



The (un)sustainability of fashion industry: Fashion-on-demand as solution?

Letícia Meneses Caetano

Dissertation written under the supervision of Laure Leglise

Dissertation submitted in partial fulfillment of requirements for the MSc
in Business, at the Universidade Católica Portuguesa, January 2022

Abstract

Nowadays, sustainability is the world's agenda. The fashion industry is undoubtedly one of the industries with the biggest environmental impact and less sustainable. With the increasing environmental awareness, the pandemic and change of behaviors and lifestyle, the industry has looked to adapt to consumers' needs, though these efforts are still insufficient. In order to fully address this issue, it is necessary to rethink and alter the fashion brands' business models.

This thesis focuses on the business model of fashion on-demand/made to order, which means that brands only start manufacturing the piece after the customer buys it, eliminating waste. The research question proposed by this paper is: "*How can fashion brands implement the fashion-on-demand business model?*". To answer the research question, I conducted a comparative case study on two brands: Constança Entrudo and Campos.

This thesis is useful for managers and brands that operate within the fashion industry, explaining how to implement it and providing the advantages and disadvantages of on-demand business model. The main findings demonstrate that in order to implement fashion-on-demand, brands have to adapt all areas and components of its business model, especially its value proposition and its key resources and partners.

Keywords: Fashion, Sustainability, Business Model, On-demand, Made-to-order

Resumo

Hoje em dia a sustentabilidade é um conceito que está na ordem do dia. A indústria da moda é sem dúvida uma das indústrias com maior impacto ambiental e menos sustentável. Com a crescente preocupação ambiental, pandemia e mudança de hábitos de consumo e *lifestyle*, a indústria tem procurado adaptar-se às necessidades do consumidor, embora ainda seja insuficiente. No entanto, e para dar resposta aos consumidores, é necessário repensar e fazer alterações no modelo de negócio das marcas de moda.

Este caso de estudo foca-se no modelo de negócio *on-demand/made-to-order*, ou seja as marcas produzirem a peça pós-compra do cliente e assim eliminar o desperdício. A questão investigada nesta tese é: “Como é que as marcas de moda podem implementar o modelo de negócio *on-demand*?”. Para responder a esta questão, foi conduzido um estudo de caso comparativo entre duas marcas: a Constança Entrudo e a Campos.

O presente caso adivinha-se útil para gestores e marcas na indústria da moda, facultando as vantagens e desvantagens deste modelo de negócio e como implementá-lo. Os principais resultados demonstram que implementar o *fashion-on-demand*, requer que as marcas adaptem todas as áreas e componentes do seu modelo de negócio, especialmente a sua proposta de valor e os seus recursos e parceiros estratégicos.

Palavras-chave: Moda, Sustentabilidade, Modelo de negócio, On-demand, Made-to-order

Acknowledgments

First of all, I would like to show my gratitude to my supervisor Laure Leglise for all the guidance throughout the process of writing my master's thesis. I would also to thank deeply to Constança Entrudo and Alexandra Neto for their availability and information provided. Without them, I would not be able to develop my thesis.

To my mother and sister I will be forever grateful for their love and support that allow me to achieve this milestone. A particular word of appreciation to my sister for all the encouragement and help to enroll in this master and finish it. Being away from home, friends are truly the family that you chose, so a special thanks to them for everything.

List of Abbreviations

RQ – Research Question

BM – Business Model

CE – Circular Economy

CBM – Circular Business Model

BMC – Business Model Canvas

MTO – Make to order

VP – Value Proposition

Table of Contents

1. Introduction.....	6
2. Literature Review.....	7
2.1 The importance of Fashion Industry.....	7
2.2 Growing Pressures for a more sustainable fashion.....	7
2.3 Innovation in sustainable BMs	8
2.4 Adapting production to demand: a demand-led model	9
2.5 Business Model Canvas.....	9
3. Methodology	11
3.1 Research design	11
3.2 Data collection.....	11
3.3 Data analysis.....	11
4. Empirical Setting	13
4.1 Constança Entrudo.....	13
4.2 Campos Store.....	13
5. Findings.....	14
5.1 Value Proposition	14
5.2 Customer Segments	15
5.3 Distribution Channels	15
5.4 Customer Relationship	16
5.5 Key Resources	16
5.6 Key Activities	17
5.7 Key Partnerships.....	17
5.8 Revenue Streams	18
5.9 Cost Structure	18
6. Discussion.....	19
7. Conclusion	20
Bibliography.....	21
Appendices	23

1. Introduction

Fashion industry generates billions of dollars and employs millions of people (Global fashion industry statistics - International apparel, 2020). Though it is one of the industries with the biggest environmental impact and less sustainable. In the last decades, due to fast fashion, not only people consume a significant amount of clothes but also the pieces have less durability and are used less times by consumer (Amed, et al., 2018). Since fast fashion democratize the access to fashion at accessible prices, people start to buy more than they did before. Sustainability is a subject of debate for a few years and consumers are becoming more environmental-conscious. For the fashion industry it is a challenge, but it also provides an opportunity for brands to grow and adapt to the new consumers' demand. Sustainability measures and behaviors are demanded by all stakeholders and the fashion industry has to comply in order to thrive (Amed, et al., 2019).

The pandemic and lockdown had a huge impact in everyone's life and in the fashion industry. According to Amed, et al. (2020b), consumers had the time to rethink about their consumption habits, lifestyle and habits including the clothes they wear. During these times, online channels grew dramatically since all stores were closed but the consumer demand was also severely altered. Sustainable and local small fashion brands emerge during this period and succeed (Amed, et al., 2020b). While the fashion industry is recovering and the world is returning to normal, Covid-19 still affects our lives and made irreversible changes that will remain. The consumer demand was severely changed. Moreover, consumers now seem to care more and demand sustainability and transparency from fashion brands (Amed, et al., 2021).

Sustainability is still a confusing concept for many consumers and some brands take advantage through greenwashing practices. By contrast, a significant amount of fashion brands is trying as much to adopt sustainability practices (Amed, et al., 2019). Consequently, we can observe new business models emerging, such as using waste as a raw material to produce new pieces (upcycling), recycling material, renting, resale, having a customer service that repairs the items in order to make them last longer (Amed et al, 2020a; 2020b). On-demand BM is also one of these practices. By producing only when people make an order, there is no waste and the production is completely aligned to the increasingly unpredictable demand.

Previous research had focused on theorizing the coexistence of the concepts of sustainability and fashion. However, the past literature lacks to show how sustainability is adopted by the fashion industry in practice. Having state that, we need to further understand the multiple ways in which companies in the fashion industry can answer the global grand challenges such as sustainability. The academic relevance of this study is to provide a more practical approach on how to implement sustainability practices within a business model of a fashion brand, focusing on the made-to-order/on-demand BM. This research can provide a useful tool and insight for brands and managers within the fashion industry and researchers in fashion, sustainability and supply chain. The research question of this paper is:

R1: How can fashion brands implement the fashion-on-demand business model?

To answer my research question, I chose to use a qualitative method and a comparative multiple case study. I selected two fashion brands: Constança Entrudo and Campos Store. The choice of these two brands seemed appropriate since they both have sustainability concerns and had experience with the on-demand BM despite operating in different segments. To answer the RQ, I used the theoretical framework of Business Model Canvas by Osterwalder and Pigneur (2010).

This thesis was structured into 6 chapters. First of all, this paper will provide a general overview of the literature regarding the fashion industry and sustainability before focusing on the adoption of sustainable practices and on the on-demand BM. In the following chapter, the comparative case-study will be presented by analyzing two Portuguese brands: Constança Entrudo and Campos. Throughout this section, both companies will be presented in terms of their history, brand, sustainability practices and experience with on-demand BM. The Methodology chapter will describe how the qualitative research was designed and the data was collected and analyzed. The section of findings will provide an answer to the research question based on the collected data analyzed through the theoretical lens. It will be followed by the discussion where the findings will be confronted with the existent literature. This thesis will be closed by the conclusion chapter stating the final remarks, the study's limitations, and suggestions for future research topics.

2. Literature Review

This Literature Review demonstrates how sustainable business models and practices can be an answer to the growing pressures for fashion industry to become more sustainable. The focus will be on the application of sustainability and on-demand business model within fashion brands. First of all, it will be presented an outline regarding fashion industry and sustainability. Then it will be described how sustainability is being demanded by fashion consumers. Following that, it will be presented some innovative sustainable business models, focusing in the on-demand business model. To conclude, the theoretical framework used – Business Model Canvas - will also be reviewed.

2.1 The importance of Fashion Industry

The report from Global fashion industry statistics - International apparel (2020) shows that global fashion industry is valued in 3,000 billion dollars, accounting for 2% of World's Gross Domestic Product (GDP). The most valuable market is the womenswear, representing 20,7% of total market value. Despite being in the process of recuperation post-pandemic, it is expected that 2022 will be a year of growth (Amed, et al., 2021). This industry is also one of the less sustainable, polluting, wasteful and resource-intensive industries (Amed, et al., 2019). The classic concept of sustainability development was defined in the Our Common Future Report by World Commission on Environment and Development in 1987:

Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. (World Commission on Environment and Development, 1987, p. 43)

In order to achieve sustainability, industries and consumers must take into consideration that resources are limited and rethink about their resource consumption (Joy & Peña, 2017). Scoones (2007) described the effects and consequences of climate change has such as higher risk of environmental change, pandemics, and biodiversity change.

In the fashion industry, since mid-1990, as rapid fashion cycles become shorter with the growth of fast fashion, industry players have adopted less sustainable BMs in order to meet customers' demand and optimize profit (McNeill & Moore, 2015). In the past 20 years, textile production and average global annual consumption per person has doubled. The average global textile consumption accounts for 13kg per person. The textile consumption represents 100 million tones, only approximately 15% is recycled and 70% ends in landfill site (Shirvanimoghaddam, et al., 2020). Within the period of 15 years, the average consumer purchases 60% more garments but keeps the clothing pieces half of the time (Amed, et al., 2018). The fashion industry is accountable for 20 to 25% of the microplastic existent in the sea that contaminates fish and consequently humans and has a carbon footprint equivalent to the combination of international flights and shopping.

Several research papers have demonstrated concerns over the future of fashion industry that may result in a global catastrophe impacting economy, health, and the environment (Amed. et al., 2019; Shirvanimoghaddam, et al., 2020). The world is already experiencing the effects and consequences described by Scoones (2007) and it is impossible to deny it. So sustainability has to be central in policy and law making and implemented in industries in order to avoid more severe consequences. Consumers are also increasingly more aware sustainability-wise and are changing their behavior and habits (Amed, et al., 2019). The pressure for adopting sustainable practices within the fashion industry is rising significantly not only from consumers but also investors (Amed, et al., 2020b), and the fashion industry must comply in order to thrive.

2.2 Growing Pressures for a more sustainable fashion

For decades, sustainability and fashion were considered incompatible concepts due to the nature and specificities of the fashion industry (Muthu, 2016). Although, it can be argued that sustainability is one of the biggest critiques that the fashion industry has ever faced (Fletcher & Grose, 2012). Adopting sustainability within the fashion industry is hard due to the complexity of fashion supply chain. In order to be considered sustainable, fashion brands “*may need to entirely transform every aspect of their businesses*” (Dixon, 2019). Sustainability covers the entire garment life cycle, from its production, usage and its end (Mora, Rocamora, & Volonté, 2014). The process of a piece of clothing is extensive beginning in the raw materials/fabrics, going through manufacturing until it gets to the customer. During this process, there are several players involved and each step of the process has potential environmental and social risks. Also sustainability concept includes and challenges more than the process itself and welfare of workers (Mora, Rocamora, & Volonté, 2014) but also in terms of economic models, values, goals and belief systems (Fletcher & Grose, 2012). Though there is an effort from fashion industry players to embrace less unsustainable practices, it will only persist and grow if consumers support those behaviors through purchasing those brands (McNeill & Moore, 2015).

The pandemic had a huge impact not only in fashion industry but also in consumers' demand and behavior. During the pandemic crisis, McKinsey conducted a study where 65% of consumers stated that their purchase intentions were to privilege durability and high-quality garments over "newness" (Amed, et al., 2020b). In addition to that, internet search on "sustainability fashion" has tripled in the period between 2016 and 2019 (Magnusdottir, 2020). Consumers are more environmental and ethical aware towards overconsumption and BMs that neglect sustainability. They expect and care about whether fashion brands have sustainability concerns and practices and their values, taking that into consideration in their purchase decisions (Amed, et al., 2019).

In the annual survey conducted by Business of Fashion and McKinsey in 2019 to worldwide fashion executives, sustainability was named the single biggest challenge and opportunity for the fashion industry in 2020 (Amed, et al., 2019). The covid pandemic unexpectedly has hit the world in the first quarter of 2020, putting the world on hold. This year's report and survey concerning 2022, still features sustainability as the second biggest opportunity and challenge for the industry, as seen in the figure below. This suggests that despite sustainability might have costs and obstacles to its adoption, it could also bring benefits and revenues to the industry players (Amed, et al., 2021).

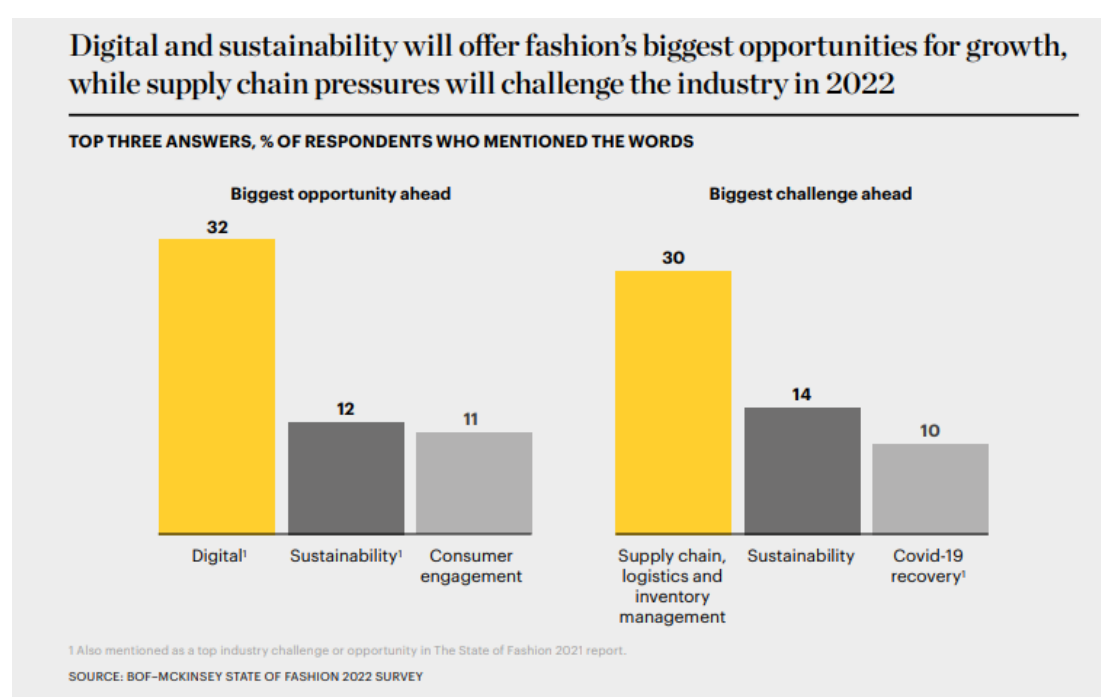


FIGURE 1 - BIGGEST CHALLENGES AND OPPORTUNITIES FOR THE FASHION INDUSTRY IN 2022 (AMED, ET AL., 2021, P.13).

The demand for sustainability in fashion was led by young people, especially generation Z and millennials. The pandemic exacerbated the sustainability concerns of consumers and brands will be rewarded if take those in consideration (Amed et al. 2018; 2020a). Consumers state that sustainability is taken in consideration in a purchase, however that concern is disregarded when it comes the time to pay for it. Only 31% of Gen-Z and 12% of baby boomers in 2019 Mckinsey survey in the US was willing to pay more for sustainable products. The concept of sustainability still in confusing and unclear to consumers due to lack of education and information. Although there is a segment of informed consumers who seek sustainable brands and practices, Nina Marenzi, the founder of an organization The Sustainable Angle states that regarding sustainability "nothing is black and white, unfortunately... It's huge shades of green, really.". The complexity of this concept makes some fashion players practicing greenwashing - promoting and advertising sustainability values and measures without practicing it (Amed, et al., 2019).

2.3 Innovation in sustainable BMs

Korhonen, Honkasalo, & Seppälä (2018) stated that since the world is becoming more aware of the importance of adopting sustainability, circular economy (CE) has emerged. CE is a potential strategy in order to develop and adopt environmentally conscious and sustainable business. Specially after the pandemic, fashion brands have embraced sustainability and circular economy, rethinking their BMs through business model innovation (Ostermann, Nascimento, & Da Silva, 2019; Amed et al, 2020a; 2020b). A circular business model (CBM) can be defined as a BM in which the value creation is based on "utilizing economic value retained in products after use in the production of new offerings" (Linder & Williander, 2017, p.183). These BMs aim to expand the life cycle of a product or parts of it, attempting to keep their value while used and repurpose for a new product at the end of usage (Linder & Williander, 2017).

CBMs oppose to traditional BMs where a product is created, used and disposed (Shirvanimoghaddam, et al., 2020). These BMs in fashion industry comprise reselling, recycling, upcycling, remanufacturing, reusing, renting, sharing or activities such as refurbishment, renovation, and repair (Linder & Williander, 2017; Salmi, 2020). CBMs such as resale and rental focus on eliminating overconsumption. Sources predict that resale could

be bigger than fast fashion in the future, since it delivers newness without compromising sustainability (Amed, et al., 2018). Since textile industry is part of the problem, brands are also rethinking the materials and technologies used (Amed, et al., 2019). The practice of recycling and upcycling garments or fabrics as raw material to new pieces can also provide an alternative in order to extend the lifespan of a product and avoid its disposal (Amed et al., 2020b).

2.4 Adapting production to demand: a demand-led model

On-demand also known as made-to-order is a production model in which goods are exclusively produced when or as required (Davies, 2021). Not only start-ups and smaller brands are embracing this BM, but also mass-market brands such as Zara, Boohoo and ASOS (Amed, et al., 2018). Local or nearshoring production (with or without adopting this BM) has been increasingly considered by the brands specially after the COVID-19 constraints (Amed, et al., 2018). The pandemic overstock and unpredictable consumer behavior are also attracting brands' interest in adopting this model or at least producing smaller batches (Magnusdottir, 2020).

Iarocheski (2021) and Davies (2021) described that in this BM applied to the fashion industry, the pieces will only be produced after the customers make an order for that specific piece and pay for it. Since the pieces are not produced at the time of the order, the customer waiting time will be longer most of the times. On-demand or made-to-order oppose to the traditional process in fashion industry where brands produce or order from factories to produce a specific quantity of each piece, making a prediction on consumers' demand. The traditional process between design and production can take up to a year until the products enter the market (Amed, et al., 2018). Despite being based in data, forecasts and predictions of demand sometimes fail, leading to dead stock and waste (Davies, 2021).

Though this model is an answer to sustainability concerns, since it reduces waste, Amed, et al. (2018) affirm that it is also a result of a paradigm shift in fashion. Before, trends were imposed to consumers and predicted by fashion editors, designers, and buyers. Nowadays, fashion is under a "pull" dynamic, where trends and products are based on consumer demand. The power of social media was a game-changer on how fashion trends are created but it also decreased the trends' life span. In the fast-paced and volatile times that we live, predicting and adapting to demand is increasingly challenging. By producing items after the consumer makes an order, brands adapt the supply to the demand in a perfect way, adopting a customer-centric approach (Amed, et al., 2018).

On-demand BM presents advantages and disadvantages. Sustainability is one of the major advantages of on-demand: less waste, water consumption, pollution and resources (Magnusdottir, 2020). It also provides more control to brands since they don't have to clear down stock and wait to launch new pieces or collections (Davies, 2021). This manufacturing model requires lower capital investment since made-to-order requires none or minimal inventory consequently affecting warehouse costs which also would be none to minimal as stated by Magnusdottir (2020). Additionally, this BMs avoids dead stock of garments or fabrics and the associated costs. By adjusting the supply to the demand, garments will be sold at full price, increasing the revenue margin of the brand.

However, as claimed by Amed et al. (2018), production and transportation costs are higher since this BM doesn't benefit from economies of scale. Another disadvantage is the customers waiting time since the piece is made to order. Due to the immediacy era we live the fashion consumer is more impatient and aims to discover, buy, and being delivered the product in a couple of days. This provides a challenge in order to captivate new customers. Though clear communication, development of technology and nearshoring could be a solution in order to surpass this obstacle.

Though an explanation of this BM and its main advantages and disadvantages was previously described, sustainability requires a systematic transformation of the entire BM instead of straightforward alterations to operational details (Fletcher & Grose, 2012). The RQ: *How can fashion brands implement the fashion-on-demand business model?* aims to further understand how fashion-on-demand can be implemented within a BM of a fashion brand comprehending all its the components.

2.5 Business Model Canvas

To answer my research question I chose the Business Model Canvas as a framework. Reviewing the past literature, especially in the past 2 decades, the BM concept has been increasingly mentioned and studied not only by researchers but also by managers (Massa & Tucci, 2013; Zott, Amid & Massa, 2011). The concept of BM describes in a systematic and holistic way how an organization creates, delivers, and captures value in relationship with its network of exchange partners (Osterwalder, Pigneur, and Tucci, 2005; Zott, Amid & Massa, 2011). The concept of BM has been present in business since pre-classical times (Teece, 2010). However before this period, companies operated a very similar BM: their revenues were made by selling a product or service produced by the company or its suppliers. Even though there were exceptional companies in history who adopted alternative BMs that differed from the classic ones based on selling a product or service (Osterwalder and Pigneur, 2010), globalization and

innovation propelled these BMs that were and are transforming industries and societies. The innovative BMs have attracted more interest and curiosity from researchers and managers.

I chose the Business Model Canvas developed by Osterwalder and Pigneur (2010) as the theoretical framework in this dissertation. To fully embrace sustainability, it can be necessary to make changes in all aspects and areas of a fashion business (Dixon, 2019). Since the research question is: “*How can fashion brands implement the fashion-on-demand business model?*” I needed to select an intuitive framework that analyzed the all the business model components to provide greater understanding of the implications and alterations of adopting fashion-on-demand.

Business Model Canvas was developed to be a practical tool to describe and analyze the business model of a company. The aim was to turn the complex concept into a model which was intuitive, easy to use but relevant and without oversimplifying it (Osterwalder & Pigneur, 2010). The BMC comprises 4 areas of business: offer, customers, infrastructure, and financial viability. 9 blocks are considered by this model: value proposition, customer segment, distribution channels, customer relationship, key resources, key activities, key partnerships, revenue streams and cost structure. As we can see in the figure 1 displayed below, all the blocks are connected, so if one is changed the others could also have to be reviewed.

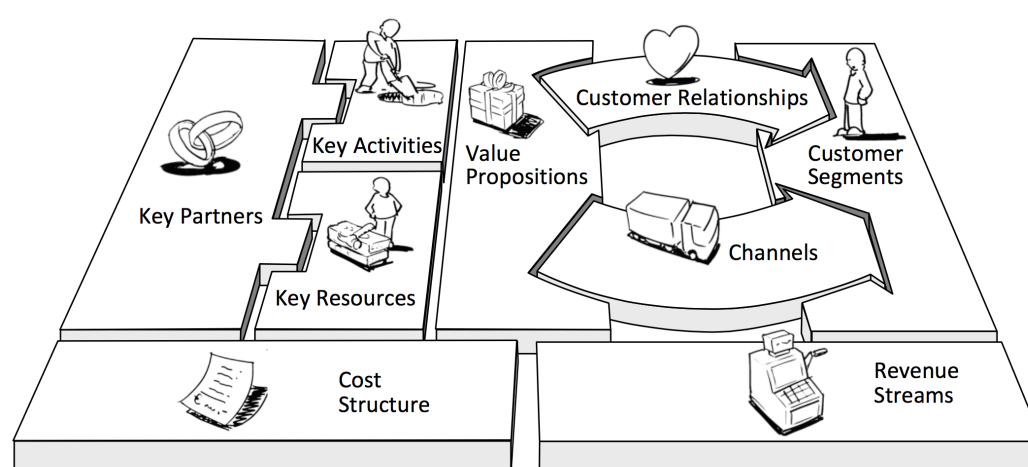


FIGURE 2 - BUSINESS MODEL CANVAS BY OSTERWALDER AND PIGNEUR (2010, PP.18-19)

As defined by Osterwalder & Pigneur (2010), value proposition is at the center of the framework. Value proposition (VP) can be defined as the value created by a product that satisfies a customer need. It is the reason why customers choose a company or brand. Customer segments can be defined as the targets that the enterprise aims to reach and satisfy. The channels in the BMC model are defined as how a company communicates and reaches its customers segments to deliver its VP. The customer relationships describe the type of relationships that the business establishes with their customer segments (Osterwalder & Pigneur, 2010). Osterwalder & Pigneur (2010) established that key resources whether tangible or intangible are the assets and resources required for the brands to function. These assets and resources can be physical, financial, intellectual, or human. The key activities are the procedures that ensure the delivery of the VP, solidify customer relationships, succeed, and make revenues. The network of suppliers, partners and allies that make the company work are the key partners (Osterwalder & Pigneur, 2010). The Financial area comprises the block of revenue streams – the generated revenues from the block of customer segment block - and cost structure – the main costs and expenses of operating the BM (Osterwalder & Pigneur, 2010).

This framework results from a extensive investigation work on business models and reunites consensus of a vast number of researchers and practitioners (Barquet et al., 2013). Business Model Canvas by Osterwalder & Pigneur (2010) was tested and put in practice before published by renowned organizations and enterprises around the world such as Deloitte, IBM, Ericson, Government Services of Canada, amongst others. One of the main limitations attributed to this framework is that ignores competition, crucial for any BM. It also presents different abstraction level between blocks, for example ‘key activities’ and ‘key resources’, highlighting some aspects over others. Although the BMC has limitations, it was a base in order to develop other business model frameworks such as Lean Business Model Canvas and Advanced Business Model Canvas (Hong & Fauvel, 2013).

3. Methodology

This chapter describes in depth the methodology used in order to answer my research question. This chapter explains how the research was designed and the reasoning behind using a qualitative research and the choice of the two cases. In addition, it will also describe the data collection and analysis processes.

3.1 Research design

I chose a qualitative approach to propose an in-depth knowledge of an organizational phenomenon in the environment in which they take place (Denzin & Lincoln, 1994). This research approach is particularly useful when the organizational/strategic concept under study is complex and lacks advance understanding (Graebner, Martin, & Roundy, 2012; Birkinshaw, Brannen, & Tung, 2011). Sustainability focused BMs like on-demand are only now emerging within the fashion industry, offering a possible solution to make fashion brands more sustainable. Due to its newness and complexity, there is not much research or understanding on it. Through conceptual insights from primary data collected, qualitative approach provides a tool to observe how broad concepts such as sustainability an on-demand BM within fashion industry operate in particular cases such as the two brands featured in this paper.

To answer my research question, I chose a multiple case-study comparing two Portuguese fashion brands. The aim of using a multiple case research is to provide a better comprehension of the phenomenon under study, by focusing on the subject under study that holds both cases (Stake, 2013). By comparing the two brands that operate in different segments, this paper will provide a more complete understanding on the adoption of sustainable practices and on-demand BM. When I initiated the writing process of this thesis, I immediately thought about Constança Entrudo's brand which I knew that produced their pieces on-demand. Through networking, I managed to contact Constança herself and initiated the process of interviews and data collection. In addition, I wanted to include the case study of Laagam, a Spanish brand that only produces on-demand and that launches new products weekly. However, despite the multiple attempts to contact them it was not possible to get them to collaborate in this paper.

To identify potential cases, I start researching about Portuguese fashion brands which had sustainability concerns and direct contact with on-demand BM, so they could provide first-hand insights and feedback. Nevertheless there was a significant number of brands which adopted sustainability practices and values, there was far lesser brands who had an on-demand BM or at least an experience with it. During my research, I found 3 brands who had at least one experience with on-demand BM, but I selected Campos Store. I firstly contacted Campos through their email and then set an interview with the founder Alexandra Neto. I selected Constança Entrudo and Campos to be featured in this paper since they matched the criteria, I have set in the first place. Additionally, I selected Campos because they had only one experience with on-demand BM, contrasting with Constança Entrudo who operates exclusively this BM in order to get contrasting and unbiased insights about operating on-demand BM.

3.2 Data collection

The data collected for each case including primary and secondary data is described in the Appendix 1. The primary data used in this paper was collected in a semi-structure interview with Constança Entrudo, founder and designer of the eponymous brand and with Alexandra Neto, founder, and CEO of Campos Store. This was followed by one email interview with Constança and one email interview with Alexandra. The interviews' main theme was about the brand itself, the sustainable practices implemented and the on-demand BM. The website of both enterprises, their Instagram social media account, media interviews and podcasts were used as secondary data. The criteria used to select the documents were the reliability of the media sources and whether the content supported the primary sources. I also included the social media as a data source since it is an important communication channel between the brands and its existing and potential customers. Through social media, both brands promote and communicate their values, identity and message including sustainability. In the Empirical Setting chapter, the data collected was exclusively from the interviews and website of both brands. The whole data collection process was guided by the triangulation method by Denzin (2012).

3.3 Data analysis

After the primary and secondary data was collected, I used the coding method to analyze the data. This method consists in labelling the data collected from primary and secondary data in order to find patterns. Then the code from all sources was compared in order to draw conclusions.

As mentioned before, the Business Model Canvas Framework by Osterwalder and Pigneur (2010) is the framework used to analyze the data collected. This model comprehends 9 blocks: Value Proposition, Customer Segments, Distribution Channels, Customer Relationship, Key Resources, Key Activities and Key Partnerships, Revenue Streams and Cost Structure.

4. Empirical Setting

4.1 Constança Entrudo

Based in Lisbon, Constança Entrudo launched her brand in 2018. The Central Saint Martin's graduate gained notoriety for her deconstructed woven fabrics that result from a unique process which involves bonded recycled threads. Known for combining handmade fabrics and bold graphic prints, Constança has attracted attention of Suzy Menkes, a British fashion editor, journalist, and critic, who referred to her fabrics as “*high quality of handwork*” on Vogue UK and many other media. In the past years, Constança has presented several collections in London, Paris and Lisbon Fashion Weeks. Constança Entrudo tries to position itself as a provocative and empowering label. Manufactured in Portugal, the brand's DNA is firmly based on the founder's belief in craftsmanship over trends. By generating sustainable fabrics that challenge the usual fabric making processes, the main aim of the brand is to create timeless pieces in the most sustainable way that could be seen as art pieces that could be worn or not. Constança Entrudo wants to offer unique artisanal clothes and fabrics, reinventing classics with intricate textiles and prints.

The team is composed by Constança herself (founder and designer), a studio coordinator, a production manager, a head of pattern cutting and two trainees that work full-time in the atelier. Though if we include the whole network of people that works from the production, control production and product development they are approximately 15 people. The team also counts with a Sales specialist specially during fashion weeks, an art director and a stylist who always work with Constança. Her work is sold online in her website and 4 more like APOC, Auné, Ssence and Mall NYC and in two physical stores in Japan. Constança Entrudo's main markets are United States of American, followed by United Kingdom, Japan and France and biggest clientele are women from 20 to 35 years old. Constança Entrudo practices on-demand manufacturing since the beginning of her activity. Due to her sustainability concerns and the craftsmanship of her pieces that sometimes are made from handmade fabrics, she feels that this BM is the right one for her brand, despite being less profitable. Regarding brand's revenue stream and cost structure it couldn't be reveal any information.

4.2 Campos Store

Campos Store was founded in 2019. The founder, Alexandra Neto worked as Head of Content while having a fashion and lifestyle blog for 10 years and wanted to start her own business. She was known as a blogger for her “classic with a twist” style and it was the quest for the perfect white shirt that motivated the start of her own brand. The founder felt that there wasn't a white shirt that satisfied her 100% of her needs and style and she knew that she could do something different. The brand's motto is “*elevated utility, infinite wearability*” and their mission is to create iconic pieces with a modern twist. To comply with their motto, Campos tries to focus on the quality, versatility, and durability of their pieces. Inspired by women, their timeless designs aim to make their customers feel elegant, practical, and comfortable. Campos has a permanent collection and seasonal pieces but that come back every season year after year. Their collections are limited in terms of new designs in order to research and produce pieces align with brand's values.

Alexandra Neto, founder and CEO is the only full-time employee of the brand. Campos also counts with its suppliers and seasonal collaborators. The brand is sold exclusively in its website and physically in a biannual two-days event with multiple brands curated by a well-known Portuguese influencer – Maria Guedes (Market Stylista). Campos Store's market is Portugal and Spain. Campos produces its pieces based on secure forecasts of what the demand will be, according to its founder. The goal is to sell every piece full price without accumulating stock. Their experience with on-demand BM was a unique one and it was successful, but the CEO feels that this BM is not a fit for her brand due to its specificities. Regarding brand's revenue stream and cost structure it couldn't be reveal any information.

5. Findings

This chapter aims to answer the RQ: “*How can fashion on demand be implemented*”? To analyze the data, I used the BMC framework. There is a gap in research regarding this research theme. So, this thesis aims to provide further understanding on how a sustainable BM such on-demand can be implemented in a fashion brand and the extent of adopting such model.

5.1 Value Proposition

To implement sustainable practices and a fashion-on-demand BM, the results show that both brands constructed a value proposition based on sustainability. Sustainability is indeed a core value of both brands. However both founders agree that fashion is about producing an unnecessary product, and despite the efforts Alexandra Neto stated in the first interview conducted by me that: “*There isn't any fashion brand that is 100% sustainable since we are creating a product*”.

The value proposition of Constança Entrudo is producing timeless pieces in the most sustainable way in order to be worn or seen art pieces. The designer's brand focus is staying true to the craft and following the characteristics of the fabric or material used and not the trends. Her brand is described as young, creative, and powerful which reflects in her intricate textiles and bold prints. Her deconstructed woven fabrics resulting from her unique signature process it is also part of the identity of the brand. Being a high fashion brand she follows the fashion calendar, but she only produces her unique pieces on-demand and minimizing waste as minimum as possible. The implementation of sustainability focused practices has origins in her education in Central Saint Martin's, where sustainability was a value that her tutors made students pursuit. Also her extensive work experience at Balmain, Peter Pilotto and Marques Almeida made the designer became super aware of how fashion was such an unsustainable industry. In addition to that, Constança's personal conscious and practice of slow processing stunt obliges to adopt these practices.

All the production methods are focused on upcycling – the process of repurposing something that has already had a life – harnessing the transformative power of craft and creativity to minimize our impact on the environment and reinforce our positive connection with nature. Constança's belief in craft over trend is the essence of the brand. Being based in Portugal, every season her brand with artisans from different parts of the country combining traditional techniques with cutting-edge technologies. While having an exclusively on-demand business model, Constança knows that having stock available is without a doubt the most beneficial business model but the most unsustainable one. As stated by Constança: “*When I have a piece available now [due to exchanges or returns] it runs out of my website in two minutes. The minute the customers see that the piece will take two weeks to get ready, I lose like 50% of the customers... [on-demand BM] it makes you lose clients*”.

The value proposition of Campos is to produce pieces with “*elevated utility, infinite wearability*”. The brand focuses on delivering high quality classic pieces with a timeless design. The brand's motto is very much aligned to sustainability principles: conscious purchasing since their pieces can be worn in multiple outfits and occasions (versatility) and forever (durability). The pieces are made with durability in mind to be seen as an investment since they are versatile and can be combined in multiple outfits and they are manufactured in order to last a lifetime. Her signature pieces are shirts that are in her permanent collection. Seasonal pieces come back every year and each season are launched 3 to 5 pieces.

Campos doesn't mention sustainability in their communication, it is only mentioned on their “About” website section. In addition to creating an unnecessary product, Alexandra stated that in her opinion the concept of sustainability lacks consensus and legislation by the worldwide organizations and government authorities, making consequently brands and consumers confused and lost regarding that theme. Having stated this, Ms. Neto feels that she doesn't have authority to reclaim her brand as sustainable but tries at most to implement sustainable practices and the values she believes without jeopardizing the financial sustainability of the brand.

Their business model of Campos is to sell the stock ordered according to the sustainable predictions and before the customers order it. Campos had a single and exceptional experience with on-demand BM. It was a pink blazer that Alexandra's team designed for her but unexpectedly it was such a success in social media that made her launch it. Unlike the founder's opinion about this BM, the unplanned process was relatively easy since the orders for that specific blazer were open for only two days and she knew in advance the atelier's availability and the quantity of fabric available. Alexandra made available online the quantities that were feasible with the resources available and provided deadlines that were met. Despite being a successful piece and launch it was a one-time event. According to the owner, she had to change all structure of the business in order to operate exclusively this BM. For her brand, it is impractical as a business to only produce when people make an order, since the manufacturing of the piece is made by a supplier. Furthermore it would reduce drastically the sales volume, increase dramatically the logistics work, and increase prices.

5.2 Customer Segments

Constança Entrudo's pieces are created without having a target client in mind. However, the designer's brand main market is women aged 20 to 35 years old mostly from USA, followed by England, Japan and France. Her pieces as displayed in her fashion shows are very versatile and could be worn by any gender and try to be inclusive regarding sizing. The brand imprints in their pieces its VP, identity, and message "*embrace yourself*" and "*take yourself less serious*". Since the brand is featured in fashion shows, the prices are premium and higher comparing to Campos and other fashion brands. The collections are launched according to the fashion calendar, presented 6 months before being available to purchase. In terms of exclusivity, since the brand operates on-demand and there is no stock available (except on retailer Ssense) their pieces are very exclusive and one-of-a-kind.

The on-demand model, according to Constança, has to come an extremely long way with consumers. Since consumers are used to fast fashion and having things instantly, she estimates that this BM makes her lose approximately 50% of potential customers. Consumers are getting more conscious, and Constança believes that the pandemic helped, but people still see fashion as an impulse act and buying unnecessary items. She hopes that consumers get to a point where they are fully aware and conscious of their purchases and thoughtfully buy a piece because they want it and feel a connection with the piece, with the brand and their values. When that time arrives, she thinks that it will be easier adopting on-demand BM since people won't mind waiting for that specific piece.

The designer feels that nowadays there is a very small niche of sustainability conscious consumers who are educated towards on-demand models and don't mind waiting, especially Gen-Z. While on-demand business model is making her brand lose customers, she believes that fashion has also an educational role. Constança feels that she doesn't have to sell loads, she prefers to wait for people to learn and become more conscious about sustainability. When that time arrives, the brand will offer a fully developed on-demand model, people won't complain and will fully understand that this is the way to make fashion industry more sustainable.

Campos's customer segment are women since the brand is inspired by and made for them. Their customers' base is located in Portugal and Spain. In terms of prices, comparing to Constança Entrudo and despite working different segments, are lower but still higher than a fast-fashion brand like Zara. This can sometimes be an obstacle to further sales specially for the typical Iberic consumer that is used to fast-fashion. The customer segment they aim for is someone who values their VP, preferring to invest in a higher quality piece since they will wear it forever. Their customer is someone who invests in classic pieces that don't follow trends. Campos can also provide some exclusivity since its production batch is smaller so it will be a more unique piece than one bought in a fast fashion brand. Campos has a permanent collection, available all year and seasonal pieces that are launched every season. There are new pieces every season but not an entire collection, just a 3 to 5.

Neither brand promote directly sustainability communicate in their communication, which can dismiss a potential customer segment who base their consumption choices in the brand's principles.

5.3 Distribution Channels

Constança Entrudo and Campos Store sell mostly online despite selling their garments offline as well. Constança Entrudo's pieces are available offline in two physical stores in Japan. Campos' products are sold offline in the biannual two-day event Market Stylista that is attended by 20 000 people per event.

Despite having an atelier that Constança prefers to call textile studio, she has no intention to transform it in a store, is just a place of creation. In her website, besides buying her pieces, customers can see the lookbook of their previous and future collections (since Constança presents her collections in Fashion weeks so 6 to 12 months in advance, e.g. her Spring/Summer 2022 collection was presented in Lisbon in October 2021), and some campaigns, runways shows' soundtrack, online video presentations (that substitute runway shows during the pandemic).

Retailers are an extremely important distribution channel since they reach a broader customer segment that the brand and have great power over the industry. This channel is also extremely valuable since it makes Constança Entrudo less vulnerable to consumers' demand. Constança revealed that if a brand only relies on direct to consumers sales it can put the brand in a vulnerable position since it is challenging to preview the consumers' behavior. Since the brand follows an on-demand BM and only produces a piece after a customer makes an order, being available in more channels is essential for the brand. Her work is available on 4 retailers: APOC, Auné, Ssence and Mall NYC.

One of the retailers is APOC a fashion website that sells emerging worldwide designers' work shipped directly from the designer to the customers. The website is committed to pay fair commissions to designers and help their brands to grow sustainably. Since pieces are shipped directly from

the designer, they are also made to order. APOC's customers are people who have a high degree of awareness towards sustainability in fashion and are prepared to wait until their piece is ready but their communication about the production method is very clear. Constança Entrudo feels that she should improve her website communication in order to have less compliances. Ssense was also a retailer highlighted by Constança since it's one of the biggest fashion sites in the world similar to Net-a-Porter and Matches that bought her past collection in bigger quantities. This retailer also wants to help designers to grow so they compromise during 2 seasons to be her main stockist of the brand and it works direct to consumer, they buy stock from the designer and they sell it. Though Constança Entrudo operates a made-to-order BM, she highlighted the importance of retailers in terms of financial sustainability and her main stockist buys stock without having orders made.

In terms of online distribution channel, Campos Store only sell its pieces in their website. Besides selling the pieces, the website also features weekly a section called "The Book", sharing ideas how to style their collection, exclusive advice and the words of their inspiration: women. Campos is also one of the more than 80 brands available at the Market Stylista, a biannual two-day event curated by an influencer that 20 000 people attend just to buy Portuguese brands. This event which started in 2013 provides great exposure to the brands that are in exhibition.

Both brands use social media as a mean of communication with the customers and promote their VP, though they do not directly communicate their sustainable practices or in Constança Entrudo's case the made-to-order model. However they do promote sustainability in an indirect way through posts where they portrait their pieces and fabric, people using it and giving positive feedback, by demonstrating the versatility of their pieces, delivering the sustainability message without communicating sustainability in a direct way. To Campos's owner there is no brand that is 100% sustainable and the concept of sustainability is biased so she feels that she has no authority to claim that her brand is sustainable. Constança Entrudo feels that promoting her brand as a sustainable one could damage her brand within the fashion industry. However she feels that she could improve and explain in a more direct way her on-demand BM, in order to get less order cancelations. Constança has also been featured in several press media articles whether is the coverage of her shows or interviews where she can share the value proposition of the brand, the values and how the brand operates. Constança Entrudo has also been featured in several podcasts about her brand and being a fashion designer based in Portugal. Despite Campos has less media coverage, Alexandra Neto has also been featured in a podcast and in digital media.

5.4 Customer Relationship

In terms of building a customer relationship, the social media is an extremely important vehicle in order to do so. Since none of the brands has a physical store (except the two stores in Japan that sell Constança Entrudo's pieces), social media is where potential and repeating customers can meet the brand and be convinced to do a purchase. Nowadays, this is the power of social media: it provides the best storefront to the pieces. Even though customers still can't try the pieces through it, they can see not only models but other customers wearing it and the pieces in more detail.

5.5 Key Resources

Constança Entrudo and Campos have as their key resources their brands, its identity, values, design and creativity that are crucial to make the company prosper. Being fashion brands, a key resource is the raw material, in this case fabrics. Whether are threads, dead stock fabric or fabric sourced through partners, without raw material and fabric it is impossible to manufacture clothes.

Constança Entrudo's fabrics are engineered to each pattern piece in order to create minimum waste. All fabrics leftovers are kept for new textiles experiments and future research. Her pieces are digitally printed which saves up to 60% of water and allows significantly reduced CO2 emissions and lower energy consumption. The brand's signature technique results from a process which involves bonded recycled polyester yarns is also a key resource. Each piece is meticulously made by hand, with some pieces taking over a week to make. Additionally, in Constança Entrudo's textile studio she also has machinery where some fabrics are produced and where she produced the prototypes to her pieces: *"I always try to make all of my fabrics in-house. Now that we are getting a bit bigger, it becomes difficult to produce everything in the studio. However, the first samples and experiences are always made in my studio in Lisbon."* (Kendall, 2021). Her team composed by 5 people besides her are constitute a key asset to her brand.

Regarding Campos' fabrics, all their pieces, except from the shirts and blazers that are made from cotton poplin or linen, are made from dead stock. The brand works with factories and use the fabrics leftovers from big companies' production that for a small brand is enough at least for a limited-edition batch. Alexandra stated in our first interview that: *"We work with several factories that have fabric leftovers. For a big company, those*

leftovers are just leftovers but for a small brand is sufficient to create at least a limited edition". Campos' shirts come in a dust bag that is also made with dead stock fabrics and that customers may use for different purposes.

5.6 Key Activities

Since both brands upcycle and re-use threads (Constança Entrudo) and dead stock from factories (Campos), another key activity is to seek for these materials that are the basis to its pieces. Constança Entrudo produces a great quantity of fabric used in her textile studio and is always looking to incorporate Portuguese artisans in her collection, embracing local and traditional craft in pieces. Campos also is seeking to only use fabrics made in Portugal and Spain and to incorporate more organic fabrics in their pieces in order to turn her production into a more sustainable one. Since the launch of Campos, its owner is seeking organic cotton poplin to manufacture their shirts, the signature piece of Campos. However, is yet to be found an organic cotton that delivers the durability than the currently used delivers. Alexandra stated that:

"I had lots of people asking me if the cotton we used was organic and that was the reason why I added a sustainability section in our website's "About". For me sustainability is much broader than just using organic fabrics. The cotton we use is not organic yet because we have a fabric that I love to work with, that it works very well and provides an answer to a much more important thing for me that is durability. Of course I would prefer to have a fabric that offered durability to my pieces and that was organic. I would prefer but I still didn't find it. I am looking for it for 2 or 3 years and I still didn't find it."

So, despite the efforts to turn the brand into a more sustainable one, the path is not linear and implies trade-offs and compromising. Regarding Campos packaging, the brand tries at most to be careful, and use recycled and compostable materials. The founder points out that the packaging needs further improvement. The brand is struggling to find a supplier that meets their quality and aesthetics standards, offers value for money and with minimum quantity that they can meet. Campos uses plastic in their packaging because its needed, but it is recycled, recyclable and compostable.

In terms of sustainability, both brands try to be as sustainable and environmentally conscious as possible. Despite creating a new product, they try to implement as many sustainable practices as possible, bearing in mind that is a work in progress and implies trade-offs. The attempt of creating no waste is applicable to both brands. The educational aspect is also extremely important, mentioned by both brands. Conscious consumption is something both brand believe in and promote. By showcasing the versatility and high quality of their pieces in their channels, but specially on social media, they want to transmit the message of thinking ahead before buying something and see pieces as an investment and a piece that you will keep wearing for years. By adopting the made-to-order BM, Constança loses customers but she feels that this BM is the future and consumers will fully understand it.

Being small brands, a key activity is to keep growing in a sustainable way. Both brands have the potential to grow in their current markets and customer segments and conquer new ones. Constança Entrudo feels extremely satisfied with her brand's results since they achieve in 2021 the goals planned for 2023. She hopes that her brand can keep growing like it did in 2021 in a sustainable way. Campos's founder hopes that the brand keeps growing. She planned a big year of change and growth, by reformulating completely the brand's image and trying to implement even more sustainable practices, staying true to the brand's motto and values.

5.7 Key Partnerships

The results show that key partnerships are a requirement in order to implement a fashion-on-demand BM.

Constança Entrudo has a wide network of suppliers and partners. This network varies according to the collection and the piece since they are manufactured using different techniques, raw materials, and suppliers due to her VP. There are pieces from the brand that go through several different factories until they are finished. In terms of raw materials, when using her signature technique the brand uses polyester yarns that were waste from factories. Since her BM is on-demand, her suppliers have to be flexible and/or sustainability-conscious to allow the brand to order small quantities of fabric and producing pieces by order or in small batches. The material suppliers are located in Portugal or in Europe. The factories that work with the brand are based on Portugal.

One of the biggest challenges to adopting an on-demand BM for small brand or designers are the factories, according to the Constança Entrudo. The factories normally oppose to produce small quantities, when they don't oppose, they demand from brand higher prices. This happens due to the fact that the vast majority of factories in Portugal disregard the production of a small brand, considering it irrelevant for their business and they don't see any advantage in producing in small quantities or on demand. During the pandemic, since some factories closed it was actually worst to

get pieces produced. Constança feels that pre-ordering is growing in fashion since brands can still produce on demand without asking the factory to produce piece per order. She stated that:

“It is a really tough time for a small designer, doing pre ordering because factories are not willing to make small quantities, and to receive and host you in their factories. If you're doing 100 [of a piece] It's not even relevant for them, they don't see any advantage in producing. Preordering it's something that it's growing, and you see more practiced, and more and more designers are doing. But it's also requires a compromise between factories and our production, whoever is producing your collection and the designer, that is a really tricky conversation, and it needs to be really worked on and in.”

Instead, brands wait until they have several orders in order to produce a bigger quantity and have more bargaining power when negotiating with factories. She stated that: *“Pre-order gives you more control”*. However, in the future, Constança’s main goal to create her own production means in order to control in house 80% to 100% of her production. Though this change would require a significant investment in machinery and in human resources it would be the best way to turn her business model in 100% pre-orders (waiting for several orders in order to produce on-demand without producing piece by order). By controlling all means of production, she would also have better control of the production so it would be easier and more efficient to produce pieces and give shorter timelines to people while not producing waste. Constança would also like to reduce the number of pieces per collection. In terms of collaborations, Constança works every season with artisans from different regions of Portugal, combining traditional craft with technology. During fashion weeks and campaigns, the brand also partners with a sales specialist, an art director, a stylist, photographers, and models agencies.

Campos counts with a network of suppliers that are responsible to ensure the business functioning. The dead stock fabrics used in some of their pieces are from several factories and ateliers that manufacture clothes for big brands. The cotton poplin and the linen used is sourced by Iberic suppliers but made in several countries worldwide. One of the main goals is to turn Campos into an even more local brand in terms of suppliers and logistics. Since long-distance transportation has become more challenging, expensive, and less sustainable, especially post-pandemic, there is a need to rethink about the source of the fabrics and if it worth to order a fabric whose origin is overseas instead of an alternative that comes from nearshore. Despite having Portuguese suppliers, a great percentage of fabric used comes from overseas. Alexandra is trying to work directly with fabric factories so that the fabric comes preferably from Portugal and Spain.

In terms of producing the pieces, Campos work exclusively with an experienced Portuguese group of ateliers that manufactures their pieces to be worn for a lifetime. During the manufacturing process, the ateliers try to waste zero fabric, minimize garbage in daily operations and avoid and reuse disposable materials. The design of the pieces is from Campos but they have an external production manager. To shoot the campaigns and new pieces, the brand also counts with models and a photographer. To optimize the business and get more customers, influencers are also partners since they showcase Campos’ pieces to their audience. Campos had a successful experience with on-demand BM, and the group of ateliers that produce its pieces didn’t oppose to producing on-demand. If the founder were to implement this BM maintaining the current structure and partnerships, by producing on-demand, pieces would be cut by hand instead of by a machine which would result in fabric waste. As Campos’ founder stated:

“If I would apply on-demand, I would order for example 4 or 5 pieces each time for example per week. The seamstresses from the atelier that I worked with explained to me that would imply that pieces would be cut by hand instead of by machine. There would be a higher risk of errors and their work would be negatively affected. The seamstresses prefer to work through stages and produce a batch of the same piece instead of producing each week 4 or 5 items.”

According to Alexandra, on-demand production would require a completely different BM from the one that Campos has. In order to implement this BM, the brand would have to hire an internal employee who produce the pieces or to own an atelier or small factory. For her brand, it is impractical as a business to only produce when people make an order, since the manufacturing of the piece is made by a supplier. Instead, there are made sustainable predictions and the brand promotes and tries to sell their products that are made before clients make the orders.

5.8 Revenue Streams

Neither Constança Entrudo nor Campos disclosed any information regarding their Revenue Streams.

5.9 Cost Structure

Neither Constança Entrudo nor Campos disclosed any information regarding their Cost Structure.

6. Discussion

The research question proposed by this paper was: “*How can fashion brands implement the fashion-on-demand business model?*”. In order to answer this RQ, a qualitative research was conducted featuring a comparative multi case-study. The cases of study brought to this paper were the designer brand of Constança Entrudo and Campos.

Sustainability is a complex concept that confuses not only consumers but also brands, suppliers and remain stakeholders within the industry. Adopting sustainable practices is not a linear process, there is no one-size-fits-all and it affects the brand’s BM and activity. What it works and is more sustainable for a business, might not work or be for another business (Amed, et al., 2019).

The on-demand business model implies that a piece is only produces after an order is placed. This BM is in theory more sustainable since it creates no waste and all the pieces produced have already a buyer (Davies, 2021). In order to adopt fashion-on-demand, one of the most important aspects is the manufacturing process and logistics whether the production is in-house or outsourced. When the production takes place in-house, the brand has more control over the process which facilitates the adoption of this BM. When outsourced, it is possible to adopt this BM but the brand has to have great bargaining power over the manufacturer and an adapted logistic system.

Constança Entrudo only produces on-demand though her main stockist makes an order to have stock available in their website, which helps her brand to be less vulnerable to consumers’ demand and helps her brand financially. Campos produces its pieces based on sustainable forecasts. Though Campos could produce on-demand this would imply that pieces were cut by hand and create more waste than when she produces a batch. This model when the brands don’t have their own means of production implies way more logistics which is extremely difficult to manage being Campos a company with only 1 employee. Constança Entrudo produces a significant amount of its fabrics and her prototypes in her studio and has a team who helps managing logistics. But since Constança doesn’t have the production means in-house, people have to wait more for her pieces to be produced. However, her plans for the future are to have their own production means in order to have more control of this BM.

Communication is key in order to educate consumers that are used to having things in a day or two in their doorstep. When adopting on-demand BM, it is extremely challenging to manage how to communicate the specificities of the BM to the consumers and make them comply with waiting significantly more comparing to a brand that has stock produced. Due to this fact, Constança Entrudo has complaints and order cancellations and she feels that she should improve the communication of their website. One of her retailers’ customers that sells her work on-demand is successful, so it is difficult to conclude if it is only a matter of communication or consumers’ sustainability awareness.

Consumers in general are more aware and conscious about sustainability but they still lack educating and information regarding this matter. However, sometimes they are not willing to pay extra for sustainability (Amed, et al., 2019). Sustainability and this BM in particular demand a higher price since producing piece by piece or in smaller batches has higher costs (Amed, et al., 2018). By adopting this BM, Campos’ prices would increase to compensate higher costs and decrease of volume and orders, putting in risk their brand specially being her main markets Portugal and Spain that are more price-sensitive and less sustainability-conscious and informed. Since Constança Entrudo is a designer’s brand that presents their collections in Lisbon, Paris and London Fashion Weeks and that has USA, UK, Japan and France as its main markets it is easier to make consumers understand her prices and added value.

A brand is still a business and at the end of the day, despite sustainability is a priority for both brands studied, profit is still key to make the business survive. By adopting this production method, the brand is more vulnerable to consumer demand. On-demand or made-to-order business model has advantages and disadvantages. It could be an answer to adjust production to consumers’ demand and turn the brand or factory into a more sustainable one. However this BM might not be applicable to every business within the fashion industry.

7. Conclusion

The aim of this research paper was to study the sustainability practices implemented by fashion brands in order to make the industry less unsustainable, focusing on the made-to-order/on-demand BM and how to implement it. The cases studied in this thesis were a designer's brand, Constança Entrudo and Campos, a fashion brand. The Business Model Canvas by Osterwalder and Pigneur (2010) was chosen as the theoretical lens to analyze the collected data. In the literature review chapter, it was presented an outline regarding fashion industry and the concepts of sustainability in fashion and Business Model Canvas were reviewed.

Sustainability will be key for all stakeholders in fashion industry. Despite being a challenge to implement sustainability practices in any company due to the complexity of its concept, it is one of the biggest opportunities to grow within the industry. Though embracing sustainability may translate into a plethora of contrasting practices for different companies, it is vital to start doing so. Consumers, brands, companies, the fashion industry and the planet will all benefit from sustainability, since we cannot as a whole continue to ignore it. Sustainable and circular business models and practices will continue to emerge like resale, recycling, upcycling, circular fashion, and design and will gain notoriety.

The analyzed BM's advantages are producing exactly what is going to be sold, perfectly adapting the production to the demand and creating no waste, making the brand into a more sustainable one. By adopting on-demand manufacturing there will be no stock which will make the brand save on inventory costs and also pieces will be sold full-price, so the margin for the brand will be better than reducing it when putting a garment in sale. Though, made-to-order BM requires that brands have their own production means or great bargaining power with the factories/ateliers. Adopting this production method will make the prices increase, complicate logistics and decrease sales volume. However these challenges might be overcome in the near future with adequate technology, the proliferation of micro factories and nearshoring phenomenon.

Customer communication is also key in order to make this BM successful. Though consumers are increasingly more aware and conscious about sustainability and their purchases, we still live in a culture of immediacy. Nowadays people can see the garment on social media and through a couple of clicks have it at home on the next day. Brands need to invest in clear communication on the value created by the piece to its customer in order to make them prepared and ok with waiting more for their pieces to be produced and shipped.

In conclusion, fashion-on demand has advantages and disadvantages and requires profound changes in the BM of a company. I believe that made-to-order will continue to grow and be adopted by different players within fashion industry. At short and medium-term, this BM will coexist with the existing ones due to its particularities. However, the future is uncertain, and technological progress can make on-demand how fashion industry will produce and work in several decades from now.

One of the main limitations of this research is that the number of interviews was limited due to the size of the enterprises and only one was in-person, two of the four were conducted by email which limits the depth of the answers. Furthermore, neither brand has presented financial data limiting the research. Though secondary data was used in order to do data triangulation, especially for Campos Store, the sources used were media articles and mentions and a podcast.

In terms of future research, regarding the topic of sustainability in fashion industry, since it is a constantly evolving phenomenon evolving different stakeholders, there is a broad spectrum of future research that could be done. Considering these research's limitations, it would be insightful to study further this BM under a different perspective or approach. For instance, research could be done concerning the consumers' insight regarding these new business models, like on-demand, upcycling, rental or even about how to implement those BM in practical terms. Moreover, especially post-covid when transportation costs are increasing, it would be interesting to study the phenomenon of nearshoring in fashion industry.

Bibliography

- Amed, I., Berg, A., Balchandani, A., Andersson, J., Hedrich, S., & Young, R. (2018). *The state of fashion 2019*. The Business of Fashion and McKinsey & Company.
- Amed, I., Berg, A., Balchandani, A., Hedrich, S., Jensen, J., Straub, M., . . . Dargan, A. (2021). *The state of fashion 2022*. The Business of Fashion and McKinsey & Company.
- Amed, I., Berg, A., Balchandani, A., Hedrich, S., Rölkens, F., Young, R., . . . Peng, A. (2020b). *The state of fashion 2021*. The Business of Fashion and McKinsey & Company.
- Amed, I., Berg, A., Balchandani, A., Hedrich, S., Rölkens, F., Young, R., & Jensen, J. (2020a). *The state of fashion 2020 - Coronavirus Update*. The Business of Fashion and McKinsey & Company.
- Amed, I., Berg, A., Balchandani, A., Hedrich, S., Rölkens, F., Young, R., & Poojara, S. (2019). *The state of fashion 2020*. The Business of Fashion and McKinsey & Company.
- Barquet, A., de Oliveira, M., Amigo, C., Cunha, V., & Rozenfeld, H. (2013). Employing the business model concept to support the adoption of product-service systems (PSS). *Industrial Marketing Management* 12, 693-704.
- Birkinshaw, J., Brannen, M., & Tung, R. (2011). From a distance and generalizable to up close and grounded: Reclaiming a place for qualitative methods in international business research. *Journal of International Business Studies*, 42, 573–581.
- Corbin, J., & Strauss, A. (1990). *Grounded Theory Research: Procedures, Canons, and Evaluative Criteria*.
- Davies, G. (2021, November 4). *How does on-demand manufacturing work for fashion brands?* Retrieved from Techpacker: <https://techpacker.com/blog/design/fashion-on-demand-manufacturing/>
- Denzin, N. (2012). Triangulation 2.0. *Journal of Mixed Methods Research* 6, 80-88.
- Denzin, N., & Lincoln, Y. (1994). Introduction: Entering the field of qualitative research. In N. Denzin, & Y. S. Lincoln, *Handbook of qualitative research* (pp. 1-17). Thousand Oaks, CA: Sage.
- Dixon, E. (2019, October 11). *The problem with 'sustainable fashion'*. Retrieved from CNN: <https://edition.cnn.com/style/article/the-problem-with-sustainable-fashion/index.html>
- Fletcher, K., & Grose, L. (2012). *Fashion and Sustainability: Design for change*. Laurence King Publishing.
- Global fashion industry statistics - International apparel*. (2020). Retrieved from Fashion United: <https://fashionunited.com/global-fashion-industry-statistics/>
- Graebner, M., Martin, J., & Roundy, P. (2012). Qualitative Data: Cooking without a recipe. *Strategic Organization*, 10 (3), 276-284.
- Hong, Y., & Fauvel, C. (2013, Dezembro). Criticisms, variations and experiences with business model canvas. *European Journal of Agriculture and Forestry Research*, 26-37.
- Iarocheski, L. (2021). *On-Demand Production as a viable shift for the Fashion Industry*. Retrieved from Platforme: <https://www.platforme.com/blog/on-demand-production-as-a-viable-shift-for-the-fashion-industry>
- Joy, A., & Peña, C. (2017). Sustainability and the Fashion Industry: Conceptualizing Nature and Traceability. In *Sustainability in Fashion* (pp. 31-54). Palgrave Macmillan.
- Kendall, Z. (2021, October 14). *Constança Entrudo is the textile designer creating clothes with humour*. Retrieved from Metal Magazine: https://i-d.vice.com/en_uk/article/n7b84b/constanca-entrudo-ss22-interview
- Korhonen, J., Honkasalo, A., & Seppälä, J. (2018). Circular Economy: The Concept and its Limitations. *Ecological Economics*, 146, pp. 37–46.
- Linder, M., & Williander, M. (2017). Circular Business Model Innovation: Inherent Uncertainties. *Business Strategy and the Environment*, 26, 182–196 .
- Magnusdottir, A. (2020, May 13). *How Fashion Manufacturing Will Change After The Coronavirus*. Retrieved from Forbes: <https://www.forbes.com/sites/aslaugmagnusdottir/2020/05/13/fashions-next-normal/?sh=27ab540b78f3>

- Massa, L., & Tucci, C. (2013). Business model innovation. *The Oxford handbook of innovation management*, 20(18), 420-441.
- McNeill, L., & Moore, R. (2015). Sustainable fashion consumption and the fast fashion conundrum: fashionable consumers and attitudes to sustainability in clothing choice. *International Journal of Consumer Studies*.
- Mora, E., Rocamora, A., & Volonté, P. (2014). On the issue of sustainability in fashion studies. *International Journal of Fashion Studies, Volume 1 Number 2*.
- Muthu, S. (2016). *Textiles and Clothing Sustainability: Implications in Textiles and Fashion*. Springer.
- Ostermann, C., Nascimento, L., & Da Silva, A. (2019). Business Model Innovation for Circular Economy: A Fashion Industry Perspective. *Proceedings of the XXI ENGEMA Conference*, (pp. 4-6). São Paulo, Brazil.
- Osterwalder, A., & Pigneur, Y. (2010). *Business model generation: a handbook for visionaries, game changers, and challengers (Vol.1)*. John Wiley & Sons.
- Osterwalder, A., Pigneur, Y., & Tucci, C. (2005). Clarifying Business Models: Origins, Present and Future of the Concept. *Communications of the Association for Information Science (CAIS)*, pp. 16, 1-25.
- Rynes, S., & Gephart Jr., R. (2004). From the Editors: Qualitative Research and the "Academy of Management Journal". *The Academy of Management Journal, Vol. 47, No. 4*, 454-462.
- Salmi, R. (2020). Business Model Innovations and Sustainability Transitions: The Case of Circular Business Models in the Fashion Industry.
- Scoones, I. (2007). Sustainability. *Development in Practice*, 17:4-5, 589-596.
- Shahbandeh , M. (2021, January 22). *Global Apparel Market - Statistics & Facts*. Retrieved from Statista: <https://www.statista.com/topics/5091/apparel-market-worldwide/#dossierKeyfigures>
- Shirvanimoghaddam, K., Motamed, B., Ramakrishna, S., & Naebe, M. (2020). Death by waste: Fashion and textile circular economy case. *Science of The Total Environment*.
- Stake, R. (2013). *Multiple Case Study Analysis*. Guildford Press.
- Teece, D. (2010). Business Models, Business Strategy and Innovation. *Long Range Planning*, 43 (2-3), 172-194.
- World Commission on Environment and Development. (1987). *Our Common Future: Report of the World Commission on Environment and Development*. Oxford: Oxford University Press.
- Zott, C., Amid, R., & Massa, L. (2011). The Business Model: Recent Developments and Future Research. *Journal of Management* , 37 (4), 1019-42.

Appendices

Appendix 1 – Primary and secondary data for Constança Entrudo and Campos Store

CONSTANÇA ENTRUDO				
Primary Data				
Type of data	Interviewee	Organization	Position	Date
Interview	Constança Entrudo	Constança Entrudo	Founder and designer	01/11/2021
Email Interview	Constança Entrudo	Constança Entrudo	Founder and designer	04/11/2021
Secondary Data				
Type of data	Title	Name of the author	Name of his/her organization	Date
Website	constancaentrudo.com	Constança Entrudo		
Social Media (Instagram)	"@constancaentrudo"	Constança Entrudo		
Media article	Constança Entrudo: Deceiving the Eye	Kerane Marcellus	Office Magazine	22/11/2021
Media article	CONSTANÇA ENTRUDO	Joana Moreira	Máxima	08/01/2021
Media article	Constança Entrudo is the textile designer creating clothes with humour	Zoë Kendall	I-D	14/10/2021
Media article	Entrevistas 560 é o novo 1... 2... 3...	Sara Andrade	Vogue Portugal	14/05/2020
Media article	Constança Entrudo	Jo Rosenthal	PussPuss	22/10/2021
Media article	Constança Entrudo - Finding a common thread in the mess	Mercedes Rosés	Metal Magazine	
Media article	ModaLisboa Collective: Constança Entrudo S/S20 – All that is solid melts into air	Marcel Schlutt	Kaltblut Magazine	21/10/2019
Media article	Constança Entrudo: "Não quero que o mesmo cliente me compre milhares de peças"	Ines Aparício	Elle Portugal	October 2019
Podcast	Constança Entrudo	Portugal acerta a agulha à moda sustentável	Comunidade Cultura e Arte	05/08/2019
Podcast	Constança Entrudo: "A moda será cada vez mais democrática"	Conversas de Fim de Tarde	Rádio Observador	07/10/2021

CAMPOS STORE				
Primary Data				
Type of data	Interviewee	Organization	Postition	Date
Interview	Alexandra Neto	Campos Store	Founder and CEO	19/11/2021
Email Interview	Alexandra Neto	Campos Store	Founder and CEO	07/12/2021
Secondary Data				
Type of data	Title	Name of the author	Name of his/her organization	Date
Website	camposstore.com	Campos Store		
Social Media (Instagram)	"@camposstore__"	Campos Store		

Media Article	8 marcas portuguesas que tem mesmo de conhecer (ainda este verão)	Marta Chaves	Saber Viver	11/08/2020
Media Article	Saiba o que comprar e comer no Summer Market Stylista	Francisca Dias Real	Time Out Lisboa	24/06/2020
Media Article	Chegou a Campos, a marca de roupa 100% nacional com peças para todas as ocasiões	Catarina da Eira Balletero	Magg	29/04/2019
Media Article	Desglobalização: de olhos postos nos pequenos negócios	Mathilde Misciagna	Vogue Portugal	09/04/2021
Podcast	Sapateado #14	Madalena Beirão	Zilian	23/08/2021