Unlocking sustainable fashion consumption: How to bridge the attitude-behaviour gap?

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UNLOCKING SUSTAINABLE FASHION CONSUMPTION: HOW TO BRIDGE THE ATTITUDE-BEHAVIOUR GAP?

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Glossary

CE	Circular Economy
EMF	Ellen MacArthur Foundation
EU	European Union
IPCC	Intergovernmental Panel on Climate Change
UN	United Nations
VABH	Value-attitude-behaviour hierarchy
WCED	World Commission on Environment and Development
WBCSD	World Business Council for Sustainable Development

Introduction

Context

Alternative business models that are more sustainable should rise to make up for the shortcomings of the linear economy (EMF, 2013a; McDonough & Braungart, 2002; Murray et al., 2017) and achieve sustainability. CE has been receiving growing interest in academia – a strongly increasing number of journals started covering this topic in the last decade (Geissdoerfer et al., 2017; Merli et al., 2018) while it is trending among scholars, business stakeholders and policymakers (Geissdoerfer et al., 2017; Kirchherr et al., 2017; Murray et al., 2017). This makes CE a strongly relevant concept to examine as a means to operationalise sustainability.

This paper examines the consumption of sustainable products in the fashion industry, which ranks very low in terms of sustainability. When it comes to generating negative externalities on the environment and on people, the fashion industry stands out from the others, and has been called a key environmental threat (EMF, 2017; Niinimäki et al., 2020). Mainly, the current prevailing fast-fashion system is responsible for environmental deterioration, exploitation of human labour and the generation of more and more textile waste (Niinimäki et al., 2020).

Given the outstandingly wide scope of sustainable fashion, paper focuses on slow fashion as one movement that falls under the umbrella of sustainable fashion. A systematic literature review highlights the movement as one of the most salient in the field of sustainable fashion marketing (Yang et al., 2017). Slow fashion associates consumers with producers to achieve sustainability (Freudenreich & Schaltegger, 2020; Ozdamar Ertekin & Atik, 2015). Therefore the examination of consumer behaviour seemed of relevance to this paper.

Research on fashion consumers shows that their interest in ethics and sustainability is strongly increasing (Niinimäki, 2010). However, markets are still flooded with cheap fashion items made in the Far East, which shows a lagging expansion of sustainable markets. Sustainable fashion remains a niche market because a severely restricted number of consumers are willing to neglect their sense of aesthetics, disregard their need for expression of *self* through fashion, pay a price premium and spend the time and energy to find suitable garments (Beard, 2008).This hints at the existence of an attitude-behaviour gap in sustainable fashion consumption.

Attitude-behaviour gaps are commonly observed in alternative ethical markets (Jacobs et al., 2018). They have been increasingly studied in academia because they hold the potential to unlock consumption and expand sustainable businesses. Despite the great attention it has been given, scholars are urged to further investigate this attitude-behaviour gap to grasp its magnitude and examine barriers to sustainable consumption (Jacobs et al., 2018; Niinimäki, 2010; Ozdamar Ertekin & Atik, 2015).

Research motivations

Managerial motivations

As pointed out in the literature review, alternative business models that are more sustainable should take precedence over the linear models currently in place (EMF, 2013a; McDonough & Braungart, 2002; Murray et al., 2017). This paper investigates the soundness of such models, notably in the fashion industry. Indeed, leading fast-fashion businesses are fierce competitors that enjoy tremendous economies of scale to provide very affordable garments to mass markets (Ozdamar Ertekin & Atik, 2015). Therefore unlocking the consumption of sustainable fashion via disruptive innovations in circular economy seems to be a great challenge. This paper hopes to present relevant examples of running business models that make the case for sustainable practices in fashion in alternative ways (H. Clark, 2008).

Since contributions from consumers are necessary to achieve sustainability in the fashion industry (Jung & Jin, 2014; Niinimäki et al., 2020), this paper hopes to provide insights into the role that companies may play in educating them about the consequences of their purchases in efficient ways. More specifically, the potential of promotional and educational campaigns is investigated to make managerial recommendations for marketers.

As policymakers are having trouble keeping up with the pace of growth in the private sector, they fail to hold firms accountable for their environmental and social externalities (EMF, 2013a) which end up on the public agenda (Niinimäki et al., 2020). This paper thus seeks a way for business owners and decision makers to take responsibility for these externalities until a more adapted legal framework is established (McDowall et al., 2017).

Academic motivations

This paper seeks to further understand the limits of the dominating linear consumption economy (EMF, 2013a; IPCC, 2021; McDonough & Braungart, 2002). As those are detailed, this paper explores the circular economy as a relevant alternative to effectively implement sustainable development, based on the United Nations' seventeen Sustainable Development Goals (UN, 2015). Since the movement is relatively loosely defined in academia, this paper seeks to gather relevant definitions to grasp the concepts it entails and understand its purpose.

The fashion industry is one of the top polluters in the linear system, which makes it a key environmental threat (EMF, 2017; Niinimäki et al., 2020; Sandin & Peters, 2018). This paper explores the ways in which the fashion industry produces negative environmental and social externalities. Based on the latter, this paper wishes to examine the relevance of circular business models in the fashion industry for it to become more sustainable. In this sense, the slow fashion movement is considered.

Again, slow fashion is relatively loosely defined in academia, therefore the conceptual part of this paper seeks to present different definitions (Fletcher, 2007, 2010; Henninger et al., 2016; Jung & Jin, 2014) of the movement and examine the characteristics of slow culture (Capatti et al., 2006; Slow Food, 1986). Since efforts toward sustainability on the production end are deemed useless without the cooperation of consumers, this paper seeks to understand their perceptions of slow fashion, and more broadly, sustainable fashion. Besides, the reasons underlying fashion consumption and the construction of one's self in society through their appearance are investigated (Niinimäki, 2010).

Main issue under investigation

The literature review unveils the ubiquitous presence of attitude-behaviour gaps in sustainable markets (Jacobs et al., 2018). In other words, some sustainable consumers disregard their environmental and social concerns when completing purchases. Therefore, a gap spreads between their attitudes and their consumption behaviour, notably in fashion (Niinimäki, 2010; Ozdamar Ertekin & Atik, 2015). This paper investigates the underlying reasons to the existence of this attitude-behaviour gap, and wishes to quantify its magnitude in European sustainable fashion markets. Since this gap cannot explain the lagging sustainable fashion consumption on its own (Bagozzi & Burnkrant, 1979; Jacobs et al., 2018), external moderators (i.e., enablers and barriers) of sustainable fashion consumption are retrieved from qualitative research and their magnitude is investigated. Therefore, this paper seeks to address the two research questions stated above. They are in line with the literature review and consistent with the managerial and academic motivations of this study.

RQ1. What magnitude does the attitude-behaviour gap have in the European sustainable fashion market?

RQ2. What are the drivers of and barriers to sustainable fashion consumption?

Approach

This paper is written according to the following structure: (1) an extensive literature review that boils down to sustainable fashion consumers is presented; (2) the methodology that was followed to conduct our quantitative research is explained and justified; (3) the results of our survey are presented and the hypotheses of our research model are tested; (4) those results are discussed in depth and theoretical content is suggested for further action and reflection; (5) the last section summarises the findings of this research and concludes on its limitations by providing suggestions for future research.

Globally, the literature review follows a funnel approach. We start with stating the limits of the prevailing linear economic model and make the case for alternative ways to sustain growth without depleting natural resources. Thus, the concept of circular economy is introduced and defined. Its relevance is discussed and its limits are examined, as it still has a long way to go to prevail in our systems. Fashion is examined as an industry that showcases the limits of a linear system particularly well, which is detailed in the literature review. Once the case for an alternative, more sustainable fashion system is made, this paper considers the slow fashion movement. Its relevance as a means to operationalise sustainability embedded in a circular economy mindset is discussed. As the literature review unfolds, it becomes obvious that consumers need to be involved in the sustainability transition of the fashion industry. Therefore, in its last section, the literature review tackles consumer behaviour and attitudes toward sustainable fashion. The attitude-behaviour gap that is commonly observed in sustainable markets is defined and identified as an important hindrance to sustainable fashion consumption. Enablers of and barriers to sustainable fashion consumption are also covered in the conceptual part, as they are also moderators of sustainable fashion consumption. The following paragraphs detail this structure in further details.

The early stages of the literature review set the context of intense and sustained economic growth that was observed between the 1920s and 2008 in Western countries (EMF, 2013a; McDonough & Braungart, 2002). This growth has been embedded in liner consumption models, i.e., outputs are typically discarded after they no longer serve their purpose or lose their appeal in the eyes of consumers (McDonough & Braungart, 2002). The limits of a linear model that seeks eternal economic with a finite quantity of resources are being reached, and are generating global environmental issues such as water depletion, climate change or air pollution (IPCC, 2021). Therefore the call for more sustainable systems is clear (EMF, 2013a; IPCC, 2021; Murray et al., 2017).

Thus, our literature review examines the potential that circular economy holds to address the issues stated above. Three definitions of circular economy are presented (EMF, 2013a; Kirchherr et al., 2017; Murray et al., 2017) which lead to formulations for its implementation. The cradle-to-cradle formulation (Braungart et al., 2006; McDonough & Braungart, 2002) and the Ellen MacArthur Foundation's butterfly diagram are presented and their relevance is discussed in our literature review.

When it comes to generating negative externalities on the environment and on people, the fashion industry ranks in the top targets and has been called a key environmental threat (EMF, 2017; Niinimäki et al., 2020). Mainly, the current prevailing fast-fashion system is responsible for environmental deterioration, exploitation of human labour and the generation of more and more textile waste (Niinimäki et al., 2020). For this reason, this research examines a means to implement circular economy in the fashion industry. The industry is deemed to cause net-negative externalities as the growing population and demand for clothes overweighs improvements for sustainability on the production end. Therefore, consumers must take part in the sustainability transition of fashion (Jung & Jin, 2014; Niinimäki et al., 2020), which is embodied by the sufficiency approach to circular economy (Freudenreich & Schaltegger, 2020).

Since sustainable fashion is an outstandingly wide movement, our literature review focuses on the slow fashion movement as a means to implement sustainable practices in the fashion industry. Relying on slower production cycles (Fletcher, 2010) that facilitate local manufacturing and meaningful object-user relationships, the pace of production overall adds to the quality of garments (Fletcher, 2012). Although not entirely understood in academia (Henninger et al., 2016; Jung & Jin, 2014), the slow fashion movement unravels insightful concepts related to user-based durability and a more active role of consumers in the production process of their garments (Fletcher, 2012). Therefore, the last section of our literature review focuses on consumers behaviour toward sustainable fashion.

Although sustainable fashion consumers are increasingly concerned with environmental and social issues (Niinimäki, 2010), they seem to neglect these concerns when purchasing sustainable garments. It is argued that an attitude-behaviour gap spreads between their values and attitudes toward sustainable fashion and their actual consumption behaviour (Joy et al., 2012; Niinimäki, 2010; Ozdamar Ertekin & Atik, 2015; Young et al., 2010). Bridging that gap is key to unlocking sustainable fashion consumption, hence the main purpose of this study and its title. Thus, our research is framed in the theory of the attitude-value-behaviour hierarchy (Homer & Kahle, 1988). External factors such as drivers of, and hurdles to sustainable fashion consumption are believed to play a role in the existence of the attitude-behaviour gap and their investigation is suggested (Jägel et al., 2012; Niinimäki et al., 2020).

Since previous qualitative studies identified potential barriers to and enablers of sustainable fashion consumption, this study conducted quantitative research to (1) assess the magnitude of the attitude-behaviour gap in Europe (RQ1); and (2) evaluate the effect of certain barriers and enablers on levels of sustainable fashion consumption (RQ2). Our research model is based on previous quantitative research (Jacobs et al., 2018).

A total of 252 responses were collected via an online survey. The survey evaluated levels of self-transcendence and self-enhancement values among respondents, as well as their attitudes toward sustainable fashion, in the frame of the value-attitude-behaviour hierarchy (Homer & Kahle, 1988). Besides, the influence of two enablers of (preference for locally produced garments; concern for exclusivity) and three barriers to (lack of trust in fashion brands; price sensitivity; perceived lack of time and energy) sustainable fashion were investigated.

Developments

Literature review

The steadiest and longest increase in economic growth ever observed, which took place between the 1920s and 2008, came hand in hand with increased consumption of electronic equipment, garments and consumer goods as well as seemingly enhanced quality of life in Western countries (EMF, 2013a, 2013b; McDonough & Braungart, 2002; Murray et al., 2017). This growth was enabled by neoliberal policies stemming from the Industrial Revolution in the 1850s, and relatively easy extraction and purchase of virgin materials (EMF, 2013a) while an ever-bigger demand for labour and energy drove production costs down a steep slope (EMF, 2013a; McDonough & Braungart, 2002; Murray et al., 2017). This growth is widely associated with a linear consumption pattern, also referred to as the *take-make-dispose* model in the literature. To put it simply, in a linear economy, after extracting raw materials and natural resources, manufacturers leverage the power of energy and human labour to create their final outputs. Once sold and used by the end consumer, the final product is disposed of as soon as it loses its appeal or function (EMF, 2013a; McDonough & Braungart, 2002).

Although it has been generating tremendous economic growth, it is nowadays no breaking news that this linear system thrives at the expense of the environment – with the obvious flaw that it aims for endless economic growth with finite natural resources (Niinimäki et al., 2020; UN, 2011). Indeed, the linear model inherently causes important losses throughout the value chain in addition to generating huge amounts of discarded products, which trap the value of materials for up to centuries (EMF, 2013a; McDonough & Braungart, 2002). The oft-disregarded limits of such a linear system have been starting to show even at economic levels: the 21st century has shown a strong increase in the price of natural resources, sometimes completely offsetting all the cost savings that were made over the previous century (EMF, 2013a; McKinsey & Company, 2014). Not only are prices of resources and raw materials increasing – notably those of oil and food – but they are also exposing firms to high volatility, and crippling the soundness of financial forecasts (EMF, 2013a). Besides, in a globalised market where interdependence levels are high, one local change in climate can affect the entire supply chain of a product which nurtures deeper instability for businesses and consumers (EMF, 2013a; Geissdoerfer et al., 2017). As far as human well-being is concerned, the Easterlin paradox shows that perceived happiness has been stable despite the surges in GDP per capita (A. E. Clark et al., 2008) which brings us to question the very purpose of our current system.

Environmental issues we face nowadays such as climate change, water scarcity, air pollution, soil contamination and overall resource depletion are overwhelmingly caused by human activities (IPCC, 2021) therefore urging us to switch to more sustainable societies and business models (EMF, 2013a; Geissdoerfer et al., 2017; Murray et al., 2017). The latest report from the Intergovernmental Panel on Climate Change (IPCC, 2021) stresses how challenging it will be to slow down and minimise climate change, with human activities impacting all the main climate system factors in the long run. The United Nations Climate Change Conference – commonly known as COP26 – that led to the elaboration of the Glasgow Climate Pact gathered official representatives from close to 200 countries (UN, 2021), showing increasing concern among policymakers for the consequences of greenhouse gas emissions and climate change.

Overall, it leaves no doubt that achieving sustainable development must happen quickly. Major publications in the literature urge the decoupling of economic prosperity and resource depletion for a successful transition toward a sustainable society (EMF, 2013a; McDonough & Braungart, 2002; Murray et al., 2017). In this paper, we retain the extensively accepted Brundtland definition of sustainable development as "development that meets the needs and aspirations of the present generation without destroying the resources needed for future generations to meet their needs" (WCED, 1988, p. 20).

Since policymakers and regulators are having trouble keeping up with the pace of growth of the private sector, they fail to hold firms accountable for environmental externalities (EMF, 2013a). A lack of guidance may be one of the issues that hinder sustainable development today. On this point, we note that the United Nations laid out seventeen Sustainable Development Goals (UN, 2015), all intertwined with one another, with the intention to provide a framework for organisations seeking a sustainable transition. One must admit the overall complexity of problems encountered at the systems level likely contributes to the blur around the ways to implement sustainability (Murray et al., 2017). Although we have stated the urgency for alternative business models, those that exist still fail to provide solutions that are robust enough to be developed on a larger scale.

The above paragraph shows that sustainability demands systems thinking (McDonough & Braungart, 2002; Murray et al., 2017). Indeed, to transition to a sustainable future and meet all seventeen of the UN's integrated Sustainable Development Goals (UN, 2015), the idea of consumption, global economic and social interactions must be redesigned with the support of industry-level cooperation, as well as firms and consumers (WCED, 1988). In this context, this paper considers the circular economy (CE) as a strategy to implement and operationalise sustainable development. We note that although this paper eventually focuses on consumer attitudes and behaviour toward a circular movement in the fashion industry, a more technical description of material flows within circular industries is required for the reader to thoroughly understand the CE concept in the first place. Therefore the following section of the literature review may seem more technical while the remainder will bring the spotlight on the fashion industry and the role that consumers play in its sustainable transition.

A circular economy to achieve sustainability

CE has been receiving growing interest in academia – a strongly increasing number of journals started covering this topic in the last decade (Geissdoerfer et al., 2017; Merli et al., 2018) while it is trending among scholars, business stakeholders and policymakers (Geissdoerfer et al., 2017; Kirchherr et al., 2017; Murray et al., 2017). This makes CE a strongly relevant concept to examine as a means to operationalise sustainability.

As for this paper, this section on CE is broken down into four main parts. First, we leverage the existing legal framework from the People's Republic of China to illustrate the pillars on which CE stands. Second, we introduce three definitions of CE (EMF, 2013a; Kirchherr et al., 2017; Murray et al., 2017) to provide insights into the most relevant theoretical research that has been conducted to coin the concept. We also point out the lack of clarity and unity of definitions in the literature. Third, we focus on the *cradle-to-cradle* formulation for CE (McDonough & Braungart, 2002) and the Ellen MacArthur Foundation's *butterfly diagram* (EMF, 2013a). The Ellen MacArthur Foundation's butterfly diagram was drafted based on McDonough and Braungart's work, therefore both contents are complementary in this literature review. The fourth and last part focuses on the barriers to the implementation of the CE concept and its inherent flaws.

The CE concept stands on three pillars – respectively *Reduce*, *Reuse* and *Recycle* – sometimes referred to as the 3R framework in the Circular Economy Promotion Law of the People's Republic of China (People's Republic of China, 2008). The European Union also published a Waste Framework Directive, adding a fourth R to the framework – namely *Recover* – emphasizing waste management as a relevant dimension of CE (EU, 2008; Merli et al., 2018). The EU Action Plan for CE (2015) most recently published more practical directives for businesses to accelerate their transition toward circularity. To the best of our knowledge, the People's Republic of China and the European Union are the only political institutions that have published official directives with binding targets (McDowall et al., 2017) which is why we consider their directives in this paper. Besides, scientific literature mainly focuses on its implementation in China and Europe (Merli et al., 2018).

Most of the literature refers to at least one of these pillars (Kirchherr et al., 2017) as can be noted in the definition of CE provided by the Ellen MacArthur Foundation (2013a, p. 7): "A circular economy is an industrial system that is restorative and regenerative by intention and design. It replaces the 'end-of-life' concept with restoration, shifts towards the use of renewable energy, eliminates the use of toxic chemicals, which impair reuse, and aims for the elimination of waste through the superior design of materials, products, systems and, within this, business models." This definition is relevant to this paper since the Ellen MacArthur Foundation is one of the leaders in CE in the United Kingdom. Further comments on this definition and the Foundation can be found at the end of this section when the butterfly diagram is described (page 18).

The second definition defines CE as "an economic model wherein planning, resourcing, procurement, production and processing are designed and managed, as both process and output, to maximise ecosystem functioning and human well-being" (Murray et al., 2017, p. 377). This definition tries to account for the globally missing social dimension of CE across the literature. Also, it warns about over-simplifying mathematical models that are used to create biological-like systems within industries, which often overlook too many factors before the model is established. Therefore the definition refutes *bio-mimicry* – where organisations aim to act as natural cycles through their processes – as a strategy to embed circularity and emphasises the potential of *bio-participation*, where humans would learn how to play a role within the environment without tampering with it.

Kirchherr et al. (2017, p. 229) define CE more comprehensively as they try to account for all its dimensions, as "an economic system that replaces the 'end-of-life' concept with reducing, alternatively reusing, recycling and recovering materials in production/distribution and consumption processes. It operates at the micro-level (products, companies, consumers), meso-level (eco-industrial parks) and macro-level (city, region, nation and beyond), with the aim to accomplish sustainable development, thus simultaneously creating environmental quality, economic prosperity and social equity, to the benefit of the current and future generations. It is enabled by novel business models and responsible consumers."

CE definitions generally mention little about business models, while just as little refers to consumers' interest in taking action toward circular consumption (Kirchherr et al., 2017). Since consumers are one of the most critical levers to enable circular business models, their perspective should be included in all CE definitions. This is of course highly relevant to this paper since its ultimate focus is on consumer behaviour towards sustainable fashion. In their extensive review of 114 definitions for CE, Kirchherr et al. (2017) note half of them link CE with economic prosperity, as it is mostly perceived as a lever for growth by practitioners. Only to a smaller extent (about one-third of the definitions analysed) is environmental quality explicitly linked to CE, whereas social equity is disregarded – although the latter two concepts are considered CE dimensions by Kirchherr et al. (2017).

We briefly want to highlight a synergy across the literature, as the same lines of action at the macro-, meso- and micro-level are used to define CE in two journal articles we use in this paper (Kirchherr et al., 2017; Merli et al., 2018). To paraphrase the authors, CE focuses on three lines of action: the first strives for a change in economic and social interactions at the macro-level; the second aims at engaging industrial cooperation at the meso-level; the third, at the micro-level, promotes new forms of production and consumption for firms and consumerism. This draws a solid parallel with the systems thinking that sustainability requires, as is explained on page 14. Implementing sustainability not only requires rethinking the way our system operates, but also relies on cooperation between industries and engagement from each firm and consumer.

All in all, a systematic literature review shows that CE is a multi-faceted concept, an umbrella term under which many principles and dimensions fall (Merli et al., 2018). CE intends to reconcile the need for economic prosperity and the restoration of the environment by converting current outputs into future inputs (EMF, 2013a; Merli et al., 2018). The idea of being restorative is fundamental to CE, as it is not only a preventive approach seeking to minimise pollution: it strives to make up for previous harm by designing regenerative systems inside industries themselves (Murray et al., 2017).

The CE concept is strongly related to sustainability (Geissdoerfer et al., 2017) and is illustrated by different formulations (Merli et al., 2018). Since it has no official unique definition (Yuan et al., 2006), various understandings of the concept co-exist, leading to a lack of guidance which may result in the concept losing momentum (Kirchherr et al., 2017). A blurry definition and unclear scope threaten the credibility of the concept, as scholars are urged to further clarify this point (Merli et al., 2018). Building on the three definitions analysed above, the following content further illustrates the concept of CE from a more hands-on perspective, through the work of McDonough and Braungart as well as that of the Ellen MacArthur Foundation.

McDonough and Braungart's formulation of CE through the *cradle-to-cradle* concept has been outstandingly useful to our understanding of circular business models. In their milestone book (McDonough & Braungart, 2002), not only do they point out the inherent weaknesses of an *eco-efficient* approach, but they also introduce an innovative *eco-effective* mindset to embed circular materials flows in regenerative industrial systems. Besides, the book details numerous practical instances of circular business models which they helped set up – mainly in the USA and Europe.

First coined in 1989, *eco-efficiency* is a concept according to which businesses strive to maximise their production levels while reducing their need for material inputs (WBCSD, 2006). In other words, an eco-efficient mindset aims at "getting more from less" (Braungart et al., 2006, p. 2). Capitalising on dematerialisation, enhanced input productivity, diminished toxicity levels, better recyclability and longer product lifespans, eco-efficiency tries to reduce the production of waste[1] while ensuring increased supply to an expanding population (Braungart et al., 2006).

Even though it seeks to minimise the need for material inputs and can lead to short-term economic growth and cost savings, eco-efficiency presents three main inherent flaws (Braungart et al., 2006). First, it appeared in mere reaction to the limits of the current linear system. With the pace of growth of both the world population and consumption levels inevitably outweighing the decreasing gains in marginal input productivity, eco-efficiency is deemed incapable of fundamentally redesigning linear material flows (Braungart et al., 2006; EMF, 2013a; McDonough & Braungart, 2002). Second, with its dematerialisation strategy to reduce the need for material inputs, eco-efficiency enjoys the momentum of the digital era and prioritises innovation for digitalisation over the exploration of new ways to use materials. In the long run, as dematerialisation reaches its limits, eco-efficiency may jeopardise economic growth and hamper innovation for new systems (Braungart et al., 2006). Third, eco-efficiency does not tackle toxicity enough and hinders its own goal of enhanced recyclability of products. Indeed, recycling is impacted toxicity levels. For instance, printing paper often contains plastics, inks and chemical additives, therefore its recycling demands even more noxious chemicals, leading to a recycled paper of lessened quality. This is a blatant example of *downcycling* – a form of recycling leading to materials of lower quality – which only delays the final discarding of the product (Braungart et al., 2006; EMF, 2013a; Shirvanimoghaddam et al., 2020).

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[1] This paper refers to waste as any by-product – of production or consumption – that no longer has value for the producer, the consumer or the environment.

Eco-effectiveness, on the other hand, fundamentally rethinks industrial material flows and draws inspiration from living organisms (Braungart et al., 2006; McDonough & Braungart, 2002) which hints at bio-mimicry. In nature, the concept of waste does not exist: the fallen leaves and flowers of a tree are broken down by the microorganisms that live underground, ensuring the enrichment of the soil and securing the next bloom – or even the rise of new trees in the surroundings. In the same train of thought, eco-effectiveness strives for all outputs to become inputs at some point, which addresses the urgency to radically rethink our material flow systems and makes up for the flaws of eco-efficiency. Indeed, it prioritises innovation for new systems thinking and calls for further investment in that direction instead of blindly praising dematerialisation at all costs. Besides, by designing products in which all components are inherently positive and purposeful by design, the issue of toxicity is tackled and waste is completely designed out (McDonough & Braungart, 2002).

To confront the philosophies of eco-efficiency and eco-effectiveness, we note that both can be helpful to achieve circularity – despite the three major weaknesses of eco-efficiency detailed above. Indeed, the shrinking in material flows per final unit of output (eco-efficiency) can be valuable in the long run, but only if the looping of those materials flows happened first-hand (eco-effectiveness) (Braungart et al., 2006; McDonough & Braungart, 2002). However, since eco-effectiveness borrows heavily from processes of living organisms, we recall the risks of bio-mimicry and over-simplification of the modelling of natural cycles that were discussed earlier (Murray et al., 2017).

The *cradle-to-cradle* design embodies the eco-effective philosophy and discriminates between two material flows, the *biological metabolism* and the *technical metabolism* (Braungart et al., 2006; McDonough & Braungart, 2002) which are clearly illustrated by the *butterfly diagram* (EMF, 2013b) in Figure 1. The analogy with environmental cycles goes even further, as materials receive the status of *nutrients*.

Biological nutrients are organic and non-toxic, which allows them to safely go back to biological cycles after they were used in human activities (Braungart et al., 2006). Of course, they can be vegetal materials but also bioplastics or other safe synthetics. Biological nutrients are used to generate *products of consumption* – products that are meant to be broken down by living organisms over their lifespan, running around a *biological metabolism*. For example, a piece of fabric designed as a product of consumption can be composted after it served its purpose as a t-shirt.

On the other hand, *technical nutrients* are mainly synthetic and mineral substances that have the capacity to flow around *technical metabolisms* with an endlessly sustained value over time (Braungart et al., 2006). They thrive in a closed-loop system of assembling, using, retrieving and dismantling. *Technical metabolisms* host *products of service* – products that serve users for as long as possible before the manufacturer takes them back to retrieve their *technical nutrients*. Such metabolisms require manufacturers to own their products and rent them to customers to ensure they are held accountable for the recapture of technical nutrients at some point in the loop. To illustrate this metabolism, let us consider a laptop which is leased to a user for as long as it performs well until it is returned to the producer so all durable components can be retrieved and reinjected into the tech industry. This example corroborates two concepts that facilitate eco-effectiveness, namely *eco-effective nutrient management*[2] and *intelligent materials pooling*[3] (Braungart et al., 2006).

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[2] *Eco-effective nutrient management* ensures all materials flow between businesses within the system, to ensure their value is endlessly maintained over time.

[3] *Intelligent materials pooling* allows different economic actors within the same technical cycles to share material inputs and manufacturing capabilities in mutually beneficial agreements, creating supportive coalitions within industries – just like internal processes among living organisms.
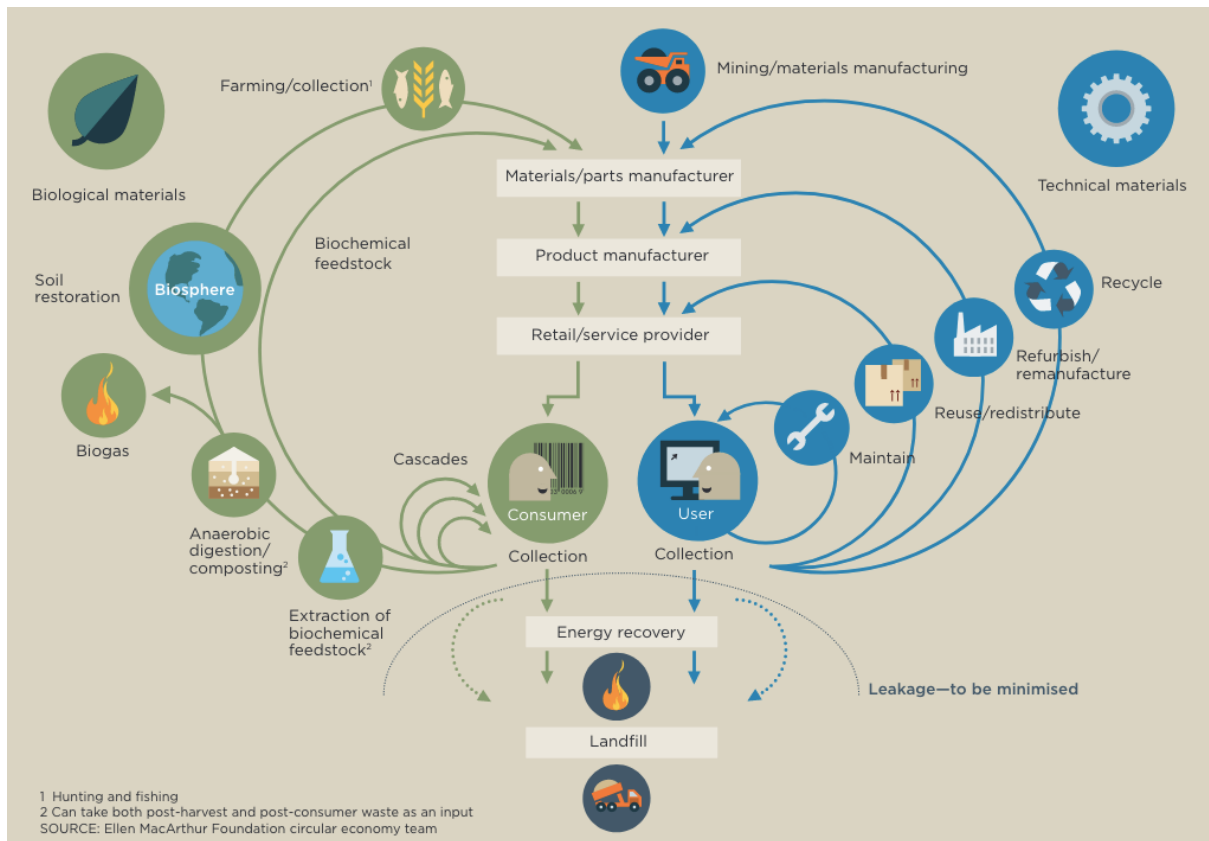
Figure 1 - Butterfly Diagram (Ellen MacArthur Foundation, 2013b, p.29)

To provide context around Figure 1, the Ellen MacArthur Foundation is a British not-for-profit that was formed in 2010 with the hope to speed up the transition toward a circular economy (EMF, 2013a). It is nowadays one of the main advocates for CE (Kirchherr et al., 2017; Murray et al., 2017; Velenturf et al., 2019). Although the publications of the Ellen MacArthur Foundation are not peer-reviewed articles, their quality showcases how grey literature can be trusted by scholars (Merli et al., 2018). Indeed, the initial report of the Foundation is said to be critical and to have impacted the global discourse around CE (Geissdoerfer et al., 2017; Kirchherr et al., 2017). Besides, public policies such as the EU Circular Economy Package (European Commission, 2015) tap into the work of the Foundation, as it has helped shape a new framework to entice investments in circularity (Velenturf et al., 2019).

Despite all efforts to design a genuine framework for circular material flows, their limits have been discussed in the literature. As far as technical metabolisms are concerned, the deterioration of material quality over time seems inevitable (Velenturf et al., 2019). When nutrients can be retrieved, some recovery mechanisms are so energy-intensive that they may offset the environmental benefits of the circulation of materials in a closed-loop system. Besides, although McDonough and Braungart (2002) plan for the biological and technical metabolisms to run distinctly, the ubiquity of heterogeneous materials – both biological and technical – may render the design of two separate flows irrelevant (Carus & Dammer, 2018). Such conglomerate materials are referred to as *monstrous hybrids* by McDonough and Braungart (2002) since their heterogeneity impedes the retrieving of materials for reinjection into the two separate metabolisms. The major dependence of CE on renewable energy may add to the list of its shortcomings. As a matter of fact, renewables are generated thanks to resource-intensive technology, notably hungry for rare minerals (European Commission, 2020) while the extractive sector is one of the most significant polluters (Circle Economy, 2021). Therefore the overwhelming reliance of CE on renewables may have net-negative environmental impacts in the long run and on a global scale (Velenturf et al., 2019).

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To the best of our knowledge, Kirchherr et al. (2018) were the first to conduct a study on a large sample to identify the barriers to CE gaining momentum. They conclude their paper by classifying the major barriers into four categories and they highlight how strongly they come together to prevent change. For instance, cheap virgin materials may hinder the development of circular business models and foster linearity, inducing low awareness among consumers of the necessity to transition to more practices, which does not encourage companies to invest in their circular journey. Overall it seems clear that despite the growing interest in CE, it is still far away from being the predominant business model in Europe (Kirchherr et al., 2018). So far, the European Commission (2015) encourages circular systems in niches but still fails to engage leading firms for best practices in circularity to gain in validity (McDowall et al., 2017). The European Action Plan for CE should provide sound indicators for companies to measure their progress toward circularity, but also for targets (EU, 2008) to be more tightly binding (McDowall et al., 2017).

We would like to note that in spite of promoting sound material flows in open- and closed-loop systems, both CE formulations from McDonough & Braungart (2002) and the EMF (2013) are quite technical and mainly focus on industrial material flows. Even though efforts to make up for the shortcomings of linear systems may take the shape of eco-efficient or eco-effective strategies, these are often offset by strongly-increasing consumption levels (Freudenreich & Schaltegger, 2020). Therefore, achieving sustainability through circular business models must entail a cutback in consumption levels and a fundamental change in consumers' lifestyles. In this train of thought, the *sufficiency approach* to CE is defined from the consumer perspective. It sheds light on consumer behaviour and seeks to associate lower consumption levels with sustainable production practices. The sufficiency approach underlines consumers' efforts for sustainability by helping them to change their consumption patterns and lifestyles (Freudenreich & Schaltegger, 2020). Consumers' will to ingrain simplicity and mindful consumption in their lives translates into lower consumption levels.

To examine one industry in which a contraction of consumption levels would help achieve sustainability, this paper considers the fashion sector. Indeed, the fashion industry is one evocative example of those whose efforts toward sustainability are far outweighed by expanding consumption levels (Niinimäki et al., 2020). The fashion sector has witnessed a soar in consumption, as the demand for garments is nearly twice as large as it was 15 years ago, while the average lifespan of garments has never been so short (EMF, 2017). Such characteristics have been enabled by the dominance of the fast fashion movement, a mass-market business model that strives to regularly provide consumers with low-cost, in-vogue items (Fletcher, 2010; Niinimäki et al., 2020).

The following section of this literature review provides an overview of the current state of the fashion industry and considers its deficiencies. As we detail the limits of the linear fast-fashion model, we make a point for the apparel industry to radically reinvent itself toward more circularity. Since rising consumption levels are to offset whatever sustainability efforts are made on the production side, we consider the *sufficiency* approach to CE to reconcile consumers and producers in their ambition to achieve sustainability in fashion.

Making the case for a circular fashion system

Taking trend-led looks from catwalks to the window displays of street stores within weeks (Fletcher, 2010), fast fashion is thriving on a dangerous dynamic that urges designers, producers and vendors to leap from one fashion to the following as quickly as possible (Ozdamar Ertekin & Atik, 2015). The fast-fashion model leans on persistent consumption and spontaneous purchasing – it prompts a pressing feeling of urgency to trigger purchase decisions (Niinimäki et al., 2020). Iconic fast-fashion leaders such as the Swedish brand H&M and the retailer Zara (of the Inditex Group) have allowed consumers to grow a habit of compulsively buying cheap, expendable items until they grow out of fashion (Fletcher, 2010; Ozdamar Ertekin & Atik, 2015; Sun et al., 2021). The expanding levels of consumption have driven prices downward, which in turn has only called for more purchase transactions to happen.

The fashion industry has been commonly linked with heavy exploitation of both human labour and natural resources (Fletcher, 2010; Ozdamar Ertekin & Atik, 2015) making it one of the largest polluters. Indeed, it generates about 10% of overall greenhouse gas emissions and accounts for one-fifth of industrial water contamination (UN Economic Commission for Europe, 2018) through industrial wet processes (Niinimäki et al., 2020; Sandin & Peters, 2018). Overall the fast fashion model is yielding huge amounts of textile waste which in turn harm natural habitats, making it a key environmental threat (EMF, 2017; Fletcher, 2010; McNeill & Moore, 2015; Niinimäki et al., 2020; Sandin & Peters, 2018; Sun et al., 2021) let alone the social impact of the industry on workers' well-being in developing countries that rely on exports of textiles and garments (Ozdamar Ertekin & Atik, 2015). In the following paragraphs, we examine the shortcomings of the fast-fashion model in terms of (1) environmental deterioration, (2) social welfare and (3) the amounts of textile waste that have been piling up around the globe. This strengthens the case this paper makes for a fundamental change in the fashion industry and will lead to the definition of the slow fashion movement as a *sufficient* alternative model (Freudenreich & Schaltegger, 2020).

Environmental deterioration. As far as the environmental impacts are concerned, we describe the industry's water usage, its carbon footprint and the impacts of the chemicals used in industrial processes. Water in the fashion industry is mainly consumed in cotton crops or industrial processes such as bleaching and dyeing (Niinimäki et al., 2020). Textile production relies on water-intensive cultures (Sandin & Peters, 2018) and production processes which have led to the milestone destruction of natural sites. For instance, the drought of the Aral Sea has been caused by water deviation from its upstream rivers for the sake of irrigating water-intensive cotton crops (Chapagain et al., 2006). This not only means that fashion intensifies water shortages, but also that it deprives manufacturing areas of running water for domestic use (Niinimäki et al., 2020). In terms of greenhouse gas emissions, textiles have one of the highest emission rates per unit (Kissinger et al., 2013) because the industry is energy-intensive. Leading textile exporters like China are often countries that happen to rely on fossil fuels which only worsens the carbon footprint of the final garments (Niinimäki et al., 2020). The distance between manufacturing countries (mainly in the Far East) and consuming countries (mainly Western countries) adds the burden of shipping to the overall carbon emissions. A portion of the final carbon footprint is also borne by the consumers – mainly via laundering the items. As far as chemicals are concerned, most of them are lubricants and solvents that are useful for spinning and knitting or water repellents, tints or peroxides that are used in wet processes (Niinimäki et al., 2020). A large amount of pesticides is also applied to cotton crops. Chemicals are heavily used in clothing production and once they are released into sewage water or end up in soils, they harm biodiversity, kill microorganisms and insects and tamper with biological processes (Niinimäki et al., 2020; Pesticide Action Network UK, 2017).

Social welfare. In addition to taking its toll on the environment, the fast fashion system has also been scolded for the exploitation of underpaid labour – including child labour – mainly located in developing countries. The unforeseeable characteristic of the supply chain in a fast-paced industry leads to unstable contracts, and hazardous working environments (Fletcher, 2010; International Labour Organization, 2013; Ozdamar Ertekin & Atik, 2015). The collapse of the Rana Plaza clothing factory in Bangladesh, which led to the death of more than a thousand employees (International Labour Organization, 2013) still resonates in the literature as one of the most infamous instances of unacceptable labour conditions and blatant lack of basic human rights in dress manufacturing (Ozdamar Ertekin & Atik, 2015). The extensive relocation of textile and apparel manufacturing activities to countries offering cheap labour has increased the complexity of the supply chain, and incredibly obscured the transparency of the production processes (Niinimäki et al., 2020). Therefore, supervision systems and enforcement tools are inefficient and an overwhelming number of factory workers cannot work with dignity (International Labour Organization, 2013).

Textile waste. Most of the textile waste generated through fast fashion sales ends up in landfills, while the rest is shipped to developing countries or incinerated for energy recovery (Niinimäki et al., 2020; Sandin & Peters, 2018). A considerable part of textile waste is generated during the production phase when fibres and yarns are discarded, cut or wrongly weaved or when pieces of fabric are cut out to fabricate fitting garments (Niinimäki et al., 2020). *Deadstock* – all accumulated unsold or returned items – is another source of textile waste that materialised quickly along with the rise of online retailing. To avoid unnecessary warehousing expenses, retailers reportedly burn the deadstock in specialised factories to recover energy. The luxury brand Burberry burnt around €100 million worth of unsold bags, clothes and fragrances over the last few years (Zazzara et al., 2020). Although retrieving some energy by burning deadstock is preferred over landfilling it, it does not lead to a net-positive impact on the environment because the combustion releases greenhouse gas and toxic chemicals into the atmosphere (Niinimäki et al., 2020; Sandin & Peters, 2018). Besides, incinerating manufactured garments shows an obvious waste of resources. The reduced lifetime of products and increasing demand (EMF, 2017) lead to quickly growing volumes of textile waste. While second-hand markets in developing countries are saturated, landfills represent an eternal trap for the value of resources that can never be retrieved (EMF, 2013a, 2017) and recycling rates have stayed very low (Niinimäki et al., 2020). In Europe between 30% and 50% of discarded clothes are collected (European Clothing Action Plan, 2019), most of which are shipped to developing countries, landfilled or incinerated (Niinimäki et al., 2020; Sandin & Peters, 2018).

When they are indeed recycled, most of the textiles are actually *downcycled* into lower-quality materials such as fibre cleaning cloths or insulating shreds (EMF, 2017). Therefore very few textiles are recycled in a closed loop, that is, very few of them are recycled into other fashion items of equivalent quality. Closed-loop business models have proven to be difficult to implement in the apparel industry (Freudenreich & Schaltegger, 2020). More than half of textile fibres derive from petroleum (Sandin & Peters, 2018), hence the majority pertain to *technical metabolisms* (Braungart et al., 2006; McDonough & Braungart, 2002) which have been criticised to entail inevitable losses of material value over time (Velenturf et al., 2019). We recall that the majority of clothes contain or are treated with dyes, bleaches and other toxic chemicals (Niinimäki et al., 2020). Therefore even materials such as cotton, the second most common type after petrochemical derivatives (Sandin & Peters, 2018), are blended with *technical nutrients* (McDonough & Braungart, 2002). The problematic recycling of such *monstrous hybrids* has been discussed earlier in this paper.

All the negative impacts stated above are undeniably exacerbated by the growing demand for clothes and accessories (Freudenreich & Schaltegger, 2020; Niinimäki et al., 2020), a reduced lifespan of the garments (EMF, 2017; Fletcher, 2010) and the uprise of online retailers, which are only enabling the demand to grow larger with outstanding delivery speed (Niinimäki et al., 2020). NGOs have stood up to offer alternatives (e.g., Fashion Takes Action, Ellen MacArthur Foundation) and fashion businesses have been advertising sustainability. However, the use of sustainable materials, marginal improvements in the supply chain and recycling strategies have failed to procure an overall decrease in unwanted environmental and social impacts (Freudenreich & Schaltegger, 2020). Indeed, the ever-increasing demand forces businesses into offering solutions that meet higher sustainability criteria without decreasing their production levels. The efforts that are made under mass-market assumptions seldom lead to net-positive environmental impacts.

Therefore, as far as the fashion industry is concerned, no sizable progress toward sustainability can be accomplished without involving consumers in the process (Jung & Jin, 2014; Niinimäki et al., 2020). For these reasons, we select the *sufficiency approach* to CE in the fashion industry as the most relevant to this paper. It aligns sustainable production processes with reduced consumption levels by focusing on the consumers, which seems to be the most promising alternative to mitigate the environmental and social externalities of the fashion industry (Freudenreich & Schaltegger, 2020). It may unlock innovation for new products, services and business models, and seeks to empower consumers in making more mindful purchase decisions.

All in all, by restraining their consumption levels, fashion consumers can participate in more sustainable practices – only under the condition that high-end pieces of clothing enable an extended product lifespan. If contributions from the consumers are to decently support sustainable development within the fashion industry, they have to come hand in hand with sustainable production principles. Indeed, consumers can only reduce their demand for clothing if durable garments are sold on the market.

Given the likelihood that the *sufficiency approach* would effectively uphold sustainable development and address the need for more circular business models in the fashion industry, this paper considers the *slow fashion* movement as a relevant and *sufficient* approach. Given the outstandingly wide scope of sustainable fashion, the following section of this literature review focuses exclusively on slow fashion as one movement that falls under the umbrella of sustainable fashion. This paper intends to examine the movement as one means to implement sustainable fashion. The movement is defined and examples of running business models are shared to illustrate its operationalisation. The limits of the movement are detailed, which will bring attention to consumer attitudes and behaviour in both slow and sustainable fashion, which links the literature review back to the original purpose of this paper: unlocking sustainable fashion consumption.

The slow fashion movement

A systematic literature review highlights the movement as one of the most salient in the field of sustainable fashion marketing (Yang et al., 2017). Slow-fashion-related papers focus on sustainable materials selection and supply chains (Yang et al., 2017) – slow *production* – whereas other studies focus on consumer attitudes and behaviour to understand and facilitate slow *consumption* (Jung & Jin, 2014; Niinimäki, 2010). In addition to being based on alternative infrastructures for manufacturing and supply, it also requests a lower number of outputs (Fletcher, 2010).

Slow fashion associates consumers with producers to achieve sustainability (Freudenreich & Schaltegger, 2020; Ozdamar Ertekin & Atik, 2015). It stems from the consumer perspective and puts forward an extended use of garments by consumers – who are enabled to enjoy the process of *wearing* a piece of clothing rather than *buying* it (Fletcher, 2010). Slow fashion is an environmentally and socially conscious movement that drives consumers to value quality over quantity (Fletcher, 2007; Jung & Jin, 2014).

First coined by Fletcher (2007) of the Centre for Sustainable Fashion (London College of Fashion), the slow fashion movement draws from Carlo Petrini's slow food movement (Slow Food, 1986) which was triggered by the intended set-up of a McDonald's outlet in Rome. Both movements have in common that they were born in reaction to the mass-marketing of standardised versions of original products – fast food and fast fashion. It is argued that despite their contributions to economic growth, fast food and fast fashion actually reduce society's worth by putting negative environmental and social externalities on the public agenda (Niinimäki et al., 2020; Shirvanimoghaddam et al., 2020), and degrading cultural diversity (Fletcher, 2010). Slow fashion must not be understood as the mere opposite of fast fashion, for it categorically turns down the well-established set of economic beliefs that uphold growth-based business models at any cost (Fletcher, 2010). Before anything, slow culture calls for a questioning of the systems in place in the fashion field and second-guesses the relevance of the root values of a growth-based economy.

The "Slow + Design" convention (Capatti et al., 2006) was held in Milan and put forward a manifesto for slow culture as a means to take the time to design, fabricate, and praise quality. Although not exclusively dedicated to fashion, this convention examines three ways in which slow culture can undermine the dominant fast fashion system to support sustainability. These three ways are a local approach to the economy, increased transparency of simpler production systems, and sustainable and sensorial products (H. Clark, 2008; Ozdamar Ertekin & Atik, 2015).

The employment of local human resources and usage of local materials is one way to avoid standardised, homogeneous products that lack authenticity (H. Clark, 2008; Jung & Jin, 2014). If such local economic systems were to develop around the globe, all items that cannot be produced locally may be exchanged. Thus, the currently globalised economy would turn into an extensive network of interconnected, localised systems.

Such a system of *distributed economies* may facilitate the circulation of locally-manufactured products across economic nodes to ensure high diversity levels with authentic pieces, and feed a cosmopolitan society (H. Clark, 2008). In comparison with fast fashion, the relationships between fashion designers and consumers enjoy the smaller size of businesses to build trust and collaboration (Fletcher, 2010). Besides, small-scale businesses allow for more transparency along the production chain, that is, the origins of a product need not be hidden behind a generic brand name and the supply chain is simplified. Closer interactions between producers and consumers enable the consumers to contemplate the true origins of the garment and the heritage that it carries, which results in heightened customer satisfaction (H. Clark, 2008). This concept was referred to as *sustainable sensoriality* during the Slow + Design seminar (Capatti et al., 2006). It is relevant because the common object-user relationship that fast, compulsory purchases promote is shallow (Fletcher, 2010) and leaves some room for fashion designers to explore more meaningful ways for humans to feel connected to their clothes (H. Clark, 2008).

A thorough conceptual examination of slow fashion (Jung & Jin, 2014) shows that slow fashion is a broad notion that is related to sustainability, among others. To paraphrase its findings, the slow fashion movement is underpinned by (1) a concern for the health and safety of factory workers and their local communities; (2) a prolonged perceived value of the garments that carry with them their own story, as slower production enables skilled craftsmen to use more traditional techniques; (3) a search for diversity among exclusive items in limited quantities; and (4) a will to extend the lifespans of garments that are durable, functional and versatile. It is of course highly relevant to this paper to highlight the willingness of slow fashion consumers to buy items that are more durable and disregard fast-changing trends that trigger repetitive purchases. The four characteristics of slow fashion described in this paragraph lead to the definition of its five underlying dimensions, namely *equity*, *authenticity*, *functionality*, *localism* and *exclusivity*. The authors also note that although slow fashion appeared in reaction to the environmental shortcomings of fast fashion, a concern for the materials that are used in manufacturing and the ways to discard the products did not stand out as an important dimension of slow fashion.

Although slowing down the speed of production is one feature of slow models, the slower pace also enables the creation of higher-quality garments than in the current fast, standardised system (H. Clark, 2008). The non-exploitation of human workforce and natural resources requires slower manufacturing speeds, but these are also meant to facilitate the production of higher-end garments, foster diversity and engage consumers in the production of their clothes to increase their perceived value (Fletcher, 2010). Therefore, consumers' attitude shifts from quantity of purchases to quality of valued clothes, which can diminish the demand for fashion if newly-produced garments have longer lifespans (Fletcher, 2010; Jung & Jin, 2014). In this train of thought, slow fashion is a relevant circular alternative to fast fashion because it enables more sustainable ways to manufacture, use and reuse garments (H. Clark, 2008).

Alas, slow fashion is often misleadingly reduced to the idea of slower production cycles because its ambitions cannot be understood through the narrow lens of a growth-based economy (Fletcher, 2010; Henninger et al., 2016). The academic distinction between slow fashion and sustainable fashion is still nebulous (Jung & Jin, 2014). The lack of academic understanding and absence of an official definition of the slow fashion concept affect its capacity to take precedence over the currently dominating fast-fashion paradigm (Henninger et al., 2016; Jung & Jin, 2014). One of the biggest challenges faced by the slow fashion movement is that it is lexicographically opposed to fast fashion, therefore considering both movements as simple antitheses is easy and locks the slow fashion concept in the current growth-based system (Fletcher, 2010).

The blurry academic line that stands between luxury fashion and slow fashion is yet one more call for scholars to investigate the matter. Luxury brands can bet on expensive garments connoting durability – and sustainability by extension – to probe consumers to buy fewer items of better quality (Sun et al., 2021). Luxury houses such as Dries Van Noten have reportedly been striving to slow down their cycles and produce less futile products that do not expire once the season is over. Gucci has recently become the first leading luxury house to partner with the Ellen MacArthur Foundation to focus on circular designs and regenerative agriculture (Nast, 2022). Besides, online platforms that facilitate the rental of luxury items (e.g., Rent the Runway) allow the maximum use of the products to several consumers, who are able to wear items a few times without completing one-off purchases that lock the value of the physical materials in their wardrobe (Sun et al., 2021). This draws a solid parallel with the slow fashion perspective, where garments are viewed as an investment – both emotional and financial (H. Clark, 2008). Some authors argue that luxury brands may lead the sustainability transition in fashion thanks to their focus on craftsmanship and timeless design (Joy et al., 2012).

We note that luxury fashion seems to be consumed mostly to affirm a social status and compare oneself to others in society (Ko et al., 2019) which does not seem in line with the underlying dimensions of slow fashion (Fletcher, 2010; Jung & Jin, 2014) or the most salient features of slow culture (Capatti et al., 2006). Besides, even authors that argue in favour of the parallels between slow and luxury fashion admit that luxury consumers may disregard durability in their purchases because it is not one of the prevailing traits of luxury items (Sun et al., 2021). Overall, there is no widely accepted definition of slow fashion (Jung & Jin, 2014) or luxury fashion (Ko et al., 2019), which does not help to draw a clear line between the two movements.

As far as enhancing the quality of garments goes, most endeavours focus on textiles selection and the manufacturing process (Fletcher, 2012). As far as materials are concerned, durability (which enables reusing) appears to be more beneficial to the environment than recycling (Sandin & Peters, 2018). Indeed, the longer the lifespan of a garment, the longer it avoids the need to manufacture a new one – or engage in a recycling process. We note that recycling clothes is still more helpful to spare natural resources than incinerating or landfilling. However, neither of these CE pillars pays lots of dividends if clothes are not emotionally durable and consumers continue to discard them at the present rate (Fletcher, 2010; Freudenreich & Schaltegger, 2020).

It is argued that the fundamentally social characteristic of fashion (Niinimäki, 2010) implies that the endurance of a garment is ultimately determined by a philosophy of use, not the materialistic tenacity of the textile itself (Fletcher, 2012). Building on the idea of *sustainable sensoriality*, Fletcher (2012) defines *emotional durability* as the nurturing of a meaningful connection between an individual and an object to stop relying on the purchase of virgin products to build purpose or express oneself. The latter definition heavily borrows from previous work on emotionally durable design (Chapman, 2005)[4]. This piece of information is consistent with the purpose of this paper since it suggests that durability is consumer-based rather than materials-based.

Now that durability is defined from both production and consumption perspectives, the following paragraphs discuss obsolescence, and in reaction, ways for users to embed durability in their philosophies of use (i.e., *shared ownership* and *user-ship*). Some slow fashion enterprises are mentioned along the way, to provide concrete examples of running business models to the reader.

For the growth-focused fashion system to continue thriving in saturated markets, it leaves no doubt that products must become obsolete after a relatively short period of time – if not physically, then emotionally at least (Fletcher, 2012). According to Burns (2010), *obsolescence* can be categorised into four types: aesthetic (the look of the product renders it obsolete); social (social norms and fashion trends steer the product into a bin); technological (new disrupting technologies make a former product irrelevant); and economic (buying a new product is objectively cheaper than having the old one repaired). In fashion, aesthetics is of course the prevailing tool to render clothes outdated and make them virtually obsolete (Fletcher, 2012).

To overcome the notion of obsolescence, Henninger et al. (2016) suggest the principle of *shared ownership* as an asset to sustainable fashion. Shared ownership allows employees, consumers, suppliers and other stakeholders involved in the activities of sustainable fashion businesses to provide their insights and feedback to owners or managers. The shared feedback can be discussed and translated into hands-on business decisions that can be implemented. This concept cultivates meaningful relationships among the stakeholders of businesses and defines new power relations between them. Besides, it helps blur the line between consumers and producers as they are both involved in the business, or even in the supply of materials. This is in line with the slow fashion ideal and advocates for sustainable values and ethical behaviour (Fletcher, 2010; Ozdamar Ertekin & Atik, 2015).

In London, Junky Styling allows customers to co-produce their clothes, made from former garments that have been taken down and can be redesigned (Ozdamar Ertekin & Atik, 2015; Sanders & Seager, 2009). Although the process is not cheap, the final product is one-of-a-kind and its sewing by highly-skilled staff ensures its physical longevity (H. Clark, 2008). Other fashion designers such as Natalie Chanin and her Project Alabama have been manufacturing robust clothes that are also meant to carry cultural heritage and memories so they are held dear for a long time (H. Clark, 2008; Ozdamar Ertekin & Atik, 2015). The New-York based company Slow and Steady Wins The Race follows the same rationale, as it seeks to embed slow fashion practices in its activities and means to stall the current obsolescence culture (H. Clark, 2008). The success of certain slow fashion business models brought them the support of celebrities like Kate Moss in the media.

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[4] In the two following paragraphs, Burns's categorisation of the different types of obsolescence and Stahel's idea of *user-ship* were both published in Chapman's book on emotionally durable design (2010). All three authors are cited by Fletcher (2012), who then draws links with her Local Wisdom Project (see *infra*).

Complementarily, *user-ship* – as opposed to *ownership* – helps move the discourse around durability away from product-based mindsets (Stahel, 2010). Indeed, user-ship considers durability as a consequence of consumer behaviour, rather than simple material quality. It genuinely considers the behaviour of users instead of reducing them to consumptive buyers. Both *shared ownership* and *user-ship* leave room for new design approaches to durability – ways to empower and engage consumers, and reshape their skills toward more meaningful, satisfying relationships with fashion (Fletcher, 2012).

Since 2009, Fletcher has been conducting qualitative research in Europe and North America through the Local Wisdom project (Fletcher, 2012). The project aims to unravel the practices and habits of users that allow considerable extensions of their clothes' lifespan. Local Wisdom explores sustainability in fashion as a series of human interactions and processes rather than manufacturing technicalities. In other words, Local Wisdom delves into the mechanisms of user-ship[5] to unlock potential levers of user-based durability. Since the research is highly exploratory, the data it generates is deeply specific and allows for little generalisation, yet it offers reliable insights into user-object relationships which have proven to increase consumer satisfaction and environmental benefits. The findings of the Local Wisdom initiative have been in line with the slow fashion movement, as the user behaviours that have been observed value authenticity and diversity, local resources and craftsmanship. Very often, the stories of long-life items have little to do with their physical resistance and involve cheap, creative practices that do not require lots of additional material resources. Again, the results of this qualitative research show that durability is way more a matter of post-purchase behaviour than the choice of textiles or manufacturing process.

To name one more brand that has been nudging its consumers to buy durable clothes more consciously and in fewer quantities, Patagonia and its "Don't Buy This Jacket" campaign featured on the front page of The New York Times on a Black Friday (Patagonia, 2011). The campaign takes on consumerism and stresses the environmental impacts of the advertised jacket to push consumers to think twice before they complete the purchase. Even though the brand is put forward as one advocate for slow fashion, mainly because it uses sustainable materials and ensures fair working conditions (Sun et al., 2021), other authors argue that the brand does not reflect the valuing of local resources and authenticity of craftsmanship (Jung & Jin, 2014). Patagonia is constantly increasing sales and expanding across the globe, thus this example may be more controversial than the others presented in this paper. However, it for once shows the efforts of an international brand to address the environmental crisis by engaging its consumers in the process (Patagonia, 2011), hence its mention in this paper.

Overall, the majority of the slow business models that are presented in this paper are of small size and their existence in the face of massive, globalised producers may make them look anecdotal (H. Clark, 2008). However, the slow business models that are examined do show a means to reposition the fashion system and redefine the values it stands for, while they provide exciting consumer experiences and meaningful consumer-object relationships. *Slow* and *fashion* are not incompatible and can be associated to make way for more sustainable practices. If anything, the previous shows how fundamental it is that consumers actively take part in the sustainability transition of the fashion industry. Therefore, a deep-dive into sustainable consumers' attitudes and perceptions of slow fashion follows, along with a definition of the attitude-behaviour gap that is observed in this domain.

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[5] Also called "*craft of use*" by Fletcher.

Sustainable fashion consumers and the attitude-behaviour gap

In a paper that connects several other publications in the field of sustainable consumption in the apparel industry, Niinimäki (2010) investigates the notion of appearance and how fashion can be viewed as a social phenomenon. On the one hand, sustainable consumers share ethical *values*[6] and *attitudes* in such forms and proportions that make them unique individuals. On the other hand, sustainable consumers seek to express those values through, among others, their appearance (i.e. fashion). Through the purchase of sustainable items, consumers achieve a certain *lifestyle*[7]: they can express their individuality (showcase ethical values or disclose environmental concerns) and address their need for social acceptance (imply links with a certain social status, comply with certain standards of aesthetics). Other authors have called slow fashion a *lifestyle* on its own (Pookulangara & Shephard, 2013). We also note that fashion products may be compared to bridges that lead to a certain lifestyle, which can (1) in this sense, give meaning to one's life (McCracken, 1988, as cited in Niinimäki, 2010); and (2) in today's prevailing consumerist philosophy, be a great barrier to the rise of sustainable fashion (Niinimäki, 2010).

In this sense, sustainable fashion genuinely enables consumers to connect their values and attitudes with their appearance in society (Niinimäki, 2010). Garments must therefore be seen as a set of external touchpoints with others in society, which assist consumers in building their sense of *self*. Since the construction of one's *self* is constantly impacted by life circumstances, it can be viewed as an ongoing, never-ending cycle that actualises into changes in style and appearance. This notion must not be overlooked: sustainable consumers are constantly torn between their individual needs of self-construction and the social benefits that they want to encourage.

In the prevailing fashion system, actualising one's appearance still implies unsustainable purchases, which pushes sustainable consumers into an uncomfortable situation of constant contradiction (Beard, 2008). Due to this state of tension, sustainable consumers may overlook their values and ignore their environmental awareness if the purchase affects their perceived well-being, their economic stability or does not meet their material expectations (Niinimäki, 2010). To observe a fundamental change in consumption patterns, designers must understand consumers need to be driven toward alternative systems such as that of slow fashion, rather than guilted out of fast-fashion purchases.

Research on fashion consumers shows that their interest in ethics and sustainability is strongly increasing (Niinimäki, 2010). However, markets are still flooded with cheap fashion items made in the Far East, which shows a lagging expansion of sustainable markets. This implies that even with more positive attitudes toward slow fashion, a gap spreads between these attitudes and real consumption behaviour (Niinimäki, 2010; Ozdamar Ertekin & Atik, 2015; Young et al., 2010). In other words, consumers who are particularly sensitive to environmental and social concerns may still appreciate purchases that stand against their beliefs (Joy et al., 2012). In the literature, this inconsistency between consumers' attitudes and their actual behaviour is named the *attitude-behaviour gap* (Jacobs et al., 2018; Niinimäki, 2010) and is examined in this paper as a barrier to sustainable fashion consumption.

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[6] The terms *values* and *attitudes* are defined further in the literature review.

[7] "The totality of a person's social practices, and the routines incorporated into habits, as well as the story that he/she tells about them" (Niinimäki, 2010, p. 152).

Attitude-behaviour gaps are commonly observed in alternative ethical markets (Jacobs et al., 2018). They have been increasingly studied in academia because they hold the potential to unlock consumption and expand sustainable businesses. Sustainable fashion remains a niche market because a severely restricted number of consumers are willing to neglect their sense of aesthetics, disregard their need for expression of *self* through fashion, pay a price premium and spend the time and energy to find suitable garments (Beard, 2008). Such niche segments have been said to encompass *ethical hardliners* (Niinimäki, 2010) or *highly involved* in slow fashion (Jung & Jin, 2016). The reason for such small-sized segments is designers and manufacturers do not genuinely understand what consumers expect from sustainable fashion (Niinimäki, 2010).

Despite the great attention it has been given, scholars are urged to further investigate this attitude-behaviour gap to grasp its magnitude and examine barriers to sustainable consumption. More specifically, potential barriers that have been identified by qualitative contributions (Jung & Jin, 2016; Pookulangara & Shephard, 2013; Vehmas et al., 2018) should be systematically investigated in quantitative research (Hassan et al., 2016, as cited in Jacobs et al., 2018). The only quantitative study we have found on enablers of and barriers to slow fashion examined a limited number of enablers and barriers, while its results were drawn from a sample of exclusively German females (Jacobs et al., 2018). The authors call for the investigation of additional potential moderators of sustainable fashion consumption, as well as more generalisable results across Europe, involving male and female respondents.

To prove the existence of an attitude-behaviour gap in sustainable fashion consumption is not the purpose of this paper, rather, this paper seeks to measure the significance of such a gap in a broader market and hopefully generate results that are more generalisable. More globally, the latter sections of the literature review showcase how the slow fashion movement is a relevant alternative to operationalise a circular economy in fashion (mainly through reusing garments that are perceived as more durable and valuable). However, they also show how difficult it can be to define slow fashion accurately without toeing the line toward other fashion movements. Given the previous and the ubiquity of attitude-behaviour gaps in sustainable markets, this paper seeks to unveil ways to unlock *sustainable* fashion in the broad sense. This leads us to the following research question:

> **RQ1.** *What magnitude does the attitude-behaviour gap have in the European sustainable fashion market?*

In this respect, the value-attitude-behaviour hierarchy (VABH) (Homer & Kahle, 1988) is the theoretical framework in which this study is embedded. According to this theory, consumers' behaviour is guided by their *values*, which exert their influence indirectly through consumers' *attitudes*. Values are very similar to beliefs, they represent certain goals in life and therefore guide our actions (Schwartz, 1992). Undoubtedly, values are key elements of consumer behaviour, especially in sustainable fields (Jacobs et al., 2018). Meanwhile, attitudes are defined as favourable or unfavourable perceptions of an object or situation, which influence consumer behaviour as well (Wiederhold & Martinez, 2018). The following hypothesis draws from these definitions:

> **H1.** Positive attitudes toward sustainable fashion encourage sustainable fashion purchase behaviour.

In his milestone universal study of human values, Schwartz (1992) offers to organise them into ten categories, representing ten main goals that humans can pursue in life (hedonism, benevolence, or conformity to name a few). The author then groups those ten categories under two dimensions that stand for *self-transcendent* values and *self-enhancement* values. Typically, self-transcendent values symbolise the concern for the well-being of others and nature (e.g., universalism and benevolence), whereas self-enhancement values speak for goals that concern one's success in society, and dominance over one's peers (e.g., power and achievement). Research in sustainable and ethical consumption shows that self-transcendence values facilitate environmentally and socially conscious behaviour, whereas self-enhancement values discourage such behaviour (Jacobs et al., 2018). Building on Schwartz's work (1992), we define the following set of hypotheses:

H2a. Self-transcendent values encourage sustainable fashion purchase behaviour.

H2b. Self-transcendent values encourage positive attitudes toward sustainable fashion.

H3a. Self-enhancement values inhibit sustainable fashion purchase behaviour.

H3b. Self-enhancement values inhibit positive attitudes toward sustainable fashion.

Hypotheses H1, H2, and H3 are very similar to those formulated by Jacobs et al. (2018) for the simple reason that this part of the VABH is meant to be quantified among a more diverse audience.

As significant an effect as values and attitudes may have on one's behaviour, they cannot totally explain the existence of an attitude-behaviour gap (Bagozzi & Burnkrant, 1979; Jacobs et al., 2018). The VABH alone does not have enough explanatory power over the attitude-behaviour gap. Besides, some studies in sustainable fashion call for further investigation of other potential moderators of sustainable consumption (Jägel et al., 2012; Niinimäki, 2010). Therefore, the following details some of the enablers of, and mostly barriers to sustainable fashion consumption. These may directly affect consumers' purchase behaviour, leading to the second research question of this paper:

RQ2. What are the drivers of and barriers to sustainable fashion consumption in Europe?

Barriers to sustainable fashion consumption

The lack of transparency along the production chain facilitates *greenwashing*[8] and hurts the trust that consumers put in fashion brands (Henninger et al., 2016; McNeill & Moore, 2015; Young et al., 2010). Misleading communication about sustainable activities has been identified as a strong barrier to sustainable purchases (Niinimäki, 2010; Ozdamar Ertekin & Atik, 2015). Clothes and accessories are overwhelmingly labelled as "eco", "green", "organic", "sustainable", "recycled", "natural" or "fair trade" to convince consumers that they are making ethical purchase decisions (Beard, 2008). However, fashion consumers are generally little aware of the consequences of their consumption as they lack knowledge as to what exactly those labels mean. In terms of publicity, a number of sustainable consumers are confused about the information shared by businesses about their environmental and social impacts (Vehmas et al., 2018). A huge flow of generic information that guilts consumers about their practices, urging them to save the planet, may leave consumers feeling powerless. Furthermore, the current supply chain complexity disconnects consumers from the consequences of their purchases, which is often a hindrance to sustainable consumption behaviour (Ozdamar Ertekin & Atik, 2015).

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[8] To claim to perform well environmentally when it is not the case, that is, make ambiguous or dishonest sustainability-related statements (Henninger et al., 2016).

Not only does this lack of clear, engaging communication impair consumers' trust in brands, but it also makes certain sustainable consumers feel powerless, as though their ethical behaviour had no impact on the overall industry (Wiederhold & Martinez, 2018). Increased transparency about the manufacturing processes may improve the faith that consumers have in companies (Vehmas et al., 2018). All in all, the literature emphasises a lack of information and a questioned credibility of the information that is at hand. Therefore a clear lack of knowledge and awareness, likely causing sceptical relationships between brands and their consumers, is a potential barrier to slow fashion consumption:

> **H4.** A lack of trust in fashion brands' commitment to sustainability inhibit sustainable fashion consumption.

Ever busier lifestyles only allow so much time for leisure activities like shopping (Young et al., 2010). Since sustainable garments are less available than conventional ones, consumers spend more time looking for what they need (Ozdamar Ertekin & Atik, 2015). Therefore, buying sustainable garments maybe perceived as more time-consuming, but also as an activity that requires more cognitive effort than conventional shopping. If completing a conscious purchase requires too much time or effort, consumers may disregard the sustainability of the items they buy. Furthermore, a number of consumers would rather spend their budget to acquire a variety of low-quality items than a restricted number of higher-quality items – because they overlook durability (Sun et al., 2021) or because they are conditioned to seek new items regularly (McNeill & Moore, 2015). For a number of consumers, shopping is still associated with pleasure and well-being (Ozdamar Ertekin & Atik, 2015). To change such deep-rooted consumption habits and invest more time and effort in sustainable fashion purchases may be a great cost to consumers (McNeill & Moore, 2015) and must not be overlooked – consumers reportedly shop where they usually do so, and tend to stay loyal to stores and brands that they perceive as familiar (Wiederhold & Martinez, 2018). The increasing supply of fast fashion items further deepens this matter as it triggers a craving for additional purchases (Henninger et al., 2016; McNeill & Moore, 2015) and impairs consumers' rational thinking (Niinimäki, 2010). On the other hand, some consumers may be willing to move away from their stressful lifestyles and aim for lower levels of consumption or at least enjoy stress-free shopping with fewer options and decisions to make (Ozdamar Ertekin & Atik, 2015). However, following the dominant thought that consumers are conditioned to shop regularly by a well-rooted fast-fashion system and struggle to change their habits, this paper views a lack of time and energy as a barrier to slow fashion consumption:

> **H5.** A perceived lack of time and energy inhibits sustainable fashion consumption.

Garments of superior quality obviously imply a price premium (Fletcher, 2007, 2010; Henninger et al., 2016). This may be one of the reasons why slow fashion is perceived as a high-end phenomenon (Henninger et al., 2016; Pookulangara & Shephard, 2013; Wiederhold & Martinez, 2018). Not surprisingly, consumers' restricted budget stands out as a barrier to slow fashion consumption (Ozdamar Ertekin & Atik, 2015). This is corroborated by other authors in the literature (Henninger et al., 2016; McNeill & Moore, 2015) who mention the price premium as a potential hurdle to the development of sustainable fashion. However, it is argued that consumers who are less financially restrained are willing to pay higher prices for original designs that satisfy their tastes and needs (Pookulangara & Shephard, 2013; Štefko & Steffek, 2018) or provide clear and transparent information on sourcing and manufacturing (Joy et al., 2012). Again, fast fashion is a fierce competitor of slow fashion since it enjoys huge economies of scale to provide consumers with very affordable pieces (Ozdamar Ertekin & Atik, 2015). Besides, Jacobs et al.'s (2018) quantitative study did not allow to draw statistically significant conclusions about the impact of price sensitivity on sustainable purchase behaviour. Therefore this paper formulates the following hypothesis:

> **H6.** Price sensitivity inhibits sustainable fashion consumption.

Enablers of sustainable fashion consumption

Although aesthetics are a key enabler of sustainable fashion consumption (Joy et al., 2012), they have not been successfully leveraged to advertise slow fashion (Ozdamar Ertekin & Atik, 2015). As explained above, the authenticity and diversity of clothes in slow fashion is a fundamental feature of the movement (Jung & Jin, 2014). Yet, it is argued that designers and retailers do not genuinely understand what consumers expect from sustainable fashion (Niinimäki, 2010). This may be one of the reasons why slow fashion is still a niche phenomenon and struggles to reach mass markets (Beard, 2008). However, we note that aesthetics may eventually help sustainable fashion reach momentum; by taking catwalk designs to high-street window displays in no time and in excessive quantities, fast fashion does not allow consumers to make genuine fashion statements (Ozdamar Ertekin & Atik, 2015). Consumers are driven into repetitive, thoughtless shopping for clothes that eventually all look alike. By offering more authentic and original designs, slow fashion addresses a potential new demand for unique items that carry style and history (Beard, 2008). Advertisement of both sustainability and desirability of sustainable garments may help bridge the attitude-behaviour gap (McNeill & Moore, 2015). As a means to market the attractiveness of sustainable garments, this paper examines the potential of the exclusivity provided by items retailed in smaller quantities. Based on previous studies (Jung & Jin, 2014), this paper investigates the following hypothesis:

H7. A concern for exclusivity encourages sustainable fashion consumption.

Qualitative research revealed that certain consumers would rather buy locally made garments (McNeill & Moore, 2015). The environmental and financial benefits of avoiding long-haul transportation were highlighted as sustainable attributes of locally produced fashion. We note that this is corroborated by Jung & Jin's (2014) definition of slow fashion, more precisely the *localism* dimension. As a reminder, this dimension shows a concern for the welfare of workers and local communities as a whole. Moreover, personal connections to the product were mentioned as a driver toward sustainable consumption in McNeill & Moore's (2015) qualitative study. Meaningful object-user relationships have been put forward in academic investigation of slow fashion (Fletcher, 2012). Garments have the power to convey their own history and cultural heritage, which also reflects the *authenticity* dimension identified by Jung and Jin (2014). Since it is closely in line with the academic understanding of sustainable fashion and has been identified as a potential lever to spur sustainable fashion consumption, this paper investigates this last hypothesis:

H8. A preference for locally produced garments encourages sustainable fashion consumption.

Research model

The previous hypotheses are presented in Figure 2. The model illustrates the VABH and acknowledges the limited explanatory power of the attitude-behaviour gap, which is why the potential role of certain barriers and enablers is put under scrutiny. This research model heavily borrows from previous quantitative research (Jacobs et al., 2018, p. 1158) because this paper partially builds on its limitations. Indeed, the authors admit the narrow scope of their research and suggest further investigation to explain the lagging expansion of sustainable clothing markets. Their paper suggests investigating consumer trust as a potential barrier, which is why it is present in the model. Other enablers and hurdles have been highlighted by our extensive literature review, and their relevance in this model has been discussed in the previous.
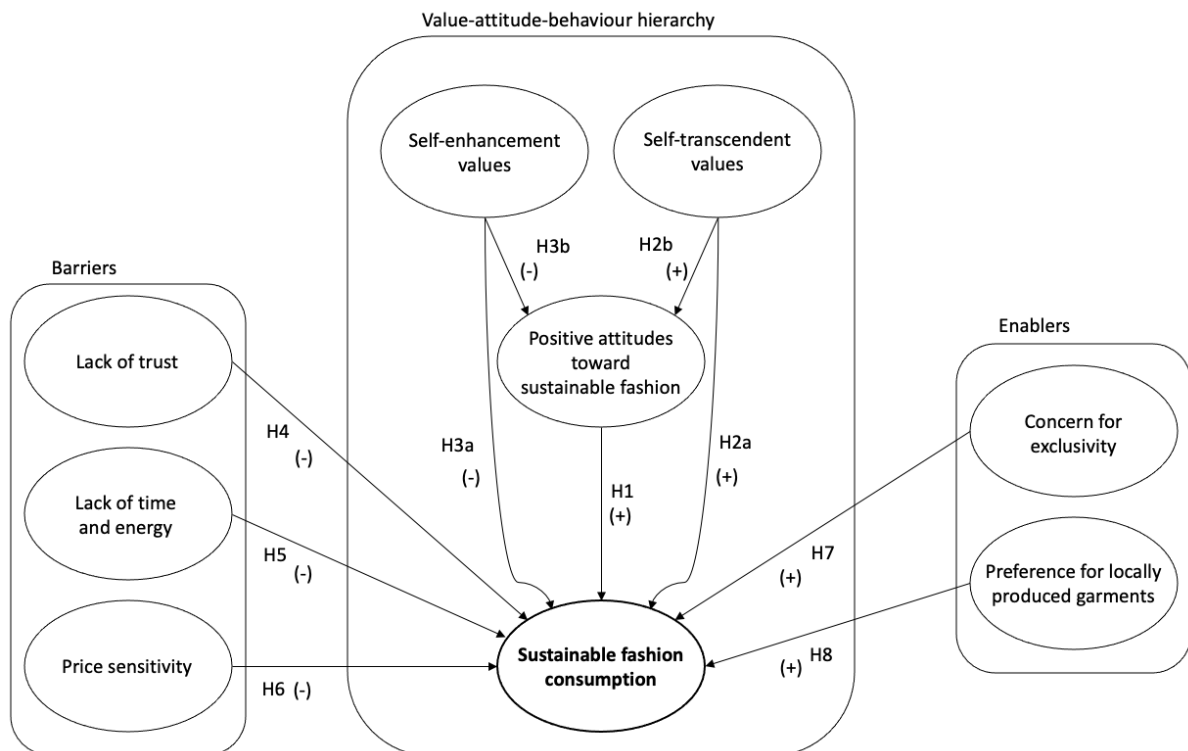

Figure 2 – Research model on sustainable fashion consumption, based on previous research from Jacobs et al. (2018)

Research design

Methodology

The research conducted in this paper is quantitative, which is relevant considering the number of qualitative studies seeking to enable sustainable fashion consumption that are already present in the literature (Jägel et al., 2012; Lundblad & Davies, 2016; McNeill & Moore, 2015; Pookulangara & Shephard, 2013; Vehmas et al., 2018; Young et al., 2010). Indeed, previous qualitative research unveils potential barriers to and enablers of sustainable fashion consumption, which allowed us to formulate the hypotheses and build a quantitative research model. A quantitative research is relevant in a research that aims at testing hypotheses through the measurement of certain variables (Malhotra et al., 2017).

Furthermore, qualitative research would not allow to measure the magnitude of the attitude-behaviour gap in the European fashion market (RQ1). Although the attitude-behaviour gap has been increasingly investigated in the literature, it is still not completely understood and further investigation is suggested to quantify its importance systematically (Jacobs et al., 2018). As far as barriers to the rise of sustainable fashion markets in Europe are concerned (RQ2), their systematic investigation is also suggested through quantitative research (Hassan et al., 2016, as cited in Jacobs et al., 2018). To ensure the thoroughness of this research, incentives to sustainable fashion consumption have also been included in the research model (H7 and H8).

Data was collected through the survey method: it was generated through a questionnaire that was distributed to a target population (Malhotra et al., 2017). The questionnaire took the form of an online survey. The data collection was structured, that is, the questions were asked to the respondents in a prearranged order (Malhotra et al., 2017). The questionnaire had a direct approach, as the purpose of this paper was briefly explained to the respondents before they started completing it.

All variables were measured on fixed-response alternative questions, meaning that the participants had to select their answer in a set of prearranged responses. One of the main advantages to this is the consistency of the collected data, because all responses range in the predetermined alternatives (Malhotra et al., 2017). Fixed-response alternative questions reduce the variability in responses and facilitate their coding to analyse the data. We note that they may affect the validity of certain types of variables, such as beliefs or emotions since the wording of the questions and limited answers is critical. Besides, some participants that do not agree with any of the prearranged answers may be unable to provide genuine information. Despite certain drawbacks, administering surveys is the prevailing way of collecting primary data. They remain easy to administer and convenient for quantitative research.

Access to the target population took place via a traditional approach to building samples, i.e., through personal contacts (Malhotra et al., 2017). Given the scope of the two research questions presented in the literature review, the sample entails all European individuals – regardless of their habits of sustainable fashion consumption. Indeed, respondents presenting low sustainable fashion consumption levels were considered as particularly relevant to the investigation of the barriers from the research model. The survey was shared on social media (mainly Facebook groups, WhatsApp groups, and Instagram) as well as individual contacts via direct messages. This draws parallels with the snowball sampling technique, which consists in selecting a first set of respondents (i.e., direct personal contacts on social media) who then refer the survey to their own personal network (Malhotra et al., 2017). The data collection method lasted one week – the survey simply remained active online until the number of new responses collected levelled off.

The survey was administered exclusively online, thus it was completed on smartphones, personal laptops and office computers. This left participants in control of the data-collection environment. Given the rise of technology use, online surveys are now the prevailing means to distribute surveys (Malhotra et al., 2017). A special care for the layout and presentation of the survey was given (e.g., images and links to explanatory webpages) which can significantly increase the quality of the collected responses. The survey was particularly short to complete (about 3 min on average) and incurred no cost on this paper. Besides, online surveys completely avoid the bias that may be injected by interviewers. We note that technical problems may occur as the data is collected, and building samples may be more elaborate, as it is difficult to ensure that the respondents effectively belong to the target audience. However, one of the questions in the questionnaire verified the nationality of respondents, which allowed a neat cleaning of the data before its analysis.

Online survey and measures of the variables

The online survey was constructed with Qualtrics, an online software that supports researchers in carrying out their quantitative research. Qualtrics also enables the coding of answers to facilitate further interpretation of the data. The online survey is presented extensively in Appendix 1 and was divided into five main building blocks: introduction; values and attitudes; enablers; barriers; and socio-demographics. These blocks recall the structure of our research model. The display logic of the survey was simple, as all participants were asked all questions in the same order. The following details and justifies the scales on which the different independent variables were measured.

All independent variables were measured on non-comparative, itemised rating scales – more specifically Likert scales. This implies each variable was measured independently of the others, via the degree of agreement of the respondent toward a certain statement (Malhotra et al., 2017). Likert scales are commonly used in marketing research and typically have 5 response alternatives, ranging from a strong disagreement to a strong agreement with the given statement. The uneven number of possible answers always left the choice for the respondent to share a neutral opinion about the statement (3 = neither disagree nor agree). Likert scales are suitable for online surveys as participants easily understand how to use them, in addition to being easy to establish and administer. We note that participants need to dwell on each statement to figure out their answer, which is why Likert scales tend to lengthen the completion duration of the survey (Malhotra et al., 2017). The shortness of our online survey may have helped offset this disadvantage.

As far as values are concerned, they were assessed by items provided along with their definition (Schwartz, 1992). All items were rated on 5-point Likert scales (1= strongly disagree; 5 = strongly agree). Self-transcendent values were assessed by the two following statements: "equality for all is important to me" and "environmental protection is important to me" (value of *universalism*[9]). Self-enhancement values were assessed by the two following statements: "being ambitious in life is important to me" (value of *achievement*) and "my social status is important to me" (value of *power*).

Attitudes towards sustainable fashion were evaluated by the perceived attractiveness of two companies publicly involved in sustainable fashion (Patagonia and H&M Conscious Collection). Here, the question was not whether these two brands are indeed sustainable fashion advocates, but rather to assess how positively consumers perceive the idea of sustainable fashion, embodied by these two brands. The attractiveness of each brand was rated on 5-point Likert scales (1 = very unattractive; 5 = very attractive). This practice was used by Jacobs et al. (2018) in the same context and is therefore relevant to this research.

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[9] Universalism is a self-transcendence value that expresses goals related to all other humans *and* nature, which seemed particularly relevant in the context of this paper. In contrast, other self-transcendence values such as *benevolence*, also express concern for others, but only those in direct or close relationship with us (Schwartz, 1992).

Consumers' concern for exclusivity was assessed by items from Jung & Jin (2016), namely "I enjoy having clothes that others do not have" and "limited editions hold special appeal for me", which were rated on 5-point Likert scales (1 = strongly disagree; 5 = strongly agree). The preference for locally produced garments was assessed by adapted items from the same research (Jung & Jin, 2016), namely "I prefer buying clothes manufactured in Europe (rather than clothes manufactured overseas)" and "we need to support European fashion brands". These items were rated on 5-point Likert scales (1 = strongly disagree; 5 = strongly agree) as well.

The level of trust in brands was assessed by adapted items from Chaudhuri & Holbrook (2001). They define brand trust as "the willingness of the average consumer to rely on the ability of the brand to perform in its stated function" (p.82). The authors provide short, straightforward statements to assess trust, such as "I trust this brand" and "this is an honest brand". The two items were rated by respondents on 5-point Likert scales (1 = strongly disagree; 5 = strongly agree).

The perceived lack of energy and time was assessed by two adapted items from the Customer Effort Score (Dixon et al., 2010), namely "shopping for sustainable clothes is time-consuming" and "shopping for sustainable clothes requires research effort". Respondents were asked to rate the items on 5-point Likert scales (1 = strongly disagree; 5 = strongly agree). Following a similar procedure to that of Jacobs et al. (2018), price sensitivity was evaluated by a single item ("the price of sustainable garments influences my purchase decisions") rated on a 5-point Likert scale (1 = strongly disagree; 5 = strongly agree). Besides, an optional open text box was left for respondents to leave any comment about their perceived incentives and hurdles to sustainable fashion consumption.

To assess sustainable fashion consumption (the only dependent variable in our research model), respondents were asked what rough percentage of their annual fashion budget was dedicated to sustainable fashion via a nominal scale (1 = 0-20%; 5 = 80-100%). This variable was measured by similar means in previous research by Jacobs et al. (2018). In complement and in the same train of thought, respondents were asked about the frequency of their sustainable fashion purchases on a 5-point Likert scale (1 = never; 5 = always). Therefore sustainable fashion consumption was assessed by two items. The coding of the first nominal scale allowed to conglomerate both items (rated from 1 to 5) to build the aggregate variable "sustainable fashion consumption" in the statistical analyses.

As far as the socio-demographics are concerned, they were all assessed on nominal scales. Nominal scales are suitable to classify objects (Malhotra et al., 2017) and are therefore relevant in this context. Participants were invited to share their gender, occupation and age as well as communicate their annual net income. Gender took the form of a nominal variable (1 = male; 2 = female; 3 = non-binary/third gender; 4 = prefer not to say). The same goes for occupation (1 = student; 2 = worker/employee; 3 = self-employed; 4 = unemployed; 5 = other) and age (1 = under 18; 7 = 65+ years old). To ensure the accurate composition of the sample, respondents' nationality was also shared via a nominal scale (see details in Appendix 1). Respondents who ticked "other" were allowed to share their nationality in an open text box. Respondents' annual income was similarly measured on a nominal scale, where proposed answers consisted of net income brackets (1 = less than €20,000 per year; 4 = more than €40,000 per year). The *net* income was asked to represent respondents' purchasing power more accurately – it removes the differences in taxation systems across Europe. The following section presents an overview of the sample based on their socio-demographics.

Statistical tools and data preparation

To conduct the statistical analyses, each response was coded on Qualtrics by a number ranging from 1 to 5, which is common practice (Malhotra et al., 2017). The data was then exported to an Excel spreadsheet for cleaning and preparation. Although sometimes complete, all responses from non-European participants have been discarded for the statistical analyses[10]. Only the complete responses from European participants were kept in the data. Indeed, most of the incomplete European responses contained too many missing values to be valid (e.g., participants who stopped responding halfway through the survey), therefore they were deleted as well.

Out of 333 intended responses, 252 complete and valid responses were collected via the online survey, which shows a response rate of 75.66%. Although response rates have been declining in this type of data collection (Malhotra et al., 2017), this sample size seems appropriate to the scope of this paper. All questions were marked as mandatory in the online survey via Qualtrics[11], thus the 252 valid responses contained no missing values.

Most of the independent variables took the form of aggregate variables in the statistical analyses, as they were evaluated by more than one item. For instance, if one variable was assessed by two items, the average of the two scores (each ranging from 1 to 5) was computed to obtain the value of the final aggregate variable. This computation happened on Excel via a straightforward manipulation of the data, and the use of the AVERAGE formula. All statistical analyses were conducted on IBM SPSS Statistics (version 28.0.1.1), into which the final[12] Excel spreadsheet was imported as a dataset. The final Excel spreadsheet contained only the variables that are present in the research model (most of them as aggregate variables) as well as the socio-demographics. All computations that we conducted on the IBM SPSS software were guided by the work of Malhotra et al. (2017) and official tutorials from the IBM website (IBM, 2021).

Sample overview

The data shows a strong majority of female respondents (73.0%) and a very strong representation of Belgian individuals (76.2%) in terms of nationality. This may be correlated to the snowball sampling technique described above, which implies that referrals of referrals tend to stay within similar social networks (Malhotra et al., 2017). Indeed, the main designer of the online survey is Belgian and was in charge of sharing it on social media, which likely explains the majority of Belgian respondents. The second most represented nationality is German (7.9%).

About 30% of the respondents are under 25 whereas almost half of them is aged 25–34. Therefore, 78.2% of the respondents are under 34 and are mostly represented by the sample. Workers and employees appear the most in the sample (54.4%) while students represent a third of the total sample.

Levels of net income show that around 40% of respondents have less than €20,000 to spend in a year whereas a solid 30% of them enjoy a relatively higher annual budget (between €20,000 and €30,000). In other words, about 70% of the sample has less than €30,000 to spend every year. The main socio-demographic characteristics of the sample are summarised in Table 1 whereas the frequency tables on which the sample overview is based are presented in the Appendix 2.

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[10] British responses were accepted, they represent 3.2% of the final sample population.

[11] Respondents were allowed to answer "Prefer not to say" to some questions that may be more personal, such as gender or income.

[12] An intermediary Excel spreadsheet, entailing all non-aggregate items was imported into SPSS beforehand to conduct the preliminary checks on the scales. The results of these preliminary checks are presented in the Results chapter of this paper.

Sample overview (part 1)	n (252)	%
Gender		
Male	64	25.4
Female	184	73.0
Non-binary / Third gender	1	0.4
Prefer not to say	3	1.2
Occupation		
Student	85	33.7
Worker / Employee	137	54.4
Self-employed	17	6.7
Unemployed	7	2.8
Other	6	2.4
Age		
Under 18	4	1.6
18-24 years old	75	29.8
25-34 years old	118	46.8
35-44 years old	14	5.6
45-54 years old	20	7.9
55-64 years old	19	7.5
65+ years old	2	0.8
Income brackets		
Less than €20,000 per year	103	40.9
€20,001 - €30,000 per year	80	31.7
€30,001 - €40,000 per year	30	11.9
More than €40,000 per year	22	8.7
Prefer not to say	17	6.7
Nationality		
Belgian	192	76.2
French	10	4.0
Dutch	3	1.2
German	20	7.9
British	8	3.2
Spanish	3	1.2
Italian	2	0.8
Portuguese	1	0.4
Other	13	5.2

Table 1 - Sample overview

Results

Preliminary checks

Before investigating correlation between the variables, we conducted preliminary checks on the variables of the research model. This section details (1) the normality check; (2) the reliability check; and (3) the validity check via an investigation of both convergent and discriminant validity.

Normality check. First, to verify the normality of the distribution of each variable, simple histograms were built and their distribution was compared to a normal curve (see Appendix 3). Most of the variables showed acceptable skewness and kurtosis, showing satisfying similarities with normal distributions. In other words, the respective skewness and kurtosis of the variables was no lower than -1 and no higher than +1. These indicators matter because many of the statistical analyses that are typically conducted in market research are based on the characteristics of a normal distribution (Malhotra et al., 2017).

The only two variables that presented excessive skewness and/or kurtosis were the price sensitivity and the sustainable fashion consumption level. Therefore these two variables required to be transformed to obtain more normal-like distributions. Out of precaution, the logit transformation of each variable was computed and the skewness and kurtosis of all logit-transformed variables were observed. However, almost none of those new variables helped obtain more normal-like distributions, as shown in Table 2. The dependent variable of the research model (i.e., sustainable fashion consumption) is the only one that presented more acceptable skewness and kurtosis in its logit-transformed version. Therefore it was retained over its original form for further statistical analyses in this paper. The logit transformation of the variable measuring price sensitivity did not cause satisfying improvements. Therefore, a related power-3-transformed variable was computed, which itself shows very acceptable skewness and kurtosis. The power-transformed variable that measures the price sensitivity of respondents was retained for further statistical analysis in this paper. The variables that have been selected for the testing of hypotheses are bolded in Table 2.

Variables	Skewness	Kurtosis
Self-enhancement values	**-0.783**	**0.387**
Logit-transformed self-enhancement values	-1.702	3.927
Self-transcendence values	**-0.787**	**-0.020**
Logit-transformed self-transcendence values	-1.119	1.097
Attitudes toward sustainable fashion	**-0.312**	**0.422**
Logit-transformed attitudes toward sustainable fashion	-1.383	3.528
Concern for exclusivity	**0.015**	**0.153**
Logit-transformed concern for exclusivity	-0.816	0.341
Preference for locally produced garments	**-0.563**	**0.639**
Logit-transformed preference for locally produced garments	-1.709	5.552
Trust	**0.096**	**0.719**
Logit-transformed trust	-0.597	0.741
Perceived lack of time and energy	**-0.435**	**0.525**
Logit-transformed perceived lack of time and energy	-1.617	5.166
Sustainable fashion consumption	1.113	0.620
Logit-transformed sustainable fashion consumption	**0.312**	**-0.581**
Price sensitivity	-1.116	2.439
Logit-transformed price sensitivity	-2.506	9.481
Power-transformed price sensitivity	**0.433**	**0.060**

Table 2 - Normality check

Scatter plots were built to verify a certain homogeneity of variance of our independent variables. Appendix 4 shows that values revolve around their mean in similar proportions and for all variables, which supports the homogeneity of variance assumption.

Reliability check. After the normality check, the reliability of the scales used in the survey was investigated. The more reliable the scale, the more consistent the results are when the measurement is repeated (Malhotra et al., 2017). Cronbach's alpha coefficient (α) quantifies the internal consistency reliability of a scale, by considering all items that measure one variable. If a majority of the respondents strongly agree with one item, and strongly agree with another item of the same measure, then the measure is more likely to be reliable (and show a high Cronbach's alpha coefficient). Cronbach's alpha coefficient takes a value between 0 and 1, where a value of at least 0.60 shows a minimum internal consistency validity (Malhotra et al., 2017). Table 3 summarises the Cronbach's alpha coefficients for all the scales that were used in our online survey.

Variables	Cronbach's Alpha (α)
Self-enhancement values (2 items)	0.681
Self-transcendence values (2 items)	0.465
Attitudes toward sustainable fashion (2 items)	-0.289
Concern for exclusivity (2 items)	0.718
Preference for locally produced garments (2 items)	0.660
Trust (4 items)	0.517
Among which: trust in Patagonia (2 items)	0.796
Among which: trust in H&M (2 items)	0.846
Perceived lack of time and energy (2 items)	0.603
Sustainable fashion consumption (2 items)	0.813

Table 3 - Reliability check

The measure of respondents' attitudes toward sustainable fashion presents a major issue, given that its Cronbach's alpha coefficient is negative. This is theoretically impossible and violates the assumptions on which the coefficient is based (Malhotra et al., 2017). After several verifications, it turns out the data was correctly imported in SPSS, therefore the error lays not in data manipulation, but likely in the questionnaire design. Indeed, attitudes were measured by asking participants to rate the attractiveness of two fashion brands who publicise their sustainability commitments (see Appendix 1), namely Patagonia and H&M Conscious Collection. As is shown in Table 4, the two items used to build the attitude scale are negatively correlated. In other words, the majority of participants who rated Patagonia as rather attractive likely gave an opposite rating to H&M Conscious Collection, and vice versa. The bias in this scale may have been induced by the two different brand identities, and renders the "attitude toward sustainable fashion" construct unreliable (negative Cronbach's alpha) and invalid (negative correlation between the two items). This is interpreted as a systematic error in measurement, that is, a poor question design (Malhotra et al., 2017). For these reasons, the attitudes variable is not taken into account in the remainder of the statistical analyses. Therefore hypotheses H1, H2b and H3b will not be tested.

Items: Attitudes		attitude_Patagonia	attitude_H&M
attitude_Patagonia	Pearson Correlation	1	-0.127*
attitude_H&M	Pearson Correlation	-0.127*	1

*correlation is significant at the 0.05 level (2-tailed)

Table 4 – Correlation between the two items that measured respondents' attitudes toward sustainable fashion

The same possible bias induced by the two different brand identities is observed in the scale intended to measure respondents' trust in brands. The two same items were used on two brands, and the Cronbach's alpha for the aggregate variable (4 items) is too low ($\alpha = 0.517$). However, once we separated the two brands to assess the reliability of the trust scale, the two Cronbach's alpha coefficients showed very acceptable values (around 0.80 each). Overall, the scale that we used to measure trust is deemed unreliable as well, likely because of too divergent brand identities between Patagonia and H&M Conscious Collection and/or a poor question design (Malhotra et al., 2017).

As it has already been stated in the early description of our methodology, Likert scales come hand in hand with fixed-response alternative questions, which may affect the reliability of certain variables, such as beliefs or emotions (Malhotra et al., 2017). Indeed, the limited number of answers may restrain the participant from providing the appropriate information, and the design of the questionnaire is critical. It seems likely that these factors contributed to the insufficient reliability of both the attitudes and the trust constructs. Apart from an insufficient reliability of the scale that measured respondents' self-transcendence values, all the other scales are deemed reliable.

To maximise the utility of the data that was collected, we introduce a new measure of trust which is based on 2 items instead of 4, that is, the two items that were illustrated by H&M Conscious Collection. We justify this choice partly because it seems respondents were confused by the two brand identities of Patagonia and H&M Conscious Collection, which is visible in Table 4. We choose the H&M-related items over the two Patagonia-related ones because they lead to a higher Cronbach's alpha coefficient (0.846 > 0.796 in Table 3) and prove a higher convergent validity (0.738 > 0.676 in Table 5).

Items: Trust	trust1_Patagonia	trust2_Patagonia	trust1_H&M	trust2_H&M
trust1_Patagonia	1	0.676**	-0.020	-0.065
trust2_ Patagonia	0.676**	1	-0.037	-0.040
trust1_H&M	-0.020	-0.037	1	0.738**
trust2_H&M	-0.065	-0.040	0.738**	1

**correlation is significant at the 0.01 level (2-tailed)

Table 5 - Correlation between the four items that measure respondents' trust

The new variable that measures trust via the two H&M-related items is distributed similarly to a normal distribution, with acceptable skewness and kurtosis (see Table 6) which satisfies the normality check.

Variable	Skewness	Kurtosis
Trust (2 items)	0.061	-0.526

Table 6 - Normality check for the new trust variable (2 items)

Validity check. Since the reliability of the scales are not sufficient to make the case for their validity (Malhotra et al., 2017), both their convergent and discriminant validity were also tested. Convergent validity quantifies the extent to which one scale is positively correlated with other scales that measure the same variable. Therefore, for each variable, a correlation analysis was carried out via the examination of Pearson's correlation coefficients (r), which is the prevailing coefficient to prove correlation between metric variables (Malhotra et al., 2017).

One example of convergent validity check is presented in Table 7. It shows a significant positive correlation between the two items that were used to measure respondents' preference for locally produced garments, thus the convergent validity of this measure is verified.

All the other measures' convergent validity check is presented in Appendix 5. The convergent validity of all variables was supported by this test. We shall note that despite its insufficient reliability, the measure of respondents' self-transcendence values shows convergent validity (see Appendix 5). It was thus retained for further statistical analyses.

Items		local_1	local_2
local_1	Pearson Correlation (r)	1	0.495**
local_2	Pearson Correlation (r)	0.495**	1
**correlation is significant at the 0.01 level (2-tailed)			

Table 7 - Example of convergent validity check (preference for locally produced garments)

Discriminant validity, on the other hand, evaluates the degree to which one independent variable from the research model is not correlated with other independent variables (Malhotra et al., 2017). In other words, if one variable (e.g., preference for locally produced garments) is not correlated with another variable that is supposed to be different (e.g., perceived lack of time and energy), then its discriminant validity is verified. A correlation matrix[13] was drafted to get an overview of all potential correlations between the independent variables and is presented in Appendix 6.

Overall, a few significant correlations between independent variables appeared. However, those correlations were low, since all Pearson coefficients were lower than 0.35 in absolute value (Taylor, 1990). To name a few of them, self-enhancement values are correlated with a concern for exclusivity (r = 0.164**)[14] and levels of trust in sustainable brands (r = 0.129*)[15]. Self-transcendence values are correlated with a preference for locally produced garments (r = 0.291**), levels of trust in brands (r = -0.139*) as well as a perceived lack of time and energy (r = 0.124*). Such low correlations between the independent variables resolve the concern for multicollinearity[16] and its repercussions (Malhotra et al., 2017). All instances of correlation between independent variables prove the discriminant validity of the variables in the research model. As they are not discussed in further details, they are presented in Appendix 6.

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[13] Given the unreliability and non-validity of respondents' attitudes toward sustainable, it was not included in the correlation matrix.

[14] **correlations are significant at the 0.01 level (2-tailed).

[15] *correlations are significant at the 0.05 level (2-tailed).

[16] In the instance of multicollinearity, very strong correlations between independent variables appear (Malhotra et al., 2017). It may affect the reliability and interpretation of multiple regressions with the data.

Descriptive statistics

Although no conclusion can be drawn from mere descriptive statistics, they offer a bird's eye view on the results and complement the sample overview that was presented in the previous chapter. We remind the reader that all variables are eventually rated on 5-point Likert scales, therefore comparing the different results is straightforward in this section. On such scales, a rating of 3 indicates a neutral value for the variables that were evaluated. A summary of the descriptive statistics of the sample is presented in Table 8.

Participants showed particularly high levels of self-transcendence values (mean = 4.43; min = 3) with the smallest standard deviation of all (σ = 0.571). Self-enhancement values are less salient in the sample population, although they are still important to most of the participants (mean = 3.74 > 3).

Variables	Minimum	Maximum	Mean	Std. Deviation
Self-enhancement values	1	5	3.74	0.841
Self-transcendence values	3	5	4.43	0.571
Concern for exclusivity	1	5	3.01	1.020
Preference for locally produced garments	1	5	3.85	0.769
Trust	1	5	2.44	0.899
Price sensitivity	1	5	3.96	0.743
Perceived lack of time and energy	1	5	3.63	0.767
Sustainable fashion consumption	1	5	2.09	0.936

Table 8 - Descriptive statistics

As for the barriers, participants show a low level of trust in the sustainability commitments of fashion brands (mean = 2.44 < 3). They are rather sensitive to price (mean = 3.96) and feel that they have only so much time and energy to dedicate to shopping for sustainable fashion (mean = 3.63). The average level of sustainable fashion consumption stands out as the lowest-rated variable (mean = 2.09). In other words, participants seldom buy sustainable fashion, thus it represents a relatively small portion of their fashion expenses.

As a reminder, participants were allowed to leave comments via on open text box in the online survey. They were invited to share insights about their sustainable shopping experience and the factors that shape it (see Appendix 1). Out of 252 responses, 49 comments were collected. About 30% of those comments referred to the uncertainty around the sustainability commitments of brands, the labour conditions of the factory workers or the alleged sustainability of garments and fabrics. Participants who shared these comments are typically suspicious about the sustainability statements of fashion brands, or the informative tags on garments and seem lost with regards to where they should allocate their sustainable fashion budget. Another important aspect in the comments (about 30% as well) concerned the availability of sustainable garments in brick-and-mortar stores. Many of these comments show that participants end up ordering fast-fashion clothes online because they do not find sustainable options easily enough. The third most salient aspect in the comments (23%) was the perceived higher price of sustainable garments, which participants (especially those who identified as students with a low income) felt was due to better working conditions or garments of higher quality.

Correlation analysis

Before attempting to prove causality between the independent variables and the dependent variable in our research model, we drafted a table to highlight the correlations between them. In other words, Table 9 offers insights into the relationships between the independent variables and the only dependent variable.

Pearson's correlation coefficients	Self-enhancement values	Self-transcendent values	Concern for exclusivity	Preference for locally produced garments	Trust	Price[17] sensitivity	Perceived lack of time and anergy
Sustainable fashion[18] consumption	-0.085	0.272**	0.037	0.207**	-0.137*	0.016	0.007
p-values	0.176	<0.001	0.563	<0.001	0.030	0.799	0.917

*correlation is significant at the 0.05 level (2-tailed)
**correlation is significant at the 0.01 level (2-tailed)

Table 9 - Correlation analysis

Participants' level of sustainable fashion consumption appears to be positively related to self-transcendent values (r = 0.272**) and a preference for locally produced garments (r = 0.207**). These variables were identified as possible drivers of sustainable fashion consumption in the research model. We recall that a certain correlation between these two drivers was observed earlier (r = 0.291**) although no multicollinearity-related issue is expected.

The only presumed barrier that showed a significant negative correlation with participants' sustainable fashion consumption level is the trust that they have in fashion brands (r = -0.137*). The correlation between trust and the preference for locally produced garments (r = -0.233**) is visible in Appendix 6. However, it should not cause any multicollinearity issue either in the multiple regression.

All in all, only three of all independent variables are significantly correlated with the dependent variable. This implies that no significant correlation can be observed as for self-enhancement values, a concern for exclusivity, price sensitivity and a perceived lack of time and energy. Participants' attitudes towards sustainable fashion are not presented in this table given that the variable was deemed unreliable and invalid in the preliminary checks of the measures.

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[17] Power-3-transformed variable.

[18] Logit-transformed variable.

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Multiple regression model

A multiple regression is a statistical technique that shows the relationship between one dependent variable and at least two independent variables through a mathematical relationship[19] (Malhotra et al., 2017). A multiple regression model complements a correlation analysis in the sense that it seeks to prove causality between the variables of the research model. In the context of this paper, a multiple regression was computed to test our hypotheses, that is, quantify the effect that independent variables (values, enablers and barriers) have on the dependent variable. In other words, the multiple regression aims at qualifying independent variables of predictors of the dependent variable. The reliability of this analysis can be deterred if a strong correlation is witnessed between two or more independent variables (Malhotra et al., 2017). As stated earlier, such an issue is not expected in this research (see Appendix 6).

A similar technique – structural equation modelling – (Malhotra et al., 2017) was used by Jacobs et al. (2018), whose work helped build our research model. In their investigation of the VABH, Jacobs et al. (2018) had to handle the attitudes-related variable as a mediating variable. In other words, the attitudes variables played the role of both a dependent and independent variable in their research model. For this reason, a structural equation modelling was appropriate to examine the cause-and-effect relationships between the variables (Malhotra et al., 2017). The same was intended in our own research model, however, our attitudes variable was rejected from the statistical analyses because it did not satisfy the reliability and validity requirements. Therefore, only one dependent variable is considered here, that is, sustainable fashion consumption. In this instance, a multiple regression modelling is recommended (Malhotra et al., 2017).

In SPSS, the multiple regression model was computed via the stepwise method. This method is recommended when a large number of the independent variables are suspected to be insignificant (Malhotra et al., 2017), which is the case in our research. The main goal of a multiple stepwise regression is to build a mathematical relationship that entails the variables that are responsible for most of the variation in the dependent variable. In other words, the SPSS software adds and discards each independent variable from the mathematical equation to eventually provide the multiple regression model that holds the most impactful combination of independent variables to predict the value of the dependent variable[20]. The multiple regression model that shows the strongest strength of prediction ($R^2 = 0.092$) is presented in Table 10. Thus, this model predicts 9.2% of the variations in sustainable fashion consumption.

We note that an alternative model was built by SPSS, including only one independent variable, which showed an inferior strength of prediction ($R^2 = 0.074$). Indeed, this model predicts 7.4% of the variations in sustainable fashion consumption. A cross-validation test[21] supports the model presented in Table 10 over the alternative one (see ANOVA table in Appendix 7). The detailed SPSS tables concerning both multiple stepwise regression models are presented in Appendix 7.

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[19] The mathematical relationship is of the following type : $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \ldots + \beta_K X_K$ (where $\beta_1, \ldots, \beta_K$ quantify the effect that the independent variables ($X_1, \ldots, X_K$) have on the dependent variable (Y)).

[20] The strength of association in the multiple regression model is quantified by its R^2 statistic, which ranges from 0 to 1 (Malhotra et al., 2017). For instance, a model of which $R^2 = 0.650$ predicts 65% of the variations of the dependent variable.

[21] This test investigates the validity of a multiple regression model that contains one additional independent variable than the multiple regression model established before in the stepwise method (Malhotra et al., 2017).

In line with the previous correlation analysis, the model shows that self-transcendence values positively influence sustainable fashion consumption (β = 0.074***), which supports H2a. The same goes for the preference for locally produced garments (β = 0.033*), which supports H8. Despite being negatively correlated to sustainable fashion consumption, no significant conclusion can be drawn on the actual effect that a lack of trust has on the dependent variable. H4 therefore remains unverified.

Dependent variable: Sustainable fashion consumption[22]	Unstandardised β	Coefficients Std. Error	Significance
(Constant β_0)	-0.172	0.091	0.061
Self-transcendence values	0.074	0.020	<0.001
Preference for locally produced	0.033	0.015	0.028

Table 10 - Multiple regression model

Unsurprisingly, no significant prediction can be made by the model on the effect of self-enhancement values, concern for exclusivity, price sensitivity, and perceived lack of time and energy on the dependent variable. Indeed, these variables did not show any significant correlation with sustainable fashion consumption in the previous, which is in line with the multiple regression results. Hypotheses H3a, H5, H6 and H7 therefore remain unverified. Although SPSS computed the possible βs for each of these variables, they were rejected from the model because they were not significant (p-values all well above 0.200, as shown in Appendix 7). As mentioned in the preliminary checks, H1, H2b and H3b remain untested because of the unreliability and invalidity of the measure of participants' attitudes toward sustainable fashion. All in all, only two of the ten hypotheses in the research model are verified by this quantitative research, as illustrated in Figure 3.
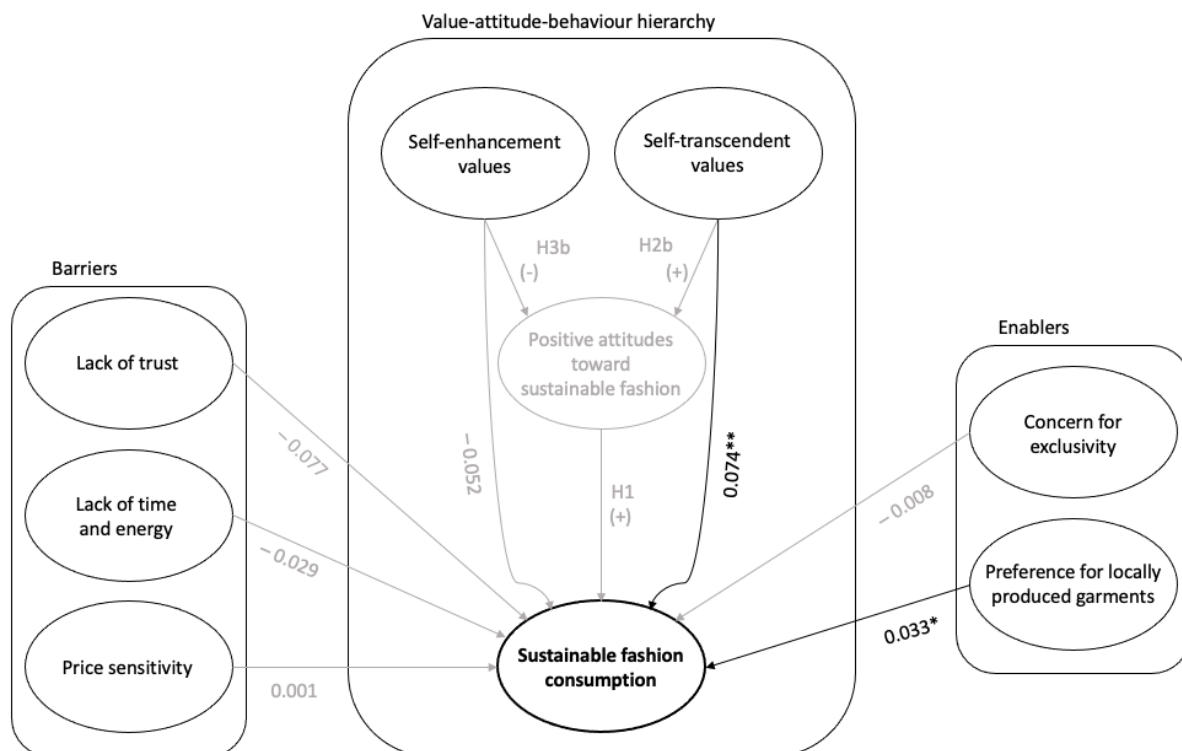

Figure 3 – Testing of hypotheses

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[22] Logit-transformed variable

Discussion

Based on the previous literature review and the extensive presentation of the results, this section (1) discusses the relevance of the sample that was investigated with the help of its descriptive statistics; (2) further examines the identified drivers of sustainable fashion consumption and proposes means to leverage them; and (3) mentions the hurdles to sustainable fashion consumption and certain means which may help overcome them.

Relevance of the sample population

The respondents in our sample proved to convey similar values to those conveyed by sustainable consumers. Their high levels of self-transcendence values embodied ethical values and a concern for environmental issues. Such values have been associated with sustainable consumption in previous research, and have been increasingly important for consumers (Lundblad & Davies, 2016; Niinimäki, 2010). A clear preference for locally produced garments hints at the *localism* dimension of slow fashion that was discussed in the literature review (Jung & Jin, 2014) while a blatant lack of trust from consumers has been highlighted in several articles cited in this paper (Beard, 2008; McNeill & Moore, 2015; Ozdamar Ertekin & Atik, 2015; Wiederhold & Martinez, 2018). Although the sample characteristics seemed globally in line with those of sustainable consumers, the reported low consumption level of sustainable consumption (see Table 8) hinted at the existence of the attitude-behaviour gap as soon as the descriptive statistics were established. As it has been mentioned before, attitude-behaviour gaps are ubiquitous in alternative sustainable markets (Jacobs et al., 2018) as the majority of consumers continue to disregard their values and attitudes toward sustainable fashion (Beard, 2008; Niinimäki, 2010).

Given the sample characteristics, it is no surprise that the results of this quantitative study are overall in line with previous research (Jacobs et al., 2018; Jung & Jin, 2014; McNeill & Moore, 2015; Ozdamar Ertekin & Atik, 2015; Wiederhold & Martinez, 2018), although not many significant conclusions could be drawn from the statistical analyses that were conducted. Indeed, only two hypothesised enablers of sustainable fashion consumption were confirmed by the multiple regression model that was established, namely consumers' self-transcendence values and their preference for locally produced garments.

Even though these measures can be qualified as actual enablers of sustainable fashion consumption, their causal effect is limited in our research model. This implies that the multiple regression model has a low prediction strength as it forecasts only 9.2% of the variations in sustainable fashion consumption. This study sought to establish a model with a way stronger prediction strength. No multicollinearity issues were revealed by our tests, which supported the validity of the multiple regression model. Therefore this low number of significant conclusions may be due to a lack of experience in questionnaire design, shown by certain issues in the reliability and validity checks (Malhotra et al., 2017). The faults in our questionnaire design are further discussed in the conclusion (see "limitations and suggestions for future research").

Drivers of sustainable fashion consumption

Self-transcendence values. Self-transcendence values were confirmed to support sustainable fashion consumption in this research. Although significant, their prediction strength on the dependent variable was relatively low ($\beta= 0.074^{***}$). In other words, an increase by 1 unit in self-transcendence values only translates into a 0.074 unit increase in sustainable fashion consumption[23]. This result is corroborated by similar quantitative research (Jacobs et al., 2018) and previous qualitative studies (Lundblad & Davies, 2016; Niinimäki, 2010).

In the process of building their sense of *self*, consumers seek to materialise the values they defend in the eyes of others (Niinimäki, 2010). In this sense, fashion represents an opportunity for them to showcase their values and achieve a certain lifestyle, as defined earlier in the literature review. Since our sense of self is continuously affected by our environment, it is a shape-shifting concept which urges us to constantly adapt the way we present ourselves to others in society (Niinimäki, 2010). This feeling of urgency is typically leveraged by fast-fashion brands, which provide us with the latest trends at affordable prices regardless of externalities (Fletcher, 2010). As detailed in the literature review, fast-fashion purchases are responsible for considerable environmental deterioration and massive piling of textile waste as it fails to address social welfare along its supply chain. Given these three main types of negative externalities, sustainable consumers are constantly torn between their need to actualise their appearance so it matches their evolving self and their need to showcase certain self-transcendence values (Beard, 2008). Therefore, many consumers end up neglecting their values to avoid this state of tension, which likely contributes to the magnitude of the attitude-behaviour gap in sustainable fashion markets.

Resolving this state of tension thus seems to be a relevant solution to bridging the gap and unlocking sustainable fashion consumption. To recall one instance that has been shared in the literature review, Junky Styling (Sanders & Seager, 2009) offer their skills to perform "wardrobe surgery". In their business model, customers are empowered in the creation process as they are asked to co-create new garments with fabrics that have been retrieved from former garments themselves. Since the garments are knitted by highly-skilled workers, they are durable and enjoy an exclusive look (H. Clark, 2008). This shows a clear example of a sustainable (and as argued in the literature review, *slow*) fashion company that operates within a more circular system, which recalls the circulation of fabrics as *products of consumption* in closed loops of a *technical metabolism* (Braungart et al., 2006; EMF, 2013b). Such mending of the garments may be operated repeatedly and allow the creation of multiple garments with the same pool of materials over time. Therefore customers may be allowed to actualise their appearance several times and leave the state of tension that is described in the above paragraph. Junky Styling attracts consumers toward alternative fashion business models, rather than guilting them out of their current purchase habits. This is argued to be an efficient way to achieve sustainability in the fashion industry, since it allows consumers to avoid the state of tension described above (Lundblad & Davies, 2016). Indeed, sustainable fashion brands such as Junky Styling provide products that provide psychological benefits to consumers, e.g. a free conscience and pleasure (Lundblad & Davies, 2016). Such practices may help bridge the attitude-behaviour gap more efficiently (Niinimäki, 2010; Ozdamar Ertekin & Atik, 2015; Vehmas et al., 2018).

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[23] On a scale from 1 to 5 for both measures.

Preference for locally produced garments. A preference for locally produced garments was the second confirmed enabler of sustainable fashion consumption in this study. Similarly to self-transcendence values, this enabler proved to be significant yet with little prediction strength on the dependent variable of our research model (β = 0.033*). In other words, an increase in the preference for locally produced garments by 1 unit only induces a 0.033 increase in sustainable fashion consumption[24]. This result is particularly corroborated by the *localism* dimension that stood out from the theoretical investigation of the slow fashion movement (Jung & Jin, 2014) and previous qualitative research stating that sustainable consumers prefer to buy locally made clothes and accessories (McNeill & Moore, 2015). On the one hand, locally manufactured garments avoid shipping across the globe thanks to their simpler production chain, which is possibly why they support sustainable fashion consumption. On the other hand, closer relationships with fashion designers and producers are enabled by local production cycles and may foster meaningful object-user relationships (Fletcher, 2012). Indeed, garments have the capacity to carry a certain culture, which reflects the authenticity dimension of slow fashion (Jung & Jin, 2014) and allows consumers to make meaningful fashion statements (Beard, 2008).

As mentioned in the literature review, Chanin's Project Alabama seeks to sew clothes that are robust and that carry cultural heritage with them (H. Clark, 2008; Ozdamar Ertekin & Atik, 2015). By using local recycled materials and employing artisans located in Alabama, the project thrives on more transparent production processes and a less elaborate supply chain. Since the garments are of high quality and have some character of their own, they are both physically robust and emotionally durable (H. Clark, 2008). Consumers' preference for locally produced garments draws strong and insightful parallels with notions that have been covered in our literature review, such as emotional, user-based durability and a search for more authenticity in clothes (Chapman, 2005; Fletcher, 2010, 2012; Jung & Jin, 2014).

Concern for exclusivity. No significant correlation was revealed between respondents' concern for exclusivity and their sustainable fashion consumption level. Jacobs et al.'s quantitative study (2018) similarly failed to prove causality between their variable "fashion consciousness" (relatively similar to our "concern for exclusivity" variable) and levels of sustainable garments consumption. In their theoretical investigation in slow fashion, Jung and Jin (2014) identified exclusivity as one of the five underlying dimensions to the slow fashion movement[25]. To the best of our knowledge, the influence that exclusive designs may have on levels of consumption has not been quantified for European markets. However, exclusivity stood out as a means to generate more traction around sustainable fashion (Joy et al., 2012) and bridge the attitude-behaviour gap (McNeill & Moore, 2015) in qualitative studies. Other researchers argue that sustainable fashion providers do not genuinely understand what consumers expect from sustainable designs (Niinimäki, 2010) thus the one-of-a-kind aesthetics that sustainable and slow fashion may offer have not been advertised successfully (Ozdamar Ertekin & Atik, 2015). This likely contributes to the existence of the attitude-behaviour gap that this paper investigates and may explain why sustainable fashion remains stuck in its niche (Beard, 2008). Although it struggles to overcome the fast-fashion paradigm, sustainable fashion may one day benefit from an increased concern for exclusivity among consumers. Indeed, fast-fashion leaves little room for consumers to make authentic fashion statements as it brings the latest trends to mass-markets in very little time (Ozdamar Ertekin & Atik, 2015).

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[24] On a scale from 1 to 5 for both measures.

[25] We admit that investigating a concern for exclusivity may address slow fashion consumption more specifically, rather than sustainable fashion consumption as a whole, although that is arguable due to the absence of official definitions of both movements (Henninger et al., 2016; Jung & Jin, 2014).

Hurdles to sustainable fashion consumption

Lack of trust. Although the effect of the lack of trust in fashion brands on sustainable fashion consumption could not be quantified by our research, the correlation analysis showed a significant correlation between both variables (r = -0.137* in Table 9). This result corroborates the findings of previous research, which state that consumers are reluctant to trust fashion brands, mainly due to a lack of transparency along the production chain and a lack of education about sustainability (Henninger et al., 2016; McNeill & Moore, 2015; Young et al., 2010). This is also corroborated by the open-text-box comments from our participants (around 30% of them), who highlighted their confusion when it comes to sustainable garments and their suspicion regarding the genuine commitment of sustainable brands. Although one aspect of transparency obviously concerns the complexity of the supply chain that induces a lack of traceability and transparency for consumers (Niinimäki et al., 2020; Ozdamar Ertekin & Atik, 2015), consumers are often unsure of what lies behind informative tags and labels such as "green" or "fair trade" (Beard, 2008; Vehmas et al., 2018). This limited access to reliable information makes certain consumers feel hopeless, as though their actions have negligible impact on the fashion industry (Wiederhold & Martinez, 2018). This impairs consumers' trust in brands (Niinimäki, 2010) and hinders sustainable fashion consumption.

Therefore, this paragraph discusses the potential of empowering consumers in their purchase decisions by building more trustworthy relationships with fashion brands, as a means to bridge the attitude-behaviour gap. Today's consumers navigate technology relatively easily, which suggests the use of the web and social media to engage consumers in sustainable fashion (Pookulangara & Shephard, 2013). Educating consumers may help increase awareness around sustainability, but also increase brand equity. Communication therefore holds a large potential to help unlock sustainable fashion consumption (Vehmas et al., 2018). Besides, the use of technology can help make information more transparent, visible and engaging. To achieve this goal, some authors suggest the use of storytelling on social media (Vehmas et al., 2018). This means should convey more concrete information about the benefits that consumers generate through sustainable purchases, such as the quantified decrease in water use or the avoided use of certain noxious chemicals. Although transparency is still a challenge for fashion brands (Pookulangara & Shephard, 2013), it must be pursued as consumers expect fact-based information on the products (Vehmas et al., 2018). To avoid feelings of guilt and hopelessness among consumers, storytelling on social media may take more of a light-hearted marketing tone and spur consumers toward sustainable consumption.

Higher levels of trust may flourish in the relationships between consumers and producers via such communication strategies (Vehmas et al., 2018). Increased transparency and more visible communication may also help strengthen self-transcendence values and positive attitudes toward sustainable clothing (Jacobs et al., 2018). Parallelly, they may also be supported by the use of local resources and/or craftsmanship (see discussion of the variable "preference for locally produced garments" above). This suggestion draws parallels with the *sufficiency* approach that was defined in our literature review (Freudenreich & Schaltegger, 2020) since it seeks to reconcile consumers' and manufacturers' standpoints in the sustainability transition of the fashion industry.

Price sensitivity. As far as price sensitivity is concerned, our research failed to reveal any significant correlation or effect with regard to sustainable fashion consumption – which was the case in previous quantitative research (Jacobs et al., 2018). Since our sample had a relatively low level of income, it was globally described as rather sensitive to price in the descriptive statistics. Since price is overwhelmingly stated as a potential barrier to sustainable fashion consumption in qualitative research (Henninger et al., 2016; McNeill & Moore, 2015; Ozdamar Ertekin & Atik, 2015; Wiederhold & Martinez, 2018), it seems somewhat ironic that, to the best of our knowledge, its effect has never been quantified in Europe. Price was mentioned in 23% of the open-text-box comments of our online survey, which corroborates previous research. Since garments with a certain exclusivity or of superior quality often imply a price premium (Fletcher, 2010), sustainable fashion is perceived as a high-end phenomenon (Pookulangara & Shephard, 2013).

However, Fletcher's Local Wisdom Project (2012) shows that sustainability in fashion can be achieved through enhanced user-based durability without necessarily implying additional expenses for the garments. The findings of the project even suggest that durability, in the end, has very little to do with the physical longevity of the materials. Rather, clothes users were found to value local resources and craftsmanship which relies on creativity more than financial investments. The Local Wisdom Project shows that achieving sustainability in the fashion industry does not have to imply expensive in-store purchases of durable garments, thus wearing sustainable can turn out to be affordable (Fletcher, 2012). Although no correlation nor cause was proved in our research, it seems clear from the descriptive statistics and the open-text-box comments that respondents still perceive sustainable clothing as expensive. It leaves some room for fashion brands and policymakers to better educate customers[26] about what sustainable fashion means and implies in terms of investments, both emotional and financial.

Perceived lack of time and energy. As far as the perceived lack of time and energy is concerned, no significant correlation with sustainable fashion consumption (nor cause-and-effect relationship) was proven in this study. As a reminder, the respondents to our online survey perceived sustainable shopping as a relatively time-consuming and energy-intensive experience (mean = 3.63, see descriptive statistics). This is in line with previous research, as consumers tend to spend more time looking for sustainable garments given their limited availability (Ozdamar Ertekin & Atik, 2015). This perceived lack of time and energy may partially be due to increasingly busy lifestyles that leave less room for leisure activities such as shopping (Young et al., 2010). Previous quantitative research investigated the limited availability of sustainable garments with a different approach, i.e. they uncovered a positive effect of online and catalogue availability on sustainable garments consumption (Jacobs et al., 2018). The low availability of sustainable garments was strongly salient (about 30%) in the open-text-box comments from our online survey. Participants stressed their limited options in brick-and-mortar stores – when not in terms of pieces, in terms of sizes. Therefore many of them admitted to end up ordering clothes online from fast-fashion brands because the shopping experience was way more convenient in comparison.

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[26] The potential of educating customers on sustainable fashion was covered in the paragraph that discusses the results linked to the "lack of trust" variable.

This draws a parallel with a quantitative study that was mentioned in the early stages of our literature review (Kirchherr et al., 2018). This paper highlights the barriers that businesses embedded in circular models may encounter. For instance, cheap first-hand materials encourage one-off purchases (such as those triggered by fast fashion) which induces low consumer awareness about sustainability. Besides, we have stated before that some consumers may still prefer to buy several cheaper items of lower quality because they overlook durability (Sun et al., 2021) or simply because they are conditioned to traditional types of mass consumption (McNeill & Moore, 2015). This, in turn, does not encourage companies to develop the production of more circular or sustainable products, which remain low in stock and are less convenient for consumers to purchase (Kirchherr et al., 2018). This issue may also be deepened by the increasing supply of fast-fashion items, logically more and more accessible relative to sustainable garments, which impairs consumers' rational thinking (Niinimäki, 2010).

The above paragraph leaves room for policymakers to drive change in the fashion industry. The European Commission delivered an Action Plan for CE (European Commission, 2015) with binding targets which encourages a transition toward circularity, although it still fails to engage leading firms (McDowall et al., 2017). In the fashion industry, change is happening as Gucci has recently become the first leading luxury house to partner with the Ellen MacArthur Foundation to focus on circular designs and regenerative agriculture (Nast, 2022). Although our hypothesis was not confirmed by the quantitative research, this paragraph provides food for thought on the role of leading firms and policymakers to lead the transition toward sustainability.

Conclusions

Since previous qualitative studies identified potential barriers to and enablers of sustainable fashion consumption, this study conducted quantitative research to (1) assess the magnitude of the attitude-behaviour gap in Europe (RQ1); and (2) evaluate the effect of certain barriers and enablers on levels of sustainable fashion consumption (RQ2). Our research model is based on previous quantitative research on the same topic (Jacobs et al., 2018).

A total of 252 responses were collected via an online survey, which evaluated the variables from our research model (see Figure 2) on 5-point Likert scales. The survey evaluated levels of self-transcendence and self-enhancement values among respondents, as well as their attitudes toward sustainable fashion, in the scope of the VABH (Homer & Kahle, 1988). Besides, the influence of two enablers of (preference for locally produced garments; concern for exclusivity) and three barriers to (lack of trust in fashion brands; price sensitivity; perceived lack of time and energy) sustainable fashion was investigated.

Our quantitative research confirmed that self-transcendence values and a preference for locally produced garments positively influence sustainable fashion consumption. Although a significant negative correlation was found between respondents' trust in fashion brands and their levels of sustainable fashion consumption, no cause-and-effect relationship was revealed by the multiple regression model. Due to a poor question design to assess respondents' attitudes toward sustainable fashion (see limitations hereunder), this study fails to address RQ1 and does not provide sufficient answers to assess the magnitude of the attitude-behaviour gap in Europe. Although the number of conclusions that can be drawn is limited, this study provides certain answers to RQ2 by confirming certain variables as enablers of sustainable fashion consumption.

The discussion of our results provides further details about the means to leverage self-transcendence values and the preference for locally produced garments. As far as self-transcendence values are concerned, a strong link is made with the state of tension that sustainable consumers go through when they wish to actualise their appearance in a system that pushes them toward unsustainable purchases (Niinimäki, 2010). Easing that state of tension is a way to bridge the ABG (Lundblad & Davies, 2016). The company Junky Styling (Sanders & Seager, 2009) thrives on this idea as their customers enjoy a guilt-free conscience (among others), which shows an effective means to increase sustainable fashion consumption levels (Ozdamar Ertekin & Atik, 2015; Vehmas et al., 2018).

As for the preference for locally produced garments, the results of our quantitative survey circle back to definitions of user-based durability and meaningful object-user relationships (Chapman, 2005; H. Clark, 2008; Fletcher, 2012), which are enabled by closer relationships between consumers and designers. Project Alabama (H. Clark, 2008; Ozdamar Ertekin & Atik, 2015) leverages the localism dimension of slow fashion (Jung & Jin, 2014) as they are dedicated to sew clothes that are durable, both physically and emotionally. Moreover, Project Alabama makes up for certain shortcomings of the prevailing fast-fashion paradigm, such as enabling their consumers to make original fashion statements with pieces that carry their own history and culture (H. Clark, 2008; Ozdamar Ertekin & Atik, 2015; Sanders & Seager, 2009).

While our study failed to prove that trust is a moderator of sustainable fashion consumption, we discovered a negative correlation between both variables, which supports previous qualitative research (Henninger et al., 2016; McNeill & Moore, 2015; Young et al., 2010). A link is made with the preference for locally produced garments, as it encourages less elaborate supply chains and facilitate the transparency of the production processes (Niinimäki et al., 2020; Ozdamar Ertekin & Atik, 2015). An increased transparency may help bridge the ABG (Jacobs et al., 2018) as it fosters trustworthy relationships between consumers and producers. Our discussion unravels interesting suggestions for consumer education and increased awareness, enabled by more accessible and transparent information on social media (Pookulangara & Shephard, 2013), notably through storytelling (Vehmas et al., 2018).

Where our study has failed to prove both correlation and causation, the discussion of our results provides insights and food for thought for the readers. The Local Wisdom Project (Fletcher, 2012) shows that sustainable fashion practices does not need to be more expensive than traditional fashion (with regard to price sensitivity). Consumers' perceived lack of time and energy hints at the limited availability of sustainable clothes, which draws links with the limits of circular business models (Kirchherr et al., 2018) and the policies currently in place (European Commission, 2015; UN Economic Commission for Europe, 2018).

Managerial implications

The early stages of the literature review stress the need for alternative business models, among others, in the fashion industry (EMF, 2013a; IPCC, 2021; Murray et al., 2017). Thus, the Local Wisdom Project (Fletcher, 2012), Project Alabama (H. Clark, 2008; Ozdamar Ertekin & Atik, 2015), Junky Styling (Sanders & Seager, 2009) and Slow and Steady Wins The Race (H. Clark, 2008) are mentioned in this paper. The examples that we retrieved from the literature are of small size, which shows yet one more time that circular business models are far from prevailing in the fashion industry, which is a common issue in the development of CE (Kirchherr et al., 2018). However, they do represent sound alternative business models that generate genuine consumer experiences and explore user-based durability through meaningful relationships with garments (H. Clark, 2008).

Even though the rise of online retailers may be seen as a means to deliver fast-fashion clothes in greater quantities and faster than ever (Niinimäki et al., 2020), it may be seized as an opportunity to avoid one-off purchases via online platforms that facilitate the rental of clothes (Sun et al., 2021). As mentioned in the discussion of the results, today's consumers are comfortable with technology (Pookulangara & Shephard, 2013). Alternative business models in sustainable fashion, in addition to the characteristics put forward by the slow fashion movement, may provide added value to customers via digital tools, which is a feature that they expect (Pookulangara & Shephard, 2013). Rental platforms such as Rent the Runway are already up and running in the luxury industry, and have proven to be successful.

In its essence, slow fashion is a call to fundamentally redesign the fashion system (Fletcher, 2007, 2010) which should mobilise entrepreneurs and fashion designers. This study proves that consumers' preference for locally produced garments can be used to increase their sustainable fashion consumption. Therefore, this paper encourages fashion designers and small enterprises to set up shop and exploit the moderators of sustainable fashion consumption that are investigated in this paper.

They can rely on local resources and skilled labour to bring more authenticity to the pieces they create and ensure more transparency along the production cycle. They should make room for consumers in the production process (Freudenreich & Schaltegger, 2020) and nurture close relationships that facilitate the education of consumers, which eventually leads to higher levels of trust (Vehmas et al., 2018). Besides, working more closely with sustainable consumers may sharpen designers' knowledge of what they actually expect from sustainable designs and advertise it properly, which has not been achieved so far (Niinimäki, 2010; Ozdamar Ertekin & Atik, 2015).

Slow fashion companies are quality-based, they care for choice, information, cultural heritage (Fletcher, 2007) and the construction of one's identity in society (Niinimäki, 2010). Educating consumers in ways that have been suggested in the discussion (e.g., storytelling on social media) may be a profitable investment for sustainability as it may help bridge the ABG (McNeill & Moore, 2015; Young et al., 2010). Besides, objective ways of informing consumers about the benefits of their sustainable purchases may reduce the state of tension that they experience (Niinimäki, 2010) and strengthen self-transcendence values (Jacobs et al., 2018), which also contribute to sustainable fashion consumption, as proved by this study. This paper highlights the role that marketers may play in managing promotional and educational campaigns with regard to sustainable fashion.

NGOs are standing up to offer alternatives and lead the way to more circular and sustainable business models (e.g., Fashion Takes Action, Ellen MacArthur Foundation) and their work has been supporting change. For instance, the Ellen MacArthur Foundation's recent strategic partnership with Gucci (Nast, 2022) is a success in terms of engaging leading fashion brands. Luxury brands may lead the way to a sustainable fashion industry thanks to their focus on craftsmanship and timeless designs (Joy et al., 2012). This paper calls for a sustained action of NGOs who are successfully engaging leaders in fashion. Besides, decision makers and managers of leading firms in the fashion industry are called to take responsibility for the externalities that their companies generate. Indeed, policymakers are having trouble keeping up with the pace of growth in the private sector to maintain an accurate legal framework around its activities (EMF, 2013a). Based on the described externalities and limits of the fast-fashion system, this paper calls for self-initiated action toward more sustainability within leading firms and groups (e.g., Inditex Group, H&M).

Theoretical implications

This study contributes to a better understanding of certain moderators of sustainable fashion consumption, which is driven by self-transcendence values and a preference for locally produced garments. To the best of our knowledge, our paper entails the second quantitative study in Europe with regard to the attitude-behaviour gap in sustainable fashion. Indeed, our research model was based on the only quantitative study that we found in the literature (Jacobs et al., 2018). Jacobs et al.'s work (2018) did assess the magnitude of the ABG for a large sample of German female respondents. Since those results were difficult to generalise, this paper sought to get the same results on the ABG, yet from a more heterogeneous sample in terms of gender and European nationalities. Although the sample in this study is relatively heterogeneous, the lack of experience in questionnaire design (discussed in the last section of these conclusions) impeded the testing of hypotheses related to the ABG. However, the theoretical content in the literature review hopefully contributes to a certain conceptual understanding of the ABG and why it is ubiquitous in sustainable markets.

Since the ABG fails to explain the totality of the variance in sustainable fashion consumption (Bagozzi & Burnkrant, 1979), an investigation of the moderators of the independent variable is necessary. This study confirmed a preference for locally produced garments and self-transcendence values as drivers of sustainable fashion consumption. It also confirmed a negative correlation with levels of trust in fashion brands, which has been extensively covered in the discussion of the results. Jacobs et al.'s research (2018) previously quantified a positive effect of online and catalogue availability of sustainable garments and, surprisingly, a negative effect of consumers' preference for durability on sustainable fashion consumption. To the best of our knowledge, these enablers are the only ones to have been confirmed and quantified based on arguably heterogeneous samples. Therefore this paper calls for the quantitative investigation of other moderators (see suggestions for future research in the section below).

Besides the findings related to the research model, this paper suggests further action be taken by policymakers to spur the uprise of circular business models, among others in the fashion industry. As it was discussed in the literature review, the circular business models that are in place nowadays are still unfit for development on a larger scale (Murray et al., 2017). Although there is a legal framework for CE implementation in Europe (EU, 2008; European Clothing Action Plan, 2019; European Commission, 2015), the targets they present are not defined accurately enough and thus could be more binding (McDowall et al., 2017). Besides, this legal framework still fails to engage leading firms in a transition toward a circular economy. The blurry definition of CE in academia may also stall its implementation (Merli et al., 2018) and this paper hopefully contributes to a better understanding of the concept among scholars. It calls for further investigation of, and more unity in the CE definition.

The lack of academic understanding of slow fashion is also discussed in the literature review (Henninger et al., 2016; Jung & Jin, 2014). Besides, slow fashion may still be perceived as a high-end phenomenon (Pookulangara & Shephard, 2013; Wiederhold & Martinez, 2018) and it toes the line toward luxury fashion in certain aspects, which does not have an official definition either (Ko et al., 2019). This paper hopefully provides a comprehensive overview of the challenges that blurry definitions cause. Thus it calls for further investigation of the definitions of the movements stated in this paragraph.

Limitations and suggestions for future research

First, the limitations of the survey design are discussed. On the one hand, the items that intended to measure participants' attitudes toward sustainable fashion indeed presented serious validity issues that impeded their manipulation in our analysis. In addition to a negative Cronbach's alpha coefficient (see Table 3) which hinted at its unreliability, the two items on which the measure was based proved to be negatively correlated with one another (see Table 4). Since respondents' attitudes were discarded from our analyses, their prediction of sustainable fashion consumption could not be quantified, nor could the magnitude of the attitude-behaviour gap. It seemed pointless to test hypotheses H1, H2b and H3b as the conclusions we may have drawn from statistical analyses would have been based on an unreliable and invalid measure. Therefore this study fails to provide reliable answers to our first research question, *RQ1*.

The existence of the VABH has been proven in previous research (Homer & Kahle, 1988), therefore it was not the main goal of this study. Rather, we were hoping to build on previous quantitative research conducted in Germany (Jacobs et al., 2018), which quantified cause-and-effect relationships within the VABH, so we could quantify the same relationships and provide more generalisable results. Indeed, Jacobs et al.'s sample (2018) entailed exclusively German female respondents whereas our sample was comprised of both male and female respondents (respectively around 25% and 75% of the sample) of different nationalities. Despite the strong majority of Belgian responses (about 75%), we are overall satisfied with the heterogeneity of the sample relative to previous research.

On the other hand, the reliability of the trust measure also was also questioned (see Table 3) as it was based on two pairs of items, each related to a fashion brand engaged in sustainability. The potential reasons underlying this issue have already been discussed in the results, and eventually lead to a new variable to measure respondents' trust in brands. Only the pair of items related to H&M Conscious Collection was used to build the trust measure, which showed way more acceptable reliability and validity. Although this may have induced a certain bias in the data, it consisted of a simple change in the computation of the aggregate measure for trust, and provided a more reliable construct for the analyses. This may also have contributed to the low number of conclusions that were drawn from the multiple regression model.

Despite the above-stated issues with the measures that we established in the online survey, the majority of our variables showed very acceptable reliability and validity, especially the dependent variable (see Table 3 and Appendix 5). As the majority of our variables passed the preliminary checks, the investigation of the effect of the identified barriers and enablers on sustainable consumption was supported (Malhotra et al., 2017). Overall, the online survey design left room for improvement but was satisfactory for the investigation of our second research question *RQ2*. The following examines the confirmed hypotheses with regards to enablers of sustainable fashion consumption and offers means to leverage them to help bridge the attitude-behaviour gap.

Second, this paper only investigates certain moderators of sustainable fashion consumption based on previous qualitative research. Other moderators such as consumer awareness of environmental and social issues in the fashion industry should be investigated in quantitative research. One may also assess consumers' knowledge of environmental and social issues, or to what extent deep-rooted consumption habits play against the rise of sustainable fashion. In terms of aesthetics, it is argued that sustainable fashion designers do not truly understand what consumers expect from them (Niinimäki, 2010) and some customers perceive durable, timeless designs as boring and unattractive (McNeill & Moore, 2015). To understand consumer perceptions more deeply, the attractiveness of sustainable garments and its effect on levels of consumption may be investigated as well.

Third, and to the best of our knowledge, this paper is the only quantitative research that uses the VABH (Homer & Kahle, 1988) as a theoretical framework to investigate levels of sustainable fashion consumption, except Jacobs et al.'s work (2018). Alternative theories may be used to investigate moderators of sustainable fashion consumption behaviour.

Lastly, since this study examines alternative ways of consumption in an industry that has been repeatedly scolded for its negative externalities, a potential bias induced social desirability in the data should not be underestimated. Social desirability is respondents' tendency to provide answers that are not necessarily representative of their opinion, but that are perceived as desirable from a social viewpoint (Malhotra et al., 2017). Our statistical analyses did not try to take such a bias into account, nor did those of Jacobs et al.'s (2018). We also state that since this paper is a Master thesis, our relative lack of experience in conducting research should not be neglected. As discussed above, the statistical preliminary checks revealed some validity issues regarding some constructs assessed in the online survey. Besides, although our statistical analyses were carried out with the greatest caution and care, our knowledge and command of IBM SPPS Statistics is still limited and leaves room for improvement.

Appendices

Appendix 1: Online survey

Sustainable fashion consumption[27]

Dear Respondent,

This survey will only take you 2-3 min. My research investigates your perceptions of sustainable fashion.

Before you start, let's agree on this: **sustainable clothes have a long lifespan (high quality), and show social and environmental concern in some way**. They may be first- or second-hand, upcycled (made of old textiles), vintage, or stolen from your grandparents' closet :-)

Let's get started!

X→

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[27] The survey was available in English, French and Spanish.

Q1 To what extent do you agree with the following statements?

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
Being ambitious in life is important to me (Q1_1)	○	○	○	○	○
My social status is important to me (Q1_2)	○	○	○	○	○
Equality for all is important to me (Q1_3)	○	○	○	○	○
Environmental protection is important to me (Q1_4)	○	○	○	○	○

Page Break

Q2 How attractive are the two following brands to you?

	Very unattractive (1)	Unattractive (2)	Neither attractive nor unattractive (3)	Attractive (4)	Very attractive (5)
patagonia What is this brand? (Q2_P)	○	○	○	○	○
H&M CONSCIOUS What is this brand? (Q2_HM)	○	○	○	○	○

X→

Q3 To what extent do you agree with the following statements?

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
I enjoy wearing clothes that others do not have (Q3_1)	○	○	○	○	○
Limited editions hold special appeal to me (Q3_2)	○	○	○	○	○
I prefer buying clothes manufactured in Europe (rather than clothes manufactured overseas) (Q3_3)	○	○	○	○	○
We need to support European fashion brands (Q3_4)	○	○	○	○	○

X→

Q4 To what extent do you agree with the following statements?

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
patagonia I trust this brand (Q4_P1)	○	○	○	○	○
patagonia This is an honest brand (Q4_P2)	○	○	○	○	○
H&M CONSCIOUS I trust this brand (Q4_HM1)	○	○	○	○	○
H&M CONSCIOUS This is an honest brand (Q4_HM2)	○	○	○	○	○

Page Break

Q5.1 To what extent do you agree with the following statements?

	Strongly disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
The price of sustainable garments influences my purchase decisions (Q5.1_1)	○	○	○	○	○
Shopping for sustainable clothes is time-consuming (Q5.1_2)	○	○	○	○	○
Shopping for sustainable clothes requires research effort (Q5.1_3)	○	○	○	○	○

Q5.2 If you have any comments about what makes your sustainable shopping easy or difficult, please share it below :-)

_____

Q6.1 How often do you buy sustainable fashion?

	Never (1)	Sometimes (2)	About half the time (3)	Most of the time (4)	Always (5)
I buy sustainable fashion (Q6.1)	◯	◯	◯	◯	◯

X→

Q6.2 Out of your annual expenses in fashion, what percentage is dedicated to sustainable fashion?

◯ 0% - 20% (1)

◯ 21% - 40% (2)

◯ 41% - 60% (3)

◯ 61% - 80% (4)

◯ 81% - 100% (5)

Note: **Just 5 more clicks to go!**

End of Block: Consumption levels

Start of Block: Socio-demographics

Q7 Which gender suits you best?

○ Male (1)

○ Female (2)

○ Non-binary / third gender (3)

○ Prefer not to say (4)

Q8 What occupation describes you best?

○ Student (1)

○ Worker/employee (2)

○ Self-employed (3)

○ Unemployed (4)

○ Other (5)

X→

Q9 Which annual **NET** income bracket describes you best?

○ Less than €20,000 per year (1)

○ 20,001€ - 30,000€ per year (2)

○ 30,001€ - 40,000€ per year (3)

○ More than 40,000€ per year (4)

○ Prefer not to say (0)

Q10 How old are you?

○ Under 18 (1)

○ 18-24 years old (2)

○ 25-34 years old (3)

○ 35-44 years old (4)

○ 45-54 years old (5)

○ 55-64 years old (6)

○ 65+ years old (7)

- -

Q11 What is your nationality?

○ Belgian (1)

○ French (2)

○ Dutch (3)

○ German (4)

○ British (5)

○ Spanish (6)

○ Italian (7)

○ Portuguese (8)

○ Other (9) _____

End of Block: Socio-demographics

Appendix 2: Frequency tables of all socio-demographic variables

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	64	25.4	25.4	25.4
	Female	184	73.0	73.0	98.4
	Non–binary / Third gender	1	.4	.4	98.8
	Prefer not to say	3	1.2	1.2	100.0
	Total	252	100.0	100.0	

Occupation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Student	85	33.7	33.7	33.7
	Worker / Employee	137	54.4	54.4	88.1
	Self–employed	17	6.7	6.7	94.8
	Unemployed	7	2.8	2.8	97.6
	Other	6	2.4	2.4	100.0
	Total	252	100.0	100.0	

Income brackets

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Prefer not to say	17	6.7	6.7	6.7
	Less than €20,000 per year	103	40.9	40.9	47.6
	20,001€ – 30,000€ per year	80	31.7	31.7	79.4
	30,001€ – 40,000€ per year	30	11.9	11.9	91.3
	More than 40,000€ per year	22	8.7	8.7	100.0
	Total	252	100.0	100.0	

Age brackets

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Under 18	4	1.6	1.6	1.6
	18–24 years old	75	29.8	29.8	31.3
	25–34 years old	118	46.8	46.8	78.2
	35–44 years old	14	5.6	5.6	83.7
	45–54 years old	20	7.9	7.9	91.7
	55–64 years old	19	7.5	7.5	99.2
	65+ years old	2	.8	.8	100.0
	Total	252	100.0	100.0	

Nationality

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Belgian	192	76.2	76.2	76.2
	French	10	4.0	4.0	80.2
	Dutch	3	1.2	1.2	81.3
	German	20	7.9	7.9	89.3
	British	8	3.2	3.2	92.5
	Spanish	3	1.2	1.2	93.7
	Italian	2	.8	.8	94.4
	Portuguese	1	.4	.4	94.8
	Other	13	5.2	5.2	100.0
	Total	252	100.0	100.0	

Appendix 3: Normality check (simple histograms with normal curve)

Price sensitivity

Perceived lack of time and energy

Sustainable fashion consumption level

70
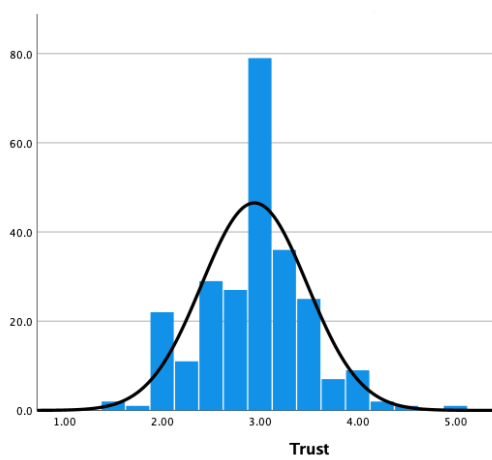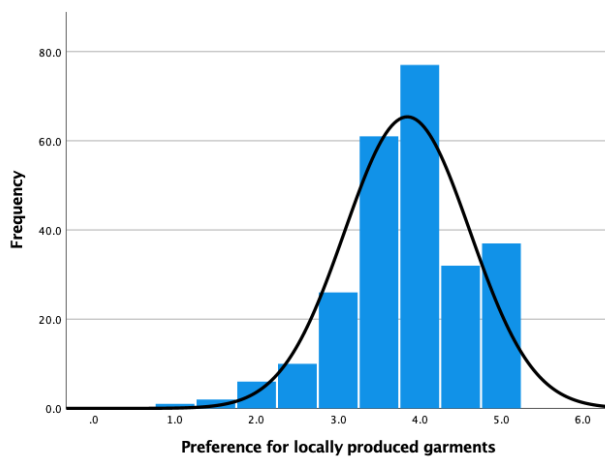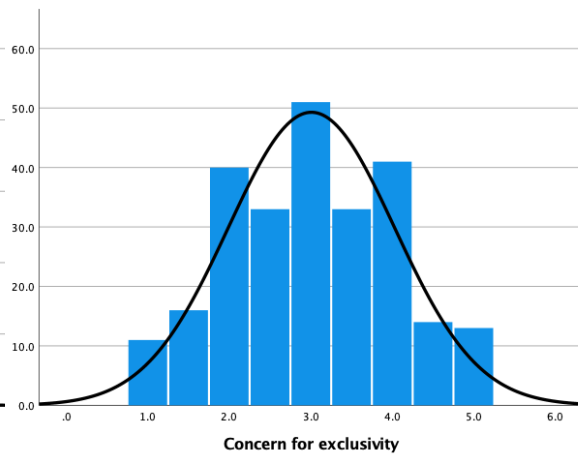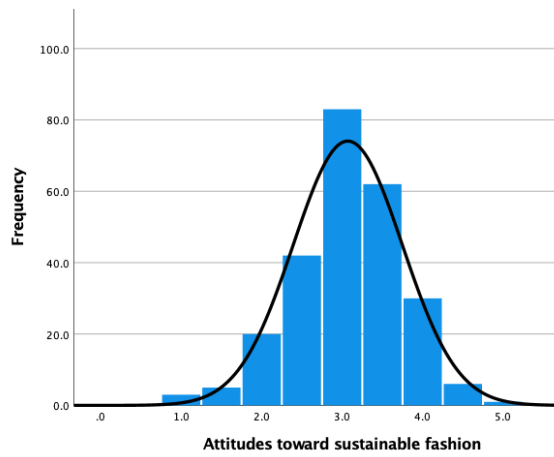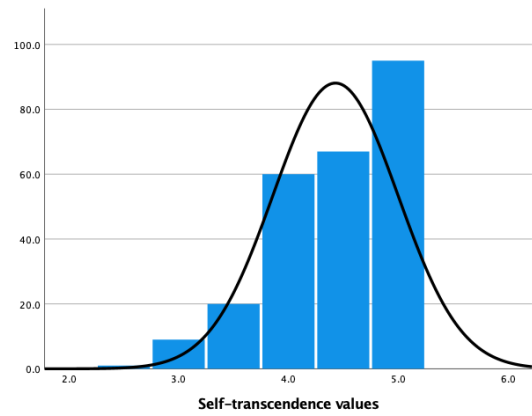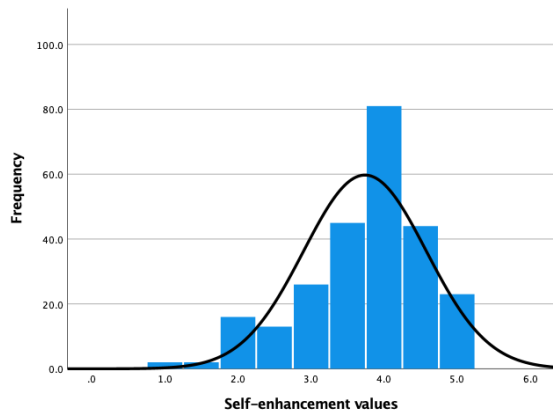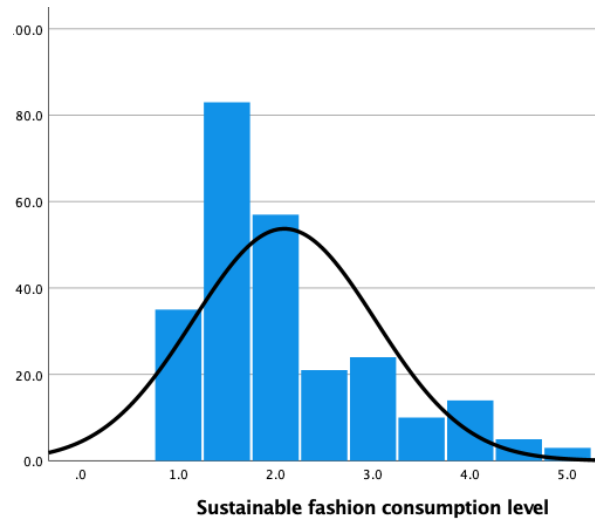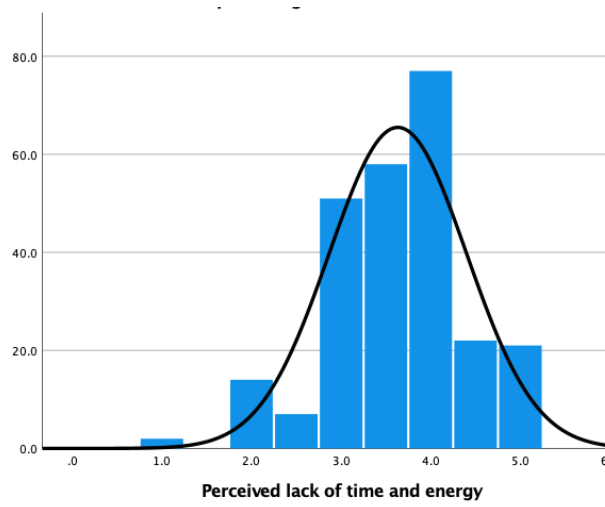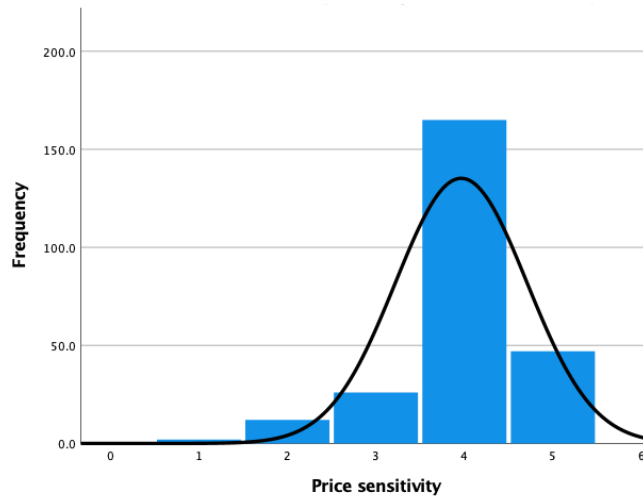
Appendix 4: Homogeneity of variance (scatter plots)

Scatter Plot of Sustainable fashion consumption by Concern for exclusivity

Scatter Plot of Sustainable fashion consumption by Preference for locally produced garments

Scatter Plot of Sustainable fashion consumption by Trust

Scatter Plot of Sustainable fashion consumption by Price sensitivity

Scatter Plot of Sustainable fashion consumption by Perceived lack of time and energy

Appendix 5: Convergent validity of the variables

Items: Self-enhancement values		SEV_1	SEV_2
SEV_1	Pearson Correlation	1	0.517**
SEV_2	Pearson Correlation	0.517**	1

**correlation is significant at the 0.01 level (2-tailed)

Items: Self-transcendent values		STV_1	STV_2
STV_1	Pearson Correlation	1	0.320**
STV_2	Pearson Correlation	0.320**	1

**correlation is significant at the 0.01 level (2-tailed)

Items: Concern for exclusivity		excl_1	excl_2
excl_1	Pearson Correlation	1	0.565**
excl_2	Pearson Correlation	0.565**	1

**correlation is significant at the 0.01 level (2-tailed)

Items: Perceived lack of time and effort		time_1	effort_2
time_1	Pearson Correlation	1	0.447**
effort_2	Pearson Correlation	0.447**	1

**correlation is significant at the 0.01 level (2-tailed)

Items: Sustainable fashion consumption		cons_1	cons_2
cons_1	Pearson Correlation	1	0.704**
cons_2	Pearson Correlation	0.704**	1

**correlation is significant at the 0.01 level (2-tailed)

Appendix 6: Correlation matrix (independent variables)

Correlations		Self-enhancement values	Self-transcendence values	Concern for exclusivity	Preference for locally produced garments	Trust	Price sensitivity	Perceived lack of time and energy
Self-enhancement values	Pearson Correlation	1	−.120	.164**	−.047	.129*	.004	−.028
	Sig. (2−tailed)		.057	.009	.460	.041	.945	.663
	N	252	252	252	252	252	252	252
Self-transcendence values	Pearson Correlation	−.120	1	.052	.291**	−.139*	.058	.124*
	Sig. (2−tailed)	.057		.408	<.001	.028	.360	.049
	N	252	252	252	252	252	252	252
Concern for exclusivity	Pearson Correlation	.164**	.052	1	.232**	−.013	.070	.112
	Sig. (2−tailed)	.009	.408		<.001	.843	.267	.076
	N	252	252	252	252	252	252	252
Preference for locally produced garments	Pearson Correlation	−.047	.291**	.232**	1	−.233**	.009	.045
	Sig. (2−tailed)	.460	<.001	<.001		<.001	.886	.480
	N	252	252	252	252	252	252	252
Trust	Pearson Correlation	.129*	−.139*	−.013	−.233**	1	.032	.006
	Sig. (2−tailed)	.041	.028	.843	<.001		.608	.923
	N	252	252	252	252	252	252	252
Price sensitivity	Pearson Correlation	.004	.058	.070	.009	.032	1	.163**
	Sig. (2−tailed)	.945	.360	.267	.886	.608		.009
	N	252	252	252	252	252	252	252
Perceived lack of time and energy	Pearson Correlation	−.028	.124*	.112	.045	.006	.163**	1
	Sig. (2−tailed)	.663	.049	.076	.480	.923	.009	
	N	252	252	252	252	252	252	252

**. Correlation is significant at the 0.01 level (2−tailed).
*. Correlation is significant at the 0.05 level (2−tailed).

Appendix 7: Multiple regression model

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.272[a]	.074	.070	.17492
2	.303[b]	.092	.085	.17357

a. Predictors: (Constant), Self-transcendence values

b. Predictors: (Constant), Self-transcendence values, Preference for locally produced garments

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.613	1	.613	20.031	<.001[b]
	Residual	7.649	250	.031		
	Total	8.262	251			
2	Regression	.760	2	.380	12.620	<.001[c]
	Residual	7.502	249	.030		
	Total	8.262	251			

a. Dependent Variable: Sustainable fashion consumption

b. Predictors: (Constant), Self-transcendence values

c. Predictors: (Constant), Self-transcendence values, Preference for locally produced garments

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	−.103	.086		−1.187	.237
	Self-transcendence values	.087	.019	.272	4.476	<.001
2	(Constant)	−.172	.091		−1.885	.061
	Self-transcendence values	.074	.020	.232	3.672	<.001
	Preference for locally produced garments	.033	.015	.140	2.213	.028

a. Dependent Variable: Sustainable fashion consumption

Excluded Variables[a]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics Tolerance
1	Self-enhancement values	−.054[b]	−.872	.384	−.055	.986
	Concern for exclusivity	.022[b]	.368	.714	.023	.997
	Preference for locally produced garments	.140[b]	2.213	.028	.139	.916
	Trust	−.101[b]	−1.652	.100	−.104	.981
	Price sensitivity	.000[b]	.005	.996	.000	.997
	Perceived lack of time and energy	−.028[b]	−.450	.653	−.029	.985
2	Self-enhancement values	−.052[c]	−.852	.395	−.054	.985
	Concern for exclusivity	−.008[c]	−.133	.894	−.008	.946
	Trust	−.077[c]	−1.237	.217	−.078	.940
	Price sensitivity	.001[c]	.023	.981	.001	.997
	Perceived lack of time and energy	−.029[c]	−.474	.636	−.030	.985

a. Dependent Variable: Sustainable fashion consumption

b. Predictors in the Model: (Constant), Self-transcendence values

c. Predictors in the Model: (Constant), Self-transcendence values, Preference for locally produced garments

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Executive summary

This paper examines the relevance of the circular economy concept as a means to operationalise sustainability. Since the fashion industry is one of the top polluters in today's economy, this paper investigates ways to implement sustainable fashion business models embedded in a circular framework. Consumers must take part in the sustainable transition of the fashion industry, which is supported by their increasing concern for environmental and social issues overall. However, it appears their consumption behaviour does not always match their values and attitudes toward sustainable fashion. This study investigates the underlying reasons to such an attitude-behaviour gap, and explores external moderators of sustainable fashion based on previous qualitative studies. Through a quantitative research, this paper seeks to assess the magnitude of the attitude-behaviour gap and measure the influence of certain enablers of, and barriers to sustainable fashion consumption in Europe. The results are extensively presented in a multiple regression model, as self-enhancement values and a preference for locally produced garments are confirmed to encourage the purchase of sustainable garments. Besides, a negative correlation between respondents' trust in fashion brands and their consumption levels is unveiled by the quantitative study. The discussion of the results provides means to leverage the above-stated drivers of consumption, and invites the reader to reflect on other ways to overcome certain barriers to the expansion of sustainable fashion markets.

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