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Can the Fashion Industry Sustain Sustainable Supply Chains? The Case of Inditex Zara

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Master's in Management of Services and Technology

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PhD Isabel Cristina de Seixas Patrício Duarte de Almeida, Invited Assistant Professor
ISCTE-IUL

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BUSINESS
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Department of Marketing, Strategy and Operations

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Acknowledgment

This dissertation represents the end of one of the most important stages of my academic life, and I can only thank those who were always present, supporting me during this important stage.

I would like to dedicate this achievement in loving memory of my friend Sergio. When I first started this journey, we were excited to see how it would turn out. I wish you were here to see that despite all the difficulties I made it. Thank you for everything, I carry you in my heart.

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Resumo

A indústria da moda mudou nos últimos anos e um novo conceito de fast fashion surgiu. As marcas de fast fashion concentram-se em produzir rapidamente grandes volumes de peças de vestuário baratas, em ritmo acelerado, que são as últimas tendências do mercado. O seu sucesso está em suas cadeias de abastecimento que seguem uma filosofia just in time, operando principalmente com respostas rápidas e agilidade por meio da integração e colaboração global. Uma marca de fast fashion como a Zara, leva apenas 2 semanas para terminar o design e a produção de um item e enviar para as lojas em todo o mundo.

Isso resulta em impactos prejudiciais ao meio ambiente por meio de suas cadeias de suprimentos, bem como o consumo excessivo por parte dos consumidores de fast fashion. Portanto, o estudo investiga como a indústria da moda pode sustentar cadeias de abastecimento sustentáveis. Foi realizado um questionário com 207 participantes angolanos, portugueses e britânicos para recolher dados do ponto de vista do consumidor e a sua influência para alcançar uma cadeia de abastecimento sustentável. Foram desenvolvidas duas versões do questionário, inglês e português e os dados coletados foram combinados. Os resultados sugerem que o consumo de produtos fast fashion ainda é notável, porém os consumidores estão mais preocupados com a forma como os itens são produzidos. Portanto, as cadeias de abastecimento podem ser sustentadas se os consumidores entenderem a sua influência perante as marcas para retornar à moda lenta e seu escrutínio para abordagens mais sustentáveis. Para isso, é necessária uma colaboração entre marcas e consumidores. As marcas podem implementar iniciativas para enfrentar este problema, bem como influenciar os consumidores a seguirem práticas mais sustentáveis.

Palavras-chave: Fast fashion, Consumo excessivo, Cadeias de abastecimento sustentáveis, Zara, Moda Sustentável

JEL classification system:

D62 - Externalities

F64 - Environment

Abstract

The fashion industry has changed in the past years and a new concept of fast fashion has emerged. Fast fashion brands focus on rapidly producing high volumes of cheaply made pieces of clothing, at a rapid rate, that are the latest trends on the market. Its success lies on its supply chains which follow a just in time philosophy, operating primarily with quick responses and agility through global integration and collaboration. With a fast fashion brand such as Zara it only takes 2 weeks to finish the design and production of an item and sent to stores globally.

This results in harmful impacts on the environment through its supply chains as well as overconsumption from fast fashion consumers. Therefore, the study investigates how can the fashion industry sustain sustainable supply chains. A questionnaire with 207 Angolan, Portuguese and British participants was conducted to collect data from a consumer's perspective and their influence towards achieving a sustainable supply chain. Two versions of the questionnaire were developed, English and Portuguese and the data collected was combined. The results suggest that consumption of fast fashion products is undergoing however consumers are more concerned about how items are produced. Therefore, supply chains can be sustained if consumers understand their influence towards brands to return to slow fashion and their scrutiny towards more sustainable approaches. A collaboration between brands and consumers is necessary to achieve this. Brands can implement initiatives to tackle this problem as well as influence consumers to follow more sustainable practises.

Keywords: Fast fashion, Overconsumption, Sustainable Supply chains, Zara, Sustainable Fashion

JEL classification system:

D62 - Externalities

F64 - Environment

Glossary

SC – Supply Chain

SSC – Sustainable Supply Chain

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Chapter 1 - Introduction

1.1 Contextualisation

As a society, in the 21st century we are faced with various challenges one of them including the state of our planet and the environment which is considered by many authors as the biggest problem (Kaspersen and Egholm, 2021). This environmental crisis has been addressed for more than 30 years and the population has come to realize that global warming has severe implications for the future of the planet and younger generations. With the recent coronavirus pandemic, this matter was postponed in priority due to the state of emergency and effort needed to help tackle the pandemic globally. Furthermore, the Ukraine war has upended the energy transition and because massive global military emissions often go unreported, this war threatens climate targets. Prior, there has been efforts by governments to provide solutions to this problem most known being the Paris Agreement in 2015 in the United Nations Climate change conference (Clemencon, 2016). Various factors have led to the fragile state of the planet that we see today one being globalisation and international trade. Another factor relates to the activities of some industries such as the fashion industry which has changed significantly over the past years due to globalisation.

There is a direct connection between environmental problems and globalisation. This phenomenon has provided benefits for both society and businesses as it promotes employment opportunities and economic development taking businesses into new markets through international trade (Apergis et al., 2021). However, it is harmful towards the environment and society particularly due to business operations, which mostly affects developing countries. With globalisation, businesses expanded worldwide and so did their supply chains (SC). Today, products travel further around the world than before, instead of locally. This leads to significant environmental damage such as increased emissions, destruction of wildlife, overconsumption, overexploitation of natural resources, increased transportation, and toxic waste. There is an increasing need to incorporate environmentally friendly choices into SC operations and hold companies accountable for their actions.

The fashion industry has been changing fast and constantly over the years where Fashion companies are looking for alternative ways to do business and, to succeed, they need to have the ability to follow new trends fast. The industry has evolved from artisanal tailors to multinational global companies that have expanded their role in SC and brand awareness in different locations (Pedersen et al., 2016). It has significantly shifted its focus to consumers and

their ever-changing needs, making it important to keep up with the latest trends. This strategy of fast fashion used by retailers aims to reduce processes such as design and fast delivery items to shops to capture the current fashion trends and satisfy the customers (Barnes and Greenwood, 2006). Retailers such as Zara have become known for adopting this strategy of constantly renewing their product ranges and being able to keep up with the latest trends. This has changed the industry's SC and made it more complex due to its speed flexibility and quick responsiveness (Christopher and Peck, 2004). This has also led to a shift from traditional fashion to fast fashion.

Fast fashion promotes overconsumption and reduces the life cycle of fashion products, generating more waste in a short time. In today's world, the ideal is to use and re-use products, and to consume sustainable items which have been produced in a sustainable way. It is required that consumers incentive brands by avoiding the demand of fast fashion items and return to slow fashion. It is the responsibility of both companies and consumers to adopt greener practises and be ethically responsible with the environment. The globalization of SC has added up to the environmental and social impacts of fashion. This has expanded the footprint of brands beyond national manufacturing as many have moved to countries with lower labour and environmental standards (Khurana and Ricchetti, 2015). The fashion industry SC is described as lengthy, vertically non-integrated, and globally spread in its stages and processes. As a result, the industry's SC faces several issues including pollution, high water and energy consumption, worker exploitation and carbon emissions, and has therefore become a major concern relating to environmental and social issues.

SC integration has increased, forcing downstream integration with distributors, retailers and consumers which is very important in the fashion industry. Moreover, in the recent decades due to globalisation, the industry's SC has also reshaped due to rising labour costs in emerging markets, constantly changing fashion trends and short product life cycle which has driven fashion companies to drastically adapt and reorganise their SC (Christopher and Peck, 2004). The adoption of worldwide production and supply networks has become one of the response strategies used by companies as well as the incorporation of agility in major aspects of the SC to guarantee responsiveness in the SC flexible and adjustable design processes and demand agile manufacturing. However, at what cost?

Sustainability in the fashion industry looks to promote the use of sustainable and renewable materials, fair wages, and product longevity (Muthu, 2019). This has become widely discussed after the accident at a garment factory in Bangladesh that supplied materials to major fashion brands. One emerging problem related to sustainability and ethics in the fashion industry is the

practice of its global SC, which is somewhat dominated by fast fashion, which consists of mass-producing clothing in cheaper ways, so that they can be sold as cheaply as possible. Fast fashion encourages clothing consumption and contributes to waste disposal as many garments are discarded after only a few years of production due to the ever-changing fashion trends. Shorter lead times also contribute poorer working conditions and human rights practices. To make their products very cheaply, companies usually must 1hire underpaid workers, use child labour and use alternative materials.

To understand the dynamics of the SC in the fashion industry, this work focuses on Zara, as the company has a global presence and position as one of the biggest apparel retailers in the world. Zara belongs to the Inditex Group which was founded in 1985 by Amancio Ortega (Inditex, 2021). The company's first store was Zara which opened in 1975. There, a new concept was introduced that brought customers closer to the products, which were also much more affordable. In the years of 1983-1992, Ortega expanded the business first across Spain, followed by an international expansion that started in Portugal (Inditex, 2021). Today, the group is a fashion pioneer among fast fashion companies and one of the world's largest fashion retailers, with eight brands present in 216 markets through its online platform and 6, 654 stores in 94 markets (Inditex, 2021). With sales of approximately $31.01 billion in 2021, the group tops the list of the world's largest apparel retailers (Smith, 2022). Nonetheless, this study will focus on Zara, which follows a fast fashion model of designing, producing and quickly bringing the latest fashion trends to the stores (Hansen, 2012). Zara is renowned for its ability to design and produce the latest trends in the market and what customer desire in less than a month in advance.

1.2 Research problem

The fashion SC and its effects on sustainability are well studied in the literature, in particular the materials, production, and logistics aspects. However, there are limitations to the study of fast fashion brands and sustainability in their SC. Firstly, I chose to develop the thesis on Zara because it is one of the biggest clothing companies in the world. It is a company which products are attractive and consumed by many people around the world and for this reason, it is important to investigate the sustainability behind its attractive stores and clothing. It is often difficult to track down the manufacturers and know where the raw materials come from and how they are processed, and consumers do not always have the right perspective on the brands either. The

theme of fast fashion also brings with it a personal concern. As a consumer of fast fashion and constantly evolving trends, it is interesting to study what is the behind the products we consume.

This problem is interesting from both a practical and scientific point of view, as there are few references in the literature. From what was gathered, there are various discussions about the SC in general and sustainability in various industries. However, there is no comprehensive information on the garment industry and case studies on specific brands in relation to their SC in the new times of fast fashion. The information on sustainability of fashion SC is limited to the sourcing stage of the SC. Hence the desire to make a dissertation on this topic area to provide further contributions to the other stages of the SC and literature.

1.3 Objective and Research Questions

Several studies have been conducted on the topic of sustainable supply chain (SSC) and its impact on the various industries. However, there is an absence of studies on the sustainability of SC in the fashion industry. Moreover, there are also a scarcity of case studies of companies in the fashion industry and the sustainability in their SC. Therefore, the main objective of the research study is to analyse the various factors that influence the apparel SC, and the role that social and environmental sustainability play in creating a competitive advantage using sustainability.

Three formulated research questions (RQ) serve the research purpose, and the expected result of the first research question is used to address the second one and the same though is used in the third one.

The first question (RQ1) aims to understand the growing problems and impact of consumer behaviour in the fast fashion industry; As consumer demand for sustainable solutions grows, so does the problem that all companies in the industry need to solve. Therefore:

RQ1) What needs to be done to make the SC of the fast fashion industry more sustainable?

The following research question (RQ2) seeks to better understand the key benefits that can differentiate fast-fashion retailers from others in the industry if they implement the sustainability efforts highlighted by the previous question (RQ1):

RQ2) How does Company Z maintain a competitive advantage in terms of sustainability efforts in its SC?

The third research question (RQ3) intends to study and analyse SC and sustainability in the fashion industry by conducting a case study on the global company Inditex Zara:

RQ3) Can the fashion industry sustain SSC?

1.4 Structure of the thesis

This section outlines the structure of the thesis and provides a summary of the 5 chapters that make up the thesis.

Chapter 1 begins with an introduction that provides an overview of the research topic′s background and its importance and relevance, as well as defining the objectives of the study.

Chapter 2 consists of the literature review, which explores and reviews relevant topics in the areas of study such as SC, sustainability, and the fast fashion industry.

Chapter 3 discusses the methodological choices and data collection methods used in this research.

Chapter 4 presents the findings of the research. It also interprets the qualitative and quantitative data collected.

Chapter 5 describes the main conclusions of the study, limitations encountered throughout the research process and recommendations for further research.

Chapter 2 - Literature Review

This section aims to address the main topics and concepts present in the forthcoming thesis. It is divided into **seven** subsections: sustainability in the fashion industry, SC concepts, a historical outlook of fast fashion, fast fashion and sustainable supply chains, the transition from fast to sustainable fashion and consumer behaviour influenced by fast fashion.

2.1 Sustainability in Fashion Industry

The concept of sustainability and environmental issues in the SC field is relatively new, with first research in the 1990s simply focused on transportation processes, manufacturing, and reverse logistics (Grant et al., 2017). The literature has limitations when it comes to discussing SSC practises, as most studies only focus on specific areas of the SC, namely procurement sourcing and production processes (Macchion et al., 2014).

A SSC is defined as the integration of systems thinking and action into the SC, which must include financial, environmental, and social performance (Sroufe and Melnyk, 2013). Similarly, it is also defined as the strategic and transparent integration to achieve social, environmental, and economic goals in the key business processes and operations to improve the long-term economic performance of the company and its SC (Carter and Rogers, 2008). In the 1990s, the literature on SSC focused on fundamental theories that addressed competitive advantage, namely the Natural Resource Based View (NRBV) and the Triple Bottom Line coined by John Elkington (Yakovleva et al., 2019). It is considered that it is possible to build SSC through purchasing natural or recycled materials, purchasing goods that require less energy to use and purchasing goods that cause less damage in use. (Kane, 2017).

At present, three main themes are mentioned in the literature when discussing sustainable (or 'green') logistics, and SC: reverse logistics, assessment of GHG[1] emissions and greening of logistical activities in the SC (Abukhader and Jonson, 2004). However, various scholars have pointed out that implementing sustainable practises in the SC can be a significant challenge due to higher costs, complexity of coordination and insufficient communication in the SC (Morana, 2013).

Globalization has affected the sustainability of SC over the past decade due to the liberalisation of international trade and the expansion of international transport infrastructure creating further issues namely fuel use and emissions. In addition, outsourcing has become a

[1] Greenhouse gases

challenge for SC sustainability as many firms have outsourced their activities to 3PLs. Although outsourcing is very cost effective for firms, they tend to lose control over operations and therefore do not pay attention to sustainability efforts (Grant et al., 2017). The lean vs agile paradigm is particularly applicable to the apparel industry, where goods are perishable or constantly changing due to trends, so there is a need to apply time compression strategies. Similarly, the rise of e-commerce means that the sustainability of transport in the SC is lacking.

The SC has traditionally focused on manufacturing processes and the delivery of goods, as well as inventory and warehousing control, which is a forward process and little attention has been paid to the afterlife of products (Blumberg, 2005). A key theme discussed in the literature on SSC is the development of reverse logistics and a closed-loop chain strategy, which has received significant attention since the early 1990s due to the concerns about the impact of waste and disposal of products on the environmental. Reverse logistics or closed loop SC includes a combination of the forward flows in the SC as well as the backward flows which include recycling and disposition of products (Blumberg, 2005). It is also defined by (Thierry et al., 1995) as the management of all used or discarded products, components and materials on the operations and processes of a company.

Grant et al., (2017) suggested that to achieve a SSC companies should focus on: Transport, Green Buildings, and Sourcing. For the Transport group, firms should consider switching to more sustainable ways of transport such as rail and sea which are less harmful to the environment. Green buildings in the apparel industry can be stores, manufacturing factories that have a sustainable design and operations to reduce negative impacts. For sourcing, the first stage of the SC, the amount of carbon each raw material generates, and the intensity of the production process should be considered.

2.1.2 Sustainability in the Textile and Apparel Industry

At each stage of the SC, the fashion industry contributes to negative environmental impacts from their vast water consumption during their fibre, yarn, and textile production processes to carbon CO_2 emissions in the manufacturing and distribution phases. A sustainable fashion SC should focus on four aspects: Eco-material preparation, sustainable manufacturing, green distribution, and ethical consumers (Shen, 2014). It is also suggested that a SSC should focus on labour and power usage, resource consumption, and operations scales.

The fashion SC begins with five pre-consumer stages which include (i) sourcing of raw materials and (ii) manufacturing (fiber and yearn manufacturing, fabric manufacturing, apparel manufacturing), followed by the last elements which are (iii) transport, (iv) retailing and (v) consumer use.

Sourcing: Most of the fashion products are made of textile materials which are made using fibers which can be either natural and manufactured fibers (Marcketti and Karpova, 2020). Natural fibers are derived from plants (cotton) and from animals (wool) in contrary with manufactured fibers which are derived from natural polymers or are synthetic fibers derived from small molecules. These fibers contribute to environmental damage as they require large quantities of water and pesticides. This makes the fashion industry the second most water intensive consuming around 79 billion cubic meters of water per year. Manufactured synthetic fibers such as the commonly used polyester create greater environmental impact due to the multiple steps involved in its process and its production also uses more than double the amount of energy used to produce cotton having as consequence higher emissions of greenhouse gases generated (Cherrett et al., 2005).

Manufacturing: Sustainability issues arise since there is a great usage of electricity to power the machines needed as well as boilers and water to create steam to dye and finish fabrics. As consequence, greenhouse gases are emitted due to the energy used to heat the boilers and the machinery (Van der Velden et al., 2014). In the apparel manufacturing stage, where fabric is transformed into the fashion products is the most labour intensive and requires the use of large machinery for processes such as ironing and sewing which also result in carbon emissions. Apparel manufacturing tends to take place in countries with low labour costs and less awareness of environment and human rights, for this reason being the part of the SC with problems concerning human rights and working conditions (Shen, 2014). Besides the large water consumptions, the industry also contributes to large amounts of waste which impacts the local water supplies as some chemicals used in the various stages of the SC enter the local groundwater causing harm to the local population (Niinimaki et al., 2020).

Distribution: Sustainable distribution involves minimizing the amount of carbon emissions and using efficient modes of. It involves transporting raw materials, textiles, fibers, and the end products between countries before being delivered to the retail stores (Wang et al., 2015). To provide a quick response to consumers, fast fashion companies need short lead times strategies implying efficient and quick transportation modes (Shen, 2014).

Green Retailing: Green retailing is the management of the retail business that care for the environment and takes advantage of environmentally friendly processes (Sinha et al., 2014).

The fashion industry has adjusted its SC by introducing online stores. The literature is very limited in the studies of green retailing as most do not focus on this stage of the SC.

Disposal: The final stage of the sustainable fashion SC involves closing the loop with the disposal stage. Many of the items are thrown away or buried a few years after they undergo this process of production which release ozone depleting methane gases which happen when the fibres do not decompose properly. A possible way of closing the loop is to recycle the waste produced and to extend the lifecycle of the products.

At each stage of the SC, the fashion industry contributes to negative environmental impacts, from huge water consumption to CO_2 emissions. The figure 2.1 shows the geographical mapping of the key environmental impacts of the fashion SC. Pollution from chemicals and agricultural products is particularly attributable to the manufacturing stage. Water waste is generated in the countries where textiles are commonly produced, and waste is generated in both the production and consumption stages.

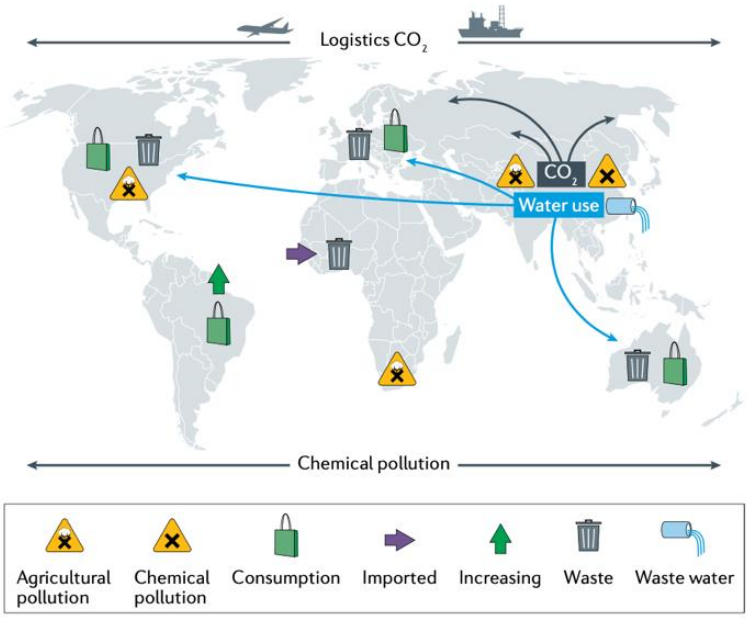


Figure 2. 1 Critical points in textile and fashion production (Niinimaki et al., 2020)

2.2 Supply Chain

This section addresses the main topics and concepts of SC as well as a theoretical overview on collaborative paradigm and the concept of trust in SC.

2.2.1 Concepts, Definitions, and Models

SC are an essential aspect of the global community as they are required to engage in trade and commerce as well as to exploit resources for the overall needs of society. The basic SC includes suppliers, manufacturers, distributors, retailers, and customers.

The term of SC was first introduced in the early 1980's where it was used to describe trends in business strategy to achieve a more efficient and value creation organisation only being understood as logistics (Christopher and Peck, 2004). This definition encompasses the network of organisations responsible for all the different processes and activities that produce value as products and services for the final consumers, through upstream and downstream linkages. In accordance with the same authors, the term required a redefinition changing to business activities ranging from procurement to distribution and manufactured based operations as well as after sales service.

SC is the linking of organisations in the various processes and activities through both downstream and upstream integration to add value to the organisation in the form of products and services for the consumer (Christopher, 2011).

SC is a sum of a firm's customer relationships, order fulfilment and supplier relationship processes as well as the interconnected linkages among the suppliers of services, materials, information and the customers of the firm's services or products (Sroufe et al., 2013).

The concept of SC is well established in the literature and there is an agreement between scholars in terms of its definitions and concepts. When defining SC, the authors take two approaches, some definitions centralize on its core components whilst others provide a more profound definition including an extended view with more aspects. Some authors adopted and end-to-end perspective of product and information flows from the source of raw materials to the end costumer, and even further – after-sales and returns are also to be considered in the SC (Christopher & Peck, 2004). Other authors centralize the definition on the core activities of the supply with emphasises on the end customer implying that the final consumer is part of the supply in the same way as the core activities.

When researching recent definitions of SC in the literature, it is not easily found. This is because there have been extensive studies in the area which has led to higher knowledge of the

topic leading to subdivisions of SC definitions becoming less general and more focused on the specific SC i.e., agile SC, green SC. The majority lean towards defining SCM rather than the actual SC.

2.2.2 Collaborative Paradigm

With the development of globalisation, internalisation, and innovation, the market has become very competitive. This pressure has led to the collaborative paradigm, i.e., the need to build long-term relationships among customers and suppliers (Sahay, 2003). Consequently, customers are becoming more demanding, and this pressure is forcing companies to shorten product life cycles and adapt quickly and efficiently to changes in the market environment. To achieve this, companies need collaboration and long-term SC relationships, as well as trust.

Collaboration has been found to be a driving force behind effective SC enhancing efficiency and effectiveness in various areas. Collaboration is when two or more external and internal firms develop strategies to achieve a common goal that cannot be achieved individually (Kumar and Banerjee, 2012). Others defined it as a partnership between two or more companies to perform SC operations and achieve a common goal (Chen et al., 2017).

The literature highlights that collaboration offers various advantages namely cost reduction, profit, and inventory control (Mofokeng and Chinomona, 2019). The study of (Wieland and Wallenburg, 2013) about the relational perspective of firms, draws the conclusion that advantages are achieved through interconnections and developing unique capabilities. The discussions in the literature state that collaboration is needed to meet the operational complexities in SC which has been particularly true in the recent years due to globalisation and in the fashion SC in particularly due to fast fashion (Liao and Kuo, 2014). However, nowadays, companies also focus on achieving sustainability performance through collaboration with different firms as well as different SC (Chen et al., 2017). The research on SC collaboration for the purpose of sustainability is growing however it is not yet established unlike the collaboration in SC for economic gains (Chen et al., 2017). The studies in relation to these themes do not explain profoundly the link between collaboration and SSC.

The main actors in the collaboration for the purpose if sustainability are the firms, suppliers, and the customers. The study by (Kumar and Meena, 2021) emphasizes the need to build collaborations to improve sustainability in the SC, focusing on the importance of relation and resource sharing based collaboration.

Collaboration and relationship management represents one of the significant components of SC management and the development of green SC and the development of core capabilities to achieve competitive advantage. This may bring the topic of SC back towards the impact that globalisation has caused such as competition, forcing firms to act in collaboration to remain competitive and assist the needs of their customers. With the emergence of the circular economy, traditional SC are moving towards a SSC chain at operational levels with the goal of using resources efficiently and eliminating waste throughout the operational SC (Sudusinghe and Seuring, 2022).

The subject of sustainability and sustainable resources and competencies has expanded beyond organisational level, it is put forward in SC level and can only be achieved through the implementation of firm collaboration relationships. The holistic perspective of organisational sustainability enables transformation in the SC as all actors involved in it, share a common goal and values. Sustainability-oriented means taking a collaborative approach to sustainability that encompasses economic, environmental, and social aspects (Rakic, 2018). However, stakeholders pursue different values and priorities. Some focus on profitability and low costs, while others focus on the wider community and environmental concerns.

The literature on supply chain collaboration focuses deeply on recognizing the attributes and risks of collaboration and the definition of the term collaboration lacks consensus in the literature. There is the need to explore this term deeper beyond attributes and risks. The general view is that supply chain collaboration focuses on quality, profit, and cost reduction. The consensus in the literature is that the main purpose of collaboration is to attain competitive advantages and achieving excellence through relation-based strategy and that culture is a determining factor of its success. Culture is described as an essential part of collaboration and may lead to success or failure as it reflects the way firms think and interact. The literature lacks the study of collaboration in the areas of information sharing, cooperation and inventory management which are fundamentals in SC and its success.

2.2.3 The concept of Trust

The concept of trust has been studied in social literature, economics, and marketing and therefore researchers in the various fields have interpreted in different ways. The common ground between all research is that trust is based upon something such as organisations, people, competences, places, and services (Tejpal et al, 2013). SC collaborations evolved in the end of

the 1990s due to the rise of the high-tech industry and the need to form alliances (Ellram and Murfield, 2019). This therefore increased the role of trust in building and maintaining long term SC partnerships The importance of trust was not regarding the achievement of environmental practises, it was based on its impact in information sharing and resources as an essential to success. The research then shifted when the buyer supplier relationship was growing in its importance and how trust was essential to create long term relationship with suppliers which are more interested in final customer needs.

Effective collaboration requires trust to achieve performance and behaviour bases objectives and the achievement of long-term partnerships (Han et al., 2021). Trust can be considered as a source of competitive advantage because it is difficult for competing organizations to imitate. Trust contributes to the commitment in the collaboration between SC actors and facilitates information sharing strengthening the relationships contributing to the achievement of a common goal (Stuart et al., 2012). SC are built on the foundation of trust and collaboration which provide the benefit of long-term relationships and facilitate information sharing due to the transparency and interest to achieve a common goal.

Trust is defined as inter firm resource developed through the process of inter organizational interaction that is a form of an intangible asset. Trust is the participation of at least two parties, a trustor, and a trustee where there is a positive expectation that both parties will perfom their actions aligned with the interests as well as the willingness of a party to be vulnerable to the other Party actions (Collier and Sarkis, 2021). Similarly, it is also defined as the organisation's notion that the organisation whose collaborating with will perform positive actions and avoid the negative actions and outcome (Mathew et al., 2020).

The common ground of the definitions is that trust requires the participation of two or more parties also described as the trustee and the trustor. The trustee is the party where trust is placed, and the trustor is the party that is vulnerable and needs the trust. The literature defines the concept of trust into two streams the trust embedded in feelings and emotions which is widely used in the research of phycology and sociology and the trust embedded in the competence and resources which moves towards the organizational research Ebrahim- Khanjari et al., (2011) proposed that definitions of trust consist of one or more of the following attributes Benevolence, Integrity, and competence. Benevolence refers to caring for the other party while integrity refers to honesty in actions while competence refers to ability and credibility.

Due to the social concerns on environmental issues, firms have been encouraged to pursue greener SC and to achieve this, firms have created collaborations with suppliers to dispose sustainable products as well as sustainable operations (Cheng et al., 2008). These collaborations

were put in place to achieve both economic and sustainable goals. The research in this area focuses on determining the driving factors behind green supply chains however very few studies have considered collaborative relationships between buyers and supplier as a driving factor (Hoejmose et al., 2012). Although the research on trust is wide and it extends to various areas of research, there is no obvious view referring to trust in the SC and its importance towards supply chain collaboration.

While there is lack of conceptual clarity, trust-building is seen as a challenge and for SC members its success depends on whether they can build trusting relationships (Tejpal et al., 2013). It looks at the benefit of trust to achieve product forecasting to inventory control, effective information flow and sharing (Stuart et al., 2012). Most of the literature focuses on the benefits of trust in the SC as stated previously however there is a lack of investigation in relation to how trust should be embedded in SC and how each element benefits with its implementation. However, there is an extensive gap in the research of the role of trust in green SC.

2.3 Fast fashion: a historical outlook

The fashion industry is characterised by high volatility, diverse and seasoned demand, which makes SC an important aspect of their business to be able to respond effectively to the customers (Christopher et al., 2004). In the literature, the term slow fashion is used to represent sustainability, quality, durability, slow use of products and low carbon footprint which differs tremendously from fast fashion which represent low quality but high volume, short product lifecycles and high carbon footprints (Farhat, 2021). The literature also addresses the concept of agile SC in the fashion industry, which refers to more flexible, demand-driven design and information sharing between businesses in the SC in comparison to the traditional SC which are characterised by high levels of inventory and slowness in response to trends (Christopher and Peck, 2004)

The concept of fast fashion emerged in the late 1990s which changed the fashion industry as well as consumption of fashion items and was adopted by major brands such as Zara. The traditional fashion brands used their capability to forecast consumer demand and fashion shows to forecast future trends however the fast fashion used real time data to estimate the needs and wants of consumers (Becker - Leifhold and Iran, 2018). The industry shifted towards a buyer driven distribution channel and developed collaborations with suppliers globally. The focus

was towards satisfying consumers demands as well as expanding the product ranges of the new fashion trends. It focuses on providing quick and agile responses as well as growing consumer demand of new goods (Muthu, 2019).

The term fast fashion refers to the manufacturing of low-cost clothing that reproduce the trends of luxury fashion trends (Joy et al., 2012). It is also referred as a business strategy that reflects quick response to emerging trends which increase demand for short cycle fashion products (Cook and Yurchisin, 2017). A similar definition states that fast fashion is the readily available, inexpensively made fashion of today (Bick et al., 2018). Due to the constant planning for the next season, rapid production and distribution, the industry has a more complex SC using just in time philosophy.

Its SC has evolved and has become more complex due to the concept of fast fashion, which operates primarily on the quick response and agile concept through the integration and collaboration in the SC (Barnes and Greenwood, 2006). The key difference in the SC is the move towards collaboration and vertical integration (Barnes and Greenwood, 2006). The industry has adopted this concept to improve efficiency within all areas as well as to allow the flow of actual, real-world information to become demand driven based on sales information captured from the stores to guarantee the rapid responsiveness instead of relying on forecast (Birtwistle et al., 2003).

2.4 Fast Fashion and Sustainable Supply chains

The topic of sustainability in fast fashion and ethical practises earned greater interest from both the community as well as scholars after the Rana Plaza factory incident in 2013 where 1200 workers lost their lives due to the collapse of a clothing factory (Macchion et al., 2017). The inexpensive and quick responsiveness of this business model and SC brings environmental and human risks throughout the product lifecycle of its products (Bick et al., 2018). Various sustainable themes can be highlighted such as intensive water use, waste, low wages, and poor conditions of workers as well as pollution and carbon footprint. For a SC to be considered efficient, it needs to apply new technology but also feature sustainable strategies as fast fashion companies know that social responsibility has become an important theme for its consumers.

The fast fashion SC is not much addressed from a sustainable standpoint as there are a few studies that focus on this relatively new business model. From the literature available, it has been identified with substantial negative environmental practises as high energy consumption,

use of toxic chemicals water pollution and poor working conditions just to name a few particularly in the production and sourcing stages (Macchion et al., 2017). In these areas of the fast fashion SC, companies have started to introduce new green production technologies to achieve zero.

The SC lacks sustainability as most companies relocated their production sites far from their worldwide markets which creates an environmental impact particularly CO2 emissions of transporting the items (Macchion et al., 2017). It has been suggested that to tackle this problem, fast fashion SC should consider low emission transportation methods as well as the optimisation of load factor (De Brito et al., 2008). The fast fashion SC uses offshore outsourcing which allocates processes within the SC to a third party that specializes in that process in a foreign country with the main purpose of maintaining costs low (Arrigo, 2020). Many companies use this method to outsource production to less developed countries as labour costs are low. This transforms the fast fashion SC into a global SC which is more complex and riskier as information flows and coordination is harder to control.

Given that the demand for sustainability in the fashion industry is relatively new, the research about sustainability in fast fashion SC is limited. The general viewpoint is that the literature does not differentiate the sustainability in the general fashion industry with the fast fashion SC, it describes it as one however they have differences which need to be considered. Further studies to emphasise how fast fashion SC can be sustainable are needed. The main barrier towards SSC are the high costs associated with the implementation of sustainable practises in all areas of the SC as the fast fashion SC main objective is to maximise production while reducing costs to sell at low prices (Macchion et al., 2017). Alternative raw materials are more expensive, the implementation of technologies to achieve zero waste and emissions also require large investments making it harder for fast fashion companies to fully adopt these practises.

2.5 The real cost of Fast Fashion: Environmental and Social impact

The term ‘fast’ essentially describes the whole concept which is fast in various ways such as fast changing trends, fast rate of production, fast customer decision to purchase, fast sale and delivery and fast usage. Fast fashion which is inexpensive and widely available has changed the way people buy and dispose clothing. Therefore, the cost of fast fashion does not only lay on the grounds of environmental impact it also has enormous social impact.

According to (McNeill and Moore, 2015), fast fashion companies base their decisions and acknowledge the importance of 'fast' beyond the importance of sustainability and due to its economic importance, the industry is globally protected. The negative externalities of the fast and cheap production of clothing are substantial and are expressed throughout this section.

Just for context, globally 80 billion pieces of new clothing are purchased each year this is more than 400% more than the amount consumed in 1990s. (Bick et al., 2018). The environmental impact of fast fashion goes beyond its production, it is continued to after the items are sold. As it encourages consumers to view clothes as disposable with a short product life, it creates larger and faster waste. Disposed clothes are exported overseas to less developed countries where it becomes solid waste creating additional environmental damage.

Most of the literature agrees that the garment industry is the second most polluting industry globally after the oil industry due to its huge usage of natural resources. The rise of the fast fashion has been heavily dependent on synthetic fibres. In the textile production where natural and synthetic fibres are made there are significant impacts due to the usage of oil for polyester production, large amounts of water to grow cotton and to dye the fabrics (Bick et al., 2018). Recent studies show that more than 60% of fabric fibres are produced from petrochemicals and due to their difficulty in being recycled 85% of them take hundreds of years to biodegrade. Polyester is the most used fabric in the fast fashion partially because it is cheap and helps keep the costs low however towards the environment it has greater costs because they are produced from fossil fuels (crude oil) (Sharma, 2020). The factories itself also have an environmental cost as they require large amounts of energy to keep running.

Processing materials such as cotton into fabrics requires large amounts of energy, pesticides, and water. To put into context, it is required 65,000 kilowatt hours of electricity and 250,000 litres of water to transform a tonne of cotton (Ting and Stagner, 2021). Chemicals are used to bleach, dye and print fabrics, which consume large amounts of water. In this process, toxic acids mix with nearby water supplies contaminating them and damaging biodiversity.

The additional hazards are due to the wastewater being discharged into water systems of these developing countries releasing toxicants that can have impact on the land, animals, and residents. There are also reports stating several birth defects, cancer, and physical disabilities due to the impact of these chemicals (Ozdamar-Ertekin, 2017). Most of the fast fashion production is outsourced to less developed countries with poor labour laws and human rights protection namely Bangladesh, Indonesia, Vietnam, and China. The 2013 Rana Plaza factory collapse which killed 11325 Bangladeshi workers is an unfortunate but important reminder of health hazards faced by the fast fashion industry (Sharma, 2020). It is estimated that 40 million

people work in garment production, 90% of them in low- and middle-income countries. Without rapid manufacturing, the fast fashion SC would not be possible and as consequence of it, working conditions of many workers are sacrificed (Ting and Stagner, 2021). Various articles also indicate that women especially are subject to violence and harassment in these factors.

2.6 Transitioning from Fast to Sustainable Fashion

Fast fashion companies such as Zara have made efforts towards sustainable fashion and SSC. They are designing the triple bottom line into their business model which considers both economic performance and environmental and social impact Ting and Stagner 2021. Sustainable fashion is part of the slow fashion movement which is the opposite of fast fashion and was developed in the past decade when consumers became aware of the environmental damage caused by the apparel industry. It is based on the sustainable values, good working conditions and less environmental damage (Henninger et al., 2016). It focuses on using more sustainable fibers, overviewing the entire sustainability of the SC and use technology to reduce waste generated in all parts of the SC (Pookulangara and Shephard, 2013). Most importantly, it encourages customers to purchase consciously which differs from fast fashion with overconsumption as customer buy more than they need at a faster rate resulting in more waste. Although not explicitly stated on the literature, it is fair to state that slow fashion is sustainable fashion.

Various scholars have studied similar concepts that are present in the fashion industry such as working conditions in sweatshops, sustainable production, recycling, waste and csr but very few have studied the concept of slow fashion or sustainable fashion.

Significant progress in achieving sustainable fashion is seen as there are changes on the design techniques and production methods. Zero waste design techniques have been implemented to eliminate waste at the design stage (Muthu, 2019). It is still a challenge to have production at zero waste level however, designers are using leftover fabrics to create pieces There is greater attention on the selection of raw materials with new alternatives such as bamboo and organic cotton (Khandual and Sahu, 2016). Some retailers are using the slogan ethically and handmade, guaranteeing better working conditions for all workers.

Consumers are now choosing second hand and charity clothes which are pre worn to extend the life of the clothes and avoid further waste. Brands have become more transparent with its consumers; they illustrate their SC practises and its use of materials on annual sustainability

reports and websites. Some have shifted their production locally or closer to home to reduce carbon footprint with shipping. Companies are relying on waste reduction methods such as using computed designing so that waste generated in cutting stages can be reduced as well as the optimization of usage of materials which have become more efficient with quality control (Gupta and Saini, 2020). Commonly, various companies pursue zero waste practise to minimize material waste during the production process by using techniques for cutting fabric using more efficient cutting patterns (de Aguiar Hugo et al., 2021). Some are re using left out fabrics, so they don't go into waste.

There has also been progress in reducing the use of natural resources and the use of chemicals which can be harmful. As a sustainable goal for the company, Nike for example is attempting to use technology to dye fabrics without using water. Current, this contribution has saved more than 20 million litres of water (Moorhouse and Moorhouse, 2017). Considerable progress towards sustainable fashion is seen with re using to increase the product life, the use of alternative ways to make fabric such as the use of recycled plastic. Re use of clothing is seen with second hand stores and clothing rentals that help extent the lifespan of clothing items which will be less harmful towards the environment as it takes longer to turn into waste and less is sent to landfills (de Aguiar Hugo et al., 2021). New recycling techniques have also been used such as upcycling which re uses materials that would have gone to waste in new ways without degrading the original composition.

The literature on progress towards sustainable fashion, one may argue that there is limited research conducted in this area. Many, scholars agree that progress relies on consumers and their buying behaviour, as if they stop the over-consumption, sustainable fashion can be achieved as this will force retailers to slow down. The literature on sustainable fashion consumption and consumer buying behaviour in fast fashion is extensive, but this does not answer the question of what contributions have been made towards sustainable fashion. The literature shows the barriers on the way to sustainable fashion, but not the progress towards it.

2.7 Consumer Behaviour influenced by fast fashion

The fast fashion concept promotes trends that are only favourable for a few weeks after being brought. This leads to overconsumption as consumers are always tempted to buying these latest trends, as well as greater waste as they are thrown away faster. Having seen that fashion is such

a polluting industry, to create an effective change towards sustainability changing consumer behaviour towards fast fashion is essential. Many efforts through sustainable production have been made however it is not enough. Consumers have the power to demand change and lead the way, as well as building collaborations with brands to achieve sustainable goals.

In the fast fashion industry clothes have a short span of time and are thrown away quicker due to the latest trends introduced between six weeks to three months. Due to this, it creates a sense of urgency from consumers to always buy more of what is new. As consequence, clothes may be thrown away quicker even if they are still in a good condition. However, this notion changes among different generations. Generation Y consumers prefer to have a higher volume of low quality, cheap and fashionable clothes compared to baby boomer's consumers who would prefer to purchase fewer clothes but of a higher quality (Bhardwaj and Fairhurst, 2010). The younger generations are attracted to the influencers on social media and the high-end fashion worn by celebrities which are seen as a drive towards fast fashion items. Therefore, behind the need to purchase there are factors such as the need to possess an item (Niinimäki, 2010).

It is observed within consumers that environmental considerations are the least of the factors that influence on the purchase of fashion items (Niinimäki, 2010). The impulse purchases due to the constantly changing fashion trends, the tempting low cost of items, the self-image perspective and lack of awareness and knowledge of negative impacts of the fashion industry, make it difficult for a change in consumer behaviour towards sustainable purchases in the fashion industry. Some consumers present a pattern which shows that they are conscious towards the environment, but this is not reflected in their purchasing behaviour (Mandaric et al., 2021). They show concern mostly about climate change and pollution but do not associate the fashion industry as a contributor to those problems. They continue to purchase fast fashion clothes which use large amounts of resources for its production, creating a negative impact on the environment. Consumers choices are somewhat irrational and may not always be connected to their beliefs.

Consumers have shown a change in their buying behaviour and have become more conscious, considering environmental factors prior to their decisions. This group leans towards returning to slow fashion to tackle the consumer behavior influenced by fast fashion. Also known as green consumers, before making a purchasing decision, they evaluate the impact of production of the items, and they are more demanding on companies adopting green practises throughout the supply chain. Sustainable clothing is still a niche market as most consumers lifestyles are not inclined with this aspect of fashion.

Fast fashion still dominates the industry particularly due to its lower priced items and availability of range of styles. Therefore, before purchasing fashion items, consumers are likely to base their decisions on price, quality, and style. The research shows that lack of knowledge, availability of information, the view that sustainable clothes are unattractive and social norms are the main barriers that prevent consumers from changing their habits towards a more environmentally conscious consumption (Mandaric et al., 2021). The collaboration between companies and consumers is necessary, and the challenge moving forward lies on the ability to change consumer behaviour. It is necessary to influence consumer behaviour and social norms for a more conscious society to protect the environment as well as to educate consumers on sustainability in fashion. Consumer information and knowledge of actual sustainability practises in fashion production is limited. Beyond the influence on the earlier stages of the supply chain, consumers can implement a sustainable behaviour in the after-purchase phase by washing less and at lower temperatures, recycling unwanted clothes or donate to charity shops or friends to extend the lifecycle of clothes and reduce waste in the disposal phase (Harris et al., 2015).

It can be argued that it is hard for consumers to base their buying decisions on sustainable fashion and sustainability because sustainable fashion is still a new concept, and it is not yet established on everybody's understanding. It has not been around for the same period as the price factor for example or the quality factor. The research shows that the main barriers faced by consumers to adopt a sustainable behaviour is the price of sustainable clothes compared to fast fashion items and the unattractiveness of sustainable clothes. (Harris et al., 2015). In addition, internal barriers which involve the consumers themselves such as the beliefs, values and knowledge about sustainability make the adoption difficult for some consumers.

Therefore, sustainable clothing behaviour is affected by lower prices, availability of range of styles, lack of information and knowledge as well as personal beliefs and values. Environmental considerations are not a major factor that influence consumers on purchasing decisions. A small number of consumers have changed their behaviour however, further intervention is needed to influence consumers particularly the younger group.

Chapter 3 – Methodology

This chapter presents the methodological choices used in this dissertation to answer the research questions and goals. It explains the type of research that was conducted, the collection and analysis of data. Finally, it highlights in detail the materials used in the research and the justification of choosing these methods.

3.1 Research Design

There is a wide diversity of research approaches when conducting a study (Saunders et al., 2016). The same author has appropriately portrayed these approaches by calling them the research onion due to the different layers they present. The research onion consists of six main layers of theory development, namely **research philosophy**, **approach to theory development**, **methodical choice**, **strategies, time horizons**, **techniques, and procedures** with underlayers of these six approaches. As the main purpose of the study is to analyse the various factors that influence the apparel SC and the role that social and environmental sustainability plays in creating competitive advantage using sustainability, **exploratory research** was conducted.

Exploratory research is most indicated for this study as it helps to understand the main aspect and the groundwork of the study and the research problem that is not clearly defined, by evaluating other existing studies on the topic to provide further discussion rather than conclusive results (Sreejesh et al., 2014).

3.2 Population Sample

As this is qualitative research involving people, the population was clearly defined. This is an important aspect of the research because the population will contribute to the results and findings of the study, therefore, the target population must be appropriately selected to ensure the validity of results (Eldredge et al., 2014). Before presenting the population of this study, it is important to draw attention to the definition of population and its role in research. A population is the collection of entities that the researcher seeks to understand or draw conclusions.

For this study when selecting the population, it was taken into consideration age, fashion consumers, gender, geographical scope, and knowledge. The study addresses the issue of sustainability within Zara, a fashion company which targets mostly the millennial generation,

both males and females. For this reason, the selected population are adults aged 16 to 65 both Zara and non-Zara consumers, to get a double view. One needs to highlight that sustainability is a complex theme that requires a certain understanding, and this is also why the choice of the age, as minors may not have sufficient knowledge of the topic. The selected population resides in Europe namely Portugal and UK and in Africa, Angola. Although the study is based on a global perspective, it is not possible to access a wider population due to time constrains.

3.3 Data collection

There are various data collection methods that can be used when developing a study. The type of data collected depends on the type of research that is being conducted and the research objectives. As exploratory research strategy was used, data collection often includes both primary and secondary research, and this was used in this dissertation.

Primary data is collected directly from respondents using collection methods such as surveys, questionnaires, and direct observation (Sreejesh et al., 2014). Traditionally, it consisted of face-to-face interviews, telephone surveys and e-mail surveys, however today digital data collection is the largest method of data collection (Hair, 2016). For this thesis, for primary data collection a questionnaire was used because they are practical, provide fast results and the data analysis is straightforward. The questionnaire was developed using Google Forms with two versions, English and Portuguese since it's the most common language among the participants. The questionnaire was shared via Facebook, WhatsApp, and Instagram. These were selected because according to statista they have 1 billion users, an effective way to reach participants.

Secondary data, i.e. data that already exists and has been collected by others, was also used for this research. All secondary data was collected using the internet as it is the major source of secondary information and contains various databases. Archival research was conducted based on historical texts, academic journal articles, corporate reports, and websites (Das et al., 2016). This research method was used because of the ease of accessibility of large data that are stored in books, journal articles, Zara's website and annual reports, and articles. A case study refers to the study of a particular case such as a group or an organisation, using various data sources to obtain information (Farquhar, 2012). As the research focuses on Zara as an organisation, this research method is the most appropriate.

For the literature review, to obtain the most reliable information the data collection filtered the search to peer-reviewed articles and attempted to use databases namely SAGE journals, Emerald Journals and ScienceDirect. The literature review aims to provide a comprehensive

background and foundation on the topic of sustainability in fashion SC, so the data collection consisted of peer-reviewed articles and books. Annual business reports, Zara's website and other articles gathered online were used to support the findings of the company.

3.4 Pre-test of the questionnaire

Before the questionnaire was sent out to the respondents, a pre-test was conducted. The pre-test was conducted with participants from different age groups, levels of education and country of residence. The objective was to understand the first impressions of the questionnaire and its validity and to identify potential problems concerning the wording, length of survey, and to receive sincere feedback for potential improvements.

With the pre-test, the older respondents had difficulties understanding the topic however as part of the questionnaire is to see the knowledge of the respondents on the topic of sustainability, it is normal that some are not aware of the topic, most importantly, they were comfortable with the wording. All respondents suggested that a definition of fast fashion and sustainable fashion should be added at the beginning of the questionnaire. For those that already know it, it is still good to remember and have a clear definition to help navigate the rest of the questionnaire with no doubts and those that do not know will have a clear explanation to help understand before they begin the questionnaire.

The respondents also pointed that the survey was lengthy, and the number of questions could be reduced because people would not want to spend too much time doing it. The objective of the survey is to collect as much data as possible hence the number of questions. So, three questions were removed having now a total of 27 questions. As the average time to complete the questionnaire among the respondents during the pre-test was 10 minutes, the time to complete was changed from the original 20 minutes to 15 minutes. It therefore resulted in some minor changes regarding the length and the addition of a definition. The questionnaire was then administered through an online survey.

3.5 Questionnaire Design

When designing the questionnaire, the objectives of the study were defined to formulate the most appropriate questions to answer the question in study. Kishel (2013) highlighted that it is impossible to obtain complete accuracy when conducting questionnaires. Attention was paid to the use of language, ambiguity and bias when conducting the questionnaire. Simple vocabulary was used so that all respondents could easily understand the questions and think about the topic

of the study without being challenged by technical terms so everyday language was used. The questionnaire attempted to reduce the ambiguity of the questions.

The questionnaire was developed on Google Forms and conducted in English and Portuguese, as these are the common languages spoken by the target population. It was delivered online using three main platforms: Facebook, Instagram, and WhatsApp to reach a greater number of people. There are an estimated 3.96 billion users on these platforms and therefore it is an appropriate choice to reach as many users as possible (Dixon, 2022). The questionnaire contains closed and open questions, and it is divided into three sections with a total of 27 questions.

The **first** section aims to understand the populations knowledge of sustainability issues in the fashion industry. With this data, it will be possible to see the customers point of view on sustainability and how they view the work of companies in relation to the topic. From this we can see if there are potential lacks studies on the topic, so customer is not aware of the fashion industry environmental damage as well as understand whether companies are visibly promoting this cause to its customers.

While the **second** section focuses on Zara and its consumers, this data will be used to understand the shopping habits. It will explore whether they purchase sustainable products and if not, why they do not buy sustainably. It will explore whether they are aware of the practises of the fashion brand they choose. It will also help to understand their requirements for fashion products and whether sustainability in the fashion industry cannot be achieved through the high customer demands and compulsive buying that brands must keep up with. Finally, it will help to understand the lifespan of fashion products in today's fast fashion dominated markets. If consumers pay attention to sustainable practises, they will hold the brand accountable, and force Zara to implement a more SSC.

The **third** section involved understanding demographic data such as age, gender, monthly income, professional status, country of residence. With the information obtained in the first section, the basic question of who the customers are and what is the mean age, gender, and income. This data will be used to show how the education level impacts the knowledge in relation to sustainability as well as age to determine intergenerational beliefs. Two European countries (Portugal and UK) and one African country (Angola) are represented in the study, so the answers may vary as some countries are not as educated in the matter.

3.6 Questionnaire objectives

The questionnaire was developed primarily to obtain data for the RQ1 and RQ2. The RQ1 is to understand the growing problems and impacts of consumer behaviour in the fast fashion industry and to see the number of consumers. To do this, it is necessary to know who the consumers of the fast fashion industry are, their purchasing behaviour and what their knowledge and opinion about sustainability is, as they are the biggest assets of an organisations success as well as failure and may impact on the organizations decisions and practises.

Part I of the questionnaire looks to understand the knowledge of consumers on the topic of sustainability and its issues in the fashion industry. Knowing these data, it can help understand consumer behaviour i.e., scrutiny towards unsustainable organizations, importance of sustainability within organizations operations, compulsive shopping, concern on towards non environmental practises in the fashion industry. By knowing this data, one may know whether consumers are demanding sustainable solutions or whether they are encouraging more fast fashion products. If consumers are shopping for more fast fashion products, by interpreting the data it may mean that they are not concerned about non environmentally friendly practises and therefore companies may not act upon this issue because their customers do not demand transparency as opposite to consumers who want to scrutinise these organisations.

The purchasing behaviour should also provide information about disposal of clothing as more consumption leads to faster disposal, the rate of which consumers expect new clothing at the store may be indicated by how many times they shop per month indicating that there are constantly new items, and this may provide an indication to whether consumers agree with the fast fashion processes or which to adopt slow fashion. Therefore, to respond to the RQ1 consumers need to be studied as they may be the core asset to make the SC of the fast fashion industry more sustainable. The data will be collected using the questionnaire and will be interpreted and presented in the analysis section.

Regarding the RQ3, one may argue that the best manner to study and analyse the SC of a global fashion company such as Zara would be by being part of their everyday operations. However, there is not a formal email or portal to directly contact Zara operations teams to formally request the information needed for the thesis. Therefore, a different approach was undertaken. Zara's own website provides immense information about their SC operations, materials used for each specific item listed and care for the item during the product life which can be used for the analysis. The data collection consisted of obtaining various sources of each step of the SC of fast fashion companies to build up an analysis of Zara's global SC. By this

means, to answer the question on whether they can sustain SSC a different approach was taken. When studying SC, the focus is to analyse its collaborations and capabilities, however in this industry the main assets are its consumers. Therefore, whether a fast fashion company can sustain a SSC, depends primary on its consumers and their demands so the study also focuses on this. The questionnaire is useful as the study on the consumers should help respond the question because if it is found that consumers are not concerned with the sustainable practises of the SC, firms will be more reluctant to adopt these practises as they are not being imposed by their consumers and their needs. In addition, the website and articles collected throughout can also help respond the question.

3.7 Ethical considerations

Research ethics refers to the guidelines and moral principles that guide researchers into carrying out responsible studies. Full faculty consent to conduct the study was obtained prior to the commencement of the research. The code of ethics may vary from field to field however all agree that the ethics in research is a set of guidelines to promote ethical standards in research (Meurman, 2016). The study followed the general ethical principles summarised below.

Honesty: The data collection methods, procedures, tools, and results used throughout the study were not manipulated. It is presented honestly.

Intellectual property: All data used was published thus sourced from public databases and was used correctly to avoid plagiarism. Authors work used in the study were correctly credited.

Confidentiality: As questionnaires were used in the study as a data collection approach, the information collected was stored privately.

Openness: The researcher has been opened to criticism and alternative viewpoints.

Chapter 4 – Results and Discussion

In this chapter, the results of the survey are presented and discussed. First, the results of the questionnaire conducted to the public to understand consumers' knowledge about sustainability and their purchasing habits towards Zara are presented and analysed. As the questionnaire was divided into three parts, each of which aimed to obtain different data, the analysis of the survey is also be conducted in this way. It will start with the socio- demographic analysis, followed by consumer buying behaviour and finally the consumers knowledge and opinion about sustainability. This will be combined with a discussion of both the survey data and the data from a compilation of information on fast fashion SC from academic journals and previous studies. The discussion will also serve as a comparison between the results of the questionnaire and the academic information. As two versions of the questionnaire were made (EN and PT), the data used to analyse the results will be the sum of the two questionnaires and will be presented in tables, while the graphs will be from each questionnaire rather than the whole.

4.1 Procedure

The questionnaire conducted resulted in a sample of 207 respondents. Two questionnaires were sent out to the population. They were identical but one was in English, and one in Portuguese. This was done as the study was aimed for the Portuguese, British and Angolan population and it could have a possible language barrier if it was in only one language. The English version obtained 59 responses and the Portuguese version 148 responses, given a total of 207 responses. The questionnaire was conducted using google forms and this data collection period lasted for 15 days before closing it. It was shared using the main social media platforms Facebook, Instagram, and WhatsApp. The responses are automatically collected in an Excel spreadsheet which makes it easier to analyse data using charts. However, because two questionnaires were made, the total data collected for both questionnaires was done manually. This was preferable because as the questionnaires are the same it is essential to be analysed together as one.

4.2 Sociodemographic analysis

The sample consists of 207 respondents, of whom 121 are female (58%), 82 are male (40%) and 4 preferred not to say (2%). This is shown in figure 4.1. The target gender population was both male and female, therefore the results of the gender obtained appropriately suit the study.

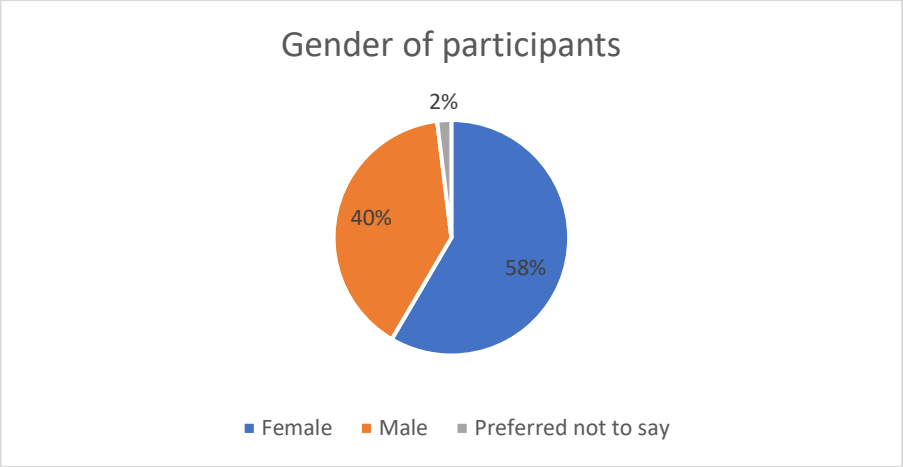


Figure 4. 1 Gender of participants

The sample population is of a young age with (38%) of respondents being between 18 to 24 years of age followed by the 25 to 34 age group. The lowest age group is from 55 to 65 however this is expected as the younger respondents are more active on the social platforms where the questionnaire was shared. Regarding the age, the study did not have a particularity however because the study is of fast fashion SC, the younger population is considered more appropriate as they are the future and the biggest consumers of fast fashion. Therefore, the results obtained are suitable for the study. This is shown in figure 4.2.

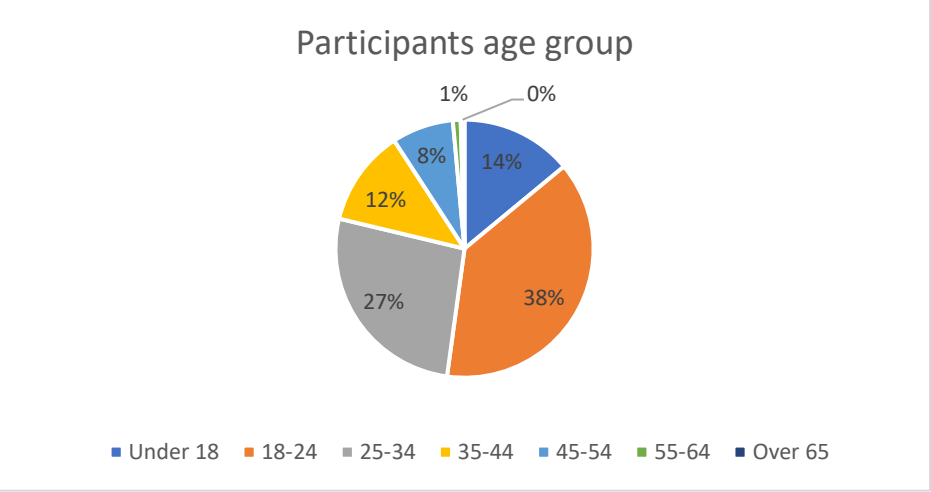


Figure 4. 2 Participants age

The questionnaire was addressed to persons residing in Angola, Portugal, and the United Kingdom and it can be observed that 92 respondents (44%) live in Angola, 70 (34%) live in Portugal and 37 (18%) live in United Kingdom shown in figure 4.3. A further 8 respondents selected the option other.

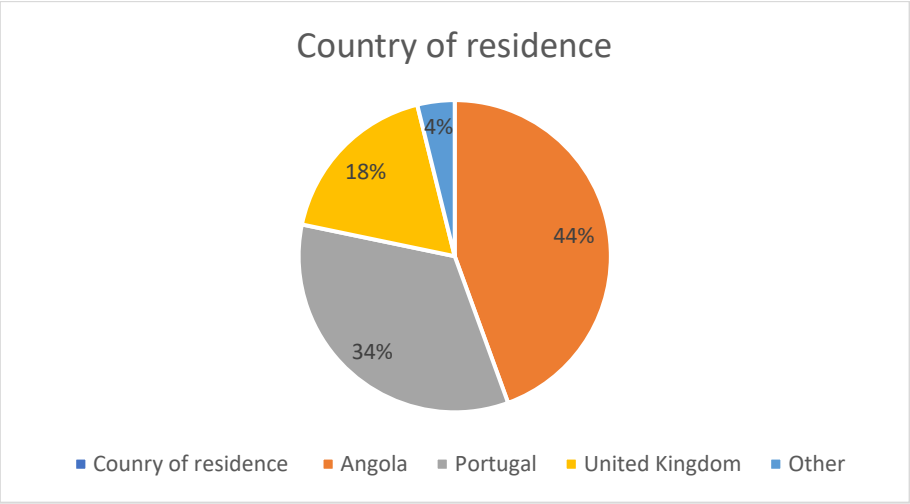


Figure 4. 3 Country of residence

With reference to the respondents' level of education, 51,2% have a bachelor's degree or equivalent and a further 27,1% pursue a high school diploma. Many may still be in education hence the high percentage of those with the highest education being high school. This can be observed in figure 4.4.

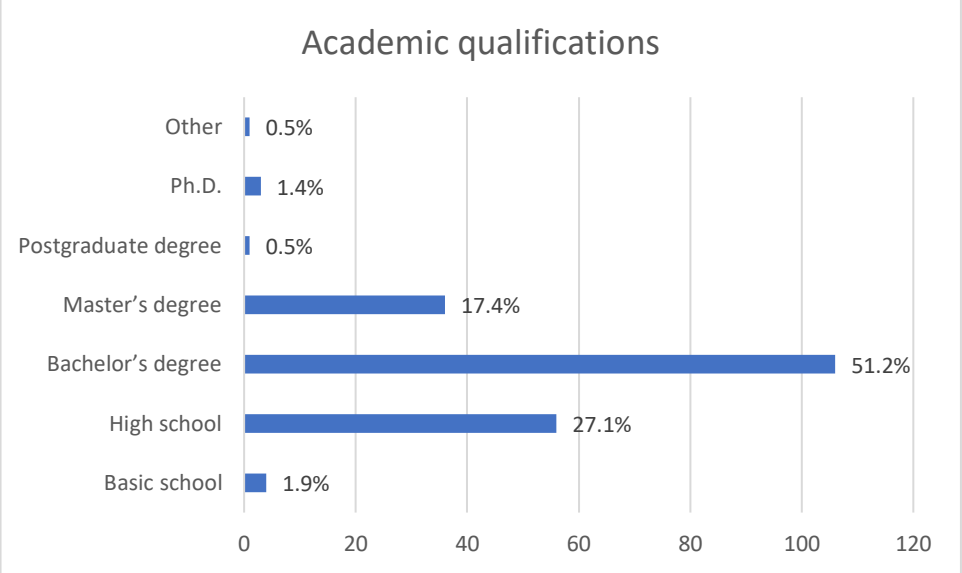


Figure 4. 4 Academic qualifications

Although a young sample, 110 respondents (53,1%) said that they are employed while 97 respondents (46,9%) responded no. A high number of respondents are students 58,0% while 42,0% are not students. This is shown in detail on table 4.1.

Table 4. 1 Employment status, Consumers attending school

		%
Employed	Yes	53,1
	No	46,9
Studying	Yes	58,0
	No	42,0

With reference to income, the sample shows that 85 respondents (41%) earned between 500€ to 1.000€, followed by 54 respondents (26%) that earned less than 500€ and the third highest with 42 respondents (20%) earning between 1.001€ to 1.500€. A further 14 respondents (7%) earn more than 2.500€ while a reduced number of 10 respondents (5%) earned from 1.501€ to 2.000€ with the remaining 2 respondents (1%) earning between 2.001€ to 2.500€ monthly. This is presented in figure 4.5.

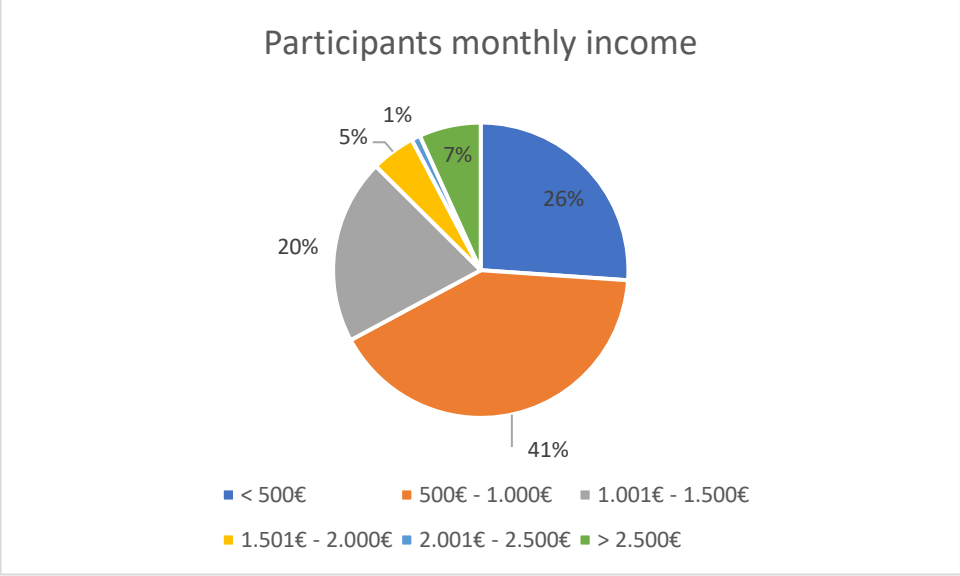


Figure 4. 5 Monthly income

4.3 Consumers purchasing behaviour

The consumption of fast fashion products has increased in the last years particularly due to content creators and social media influencers as they infuse the idea of the need to wear an outfit for every occasion and the need to follow the latest trends. This has led consumers on becoming more fashion conscious and increasing overconsumption than environmentally conscious.

Progress towards SSC relies on consumers and their buying behaviour, as if they stop the over-consumption, sustainable fashion can be achieved as this will force retailers to slow down. This section of the questionnaire is about collecting data on consumer buying behaviour as they are an important element in achieving SSC. The purpose is to understand whether the fashion industry can sustain SSC through consumers and their influence. This is because when SC are studied, the focus is its complexity, its collaboration, upstream and downstream approaches. However, in the fashion industry, consumers play an important role due to their demanding needs that affect the workings and doing of fashion brands.

When asked consumers if they shop at Zara, 194 respondents (94%) said yes while a reduced number of 13 respondents (6%) said no. This data shows that Zara is a well-known and used brand among consumers in those three countries.



Figure 4. 6 Whether consumers shop at Zara

To briefly understand how much of fast fashion they consume, it was asked how many times per month the respondents shop at Zara. A total of 133 participants (64%) said between 0 to 1 time followed by 65 participants (31%) that shop 2 to 5 times per month. A small number said that they shop over 10 times (2%) while an even smaller number shop between 6 to 10 times (2%). This is shown in figure 4.7.

Fast fashion products are cheap and disposable and are made to be replaced with new pieces very rapidly due to constantly changing trends. From the data, consumers mostly purchase items at Zara between 0 to 1 time per month with very few purchasing over 10 times. Due to fashion trends and constantly changing needs and cheap prices, it creates compulsive purchasing habits to consumers therefore this value collected seems to state that although consumers purchase items every month, they are conscious about their purchases as the number of times is not exaggerated.

Fashion brands work in turn of the consumers demand and wants therefore, if consumers shop at Zara more than 10 times per month the less sustainable the SC will be because its consumers are demanding more items which must be produced faster to fulfil these needs. In fashion SC the main objective is to satisfy consumers and achieve high customer service as they are the focus (Choi, 2014).

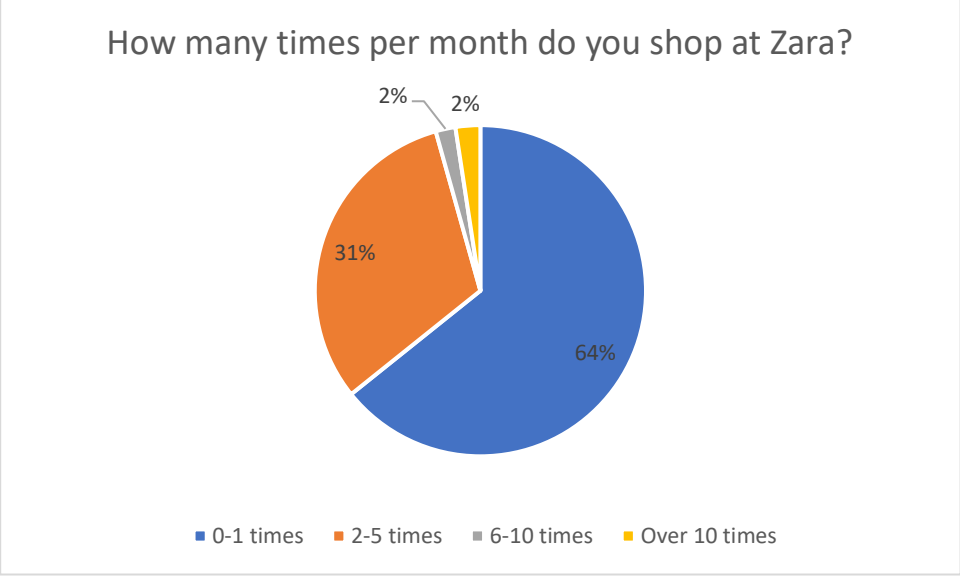


Figure 4. 7 How many times per month consumers shop at Zara

The main question to understand is why consumers shop at Zara. Therefore, they were given six options from which they could select all that apply. It is observed that 170 respondents selected good quality, followed by 106 choosing reasonable prices and 80 going for range of products. In the middle range selected by the consumers is new trends 66 and new items every week at the stores. The least chosen reason is brand loyalty with 29 participants. This information is shown in figure 4.8.

Note, that since consumers had the option to select as many reasons as they wanted, the total number on the table and the total percentage of participants is not applicable. Hence the breakdown of each reason and the total number of participants of both questionnaires. A total of 207 responded, and each answered more than once because they could select more than one option, the option with the highest percentage is the one that was selected more times.



Figure 4. 8 Reasons why consumers shop at Zara

The last decade has seen a shift on consumer trends and wider demand which have forced SC to adapt by providing higher quality products as well as transparency in the SC. When asked why they shop at Zara, most participants pointed at quality. From the consumers perspective who are interested in high quality items, this suggests that Zara, as a fast fashion brand, offers high quality items and therefore they are not required to shop several times a month because the clothes are durable.

From this data, it is observed that many participants chose reasonable prices as the reason to why they shop at Zara, and this is a characteristic of fast fashion which influences its SC and

sustainably. The fast fashion retailers operate in a global supply having access to low cost and highly skilled labour. They can sell at very cheap prices due to the low cost in outsourcing production to low-income countries such as Bangladesh (Ting and Stagner, 2021). Due to its low prices, it creates compulsive and addicted consumers as they purchase clothing that do not require making and as consequence of the speed consumption the products lifecycle has decreased contributing to more waste as disposal.

Surprisingly, only a few suggest that the reason they shop at Zara is due to new items added to stores each week. Stores can have 52 seasons a year meaning that they are able to put up new items every week compared to 2 seasons a year prior to fast fashion era (Ozdamar-Entrekin, 2017). They can do this because of just in time production which is the most common SC concept in the fashion industry aiming at reducing costs but able to deliver the goods to the shops in time to meet demand without carrying inventory (Barnes and Greenwood, 2006). However, from the data collected this is understandable because many participants shop around 0 to 1 time per month, meaning that because they do not go to the stores every week, they are not aware of new items added weekly. They may go to stores and see new items however, because they go every month it may go unnoticed.

The amount of money consumers spend monthly at Zara varies between 19€ to 2000€. This was an open question, so each participant was able to write down the amount and after reviewing all values, it was observed that most spend less than €500 when they shop at Zara. Some stated that it varies depending on whether the purchase is for the individual itself or whether it's for the family (for those that have kids). This data is to help understand how much consumers are willing to spend on a fast fashion brand to contrast with their monthly earnings.

When asked whether they would continue shopping at Zara if the brand was found to have unsuitable practises, 88 participants said yes (42,5%) while 119 (57,5%) said no. Further, 89 participants (43%) said that they are influenced by influencers and social media trends before making a purchase while 118 (57%) said no to being influenced. This information is shown on table 4.2.

Table 4. 2 Scrutiny towards unsustainable practises, influenced by influencers

		%
Willing to continue shopping if the brand had unsustainable practises	Yes	42,5
Not willing to shop if the brand had unsustainable practises	No	57,5
Whether consumers are influenced by influencers before purchasing	Yes	43,0
	No	57,0

Consumption has increased in the last years due to social media and the growth of fashion influencers, as well as intense competition, which has led to a decline in mass production because consumers want, and needs were changing rapidly particularly with women. Popular culture also influenced these changes in the industry because they influenced the latest trends on consumers. From the data, most participants do not feel influenced before making a purchase however those that are influenced are in high number.

Some consumers have become more conscious and informed, and their purchases are influenced by beliefs and attitudes towards fashion, contributing to more sustainable fashion (Kim et al., 2018). These results show that consumers are not willing to use a brand that has unsustainable practises. If consumers stop demanding these items, Zara will be forced to change and adjust its SC to a more sustainable one because of its consumers' pressure.

In recent years, there has been more demand towards the fashion industry to meet environmental and social needs. Fast fashion retailers are listening to consumer concerns about sustainability and their operations and are being held accountable for their actions. The European Union notes that for fast fashion SC to become sustainable the company needs to have social responsibility, human rights, environmental and ethical responsibility into the core of their business operations and close collaboration with their stakeholders.

However, it is important to highlight that the number of participants that are indifferent about the subject is alarming and if they grow in the next years, it may be hard for brands to achieve an SSC because their consumers are not demanding such changes. SSC can be achieved with the adoption of new technologies to aid in sustainable processes as well as the input of

consumers opinions and scrutiny towards the brands and buying the behaviour. It is important for consumers to be educated so that they can minimize the trend of overconsumption and shop more responsibility and potentially return to slow fashion **(**Binet et al., 2019).

Zara has made significant efforts towards sustainable material selection. It has been using organic cotton for various years and uses sustainable cotton manufacturing. 'The circular economy drives us, we are constantly seeking tools and solutions that help us minimise the negative impacts of our activity throughout the life cycle of our products: fibres, processes, use and end of life' (Inditex annual report, 2021). Zara has set up a sustainability innovation hub platform to develop more sustainable approaches towards the various areas of the SC from sourcing and production. (Inditex annual report, 2021). In addition, to move to a more SSC, Zara has established partnerships with governments and institutions to maximise the contribution and foster the triple bottom concepts within its business model.

In the retail stage of the SC, the change towards sustainable practises is visible. The reduction of packaging as well as the recycling incentives is a way of reducing environmental issues as well as educating consumers on the actions the company is taking and the issue of sustainability. In 2021, the Inditex group started charging 10 cents for paper bags at all shops as a measure to eliminate plastic throughout their operations and to encourage consumers to reuse the packaging and move more towards sustainability (Garrido, 2021).

4.4 Insight of the population's knowledge on sustainability and fast fashion

According to 106 participants (51%) they knew the difference between fast fashion and sustainable fashion based on the description given at the start of the questionnaire while 101 participants (49%) responded that they did not know the difference. This definition was put at the start of the questionnaire to facilitate the understanding of those who would not know the definition and may had struggled to fill the questionnaire on the parts focused on sustainability. The results are considerably close showing that just over a half of the participants understand the difference however, the number of those who do not know is still alarming because the population is young and should be aware of this topic as it is a crisis that has impacts on the future of the planet.

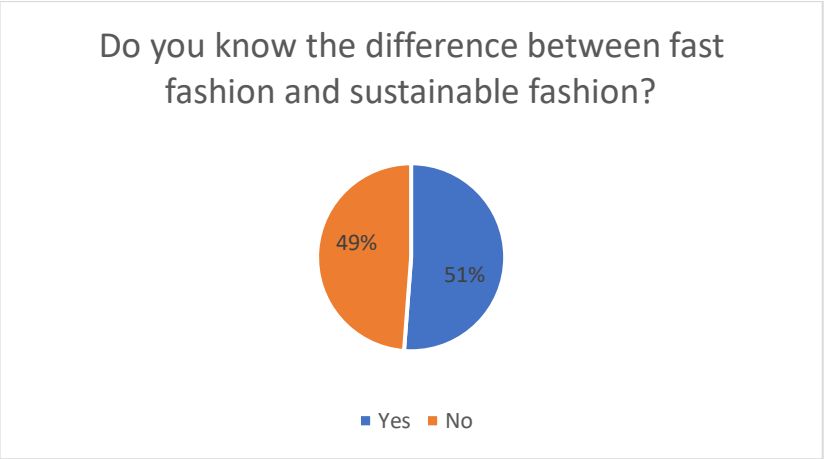


Figure 4. 9 Consumers knowledge of difference between fast fashion and sustainable fashion

The data shows that 125 respondents (60,4%) purchase clothes between 1 to 5 times per month, another 70 participants (33,8%) shop for clothes around 2 to 5 times per month while 7 (3,4%) purchase clothes about 6 to 10 times per month. A smaller number of participants buy clothes over 10 times per month (2,4%). These results are presented in figure 4.10 and they show the number of times consumers shop for clothes in general considering other shops rather than Zara.

It was discussed prior that most consumers purchase at Zara between 0 to 1 time per month however Zara is not the only fashion brand they shop at so on a general perspective of how many clothes they purchase per month the values show that although the majority also shops 0 to1 time there is a great number of people who shop 2 to 5 times. This is concerning because it is known that they are not purchasing from a sustainable brand as 144 participants stated that they shop for sustainable clothing 0 to 1 time per month and the reason they shop for fast fashion items is due to its reasonable prices and range of styles available. The more consumers buy clothes the more overconsumption which will lead to greater and faster waste.

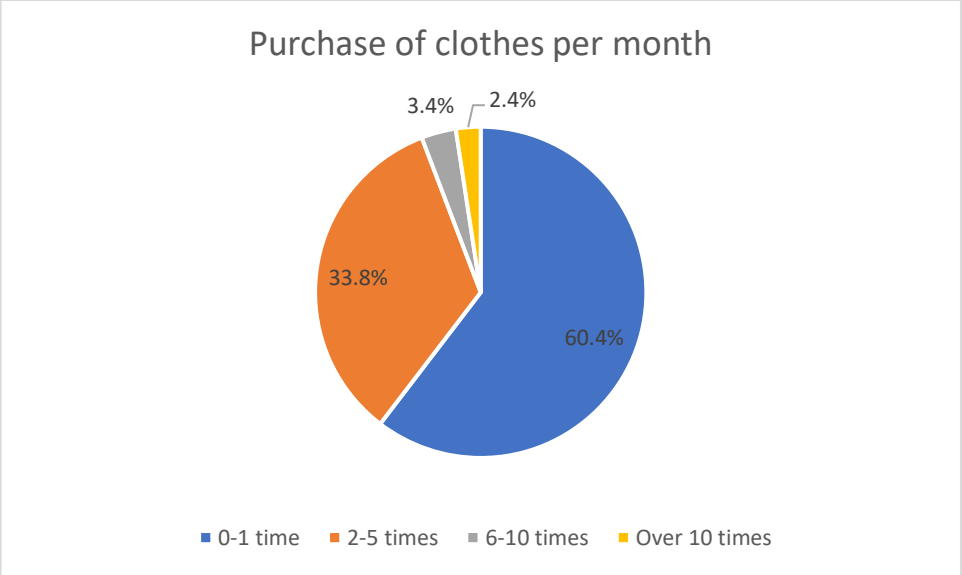


Figure 4. 10 Purchase of clothing per month

Our results shows that 53 participants shop between 2-5 times for sustainable clothing. This may seem that progress is notably seen in consumers as they are adopting more conscious purchases. Many have started to avoid fast fashion companies to become free of the constant trends that encourage overconsumption and started to support local brands (Mukendi et al., 2020). Further, if consumers are buying more, they are most likely only using their clothes for a shorter amount of time. The fast fashion model encourages overconsumption and therefore clothing items are worn for a short period of time and ultimately end up quicker in landfill sites (Arrigo, 2020). At present, consumers over consumption of fast fashion products are to be blame for the failure of the sustainability of the fashion industry.

When asked consumers to choose the main reason why they purchase fast fashion items 101 respondents (48,8%) said that it was due to the price of clothing, followed by 55 (26,6%) that said it was due to the range of styles they offer. Another 30 participants (14,5%) selected the option new arrivals at the stores each week while 10 (4,8%) answered that it was due to quicker delivery. Most of the fast fashion production is outsourced to less developed countries with poor labour laws and human rights. These workers are pressured to work long hours to meet fast fashion deadlines and wages are cut down on as it is a way for companies to keep costs lower in the SC. This therefore allows fashion brands to keep prices low which attract more customers.

Note that this is not a mandatory question as it is destined for only those that use fast fashion. A total of 196 were submitted, expecting that the remaining 11 missing are from those who do not purchase fast fashion. The data is presented on Figure 4.11

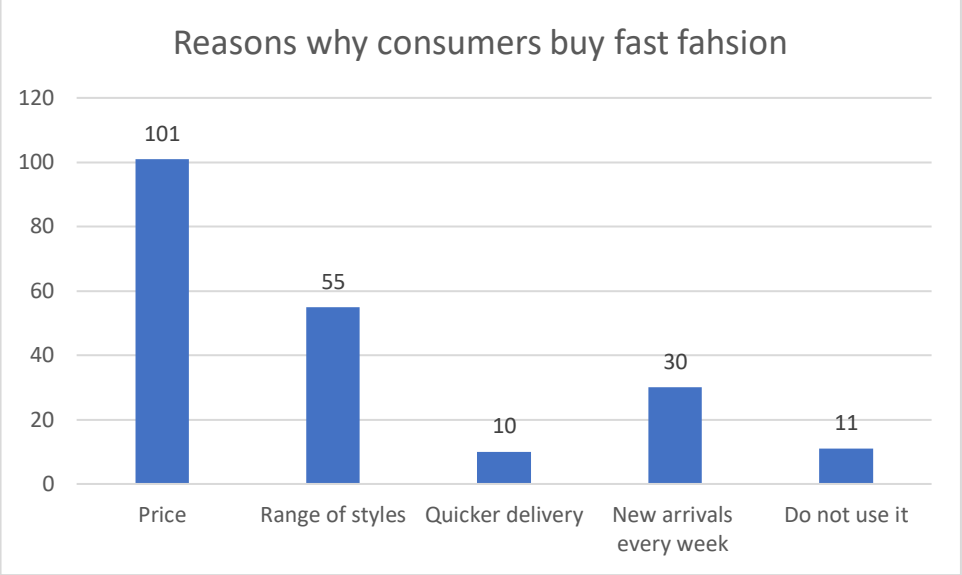


Figure 4. 11 Reasons why consumers buy fast fashion

In general, consumers do not purchase as much sustainable clothing, 144 participants (69,6%) purchase it between 0 to 1 time per month, followed by 53 participants (25,6%) who purchase it between 2 to 5 times. This is shown on table 4.3.

Table 4. 3 Number of purchases of sustainable clothing per month

Number of purchases of sustainable clothing	**%**
0-1 time	69,6
2-5 times	25,6
6-10 times	1,4
Over 10 times	3,4

Clothes are disposed mostly every 2 years with 53% of the participants choosing this option, followed by 32% disposing every year, 14% every six months and lastly 1% every month.

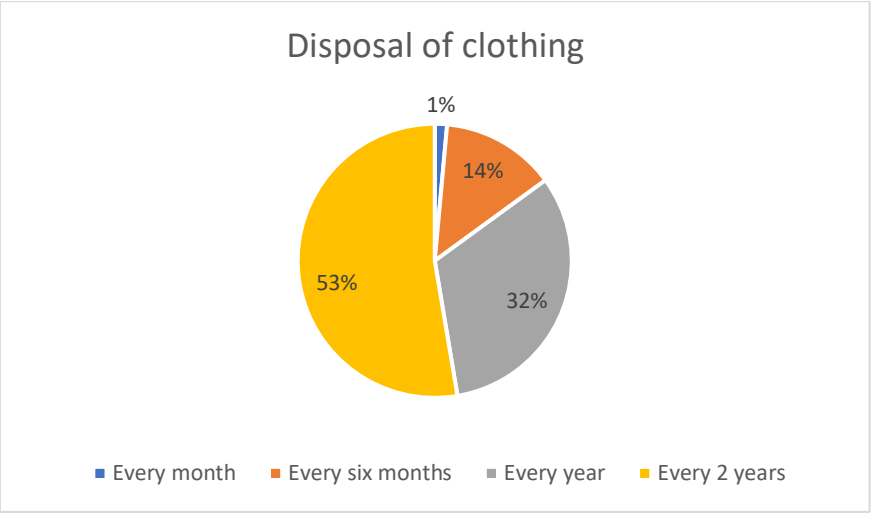


Figure 4. 12 Disposal of clothing

In terms of how these clothes are disposed, 151 respondents hand down to younger family, 120 donate the unwanted clothes to charity while 62 of whom give to friends. A smaller number of 26 sell it while 25 of the participants throw it away. Note, that since this was an open question, consumers had the option to select as many options that apply, the total number on the table and the total percentage of participants is not applicable as it will give a higher number than of the total number of respondents (207) because for 1 participant it may have more than one response. Hence the breakdown of the total number of people who selected the options.

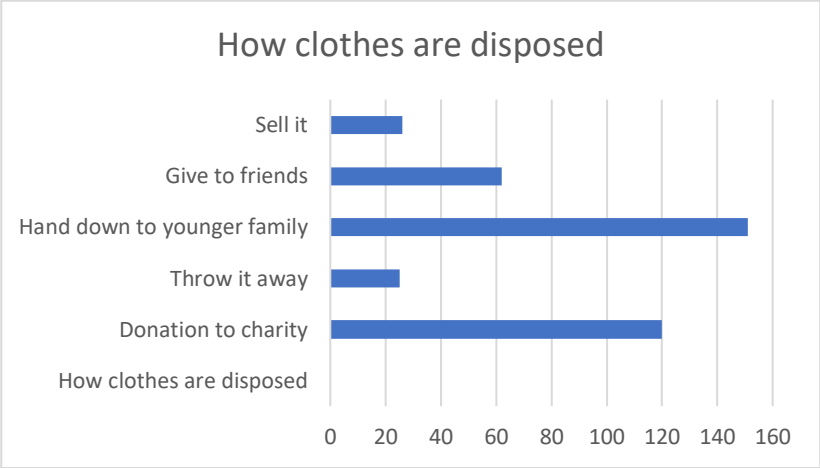


Figure 4. 13 How clothes are disposed

Historically, clothes were bought to use for a long time however nowadays much of the modern clothing is not made or bought to last. This concept of influencers and fast fashion trends reduces the products lifecycle contributing to more waste as disposal at a faster rate. It is concerning when only 10% percentage of clothes are recycled, meaning that the majority is

non-biodegradable taking up to 200 years to dispose in the meantime they release harmful gasses into the environment (Ozdamar- Ertekin, 2017). The data shows that for most consumers, the disposal of clothes happens every 2 years and others every year. Although it is still a small lifecycle for the product, these are not thrown away, instead they have given as donation to charity and are handed down to younger family or given to friends. This is a step towards sustainability as it prolongs the lifecycle of products reducing the time until waste is generated. This last section of the SC which is the disposal/ reuse phase lacks attention from brands and requires large improvement to educate consumers to look beyond the production part of the process.

Zara has implemented a clothing collection program as part of their social and environmental purpose, to help their costumers increase the useful life of their clothes (figure 4.14). These clothes will be recycled to be turned into new fabrics while those that are not cotton or wool will be converted into materials for the construction or automotive industry (Zara, 2022). However, this option is not yet available in every country. On the website, it gives the option to find the nearest stores to donate the clothes, however when selecting Portugal or United Kingdom no stores are available however, it is functional in the United States therefore it may be implemented in other countries shortly.



Figure 4. 14 Zara clothing collection program (Zara, 2022)

A larger number of participants 119, did not know that the fashion industry is ranked on the top 5 most polluting industry while, 88, was aware of this. This is expected as there is more information about other polluting industries and cases of unsustainable practises that have been viewed worldwide namely with the oil industry. The importance of educating consumers is highlighted here as once education is in place their choices and influence becomes more sustainable. When asked about the concern on the environmental impacts of the fashion industry, 106 participants are neutral which means that they are indecisive about the answer while 88 respondents are certain that they are concerned, and the remaining 13 respondents are not at all concerned. People adopt this attitude specially towards controversial topics. This is worrying because there are many young people that are undecided if they are concerned about

the environment because they are less likely to influence brands on pursing a more sustainable approach on their SC compared to those whose concern are very much. This is a topic that should be of concern to everybody but especially the younger generation due to the likely future of the planet.

Table 4. 4 Knowledge about environmental damage of fashion industry and concern level for environmental impacts

		%
Pollution knowledge of fashion industry	Yes	42,5
	No	57,5
Concern about environment	Not at all	6,3
	Neutral	51,2
	Very much	42,5

The participants were required to agree or disagree on seven statements about usage of clothing. Starting with the first statement Wear it for a few years 81 participants (39,1%) strongly agree that clothes should be worn for a few years while 12 others (5,8%) disagreed and 19 strongly disagreed (9,2%). On a similar note, when asked about wearing these clothes until they fall apart 67 participants (32,4%) agreed while 53 disagreed (25,6%). On this statement, Wear the clothes that are the new trend 61 (29,5%) participants agreed and 61 (29,5%) disagreed while 58 others (28,0%) were neutral about it. Most participants strongly agree to not buying clothes 102 making (49,3%) and 86 agree (41,6%). On the statement of Does not wear items more than once 139 strongly disagree (67,1%) with 2 agreeing (1%). A larger number of 66 respondents (31,9%) were neutral when asked about recycling the clothing whereas 64 agree that this is necessary. Lastly, 72 people agree on washing the clothes every week (34,8%) while 47 are neutral (22,7%). This information is detailed in figure 4.15.

When most of the respondents agree that clothes should be worn for a few years and until they fall apart, there's hope for sustainable consumption. The lifecycle of a piece of clothing is between 100 to 200 wears however due to fast fashion this has reduced significantly. It is critical that consumers buy fewer clothes and wear more of what they already own for a less environmental impact.



Figure 4. 15 Consumers viewpoint on the usage of clothes

The number of those who disagree that people should wear clothes that are new trend and those who agree with the statement is equal. Trends are created by fashion influencers who encourage consumption of fashion products mostly being fast fashion products because they are cheap and quickly available. Although when asked consumers if they feel influenced before making a purchase, most said no, and these values do show this, it is because many do not see or that fashion influencers are imposed by influencers. So, although they think they are not being influenced by influencers directly, they are following the trends. This leads to overconsumption. Many also strongly disagree on not buying clothes which is not a sustainable thinking. Sustainable fashion doesn't only involve how the clothing was made but also the consumption of the clothing. Buying new clothes should always be the last option, where favourably consumers should wear their clothes for a longer time and choose to buy from second hand shops or charity shops to prolong the lifecycle of these garments.

Similarly, many consumers agree that clothes should be washed every week which is a threat to the environment due to waster and energy consumption. Each wash shortens the life of a garment, the energy and water consumption with the washing machine and the tumble drying uses significantly more energy than the washing machine. Further, plastic fibres and toxic dyes are a few of the toxins that get washed into the sewage system when laundry is done.

Therefore, consumers are advised to use cold water and utilise the full capacity of the machine to reduce the number of washes, as about 41 gallons of water are used per load. Instead of using the dryer, consumers can air dry clothes to reduce the tumble dryer energy

consumption. To adopt eco-friendly shopping, consumers need to be made aware and educated about reducing end-of- life waste and the environmental damage caused by fast fashion.

Respondents were presented with nine statements about the production of clothing, and they were asked to select the applicable options. From the sample, 86 respondents think that clothes should be made in a way that does not harm the environment, followed by 77 respondents who think that they should be produced without using forced labour and child labour. A very small number of 3 participants consider that speed is an essential statement in the production of clothes. Note that total number on the table and the total percentage of participants are not accurate because consumers had the opportunity to select more than one option. Hence the breakdown of each option and the total number of participants in both questionnaires who selected each option. In total, 207 people responded and each answered more than once because they could select more than one option. The option with the highest percentage is the one that was selected more often. This information is summarised on Figure 4.16.

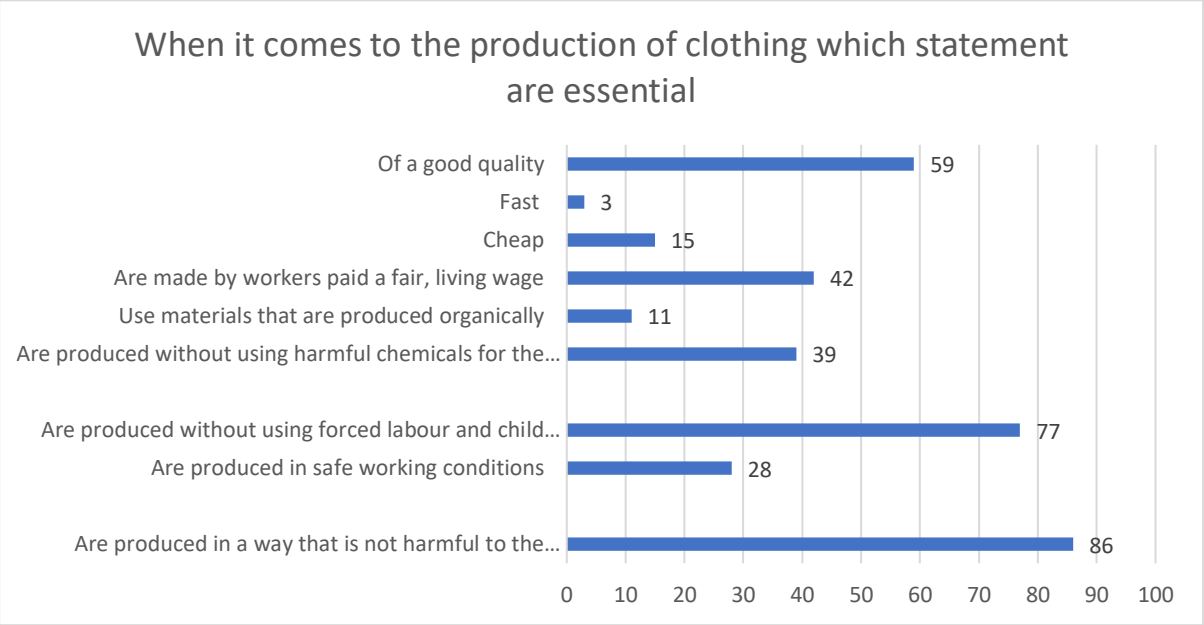


Figure 4. 16 Participants views on statements they consider essential about the production of clothes

The most important aspect is that consumers consider that clothes should be produced in a way that is not harmful to the environment and not using child labour. Although this is their viewpoint, they are still purchasing fast fashion items and disagree on not buying clothes. This is interpreted with the data of good quality. Many participants selected the environmentally friendly options but also answered that it is essential that the clothes are of good quality.

Similarly, when asked why they shop at Zara the majority said it was due to the quality of the clothes. Therefore, this may suggest that although they may seem concerned about environmental impact, a large number will be fine continuing buying it due to the good quality that they believe to be essential.

When asked what they think a brand should be, 63 participants (30.4%) strongly agreed that brands should publicise their social and environmental policies, while 62 (30%) others remained neutral. On the question of whether the brand should be known and famous, 76 respondents (36.7%) disagreed, while 50 others (24.2%) remained neutral. Similarly, on the question of whether a brand must be expensive 97 participants (46.9%) agreed while 59 (28.5%) remained neutral. On the concept that items are being cheap, 81 participants (39.1%) agreed neutrally while 56 agreed (27.1%). This is somewhat interesting because fast fashion attracts customers through low prices. However, the sample shows that consumers are not so much concerned with cheap prices, caring more about environmental policies and transparency. When asked for detailed information about the working conditions of people in the SC 81 respondents (39.1%) agree, while 53 others (25.6%) remain neutral. This is shown in Figure 4.17.

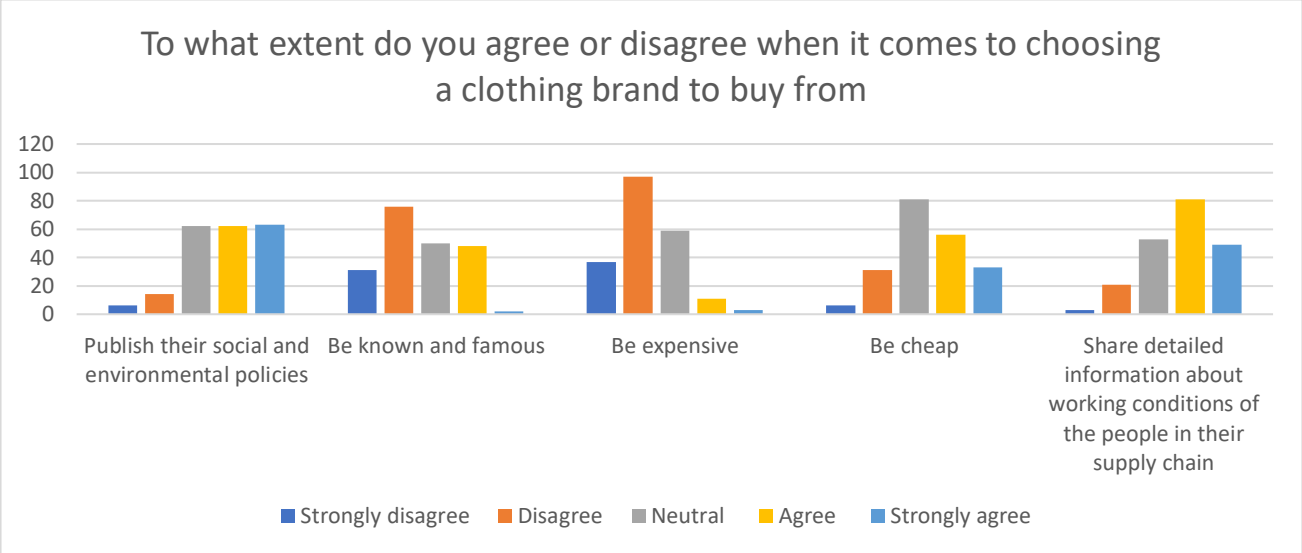


Figure 4. 17 Factors that influence participants on choosing a brand to buy from

Most participants 152 believe that governments and fashion brands should ensure that clothing is sustainably produced. The same number of participants 113 believe that these entities should make it easier to purchase clothing produced in a sustainable way and encourage slow fashion as well as to provide information about the environmental impacts of their business This is surprising because from the sample it was previously observed that not very many

people purchase sustainable clothes. Therefore, they are still consuming fast fashion items while in practise claiming the opposite.

A further 91 respondents consider that their role is to provide information about the social impacts of their business while 64 believe they should Publish which suppliers they use to source the fabrics and raw materials used in their clothing. Note, that since consumers had the option to select more than one option, the total number on the table and the total percentage of participants is not applicable. Hence the breakdown of each option and the total number of participants of both questionnaires to give the total number of responses for each option. A total of 207 responded, and each answered more than once because they could select more than one option, the option with the highest percentage is the one that was selected more times. The Figure 4.18 summarises the results.

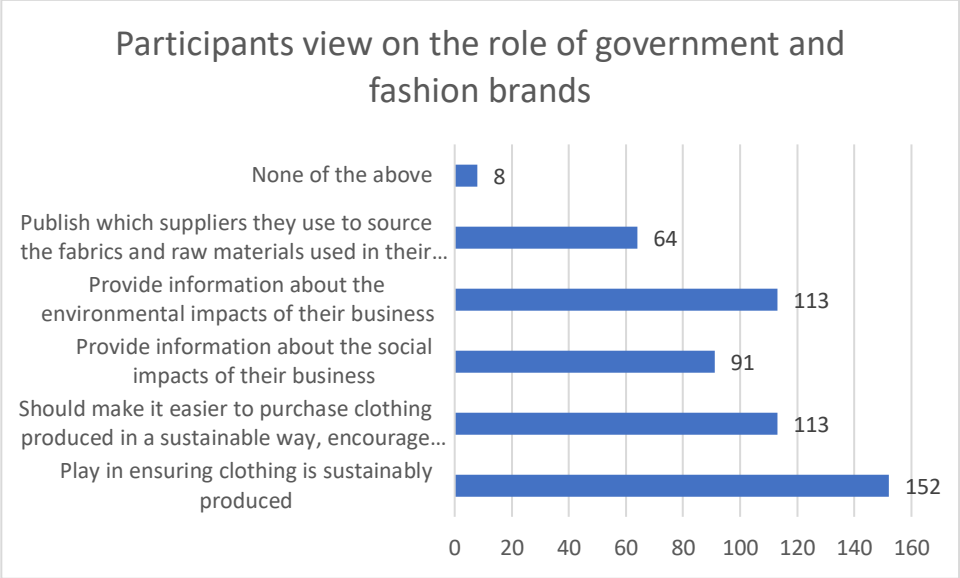


Figure 4. 18 Participants view on the role of the government and fashion brands towards sustainability

It is possible to see that many respondents have indicated that brands and governments should ensure that clothes are produced sustainably, that sustainable clothes should be easier to purchase, and that slow fashion should be encouraged. Consumers cannot see that, they have the power to enforce Slow Fashion in this industry, rather than placing this expectation on government. This leaves room for a possible desire to return to slow fashion and produce higher quality products longer. This will, in theory, minimise waste as it will slow down production as well as consumption (Nature Climate Change, 2018).

Many consumers also stated that information about the company's social and environmental impacts should be provided. If all brands openly have this information available to consumers, they would be able to have their perspective and make their mind about the topic. Zara has this implemented on their website, where information about sustainable efforts is shared.

In 2016, Zara introduced its first sustainable product line the Join life which items were manufactured solely on sustainable raw materials with technology that reduces water intake and renewable energy in the manufacturing progress (Zara Portugal, 2022). The information about the join life initiative is available on the Zara website so consumers can see the efforts of the company. In addition, on the website Zara has information about the materials, care and origin of every item listed so when consumes select the item they want to purchase there is information explained next to the product. An example of this is shown Figure 4.19.

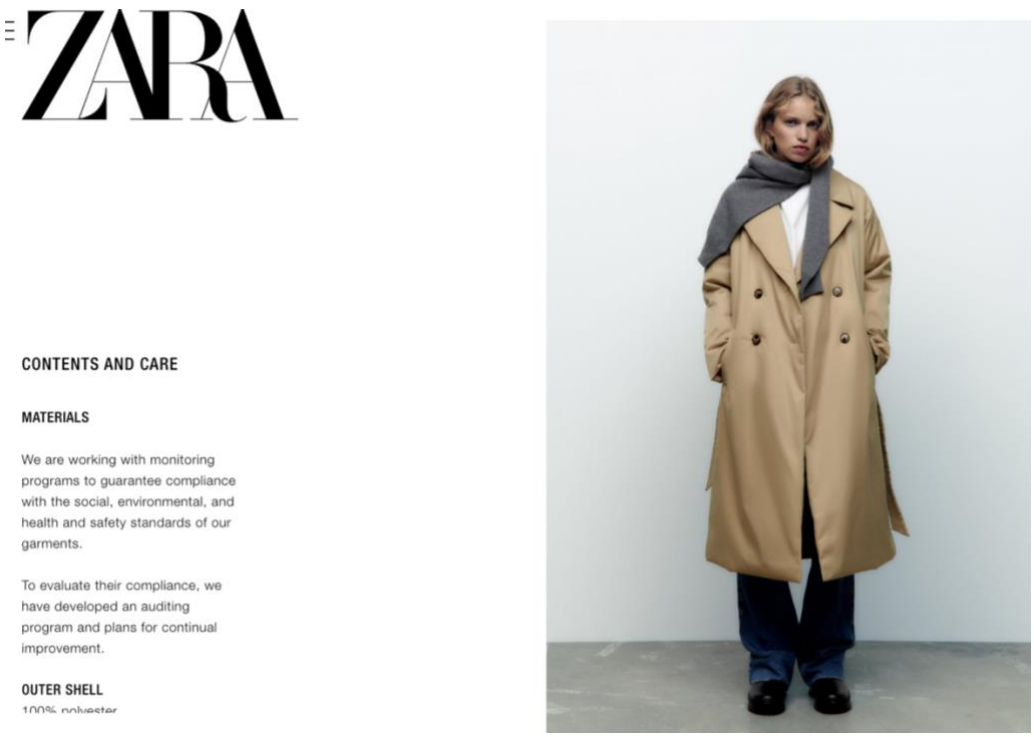


Figure 4. 19 Description of materials used for each product on Zara's website

Chapter 5 - Conclusion

This research was conducted to analyse whether the fashion industry can sustain a SSC with a focus on the fast fashion model and the fast fashion brand Zara. This chapter presents the conclusions of the results obtained, as well as limitations to the study. Suggestions are also presented for future research.

5.1 Main Findings

The study to analyse the various factors that influence the apparel supply chain and the role that social and environmental sustainability play in creating a competitive advantage using sustainability, used a survey to understand consumer purchasing behaviour and their opinions towards sustainability. It also incorporated compiled information from various academic sources. The results obtained indicate that sustainability creates a competitive advantage in the apparel supply chain due to consumers preferences to lean towards brands that have more environmentally friendly practises

The study concluded that it is a challenge for companies in the fashion industry to sustain SSC due to the complexity of their SC and its business model. However, it is possible to achieve a SSC in the fast fashion SC with consumers and brands working together to achieve this goal.

Consumers awareness of environmental issues have grown and may grow further if they are educated in the matter. They have little knowledge about the environmental problems associated with the fashion industry, a reason to why they continue to consume fast fashion products. In this new era of fashion, where the main purpose of brands is to fulfil the growing demand of the customers, consumers can influence fashion brands and their workings. SSC can be achieved if consumers demand less fast fashion items and return to slow fashion as well as to demand transparency from firms about their operations and environmental efforts. By consuming less, consumers will be returning to slow fashion which will force brands once again to adapt and return to the old model. This will reduce overconsumption because clothes would be made to last, the more they last the longer it takes for clothes to be disposed tackling the problem on the last stage of the SC.

Based on the sample of 207 participants, it is possible to recognize that the population is moving towards a more sustainable side. The amount of consumption rounds at mostly 0 to 1 time per month and clothes are discarded in sustainable ways instead of throwing it away they

are given to friends and family or donate to charity which extends the life span of the items and therefore prolongs the need to dispose and contribute to waste. Many have said that if a brand is found be unethical in their operations they would stop buying and using such products. Therefore, the need for transparency from firms, so consumers can base their decisions on sustainability as an influential factor. Essentially SSC are achievable with consumers influence and a change in their purchasing habits.

From a brands perspective, SSC can be achieved by implementing greener practises in all steps of their operations. This is effective however due to high costs and the need to maintaining costs low, firms may be reluctant and therefore the need of the influence from customers, forcing these brands to implement such practises. Zara is greatly involved in achieving a closed loop model, by developing the join life collections. They have made progress with publications of annual sustainability reports to educate and assure consumers of their practises as well as to show transparency of their operations.

The greatest challenge is in the sourcing stage of the SC, where the company is not fully aware of how items are sourced due to secondary suppliers. This lack of control is critical and may slow progress towards sustainability.

Nevertheless, although various efforts are being done to move towards a more SSC, it is important to consider on whether it is possible for fast fashion SC to be all sustainable due to its global complexity. It is also necessary the action of international governments and local authorities to introduce efficient regulations and hold these companies accountable thus introducing well-structured regulations and measures for these companies and not wave sanctions due to their global economic input.

Considering the research questions, some answers can be drafted as follows:

RQ1) What needs to be done to make the SC of the fast fashion industry more sustainable? Fashion brands should only work with suppliers that incorporate sustainable practises, this way they are working towards a common goal. As control in this stage is difficult due to its global SC, this reduces the difficulty. Further, these suppliers should be analysed by the company's sustainability teams to ensure that they are performing accordingly. Materials should be ethically sourced, with the need to avoid synthetic materials that require large amounts of water and energy and further environmental damage. Brands should have the commercial power to drive changes. Brands should focus on the last section of the SC disposal, which is often overlooked, by implementing recycling hubs at its stores where consumers can bring their old garments to be recycled and re used and extend the lifespan. Consumers can influence a change by returning to slow fashion, forcing brands to adopt the old model which is more sustainable.

RQ2) How does Company Z maintain a competitive advantage in terms of sustainability efforts in its SC? From the sample, it is observed that consumers prefer to shop at Zara due to its quality. However, Zara's efforts go beyond the quality of the clothing. They have ended the use of plastic bags and by charging for paper bags they are incentivising people to re-use it. They have introduced the join life collection which is Zara's sustainable line made with sustainable materials, such as organic cotton and recycled polyester. The cotton will be ecologically grown and should be 100% more sustainable by 2023. They have set future sustainability goals such as the zero emissions goal to be achieved by 2040 and eliminating plastic from the manufacturing process. They have ensured that all cardboard boxes used are 100% recycled. They are in collaboration with other companies in the sector to jointly drive sustainability in the fashion industry, this way others may follow and implement practises in their operations. They are working towards implementing greener buildings, ensuring that the energy used in all facilities is 100% renewable. Importantly, they are developing innovative projects to improve water usage in the manufacturing stage for wet processing. This is to be achieved by 2025. All these initiatives give Zara a competitive advantage because they are the pioneers of change, differentiating them from other brands.

RQ3) Can the fashion industry sustain SSC? Essentially SSC are achievable with consumers influence on their purchasing habits forcing companies to return to slow fashion which is more sustainable. In addition, companies should implement the sustainable model, ensure vertical integration to facilitate communication and control within its SC.

5.2 Limitations and future research

The study has achieved its research objectives however limitations were encountered throughout and will be explained to also be considered for future research.

Firstly, there are limitations in the literature when searching for recent definitions of SC. SC have evolved throughout the years and for this study it was important to see the definitions throughout time as the study analysis an industry which has changed and subsequently its SC has also changed. This lack of recent definitions in the literature is because there have been extensive studies in the area which has led to higher knowledge of the topic leading to subdivisions of supply chain definitions becoming less general and more focused on the specific supply chain i.e., agile SC, green SC. Most of the authors also lean towards defining SCM rather than the actual supply chain. This was a limitation to the study because the fashion industry SC

has changed and for this matter it was important to show the contrast of the traditional SC with the new SC through the literature.

The literature on SC collaboration focuses deeply on recognizing the attributes and risks of collaboration and the definition of the term collaboration lacks consensus in the literature. There is the need to explore this term deeper beyond attributes and risks. There is also little research on the relation between how collaboration leads to SSC and an extensive gap extensive gap in the research of the role of trust in green SC.

The sustainability in the fast fashion SC in little or not addressed in the literature as only very few studies focus it on this evolved model of the fashion industry. When sustainability is addressed, there is no differentiation between the traditional SC and the fast fashion SC, it is described as one however they have differences which should be addressed in future studies. The challenges of following a SSC are highlighted however there is very little research on the steps to take to achieve sustainability in all areas of the SC.

To sum up, the literature is very limited on fast fashion SC and sustainability. There is a greater need to conduct research in this area in general as well as focusing on fast fashion brands to critically analyse the sustainability of their SC operations. There are very few academic studies about fashion brands and the workings of their fast fashion SC. Due to this lack of research in the area, the study required a greater amount of time for searching for resources.

Furthermore, the questionnaire presented limitations with its length and sharing methods. It was shared using the most common social media platforms to attract a greater number of participants however, people were reluctant to fill the questionnaire and it required a great deal of persuasion. Many pointed that it was a long questionnaire and felt lazy to do it especially because it is a topic that doesn't attract everyone immediately. There is also various distractions in social media platforms, so the population was more interested to spend their time engaging in other means than doing the questionnaire. It is important to acknowledge that there is a limitation with this type of sampling. Conclusions cannot be drawn due to the nature of the sample. Because it is a case study where a questionnaire was used, only a selection of participants were involved excluding various other views to be studied. Meaning that it is too generalised and concrete conclusions cannot be made.

Instead of relying on social media platforms, a more direct and face to face interaction with the population may have also been effective in strategic locations such as shopping malls, high streets where most or all people are consumers of fashion items. Due to time restriction, the questionnaire was administered to three countries therefore to obtain more extensive results it should cover more nationalities and more age groups especially above 40 years. On the design

of the questionnaire, the neutral option on a 5-point Likert scale should be discarded when addressed a very important because it doesn't show a positive nor negative answer, so interpretation is needed. Neutral responses may mask beliefs of those leaning forward or against a topic, so it is a way to avoid taking a position on an important usually controversial issue.

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Appendix

Appendix 1 - Questionnaire English version

Title: Sustainability in the fashion industry

Introduction:
Hello, my name is Filipa Yekini, I am a second-year master's student of Management of Services and Technology at ISCTE. As part of the research for my dissertation, I am conducting a questionnaire to collect data to help build an answer to my research questions. The main objective is to analyse the various factors that influence the apparel supply chain, with a focus on ZARA, and the role that social and environmental sustainability play in creating a competitive advantage, using sustainability.
Three research questions were formulated as a basis to meet the objectives stated above.

RQ1) What needs to be done to make the supply chain of the fast fashion industry more sustainable?
RQ2) How does Company Zara maintain a competitive advantage in terms of sustainability efforts in its supply chain?
RQ3) Can the fashion industry sustain sustainable supply chains?

The questionnaire consists of three groups of questions and will take approximately 10 minutes to complete. The first one is aimed at obtaining data of your knowledge about the topic of sustainability and the fashion industry, while the second part, collects data about the brand in study and its consumers. The third part collects the demographic data.

All responses will be kept anonymous meaning that none of the participants will be identified in the research. Thank you for taking part!

Knowledge on sustainability

Sustainable fashion referes to clothing that is designed, manufactured, and distributed in ways that are environmentally friendly. It focuses on using more sustainable fibers, and use technology to reduce waste generated in all parts of the supply chain.
Fast fashion refers to the manufacturing and quick response of low-cost clothing, that reproduce the emerging trends which increase demand for short cycle fashion products.

Based on the description above, did you already know the difference between fast fashion and sustainable fashion? *

- ◯ Yes
- ◯ No

How many times per month do you buy clothes? *

- ◯ 0-1
- ◯ 2-5
- ◯ 6-10
- ◯ Over 10

If you use fast fashion, what are the main reasons that make you prefer to buy fast fashion items rather than sustainable fashion items?

- ◯ Price
- ◯ More range of styles
- ◯ Quicker delivery

How many items of sustainable clothing do you buy per month? *

- ◯ 0-1 items
- ◯ 2-5 items
- ◯ 6-10 items
- ◯ Over 10 items

How often do you dispose of your clothing? *

- ◯ Every month
- ◯ Every six months
- ◯ Every year
- ◯ Every 2 years

How do you dispose of unwanted clothes? (Choose all that apply) *

- [ ] Donate to charity
- [ ] Throw it away
- [ ] Hand down to younger family
- [ ] Give to friends
- [ ] Sell it

Did you know that the fashion industry in ranked on the top 5 most polluting industries? *

- ○ Yes
- ○ No

How much are you concerned about the social, environmental, and ethical impacts the fashion industry has on the world? *

- ○ Not at all
- ○ Neutral
- ○ Very Much

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
Wear it for a few years	○	○	○	○	○
Wear it until they fall apart	○	○	○	○	○
Wear the clothes that are the new trend	○	○	○	○	○
Do not buy clothes	○	○	○	○	○
Don not wear items more than once	○	○	○	○	○
Recycle your clothes	○	○	○	○	○
Wash it every week	○	○	○	○	○

When it comes to the production of clothing which of the following statements do you consider essential? *

- [ ] Are produced in a way that is not harmful to the environment
- [ ] Are produced in safe working conditions
- [ ] Are produced without using forced labour and child labour
- [ ] Are produced without using harmful chemicals for the consumer
- [ ] Use materials that are produced organically
- [ ] Are made by workers paid a fair, living wage
- [ ] Cheap
- [ ] Fast
- [ ] Of a good quality

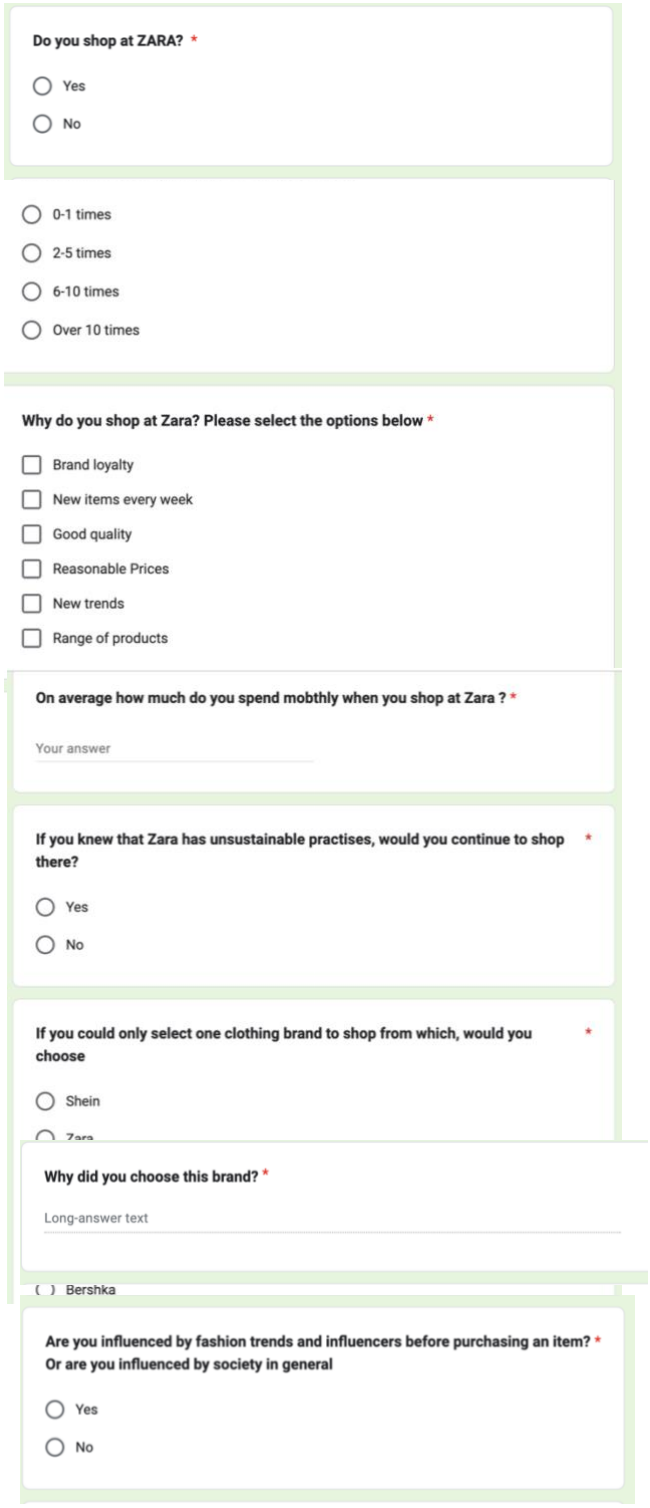
To what extent do you agree or disagree with the following statements. When choosing a clothing brand to buy from, it is important for the brand to have the following: *

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Publish their social and environmental policies	○	○	○	○	○
Be known and famous	○	○	○	○	○
Be expensive	○	○	○	○	○
Be cheap	○	○	○	○	○
Share detailed information about working conditions of the people in their supply chain	○	○	○	○	○

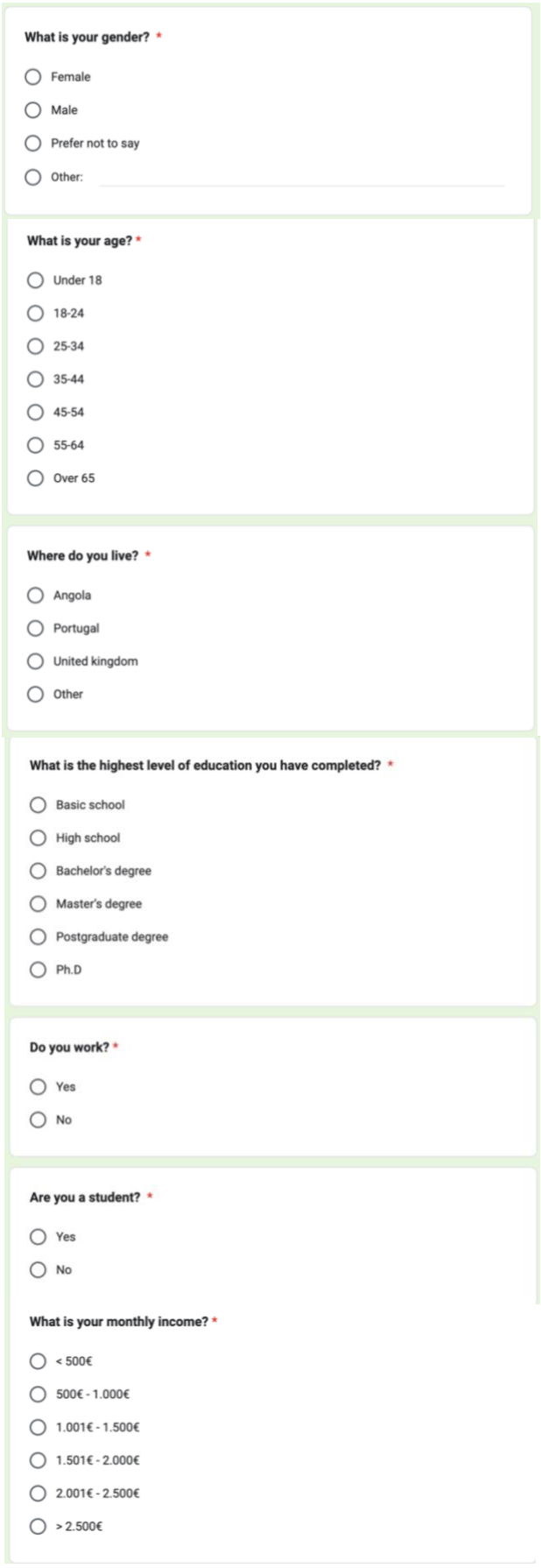
Do you feel that the government and fashion brands have the role to *

- [ ] Play in ensuring clothing is sustainably produced
- [ ] Should make it easier to purchase clothing produced in a sustainable way, encourage slow fashion
- [ ] Provide information about the social impacts of their busines
- [ ] Provide information about the environmental impacts of their business
- [ ] Publish which suppliers they use to source the fabrics and raw materials used in their clothing
- [ ] None of the above

Consumer Purchasing Behaviour



Demographic Information



What is your gender? *

- ◯ Female
- ◯ Male
- ◯ Prefer not to say
- ◯ Other: _____

What is your age? *

- ◯ Under 18
- ◯ 18-24
- ◯ 25-34
- ◯ 35-44
- ◯ 45-54
- ◯ 55-64
- ◯ Over 65

Where do you live? *

- ◯ Angola
- ◯ Portugal
- ◯ United kingdom
- ◯ Other

What is the highest level of education you have completed? *

- ◯ Basic school
- ◯ High school
- ◯ Bachelor's degree
- ◯ Master's degree
- ◯ Postgraduate degree
- ◯ Ph.D

Do you work? *

- ◯ Yes
- ◯ No

Are you a student? *

- ◯ Yes
- ◯ No

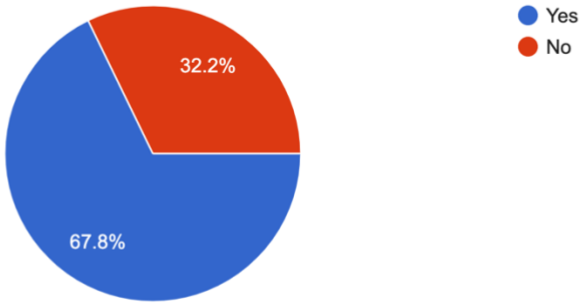
What is your monthly income? *

- ◯ < 500€
- ◯ 500€ - 1.000€
- ◯ 1.001€ - 1.500€
- ◯ 1.501€ - 2.000€
- ◯ 2.001€ - 2.500€
- ◯ > 2.500€

Appendix 2 - English questionnaire graphs

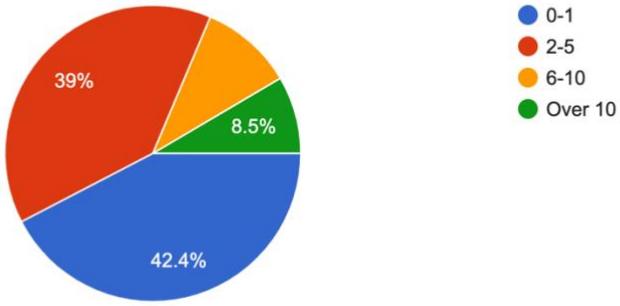
Based on the description above, did you already know the difference between fast fashion and sustainable fashion?

59 responses



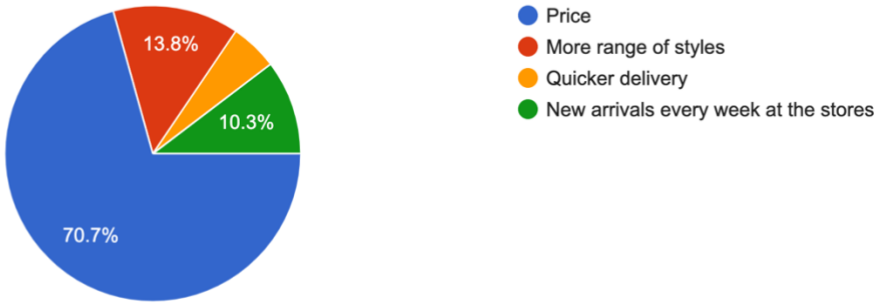
How many times per month do you buy clothes?

59 responses



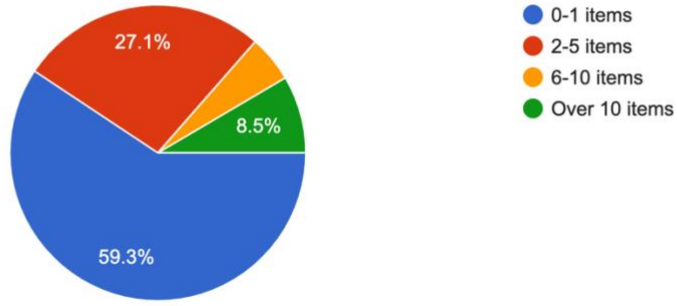
If you use fast fashion, what are the main reasons that make you prefer to buy fast fashion items rather than sustainable fashion items?

58 responses



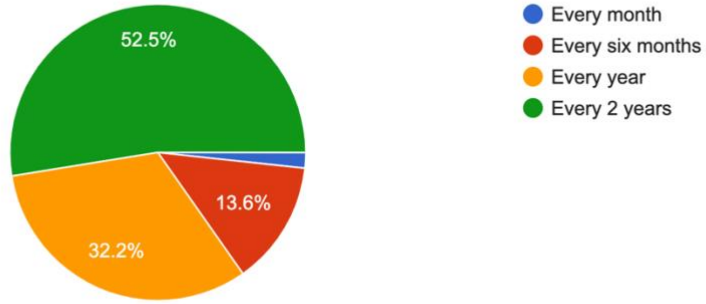
How many items of sustainable clothing do you buy per month?

59 responses



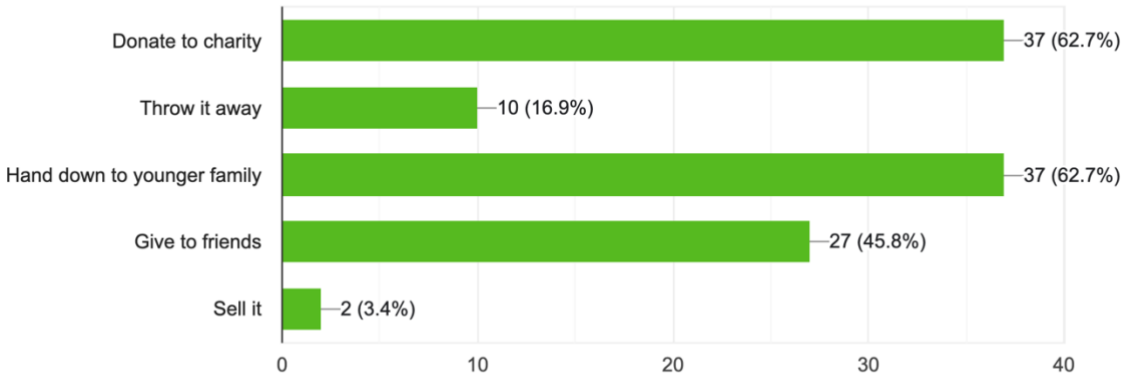
How often do you dispose of your clothing?

59 responses



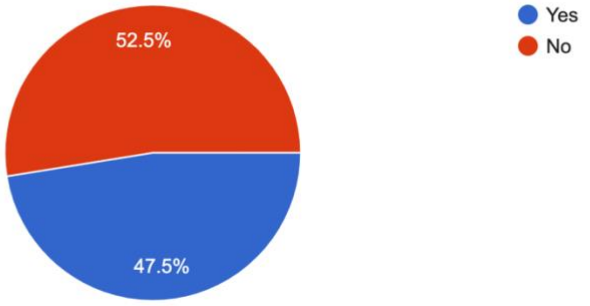
How do you dispose of unwanted clothes? (Choose all that apply)

59 responses



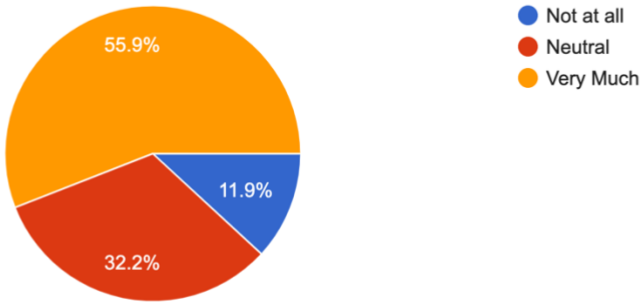
Did you know that the fashion industry in ranked on the top 5 most polluting industries?

59 responses

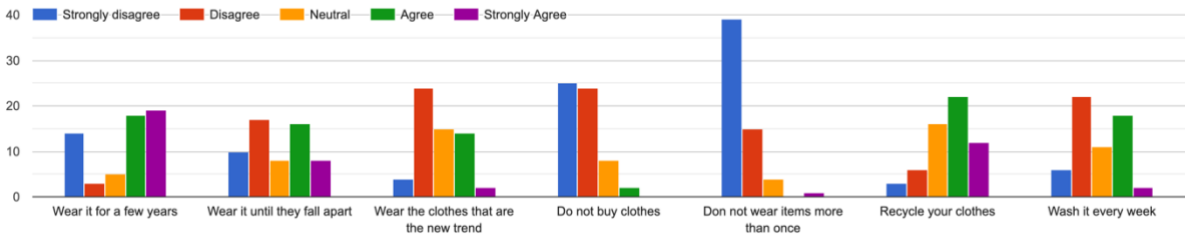


How much are you concerned about the social, environmental, and ethical impacts the fashion industry has on the world?

59 responses

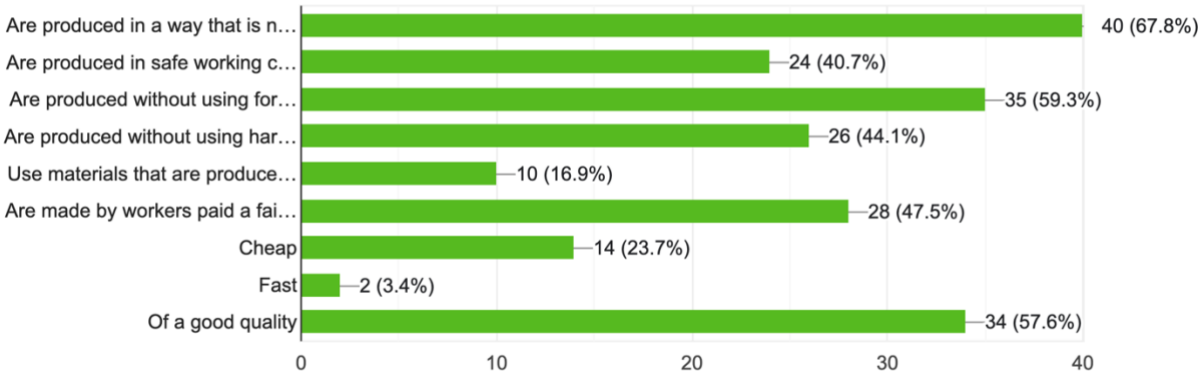


To what extent do you agree or disagree with the following statements. Please choose the following options when it comes to clothing.

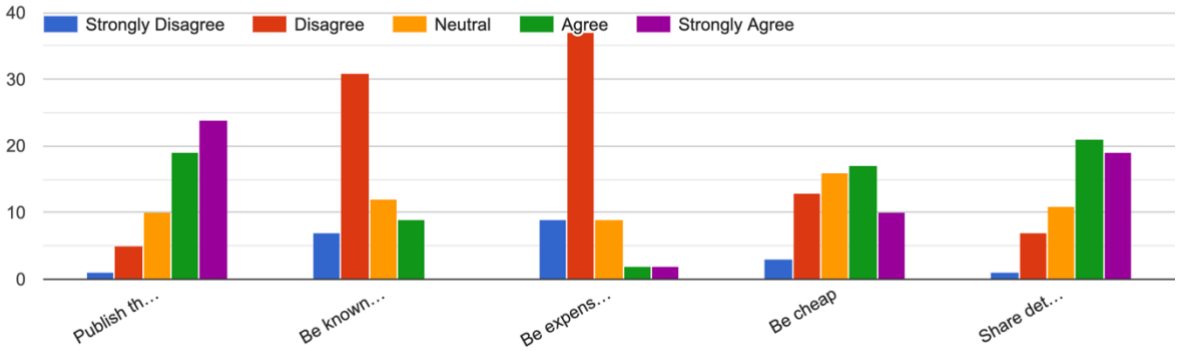


When it comes to the production of clothing which of the following statements do you consider essential?

59 responses

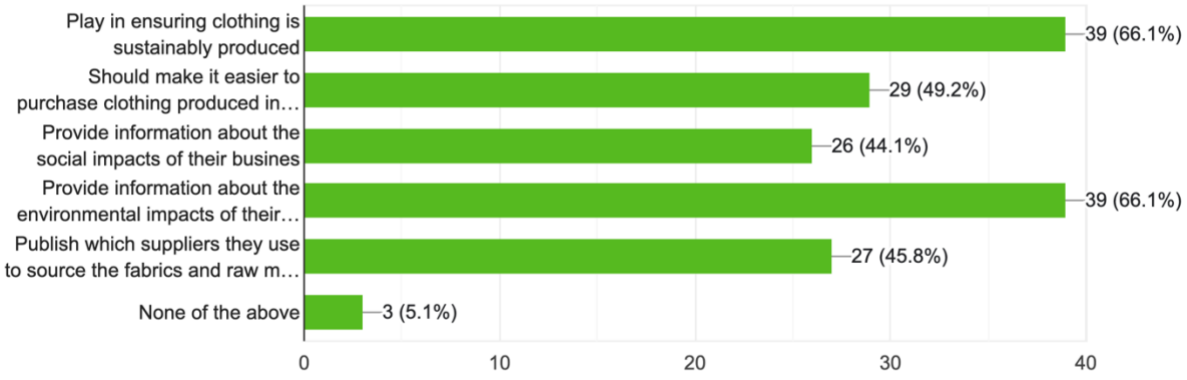


To what extent do you agree or disagree with the following statements. When choosing a clothing brand to buy from, it is important for the brand to have the following:



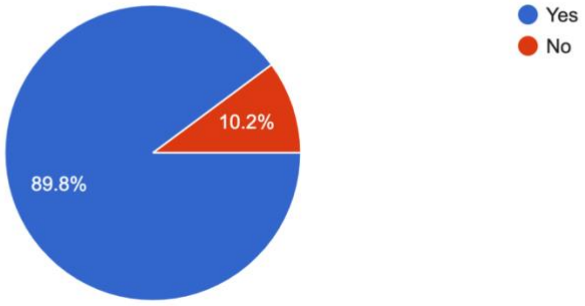
Do you feel that the government and fashion brands have the role to

59 responses



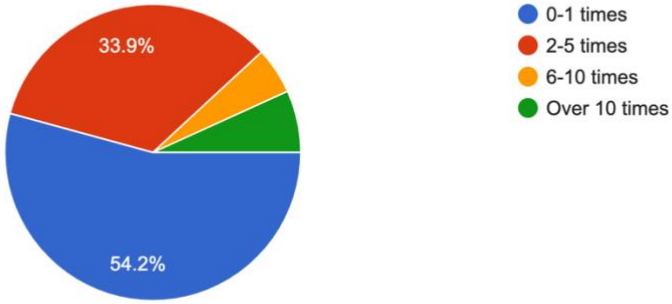
Do you shop at ZARA?

59 responses



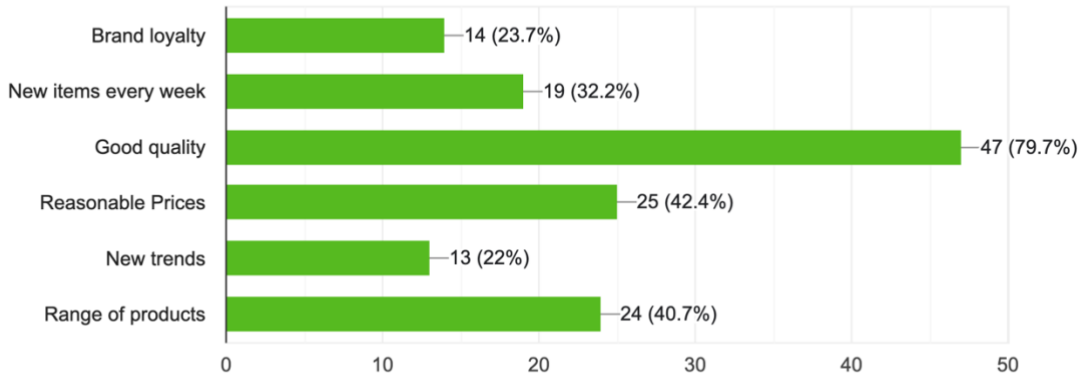
How many times do you shop at Zara per month?

59 responses



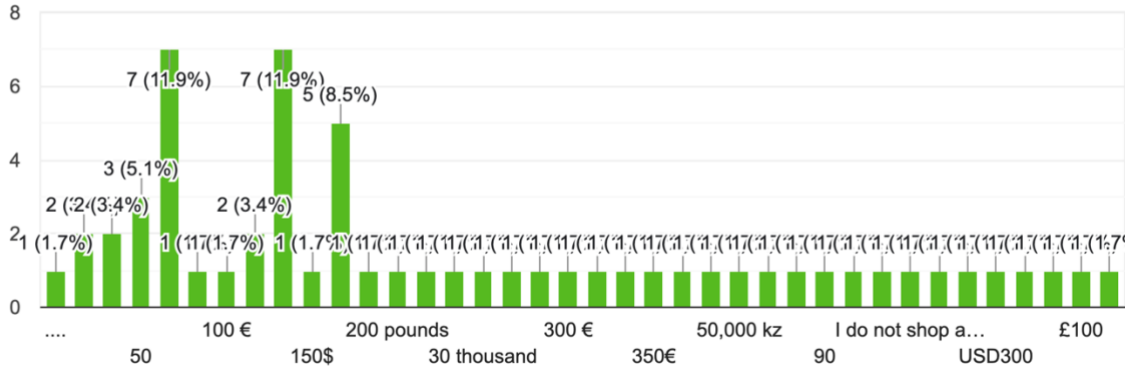
Why do you shop at Zara? Please select the options below

59 responses



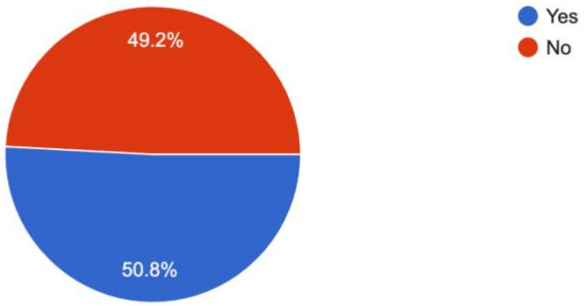
On average how much do you spend mobthly when you shop at Zara ?

59 responses



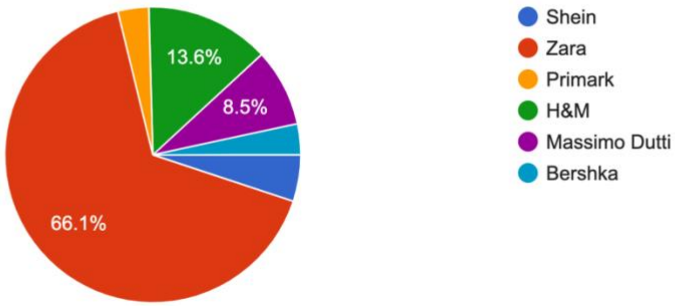
If you knew that Zara has unsustainable practises, would you continue to shop there?

59 responses



If you could only select one clothing brand to shop from which, would you choose

59 responses



Why did you choose this brand?

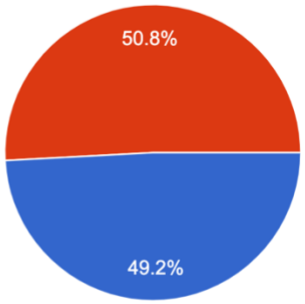
Bershka	Because I like
Bershka	Because I like
Zara	Becouse i like
Zara	Styles
Zara	Because is a quality Brar
Shein	Cheaper
Zara	Need
Shein	It Has many plus size op
H&M	Because is cheap and ha
Shein	Cheap and affordable co
Massimo Dutti	Quality's and durability
Zara	Good quality
Zara	Range of styles available
Zara	Range of styles and reas
Zara	Well rounded
Zara	Good quality
Zara	Very nice quality
Zara	Simplicity without many c
H&M	quality
Zara	good price
Zara	I like the clothes
Zara	Good prices

Zara	Good prices
Zara	Love the clothes
Massimo Dutti	Formal clothing for work
Zara	it has everything in stores
Zara	Pretty clothes
Zara	Aesthetics
Zara	It has good quality clothir
Primark	Its cheap and i can buy li
Zara	It has fashionable items t
Zara	Love the quality
Zara	They have new clothes ir
Zara	Good quality and prices
H&M	Cheaper but has good qu
Massimo Dutti	They are more sustainab
Zara	I like the styles they sell

Zara	Due to range and quality
Zara	Love it
Zara	Because I like the clothes
Massimo Dutti	Thank to the quality
Zara	Because of the quality
Zara	Variety
Zara	Pela qualidade da roupa
Zara	Porque gosto dos model
Zara	Product range
H&M	Preference
Primark	Because of the price
H&M	Reasonable price and qu
H&M	Because they have good
Zara	Because I like
Zara	I like
Zara	O like
Massimo Dutti	Quality
Zara	They have a good quality
Zara	They have a better qualit
Zara	I like it because of the qu
H&M	Range + Price
H&M	Good quality

Are you influenced by fashion trends and influencers before purchasing an item? Or are you influenced by society in general

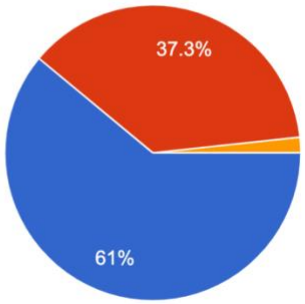
59 responses

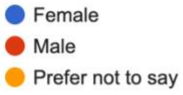




What is your gender?

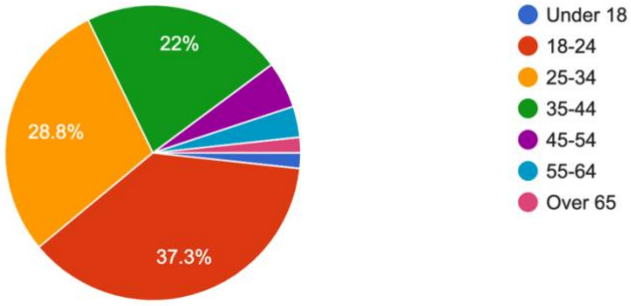
59 responses





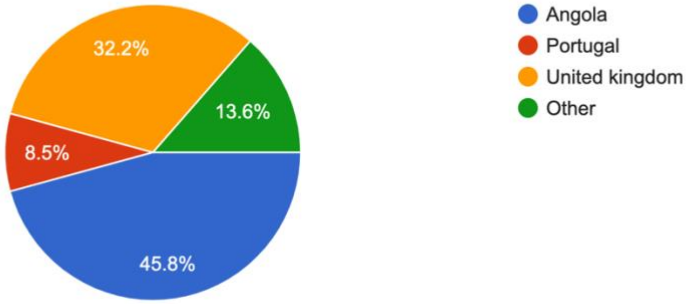
What is your age?

59 responses



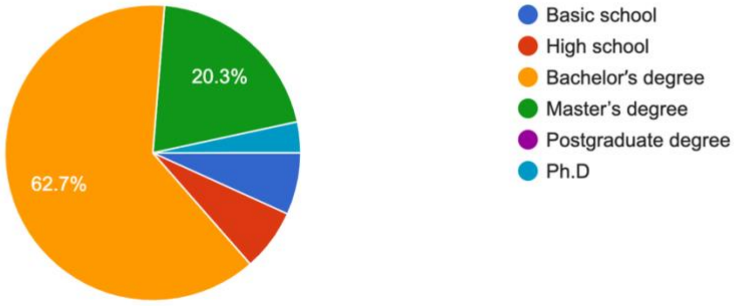
Where do you live?

59 responses



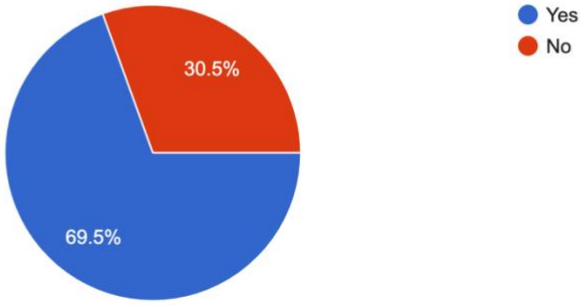
What is the highest level of education you have completed?

59 responses



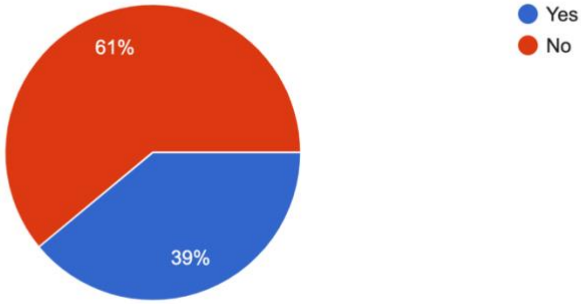
Do you work?

59 responses



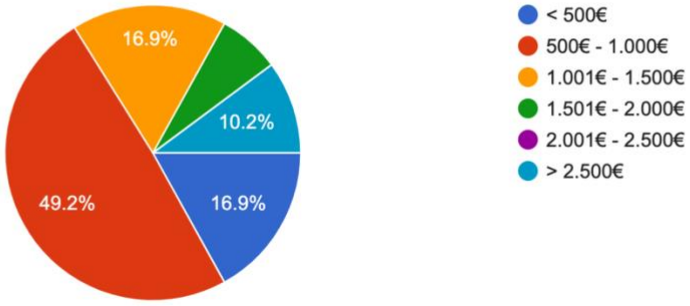
Are you a student?

59 responses



What is your monthly income?

59 responses



Appendix 3 - Questionnaire Portuguese version

Título: Sustentabilidade na Cadeia de Abastecimento da Indústria da Moda

Introdução:

Olá, chamo-me Filipa Yekini, sou estudante do segundo ano do mestrado em Gestão de Serviços e da Tecnologia no ISCTE. Como parte da pesquisa para a minha dissertação, estou a realizar um inquérito para recolher dados a fim de me poder ajudar a construir uma resposta às minhas perguntas de pesquisa. O objetivo principal, é analisar os diversos fatores que influenciam a cadeia produtiva do vestuário, com o foco na ZARA e o papel que a sustentabilidade socioambiental desempenha na criação da vantagem competitiva, através do uso da sustentabilidade. Três questões de pesquisa foram formuladas como base, para atender aos objetivos acima expostos.

RQ1) O que precisa ser feito para tornar a cadeia de suprimentos da indústria de fast fashion mais sustentável?

RQ2) Como a empresa Zara mantém uma vantagem competitiva em termos de esforços de sustentabilidade em sua cadeia de suprimentos?

RQ3) A indústria da moda pode sustentar cadeias de suprimentos sustentáveis?

O questionário consiste em três grupos de perguntas e levará aproximadamente 10 minutos para ser respondido. A primeira pergunta visa obter dados de seu conhecimento sobre o tema da sustentabilidade e a indústria da moda, enquanto a segunda parte, coleta dados sobre a marca em estudo e seus consumidores. A terceira parte recolhe os dados demográficos.

Todas as respostas serão mantidas em anonimato, o que significa que nenhum dos participantes será identificado na pesquisa. Obrigada por participares!

Knowledge on sustainability

A **moda sustentável** refere-se a roupas que são desenhadas, fabricadas e distribuídas de maneira ecologicamente correta. Tem como foco o uso de fibras mais sustentáveis, além de usar tecnologia para reduzir os resíduos criados em todas as partes da cadeia de suprimentos.

Fast fashion refere-se à fabricação e resposta rápida de roupas de baixo custo, que reproduzem as tendências emergentes que aumentam a demanda por produtos de moda com pouco durabilidade .

Com as definições dadas a cima, já sabia qual a diferença entre fast fashion e moda sustentável? *

- ◯ Sim
- ◯ Não

Quantas vezes por mês compra roupa? *

- ◯ 0-1 vezes
- ◯ 2-5 vezes
- ◯ 6-10 vezes
- ◯ Mais de 10 vezes

Se usa fast fashion, quais são os principais motivos que lhe levam a preferir comprar fast fashion itens ao invés de optar pela moda sustentável?

- ◯ Preço
- ◯ Mais variedade de estilos
- ◯ Entrega mais rápida
- ◯ Novas tendências todas as semanas nas lojas
- ◯ Other: _____

Quantas peças de roupa sustentável compra por mês? *

- ◯ 0-1 vezes
- ◯ 2-5 vezes
- ◯ 6-10 vezes
- ◯ Mais de 10 vezes

Com que frequência descarta suas roupas? *

- ◯ A cada mês
- ◯ A cada seis meses
- ◯ A cada ano
- ◯ A cada 2 anos

Como descarta as roupas indesejadas? (Escolha todas que se apliquem) *

- [ ] Doação para caridade
- [ ] Jogo fora
- [ ] Passo para a família mais jovem
- [ ] Dar aos amigos
- [ ] Vendo

Sabia que a indústria da moda está classificada entre as 5 indústrias mais poluentes? *

- ◯ Sim
- ◯ Não

O quanto está preocupado com os impactos sociais, ambientais e éticos que a indústria da moda tem no mundo? *

- ◯ De modo nenhum
- ◯ Um pouco
- ◯ Muito

Até que ponto concorda ou discorda com as seguintes afirmações. Por favor, escolha as seguintes opções quando se trata de roupas. *

	Discordo totalmente	Discordo	Neutro	Concordo	Concordo totalmente
Usa por alguns anos	◯	◯	◯	◯	◯
Usa até desgastar	◯	◯	◯	◯	◯
Usa as roupas que são a nova tendência	◯	◯	◯	◯	◯
Não compra roupas	◯	◯	◯	◯	◯
Não usa itens mais de uma vez	◯	◯	◯	◯	◯
Recicla suas roupas	◯	◯	◯	◯	◯
Lava todas as semanas	◯	◯	◯	◯	◯

Até que ponto concorda ou discorda das seguintes afirmações, ao escolher uma marca de roupa para comprar: *

	Discordo totalmente	Discordo	Neutro	Concordo	Concordo totalmente.
Divulgue suas políticas sociais e ambientais	◯	◯	◯	◯	◯
Seja conhecido e famoso	◯	◯	◯	◯	◯
Seja caro	◯	◯	◯	◯	◯
Seja barato	◯	◯	◯	◯	◯
Compartilhe informações detalhadas sobre as condições de trabalho das pessoas em sua cadeia de suprimentos	◯	◯	◯	◯	◯

No que diz respeito à produção de vestuário, qual das seguintes afirmações considera essencial? *

- ◯ Produzidas de forma não prejudicial ao meio ambiente
- ◯ São produzidas em condições de trabalho seguras
- ◯ São produzidas sem uso de trabalho forçado e trabalho infantil
- ◯ São produzidas sem usar produtos químicos nocivos para o consumidor
- ◯ Usam materiais que são produzidos organicamente
- ◯ São feitos por trabalhadores que recebem um salário justo e digno
- ◯ Barato
- ◯ Rápido
- ◯ De boa qualidade

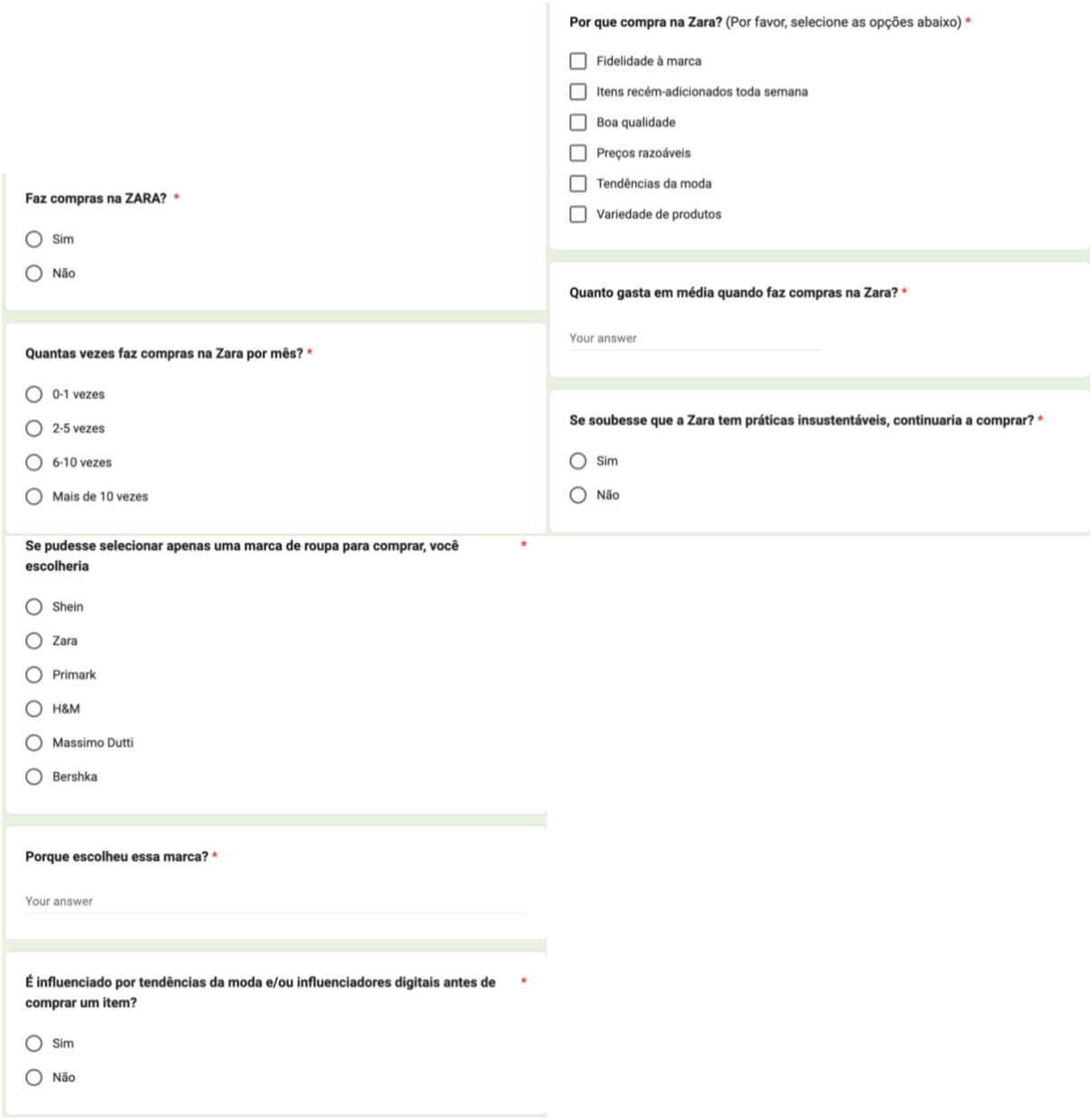
Até que ponto concorda ou discorda das seguintes afirmações, ao escolher uma marca de roupa para comprar: *

	Discordo totalmente	Discordo	Neutro	Concordo	Concordo totalmente.
Divulgue suas políticas sociais e ambientais	◯	◯	◯	◯	◯
Seja conhecido e famoso	◯	◯	◯	◯	◯
Seja caro	◯	◯	◯	◯	◯
Seja barato	◯	◯	◯	◯	◯
Compartilhe informações detalhadas sobre as condições de trabalho das pessoas em sua cadeia de suprimentos	◯	◯	◯	◯	◯

Sente que o governo e as marcas de moda têm o papel de (Escolha todas que se aplicam) *

- ☐ Tomar iniciativas para que as roupas sejam produzidas de forma sustentável
- ☐ Devem facilitar a compra de roupas produzidas de forma sustentável
- ☐ Incentivar o slow fashion
- ☐ Informar sobre os impactos sociais de seu negócio
- ☐ Informar sobre os impactos ambientais de seu negócio
- ☐ Divulgar quais fornecedores eles usam para obter os tecidos e matérias-primas usados em suas roupas
- ☐ Nenhuma das opções

Consumer Purchasing Behaviour



Faz compras na ZARA? *

- Sim
- Não

Quantas vezes faz compras na Zara por mês? *

- 0-1 vezes
- 2-5 vezes
- 6-10 vezes
- Mais de 10 vezes

Se pudesse selecionar apenas uma marca de roupa para comprar, você escolheria *

- Shein
- Zara
- Primark
- H&M
- Massimo Dutti
- Bershka

Porque escolheu essa marca? *

Your answer

É influenciado por tendências da moda e/ou influenciadores digitais antes de comprar um item? *

- Sim
- Não

Por que compra na Zara? (Por favor, selecione as opções abaixo) *

- [ ] Fidelidade à marca
- [ ] Itens recém-adicionados toda semana
- [ ] Boa qualidade
- [ ] Preços razoáveis
- [ ] Tendências da moda
- [ ] Variedade de produtos

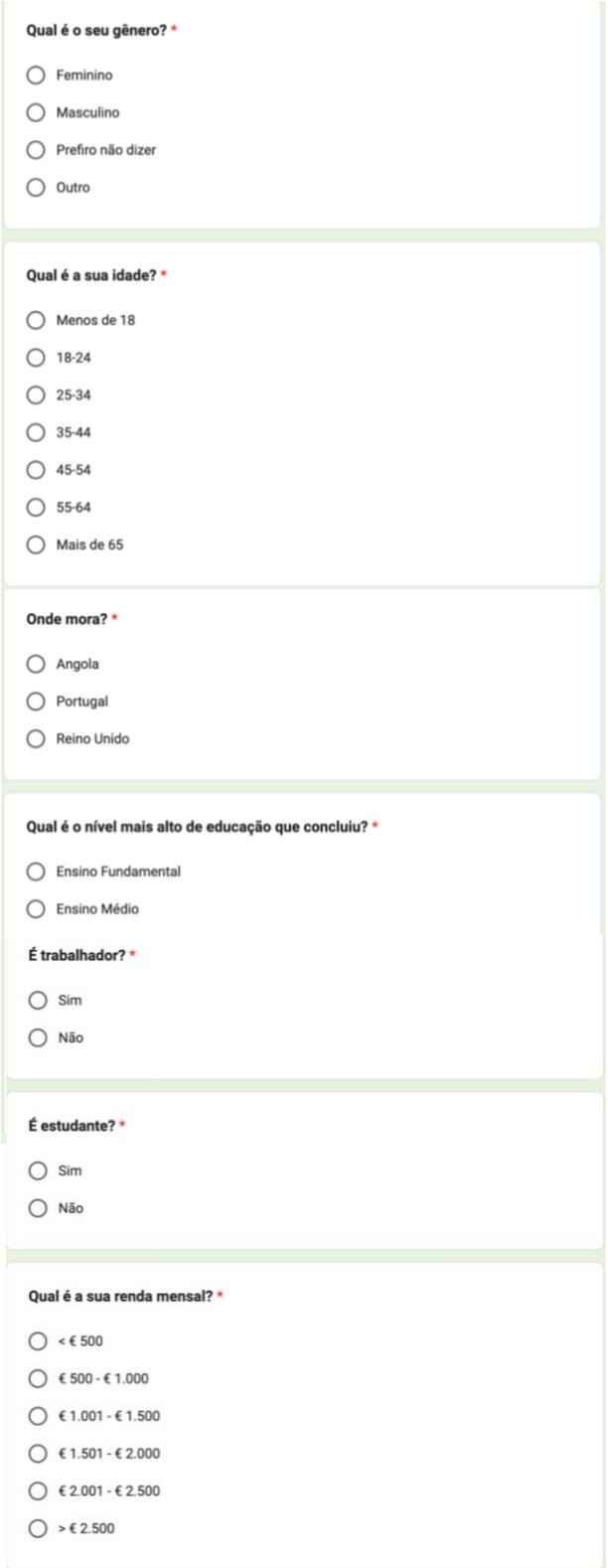
Quanto gasta em média quando faz compras na Zara? *

Your answer

Se soubesse que a Zara tem práticas insustentáveis, continuaria a comprar? *

- Sim
- Não

Demographic information



Qual é o seu gênero? *

- ◯ Feminino
- ◯ Masculino
- ◯ Prefiro não dizer
- ◯ Outro

Qual é a sua idade? *

- ◯ Menos de 18
- ◯ 18-24
- ◯ 25-34
- ◯ 35-44
- ◯ 45-54
- ◯ 55-64
- ◯ Mais de 65

Onde mora? *

- ◯ Angola
- ◯ Portugal
- ◯ Reino Unido

Qual é o nível mais alto de educação que concluiu? *

- ◯ Ensino Fundamental
- ◯ Ensino Médio

É trabalhador? *

- ◯ Sim
- ◯ Não

É estudante? *

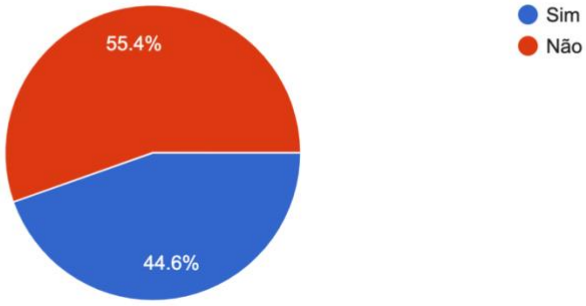
- ◯ Sim
- ◯ Não

Qual é a sua renda mensal? *

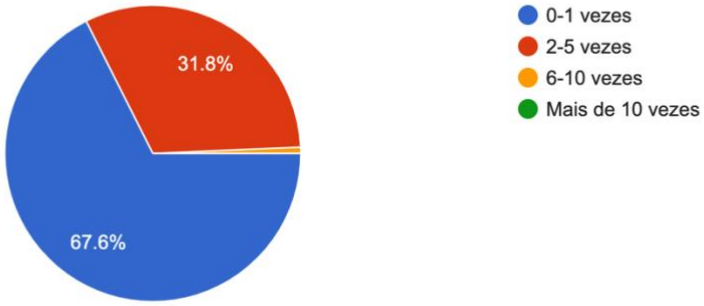
- ◯ < € 500
- ◯ € 500 - € 1.000
- ◯ € 1.001 - € 1.500
- ◯ € 1.501 - € 2.000
- ◯ € 2.001 - € 2.500
- ◯ > € 2.500

Appendix 4 - Portuguese questionnaire graphs

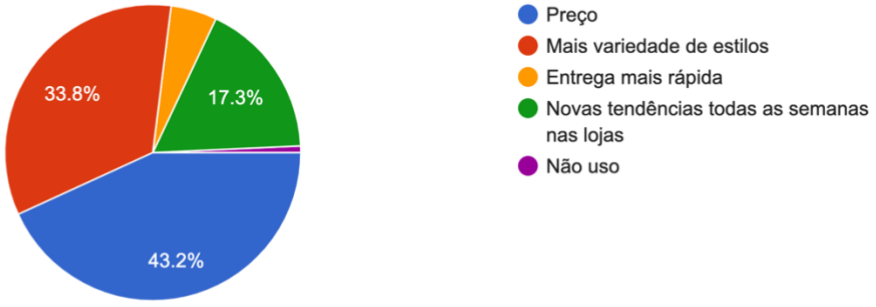
Com as definições dadas a cima, já sabia qual a diferença entre fast fashion e moda sustentável?
148 responses



Quantas vezes por mês compra roupa?
148 responses

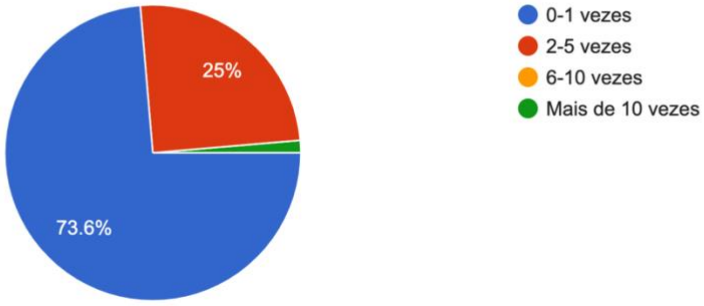


Se usa fast fashion, quais são os principais motivos que lhe levam a preferir comprar fast fashion itens ao invés de optar pela moda sustentável?
139 responses



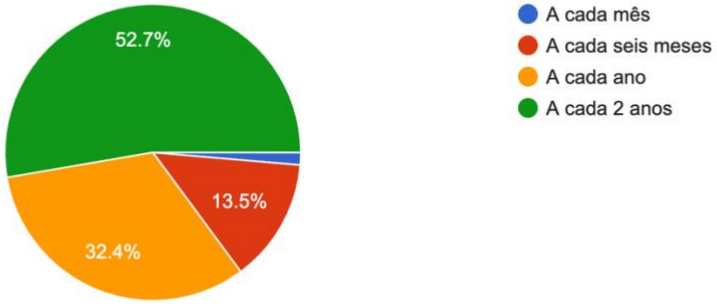
Quantas peças de roupa sustentável compra por mês?

148 responses



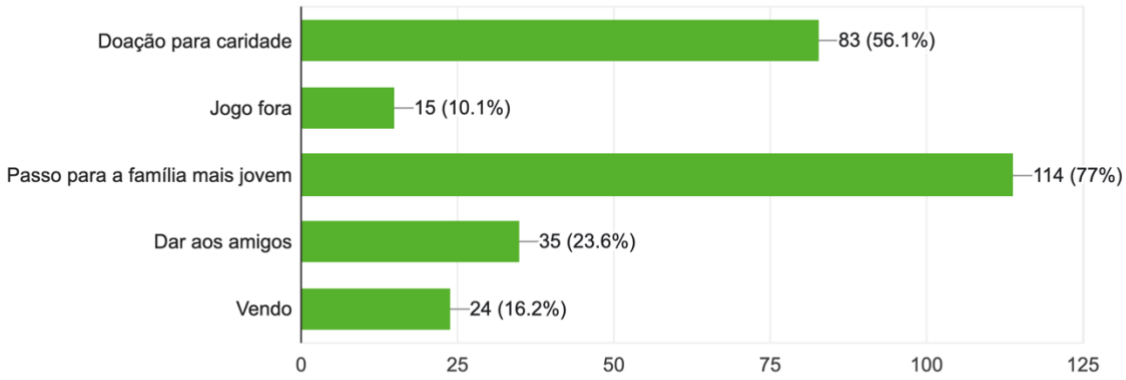
Com que frequência descarta suas roupas?

148 responses



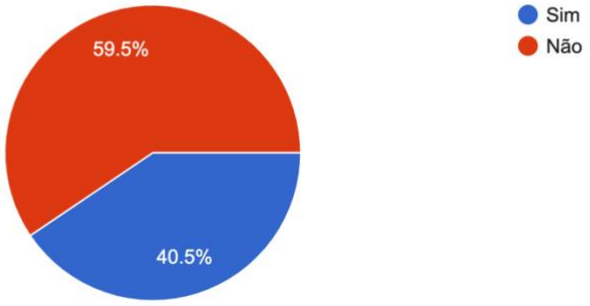
Como descarta as roupas indesejadas? (Escolha todas que se apliquem)

148 responses



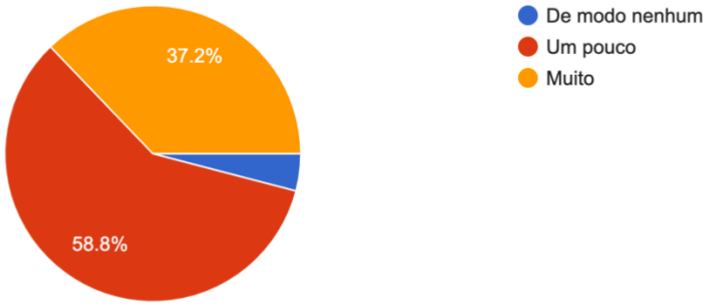
Sabia que a indústria da moda está classificada entre as 5 indústrias mais poluentes?

148 responses



O quanto está preocupado com os impactos sociais, ambientais e éticos que a indústria da moda tem no mundo?

148 responses



Até que ponto concorda ou discorda com as seguintes afirmações. Por favor, escolha as seguintes opções quando se trata de roupas.

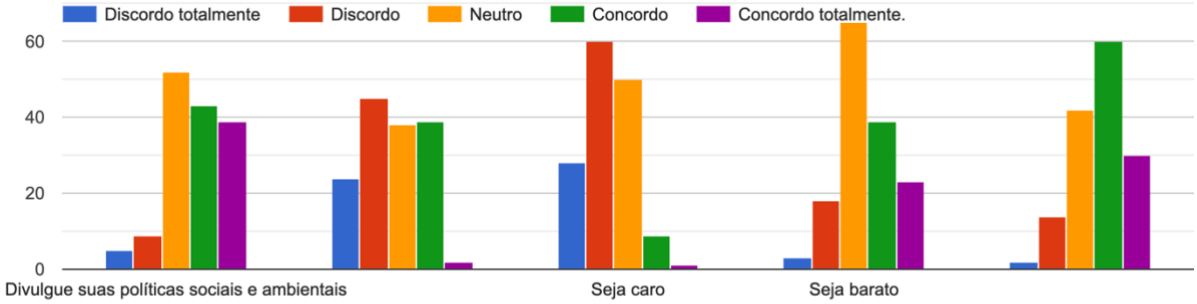


No que diz respeito à produção de vestuário, qual das seguintes afirmações considera essencial?

148 responses

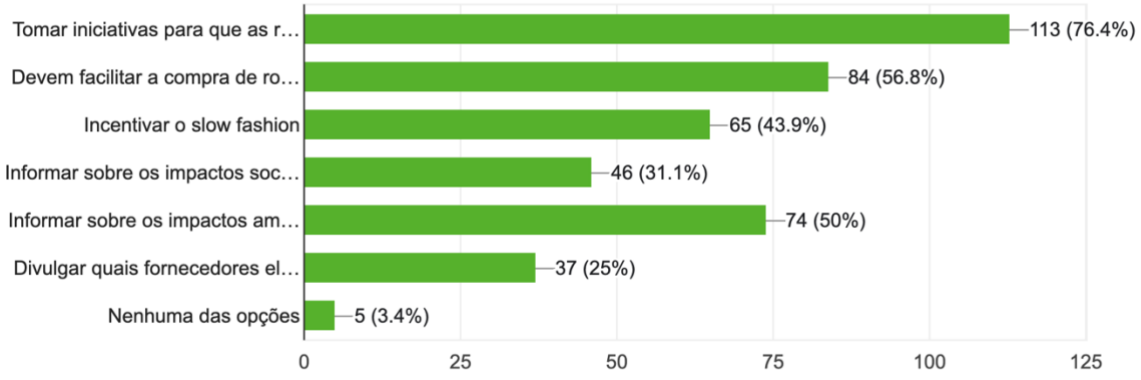


Até que ponto concorda ou discorda das seguintes afirmações, ao escolher uma marca de roupa para comprar:



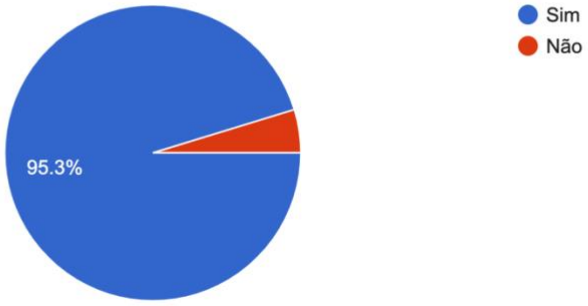
Sente que o governo e as marcas de moda têm o papel de (Escolha todas que se aplicam)

148 responses



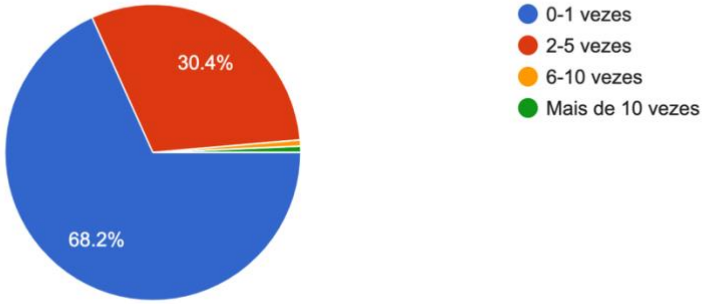
Faz compras na ZARA?

148 responses



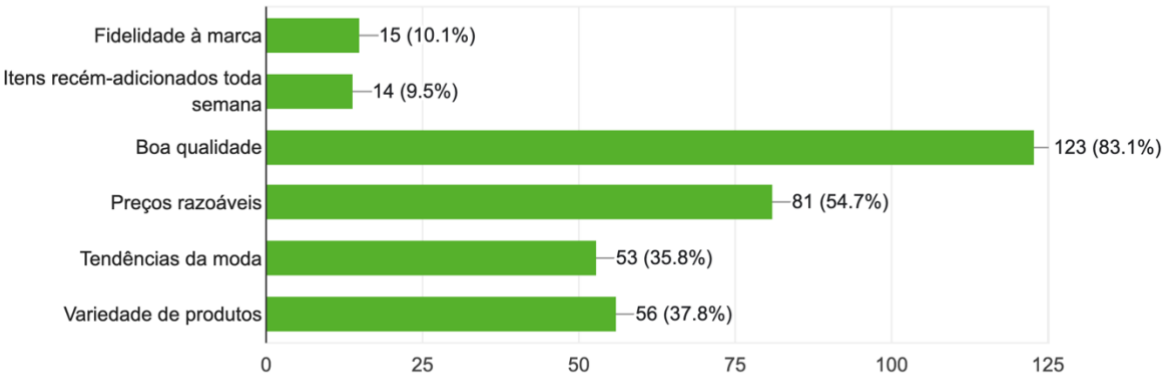
Quantas vezes faz compras na Zara por mês?

148 responses



Por que compra na Zara? (Por favor, selecione as opções abaixo)

148 responses

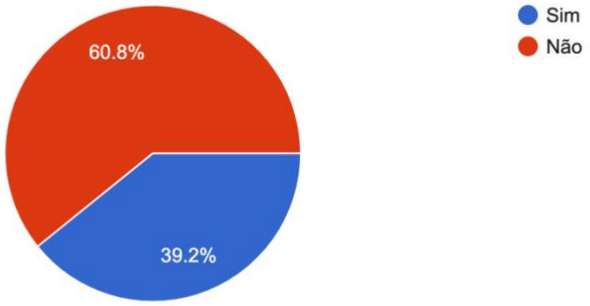


Quanto gasta em média quando faz compras na Zara?

100€	100	90	100€
30	115		
30€	300	200£	100€
50€	200	200€	50€
20	150		mprar, e
	300	300	
€50	150	50€	
80	100	25€	
50	100	200€	
100	100		150
		250€	150
100			280
80	100€	50€	500€
100	90	200	100€
200			100€
150	200£	50	40€
300	200€	50€	20€
70			80€
100	300		70€
	50€		50€
	25€	200	60€
			5.00€

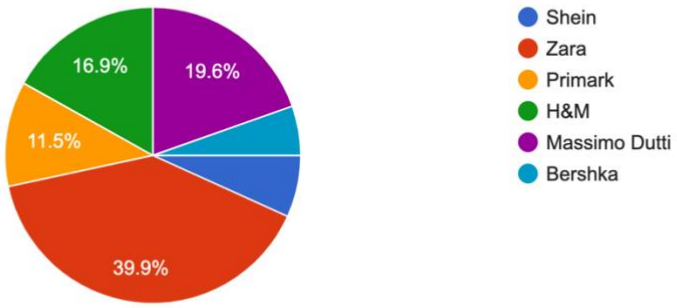
Se soubesse que a Zara tem práticas insustentáveis, continuaria a comprar?

148 responses



Se pudesse selecionar apenas uma marca de roupa para comprar, você escolheria

148 responses



Porque escolheu essa marca?

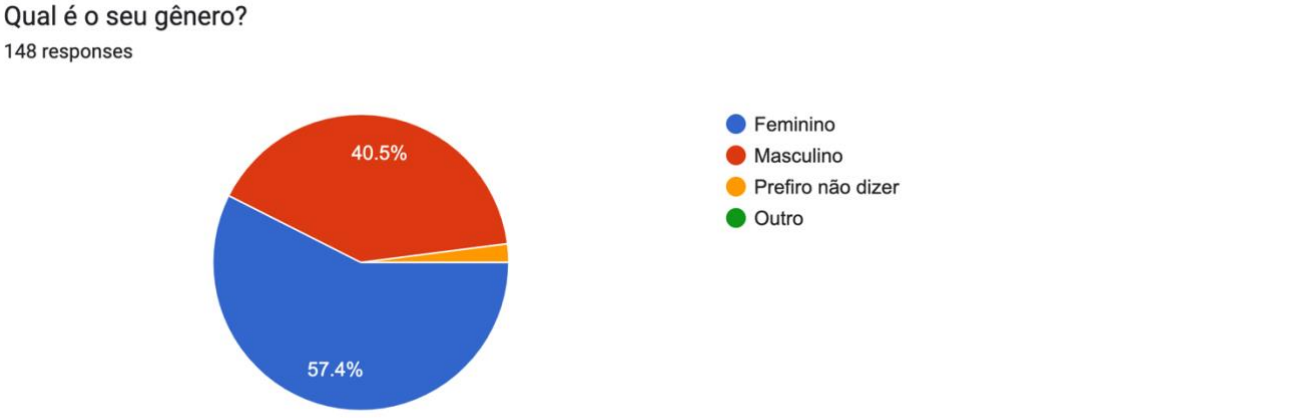
Massimo Dutti	Boa qualidade
H&M	Preço
Bershka	Pela qualidade da roupa
Massimo Dutti	Pela sua qualidade.
Massimo Dutti	Gosto acho fashion
Zara	preferia só
Massimo Dutti	Fico em lágrimas faz-me
H&M	Variedade e qualidade
Zara	Conheço melhor.
Massimo Dutti	Boa qualidade nos seus
Zara	Gosto da qualidade da rc
Zara	Porque as roupas são bc
Shein	Preço
Massimo Dutti	Têm boa qualidade e dis
Massimo Dutti	Agrada-me em termos de
Massimo Dutti	Mais qualidade e acredit
Shein	Porque para além de bar
Massimo Dutti	Relação Preço-Qualidad
Zara	Pela sua qualidade
Zara	Por ser a melhor no meu
Zara	Variedade
Massimo Dutti	Qualidade

Zara	Variedade
Zara	Variedade de peças
H&M	Sinto que tem uma maior
H&M	Currrrto bwe
Massimo Dutti	Identifico-me bastante cc
Zara	Pela diversidade dos pro
Zara	Me sinto bem
Massimo Dutti	Melhor relação preço/qua
H&M	Relação preço/qualidade
H&M	Mais barata
Massimo Dutti	Até dá-me vontade de ch
Massimo Dutti	qualidade, preços "acess
Zara	Preço-qualidade e tendê
Zara	Supre todas as minhas n
Zara	Porque gosto da marca Z
Zara	preço-qualidade. O mund
Zara	Variedades de produtos
Shein	Barato, diversidade, todo
H&M	Curto
Zara	Qualidade é bom preço
H&M	Sustabilidade

H&M	muitos saldos
Zara	Amo a qualidade e o pre
H&M	Qualidade
Massimo Dutti	Amo a qualidade
H&M	Uso a muito tempo
Zara	Tem todo o tipo de roupa
H&M	Gosto porque tem boas r
H&M	Opcoes de roupa plus siz
Zara	Zara tem tudo
Massimo Dutti	Melhor qualidade
Zara	Varias opcoes para comp
Shein	Barato
Primark	Barata
Massimo Dutti	Roupas de qualidade par
Zara	Boa qualidade e preço
H&M	As roupas duram muito t
Zara	Boa qualidade
Massimo Dutti	Design bom de roupas
Shein	Tem tudo
H&M	Boa qualidade e preco
Massimo Dutti	Good quality
Zara	Range of styles

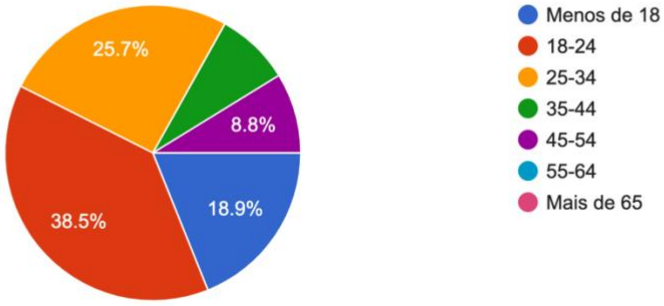
Zara	Range of styles
Zara	Bons preços
Zara	Qualidade
Zara	I like the price
Zara	Tell have everything I nee
Zara	Gosto muito
H&M	Por encontrar as roupas
Zara	Boa e acessível
Shein	De todas as marcas é a
Shein	Variedade de produtos e
Bershka	qualidade
Zara	Gosto da qualidade da m
Bershka	Qualidade e preço
H&M	Boa qualidade e preços r
Zara	É a q mais uso
Bershka	Tem mais variedade
Primark	preferência
H&M	É mais barato
Bershka	Porque tem roupas de qu
Zara	Porque amo tudo q produ
Massimo Dutti	melhor qualidade
Zara	Porque tem muita qualida





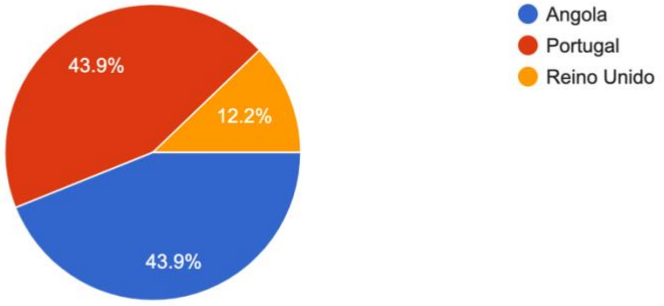
Qual é a sua idade?

148 responses



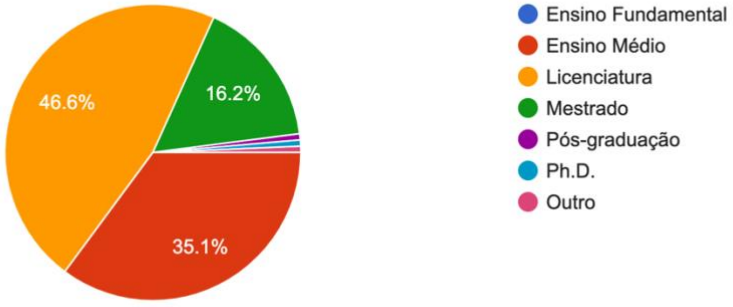
Onde mora?

148 responses



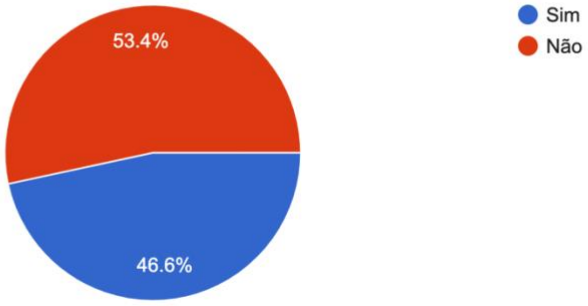
Qual é o nível mais alto de educação que concluiu?

148 responses



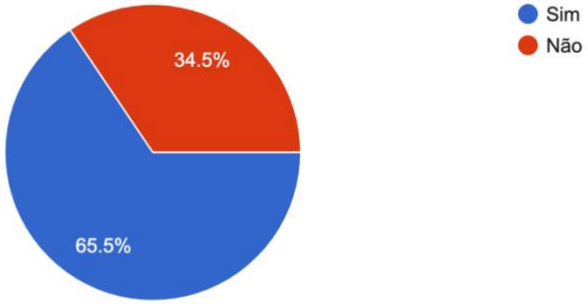
É trabalhador?

148 responses



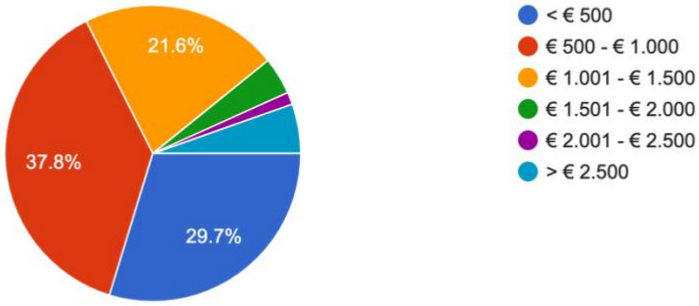
É estudante?

148 responses



Qual é a sua renda mensal?

148 responses



Appendix 5 - Demographic statistics: Gender, Age

		Total Number	**%**
Gender	Female	121	58,5
	Male	82	39,6
	Preferred not to say	4	1,9
	Total	207	100,0
Age	Under 18	29	14,0
	18-24	79	38,2
	25-34	55	26,6
	35-44	25	12,0
	45-54	16	7,7
	55-64	2	1,0
	Over 65	1	0,5
	Total	207	100,0

Appendix 6 - Demographic statistics: Country of residence, Academic qualification

		Total Number	**%**
Country of residence	Angola	92	44,4
	Portugal	70	33,8
	United Kingdom	37	17,9
	Other	8	3,9
	Total	207	100,0
Academic qualification	Basic school	4	1,9
	High school	56	27,1
	Bachelor’s degree	106	51,2
	Master’s degree	36	17,4
	Postgraduate degree	1	0,5
	Ph.D.	3	1,4
	Other	1	0,5
	Total	207	100,0

Appendix 7 - Demographic statistics: Monthly Income

		Total Number	**%**
Monthly income	< 500€	54	26,1
	500€ - 1.000€	85	41,1
	1.001€ - 1.500€	42	20,3
	1.501€ - 2.000€	10	4,8
	2.001€ - 2.500€	2	0,9
	> 2.500€	14	6,8
	Total	207	100,0

Appendix 8- Purchasing habits of Zara consumers

		Total Number	**%**
Do you shop at Zara	Yes	194	93,7
	No	13	6,3
	Total	207	100,0
How many times per month	0-1 times	133	64,3
	2-5 times	65	31,4
	6-10 times	4	1,9
	Over 10 times	5	2,4
	Total	207	100,0

Appendix 9 - Reasons why consumers shop at Zara

		Total Number	**%**
Reasons why consumers shop at Zara	Brand loyalty	29	14,0
	New items every week	33	15,9
	Good quality	170	82,1
	Reasonable Prices	106	51,2
	New trends	66	31,9
	Range of products	80	38,6
	Total	N/ A	N/ A

Appendix 10 - Knowledge of fast fashion definition, how many times clothes are purchased monthly by consumers

		Total Number	**%**
Number of participants that know/ do not know the definition of fast fashion	Yes	106	51,2
	No	101	48,8
	Total	207	100,0
Purchase of clothes per month	0-1 time	125	60,4
	2-5 times	70	33,8
	6-10 times	7	3,4
	Over 10 times	5	2,4
	Total	207	100,0

Appendix 11 - Reasons consumers buy fast fashion items

		Total Number	**%**
Reasons to purchase fast fashion items	Price	101	48,8
	Range of styles	55	26,6
	Quicker delivery	10	4,8
	New arrivals every week	30	14,5
	Do not use it	11 remaining	5,3
	Total	207	100,0

Appendix 12 - Number of purchases of sustainable clothing, time of disposal of clothing and how they are disposed

		Total Number	**%**
Number of purchases of sustainable clothing			
	0-1 time	144	69,6
	2-5 times	53	25,6
	6-10 times	3	1,4
	Over 10 times	7	3,4
	Total	207	100,0
Disposal of clothing	Every month	3	1,4
	Every six months	28	13,5
	Every year	67	32,4
	Every 2 years	109	52,7
	Total	207	100,0
How clothes are disposed	Donation to charity	120	58
	Throw it away	25	12,1
	Hand down to younger family	151	73,0
	Give to friends	62	30,0
	Sell it	26	15,6
	Total	N/ A	N/ A

Appendix 13 - Participants viewpoint on the usage of clothes

	Strongly disagree	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
Wear it for a few years	19 9,2%	12 5,8%	18 8,7%	77 37,2%	81 39,1%
Wear it until they fall apart	23 11,1%	53 25,6%	33 15,9%	67 32,4%	31 15 %
Wear the clothes that are the new trend	16 7,7%	61 29,5%	58 28,0%	61 29,5%	11 5,3%
Do not buy clothes	102 49,3%	86 41,6%	16 7,7%	3 1,4	0
Does not wear items more than once	139 67,1%	55 26,6%	8 3,9%	2 1%	3 1,4%
Recycle your clothes	14 6,8%	40 19,3%	66 31,9%	64 30,9%	23 11,1%
Wash it every week	9 4,3%	50 24,2%	47 22,7%	72 34,8%	29 14%

Appendix 14 - Participants viewpoint on statements they consider essential about the production of clothes

Statements	Number	%
Are produced in a way that is not harmful to the environment	86	41,5
Are produced in safe working conditions	28	13,5
Are produced without using forced labour and child labour	77	37,2
Are produced without using harmful chemicals for the consumer	39	18,8
Use materials that are produced organically	11	5,3
Are made by workers paid a fair, living wage	42	20,3
Cheap	15	7,2
Fast	3	1,4
Of a good quality	59	28,5
Total	N/ A	N/ A

Appendix 15 - Participants view on the role of the government and fashion brands towards sustainability

	Strongly disagree	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
Publish their social and environmental policies	6 2,9%	14 6,7%	62 30,0%	62 30,0%	63 30,4%
Be known and famous	31 15,0%	76 36,7%	50 24,2%	48 23,1%	2 1%
Be expensive	37 17,9%	97 46,9%	59 28,5%	11 5,3%	3 1,4%
Be cheap	6 2,9%	31 15,0%	81 39,1%	56 27,1%	33 15,9%
Share detailed information about working conditions of the people in their supply chain	3 1,4%	21 10,1%	53 25,6%	81 39,1%	49 23,8%