning that it has not been the result of one unique transformational event. However, even though the current literature promise long-term competitive advantage and increased economic performance from engaging in BMI for sustainability, the case company struggles with achieving return on investment on its sustainability activities. So far it is proven to be more of a cost than long-term investment which makes the case company question the process. Consequently, and in relation to the stressing gap in literature, the case company provides an interesting case on BMI for sustainability and the barriers active in the process. The findings will contribute to the gap in literature as well as assist companies that are currently engaging in BMI for sustainability or are considering to start, by pinpointing the common barriers and how these barriers influence the process.

1.5. Outline of the Thesis

This thesis is divided into 6 chapters comprised of the presentation of the concepts outlined previously in this section, the methodology applied, the findings and analysis that emerged from our research. Following this introduction, Chapter 2 offers a detailed review of the literature regarding all relevant concepts for the final research. Chapter 3 encompasses the choice of methodology approach for data collection and analysis. Subsequently, Chapters 4 and 5 reveal the main findings for the research, as well as the analysis pertinent to the research question. Finally, Chapter 6 is comprised of the conclusions drawn from the analysis, as well as limitations, managerial implications, and suggestions for future research.

Chapter 2: Literature Review

2.1. Business Models

The concept of BM emerged during the dot.com revolution when companies had to rethink the way they do business, and this allowed companies to start to map out how they generate value. Every company has a BM, however, before it became a known concept in literature, its implementation was more accidental than a deliberate design (Magretta, 2002; Chesbrough, 2007). Since then, the term has been defined in numerous ways (Zott et al. 2010; Osterwalder et al. 2005). Richardson (2008) states that a BM is composed by 3 main components; value proposition, value creation and delivery, and value capture. Together the components make a “conceptual tool containing a set of objects, concepts and their relationships with the objective to express the business logic of a specific firm” (Osterwalder et al. 2005:3). In this sense, a BM describes how a company makes money. In this light, the concept of BM is an important conceptual tool to assess how the case company creates value to then further understand how sustainability is integrated in different parts of the model.

Nevertheless, the definition of BM as a set of components that shows how a company creates, delivers and captures value is limited and static. With this in mind, this research will adopt an activity-based approach to the concept of BM. This allows for a more in-depth understanding of how a company does business. Amit and Zott (2001), describe a business model as “the content, structure, and governance of transactions designed so as to create value through the exploitation of business opportunities” (Amit & Zott, 2001:511). This definition goes beyond the description of the logic for how a company delivers, creates and captures value in different building blocks within a firm's boundaries. Moreover, Amit and Zott (2011), propose a new perspective on this definition based on an activity-based approach to business models, where a business model is explored as a set of activities (engagement of human, physical and capital resources), that construct an activity system organised to achieve a common objective to create value within and beyond the boundaries of the firm (Amit & Zott 2012; Zott & Amit 2010).

Furthermore, this activity system is in turn characterised by three design elements previously discussed: Content, Structure and Governance. These three design elements describe an activity

system’s architecture, and provides a firm with what, how, by whom and where activities are taking place in a BM to create and capture value. Consequently, to address the BM and in this view activity system, three elements needs to be understood by companies by asking three different questions shown in Table 1:

	Content	Structure	Governance
Design element question	What activities are performed?	How are they linked and sequenced?	Who performs them, and Where?
What it entails	Selection of activities to preform and generate value	How activities are connected and linked to generate and deliver value. System approach to how a firm does business to capture value.	Who is responsible for the activity? Employees, partners, stakeholders. Where are activities preformed in the activity system. All stakeholders in the activity system.

Table 1: The three design elements that construct an activity system by Zott and Amit (2010;2013).

Zott and Amit (2013) provide the explanation of the activity system approach to BM as:

“A business model is thus a template that depicts the way the firm conducts its business. It is crafted by a focal firm’s managers in order to best meet the perceived needs of its customers. To fully address the market opportunity, the focal firm’s business model often spans across the firm and its industry boundaries. While it is anchored on the focal firm, it is market centric and designed so as to enable the focal firm not only to enhance total value for all business model participants but also to appropriate a share of the value created” (Zott & Amit, 2013:404).

In this way, the activity-based approach provides a vibrant understanding of BM that enables companies to actively change and redesign activities. This allows a more dynamic understanding of the BM concept, as activities are not isolated into separate building blocks. In addition, Zott and Amit, (2010) state that a common mistake for firms is that they view the BM as separate components rather than interdependent; and without interdependencies among activities they become inefficient and abundant. However, with an activity-based approach there are

interdependencies among all activities, creating an integrated BM, where components are not designed in isolation (Zott & Amit, 2010). The activity system involves activities inside the focal firm and activities that reach beyond the boundaries of the focal firm which includes suppliers, partners or customers. The definition builds on Porter's (1985) concept of value chains, and includes all stakeholders related to the BM. Furthermore, Porter (1985) addresses activities which only encompass economic transactions, while an activity system proposes that not only economic transactions are vital but also the people and social transactions taking place in a firm (Zott & Amit, 2010; Santos et al. 2009).

Lastly, the use of an activity system has only been recently introduced as a concept of understanding BM in the literature (Sosna et al. 2010; Zott & Amit 2013). Therefore, the empirical studies adopting the concept are few. Zott and Amit (2007; 2008) have conducted two empirical studies to gain validity to the definition but highlight the need for further empirical studies in the field of BM and BMI (Zott & Amit 2013). In the empirical case study by Sosna et al. (2010), an activity system is undertaken to understand BMI and confirms that the activity system provides a dynamic view of business models and how value is created. In the field of BMI for sustainability, empirical studies have not applied an activity-based approach to identify and determine the activities in a BM (Bocken et al. 2014; Bocken & Short, 2016; Morioka & de Carvalho, 2015; Laukkanen & Patala, 2014; Hvass, 2015). This study aims to address this gap by applying the three design elements of Content, Structure and Governance as a tool to explain and understand the case company's BM. Furthermore, this will enable the study to see how activities are linked throughout the BM to create, deliver and capture value within and beyond the firm's boundaries. By inspecting the activities and their evolution over time within the firm's BM, the study can evaluate how sustainability has been inserted into them. Activity-based assessment of a BM, in combination with a dynamic dimension, which involves the continuous change in the design elements of the BM, allows a complete understanding on how activities overlap and build on each other, comprising BMI for sustainability.

2.2. Business Model Innovation

In the previous chapter the concept of BM was explained, but it does not imply any change. However, coupled with innovation, the BM can be understood as a tool to address innovation, to increase performance and gain competitive advantage (Chesbrough, 2010; Johnson et al. 2008; Demil & Lecocq, 2010; Teece 2010; Osterwalder & Pigneur, 2010). It is generally recognised that for companies to remain competitive in today's turbulent and global market they must “continually adjust, adapt and redefine themselves” (Kuratko et al. 2011:3). This implies that companies seeking to maintain competitive advantage in a changing environment require that their BM does not remain stagnant, and that assessment and change of the firm’s activity system is adopted as a tool for continuous improvement of a BM. This need for change in the organisational structure on how a business creates, captures, and delivers value is the foundation of BMI. However, the definition and components that entail BMI in extant literature are not universal, and research in this field remains emergent and is not a clearly delimited phenomenon (Spieth et al. 2014). This creates an issue in establishing a common vocabulary to the description of the changes in a company’s BM, as now, authors use different vocabulary as synonyms and interchangeably between bodies of work. In this sense, the changes to a BM are most commonly referred as: business model innovation (Amit & Zott, 2012; Teece, 2015; Schaltegger et al. 2011), business model evolution (Doz & Kosonen, 2010; Demil & Lecocq, 2010), business model transformation (Laudien et al. 2016; Aspara et al. 2011), business model experimentation (Chesbrough, 2010), business model change (Cavalcante et al. 2011), and several other terms to describe a similar phenomenon.

To provide a clear definition on what changes are needed to engage in BMI this study is based on Cavalcante et al. (2011) typology of BM change, referring specifically to their interpretation on “revision” of the BM, which will now be explained. Cavalcante et al. (2011) provides a definition to BM change that states that not all change inside a company necessarily entails changing the BM. “Only changes that affect the core standard repeated processes of a business model constitute a change in the business model“ (Cavalcante et al. 2011:1330). Cavalcante et al. (2011) bring forward four types of BM change and this study only consider Business Model Revision as BMI. The four are:

Business model creation: Creation of new processes, refers to when an idea/vision is materialised and processes implemented needed to start functioning the idea. It is the early stages of creation which entails necessary adjustments to be made to enable the implementation into relevant business practices. Consequently, BM creation is setting up a business from the start.

Business model extension: Adding new processes “extension is meant adding activities and/or expanding existing core processes to an existing business model” (Cavalcante et al. 2011:1332). Here a company explores new opportunities to extend the business which could imply that the company operates over a wider area and does not necessary lead to changes in working practices. It can be expansion in “offering more and/or better lines of products/services, which can occur gradually over the years” (Cavalcante et al. 2011:1332). Thus, extension mainly focuses on adding new activities inside the business.

Business model revision: Changing existing processes, “revision implies intervening in existing process(es), which in turn implies following a different direction and/or exploring alternative ways of doing business” (Cavalcante et al. 2011:1333). This could then mean that a business removes activities in order to modify the current BM and replace it with new activities or processes. Thus, established activities and working practices are changed, in contrast to BM extensions where only new processes are added. There can be several reasons to why a company starts revisions its activities, in this thesis the reason of sustainability is explored.

Business model termination: Terminating existing processes, refers to “close down a business area or unit, which means abandoning just some of its current processes, the remaining activities of the company will continue to be developed” (Cavalcante et al. 2011:1334). Thus, discontinue a BM.

Moreover, with a clear definition on BMI provided by Cavalcante et al. (2011), it is also important to elaborate the degree to which BMI is implemented. Due to the fragmented literature on BMI two streams of thought have emerged. One group of authors require complete re-invention of the BM to actively engage BMI (Teece, 2010; Johnson et al. 2008; Kaplan, 2012), others consider change and innovation to be the result of incremental adaptation and fine tuning of the BM (Amit & Zott, 2012; Sosna et al. 2010; Demil & Lecocq, 2010; Villinger, 2015;

Girotra & Netessine, 2014). The first categorisation, defines BMI as a change where a company must find entirely new ways of doing business, which fundamentally transforms all components in a BM, moving beyond incremental changes (Hansen et al. 2009; Adams et al. 2016; Clinton & Whisnant, 2014). This view is supported by Teece (2010) and Johnson et al. (2008) whom argue that BMI requires a radical change in how it creates, delivers and captures value. Similarly, Kaplan (2012) argues that re-inventing or “tweaking” the business model is not sufficient; firms require a complete transformation. This view entails the concept of business model transformation as a one-time event where companies conduct game-changing re-inventions for their business architecture.

In contrast, the second stream of thought, perceives BMI as a continuous execution of changes inside a BM, where transformation and adjustments are implemented regularly, creating a state of constant evolution within the firm, thus, creating a dynamic perspective on BMI. At its most fundamental level, BMI is argued to be “about delivering existing products that are produced by existing technologies to existing markets” (Girotra & Netessine, 2014:1). Hence, improving a company’s profitability and productivity radically, relies on implementing BMI at a strategic level, and not treated as a single radical event. Moreover, Zott and Amit (2012) discuss interdependencies among activities in a business model which can be innovated or re-designed in novel ways subsequently leading up to BMI. Demil and Lecocq (2010) in line with Sosana et al. (2010), state that changes or redesign of individual activities will result in innovation throughout the whole BM as a result of their interdependence or dynamic relationships. This research will apply the second stream of thought and more specifically a definition of Demil and Lecocq (2010) on BMI.

The adopted definition distinguishes BMI as a continuous process of change, where isolated events are not considered BMI on their own, but the sum of all efforts into incrementally developing a BM that is new to the firm. This conceptualization is especially important for this research in BMI for sustainability, as it is better suited to understand how activities in the case company’s business architecture have developed over time to embed sustainability into all design elements of the BM. Consequently, the inclusion of a recurrent transformation process of the firm’s activity system as a requirement for BMI, leads to dynamic consistency and development of sustainable activities within the BM.

The concept of dynamic consistency comes from Demil and Lecocq (2010) and builds on a RBV perspective to understand the evolution of BM elements. Hence, Demil and Lecocq (2010) aim to understand the dynamic interactions between and within these components, and their impact on firm performance. BMI demands continuous change and persistent transformation. Firms looking to implement BMI need to ensure dynamic consistency, in the form of persistent incremental changes in adapting, redesigning or innovating the BM. This perspective allows this thesis to explain a company's growth process by exploring the dynamics of change in and between activities for sustainability. Demil and Lecocq (2010) main conclusion states that BM are not static and require transformation to yield competitive advantage. For a business to sustain its performance they need "dynamic consistency" which means that managers need the capability and resources to ensure constant BM evolution between and within BM components in the value chain.

To sum up, this research adapts the second stream and applies the definition by Demil and Lecocq (2010) meaning that BMI is understood as a continuous BMI between and within BM components and activities (Demil & Lecocq 2010; Villinger, 2015; Amit & Zott 2012; Sosna et al. 2010; Girotra & Netessine, 2014). Furthermore, adds the definition by Cavalcante et al. (2011) to delaminate what change is in BMI. Consequently, BMI is a continuous process in the activity system where BM revision is changes in two or more of Content, Structure and Governance.

2.3. Business Model Innovation for Sustainability

The trade-off between ecology and economy has been an issue of growing impact and widespread consideration (Porter & Van der Linde, 1995). Companies are now prioritizing the environmental impact of their business endeavours in favour of capitalizing on market opportunities by paying attention to the environmental consequences of their product offering and the processes involved in their creation (Giunipero et al. 2012). Thus, firms are increasingly accounting for success factors beyond economic elements, and are now recognizing the interdependencies of environmental and social dimensions that are present in the new business context (Lozano, 2012). In this sense, sustainability is integrated into a firm's strategy when BM transcend a specific economic focus, and shift into one that integrates social and environmental

value through the actions of the organization (Joyce & Paquin, 2016), and considers both short term profits and long term sustainability (Patala et al. 2016). This juxtaposition of value generation and creation across the three different dimensions of economic gain, environmental concerns, and social benefits is referred to as the triple-bottom-line (Elkington, 1994). Although the concern for both social and environmental impacts is a topic of great relevance among companies, the actual definition, focus, and implementation of sustainability remains a diverse issue (Giunipero et al. 2016). The use of sustainability as a driver for competitive advantage has yielded several business cases, in which sustainability has been used in a wide array of applications, from simple addition of superficial environmental and social concerns through “greenwashing” (Schaltegger et al. 2011), to more inclusive business mechanisms such as product-service systems (Yang et al. 2017). For the purposes of this thesis, we adopt the definition of sustainability through the lens of the triple-bottom-line, where the company creates value for its stakeholders, which include the environment and society. Hence, sustainability incorporates economic gain through value creation for its customers, and prioritizes concerns on the effects of their business actions on the environment, while also incorporating social benefits into its strategy.

As a response to the increasing market outcry for environmental consciousness, sustainability has become a reason for companies to rethink their BM in search for greener solutions (Bocken et al. 2014; Boons & Lüdeke-Freund, 2013; Yang et al. 2017). As a result of these market pressures, an add-on to BMI has emerged; innovation of a firm’s BM towards sustainability to achieve SBM. However, the emerging discourse on BMI for sustainability is highly fragmented and little research has been done to date, with only a common understanding of what comprises sustainability-driven BMI (Yang et al. 2017). Lüdeke-Freund (2010) contribution to SBM remains one of the most important references anchoring BM to the triple-bottom-line by describing a SBM as “a business model that creates competitive advantage through superior customer value and contributes to the sustainable development of the company and society” Lüdeke-Freund (2010:23). Therefore, BMI for sustainability is developed within an organisation when the firm aims to create social, environmental, and economic value, as opposed to traditional BMI which is generally implemented with commercial value as its driving force.

Research regarding SBM is still in its infancy and empirical studies on how to manage BMI for are even more scarce, with limited information and data regarding frameworks and mechanisms to implement BMI inside a firm. However, within this narrow field, some tools for BMI application have been developed, such as value mapping to enable companies to identify and serve value to multiple stakeholders in the value network (Bocken et al. 2013). This framework can help companies find new ways to reach a value across the triple-bottom-line by including the environment and society as key stakeholders (Bocken & van Bogaert, 2016). Evans et al. (2017) and Yang et al. (2017) both build on this value mapping tool to identify value uncaptured which can enable a firm to find new opportunities for sustainability. Once uncaptured value has been identified, firms can benefit from recognizing new opportunities that triggers BMI for a new SBM.

The most prominent contribution in BMI for sustainability is provided by Bocken et al. (2014) where a categorisation on how to integrate sustainability in a BM by the way SBM archetypes is introduced. The archetypes allow firms to embed sustainability into their BM innovation endeavours. Additionally, Boons and Lüdeke-Freund (2013) propose a set of four normative requirements that provide the basis on which BM for sustainable innovation should operate: value proposition, supply chain, customer interface, and financial model. These components are selected as the foundation for BMI as change within these implies a change in the way that the company does business, and therefore, engages in the innovation of their BM across all fronts.

The exploration on BMI for sustainability that has surfaced relies primarily on Richardson's (2008) building blocks for business modelling, while activity-based approach has yet to be linked to SBM. This thesis seeks to close the gap in understanding BMI for sustainability through the lens of the activity system present in the case company. Moreover, there is a stressing need for qualitative in-depth understanding of case studies to explain and describe how BMI for sustainability is conducted and achieved. There is no universal structure or guideline on how firms can achieve a SBM. For this reason, our thesis will take on specific events in BMI for sustainability where change has taken place across the elements of Content, Structure and Governance. This will allow a more interdependent understanding of activities taking place in the BM and their linkages, supporting a more in-depth grasp on core tasks, rather than depending on clustering individual components into generic BM segments.

2.4. Barriers to BMI and Sustainability

2.4.1. Barriers to BMI

It becomes apparent that BMI for sustainability remains a vital element of development for companies to preserve their competitive advantage and capture value from embedding sustainability into their activity system. The process of BMI is even more prevalent in the current changing commercial environment, as these changes in the competitive landscape require firms to reassess their activities and decide which are essential and which should be discontinued (Zott & Amit, 2013). It is paramount that existing BM be revisited constantly and innovated as a way to ensure that it is preserved as viable, competitive and hard to imitate. Not doing so leaves firms vulnerable to replication and loss of market share (Nogueira et al. 2015). Thus, it is clear that BM only provide a snapshot of the company's current value architecture, reflecting only an effective business perspective from a particular point in time, and require adjustment and re-examination over time to be usable and maintain positive performance levels (Chesbrough, 2010; Laudien & Daxböck, 2015).

However, even with the available literature stating the importance of BMI within a company's long-term market survival, and the need for transformation of BM components, firms are still hesitant to evolve, begging the question of why are not more firms engaging in BMI before their BM becomes redundant (Chesbrough, 2010). The answer may lay in the barriers and obstacles that are present during the implementation and assimilation of BM change within the company. These barriers can hinder the firm's ability to undertake BMI as a process for renewal of their activity system towards sustainability, and can limit the company's scope of action regarding changes in their current BM (Laudien & Daxböck, 2015).

In detail, barriers to innovation on BM may arise from a variety of elements that deter firm's into engaging in a continuous process of change for fear that they will succumb to these barriers, and may not go back to their previously working BM (Sivertsson & Tell, 2015), or risk that their core competencies are harmed by the integration of new activities in the BM (Sivertsson & Tell, 2015). Some barriers are a result of cognitive limitations, where dominant logic proves to be a constraint when it is followed too slavishly, as it causes firms to miss new business opportunities that are not an obvious fit to their current value systems (Chesbrough, 2010). Additionally, BMI

requires a rethinking of choices or paths made in the past to pursue new business opportunities, however, when firms fail to stray away from their past BM designs, they fall into path dependency that influences their approach to BMI (Laudien & Daxböck, 2015). Cognitive barriers also diminish BM change when companies do not understand their BM well enough, resulting in lack of knowledge or awareness of when core business needs to be leveraged to maintain competitiveness, and when a new BM is needed to compete (Johnson et al. 2008). Yet, the opposite can also be constructed as a cognitive barrier. When firms possess clarity in understanding the current BM, obstacles appear in the form of inadequate knowledge on what the right new BM ought to be, creating barriers in the form of confusion or obstruction (Chesbrough, 2010). Thus, cognitive barriers result from absence of knowledge both on current BM and on which specific changes are needed, causing managers to limit resources to exploration of new BM and hindering the firm's ability to continuously innovate their BM.

Moreover, additional barriers are brought forth in terms of the financial aspects that BMI entails. By engaging in BMI for sustainability companies face new costs in asset and resource acquisition and can carry out risks regarding the fit of the new BM with the old one currently in place in the company (Sivertsson & Tell, 2015). Other risks pertain mainly to market factors that influence the way a company might deliver value to their market segments. In this case, Coad et al. (2016) propose that special attention be given to market elements such as shortage of adequate skills, lack of adequate information on technologies and markets, and uncertainty of demand in highly concentrated market structures.

Santos et al. (2009) seek to understand the BMI process in incumbent firms by applying cross-case analysis between 15 incumbent firms. The authors conclude that incumbent firms struggle with achieving mutual engagement inside an activity system, necessary to encourage development and sharing of BMI ideas. Santos et al. (2009) argue that mutual engagement "lies at the heart of the creative space" (Santos et al., 2009:36) of the BMI process and is therefore vital stimuli. Nevertheless, it was found hard to accomplish in a corporate setting because of the flawed communication and power distances between and among activities inside the focal activity system.

Eichen et al. (2015), provide a wide-reaching classification of barriers that impede firms from successfully implementing BM change. Although this categorization of obstacles is broad, and is not specifically guided towards BMI for sustainability, it provides valuable information when adapted to the focus of this thesis. The emerging framework can be used to group and allocate barriers specific to BMI for sustainability and recognize the main constraints that are present during a firm's quest for continuous BMI for sustainability. The classification framework for barriers based on Eichen et al. (2015) is as follows:

- Awareness-related barriers: dominant logic and existing incentives prevent innovations beyond products. Barrier related to organizational thinking.
- Search-related barriers: Narrow definition of internal and external environment limit the search for new opportunities. Barrier related to lack of diversified perspectives.
- System-related barriers: Manage the new in terms of the tension between evolutionary and disruptive innovations, as well as process, product, and BMI in the right way.
- Logic-related barriers: a lack of drive, guidance, and incentives to move beyond mere ideas and start thinking and acting in innovative business logics. Understanding BMI systemically.
- Culture-related barriers: Decision between cultural autonomy and cultural coordination.

While exploring the different barriers specifically focalized in BMI, it becomes apparent that the literature in this distinct area is lacking in depth and offers limited results that identify concrete barriers found during the process of BMI. Thus, we expanded our search criteria to include barriers and challenges within the wider scope of innovation, as barriers during the process of innovation regardless of its objective (process or product) will provide valuable insights that can be extrapolated to BMI or present a starting point for our specific case in BMI for sustainability. In this sense, innovation requires changes, be it innovation in final products or in the development of new internal processes, innovation will bring about transformation of the current activities and working mechanism of the company. Thus, change will create friction between the current state of affairs and the new paradigm shifts in product, process, and management. In this sense, innovation requires overcoming certain challenges or barriers that can be exposed as a result of internal processes or the external context in which the company exists.

For BMI, it becomes a vital issue to identify and discern barriers that occur at a structural level when dealing with innovation as a complete concept, integrating change in product, process, and organization, as BMI includes the implementation and integration of activities across these segments. Madrid-Guijarro et al. (2009) present the relationship between barriers or challenges to innovation and the innovation outcomes in product, process, and management. This framework based on the empirical study of Spanish SME's is grouped into barriers that are internal to the company, and generally considered difficult to overcome, as well as into barriers that are external and a result of the working environment and context in which the firm operates. The internal barriers relate specifically to: lack of financial resources; poor human resources practices and weak management support; weak financial position; and high cost and risk of innovation.

For the external barriers, Madrid-Guijarro et al. (2009), emphasize turbulence, lack of external partner's opportunities, lack of information, and lack of government support. These barriers, while not strictly confined to BMI, show the constraints of innovation, and endanger a firm's competitiveness and risk losing market share. Thus, barriers to innovation resulting from internal processes and activities and from external forces, provide valuable insights into BMI, as both encompass the same final goal, competitive advantage for the firm.

Furthermore, barriers to innovation have been classified depending on the source of each obstacle. The main classification for these barriers is presented in Weber (2013) study on transforming BM for family physicians, and states that these barriers can be exogenous or endogenous. The former relates to barriers that are ingrained in market conditions, and are not controllable by companies. Endogenous barriers on the other hand, are obstructions created by firms in terms of their market strategies and competitive behaviour (Weber, 2013).

Finally, further research has been employed into establishing the main barriers that hinder innovation inside a company, and the effect that these have on firm productivity. In detail, Coad et al. (2016) describe 7 main obstacles to innovation that are derived from domains in finance, knowledge, demand, and regulation. The resulting barriers are: (1) cost of finance; (2) availability of finance; (3) lack of qualified personnel; (4) lack of information on technology and/or market; (5) market dominated by established firms; (6) uncertain demand for innovative

goods or services and (7) regulation factors. (Coad et al. 2016). The identification of these barriers helps firms take the first step towards overcoming these obstacles and increase productivity. In the context of BMI for sustainability, outlining barriers within these dimensions, provides firms with the capability to undertake a continuous approach to BM change.

2.4.2. Barriers to Sustainability

Barriers on BMI for sustainability are not quite fully explored in existing literature, as a way to provide empirical data on the challenges that firms face when implementing changes in their BM to instil sustainability in their activities. Although limited, current literature on barriers for sustainability has concentrated on constraints in specific segments of their business. In this sense, Giunipero et al. (2012), expose four main sustainability barriers, specifically guided towards sustainable supply chain management: (1) lack of consensus at the CEO level; (2) costs of sustainability and economic conditions; (3) lack of sustainability standards and appropriate regulations; and (4) misalignment of short term and long term strategic goals. While not directly entrenched in BMI, these barriers provide some context on several important challenges that firms face when implementing sustainability into some part of their business process. The barriers proposed by the authors can be channelled into understanding some of the challenges that firms face in BMI for sustainability, and provide an initial framework for further analysis of the barriers that companies face while in their continuous process of BMI for sustainability.

Additionally, empirical studies analysing the barriers for innovation, not strictly focused on BM, have been developed to describe the barriers present in fostering innovation within companies. In one instance, Pinget et al. (2015) use French SME's to determine the barriers that companies face when implementing environmental innovations. These barriers are then compiled into three different sets: cost barriers, knowledge barriers, and ability to connect technical opportunity with market opportunity. First, barriers of cost relate to the lack financial resources available for investment in innovation. Second, knowledge barriers are focused on the limited access to information and skilled labour-force necessary in engaging innovation. Finally, the need to bridge the gap between technical opportunities and market opportunities to capture value on innovation. This is especially important when anchoring these barriers into BMI, as inventions are useless without an appropriate and coherent BM (Eichen et al. 2015).

Sivertsson and Tell (2015) identified barriers in the BMI process within the sector of Swedish agriculture and identified that regulatory barriers play a big role in how BMI could be conducted. Furthermore, evidence showed that there was a leadership gap which took place when the owners in the organisations were not able to change its attitude to a more acceptance for experimentation and change, which created risk aversion and fear of failure. In line with this, in the empirical study conducted by Sosna et al. (2010) findings show that BMI for sustainability requires continuous experimentation, trial-and-error learning to generate competitive advantage. If a company is risk averse they will not engage in experimentation due to the risk of failing, stressing the importance for embracing failure to overcome risks involved in BMI.

As mentioned before, literature on the integration of sustainability into BMI is highly fragmented with only a few contributions providing a concise contribution on how firms reach SBM. Bocken et al. (2014) provide the framework of the 8 archetypes groupings for SBM, but lack information on the barriers that are present in each of these. Laukkanen and Patala (2014) present different barriers for the diffusion of these 8 archetypes, and classify them into 3 main categories: regulatory, market and financial, and behavioural and social. The barriers allocated to each category is presented in detail in Table 2. While the barriers proposed by the authors provide a detailed understanding of challenges in diffusion, these are only limited to the 8 archetypes described by Bocken et al. (2014), and are not including activities in BMI for sustainability that might be present outside the archetypes. However, the barriers provided can aid in examining the main challenges into transitioning to a SBM and the most common constraints into why these archetypes have not reached adoption at a global scale.

Regulatory Barriers	Market and financial barriers	Behavioural and social barriers
<ul style="list-style-type: none"> • Lack of long-term strict legal regulatory frameworks • Inconsistent and overlapping regulatory mechanisms • Lack of economic incentives • Lack of encouragement to innovativeness • Lack of flexibility • Lack of involvement of stakeholders in decision making • Lack of normative rules/industrial standards 	<ul style="list-style-type: none"> • Financial risk • Short-termism • Lack of awareness and understanding among market participants • Lack of marketing know-how 	<ul style="list-style-type: none"> • Attitudes and values • Lack of consumer/customer acceptance • Lack of risk-taking • Enterprise culture • Leadership, management • Lack of motivation • No stakeholder pressure • Profitability of existing business models/satisfaction

Table 2: Barriers to the diffusion of SBMIs (Laukkanen & Patala, 2014)

Table 3, provides a categorization of barriers based on the challenges presented above, as to include barriers exhibited in the existing literature. The use of these broad categories for BMI barriers helps us integrate different individual obstacles into larger blocks to assess and outline the importance of each group, and as method to prioritize barriers within each segment. This is done to provide a thorough categorization of the barriers and the effect that these have on BMI for sustainability.

Barrier Category	Challenge to the firm	Reference
Risk Aversion	Fear of not going back to previously working business model after BMI.	Sivertsson and Tell (2015)
	Lack of risk taking.	Laukkanen and Patala (2014)
	Risks regarding the fit of the new business model with the old one currently in place in the company.	Sivertsson and Tell (2015)
Financial Barriers	Weak financial position and high cost of innovation.	Madrid-Guijarro et al. (2009)
	Costs of sustainability and economic conditions.	Giunipero et al. (2012)
	Lack of financial resources available for investment in innovation.	Pinget et al. (2015)
Knowledge Barriers	Lack of financial resources.	Madrid-Guijarro et al. (2009)
	Lack of knowledge of when a new business model is needed to compete.	Johnson et al. (2008).
	Shortage of adequate skills, lack of adequate information on technologies and markets.	Coad et al. (2016)
Leadership Gap	Limited access to information and skilled labor-force.	Pinget et al. (2015)
	Lack of qualified personnel.	Coad et al. (2016)
	Lack of information on technology and/or market.	Coad et al. (2016)
	Lack of consensus at the CEO level.	Giunipero et al. (2012)
	Poor human resources practices and weak management support.	Madrid-Guijarro et al. (2009)
	Dominant logic proves to be a constraint when it is followed too slavishly.	Chesbrough (2010)
	Dominant logic and existing incentives prevent innovations beyond products.	Eichen et al. (2015)
Inadequate knowledge on what the right new business model ought to be.	Chesbrough (2010)	
Regulation Barriers	Path dependence that influences decisions related to business model transformation	Laudien and Daxböck (2015)
	Lack of sustainability standards and appropriate regulations.	Giunipero et al. (2012)
	Inconsistent and overlapping regulatory mechanisms.	Laukkanen and Patala (2014)
Organizational Barriers	Regulation factors for innovation.	Coad et al. (2016)
	Misalignment of short term and long term strategic goals.	Giunipero et al. (2012)
	Need to bridge the gap between technical opportunities and market opportunities to capture value on innovation.	Pinget et al. (2015)
	Short-termism.	Laukkanen and Patala (2014)
	Lack of diversified perspectives.	Eichen et al. (2015)
Market Barriers	Struggle with achieving mutual engagement inside an activity system,	Santos et al. (2009)
	Lack of drive, guidance, and incentives to move beyond mere ideas and start acting in innovative business logics.	Eichen et al. (2015)
	Market dominated by established firms.	Coad et al. (2016)
	Obstructions in terms of market strategies and competitive behavior.	Weber (2013)
	Uncertain demand for innovative goods or services	Coad et al. (2016)
Uncertainty of demand in highly concentrated market structures	Coad et al. (2016)	

Table 3: Aggregated categorization of barriers to BMI for sustainability.

2.5. Relations between theoretical concepts

With the aim to contribute to the research fields in; BM, BMI and BMI for sustainability, this section will relate the theoretical concepts from each research fields. To understand the concept of BM, this study applies the definition of Zott and Amit (2010), an activity system with three design elements and relating questions: Content-what, Structure-how and Governance-who/where. The three design elements provide an overview of the architecture of a firm's activity system (BM). However, a BM does not equal BMI. To translate into BMI companies needs to innovate their BM. The definition by Cavalcante et al. (2011) offers a clear distinction that relates well with the activity system. Subsequently, for a BM to become BMI firms need to change existing processes in the way they do business, which implies revising, modifying, or removing existing activities. Merged together with an activity system, BMI is when change takes place in two or more of Content, Structure, and Governance.

For the purpose of this research the concept of BMI is combined with SBM provided by Lüdeke-Freund (2010). Meaning that, companies innovate their BM to include sustainability to create a SBM (Lüdeke-Freund, 2010). As follows, sustainability in BMI is when a firm innovate their BM to create more than economic value, thus also environmental or/and social value that “contributes to the sustainable development of the company and society” (Lüdeke-Freund, 2010:23). This definition builds on the concept of creating value throughout the triple-bottom-line by Elkington (1994), however, Lüdeke-Freund (2010) anchor the triple-bottom-line to BMI. In this way, BMI for sustainability is when BMI creates value throughout the triple-bottom-line. This provides a static understanding of BMI for sustainability. To go beyond the static view of BM, the dynamic perspective on BMI as a continuous evolutionary process is applied by Demil and Lecocq (2010). In this view, the research can better explain how activities in the business architecture have developed over time to embed sustainability into all design elements of the BM.

Taken all together, in this study BMI for sustainability is a continuous process where changes are made in the activity system in two or more of the design elements; Content, Structure, and Governance. The changes made in the activity system aim to create economic and/or environmental and social value to stimulate sustainable development of the company and

society; throughout the triple-bottom-line. Based on this definition, the purpose of the research is to identify what barriers are present in BMI for sustainability and how do these barriers influence the process.

Chapter 3: Methodology

3.1. Research Approach

This study applies an understanding of knowledge that refers to the epistemological position known as interpretivism. It enables research to understand legitimate knowledge as subjective social meanings of human behaviour of the social phenomena being studied (Bryman & Bell, 2015). Therefore, the case company under study is a social construct that is influenced and organized by social actors. It is interesting to understand the variations of how social actors interpret the world around them and interpret the social world from the perspective of the respondents' by analysing their own words, concepts, and terms. In this way, knowledge can never be value free or objective and it is a subjective interpretation of the social constructs' interpretation of the world that is being studied (Bryman & Bell, 2015).

Furthermore, the interpretivist stance relies on the ontological position of constructivism, which understands the phenomena under study as constructed by the subjective views of individuals. Thus, perceives "social reality as a constantly shifting emergent property of individual's creation" (Bryman, 2012:36). Therefore, this paper understands that culture and organizations are social constructions and do not take place in an independent vacuum. The ontological and epistemological standpoint enables the authors to reduce personal biases as researchers since research from this stance cannot be value-free and instead of seeing it as a limitation put it as a central understanding of the research process and the phenomena being studied. Thus, a researcher's prior experience, knowledge and attitudes will not limit the result of the study but is seen as a part of the study (Bryman & Bell, 2015).

3.2. Research strategy and Design

As this study focuses on understanding a particular social phenomenon in order to explore the barriers in BMI for sustainability, it will follow an inductive process with influences of deductive features and a qualitative strategy in order to answer the research question (Maxwell, 2008; Bryman & Bell, 2015). An inductive approach with a qualitative strategy will allow the authors to collect a rich set of data and allows theory to be generated from the empirical research. The

inductive approach is complemented with deductive influences as theory helps interpret the empirical findings and make them theoretically significant and generalizable (Bryman & Bell, 2015). A qualitative strategy is necessary as it support the focus on how individuals interpret their social world, allowing the new concepts and theory that is grounded in the data to speak for itself (Bryman & Bell, 2015). Furthermore, because the research question aims to address a phenomenon which is lacking understanding in the current literature, a qualitative approach is most suitable (Punch, 2005). In this way, this study can contribute with a much deeper understanding of the specific context than quantitative, which is an important contribution to the research gap. In addition, the inductive approach makes it possible for the study to apply an iterative process of data collection and analysis and allows to go back and forth between theory and data and change research focus depending on the findings in the data throughout the research. This is a necessary approach to this study as it aims at linking theory to the empirical research (Bryman & Bell, 2015).

3.2.1. Single Case Study Design

Guided by the purpose of this study, this research takes the form of a single case study design which will enable a detailed understanding of one particular case (Bryman & Bell, 2015). A single case study design is appropriate to this study as it “aims to understand the case in depth, and in its natural setting, recognizing its complexity and its context” (Punch, 2005:144), and can therefore help provide valuable contributions to the lack of empirical literature on BMI for sustainability and the need to explore the barriers taking place in this process.

With the research question in mind, the specific case to be studied is business model innovation for sustainability conducted at a case company in Lund. The boundaries of what is being studied in the case are guided by the research question since not everything can be studied, not even within one case (Punch, 2005). The case company is therefore relevant to the research question because it is a revelatory case as it contributes with a novel empirical case to the literature however it can also be seen as a typical case as the company have conducted BMI for sustainability (Bryman & Bell, 2015).

A single case study design is suitable for this research because it provides a broader set of data collection methods necessary for a detailed examination (Bryman & Bell, 2015). Also, because it enables theory grounded in the empirical data to reflect the nature of the particular case (Bryman & Bell, 2015; Gioia et al. 2012). This rich and detailed information can further the understanding of how companies can go about BMI for sustainability and how barriers influence this process. With this understanding companies can look at this case study and learn from the detailed findings.

3.2.2. Research Process

The research process is predominantly following an inductive design because it aims to allow barriers on BMI for sustainability to emerge from the words and perception of the interviewees. However, it is wrong to state that the research is purely inductive as it applies an iterative process between theory and data to answer the research question. Consequently, the role of theory has been apparent in the study from the start. Firstly, theory on BMI guided the unstructured interviews to identify BMI for sustainability events conducted at the case company, which can be described as sub-cases of the case of study. These events were identified due to their relation to the definition of change in BMI by Cavalcante et al. (2011). The events then guided the semi-structured interviews alongside literature on activity systems and barriers. Nevertheless, it is important to stress that the questions in the semi-structured interviews were designed to not guide the interviewees. To conclude, the research is conducted through an iterative research process with the purpose to allow theory to emerge as an outcome from the raw data and includes deductive influences when consulting theory throughout the research process.

3.3. Data Collection Method

3.3.1. Case Company

This study adopts a single case study design where the case was chosen with a purposive sampling as it is relevant to answer the research question (Bryman & Bell, 2015). The case company is of theoretical interest because it has a long experience in BMI for sustainability as it started to innovate their BM for sustainability back in 2007. This means that the case company is

still conducting BMI for sustainability and it provides an interesting case for the research question, which can show a deeper understanding of the barriers in BMI for sustainability and how these influence the process.

3.3.2. Unstructured Interviews

Unstructured interviews were selected as appropriate data collection method because it provides a valuable source to collect rich qualitative data based on its open-ended flexibility (Punch, 2005). The interviews had two main purposes: identify an interesting research topic for the thesis and identifying when the case company conducted BMI for sustainability. These two will now be explained.

Unstructured interviews to identify a research topic

The unstructured interviews were conducted with eight people in the case company (see Table 4) with the aim to identify an interesting research topic which also contributes to the research gap. The unstructured interviews followed an iterative process guided by open topics to narrow down the focus of the research. Findings from the unstructured interviews pointed to the same problem; that the case company has experienced and is experiencing challenges when doing BMI for sustainability. The individuals in the company complain about sustainability and stress a type of pain about it without being able to understand why. Therefore, this study will explore in-depth the barriers present in BMI for sustainability in the case company and explore how these barriers influence the process.

A limitation to the unstructured interviews is that all, except one interviewee, are located in the office in Lund. The case company does also have offices in Borås and Stockholm and it is only the ISO manager is located outside of Lund, in Borås. Nevertheless, the people in Lund represent a micro-perspective of the different divisions thus it can be assumed that the challenges in BMI for sustainability identified from the unstructured interviews in Lund is relevant and present in the whole case company.

The unstructured interviews were recorded to increase transparency and credibility of the research since these are the basis for selecting the relevant area of research and influenced the

selection of relevant units to answer the research question for the semi-structured interviews (Bryman & Bell, 2011). Nevertheless, they have not been transcribed with the argument that they are guiding the researches to the interesting social phenomena of study but not as a source of data collection for data analysis.

Division	Date	Recorded	PET-team	Events on BMI for sus.
Purchase	24 March	x	x	x
ISO	6 February	x	x	
CEO	Frequent discussions + 27 March	x only the interview conducted the 27 March	x	x
IT/Branding	27 January	x	x	
IT/Branding	26 January	x		
Sales/Key Account Manager	1 Feb & 24 March	x both are recorded		x
Sales support	31 Jan	x		
Sales support	24 Jan	First informal interview did not record it		

Table 4: Unstructured interviews in the case company

Unstructured interviews to identify events on BMI for sustainability

Three unstructured interviews were conducted to identify when BMI for sustainability took place at the case company (see Table 4). The interviews were more structured than the above but less structured than semi-structured interviews (Punch, 2005). The interviewees were asked to describe significant changes taking place at the case company since they started working there, first on general changes and secondly on changes for sustainability. To enhance their memory, they were asked to map-out the changes on a timeline. The interviews were recorded for overall

quality of the research (Bryman & Bell, 2015). From the interviews three events on BMI for sustainability based on Cavalcante et al.'s (2011) definition of BM change were identified. The three events are included in the semi-structured interview guide to provide detailed information about the barriers present in each event. The year when the event started is mentioned in Table 5. However, since BMI is a continuous process, it is not possible to have an end date, but provides an understanding of the time frame of BMI for sustainability in the case company. It is important to mention is that the authors included general questions on BMI for sustainability in the semi-structured interviews to capture other events that might had been missed from the unstructured interviews.

Events on BMI for sustainability	Started in Year	Explanation of the events What changed - Content	BMI - Activities that changed with the event Cavalcante et al. (2011) - Structure and Governance
ISO	2008	<p>ISO -9001 quality management system: systematize internal processes to increase quality and efficiency, address supply chain control and efficiency.</p> <p>ISO -14001 environmental management: implementation of efficient systems to measure and continuously improve environmental impacts.</p>	ISO lead to revision in the business model because it required collaboration with new partners such as Kemikaliegruppen, introduced a new ISO division with one person in charge, all which falls under changes in Governance. The ISO meant new activities and changes in working processes for divisions. A diviation system was implemented where all employees need to document diviations, to increase efficiendy and reduce waste. The PET-team was introduced to follow-up on the diviation system, and to make processes more efficient, decisions on changes faster. To conduct these changes the company reorganized and link new activities with old. Thus, the Structure in the activitiy system was aslo revised.
UNICEF	2009	Collaboration with UNICEF: a Pro-bono initiative to create social benefits. UNICEF's work to advocate for the protection of children's rights.	The collaboration with UNICEF meant changes in Governance in terms of new partnerships and required the case company to hire new staff to preform all the new tasks to deliver value. To create and deliver the offering the changes lead to a new customer segment. Going from only having B2B customers to now B2C as well. A complete new experience which lead to the implementation of a new webshop different from earlier ones (B2C). Thus, for the case company to start creating social value the whay they do business was revised.
Acquisition of Stadium Promotion:	2013	<p>Collaboration with Nattvandrarna: a pro-bono initiative to create social benefits. Nattvandrarna work to increase safety and help people in need during nights.</p> <p>New knowledge and systems on ISO -14001 concept of Brand Items introduced, products with a purpose and a task so it is not wasted</p> <p>Product Ranking System: system to rank the level of sustainability in products. To offer clients the possibility to make informed decisions.</p>	<p>The case company acquired Stadium Promotion however this is not seen as a BMI for sustainability per se. But with the acquisition came:</p> <ul style="list-style-type: none"> -Nattvandrarna -New knowledge and systems on ISO - 14001 -Product ranking system <p>Together meant change for sustainability for the case company. Responsibilities in Governance were changed; Nattvandrarna was assigned to a new person. The product ranking system is mostly a change in Content, but together with the two other events is considered BMI for sustainability.</p> <p>Most changes are in the element of Structure because with the new knowledge on ISO came new systems which meant changing how the case company creates and delivers value to customers. Therefore, the company revised the offering, going from providing Branded Products to offering Branded Items. The concept of Branded Items meant a new way of approaching and analysing customers, to select products that both reflect the customer's brand and fulfills a specific task. Products with a purpose so that they would not be thrown away by end-users.</p>

Table 5: BMI for sustainability events identified from unstructured interviews.

3.3.3. Semi-structured Interviews

To understand the social phenomena of study, a semi-structured interviews with open-ended questions were applied with the argument that it allows the interviewees to respond in their own terms to a much greater extent (Punch, 2005). Semi-structured interviews give the authors the flexibility to depart from the interview guide and opens-up for interesting follow-up questions on significant issues to enrich the research without jeopardizing the validity and reliability of the overall research which would have been the case in quantitative research (Bryman & Bell, 2011).

With the research question in mind, it is also essential for the respondents to be able to express their interpretation through their own meanings, terms and understandings. This is an important factor to enable interesting linkages and concepts between the research and theory to emerge grounded in the interpretation of the respondent (Bryman & Bell, 2015). This does also bring validity to the study as it enables the authors to impact the study less if the respondent is free to answer through their own terms and concepts. Especially since this study aims at directly capturing the real-life experience of the people in the firm (Bryman & Bell, 2015). Nevertheless, the semi-structured interviews will be guided by relevant topics necessary to answer the research question and therefore not follow an unstructured interview method. Consequently, “by and large, all the questions will be asked and a similar wording will be used from interviewee to interviewee” (Bryman & Bell 2011:467).

3.3.4. Interviewee Selection

As Bryman and Bell (2015) state that research that applies a single case study design must first select the single case and then sample units within that case. In this study, the units of interest within the single case are individuals in the case company. The research question guides the sampling of the individuals that are interesting for the purpose of this study (see Table 6). Consequently, this thesis will adopt a non-probability sampling process with purposive sampling method. This method allows the authors to select the relevant participants necessary to enrich and answer the research question (Bryman & Bell, 2015). Limitation to purposive sampling is that the units of study is actively chosen by the researchers in contrast to a random sample, and this can bring forward biases and question the internal validity. However, as this study applies a

qualitative strategy it does not jeopardise the validity and generalization because of the relevance to the research question.

Figure 1 illustrates the case company’s divisions and number of employees in each to clearly illustrate how people are selected and to what extent these people correspond to the activity system. This provides a better and more transparent understanding of the selection of interviewees with the aim to increase the transparency of “what the researcher actually did and how he or she arrived at the study’s conclusions” (Bryman & Bell, 2011:409).

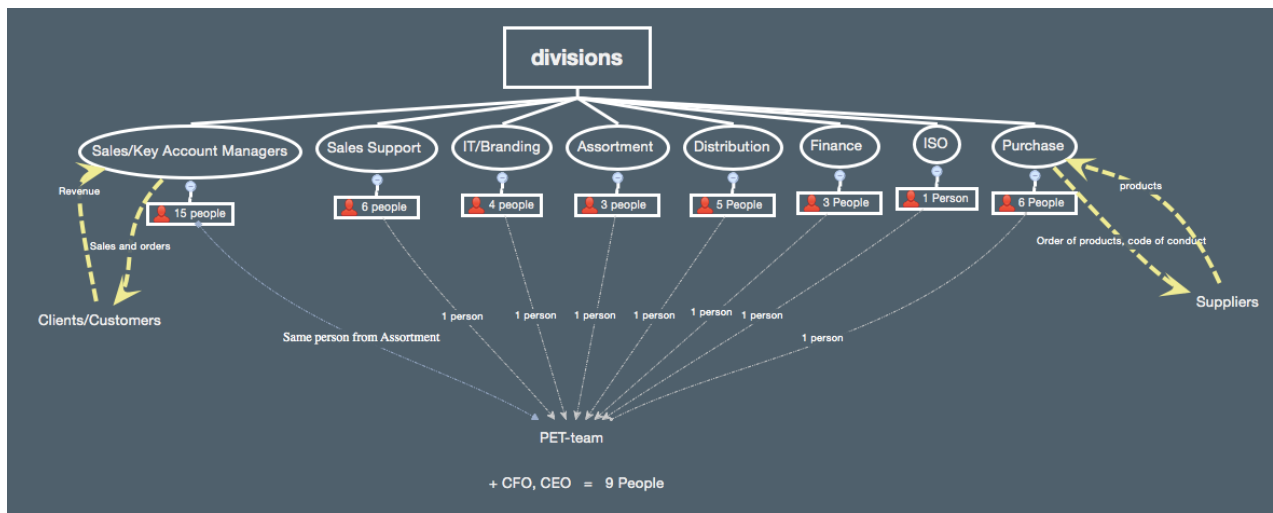


Figure 1: Divisions in the activity system of the Case Company. Source: unstructured interviews and home website.

First, the research question aims to describe barriers apparent when a company is innovating their business for sustainability consequently aim to capture a representative sample of the activity system in the case company guided by the definition of Zott and Amit (2010). This means that to understand how an activity system works within a company one needs to understand the core activities. We translate this as a representation of all divisions in the company and by aiming to select one person from each division the study will be able to provide in-depth understanding about barriers present in the activity system.

Second, who should be selected from each division of the activity system. From the unstructured interviews, it was pointed out that there is a Process Executive Team (PET-team) that was implemented three years ago with the purpose to take faster decisions for change by having all

divisions of the company present at the same time. With this knowledge, members from the PET-team were purposively selected with the argument that they will provide enriching data necessary to answer the research question. However, the purposive selection of the PET-team provides a top-management view on BMI for sustainability and the barriers present in this process. To allow findings to emerge from the data that are not specific to top-management view the final criteria is elaborated on.

Finally, in the unstructured interviews it was identified that the case company is very customer centric because they rely on a limited number of clients with big orders. Subsequently, sales/key account managers have a fundamental part in the activity system which is also seen in Figure 1 on the amount of personnel in this area. Therefore, two employees that are not part of the PET-team are purposively selected, where one is a key account manager and they do also contribute with a “non-management” view and are affected by the outcomes made by the decisions from the PET-team. The key account manager are managers over their clients but are not part of the top-management team per se. Thus, the sample of this study results in reflecting not only top-management that take the decisions for sustainability but also the view of people that are affected by the outcome of the change in activities for sustainability from the top.

In short, the year each interviewee started working was documented to show that they have taken part of the continuous process of BMI for sustainability (see Table 6).

Name	PET-team	Division	Started working at the case company
Interviewee 1	x	CEO	1998
Interviewee 2	x	CFO	2000
Interviewee 3	x	Purchase	2005
Interviewee 4	x	IT/Branding	2013
Interviewee 5	x	Distribution	1999
Interviewee 6	x	ISO	1995
Interviewee 7		Sales/ Key Account Manager	2011
Interviewee 8		IT/Branding	2013

Table 6: Description of Interviewees

3.3.5. Interview Guide

The interviews conducted for this case study were developed according to the suggestion on semi-structured interviews provided by Bryman and Bell (2011), in terms of flexibility, order, and overall design to answer the research question. The resulting interview guide is comprised of 3 major categories: (1) background, (2) BMI for sustainability, and (3) barriers. Category (1) contains introductory questions that record “facesheet” information of a generic kind (Bryman & Bell, 2011), and are effective in presenting some context on the answers given by each interviewee. Moreover, as sustainability is a key theme throughout the interview, background questions contain a number of queries regarding the definition and role of sustainability in the interviewee’s work activities. This provides a general overview of sustainability within the organization’s main activities and serves as a transition into more specific themes in the following interview categories.

Furthermore, the second set of questions relates primarily to obtaining information regarding the changes for sustainability that have been present at the company over time. These questions are focused on first obtaining a general overview on how sustainability has been integrated into the firm and how this process has been developed. In order to attain full data on the BMI for sustainability, section (2) of the interview guide is based on the three BM components described by Zott and Amit (2010) consisting of Content, Structure, and Governance. This design outlines and describe what, how, by who and where activities for sustainability are taking place in a BM and how these are changed. Moreover, the first part of section (2) deals with an overall assessment of the implementation of sustainability in the firm's BM, as to allow the interviewees to describe the main changes and events without limiting their scope on which activities to include. These general questions on change are guided by the definition of Cavalcante et al. (2011). However, the second part of this set of questions, relates to specific the events in change for sustainability that have been identify previously by unstructured interviews. These specific events aid in focusing the discussion on certain developments of changes for sustainability and changes, impacts and barriers related uniquely to these events. The combination of both a general approach to BMI and a detail questioning on specific events, allow the interview to provide richer and more encompassing information on all relevant events perceived by the interviewee, but also allow specificity on developments considered integral to sustainability by the researchers.

Finally, section (3) of the interview guide focuses in retrieving answers for the barriers that are present in BMI for sustainability within the firm. This segment is divided into subcategories to represent the different grouping of barriers exhibited in the aggregated categorization in chapter 2.3. The questions help guide the researchers into inquiring into certain obstacles and challenges existing in the integration of sustainability into the company's BM. The use of the word "barriers" is excluded from the interview guide as not to lead the interviewees into certain answers, in this sense, "obstacles" and "challenges" are used as synonyms to inquire on the influence of these in the changes for sustainability. The categorization of section (3) allows the formulation of questions supports the collection of information on different sources of challenges for an in-depth analysis of the barriers that companies face when conducting BMI to accommodate sustainability. Moreover, while these categories provide specific themes into

barriers, it is also crucial to add a separate sub-theme that is directed into gathering answers on overall challenges recognized by the interviewees. These general questions serve as an additional examination into barriers that might not be found in the aggregated categorization, and thus, ensuring a complete gathering of information (Bryman & Bell, 2011).

3.3.6. Interview Preparations

- The semi-structured interviews were conducted face-to-face as well as by Skype.
- 6 interviews were conducted face-to-face.
- 2 interviews were conducted over Skype.

The face-to-face interviews were conducted at the case company's office in Lund and Borås, as it was the most convenient for the interviewees. Learning from the experience of the unstructured interviews, the interviews were conducted in a meeting-room to not be interrupted by phone calls and other disturbance. Since there is more than one interviewer, the positioning was in a triangle to create an informal atmosphere (Bryman & Bell, 2011). The skype interviews were conducted because the case company has offices in 3 locations in Sweden. Due to cost and time the authors are not able to travel to Stockholm to conduct face-to-face interviews. According to Bryman (2016), there is little evidence that Skype and other synchronous (real-time) connections would significantly reduce the results from the interview in comparison to face-to-face interviews (Bryman, 2016).

All interviews had two interviewers; one passive role and one active role, with the argument that in a qualitative setting it can enrich the interview and provide more valuable data (Bryman & Bell, 2011). The active interviewer lead the interview while the passive interviewer confirmed that the interview stayed relevant to the topics and added follow-up questions when interesting answers are provided (Bryman & Bell, 2011). The interviews were conducted in English as the case company is professional in English with mother tongue in Swedish, therefore there is no risk to limit the validity of the study (Bryman & Bell, 2011). Lastly, the semi-structured interviews were recorded and transcribed with the motivation that the study aims at understanding a social phenomenon from the perspective of the interviewees. Therefore, it is

important to reduce researcher bias and increase the match between raw data and theory as far as possible (Bryman & Bell, 2011).

3.3.7. Ethical considerations

Integrity and quality of the research presented in this thesis is of the utmost importance for the authors, and therefore a series of ethical considerations have been taken in order to ensure the validity. These considerations deal largely with the interactions between researchers and participants that exist as a result of qualitative study. The ethical issues examined in this section are guided by the four main categories of ethical principles presented in Bryman and Bell (2010):

- Avoid harm to participants: during the research of the study ensure to protect the confidentiality and anonymity of participants if requested, as to avoid harmful ramifications from the information they provide during the research. Moreover, anonymity is preserved to encourage participants to openly discuss subjects that would otherwise remain out of bounds.
- Informed consent: participants were fully informed about the research topic and process before initiating interviews. Additionally, they were informed on additional observation techniques or recording equipment to guarantee informed consent before participating.
- Invasion of privacy: along with informed consent, the right of privacy is safeguarded, and research is not done beyond the agreed upon extent of the participation of the individuals.
- Avoid deception: information is provided on the exact subject of study and are informed of all relevant research techniques used in it beforehand to ensure that consent is granted.

3.4. Data Analysis

Based on the very limited amount of studies conducted in the research field, this research has an explorative nature and requires a more open approach for data analysis to allow barriers grounded in the continuous process of BMI for sustainability to emerge. With this in mind, the analytical framework provided by Gioia et al. (2012) will be applied to analyse the qualitative data. Furthermore, the analytical approach allows the research question to guide the data analysis with the aim to collect “retrospective and real-time account by those people experiencing the phenomenon of theoretical interest” (Gioia et al. 2012:19). The advantage with the method provided by Gioia et al. (2012) is that it allows informant-centric terms and words to emerge from the data vital for this research transparently illustrate where barriers come from. In this way, the raw data is systematically analysed to collapse concepts and themes that are linked to theory, creating a framework that illustrates the emerged dynamic relationships on the phenomena of study (Gioia et al. 2012).

Another well referenced author in case study research is Eistenhardt (1989) inspired by a more positivistic approach toward data analysis. This approach was not perceived as applicable with the argument that it is essential to minimize the subjective interference by researchers until after dynamic relationships are built. However, for this research it was vital to be able to link theory with data early in the process due to the lack of research conducted on barriers in BMI for sustainability. Guided by theory the authors could identify novel and unique findings which were new to the research field. Similarly, identify confirming or contradicting findings which emerged in the data to clearly build a framework which contributes to literature. By applying the analytical framework provided by Gioia et al. (2012) the analysis acquired deductive influences to make sense of the raw data.

To increase validity and make the analysis more transparent and systematic a “graphic representation of how we progressed from raw data to terms and themes in conducting the analyses” (Gioia et al., 2012:20) will be provided, see Figure 2 (Gioia et al. 2012; Bryman & Bell, 2011). The systematic coding process starts with coding direct quotes that emerged as barriers in the raw data. These quotes were then compared to identify similarities and differences among barriers to collapse down to 1st-order concepts. The 1st-order concepts are formulated

from the terms of the interviewee, providing interviewee-centric concepts supported by the direct quotes. The next step is 2nd-order themes that are more abstract themes that are collapsed from 1st-order concepts. The 2nd-order themes are researcher-centric and are linked with theory, creating theoretical themes that aim at describing the type of barriers present in the process of BMI for sustainability. Lastly, the 2nd-order themes are compared among each other and theory which forms the final collapse to aggregated dimensions. The aggregated dimensions are collapsed from the raw data and simultaneously being anchored in theory as far as possible, providing an overarching view of the barriers present in the continuous process of BMI for sustainability (Gioia et al. 2012). The final data structure answers the first part of the research question: what are the barriers for a company to do BMI for sustainability.

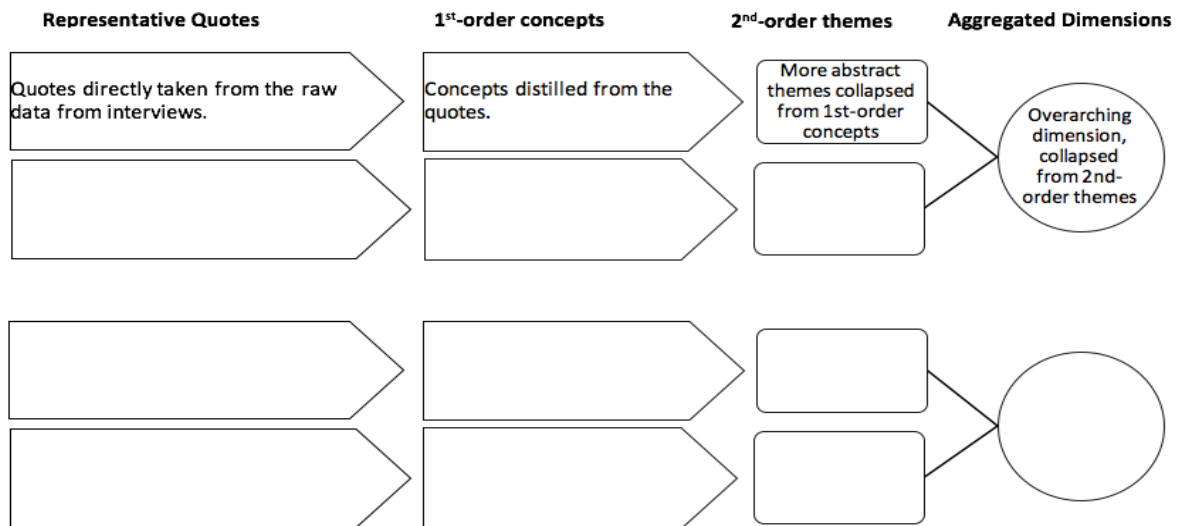


Figure 2: Systematic model for the data structure

However, the process of creating data structure is not without its risks. Gioia et al. (2012) as well as Bryman and Bell (2011) raise the critique that researchers cannot not apply an objective mind during coding. By applying a systematic and transparent process each decision is justified to ensure a close fit between data and theory ensuring internal validity. Furthermore, because this research applies an epistemological stance where knowledge can never be objective and aims to understand the subjective interpretation of the social construct's world that are under study, there is a need for the researchers to interpret the data to connect it to theory to make the research significant (Bryman & Bell, 2011).

3.4.1. Building a dynamic framework

To answer the second part of the research question: how do these barriers influence BMI for sustainability?, the barriers identified in the data structure will be the base to develop “a vibrant inductive model that is grounded in the data (as exemplified by the data structure), one that captures the informants’ experience in theoretical terms” (Gioia et al. 2012:22). This inductive model represents a dynamic relationship from the aggregated dimensions that emerged out of the data structure forming a dynamic framework. The dynamic framework provides data-to-theory connections essential to provide rich understanding to how barriers influence BMI for sustainability and contribute to the research gap. However, the model is not purely inductive as stated by Gioia et al. (2012) but have deductive influences as it is created through an iterative process between theory and data where theory is consulted to interpret the raw data that builds the dynamic framework. Consequently, chapter 5 will link empirical findings with theory to make sense of the data and identify which findings are novel or confirms existing literature.

3.5. Validity and Reliability

The study ensures internal validity by letting the research question guide the selection of methodological approaches (Bryman & Bell, 2011; Punch, 2005). Consequently, a qualitative strategy was selected because it enables the research to gain an in-depth understanding of the social construct under study. Qualitative strategy also allows an iterative research process with both inductive and deductive design features. These design approaches are essential to answer the research question, to let the barriers perceived by the interviewee emerge in their own words as well as consulting theory throughout the process. Moreover, the source of primary data comes from semi-structured interviews which is closely related to qualitative strategy and it allows for rich empirical data on the research phenomena (Bryman & Bell, 2011; Punch, 2005). Lastly, the selection of Gioia et al. (2012) as systematic analytical framework, provided a high level of congruence between theory and data through a transparent data structure that illustrates “good match between researchers’ observations and the theoretical ideas they develop” (Bryman and Bell 2011:395). The purpose and design of research provides a coherent internal logic guided by the research question to achieve internal validity.

In terms of reliability, most unstructured and all semi-structured interviews were recorded and all semi-structured interviews were transcribed. The researchers have actively worked to apply a transparent process throughout the research to enable future researchers the possibility to repeat a similar study (Bryman & Bell, 2011). Additionally, the transparent and systematic data analysis show direct evidence that the 2-nd order themes and aggregated dimensions originates from direct quotes from the interviewee and is not invented (Gioia et al. 2012).

3.6. Generalisation

External validity is a key issue to address regarding case study design and qualitative research approach to increase the quality of the empirical findings (Bryman & Bell, 2011). The case company has conducted continuous BMI for sustainability process since 2007 and therefore provides to be an interesting case to be studied with the purpose of contributing to literature. Findings from the study can be applied to other companies conducting BMI for sustainability and help them to reduce the risk of encountering barriers that hinder the process. With this argument, the case company provides to be an interesting case of BMI for sustainability where the findings exemplify a general phenomenon (Gioia et al. 2012). Furthermore, the applied analytical method generalizes the findings to theory which increase the significance of the contributions as well as ensures generalizability of the research (Bryman & Bell, 2011; Gioia et al. 2012).

Chapter 4: Findings

In this chapter, the data structure will be created and answer *what* barriers are present when a company is conducting BMI for sustainability. To make the analysis more transparent and systematic, the data structure built from applying the method by Gioia et al. (2012), is provided to show how concepts, themes and dimensions progressed from the raw data to analysis (Gioia et al. 2012). First, evidence on changes made in two or more of the design elements; Content, Structure and Governance in each BMI for sustainability event will be addressed. This provides an understanding on the continuous BMI for sustainability processes from which barriers emerge.

4.1. The continuous process of BMI for sustainability

In order to identify barriers present in the process of BMI for sustainability at the case company, the interview guide included questions on Content, Structure and Governance on three specific BMI for sustainability events, as well as general questions to identify additional events. Appendix 2 provides evidence from the interviews that BMI for sustainability happened, by illustrating the quotes from the interviews on changes in two or more of Content, Structure and Governance.

It was found from the interviews that there are two additional events that took place, which were not identified during the unstructured interviews. This implies that the barriers present in the continuous process of BMI for sustainability arise from five different events. Figure 3 illustrates a timeline with the five events: the events shown in blue were discovered from the semi-structured interviews, and those in green guided the interviews. After acquiring Stadium Promotion the company has only added activities for sustainability which is defined as business model extension by Cavalcante et al. (2011) and not BMI. The company became an associate member of BSCI (Business Social Compliance Initiative) which is a global collaboration for sustainability but has not yet required the case company to change its business model.

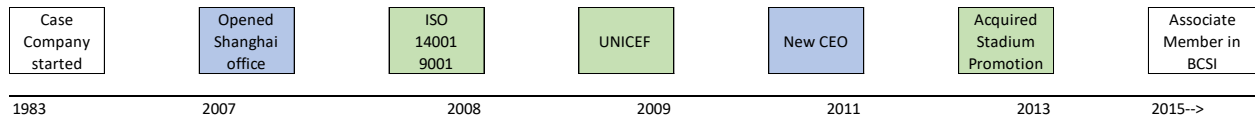


Figure 3: continuous process of BMI for sustainability at the case company

4.2. Explanation of the five events

With the research question in mind, findings on the changes in two or more of Content, Structure and Governance in each BMI for sustainability event will now be explained.

4.2.1. Opened the Shanghai office

Based on the findings from the more general questions in the interview guide, the opening of the Shanghai office was identified as an event that changed the existing activities in all three design elements of the activity system. In terms of Content, the new office which was stressed as a big change for sustainability, one interviewee stated: *“when ... we started up the office in China with a [person in China] think it was 2006 – 2007, It was a big climb”* [Interviewee 6]. Consequently, the new office made the case company change the way they do business by providing new product offerings towards sustainability. Moving from not being able to guarantee quality and requirements to gaining control and knowledge about suppliers in the supply chain. This changed how activities were arranged and linked to create value in Structure. With the office in Shanghai the case company started conducting assessments of the suppliers to ensure good working conditions and social benefits for workers. Consequently, normal working practices in the activity system no longer applied, key account managers needed to offer different products to customers because there was now more control over the supply chain: *“we started our own buying office in China, so we could control the factories that we were buying from, they have to sign our code of conduct ”* [Interviewee 1]. In terms of Governance, *“three Chinese people [were] employed and they are located in Shanghai...”* [Interviewee 2]. The three new employees in Shanghai were assigned to perform controls and establish contacts with new suppliers. Furthermore, inside the focal firm new staff were hired and trained to execute the new working activities. The opening of the Shanghai office led to change in all three design elements, consequently revising the way the case company did business.

4.2.2. ISO 14001 and 9001

The second event on BMI for sustainability was identified as BMI before the semi-structured interviews and was confirmed from the findings to be a significant change in the activity system. In Content, it was supported that both 14001 and 9001 were considered new activities on sustainability: *“An important thing was when we got ISO certified, for quality and environmental certification”* [Interviewee 2]. The new Content in the activity system consequently impacted the Structure of the business. The PET-team was implemented: *“we defined the teams and the process teams. And then we set up the process executive team. That what we call PET-group”* [Interviewee 3]. With the new system came new activities that had to be rearranged and changed to deliver on ISO. As mentioned in chapter 3, the implementation of deviation system was also a reaction to the BMI for ISO where every employee should now file a deviation if something is wrong in the system. All interviewees stressed that they got new working processes, especially documentation of activities to ensure efficiency and increase sustainability, in managing the environmental impact of the company. The ISO did also change responsibilities in the activity system which was clear from the following quote: *“we work with the ISO together, in that time I was the CEO ... and the [CFO] did a lot of that at that time, and we have a girl who was sales man ... she was working a lot with ISO. So it has been a part of my job, but since I leave the CEO it was 2011 then I work more with ISO”* [Interviewee 6]. Consequently, ISO has engaged many people to conduct the change in the business.

4.2.3. UNICEF

The collaboration with UNICEF started in 2009 and has gradually become BMI for sustainability. It started as a service from the case company to host products in their warehouse for UNICEF not dealing with sales only storage and shipment. This has continuously evolved into having full responsibility over the “UNICEFbutiken” which is *“a webshop like every other webshop we are having otherwise, of course it's a B2C shop, so that's the difference”* [Interviewee 8]. This change in Content, resulted in the case company conducting: E-commerce with orders, maintenance, design, payment, storage, shipment; the whole BM of UNICEFbutiken. The new BM impacted how activities were Structured in the activity system shown in: *“we have to supply them with a webshop where private persons can go in and*

purchase and that is also new for us because we don't sell directly to private persons usually. So we had to arrange some systems for payments then we use klarna for that purpose" [Interviewee 2]. Changes in Governance are also apparent: "at the beginning it was, a sales person, [key account manager] had it for a few years. Then after him [IT department] took it and had it for 2 years I believe" [Interviewee 2].

4.2.4. New CEO

The Content that changed here was predominantly in Governance, and had a significant change in how the company does business. It was found from the interviews that with the new CEO came big change for sustainability as can be seen in the following quote: "*[the new CEO] got president he was the one to really make this go forward with CSR and everything. At [the old CEO]'s time it was ok, he worked with it as well but it wasn't that important at that time when [the old CEO] was leading the company" [Interviewee 5]. The changes in Structure meant that new systems for sustainability were given priority with the new leader in Governance. Activities with sustainability were highlighted and merged with current processes in the activity system. One interviewee expressed the change as "he promoted how important it was in the future for [case company] to get new customers. So he saw into the future, it has also cost us a lot of money because [case company] was one of the first in our industry to really work with it. I think we, we have helped our suppliers to be better. They have [CEO] to thank for that too I think" [Interviewee 5]. The new CEO started investing in sustainability in a much larger extent than before which have impacted the activity system because now new collaborations expanded, such as joining UN Global Compact. The company signed to start working to achieve the global development goals.*

4.2.5. Acquisition of Stadium Promotion

With the acquisition of Stadium Promotion came thee changes in Content; Nattvandrarna, New Knowledge on ISO 14001 and Product Ranking System. Together changing Content, Structure and Governance to accommodate sustainability. The social initiative Nattvandrarna was found to have mainly impact on Content and Governance in the activity system. Nattvandrarna was a new

activity added to the activity system and the responsibility was given to one person, hence change in Governance. The person responsible for Nattvandrarna stated: *"looking for social responsibility which myself is always involved in that. And we have our management team involving in that kind of activities as well"* [Interviewee 1], which implies that the management team is also impacted by the new activity.

New Knowledge on ISO 14001 had a big impact on the Structure in the activity system as it created a new offering that changed the value creation system. *"With the ISO 14001, when we looked at the things that Stadium Promotion had done and the things that we have done, we had done different things. So, when we put the system together it became a whole"* [Interviewee 1]. The combination of system lead to a new offering referred as Brand Items, which is a new way of selecting and delivering products to customers and have a briefing system to better understand the customer's needs. Reflected in: *"when we start of project and the customers don't really know what they want, and for us to get an understanding about the project, we have a briefing system "* [Interviewee 3].

Findings from the interviews shows that the Product Ranking System have mostly been isolated to one individual and it has just recently started to integrate into the activity system. It is now starting to impact Content and Structure, however, there is no change in Governance so far. The following quote refers to people starting to work together regarding the Product Ranking System: *"It took a while that is for sure. And also the other way around, because a mix, are starting to get very successful at the moment but it has taken 4 years or something like that, before they could actually work together"* [Interviewee 5]. Changes occurred in Content, Structure and Governance of the activity system which means that the BM was revised for sustainability.

4.3. Data structure on barriers in BMI for sustainability.

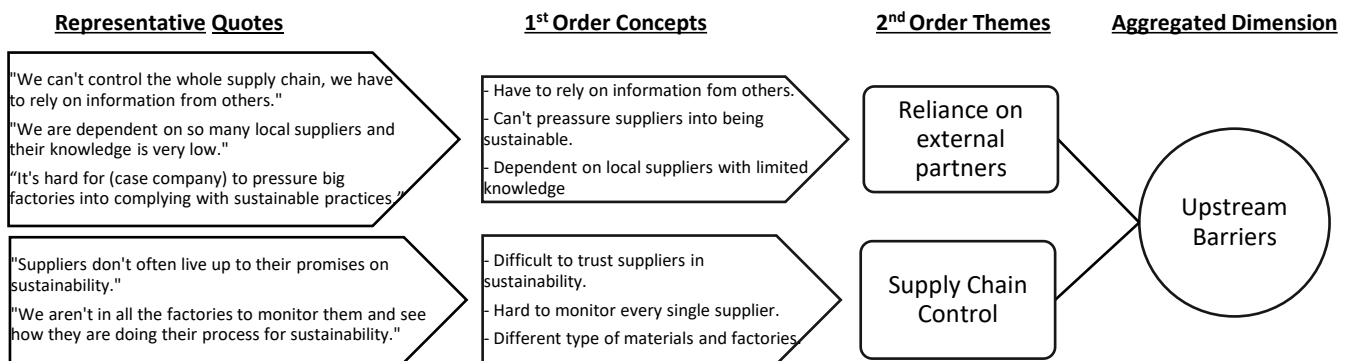
The following sections will explain each emergent 2nd-order themes and aggregated dimensions that were developed from the raw data, and is the basis for the data structure. Distilled from the raw data are 7 aggregated dimensions; 1). Downstream Barriers, 2). Internal Communication 3). Corporate Logic, 4). Organisational Commitment, 5). Risk Aversion, 6). Upstream Barriers and lastly 7). Resource Barriers. These provide data on the existing barriers in BMI for sustainability.

4.3.1. Upstream Barriers

This dimension involves the obstacles that are present in the upstream segment of the activity system for the case company. These challenges refer to the need for supply chain control at every stage, and the reliance on external partners when change is not possible within the reach of the case company itself. This dimension revolves around the players present in the supply chain process.

Reliance on external partners: in terms of sustainability in matters regarding upstream activities, the company has found different challenges in obtaining information regarding sustainability, and with external partners complying with the needed requirements in sustainable practices. This means that case company often depends on external players for sustainability to take place within the supply chain.

Supply chain control: we have seen that the case company encounters difficulties when trying to control every aspect of their supply chain to guarantee that sustainability is a priority. The nature of the industry itself allows for an extensive dependence on a large quantity of suppliers, putting the case company in a challenging position to control all suppliers into complying with sustainability.



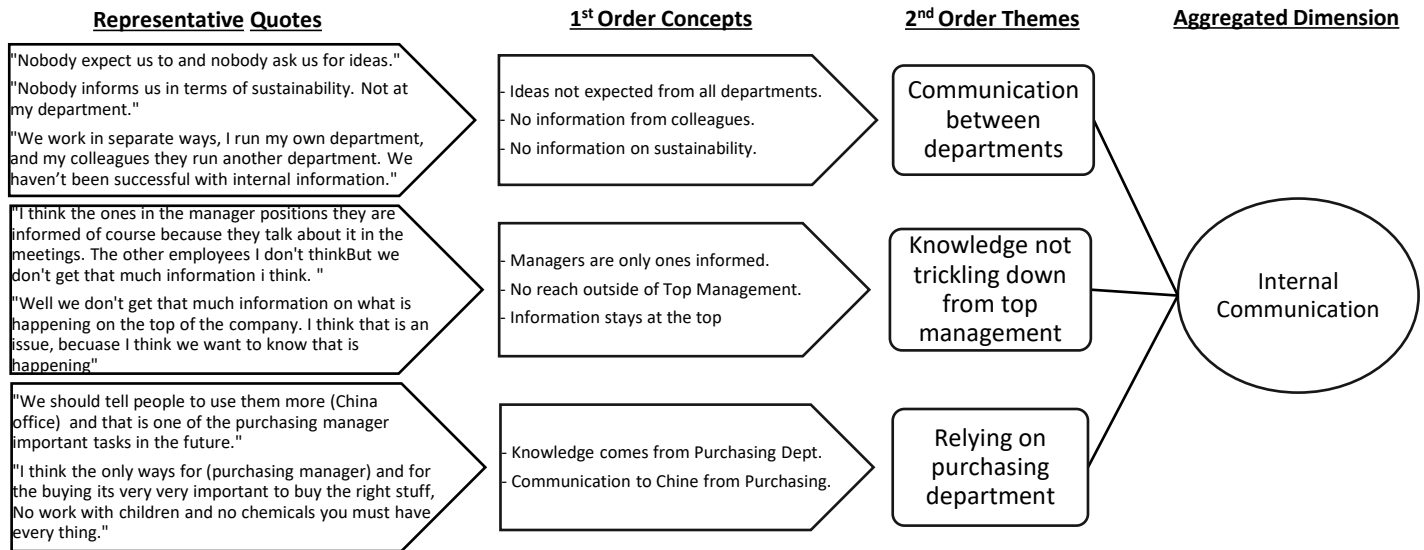
4.3.2. Internal Communication

The findings illustrate that the internal communication within the company plays a significant role when conducting BM change for sustainability. In the case company changes for sustainability are either happening in certain departments or in the top-management. The isolated communication on change for sustainability becomes a barrier as it is hard to make changes in the activity system with no proper communication. In addition, there is lack of cross-communication between departments which impact the way BMI is conducted.

Communication between departments: in many cases our findings showed that changes for sustainability were isolated to specific departments and others were excluded from the process. Thus, departments was not expected to be involved in changes for sustainability. This theme also showed that information about how the company works with sustainability is not shared between departments based on the finding that only some departments were informed and did not share it with the others.

Knowledge not trickling down from top-management: the collaboration with Nattvandrarna came along during the merger with Stadium Promotion. Nevertheless, it was found that one person in the top-management team got the main responsibility of the initiative and have since then never trickled down. Furthermore, this theme shows that the PET-team which are all part of top-management are the ones that discuss changes for sustainability which are not further communicated down.

Relying on purchase department: this theme was increasingly apparent throughout the interviews, creating its own 2-order theme. In most all interviews except with the purchase department itself, when an interviewee could not answer the question about BMI for sustainability they referred to the purchasing department. It is an internal culture of “it is the purchase departments responsibility so therefore I don’t need to know”. It is interesting because the interviewees are not explicitly saying that it is a challenge in the process, more the opposite that it simplifies their work. But it becomes a barrier because it limits BMI for sustainability to one specific department and not spread to other parts of the company.



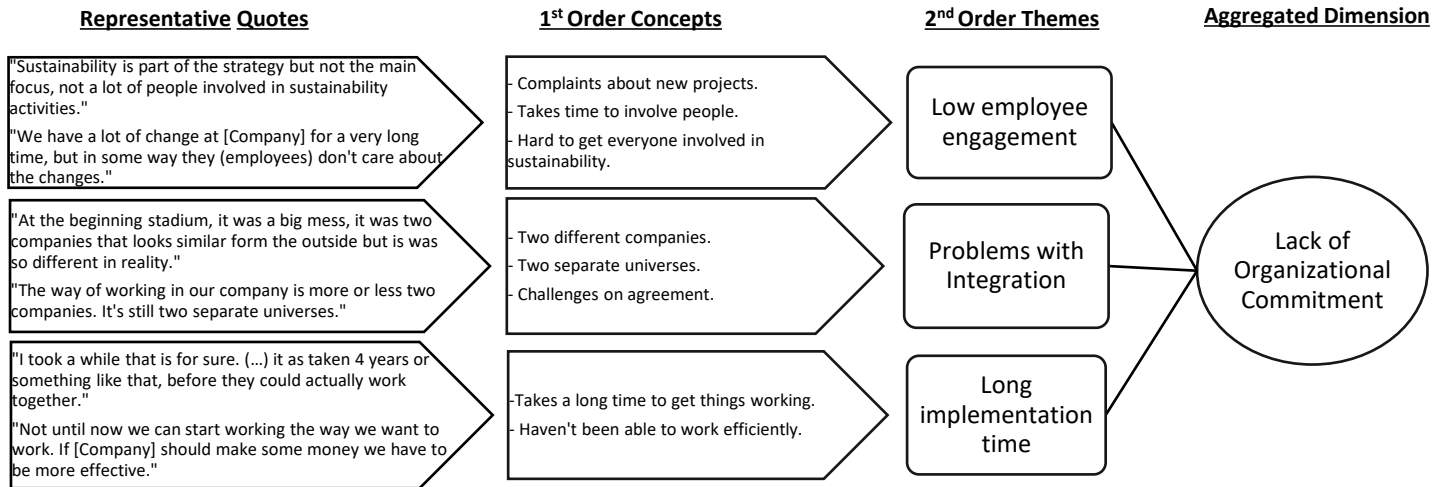
4.3.3. Lack of Organisational commitment

Reflects the problem of engaging employees in new internal systems and practices that comes with BMI for sustainability. In events where BMI for sustainability took place the findings show that it is hard and time consuming to create and organise systems that build a new way of doing business for sustainability. However, the most present theme in this dimension is low employee engagement, which was expressed very frequently during the interviews. It reflects that it is difficult to create new systems, but even more challenging to get people to utilize these systems.

Low employee engagement: many feel that it is hard to get employees involved in the new systems or working activities regarding sustainability. When changes are made for sustainability there is lot of work to be done to get employees engaged in and organise them to work accordingly to the new processes. The CFO expressed that after implementing the deviation system that came along with ISO there were problems with getting staff to register deviations.

Problems with integration: refers exclusively to the Stadium Acquisition where changes for sustainability also took place. But it was not an easy process and the difficulty of integrating the new company into the case company which made BMI for sustainability harder to conduct.

Long implementation times: when changes do become present in the company, the implementation time for these are often very extended. This prevents efficiency in the development of these changes into viable business solutions or improved working processes, and stagnates innovation as it requires prolonged period of time to reach optimal productivity.



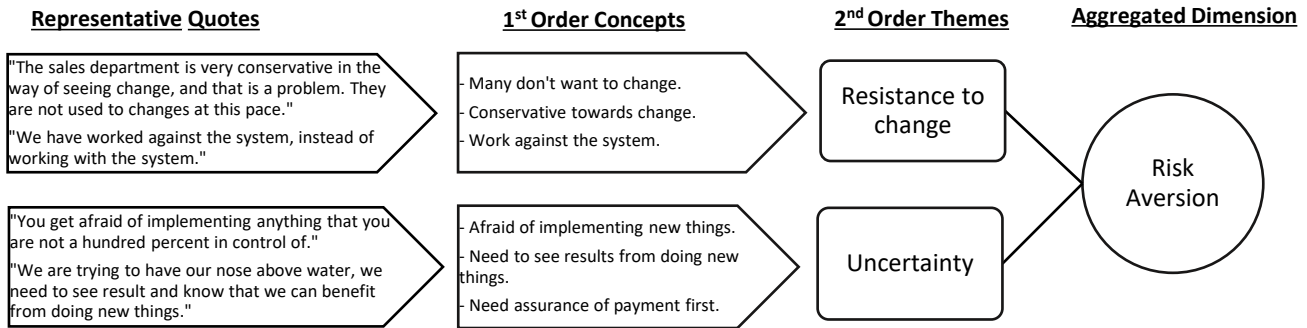
4.3.4. Risk Aversion

The company shows evidence of risk aversion when conducting changes for sustainability. The risk involved in changes for sustainability makes the company reconsider or step away from conducting BMI for sustainability.

Resistance to change: when changes for sustainability have been implemented, people saw it as a burden, which is also reflected that they do not perceive themselves as very positive to change. There is a resistance to new systems and new working activities which makes people work against the system. This resistance to change is exacerbated when trying to introduce new processes and activities into the traditional way of operating, as it becomes a strain on the employees that perceive these changes as unneeded and will opt to keep labouring in within the same working system as before.

Uncertainty: this theme shows that the company is afraid of the uncertainty that comes along with change. It is keeping the company from establishing more changes for sustainability because they are uncertain if they will benefit from it. In detail, this barrier refers to absence of

control in different alternatives for change, if the result is uncertain, or the process of change is not controlled entirely by the firm, they will not pursue it. Thus, uncertainty refers to the organization inability to seek and implement new changes for sustainability if the result is unclear or ambiguous from the beginning.



4.3.5. Corporate Logic

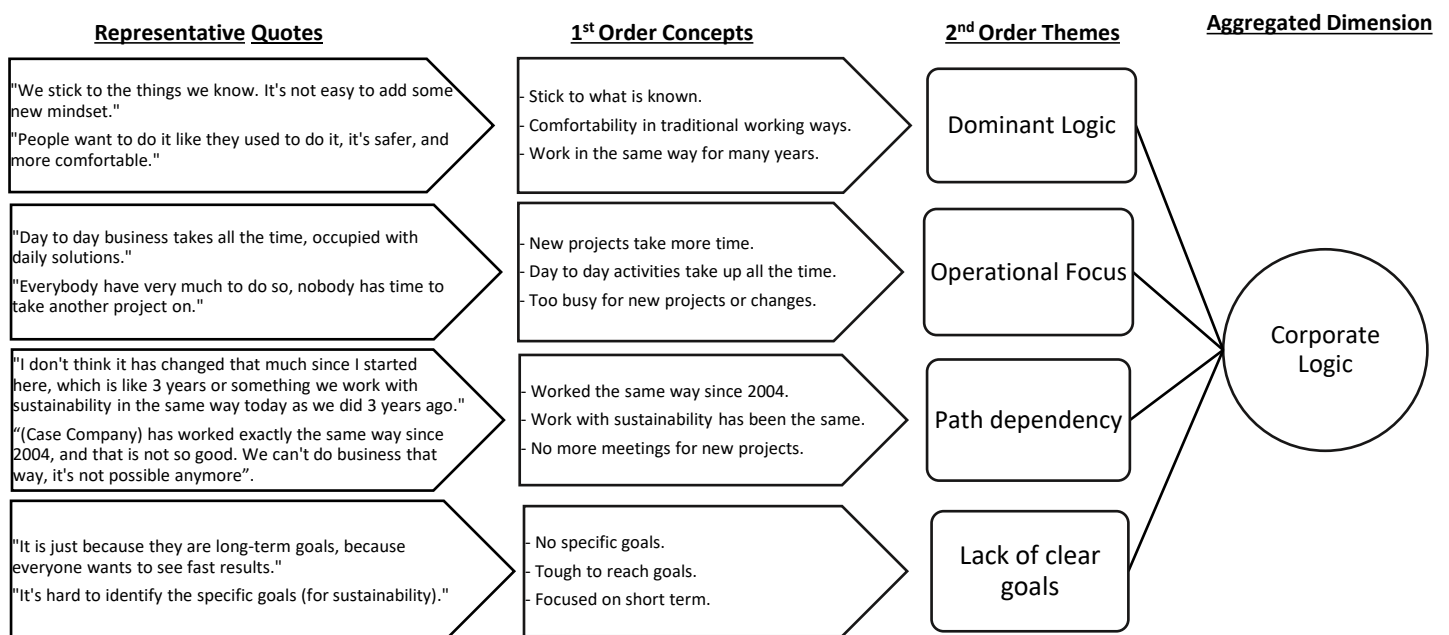
This dimension was labelled corporate logic as it represents themes that follow the same logic in procedures or working systems for extended periods of time despite innovating. This dependence on traditional ways of working has resulted in barriers for innovation to emerge within the case company. Challenges in the form of dominant logic and path dependency have been persistent throughout the interviews, exhibiting signs of innovation slumps, as well as focus on operational activities where no one wants to take the extra mile to ensure change takes place. The corporate logic enforces focus on operational activities instead of focusing on long-term change, which is where lack of goals comes in as for some the goals do not clearly set the path for sustainability. Leaving the case company with a corporate logic that hinders BMI for sustainability to develop.

Dominant logic: obstacles are present when institutionalized thinking is set as the company's mindset towards new opportunities in sustainability. Changes are often discarded because of not fitting into the traditional way of thinking of the firm, and new opportunities are not sought after if it does not fit this corporate mindset. In this sense, dominant logic limits the company into realizing new changes in sustainability that are not within their traditional ways of operating. It becomes an issue of recognition in terms of innovations for sustainability, as their corporate logic guides the company only into already explored territories without acknowledging new alternatives in BMI for sustainability.

Operational focus: the focus on operational daily activities takes away the time for BMI for sustainability and hinders further progression. There is no one that wants to take on changes because it will add to their daily work activities. Furthermore, changes regarding sustainability in the business are neglected from the start or limit the changes in the BM.

Path Dependency: decision making for changes in sustainability is influenced by the current competences and trajectory of the firm, and is not often guided by new changes that can be achieved in terms of sustainability. The decision on future investments on sustainability are guided mainly by how the company has been working throughout the years. Whereas dominant logic results as a problem of recognition, path dependency develops into an issue of implementation. This distinction means that with path dependency as a barrier, the company is able to identify some possible opportunities in BMI for sustainability but will not pursue or implement them due to these being outside the scope of their traditional way of working.

Lack of clear goals: this theme is quite modest and is not a strong barrier in the process of changing BM for sustainability. However, it refers to goals that they have for sustainability which have been created in the BMI, they are said to be difficult because they are long-term goals and people want to see fast results, it is also stressed that identifying goals is hard.



4.3.6. Resource Barriers

The dimension of resource barriers represents the problems that arise when lacking the necessary resources to conduct BMI for sustainability. The limited resources stem from financial resources, available personnel and distribution of existing resources to maintain the current ventures on social aspects. Insufficient knowledge on sustainability in the form of lack of trainings makes departments isolated from the process. This presents obstacles when involving of personnel into changes for sustainability as the investment in trainings to increase the level of knowledge is limited. Moreover, are also present when dealing with specific procedures and expertise on specific social ventures.

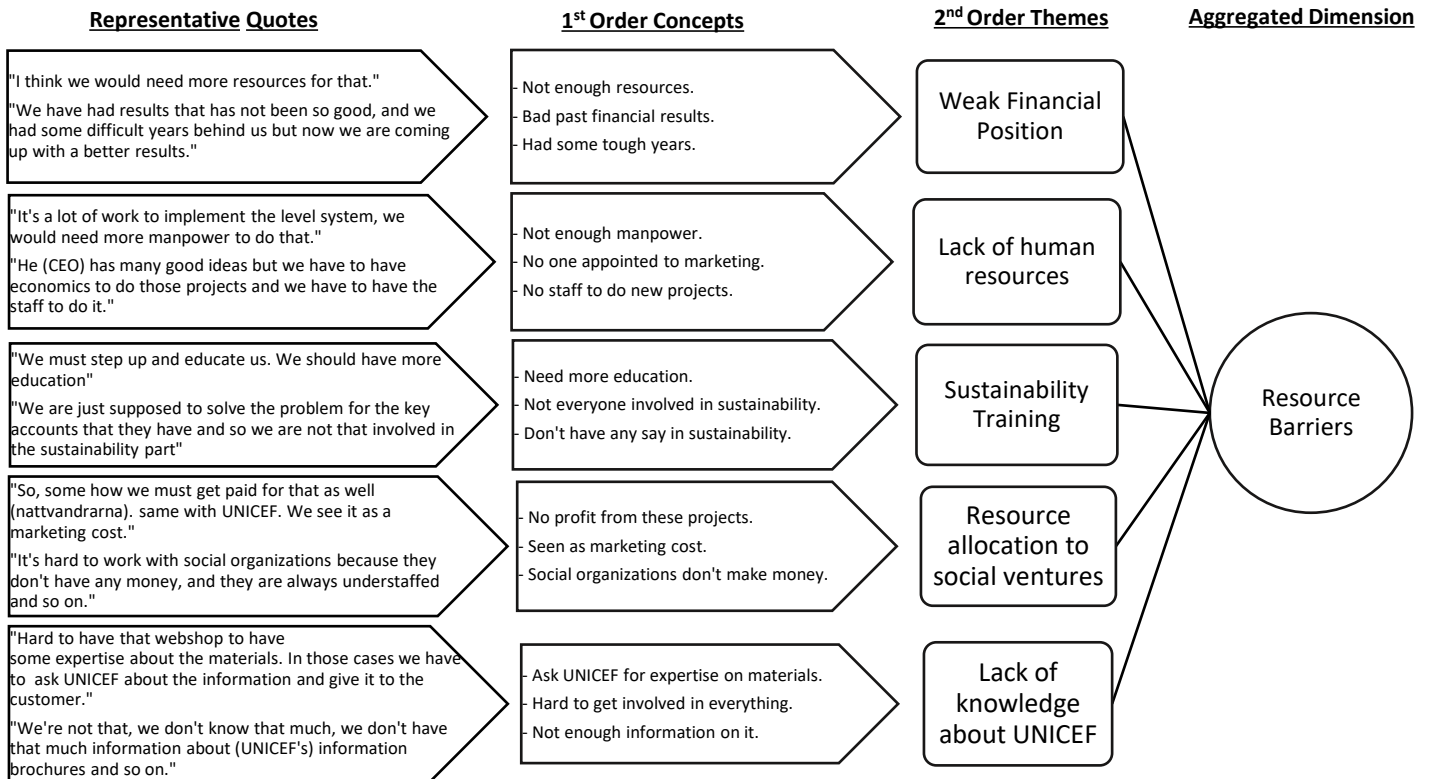
Weak financial position: negative results in the last years have located the company in a weak financial position where they have been forced to implement several costs cutting restrictions, and have not been able to fully invest in changes for sustainability as these financial resources are assigned to operational activities to keep the company afloat.

Lack of human resources: while there are some new ideas for development into sustainability, these have moved beyond ideas as there is not enough human resource to take on new projects. The available personnel are focused entirely on their daily activities and scarce slack time prevents the case company to assign human resources into the implementation of new changes for sustainability.

Sustainability Training: in the process of BMI for sustainability there are lack of trainings on sustainability which reduces the knowledge on sustainability. It is seen that know-how is mainly allocated within the purchasing department, while other departments lack the in-depth knowledge on sustainability to provide inputs on changes needed in sustainability. It is therefore stressed that there exists a clear need for education in this matter.

Resource allocation to social ventures: ventures in sustainability that provide social benefits are treated as pro-bono projects, on which the company does not generate any revenue. This creates challenges into assigning current resource to these projects and ventures as they do not provide a source of income, and are seen as a marketing cost. Obstacles arise when trying to distribute resources from revenue generating activities towards social benefits.

Lack of knowledge about UNICEF: there exists a gap in knowledge when dealing with specific information and events for social benefit, in this case the cooperation with UNICEF. The operating procedure on materials and shipment rights, are different from normal activities, and creates a barrier in acquiring the necessary knowledge to fully exploit this social endeavor.



4.3.7. Downstream Barriers

This dimension is present downstream in the activity system and relates to the impact that customers and market influences have on how BMI for sustainability takes place inside the company. With five 2nd-order themes, it is a significant barrier that reflects the problems of market maturity when implementing new changes for sustainability, or overall industry and customer acceptance of these changes. Also, dependency on the customer demand and to what price customers are willing to pay for sustainable products hinders change for sustainability. It then becomes a challenge for the company to explain and justify for customers that sustainability is an added value for them.

Customer dependency: changes in BMI for sustainability are dependent on what the customer demands from the company. If there is a clear “push” or demand from customers, then sustainability is pursued, however, as soon as this interest is lost changes are abandoned. When the case company revised the BM to include UNICEF it was hard because there was a need of permission to continue BMI.

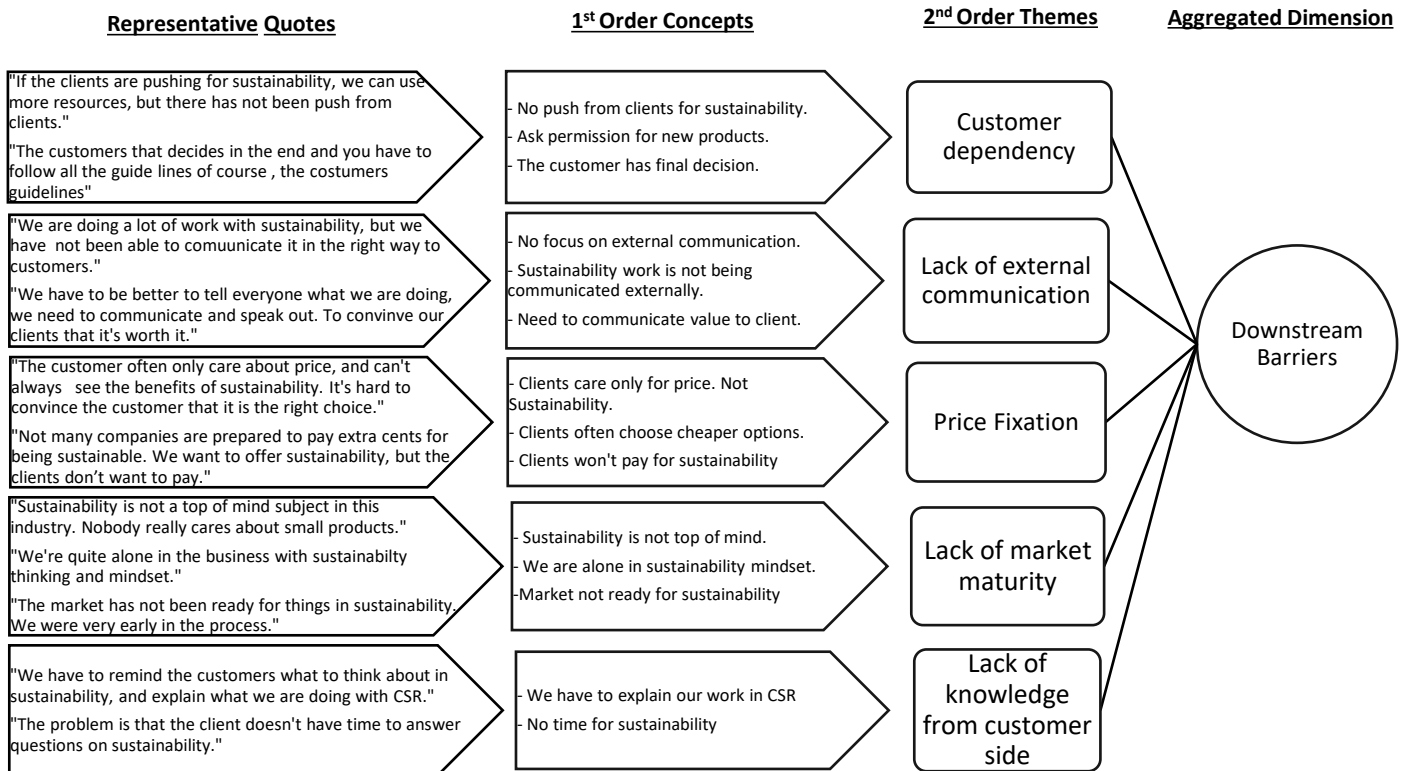
Lack of external communication: this theme is continuously stressed in the interviews and it refers to the challenge of communicating what the company does on sustainability to customers. The consensus is that the company performs several activities for sustainability but these are not communicated to customers, which becomes an influential barrier. This barrier represents a constraint within the company, where resources and efforts are not sufficiently allocated to communicate externally the work they have done in sustainability, and therefore, investments made for change in this aspect are kept within the company and not expressed outwardly, as a result of internal constraints.

Price fixation: reflects that customers are fixated on the high price of sustainable products and are reluctant to pay for it. Thus, there is a disparity between customers, in claiming to want sustainable products, but ultimately choosing the cheaper option, forcing the case company to have two offerings (sustainable products and non-sustainable products).

Lack of market maturity: we encountered a recurring issue with market acceptance of new sustainability solutions, because of the industry itself not being ready to prioritize sustainability as a top of mind issue. In this sense, the case company has come across challenges for full market penetration in sustainability, as they entered at a very early stage and the industry was not pulling for these solutions.

Lack of knowledge from customer side: this theme is related primarily to the lack of knowledge that is present in the customer’s side in terms of sustainability. We have seen this issue as a limiting factor when trying to push sustainability as a product solution. Customers do not have the expertise on sustainability to see it as a viable alternative, and are fixating on costs. As opposed to the previous barrier of “Lack of external communication”, this barrier is a specific constraint stemming from outside the focal firm, where general knowledge on sustainability is

not present on the customer's side. This lack of knowledge from the customer goes beyond limited knowledge on specific sustainable offerings from the firm, and involves narrow awareness of sustainability in the industry. This requires that the company continuously educate them on it.



Chapter 5: Discussion

This chapter will analyse the dynamic relationship between barriers in the continuous process of BMI for sustainability. The chapter therefore aims to answer the question of how barriers in BMI for sustainability influence the process. The findings show that barriers arise from three parts in the activity system: upstream, within the focal firm, and downstream. These three parts guide the discussion. Moreover, emergent from the data, evidence shows that barriers do not often happen in isolation, which is an interesting finding and only possible due to applying Demil and Lecocq's (2010) definition of BMI as a continuous process. This has enabled the study to open up to a more dynamic relationship in contrast to existing articles on barriers in BMI for sustainability. Consequently, this research is able to build a dynamic framework that not only shows what barriers are present in BMI for sustainability but also how barriers influence the process as well as each other in the continuous process. This will now be discussed under the three guiding headings.

5.1. Upstream Barriers

The two barriers that were identified upstream in the activity system in the continuous process of BMI for sustainability were; supply chain control and reliance on external partners. When the case company opened their Shanghai office and started to change for sustainability, they went from not being concerned about having control of the supply chain to establishing new systems and standards, leading to the urge for control at every stage of the supply chain. Their strive for control of the whole supply chain as a promotional merchandiser with several suppliers creates a difficult scenario for the case company, as: *"we aren't in all the factories to monitor them and see how they are doing their process for sustainability"* [Interviewee 7]. Hence, turns into a barrier as the case company feels the necessity to control large number of suppliers. According to Bocken et al. (2014) gaining more control and knowledge about the supply chain is part of what companies do when innovating their BM for sustainability (Bocken et al. 2014). Furthermore, the problem that the case company experienced supports Laukkanen and Patala's (2014) barrier on transparency and the challenge of controlling the supply chain in the global environment because of its complexity. The finding is also in alignment with Giunipero et al. (2012) argument that

lack of sustainability standards and appropriate regulations makes it difficult to control and monitor companies in the supply chain to ensure their compliance.

The second theme; reliance on external partners, is triggered by the former and relates to an interesting finding which is not supported in the literature. It shows that all the new knowledge that the case company acquired on transparency, control and requirements for compliance in the supply chain is counterproductive. Because the case company is very knowledgeable on each step in the supply chain, they perceive it as a failure when they cannot control it. This is reflected in the interview: *“It's hard for [case company] to pressure big factories into complying with sustainable practices”* [Interviewee 1]. Subsequently, they start relying on external suppliers as they themselves are not able to control and guarantee that all products are sustainably produced or under appropriate working conditions further down in the supply chain. It is a novel and interesting barrier as it is natural that the case company cannot control every detail in the supply chain, which limits how the case company innovates for sustainability.

5.2. Within the focal firm

5.2.1. Internal Communication

When conducting BMI for sustainability the purchasing department was found to work as a bridging barrier between upstream activities outside and barriers within the focal firm. Most of the changes made upstream in the activity system reach the purchasing department before reaching other activities in the focal firm. This means that the purchasing department has a big influencing factor on how change for sustainability is conducted internally. Moving internally within the focal firm, the data shows that the case company relies on the purchasing department to have the knowledge and know-how about sustainability. Thus, the staff did not feel that they needed to understand and have knowledge on sustainability because that is the purchasing department's responsibility. Taking sustainability for granted and not involving themselves in the process of BMI for sustainability, questioning why should they when it is not part of their functional tasks. Repetitively, interviewees referred to the purchasing department and stressed that *“[w]e should tell people to use them more [the China office] and that is one of the*

[Purchasing Department] important tasks in the future." [Interviewee 6]. The changes in the BM are therefore dependent on the purchasing department.

Nevertheless, it is important to stress that the people in the purchasing department are not found to be barriers to BMI for sustainability per se, but the fact that sustainability is expected to emerge and be continued by them. This barrier is an interesting and unique finding for the case company, as it is not reflected in the literature, but provides an important understanding on barriers in BMI for sustainability. This bridging barrier creates a lock-in of BMI for sustainability to the purchasing department, which makes it hard for change to take place throughout the complete activity system. As it indirectly excludes employees in the process that leads to low engagement and low interest in change for sustainability.

Internal Communication is a strong barrier that includes two more barriers that influence BMI for sustainability significantly; knowledge not trickling down from top-management and communication between departments. These two themes emerged from the interviewee selection criteria; get a representative sample of the activity system in the case company and represent people both in the PET-team (top-management) and non-management personnel. The latter criteria formed a clear finding grounded in the data that information on change for sustainability and knowledge on sustainability in general are not trickling down from the PET-team to the organisation. Consequently, excluding key structural elements in the activity system, new content on sustainability is decided and implemented in the PET-team, however, becomes a barrier when not shared with the rest of the organisation because it hinders how new and old activities are linked between departments. One interviewee stated: *"well we don't get that much information on what is happening on the top of the company. I think that is an issue, because I think we want to know what is happening ... nobody told me, they just told one another on their meetings but they haven't sent anything out to our emails"* [Interviewee 8].

This barrier confirms Santos et al. (2009) argument that hierarchal authority in the form of internal power distance "can lead to flawed communications and distrust" (Santos et al. 2009:36) that hinders the process of BMI. In contrast to the leadership gap identified by Sivertsson and Tell (2015), the case company illustrates that change takes place in top-management but does not involve the rest of the activity system, impeding BMI for sustainability. However, in the case of

the Swedish agricultural sector it was the top-management that was resistant to change and experimentation that ultimately hindered BMI.

The last identified barrier within the dimension of internal communication is *communication between departments*. The findings were possible due to the first selection criteria to have a representative sample of the activity system, and illustrate that information and knowledge is not communicated between departments and causes sustainability to become isolated to a selected few, as stressed during one interview: “*We work in separate ways, I run my own department, and my colleagues they run another department. We haven’t been successful with internal information*” [Interviewee 7].

Demil and Lecocq (2010) state that when change takes place in a company, key resources and key competencies should impact each other to stimulate dynamic consistency and “keeping the BM in a permanent state of disequilibrium” (Demil and Lecocq, 2010:242). This is fundamental for BMI to be continuous, but the problem of departments not communicating or collaborating on sustainability limits the disequilibrium necessary for BMI, leading to change stagnating and isolated to key activities. Santos et al. (2009) argue that closeness of departments in the process of BMI is key as it provides an essential source of innovation. Consequently, this barrier in the case company is found to be an important barrier to take into consideration in BMI as it supported in literature and has large influence in the BMI for sustainability process in the case company. The barrier of Internal Communication is one of the largest barriers inside the case company.

5.3. Loop within the focal firm

The relationship between the loop within the focal firm and the barrier of Internal Communication is interchangeable. The Internal Communication creates the loop as well as the loop feeds back into Internal Communication. Next the relationship between the dimensions inside the loop will be discussed.

5.3.1. Lack of Organisational Commitment

The evidence from the findings shows that Internal Communication is a key barrier in the case company, which in turn leads to low employee engagement that makes it difficult for the company to get employees engaged in new working activities and new systems changed for sustainability. Low employee engagement stands out as a large barrier within the dimension Lack of Organisational Commitment with its great number of quotes from interviews such as "[s]ustainability is part of the strategy but not the main focus, not a lot of people involved in sustainability activities." [Interviewee 6]. The barrier is triggered by Internal Communication because departments and people are excluded from the BMI process making them demotivated and generates low engagement from the employees. This increases implementation time which in turn did create problems with integrating sustainability during the Stadium Promotion acquisition.

In similar vein, Santos et al. (2009) discuss the vital importance of mutual engagement inside an activity system when conducting BMI. The concept supports the relationship between Internal Communication and Lack of Organisational Commitment found in the case company, as the power distance generated lack of communication. In this way, it creates disparities between activities, and subsequently reducing the internal engagement among employees, depriving the corporate setting of creative space (Santos et al. 2009). Giunipero et al. (2012) did also find that companies perceived it hard to change current practices when changing for sustainability but not BMI per se. Nevertheless, this was ranked as a low influential barrier by Giunipero et al. (2012) but is a highly influential barrier in the case company. Furthermore, this dimension could easily be mistaken to relate to Eichen et al. (2015) system-related barriers. Nevertheless, these system-related barriers discuss the issue of the confusion about how the system should be implemented and who should be responsible. This was not seen to be the case, instead it is about not being able to engage staff in the new systems and practices.

5.3.2. Risk Aversion

The barriers on Internal Communication as well as Lack of Organisational Commitment stimulates risk aversion towards change inside the case company. The low employee engagement

does also generate further resistance to change among employees. One interviewee stated that when change was conducted they resisted it because: *“We have worked against the system, instead of working with the system”* [Interviewee 5]. This is a consequence of Lack of Organisational Commitment as well as lack of Internal Communication. Furthermore, makes staff afraid of taking risks: *“You get afraid of implementing anything that you are not a hundred percent in control of”* [Interviewee 3]. However, this barrier was found to be minor in contrast to other dimensions based on the few quotes and number of themes.

The same barrier was found in the study by Sivertsson and Tell (2015) where Swedish farmers experienced uncertainty when changing the business to become more sustainable; this uncertainty arose from the lack of assurance that the new BM would fit in with the existing one. This uncertainty in BMI made farmers’ reconsider or step away from conducting BMI from the start because there was no guarantee that they could go back to the old working practices. This risk reduced the willingness and motivation to conduct BMI similar to the case company where it is considered safer to not conduct BMI for sustainability. Laukkanen and Patala (2014) do also raise the barrier of lack of risk taking in companies that are conducting BMI for sustainability. Sosna et al. (2010) take this discussion further when stressing the need for continuous experimentation for BMI, which cannot be archived if a company is afraid of taking risks. An interesting finding is that the barrier is extensively supported in literature however not considered as significant in the case company.

5.3.3. Corporate Logic

This dimension is a very influential barrier as the themes of dominant logic, path dependency and operational focus were all mentioned continuously in the interviews. Inside the focal firm the relationship between Internal Communication and Corporate Logic is interchangeable as both are driven by and are a result of the other. Evidence shows that the Corporate Logic creates Lack of Organisational Commitment especially in the form of low employee engagement. In the theme of low employee engagement one interviewee stated that *“we have a lot of change at [case company] for a very long time, but in some way they [employees] don't care about the changes”* [Interviewee 6]. This supports the relation between Corporate Logic and Lack of Organizational Commitment. The relationship is found in the literature on BMI by Eichen et al. (2015) “there is

a lack of drive, guidance and even incentives to move beyond mere ideas and start thinking and acting in innovative business logics – which is reflected in the logic-related barriers” (Eichen et al., 2015:34). The Corporate Logic influences how a company creates ideas and acts on them, it influences the way systems are implemented and how employees react upon them (Eichen et al. 2015).

Moreover, Corporate Logic influences the decisions within the corporate context of the firm and plays an important role in how the company will seek and approach new changes in their BM, and the composition of their activity system. In this sense, the case company has been following a consistent train of thought regarding sustainability, and the way that they create and capture value from it. However, relying blindly on this established BM creates a strong influence over the information and data on new opportunities that get filtered out of the corporate decision process (Chesbrough, 2010). This ingrained mindset on the working BM, or dominant logic, impedes the company from looking into new changes for sustainability that might not necessarily appear obvious or in line with their current activity system. This mindset, creates a barrier into exploring new BM for sustainability that can bring forth new markets or revenue streams (Chesbrough, 2010). Thus, it is an issue of recognition, where new opportunities for sustainability are not identified, as the company is too entrenched in their traditional corporate logic, which limits their scope of exploration for new changes. The following quote describes the general perception of the company towards recognizing new opportunities in BMI for sustainability, highlighting the deeply rooted dominant logic: *“We stick to the things we know. It's not easy to add some new mindset.”* [Interviewee 7].

Likewise, the previous successful experiences with the current BM, and the incentives obtained by it, create close-minded thinking on innovation and what is actually understood by it at the corporate level, creating an important barrier into moving innovation beyond individual components, as are products (Eichen et al. 2015). Moreover, as with dominant logic becoming the prevailing mindset inside the firm, path dependency also creates obstacles in creating and developing changes in the components of Content, Structure and Governance in a BM. This can lead to the company becoming trapped in inappropriate or obsolete BM, as result of not pursuing a path that is divergent to their current one (Laudien & Daxböck, 2015). Thus, while we see dominant logic as a cognitive barrier that prevents the company from distinguishing new

opportunities in sustainability, we emphasize path dependency as a barrier set forth when different SBM are identified, but ultimately neglected due to their distance to the current one. Both of these constraints pave the way for the firm to continue through the same business path, with little to no change over extended periods of time, where BMI for sustainability is not as prominent. Therefore, the following quote describes how the Corporate Logic has prevented the case company from implementing new changes, as these do not strictly follow their business scope, and prevent new changes from emerging in the BM: *“I don't think it has changed that much since I started here, which is like 3 years or something we work with sustainability in the same way today as we did 3 years ago.”* [Interviewee 8].

The operational focus inside the company is a significant barrier in BMI for sustainability because employees are more concerned with daily activities and do not want to risk receiving additional work that comes with change. In the case company this hinders change to take place from the start, it also impacts the lack of clear goals, staff want to see short-term results instead making innovation stagnate. This barrier is established in Eichen et al. (2015) however, referred as culture-related barriers. The resistance for innovation due to operational focus paralyzes the BMI process and in similar vein as “not-invented-here syndrome” staff do not see it as their assignment or responsibility to change (Eichen et al. 2015). This phenomenon is deeply rooted in the case company as seen in the following quote: *“everybody have very much to do so, nobody has time to take another project on”* [Interviewee 8].

5.4. Resource availability and allocation

Resource availability for innovation projects or transformation of a company's BM is one of the most significant barriers for innovation (Madrid-Guijarro et al. 2009), and represents a fundamental constraint for the case company to pursue changes in sustainability within their BM. These obstacles in resources are not limited to financial pressure for responsible expenditure, but also involve lack of qualified human resources to lead the change towards sustainability, and more specific resource allocation restrictions regarding social ventures, as these represent a completely different business endeavour from the normal commercial activities.

The case company is currently undergoing a recovery process from a financial downward turn in previous years, where cost-cutting measures were applied to maintain sufficient revenue and cash flow to survive in the competitive landscape. The resulting weak financial position left them unable to invest largely in sustainability and other innovation projects, as financial resources were allocated towards operational activities that were sure to deliver consistent revenue streams. This unsteady position represents a resource constraint, as resources cannot be allocated towards new innovation projects for sustainability, forcing the firm to take decisions to abandon, slow down, hold, or avoid taking on new activities in innovation (Pinget et al., 2015). This barrier influences the influx of new activities on sustainability that can be nurtured and implemented by the company, and creates a tighter grip on which ideas can be further developed into projects that can transform the BM for sustainability. This is further confirmed by Giunipero et al. (2015), when outlining the effects of uncertain economic times in moving the adoption of sustainable practices to a lower level of priority for the firm's overall business goals. In this sense, the case company has not been able to pursue new changes, as their financial position hinders their ability to allocate resources into new activities for sustainability. This weak financial position scenario is further stressed by the following quote: *"We have had results that has not been so good, and we had some difficult years behind us but now we are coming up with a better result."* [Interview 2].

Additionally, lack of resources is extended into insufficient qualified personnel to take on new activities for sustainability or to fill gaps in the current activity system that are limiting the company's ability to profit off their investments in sustainability. As mentioned in section 5.3.3 operational focus has led to a stern focus on short term goals, with no strategic manoeuvring for different projects into sustainability, and this in part is due to the lack of employees within the firm to absorb some of these operational activities, and allowing senior personnel to invest time into developing new solutions for sustainability. Moreover, specific tasks like marketing, are put aside to focus on ad-hoc problem solving, which has created barriers of its own that relate to lack of external communication. Hence, the lack of human resources influences how the company can allocate available personnel into different activities in the BM, which then are focused primarily on day to day functions, relegating new activities for sustainability to a minor role in the company's priorities. Following their struggling financial position, they lack enough personnel to

tackle and seek new activities in sustainability, and are forced to follow priority tasks before allocating time and effort to different activities, as emphasized by the following quote: *“It’s a lot of work to implement the level system, we would need more manpower to do that.”* [Interview 4].

Furthermore, additional barriers to BMI for sustainability were observed specifically when trying to allocate existing resources to develop and maintain the social ventures that the firm has in place. This is due to the nature of these ventures, as they serve as a social benefit and the company does not generate profit from them. This lack of economic incentives is perceived as a main barrier for social oriented BMI for sustainability (Laukkanen & Patala, 2014), and for the case company these barriers are specifically represented as obstacles in removing existing resources from profit-generating activities, and allocating those resources into social benefit projects. The lack of human resources stems originally from their recovering financial position, and thus, resource allocation is decided by operations that will likely generate more profit for the company. This creates several barriers to BMI for sustainability, as vital resources are not designated to projects that encompass social or sustainable operations, as these are given a lower priority and therefore changes within sustainability are less prone to take place under this scenario. This struggle with allocating resources to social ventures due to lack of profit on them, is further exemplified by the following quote: *“...so, somehow we must get paid for that as well [Nattvandrarna]. Same with UNICEF. We see it as a marketing cost”* [Interview 2].

Accordingly, resource scarcity proves to be a barrier for the implementation of BMI for sustainability within the case company. Whether is their financial position, or their prioritized resource allocation scheme, sustainability changes, both for environmental and social benefits, are put on hold or not given enough means for development. This creates an impediment for the firm to continuously pursue new activities for sustainability beyond the changes already established, creating a period of inactivity regarding BMI for sustainability.

5.5. Downstream Barriers

Barriers that are found downstream of the activity system in the case company’s quest for successful BMI for sustainability, relate primarily to their reach with customers and the commercial background on which the firm maintains business activities. This specific context in

the interaction between company, customer and industry reveals several challenges into implementing new changes for sustainability in the case company's existing BM. While these barriers represent external challenges, their impact is strongly noticeable within the focal firm and the case company's ability to implement changes for sustainability and profit off those investments. In comparison to the Upstream Barriers, the Downstream Barriers appear more often, meaning that in the case company Downstream Barriers have bigger influence in the continuous process of BMI for sustainability.

The industry in which the company operates, plays a crucial role in determining the acceptance of different BM in terms of sustainability and the way the case company can experience returns on their investment. Findings illustrate that in the promotional merchandise industry, sustainability does not emerge as a vital component for commercial penetration and is not yet translated into an additional revenue source for the company. This lack of maturity in the industry becomes a barrier when it creates an uncertainty in the demand for innovative goods as seen in Coad et al. (2015). In the case company, sustainable products or service are not currently seen as profitable goods. This is illustrated by the following quote: "*Sustainability is not a top of mind subject in this industry. Nobody really cares about small products.*" [Interview 3]. This displacement of sustainability as a core component of the industry, creates Content barriers on SBM, and restrains the potential for competitive advantage when incorporating sustainability as a fundamental element of a BM.

Thus, market maturity is a strong determinant into the acceptance of new SBM within the industry, and these create significant barriers for the firm that is trying to develop sustainability embedded product offerings, and a sustainable supply chain for procurement. In this sense, the case company entered the market too early with a SBM and has been unable to completely acquire a competitive advantage based solely on their sustainability activities. Moreover, adding to the challenges existing with the lack of market maturity in sustainability, lack of knowledge from the customer side creates a barrier in how the case company approaches and extracts value from their SBM. The customer's lack of knowledge on what sustainable practices are present in the market, create additional tasks for the case company to expose and clarify their commitment to sustainability and reap the benefits of their investment. This insufficient knowledge from the customers involves further allocation of time into explaining sustainable practices done by the

company, and how these are valuable to them in the greater scheme of things. This limited understanding on the customer's side is manifested with the following quote: *"We have to remind the customers what to think about in sustainability, and explain what we are doing with CSR"* [Interview 7]. The lack of awareness and understanding of the SBM amongst the industry members and customers, restricts the return on investment of BMI for sustainability, even if the firm has a clear grasp on their SBM (Laukkanen & Patala, 2014).

Furthermore, challenges arising from the interaction with customers are not only limited to lack of knowledge on sustainability, but are also concurrent with the firm's dependency on their clients in terms of business offerings. The case company's business activities are often contingent on the specific requirements of the clients, and cannot veer away from these necessities when developing new changes in their BM for sustainability, where both industry and customers are not well-versed. This increased buyer power, forces the case company to analyse the client's specific requirements when trying to implement new changes for sustainability, which greatly limits the scope of BMI that can be achieved while still securing competitiveness in the marketplace. The next quote further illustrates this customer dependency: *"If the clients are pushing for sustainability, we can use more resources, but there has not been push from clients."* [Interview 1].

Hence, customer dependency is a strong external barrier that influences the way the company pursues BMI for sustainability. As transforming their business into an activity system that does not cater to the clients, will inevitably lead to a fading competitive advantage, and loss of resources into changes that are not accepted by either the industry or the client base. Moreover, it was found that this customer dependency translates into more specific barriers that are apparent on the client's end. It translates into a rigid price fixation on the customer's side, where cost leadership is a desirable trait in suppliers, and differentiation through sustainability often does not imply a big enough competitive trait for customers to choose this option. Contrary to Giunipero et al. (2012) who believed that difficulty in changing user preferences towards green products and services to be mainly a marketing issue, we observed this as an external market barrier, where customers' preferences are driven towards cost rather than added benefits in sustainability. This infatuation on lower prices over other functional qualities, represents a major hurdle for the case company to explore different alternatives for BMI for sustainability.

Changing Content, Structure, and Governance concepts within the case company's BM to embed sustainability into it, requires investments on new processes or activities to take places throughout the activity system. However, to retrieve returns on these investments, the final product offering increases in price, as to offset the costs into building sustainable practices at every step of the business process. In this sense, clients are hesitant to place additional investment in sustainable offerings when non-sustainable products are heavily discounted, illustrated by the following quote: *"Not many companies are prepared to pay extra cents for being sustainable. We want to offer sustainability, but the clients don't want to pay."* [Interview 1]. Thus, price fixation on the customer's end implies significant barriers when they are not willing to take on the price of sustainable products, or products that have gone through a sustainable supply chain, as the case company cannot allocate resources into fundamental changes in sustainability if the clients will not embrace the price hike.

Finally, our findings suggest a major barrier in downstream activities that bridges the focal firm with external stakeholders. This barrier refers to the lack of external communication of sustainable activities done inside the firm to customers, which impedes the case company to maximize profits on their investments made on sustainability. This bridging barrier affects the way the company communicates externally their efforts in sustainability, and includes the lack of resources allocated to maximize the marketing potential of these activities, as demonstrated by the following quote: *"We are doing a lot of work with sustainability, but we have not been able to communicate it in the right way to customers"* [Interview 7]. Thus, despite having several accomplishments in sustainability, ranging from compliance with international standards, to the offering of a sustainable product portfolio, the case company has been limited in creating awareness of their sustainable strategies, as supported by Giunipero et al. (2012). Therefore, this barrier in externalizing their ventures in BMI for sustainability, restricts the case company's ability to profit from these changes, and decreases their disposition to further invest in new sustainable activities. To conclude, it becomes apparent that external barriers in downstream activities in the activity system represent significant obstacles for the case company to fully develop and profit from BMI for sustainability.

5.6. Influence of barriers in BMI for sustainability

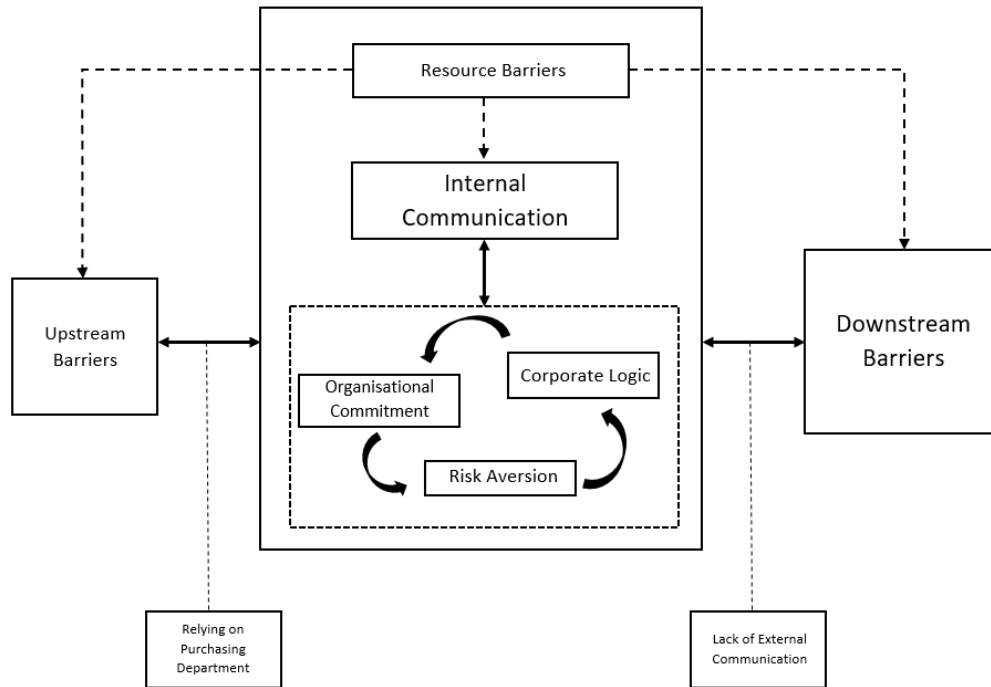


Figure 4: Dynamic relationship between barriers in BMI for sustainability

The dynamic relationship in Figure 4 is created from the relationships between aggregated dimensions that arrived from the data structure. It presents how barriers influence the continuous process of BMI for sustainability in the activity system of the case company. The upstream and downstream dimensions reflect barriers in the activity system that goes beyond the boundaries of the focal firm while Internal Communication, Corporate Logic, Lack of Organisational Commitment, and Risk Aversion are inside the focal firm in accordance to the definition of Zott and Amit (2010). Resource Barriers are present throughout the activity system; however, they are presented as a constraint that is emergent from within the focal firm with outside reach that influence both upstream and downstream activities. Moreover, we present bridging barriers between the focal firm and external activity system, as these involve activities that are affected and influenced by both external and internal forces. Additionally, the dimensions of Downstream Barriers and Internal Communication are given a more prominent display in this figure, as they represent the most influential barriers in BMI for sustainability in the context of the activity system in the case company.

Chapter 6: Conclusion and Implications

6.1. Conclusion

BMI is a fundamental driver of competitive advantage and a main component in capitalizing on new business opportunities. However, this attribution of enhanced competitiveness does not rely solely on isolated and unique changes in a firm's activity system; it demands a continuous innovation of the BM to quickly adapt to changing markets and adopt a proactive approach to business opportunities. Thus, BMI for sustainability requires that change be anchored in several design elements of the activity system to achieve long-term competitive advantage. However, BMI for sustainability does not come without its obstacles for implementation, and barriers that hinder the engagement of firms into innovate their BM into a sustainable one.

Embedding BMI with sustainability implies the addition of not only commercial implications into decisions for change, it includes the examination of environmental concerns and social benefits in its development structure. However, BMI for sustainability encompasses several challenges and barriers than can hinder the firm's ability to develop and maintain a continuous state of BMI for sustainability, and limit their potential for competitive advantage.

Thus, the objective of this study is to present a case study detailing the existing barriers in a firm when implementing BMI for sustainability as an evolving and incremental approach to competitive advantage. The research question served as the guiding framework to analysis and research, where several barriers present in the process of BMI for sustainability throughout the complete activity system of the focal firm, as well as important challenges both upstream and downstream. These barriers represent organisational constraints that curbs the case company's capability to continuously innovate their BM and limit their return on investments made for sustainability.

Moreover, this research aims to contribute to extant literature in BMI for sustainability, specifically on the implications and influences of barriers throughout the process. Findings shows the most prominent barriers in BMI for sustainability that are present in the case company, and their influence in the process of BMI for sustainability.

6.2. Managerial Implications

This thesis has presented a detailed composition of barriers that are present when implementing and developing BMI for sustainability. The barriers expressed and analysed describe valuable findings that can aid managers in better understanding the specific constraints encountered in BMI for sustainability and can include this knowledge into their decision-making processes to decrease the effects of these barriers in their efforts to successfully achieve BMI with sustainability at its forefront. Thus, using the findings shown in this paper, managers and practitioners can increase their potential for return on investment and maximize their competitive advantage when innovating their BM for sustainability.

First, an important focus point should be centred around the issues of internal communication, that create a limitation in sharing knowledge and specific information regarding sustainability across all functional departments of the organisation. This departmental independence, as well as limited knowledge trickling down from top management, causes the organisational structure to resemble autonomous silos where innovation for sustainability is restricted only to the areas where it is directly involved, and restrains innovation to flow and emerge from all areas of the company, limiting its potential to achieve BMI for sustainability.

Second, there is a strong need to target downstream barriers to ensure that investments made in BMI for sustainability are translated into market opportunities, and are therefore profitable and augment the firm's competitive strategy. In detail, lack of external communication appears to be a crucial factor in exposing and exploiting the changes made within the company. If market maturity is an issue, and the firm is reliant on customer's push for innovation, managers should concentrate on displaying and disclosing their efforts in sustainability beyond mere product specifications. Marketing endeavours should be prioritized in this instance.

In summary, this thesis contributes to a deeper understanding of a currently underdeveloped area of research, which enables managers to understand the main barriers and constraints existing in the specific context of BMI for sustainability.

6.3. Limitations

By nature of the case study itself, this thesis presents some key limitations in terms of external validity or generalizability of the findings, as our research is based on a single case study where particularisation rather than generalisation is emphasized (Bryman and Bell, 2011). Thus, the findings on the barriers existing within the case company might not be entirely similar in firms that are operating within a different business context, country, or specific industry.

Moreover, the analysis and focus of the research is done primarily on the barriers specific to BMI enclosed to sustainability. This implies that the barriers and their relationships found in the context of the case company are particular to sustainability, and these cannot be guaranteed to be present in different aspects of BMI.

Furthermore, the effect of regulation was ruled out as constraints in BMI for sustainability in the case company, as these did not yield extensive challenges, as opposed to the barriers in regulation presented in literature. This aspect tends to be country and industry specific, and should be revised when analysing BMI for sustainability in different business contexts.

6.4. Future Research

The research presented in this thesis, has established a novel contribution to the field of BMI for sustainability, by exploring the distinct barriers displayed in this process, and their relationship and influence within the firm's activity system. This is a starting point for future research in this growing field, in which subsequent research can focus on solving these barriers for sustainability, and how firms can halt the ill-effects of these constraints in their search for competitive advantage through continuous BMI for sustainability.

Moreover, while our research focuses on a case company where BMI for sustainability happens primarily on upstream activities, future research should centre around firms where sustainability is spread out throughout all the organization, providing deeper insights into new barriers. Thus, forthcoming research on BMI for sustainability should explore different commercial contexts, to compare different barriers and constraints in BMI for sustainability, as to assess similarities and differences across industries, helping managers engage in better decision-making processes.

References

- Adams, R., Jeanrenaud, S., Bessant, J., Denyer, D., & Overy, P. (2015). Sustainability-oriented Innovation: A Systematic Review, *International Journal of Management Reviews*, 18(2): 180-205.
- Amit, R., & Zott, C. (2001). Value creation in e-business. *Strategic management journal*, 22(6-7): 493-520.
- Amit, R., & Zott, C. (2012). Creating Value Through Business Model Innovation. *MIT Sloan Management Review*, 53(3): 41-49.
- BM Sandbox (2017). About the Sandbox. Available Online: <http://sandbox.businessinnovationfactory.com/welcome-bifs-business-model-sandbox> [Accessed 17 March 2017]
- Bocken, N., Short, S., Rana, P., & Evans, S. (2014). A literature and practice review to develop sustainable business model archetypes, *Journal of Cleaner Production*, 65: 42-56.
- Bocken, N., Short, S., Rana, P., & Evans, S. (2013). A value mapping tool for sustainable business modelling. *Corporate Governance*, 13(5): 482-497.
- Bocken, N., & Short, S. (2016). Towards a sufficiency-driven business model: Experiences and opportunities. *Environmental Innovation and Societal Transitions*, 18(3): 41–61
- Bocken, N., & van Bogaert, A., (2016). Sustainable business model innovation for positive societal and environmental impact, in Cörvers, R., de Kraker, J., Kemp, R., Martens, P., & van Lente, H., (Eds.), *Sustainable Development Research at ICIS: Taking stock and looking ahead*. Datayse/Universitaire Pers Maastricht. pp. 107-120.
- Boons, F., & Lüdeke-Freund, F. (2013). Business models for sustainable innovation: state-of-the-art and steps towards a research agenda. *Journal of Cleaner Production*, 45: 9-19.
- Bryman, A. (2016). *Social research methods*. 5. ed., Oxford, UK: Oxford University Press.
- Bryman, A. (2012). *Social research methods*. 4. ed., Oxford, UK: Oxford University Press.

Bryman, A., & Bell, E. (2015). *Business Research Methods*. 4. ed., Oxford, UK: Oxford University Press.

Bryman, A., & Bell, E. (2011). *Business Research Methods*. 3. ed. Oxford, UK: Oxford University Press

Chesbrough, H. (2010). Business Model Innovation: Opportunities and Barriers. *Long Range Planning*, 43(2): 354-363.

Clinton, L., & Whisnant, R. (2014). Model Behavior - 20 Business model innovations for sustainability. Report, SustainAbility. Available Online: <http://sustainability.com/our-work/reports/model-behavior/> [Accessed 23 March 2017]

Coad, A., Pellegrino, G., & Savona, M. (2015). Barriers to innovation and firm productivity. *Economics of Innovation and New Technology*, 25(3): 321-334.

Demil, B., and Lecocq, X. (2010). Business model evolution: in search of dynamic consistency. *Long Range Planning*. 43(2): 227-246.

Doz, Y. L. & Kosonen, M. (2008). *Fast Strategy: How Strategic Agility Will Help You Stay Ahead of the Game*, Wharton School Publishing, London, UK.

Eichen, S. F., Freiling, J., & Matzler, K. (2015). Why business model innovations fail. *Journal of Business Strategy*, 36(6): 29-38.

Eisenhardt, K. (1989). Building Theories from Case Study Research. *The Academy of Management Review*, 14 (4): 532–50.

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

Evans S., Fernando L., & Yang M., (2017). Sustainable Value Creation—From Concept Towards Implementation, in Stark, R., Seliger, G., & Bonvoisin, J. *Sustainable Manufacturing*

Challenges, Solutions and Implementation Perspectives. Springer International Publishing AG. pp. 203-220

França, C. L., Broman, G., Robèrt, K., Basile, G., & Trygg, L. (2017). An approach to business model innovation and design for strategic sustainable development. *Journal of Cleaner Production*, 140, 155-166.

Gioia, D., Corley, K., & Hamilton, A. (2012). Seeking Qualitative Rigor in Inductive Research: Notes on the Gioia Methodology, *Organizational Research Methods*, 16(1): 15–31.

Girotra, K., & Netessine, S. (2014). The Risk-driven Business Model: Four Questions That Will Define Your Company. *Harvard Business Press*.

Giunipero, L., Hooker, E., & Denslow, D. (2012). Purchasing and supply management sustainability: Drivers and barriers. *Journal of Purchasing and Supply Management*, 18(4): 258-269.

Hansen, E. G., Grosse-Dunker, F., and Reichwald, R. (2009). Sustainability Innovation Cube - A Framework To Evaluate Sustainability-Oriented Innovations. *International Journal of Innovation Management*, 13(04): 683-713.

Hvass, K., K. (2015). Business Model Innovation through Second Hand Retailing: A Fashion Industry Case. *Journal of Corporate Citizenship*, 57: 11-32

Jansson, J., Nilsson, J., Modig, F., & Vall, G. H. (2015). Commitment to Sustainability in Small and Medium-Sized Enterprises: The Influence of Strategic Orientations and Management Values. *Business Strategy and the Environment*, 26(1): 69-83.

Johnson, M. W., Christensen, C. C., & Kagermann, H. (2008). Reinventing your business model, *Harvard business review*, 86(12): 50-59.

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

Kaplan, S. (2012). *The business model innovation factory: how to stay relevant when the world is changing*. Hoboken, New Jersey: John Wiley & Sons

Laudien, S. M., & Daxböck, B. (2015). Path dependence as a barrier to business model change in manufacturing firms: insights from a multiple-case study. *Journal of Business Economics*, 86(6): 611-645.

Laukkanen, M., & Patala, S. (2014). Analysing Barriers to Sustainable Business Model Innovations: Innovation systems approach. *International Journal of Innovation Management*, 18(6): 1-21

Lozano, R. (2012). Are Companies Planning their Organisational Changes for Corporate Sustainability? An Analysis of Three Case Studies on Resistance to Change and their Strategies to Overcome it. *Corporate Social Responsibility and Environmental Management*, 20(5): 275-295.

Lüdeke-Freund, F. (2010). Towards a conceptual framework of business models for sustainability, in Wever, R., Quist, J., Tukker, A., Woudstra, J., Boons, F. & Beute, N. (Eds), *Proceedings of the Knowledge Collaboration & Learning for Sustainable, Innovation Conference*; 2010 October 25-29, Delft, Netherlands, 2010.

Madrid-Guijarro, A., Garcia, D., & Van Auken, H. (2009). Barriers to innovation among Spanish manufacturing SMEs. *Journal of Small Business Management*, 47(4): 465-488.

Magretta, J. (2002). Why business models matter. *Harvard business review*, 80 (5): 86-92.

Maxwell, J.A., (2009). Qualitative Research Design: An Interactive Approach. in Bickman, L., & Rog, J., D., *The SAGE handbook of applied social research methods*. (2nd,edn). Los Angeles: SAGE. pp. 214-249. Available Online: https://www.researchgate.net/publication/43220402_Qualitative_Research_Design_An_Interactive_Approach_JA_Maxwell [Accessed 26 February 2017]

Morioka N., S., & de Carvalho M., M., (2015). Exploring Sustainable Business Models Archetypes in Brazilian Case Studies. Conference Paper, 22nd EurOMA2015 Conference -

Operations Management for Sustainable Competitiveness, At Neuchâtel, Switzerland, Available Online:

https://www.researchgate.net/publication/282290507_Exploring_Sustainable_Business_Models_Archetypes_in_Brazilian_Case_Studies [Accessed 1 February 2017]

Osterwalder, A., Pigneur, Y., & Tucci, C.L., (2005). Clarifying Business Models: Origins, Present, and Future of the Concept. *Communication of the association for information systems*, 16(1): 1-25.

Osterwalder, A., & Pigneur, Y. (2010). *Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers*. Hoboken, NJ: John Wiley & Sons. E-book.

Patala, S., Jalkala, A., Keränen, J., Väisänen, S., Tuominen, V., & Soukka, R. (2016). Sustainable value propositions: Framework and implications for technology suppliers. *Industrial Marketing Management*, 59: 144-156.

Porter, M.E. (1985). *Competitive Advantage: Creating and Sustaining Superior Performance*. New York: Free Press.

Porter, M. E., & Van der Linde, C. (1995). Green and competitive: ending the stalemate. *Harvard business review*, 73(5): 120-134.

Pinget, A., Bocquet, R., & Mothe, C. (2015). Barriers to Environmental Innovation in SMEs: Empirical Evidence from French Firms. *M@ n@ gement*, 18(2): 132-155.

Punch, K., F. (2005). *Introduction to social research: quantitative and qualitative approaches*. London: SAGE

Richardson, J. (2008). The business model: an integrative framework for strategy execution. *Strategic Change*. 17(5-6): 133-144.

Santos, J., Spector, B., & Heyden, L. V. (2009). Toward a Theory of Business Model Innovation within Incumbent Firms, Working Paper, no. 16, SSRN Electronic Journal, INSEAD Fontainebleau, France.

Schaltegger, S., Lüdeke-Freund, F., & Hansen, E. G. (2011). Business cases for sustainability: the role of business model innovation for corporate sustainability. *International Journal of Innovation and Sustainable Development*, 6(2): 95-119

Sivertsson, O., & Tell, J. (2015). Barriers to Business Model Innovation in Swedish Agriculture. *Sustainability*, 7(2): 1957-1969.

Sosna, M., Trevinyo-Rodríguez, N., R., & Velamuri, R., S., (2010), Business Model Innovation through Trial-and-Error Learning - The Naturehouse Case. *Long Range Planning*, 43: 383-407

Teece, D. J. (2010). Business models, business strategy and innovation. *Long Range Planning*. 43(2): 172-194.

Tidd, J., & Bessant, J. (2014), *Strategic Innovation Management*, 1st Edition, John Wiley & Sons.

Weber, J. M. (2013). A New, But Old Business Model for Family Physicians: Cash. *Health Marketing Quarterly*, 30(3): 235-245.

Yang, M., Evans, S., Vladimirova, D., & Rana, P. (2017). Value uncaptured perspective for sustainable business model innovation. *Journal of Cleaner Production*, 140(3): 1794-1804.

Zott, C., & Amit, R. (2010). Business model design: An activity system perspective. *Long Range Planning, Special Issue on Business Models*, 43(2-3): 216-226.

Zott, C., & Amit, R. (2013). The business model: A theoretically anchored robust construct for strategic analysis. *Strategic Organization*, 11(4): 403-411.

Appendix

Appendix 1: Interview Guide

Interview Guide:

Thank you for participating in this interview. We (Nicky and Jossue) are currently working on two projects here at the case company and this interview is for one of them; the master thesis. Therefore we would like to record this interview, you will be anonymous so your name will not be mentioned anywhere. Is this okay with you?

We are looking for your opinions and point of view on specific topics, so there are no right or wrong answers. If a question is unclear just let us know and we will clarify.

So we will start with a few some general questions for background information:

Background Information

In short, what are your main work activities here at the case company?

What does sustainability mean to you at the case company? *Work related*

BMI for sustainability

We would like to get a deeper understanding about how the case company has worked with sustainability over the years. Therefore we want you to think back on when the case company started working with sustainability in your own point of view and the changes involved.

When we say sustainability we mean: economic gain through value creation for customers, while focusing on the environmental concerns and social benefits of a firm's actions.

Sustainability as how the case company creates economic gain, while focusing on the environmental concerns and social benefits of their actions.

General questions on BMI for sustainability - Cavalcante et al. (2011)

Content: How did the case company start working with sustainability?

Content: In your time at the case company, what events can you identify where the case company changed its working process to include sustainability?

(if specific events are mentioned then jump down to that event)

Structure: Describe how these changes affected/impacted the case company's working activities?

Governance: Who was/is involved in undertaking these changes? Who is affected by them?

Specific BMI events for sustainability

Now we will look on specific events more in detail that we have identified regarding sustainability here at the case company and would like you to elaborate on.

ISO Certification

We have understood that the case company is ISO certified, thinking back on when it started:

Content: What working processes/activities have changed at the case company to become ISO certified?

Structure: How has these changes impacted your working activities as a (division)?

Governance: Did this event involve a change in responsibilities? How?

Did you notice any challenges in this event?

UNICEF

We have understood that the case company works with UNICEF, thinking back on when it started:

Content: What working processes/activities have changed at the case company to take on UNICEF?

Structure: How has these changes impacted your working activities as a (division)?

Governance: Did this event involve a change in responsibilities? How?

Did you notice any challenges in this event?

Stadium Promotion Acquisition – results on sustainability (Nattvandrarna, New Knowledge on ISO 14001 and Product Ranking System)

During the Stadium Promotion acquisition we identified 3 events that had an impact on sustainability for the case company; Nattvandrarna, New Knowledge on ISO 14001 and Product Ranking System, with these three in mind:

Content: What working processes/activities have changed at the case company to take on Nattvandrarna, New Knowledge on ISO 14001 and Product Ranking System?

Structure: How have these changes impacted your working activities as a (division)?

Governance: Did this event involve a change in responsibilities? How?

Did you notice any challenges in this event?

Barriers

Again, please think on sustainability as how the case company creates economic gain, while focusing on the environmental concerns and social benefits of their actions.

General questions on barriers

What are your key learnings after implementing these changes for sustainability?

What is still need to be done with sustainability? Why is it not done yet?

What are the challenges that you perceive in integrating sustainability in the way the case company does business?

Risk Aversion

What is the company's attitude towards change? Why?

How does that impact the way the case company seeks new opportunities in sustainability?

Financial Barriers

Why haven't there been any more investments in sustainability?

For the investments that have been made for sustainability, do you think the case company has been able to profit on them? Why not?

Knowledge Barriers

What issues do you see with your process of gaining knowledge on opportunities for sustainability?

In your opinion, what is the level of knowledge on sustainability in the case company? How does that influence how the case company works with sustainability?

Organizational Gap

Do you consider sustainability to be part of the case company's strategy?

In your opinion, what are the challenges into communicating your strategy on sustainability internally and externally? Why?

What are the challenges in working with long-term goals for sustainability? *How do they influence how the case company change for sustainability?*

What are the challenges of turning ideas into new opportunities for sustainability? *going from idea to execution*

How does communication between departments influence going from idea to execution on new opportunities for sustainability?

Regulation barriers

How are market/government regulations in sustainability affecting how you do business?

Market Barriers

How does the external market influence your activities towards sustainability? *Competitors*

Closing Questions

So, what is the future challenge for the case company to change for sustainability?

Do you have anything more to add? Do you feel we have missed anything?

Appendix 2: BMI for sustainability events

	Content - What	Structure - How	Governance - Who
	New activities that are added.	Changed in linking new activities with existing, in new ways.	Change in responsibilities and partnerships to perform the new activities.
Opened Shanghai Office	<p>"I started here 2000, and at that time there was not that much about sustainability. I would say 10 or 15 years ago it really took a good start, when we opened an office in China" (Interviewee 5)</p> <p>"we started up the office in China it was 2006 – 2007, it was a big climb" (Interviewee 6).</p>	<p>"they are really are in China, they can have contact with suppliers in China and they can check their work, So I think they are quite important" (Interviewee 2)</p> <p>"Everything starts there, (with the office in Shanghai) and it is important to check the suppliers and the conditions for the labour force and so on" (Interviewee 2)</p> <p>"we started our own buying office in China, so we could control the factories that we were buying from, they have to sign our code of conduct " (Interviewee 1)</p>	<p>"Three Chinese people employed and they are located in Shanghai (...)" (Interviewee 2)</p> <p>"that is one of purchase department's important tasks in the future" (Interviewee 2).</p>
ISO 14001, 9001	<p>"An important thing was when we got ISO certified, for quality and environmental certification" (Interviewee 2).</p> <p>"I think a lot of the things that has been done, or is being done, is to develop the certification, ISO certification" (Interviewee 4).</p>	<p>"the way we work with our distributors we only work with those that have agreements on sustainability. And that is because of ISO. They have to sign agreements and so, otherwise we cannot send goods with them" (Interviewee 5)</p> <p>"we defined the teams and the process teams. And then we set up the process executive team. That what we call PET-group". (Interviewee 3)</p> <p>"with everything on ISO, its how the warehouse is organized, the routines for good coming in and coming back, a lot of how we are going to mark the boxes and so on. So it's a lot of things with the ISO system that is documented" (interviewee 1)</p>	<p>"I was quite involved in that in the beginning. And then after a few years, or 2 years (ISO) took a more active role but I am still quite involved in our ISO work" (Interviewee 2)</p> <p>"we work with the ISO together, in that time I was the CEO (...) and (CFO) did a lot of that at that time, and we have a girl who was sales man (...) she was working a lot with ISO. So it has been a part of my job but since I leave the CEO it was 2011 then I work more with ISO". (Interviewee 6).</p>
UNICEF	<p>"a webshop like every other webshop we are having otherwise, of course it's a B2C shop, so that's the difference" (Interviewee 8)</p>	<p>"yes we are not organized and built for business-to-consumer. So that was a challenge.. because our customer orders was sending one Christmas ornament and sending one,, instead of sending 500 like this" (Interviewee 7)</p> <p>"we have to supply them with a webshop where private persons can go in and purchase and that is also new for us because we don't sell directly to private persons usually. So we had to arrange some systems for payments then we use klarna for that purpose" (Interviewee 2)</p>	<p>"at the beginning it was , a sales person, (key account manager) had it for a few years. Then after him (IT department) took it and had it for 2 years I believe" (Interviewee 2).</p> <p>"when (Employee) also worked with them, she was the like support and I came in like just help , and then I took over (Employee) work and (key account manager) was still the key account, and then I got it for myself the last year" (Interviewee 8).</p>
New CEO	<p>"(CEO) got president he was the one to really make this go forward with CSR and everything. At (Old CEO's) time it was ok, he worked with it as well but it wasn't that important at that time when (Old CEO) was leading the company" (Interviewee 5)</p>	<p>"he promoted how important it was in the future for (case company) to get new customers. So he saw into the future, it has also cost us a lot of money because (case company) was one of the first in our industry to really work with it. I think we, we have helped our suppliers to be better. They have (CEO) to thank for that too I think" (interviewee 5)</p>	<p>"I have also change my leadership very much in the last 2 years" (Interviewee 1)</p>
Acquired Stadium Promotion	<p>"we doing clothes, jackets and so on I know and we distribute some paper a lot of papers they distribute" (Interviewee 6)</p> <p>"I think it has been, sales people, how they should think when they approach a new customer, I think (Employee) and (Employee) and (Employee) they have learned wackes people to think, how to think regarding sustainability" (Interviewee 5)</p>	<p>"we combined stadium promotions ISO with (case company), it was my the responsibility together with (Employee) and our consult for ISO" (Interviewee 6)</p> <p>"With the ISO 14001, when we looked at the things that Stadium promotion had done and the things that we have done, we had done different things. So when we put the system together it became a whole" (interviewee 1)</p> <p>"when we start of project and the customers don't really know what they want, and for us to get an understanding about the project, we have a briefing system " (Interviewee 3)</p> <p>"now I think it is really really good that everything happened. That (case company) and stadium became one, and for the sustainability, (Employee) and (Employee) I would say are very very good at all this and all their set up with customers and how they think is sustainability all throughout" (Interviewee 5)</p>	<p>"looking for social responsibility which myself is always involved in that. And we have our management team involving in that kind of activities as well" (Interviewee 1)</p> <p>"the network with nattvandrarna, has a lot of sponsors, so we can benefit on that network" (Interviewee 4).</p>