How the Business Model Impacts on the Sustainability of Fashion Companies

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Abstract. The main contribution of this paper is to understand how fashion companies try to include elements of circularity in their business models since in recent years, the fashion industry is the one that consumes the greatest amount of raw materials and pollutes the environment. Starting from what consumers perceive and as they are interested in the factor of sustainability and ethics in relation to the world of fast fashion and fashion in general, the goal is to understand how these companies move from a linear business model to a circular business model. Then we will analyze the collaboration between H&M-Sellpy. Our empirical investigation aims at gathering knowledge concerning the cocreation mechanisms underpinning the co-creation processes of circular firms and their key co-creating actors. In this scenario, it appear very interesting trying to understand what the attitudes and behaviors of Millennials and Centennials are when they faced with the purchase of luxury and sustainable fashion items. In doing that, a survey questionnaire turned out to be the most suitable tool to conduct such investigation.

Keywords: Circular Business Model · Fashion Industry · Sustainability

1 Introduction

Today, the fashion industry is among the most polluting in the world. In fact, increasing consumer and business awareness has led companies to change their business models. For this reason, this article seeks to provide an overview of what a business model is, especially in reference to circular business models.

Subsequently, a literature review of the transition still taking place today within the fashion world was made: from a linear economic model to a circular one. Moreover, a concrete case has been brought of circularity inside their business model, that is the collaboration between sellpy & H&M to understand which are the advantages for the enterprises.

Furthermore, it was necessary to try to understand what were the variables that affect the choices in buying eco-sustainable luxury products of today's consumers, an empirical survey has been carried out on the attitudes of a chosen target: Millennials & Centennial when they have to buy a sustainable luxury item. Furthermore, it was necessary to try

to understand what were the variables that affect the choices in buying eco-sustainable luxury products.

The paper is organised as it follows: Sect. 2 Circular Business Model; Sect. 2.1 Circular Economy; Sect. 3 Linear and Circular Economy in the Fashion Industry; Sect. 3.1 Linear Model in Fashion Industry; Sect. 3.2 Circular Economy in Fashion Industry; Sect. 4 Sellpy and H&M; Sect. 5 Material and Methods and Sect. 6 Conclusions, Limits and Future Research.

2 Circular Business Model

The traditional balance between customers and suppliers has been altered by advancements in the global economy. The emergence of new communication and computing technologies, along with the establishment of more open global trading systems, has provided customers with increased choices. Varied customer needs can now be expressed, and alternative supply options are more transparent. Consequently, businesses must prioritize a customer-centric approach, particularly since technology enables the cost-effective provision of information and customer solutions. These changes necessitate a re-evaluation of the value propositions offered to customers, as the supply-driven logic of the industrial era is no longer viable in many sectors. This evolving landscape also highlights the importance of not only addressing customer needs effectively but also capturing value through the provision of new products and services. Without a well-developed business model, innovators will struggle to deliver and extract value from their innovations, particularly evident in Internet companies where revenue generation can be challenging due to customer expectations of free basic services.

A business model serves to articulate the logic and provide evidence of how a business creates and delivers value to customers. It outlines the revenue, cost, and profit structure associated with the delivery of that value. Various elements need to be determined when designing a business model. The design of a good business model involves interconnected issues that lie at the core of the fundamental question asked by business strategists: How can a sustainable competitive advantage be built to achieve above-average profits? In essence, a business model defines how an enterprise creates and delivers value to customers and converts received payments into profits. To profit from innovation, business pioneers must excel not only in product innovation but also in designing a business model that aligns with customer needs and technological trends. However, developing a successful business model alone is not enough to ensure a competitive advantage, as imitation is often straightforward. It is crucial to establish a differentiated yet effective and efficient business model that is difficult to replicate, thus increasing the likelihood of generating profits. Business model innovation itself can be a pathway to gaining a competitive advantage if the model is distinct enough to discourage replication by both incumbents and new entrants.

The circular economy (CE) is viewed as a development strategy aimed at addressing environmental and economic challenges. Its objective is to decouple the consumption of goods and services from the extraction of raw materials, thereby reducing waste generation and the depletion of natural resources [1, 2]. The concept of CE is often seen as a means to promote sustainable [3, 4]. The most widely accepted definition of CE, as

provided by the Ellen MacArthur Foundation, describes it as "an industrial system that is restorative or regenerative by intention and design", with a focus on the principles of reduction, recovery, reuse, and recycling of materials, energy, and waste [3, 5].

The development of CE necessitated a multidisciplinary approach encompassing fields such as ecology, design, economy, and business management, to transition from a linear economy. This shift facilitated the development of eco-innovations that prioritize ecological considerations over anthropocentric perspectives. According to some authors, CE comprises four components: 1) the recirculation of resources, 2) a multilevel approach, 3) its significance for sustainable development, and 4) its close relationship with society. Others highlight the fundamental role of circularity in CE, as papers discussing and defining CE commonly emphasize the circular flow of materials, energy, and nutrients, highlighting the broad range of applications and the importance of CE.

CE presents new business opportunities and encourages the adoption of innovative solutions for sustainable development. For instance, companies can develop business models that fulfill customer needs through product functionality rather than relying solely on the production and sale of physical goods [6]. This approach reduces material costs and enhances resource efficiency [6]. However, effective implementation of CE requires organizations to establish multiple partnerships. These partnerships may involve collaborating with waste collection services for recycling purposes, handling the transportation, sorting, and dismantling of used materials, and mitigating risks and costs [7].

One of the commonly used frameworks for circularity strategies is the 4R framework, consisting of four strategies: Reduce, Reuse, Recycle, and Recover. In this paper, the authors propose the addition of a fifth category, Regenerate, to better accommodate start-ups involved in the development of nature-based solutions. Nature-based solutions aim to enhance the utilization of ecosystem services, which encompass the benefits humans derive from ecosystems. Examples of ecosystem services include green roofs or walls and urban green spaces, which rely on a minimal input of nonrenewable natural resources and prioritize renewable natural processes.

The R-list establishes a hierarchical order for waste management methods, with Regenerate given precedence over Reduce, and so on, as the level of circularity decreases down the list. These strategies can be applied within the two types of material cycles characterizing the circular economy: the biological cycle, which involves the flows of food and biologically-based materials (such as cotton and wood) designed to return to the biosphere through processes like composting or anaerobic digestion, and the technical cycle, which pertains to the flows of inorganic or synthetic materials.

Our consumption behaviors have unprecedented impacts on the natural environment. As a result of these consumption patterns, society, and businesses are faced with a convergence of factors, including environmental degradation, pollution, climate change, social inequity, poverty, and the growing need for renewable energy sources. These factors necessitate a new approach to conducting business. In response, many companies are acknowledging the need for sustainable business practices, and we observe firms like Interface Carpet, Unilever, Nike, and Starbucks incorporating sustainability into the core of their brands. This study reviews the literature on sustainable consumer behavior

change and presents a comprehensive psychological framework to guide researchers and practitioners in fostering sustainable behavior.

The Circular Economy is gaining momentum in academia, industry, and policy-making as an alternative model that aims to minimize resource depletion, waste, and emissions. Implementing this concept at the organizational level relies on business models as a crucial leverage point. A body of literature has emerged exploring the notions of circular business models and circular business model innovation. However, there is a significant lack of clarity regarding their theoretical conceptualization. To address this gap and systematize the current state of the emerging field of circular business models and circular business model innovation, we conducted a literature review using systematic database searches and cross-reference snowballing. Our contributions to conceptual clarity include (1) an overview of the history of circular business models and circular business model innovation concepts, (2) a synthesis of definitions of circular business models and circular business model innovation, and (3) an overview and synthesis of conceptual frameworks for circular business models and circular business model innovation [8].

The concept of the circular business model is built upon two fundamental concepts: the circular economy and business model innovation. This section provides a brief introduction to both topics.

2.1 The Circular Economy

The idea of the circular economy draws influence from Boulding's work in 1966, which argued for viewing the Earth as a desirable closed-loop system with the limited assimilative capacity to achieve a balance between the economy and the environment. Stahel and Reday further developed the concept by focusing on industrial economics and introducing the notion of a loop economy. This concept described strategies for waste prevention, regional job creation, resource efficiency, and the dematerialization of the industrial economy [9].

Stahel emphasized the importance of selling utilization rather than ownership of goods as a relevant business model for a loop economy. This approach allows industries to generate profits while reducing costs and risks associated with waste. The contemporary understanding of a circular economy, introduced by Pearce and Turner, incorporates various features and contributions from different concepts that share the idea of closed loops [10]. These concepts include industrial ecology, cradle-to-cradle, laws of ecology, looped and performance economy, regenerative design, biomimicry, the blue economy, and life cycle management and engineering.

The Ellen MacArthur Foundation, supported by McKinsey, played a significant role in popularizing and shaping the contemporary curated form of the circular economy concept through influential reports. Since 2013, the concept has gained increasing attention in academia, resulting in a range of different definitions. For example, definitions highlight the circular flow of materials, the design for restoration, and the aim to keep products, components, and materials at their highest utility and value.

Kirchherr et al., reviewed numerous definitions and proposed a comprehensive definition that describes the circular economy as an economic system based on business models that replace the "end-of-life" concept with reducing, reusing, recycling, and

recovering materials. It operates at multiple levels, including the micro, meso, and macro levels, to achieve sustainable development and create environmental quality, economic prosperity, and social equity for current and future generations [3].

However, a previous review of circular economy literature identified shortcomings in this definition, such as oversimplification of the term "end-of-life" and a reduced focus on other lifecycle stages. Therefore, the authors revisited the definitions and adapted a previous definition for this research. For this study, the circular economy is defined as an economic system in which resource input and waste, emissions, and energy leakages are minimized through cycling, extending the lifespan, and maximizing value retention.

The goal of achieving a circular economy involves intensifying and dematerializing material and energy loops. This objective can be accomplished through various means, such as digitalization, servitization, sharing solutions, designing long-lasting products, implementing maintenance and repair practices, and promoting reuse, remanufacturing, refurbishing, and recycling. While achieving a completely closed-loop system is theoretically impossible, our understanding of a circular economy adopts a dynamic perspective of "going circular," acknowledging the ongoing efforts to minimize leakage of materials and energy, rather than aiming for a static state of a fully circular system.

The concept of the business model gained popularity and evolved during the dot-com boom in the 1990s, particularly with the introduction of innovative revenue mechanisms. Initially, the business model concept served as a means to communicate complex business ideas to potential investors within a limited timeframe. Over time, it transformed into a tool for systemic analysis, planning, and communication, as well as a strategic asset for gaining competitive advantage and improving firm performance. The ability to innovate and introduce business models swiftly and effectively can create a significant competitive edge for organizations, especially considering the diminishing returns on technology, increasing complexity, and decreasing cost of capital. The disruption caused by digital transformation further amplifies the importance of business model innovation, as evidenced by the market valuation of relatively new technology conglomerates with innovative digital business models.

Business model innovation capabilities not only have the potential to yield higher returns compared to product or process innovations but can also serve as a "renewable" competitive advantage. These capabilities can trigger a dynamic sustainable competitive advantage for companies, making them crucial for organizational strategy. Additionally, business model innovation plays a critical role in helping organizations fulfill their social and environmental objectives by leveraging effective environmentally, socially, and economically sustainable technologies and solutions.

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Companies that engage in sustainable business model innovation have the potential to enhance their financial, social, and environmental performance, as well as improve

their resilience and ability to manage risks from their operating environment. Academic research on business model innovation has also grown, with numerous reviews and studies conducted on the subject [11–13]. Consequently, various definitions of the concept have emerged, this research adopted a previous definition proposed by the authors, which stems from a comprehensive review of the field [14, 15]. Business model innovation is defined as "the conceptualization and implementation of new business models that may involve the development of entirely novel models, the diversification into additional models, the acquisition of new models, or the transformation from one model to another. The transformation can encompass the entire business model or specific elements related to value proposition, value creation and delivery, value capture, the interconnections between these elements, and the value network" [7, 8, 16].

3 Linear and Circular Economy in the Fashion Industry

3.1 Linear Model in Fashion Industry

Nowadays, the fashion industry is divided in two segments. The first segment involves luxury companies which offer high quality products while the second includes fast fashion enterprises which represents the set of all the brands that follow the new trends by applying affordable prices.

In the last decades, the boundaries of the fashion industry were redefined by fast fashion. Indeed, in the late 80s, the fashion industry was dominated by several retailers, which led to increased competition in the market [17].

To survive this change, fashion retailers have moved from product-oriented distribution channels to buyer-oriented distribution channels, developing alliances with suppliers from different countries with a greater emphasis on the brand. The growth of the sector and strong competition have led to a decrease in mass production and a shift to the structural features of the supply chain.

In this scenario, phenomenon of fast fashion arose. This term refers to "an approach to the production, design and marketing of fashion clothing that emphasizes quickly and economically available fashion trends for consumers" [18].

This new production model led fashion brands to create many styles at the expense of features such as quality and sustainability. This occurs because fast fashion use low-quality raw materials and products with low longevity. In fact, some studies explain and highlight how fast fashion products cannot be worn more than 10 times. Within fast fashion there are cycles in which colors, shapes and styles change continuously, leading consumers to perceive their clothes "out of fashion". This leads to increased profits for brands, as they encourage the purchase of new clothing more frequently, even though those already own by consumers are in excellent condition.

One factor that has accelerated and influenced this new trend are social media, through the promotion of strategies as daily deals, influencers, and others. Using those strategies, companies increased consumption of clothing by consumers, fueled by rapid distribution which has led to increase waste.

In this sector, enterprises usually operate according to the principles of the linear economy, that is a one-way economy based on consumption. Products of such a model

are available and are characterized by a short duration and, at the end of their life cycle, end up like waste, generally in landfills. This model does not base production on sustainability models but on mass production models whose products are mainly of poor quality. In addition, mass production and consumption are associated with a consequent depletion of raw materials, energy consumption and waste of resources and products, resulting from all the processes. Such a model is based on the principle of "take-make-dispose", and it is characterized by a large demand of resources and waste production which generate pressures on the natural environment [19].

Despite this, there is now a greater propensity from the consumers to issues as environmental sustainability, so it is clear that this linear model of economic growth no longer reflects the needs of modern society [20].

A clear example of such pressures is given by the fashion industry itself, since the fashion industry is characterized by a high consumption of goods and produces high volumes of waste not only during the production stage but also through all the life cycle [21, 22].

The fashion industry generates revenues for 2 trillion and employs more than 300 million people in the world but is one of the most polluting industries on the planet.

Estimates in recent years have shown that the fashion industry is responsible from 8 to 10% of global annual emissions and the production of one kilogram of cotton requires approximately 10,000 L of water. Just in Europe, 11 kilos of clothes per person per year are thrown away.

The fashion industry consumed from 79 to 93 million cubic meters of water during the year 2015, causing pressure on water supply where scarcity in countries such as China and India is a major problem. Another negative effect produced by the fashion industry on the environment is chemical pollution. In fact, tissue treatment is estimated to cause about 20% of industrial water concern on a global scale.

The main negative aspect is the excessive generation of waste throughout the production chain and the consumption of goods, not considering land use, water, energy and waste and environmental pollution. Furthermore, the fashion industry's linear model has significant social impacts, such as labor exploitation, human rights violations, and unsafe working conditions for factory workers. According to the International Labour Organization, an estimated 170 million children are engaged in child labor, and 70% of the global fashion workforce are women [23–25].

For these reasons, the transition from a linear to a circular economy model is necessary but also challenging, as this transition involves systemic change that affects the entire economy. To address these challenges, the fashion industry is exploring alternative economic models, such as the circular one.

3.2 Circular Economy in Fashion Industry

In a circular economy, resources are kept in use for as long as possible, waste is minimized, natural systems are restored, and materials are regenerated at the end of their life cycle. The circular economy in the fashion industry aims to eliminate the negative impacts of fast fashion, reducing waste and pollution, and promoting sustainable and ethical production practices.

In this model, manufacturers are trying to use recycled materials and produce clothes and products that are more sustainable and easier to repair.

Circular Economy is an emerging concept within the fashion industry which combines aspects such as the circular economy and sustainable fashion. This leads to a distancing from the existing mode, "take-make-dispose".

As we have already said, the linear economic model is based on production and consumption while the circular economic model focuses on concepts such as recycling and reducing waste.

The circular economy in the fashion industry is a model that aims to reduce the waste and environmental impact of industry through recovery, repair, reuse, and recycling of materials. In practice, this means that the actors in the industry need to try to create a virtuous cycle in which materials are not wasted, but are used as much as possible, avoiding ending up in landfills. Nevertheless, improving tissue recycling techniques and encouraging consumers to change their purchasing habits are some of the challenges.

Circular Economy in the apparel and fashion field, is based on three fundamental principles as (1) sustainable design: manufacturers strive to create durable, easy-to-repair and recyclable clothing; (2) reuse: garments that is no longer used is sold or donated to people who need it, rather than being thrown away; (3) recycling: clothing materials that cannot be reused are recycled or transformed into new products.

The circular economy in the fashion industry offers many advantages as the waste reduction which implies the repair, reuse and recycling of materials which reduce resource waste and help preserve the environment. In terms of innovation, we can see how the need to find sustainable solutions for the fashion industry drives research and innovation, with the development of new materials, production techniques and processes. Lastly, reuse and recycling of materials can reduce production costs and increase the profitability of the industry.

The circular economy model for the fashion industry involves designing clothes and accessories with circularity in mind, using sustainable materials, adopting sustainable production practices, and extending the life cycle of products through repair, reuse, and recycling. This approach promotes a shift from a linear model of production, consumption, and disposal to a more circular one that keeps materials in use for longer periods, reducing the environmental impact of the industry.

Textile recycling is an example of a circular economy. The collection, sorting, and processing of used clothing and textiles is part of the recycling process, and this approach helps to reduce waste. According to a report by the Ellen MacArthur Foundation, the textile recycling market could reach $4.9 billion by 2025, creating new job opportunities and economic benefits.

Also, the use of sustainable materials in the fashion industry includes organic cotton, recycled polyester, and bamboo. Cotton and synthetic fibers have a higher environmental impact than these materials. The use of sustainable materials in the fashion industry increased in the last two years by 36% between 2017 and 2019 [26, 27].

Rental and resale platforms have started to be adopted by fashion companies because these platforms allow consumers to rent or buy second-hand clothing, extending the life

cycle of garments and reducing waste. According to a report by ThredUp, the resale market is expected to reach $64 billion by 2024, indicating a growing demand for sustainable fashion [28].

Fashion industry is one of the largest and polluting trade worldwide. For this reason, it appears to be the industry with the greatest probability and possibility of damaging the environment, with repercussions on society due to the high use of non-renewable resources. Nevertheless, as already pointed out, companies operating in the fashion industry are trying to implement strategies of circular economy. Dissanayake and Weerasinghe have proposed four types of strategies that can help in the implement of the principles of the circular economy in the fashion industry [29].

These are:

1. Resources efficiency, which is an important aspect of the circular economy in the fashion industry. This means that clothing manufacturers must consider the sustainable use of natural resources during production, such as reducing water use and energy and the use of non-toxic raw materials, to reduce the environmental impact of the fashion industry.
2. Circular design, that is an approach that encourages the creation of products that are designed to last long, be easily repaired and recyclable. This means that apparel manufacturers should try to create high quality products that last long, using durable materials and sustainable designs. In addition, repair and reuse initiatives can be introduced to further extend product life.
3. Product life extension, is a key principle in the fashion circular economy, aimed at reducing waste and maximizing the value of garments. It involves extending the lifespan of a product through various strategies, rather than disposing of it prematurely. By prolonging the use of clothing items, we can minimize the negative environmental and social impacts associated with fashion production and consumption.

End-of-life circularity which is an important strategy of the circular economy in fashion, which aims to ensure that products are disposed of sustainably and that materials can be recovered and recycled to produce new items. So, manufacturers need to think about the end of product life from the design stage, to ensure that materials are easily separable and recoverable [30].

In conclusion, we can see how the use of the circular economy is the basis for the generation of lasting benefits and allowing an economic system to grow and generate income over time.

Although, as we have seen in the previous paragraphs, the fashion industry has always been developed and associated with a high level of consumerism, in recent years sustainability and economic activity have become key issues in the sector.

4 Sellpy and H&M

Sellpy and H&M are two companies operating in the fashion industry. Sellpy is a Swedish company second-hand e-commerce platform founded in 2014. The company has a business model that involves the purchase of used clothes by customers, evaluating garments, cleaning and cataloging products and they provide a marketplace to sell items including

clothing, accessories, and home goods. So, in is model, Sellpy takes care of the whole sales process.

Sellpy has obtained investments from major venture capital enterprises, including H&M and Kinnevik, and in 2020 it was acquired by the H&M group.

Instead, H&M is a major Swedish fashion chain that sells apparel for men, women, and children worldwide and was founded in 1947. The company produces and sells new clothing, and it has different store in several countries. H&M's business model involves the production and sale affordable and trendy apparel. However, over the past few year, H&M has focused on sustainability, launching a series of initiatives to reduce the environmental impact of the fashion industry.

Although the two companies have different aim and business models, both are trying to address the growing awareness of the environmental impact of the fashion industry. Indeed, in 2020, Sellpy announced a collaboration with H&M, one of the world's largest fashion retailers.

This partnership came out through the sharing of sustainable development goals and the desire to promote circular fashion. H&M through the acquisition of Sellpy saw a way to expand its business, while Sellpy benefited from the support and resources of a large group like H&M.

The collaboration between Sellpy and H&M is part of H&M's efforts to become more sustainable and reduce its environmental impact. By partnering with Sellpy, H&M aims to encourage its customers to recycle their clothing and make it easier for them to do so. The collaboration also supports H&M's goal to become fully circular and only use sustainable materials by 2030 [31–33].

As part of the collaboration, H&M invested in Sellpy and became a minority shareholder in the company. H&M also provides Sellpy with logistical support, such as access to its warehouses and transportation network. Sellpy benefits from H&M's expertise in logistics, which allows it to scale its operations and expand its reach.

The collaboration between Sellpy and H&M has been successful so far. Sellpy has experienced significant growth since the partnership began, and H&M has seen an increase in sales of its sustainable products. In 2020, Sellpy reported a 60% increase in sales compared to the previous year, and H&M's sustainable products accounted for 27% of its total sales.

Sellpy's collaboration with H&M is part of a larger trend towards sustainable fashion and circular economy. By encouraging people to recycle their clothing and reducing waste, companies like Sellpy and H&M are helping to create a more sustainable future for the fashion industry.

In summary, the collaboration between Sellpy and H&M has several advantages, including promoting circular fashion, providing logistical support, promoting sustainable consumption, and supporting job creation and economic growth [34–37].

5 Material and Method

5.1 Survey on the Attitudes of Millennials and Centennials

As we have said, growing awareness of sustainability among businesses and consumers made necessary the slowdown of the fashion industry production. Also, it is important to pay attention to use sustainable materials in order to reduce the environmental and social impact resulting from the production processes of fashion items. To deepen the knowledge of such phenomenon it has been necessary to investigate consumer attitudes through a quantitative survey using a structured questionnaire.

The main purpose is to highlight whether consumers, without making a distinction between luxury and non-luxury buyers are aware of sustainable luxury items and if they are attracted in buying ethical and sustainable fashion products.

The first step in understanding attitudes and propensity of millennials and Generation Z is to identify the socio-demographic variables of the chosen target. The questionnaire was distributed by 352 individuals, 80 men and 272 women. This result shows a higher percentage of the female sex, equal to 77,3%. The reason for this result probably is strongly linked to the fact that the female gender seems to be most interested and involved in the fashion field. Also, the respondents were also divided into the two age groups corresponding to the two generations studied and the sample is distributed almost equally.

In addition, 49% of respondents were reached for Millennials, compared to 51% for Generation Z. Within the Millennials category there are mainly graduates and workers; while Generation Z consists of students, recent graduates, workers and unemployed.

The sample was then subdivided according to the area of residence.The answers provided by the respondents revealed most individuals living in Southern Italy and the Islands, reaching a percentage equal to 56% of the sample. The last question in the first section of the questionnaire was about the knowledge and the subdivision of this sample in terms of income received within the household during the year 2019. For this variable there was a strong predominance of the band belonging to 0–18,000.00 euro with a percentage equal to 27% of respondents.

From the analysis of the above data, it can be said that luxury purchases are not only made by those with greater purchasing power, but also by individuals with lower incomes. This is presumably due to the fact that such purchases bring numerous benefits to buyers, including high brand symbolic values (Fig. 1).

Increasing awareness in sustainability and ethical practices among businesses and consumers has made it necessary to slow down the production of the fashion industry and increase the focus on the use of sustainable materials in order to reduce the impact environmental and social processes resulting from the production of fashion products. For this reason, the current situation regarding this phenomenon has been thoroughly analysed in the previous paragraphs. The aim assigned to the next section of the questionnaire, called eco-fashion, was specifically to better understand the attitudes and propensity of respondents to this approach.

The section opens with a first important question that is whether the respondents were aware of the recent phenomenon of ethical fashion. A relatively high 38% of the sample indicated that it was not aware of this. On the other hand, 35% of respondents indicated that they were aware of this phenomenon.

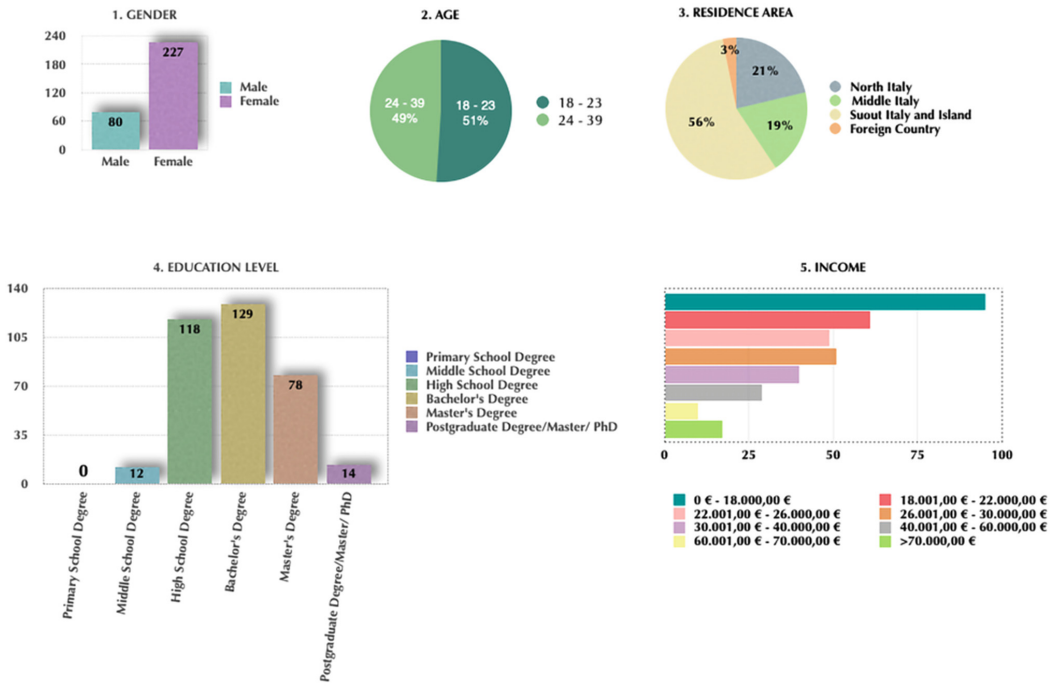

Fig. 1. Socio-demographic area (Author: Sinatra, 2023)

As for the other 28% of respondents, they gave a different answer, "I've heard about it," presumably because they have less in-depth knowledge of ethical fashion.

The study of eco-sustainable fashion ends with a further question regarding the propensity to purchase eco-sustainable fashion products. From the data collected during the survey, it emerged that only a small percentage of respondents, almost all Millennials, purchased eco-sustainable luxury products, recording a percentage equal to 12% of the sample.

The remaining 88% said they had not made a sustainable luxury purchase. This presumably stems from the fact that such a question was addressed to the whole sample, which also includes those who have never purchased luxury products (Fig. 2).

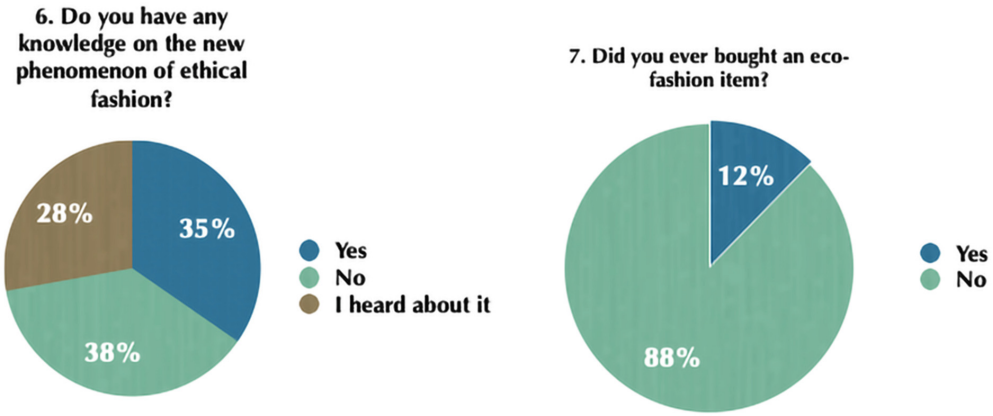

Fig. 2. Eco-Fashion section (Author: Sinatra, 2023)

Consequently, an analysis of consumer behavior has been developed to identify why consumers do not purchase an eco-fashion luxury product. The variables considered were many and the possibilities of response given to respondents wide.

Assuming that consumers were aware of the significance attributed to each of the variables analyzed, it appeared that the overriding motivation in choosing not to purchase environmentally sustainable luxury products depends on the high price of these products, statement from a sample match of 103 out of 193. The second is the lack of information provided by companies, with 84 answers. In third and fourth place respectively, the incompatibility with the personal tastes of the respondents (31) denoting the real importance attached to fashion products in the expression of self and identity and the lack of information on the effects of purchasing such products (46). Only 10 interviewed indicated the justification for the lack of interest in sustainability issues, revealing how today's consumers attach real importance to these issues. Finally, in relation to the last option, 14 respondents justified their limited propensity to purchase environmentally sustainable luxury fashion products, for example due to the low availability of such products or lack of information on the social and environmental effects arising from the use of such goods.

Another area analyzed was on the study of the impact of different attributes on the choices of respondents in not to buying eco-sustainable luxury products. From the data collected, it emerged that the fundamental variable influencing consumers' choices is the price (78 respondents). This result arise probably from an excessive price of environmentally sustainable fashion products, from which it is assumed that both generations are not willing to pay a premium price for obtaining such items.

From the variable analyzed, corresponding "do not follow fashion trends", emerges as a factor that has a lesser impact on the choices of not buying eco-sustainable luxury products for consumers, despite a small percentage have indicated this variable as incisive, presumably because eco-sustainable luxury products are considered less attractive in terms of beauty by today's consumers (Fig. 3).

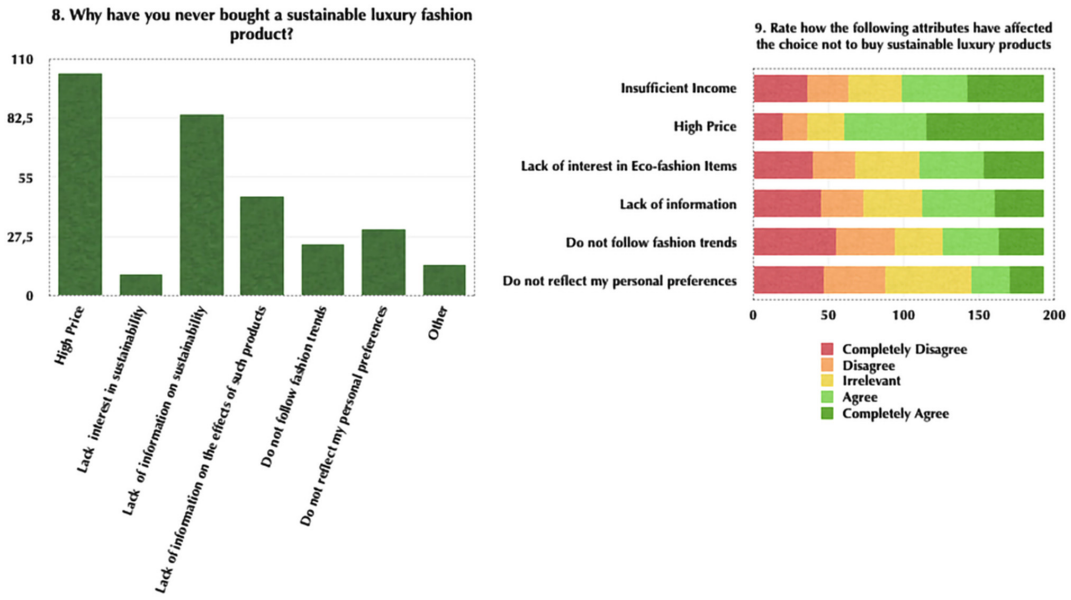

Fig. 3. Consumers' motivation in not buying sustainable luxury products

6 Conclusions, Limits and Future Research

As for the phenomenon of ethical fashion and the purchase of eco-sustainable products, an important fact arises: consumers are aware of this phenomenon but, in fact, a small part of them proceed to purchase such goods. From this it is deduced that, we can hypothesize that people fight for ethical and social causes only to appear on social media, in particular Centennials.

The two generations studied, while presenting points in common, represent different categories of consumers and, as emerged from the survey, the suggest is to fully understand this diversity and try to adapt strategies to each generation.

The inclusion of circularity in companies' business model has become increasingly important in recent years. Circularity can help businesses reduce the environmental impact of their products and services, increase resource efficiency, reduce costs, and improve the company's reputation. Furthermore, circularity can help fashion companies create new commercial opportunities as selling products and services based on recycled materials or repairing and reusing existing products.

So, companies that integrate circularity into their business model can benefit from a number of competitive advantages, such as product differentiation, increase customer loyalty, and reduce resource scarcity risks. Moreover, the inclusion of circularity can help companies meet the needs of increasingly environmentally conscious consumers and respond to the growing demands for transparency and social responsibility.

It is important to underling that this paper several limitations. Firstly, having developed a survey limited only to two categories of consumers (Millennials and Generation Z) has not made it possible to compare and examine in depth differences between other consumers' categories. So, the suggestion for eventual future research is to enlarge the sample.

Secondly, in the future it would be recommended base the research on a more qualitative research model, to better understand motivations and attitudes that lead to certain final purchasing choices.

In conclusion, the inclusion of circularity in their business model can offer numerous opportunities for companies to improve their economic, environmental, and social performance, and to create long-term value for their stakeholders. It is therefore important that companies take the integration of circularity into their modus operandi seriously.

Acknowledgments. This publication was produced while attending the PhD programme in Circula Economy at the University of Trieste, Cycle XXXVIII, with the support of a scholarship financed by the Ministerial Decree no. 351 of 9th April 2022, based on the NRRP – funded by the European Union – NextGenerationEU – Mission 4 "Education and Research", Component 1 "Enhancement of the offer of educational services: from nurseries to universities" – Investment 4.1 "Extension of the number of research doctorates and innovative doctorates for public administration and cultural heritage".

Authors' Contributions. Conceptualization, methodology, formal analysis, materials and resources, data curation and validation: all authors. In particular: Sinatra wrote Sect. 1, Sect. 3, Sect. 3.1, Sect. 3.2, Sect. 4, Sect. 5, Sect. 5.1, Sect. 6; Dore wrote Sect. 2; Sect. 2.1.

References

1. Sauvé, S., Bernard, S., Sloan, P.: Environmental sciences, sustainable development and circular economy: alternative concepts for trans-disciplinary research. Environ. Dev. **17**, 48–56 (2016)
2. Lieder, M., Rashid, A.: Towards circular economy implementation: a comprehensive review in context of manufacturing industry. J. Clean. Prod. **115**, 36–51 (2016)
3. Kirchherr, J., Reike, D., Hekkert, M.: Conceptualizing the circular economy: an analysis of 114 definitions. Resour. Conserv. Recycl. **127**, 221–232 (2017)
4. Velenturf, A.P., Purnell, P.: Principles for a sustainable circular economy. Sustain. Prod. Consum. **27**, 1437–1457 (2021)
5. Geissdoerfer, M., Savaget, P., Bocken, N.M., Hultink, E.J.: The circular economy–a new sustainability paradigm? J. Clean. Prod. **143**, 757–768 (2017)
6. Tukker, A.: Product services for a resource-efficient and circular economy–a review. J. Clean. Prod. **97**, 76–91 (2015)
7. Veleva, V., Bodkin, G.: Corporate-entrepreneur collaborations to advance a circular economy. J. Clean. Prod. **188**, 20–37 (2018)
8. Geissdoerfer, M., Pieroni, M.P., Pigosso, D.C., Soufani, K.: Circular business models: a review. J. Clean. Prod. **277**, 123741 (2020)
9. Stahel, W., Reday, G.: The Potential for Substituting Manpower for Energy (1976)
10. Pearce, D.W., Turner, R.K.: Economics of Natural Resources and the Environment. Johns Hopkins University Press (1989)
11. George, G., Bock, A.J.: The business model in practice and its application for entrepreneurship research. Enterpren. Theor. Pract. **35**(1), 83–111 (2011)
12. Zott, C., Amit, R., Massa, L.: The business model: recent developments and future research. J. Manag. **37**(4), 1019–1042 (2011)
13. Massa, L., Tucci, C.L., Afuah, A.: A critical assessment of business model research. Acad. Manag. Ann. **11**(1), 73–104 (2017)
14. Schallmo, D.: Geschäftsmodell-Innovation. Springer Fachmedien Wiesbaden, Wiesbaden (2013)
15. Foss, N.J., Saebi, T.: Fifteen years of research on business model innovation: how far have we come, and where should we go? J. Manag. **43**(1), 200–227 (2017)
16. Teece, D.J.: Dynamic Capabilities and Strategic Management: Organizing for Innovation and Growth. Oxford University Press on Demand (2009)
17. Barnes, L., Lea-Greenwood, G.: Fast fashioning the supply chain: shaping the research agenda. J. Fashion Mark. Manage. **10**, 259–271 (2016)
18. Merriam-Webster Dictionary: Fast fashion definition. https://www.merriam-webster.com/dictionary/fast%20fashion. Last accessed 22 Feb 2023
19. MacArthur, E.: Towards the circular economy. J. Ind. Ecol. **2**(1), 23–44 (2013)
20. Blum, P.: Circular Fashion: Making the Fashion Industry Sustainable. Hachette, UK (2021)
21. A new textiles economy: redesigning fashion's future. Retrieved from https://www.ellenmacarthurfoundation.org/assets/downloads/publications/A-New-Textiles-Economy_Full-Report_Updated_1-12-17.pdf. Last accessed 2 Mar 2023
22. Vecchi, A.: The circular fashion framework-the implementation of the circular economy by the fashion industry. Curr. Trends Fashion Technol. Textile Eng. **6**(2), 31–35 (2020)
23. Brink, J.V.: Expectations of the Circular Economy in the Fashion Industry, Master's thesis (2018)
24. McNeill, L., Moore, R.: Sustainable fashion consumption and the fast fashion conundrum: fashionable consumers and attitudes to sustainability in clothing choice. Int. J. Consum. Stud. **39**(3), 212–222 (2015)

25. International Labour Organization: Child labour in the fashion supply chain. https://www.ilo.org/global/topics/child-labour/lang--en/index.htm. Last accessed 29 Mar 2023
26. Global Fashion Agenda: Pulse of the Fashion Industry (2019). https://globalfashionagenda.com/wp-content/uploads/2019/05/Pulse-of-the-Fashion-Industry-2019.pdf. Last accessed 16 Mar 2023
27. Textile Exchange: Preferred fiber and materials market report 2020. https://textileexchange.org/wp-content/uploads/2020/11/2020-PFM-Report.pdf. Last accessed 18 Mar 2023
28. ThredUp: 2020 resale report. https://www.thredup.com/resale. Last accessed 22 Mar 2023
29. Dissanayake, D.G.K., Weerasinghe, D.: Towards circular economy in fashion: review of strategies, barriers and enablers. Circ. Econ. Sustain. **2**(1), 25–45 (2021). https://doi.org/10.1007/s43615-021-00090-5
30. Gazzola, P., Pavione, E., Pezzetti, R., Grechi, D.: Trends in the fashion industry. The perception of sustainability and circular economy: a gender/generation quantitative approach. Sustainability **12**(7), 2809 (2020)
31. H&M invests in Sellpy, a Swedish secondhand fashion platform. https://hmgroup.com/media/news/general-news-2020/hm-invests-in-sellpy-a-swedish-secondhand-fashion-platform.html. Last accessed 26 Mar 2023
32. Sellpy experiences strong growth after H&M investment. https://fashionunited.uk/news/business/sellpy-experiences-strong-growth-after-h-m-investment/2020070248368. Last accessed 26 Mar 2023
33. Circular and sustainable fashion: H&M's new goals and partnerships, https://hmgroup.com/sustainability/news/general-sustainability-news-2020/circular-and-sustainable-fashion-hms-new-goals-and-partnerships.html. Last accessed 26 Mar 2023
34. H&M Group: Sustainability: https://hmgroup.com/sustainability.ht. Last accessed 29 Mar 2023
35. Fletcher, K., Grose, L.: Fashion & Sustainability: Design for Change. Laurence King Publishing, Hachette UK (2012)
36. Sellpy, il negozio second hand online di H&M, viene lanciato in altri 20 Paesi, https://it.fashionnetwork.com/news/Sellpy-il-negozio-second-hand-online-di-h-m-viene-lanciato-in-altri-20-paesi,1306881.html. Last accessed 30 Mar 2023
37. Sellpy Home page: https://www.sellpy.com/about. Last accessed 30 Mar 2023