Circular economy in the Italian fashion sector – a new, post-pandemic state of the art

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Abstract: The purpose of the present paper is to investigate the development of circular economy in the Italian Fashion-Luxury industry. The research takes into consideration 4 different tiers of the fashion supply chain, namely textile companies, brand owners, retailers and final consumers. Albeit being an exploratory research, the extensive coverage of the supply chain allows to check the consistency of the approaches used upstream with the requests coming from the market, as well as assessing the alignment in terms of maturity at the various tiers of the Supply Chain.

Keywords: Circular Economy, Fashion Supply Chain, COVID-19

1.Introduction

In the last decades, sustainability acquired an increasing relevance in society, deserving a spot at the top of the list of management agenda in many sectors. Economy and environment have always been, indeed, tied by a strong relationship, reciprocally influencing one another. However, several industries are nowadays still characterized by a "linear" model, where supply chain flows originate from mother earth and end with the final consumer, in contrast with the "circle of life" of natural resources. Therefore, lately, many stakeholders started feeling a growing necessity to urgently restore a balance between economy and environment, vanished since the industrialization. In this contest, circular economy is considered an effective tool with the deployment of the 3Rs (reduce, reuse, recycle). The transition toward a circular model requires a strong synergy and collaboration along the whole supply chain, along with the sensibilization of final consumers about this topic. The goal of our research is to analyse to what extent this transition is developed along the fashion supply chain. The research takes into consideration an extensive part of the Italian fashion supply chain, from the textile companies to the final consumer. On the companies' side, the aim is to understand to what extent companies declaring to be close to sustainability are actually knowledgeable about their supply chain and involve the different actors, and whether sustainable actions are reflected both internally and externally. On the consumer side, the analysis wants to define responsible purchasing profiles depending on the shopping habits of the sample. Furthermore, we analysed the potential impact that the pandemic could have, in terms of companies strategy and consumers habits.

Research questions addressed are the following: RQ1: Companies in the fashion industry typically declare to work having sustainability in mind; how much do they really know about their supply chain and involve the different actors? RQ2: What does sustainability mean, for companies inclined to circularity? Is the vision reflected both internally and externally? RQ3: What is the current level of consciousness and interest about the subject among the final consumers and what leverages can be used in order to increase their inclination to sustainability? RQ4: Has COVID-19 impacted on attitudes and behaviour of the different actors?

The remainder of the paper is organized as follows: motivations of the study are presented in Section 2; then, starting from a synthetic scientific background in Section 3, Section 4 will illustrate the research methodology. Findings and results will be discussed in Section 5 and Section 6 will conclude the paper.

2.Motivation of the study

Fashion-luxury, experts used to say, is an industry that knows no crises. Actually, many had to change their minds after personal luxury goods posted a first-time-ever year-on-year reduction of around 23% (expected) in global sales in 2020 vs 2019, as a consequence of the COVID-19 outbreak (Altagamma and Bain, 2020). In 2008, Brun and Castelli published a seminal paper on Luxury Critical Success Factors (CSFs) which allowed to create a link between the reasons why customer value luxury goods and services to the Luxury Supply Chain priorities. In the following decade, a significant research stream on Luxury Supply Chain Management developed. Arguably, the lockdown changed the habit of people globally, and this may imply that the list of luxury CSFs may need to be updated.

Therefore, as a preliminary step in designing the present research, the author interviewed a number of luxury consumers, as well as the managers of 4 major Italian luxury companies, and come to the conclusion that, after the emergency will be over, some of the luxury consumers will change their spending pattern permanently. Convenience sampling was adopted at this stage, privileging such criteria as 1) a swift response, and 2) representativeness of a specific cluster of trend-setting companies and consumers, over 3) sample size, and 4) heterogeneity of the sample.

Wealth, not income - If before the outbreak, HENRYs (High-Earning, Not Rich Yet) would spend a considerable fraction of their disposable income in luxury goods and experiences, after the lock-down they may lack cash availability for superfluous spending, while HNWI (High Net Worth Individuals) will have an unaffected spending capacity.

For those who will stay home – people will travel less – especially flights will be affected – due to governmental restriction, fear of infection, business run on conference calls in place of face-to-face meetings. This will impact negatively on some channels (especially Travel Retail), specific destinations (e.g. Las Vegas), specific customer segments in the flagship stores of world's fashion capitals (travellers exploiting tax free shopping), and product categories (suitcases). On the contrary, with the reopening, socialization occasions may happen at home, and categories such as Art de la Table may benefit.

Hedonistic experiences – After the sacrifices of lock-down, customers will crave for hedonistic products and services to satisfy the need of self-indulgence and personal pampering – shifting away from the "band-wagon effect" and moving into the "luxury as a personal affair" area. Premium beauty products, but also home-spa and home-wellness, and intense sensorial experiences in the fine food and drinks territory, could benefit.

Responsible luxury - The pandemic outbreak stimulated deep societal reflections around the main theme of "where is humanity going?". Consumers will be even more aware of sustainability, and brands and product categories allowing "responsible consumption" will be privileged. Giorgio Armani penned an open letter to WWD, in which he challenged the current fast-fashion mindset, saying he believes in an "approach to the design and making of garments that suggests a way of buying them: to make them last" (Zargani, 2020).

Looking for discounts – if, on the one hand, we could expect a wave of anti-consumerism, the habit of waiting for end-of-season sales and doing pilgrimages to Factory Outlets and buying from off-price channels will be further strengthened by the self-appeal to frugality. Brands and retailers resorting to discounts to get rid of the unsold collections just fostered the vicious circle of off-price and bargain hunts: special promotions were the main reason for purchasing clothing during the crisis for 56% of consumers (Amed et al., 2020).

Online is the new normal – the transition to a life in the digital world was accelerated as through a time warp, and customers are buying more online and consuming more digital content. This represents a major change in paradigm: today, a brand without a strong online presence is a non-existing brand in the eyes of many a consumer.

When your own initials are enough – Economic theories say that after a "quarantine of consumption" - as Li Edelkoort defined this unprecedented period of forced fast from conspicuous consumerism (Fairs, 2020) - consumers may switch "revenge spending" (Gopalan, 2020). But in the aftermath of the lockdown we are still experiencing a climate of "social thriftiness", which may reduce the appetite for conspicuous consumption. Before the crisis, brands with a very bold visual identity were performing extremely well with brand sensitive customers; after Covid, luxury consumers could steer towards the quality and intimacy of "no-logo brands", as they are finally understanding the meaning of Bottega Veneta payoff ("When your own initial are enough": there's room for feel-good purchases even without a big flashy logo on your t-shirt).

A renewed pride for local producers – this may vary in strength on different markets and for different product categories, but we are already witnessing the first signs that are forewarning the rise of full-fledged "buy local" movements.

Experts expect the fashion-luxury industry to bounce back to pre-covid values in late 2022 / early 2023, but this will require "companies to take a front seat in transforming the industry on behalf of the customer" (Altagamma and Bain, 2020 & 2021). If one were to find a common denominator among several of the above findings, it certainly would be the increasing relevance of "responsible luxury". As a consequence, the list of Luxury CSFs may be updated including Sustainability. Hence, we decided to study the state of the art of circular economy in Italian fashion-luxury industry and try to understand if COVID-19 actually accelerated the implementation of more virtuous approaches.

3.Scientific background

The overarching logic of the traditional industrial model is a linear sequence of "make-waste-disposal" which is not sustainable anymore. A new way to conceive business is badly needed and circular economy may be a possible pragmatical solution. Since several years, Europe is investing in developing action plans to accelerate the transition toward the 3R paradigm: **Reuse**, **Recycle**, **Reduce**. In March 2020, a new Circular Economy Action Plan was adopted as part of the European Green Deal for sustainable growth (European Commission, 2020). Italy, in particular, is the first country for the circulation of the materials recovered within the production processes and for the use of raw material extracted by waste (Circular Economy Network, 2019). Different enabling factors facilitate the implementation of new business models, for example the development of Industry 4.0 which allows to trace the whole production process. However there are still many barriers, starting from the inertia to change the consumer's behaviour (Colucci and Vecchi, 2021). Furthermore, to make the whole supply chain transparent and collaborative, a synergic participation of all the actors is required. It is also necessary to integrate circular thinking into supply chain management. In the fashion industry the transition is specifically challenging since the current fashion system is based on quick responses, short lead times and huge volumes of garments consumed globally, the so called "fast fashion" (Shirvanimoghaddam et al., 2020). Companies need to re-think their business models and to integrate in their governance new policies, such as the use of wasting materials to generate new goods of equal or higher perceived value (upcycling) and converting materials from existing products to create different products (recycling) (Karaosman et al., 2020). The implementation of both practices requires a new way to conceive the product design, considering the materials that compose the garments, integrating it with the collaboration and transparency between the different actors (Cicculo et al., 2019).

Transparency is possible with disclosure and sharing of information by the companies (Brun et al., 2020), but currently there are no standards system of metrics that can guide companies in adopting circular models and in monitoring their performances (Karaosman et al., 2017). However, many companies have started to rethink their business models in order to guarantee more sustainable practices. If their commitment is properly communicated to the final customers, by understanding their attitude toward the new paradigm, sustainability can actually turn into an order winner (Cicculo et al., 2020). Furthermore, the lockdown caused by COVID-19, has brought to the attention some critical issues of the sector, including overproduction, how to dispose of excess inventory, and the difficulties in managing the relationships between brands and suppliers. Nevertheless, the crisis could be an opportunity to raise awareness among companies and consumers about the need of slowing production and consumption (Zargani, 2020).

4.Research methodology

The concept of circular economy has been gaining growing importance in the last years, Italy is well performing in the transition from the linear model toward the circular one; however, there is not much evidence about the way the fashion industry is addressing this change. The theoretical background has shown the main barriers that the industry has to face, and therefore the objective of our analysis is to understand how companies, that declared to be inclined to the circularity, are performing along the whole supply chain. As a consequence of the gaps in outstanding literature, we formulated and addressed the research questions already illustrated in the Introduction section.

Taking into account the type of research questions, the focus on contemporary events, and the fact that our research did not require control over the behavioural events, the most apt method for our research analysis was the survey. The approach was inductive; indeed, the analysis started from the observations arose by the literature review and aimed to generate conclusions on the basis of the highlighted gaps.

4.1 Data collection protocol

Research data were collected with different methods depending on the different actors being observed: closed-ended questionnaires were used for textile companies, brand owners and consumers, while to collect data from retailers we performed semi-structured face-to-face interviews (readers interested in details on the survey questions and interview protocol may write to the corresponding author, which will be happy to share the protocols).

4.2 Samples selection

Different sample selection methods were employed depending on the supply chain tier.

For **textile companies** and **brand owners** we employed a non-probability sampling: we chose purposive sampling, targeting Italian Small-Medium firms which demonstrated interest and inclination to sustainability and circularity.

For **customers** we employed probability sampling: we opted for simple random sampling with larger sample size, aiming to obtain a sample representative of the Italian population.

A non-probability sampling approach was employed also for **retailers**, with a stratified sampling + quota sampling approach. Indeed, the sample selected for the retailers' analysis was chosen from the lists of brands analysed with the surveys in order to ensure uniform representation of brands. Both mono brand shops and specialized multi-brand retailers were selected.

4.3 Inferential statistics

Data collected from textile companies, brands and consumers were analysed using the following quantitative methodologies: Cronbach's Alpha, to verify internal coherence in the answers; Factor Analysis, to group questions into factors; Box Plot, for outlier identification and removal; Cluster Analysis, to create group of respondents with similar profiles.

5.Findings and results

The response rate of companies varied depending on the channel used to deliver the survey; the use of LinkedIn has proven to be successful in contacting brand owners and textile companies. The final sample encompassed 21 answers from textile companies (out of 55 contacted) and 30 answers from brands (out of 79). Furthermore, we interviewed 7 retailers and collected 402 valid responses from consumers.

For all the actors of the industry, a complete analysis was performed. For sake of conciseness, the present paper will focus mainly on the results related to textile companies and brand owners, while details on the findings about retailers and consumers will be disclosed in a forthcoming paper.

5.1 Textile and brand owning companies

The textile sample is mainly composed by middle size firms, covering a range of different materials (wool, silk, cotton/denim, and other materials), and located in the main Italian textile districts (e.g. Como, Prato, Biella, …). On the other hand, brand owners are mainly small size firms, focusing on garments production. Analysis of answers received was performed by grouping the questions in five areas, or factors: 1) **level of awareness of the supply side**, considering also the knowledge about the materials purchased; 2) **implementation of actions aiming at reducing the environmental impact** and their monitoring; 3) **waste management** and knowledge about the actors involved in it; 4) **product end of life**

management, considering if the products are made by materials that allow the recycling and the reuse; and 5) **communication with the customer side**. In the case of the textile companies it includes the amount of information shared with the brands in order to make the products more durable. For the brands, on the other hand, this area includes the communication with the final consumers, concerning also the actions taken by the retailers. Answers on a 5-points Likert scale allowed to calculate a global score for each area, per every respondent. On the basis of these factors, we conducted a Cluster Analysis with the statistical software Minitab, with the aim of categorizing companies in groups with homogeneous level of maturity in circularity.

In appendix, the resulting Dendrograms are reported: considering an acceptable similarity level of at least 34% for textile companies and 41% for brands, five clusters were obtained for each actor. The maturity assessment for each cluster consists in the evaluation of the average score of the group for each factor in order to understand in which area the cluster is performing well or not. In appendix, two spider chart are reported, illustrating the results obtained for textile companies and brand owners. In case of textile companies, the different groups of firms are well distributed along the scale regarding the awareness of the supply side, the waste management, the implementation and monitoring of sustainable actions and end of life product management. However, the factor concerning the customer side revealed different approaches, indeed three out of five groups are performing really well in collaborating with their brands, while the other two have, instead, low scores. Finally, by classifying the companies on two dimensions, customer value proposition and interface, and value network, resulted that three out of five textile companies can be considered in the direction toward full circularity, since they are performing well on both axes, and the other two instead, are considered upstream circular.

The same analysis for brands showed different results. As for the textile sector, five clusters were identified, but in this case the area which is less developed is the monitoring and the implementation of the sustainable actions in order to reduce the environmental impact of the production phase. Indeed, as the literature review stated, for smaller companies, the traceability and the monitoring of the indicators are harder and costly. However, three out of five brands can be considered in the right direction toward full circularity, since they have high scores on both axes, and this is in line with the choice of the sample selected. On the other hand, the other two have lower scores on both axes: one is classified as still linear, the other one as downstream circular.

5.2 Retailers

The analysis of the retailers led to a strong differentiation between the mono brands and the multi brands stores. The formers seem to be more aware about the commitment of the companies and therefore more inclined to communicate it to the final customer, while multi-brand retailers tend not to communicate to the final customer the sustainability endeavour of brands.

5.3 Consumers

The sample of the final customers is the widest and most heterogeneous, allowing quite a complete overview about the current purchasing customs of Italian consumers. The survey's questions were organized in two groups: one including features about the inclination toward sustainability, the other one regarding the shopping habits. The first group allowed determining a "sustainability profile" per each consumer of the sample. On the other hand, a Factor Analysis was computed on the second group of questions to reduce the number of features.

The 11 factors identified are the following: (1) Inclination towards second-hand clothing; (2) Lack of interest in Fashion trends; (3) Shopping frequency; (4) Inclination towards physical shops despite of online; (5) Lack of awareness about sustainable fashion; (6)Age; (7) Lack of price priority; (8) Comfort priority; (9) Willingness to express one's personality; (10) Lack of material priority; and (11) Brand priority. Five different customers clusters were singled out applying the Cluster Analysis on the 11 Factors.

What emerged as a general finding was that the attention to materials and the awareness about the environmental impact of the fashion industry have a positive impact on the inclination toward the purchase of sustainable clothes for all the clusters. Other factors have larger impacts on specific clusters: for example, a good way to generate responsible consumption habits in the first cluster – represented by young customers – is to make sustainability become a style which people interested in fashion trends want to follow, something "important and cool"; on the contrary, this has no effect on the second cluster, encompassing customers who don't care about fashion trends but just wants to express their personality.

5.4 Coronavirus impact

In terms of impact that COVID-19 had on the strategies of companies and on the purchasing behaviours of consumers, answers collected showed that 63.6% of the textile companies claim the lockdown influenced their strategies, in terms of introduction of digital tools and online services. In a similar manner, 66% of brands were impacted by the pandemic, implementing and improving online sales. Furthermore, some of them exploit this situation to raise the awareness of the customers about sustainable and ethical issues and to improve the communication about their commitment. Others started to recover unused garments or to resell unsold clothing, two of them had to stop production and another one began to produce masks.

Impact of COVID-19 on customers seems to be age-dependent: 60% of respondents declared not to have changed their habits; yet the majority of those who changed is more than 50 years old. One possible explanation is that the Covid pandemic simply accelerated a digital and sustainable transition that was already taking place in younger generations.

6.Conclusions

Interesting findings were reached through the analysis. The majority of companies defining themselves close to sustainable principles, are actually working on the relationships within the supply chain, and monitoring and implementing internal activities to improve their environmental impact. On the other hand, companies performing less well, are lacking on the communication with the downstream part of the chain. Multi brand shops are not aware at all about the circularity of the products they sell, and the sustainable principles are not transmitted all the way to the consumers, whereas a greater awareness and better communication about the sustainable fashion would exploit the hidden interest of younger consumers about the topic.

In conclusion, we can say that sustainability is gaining more relevance every day. Some companies are already on the right path, giving the example, but a majority is not provided yet with all the tools needed to alter the purchasing habits. Companies need to focus on the communication downstream, to facilitate shopping of sustainable clothing and to educate the population about the urgent need of change.

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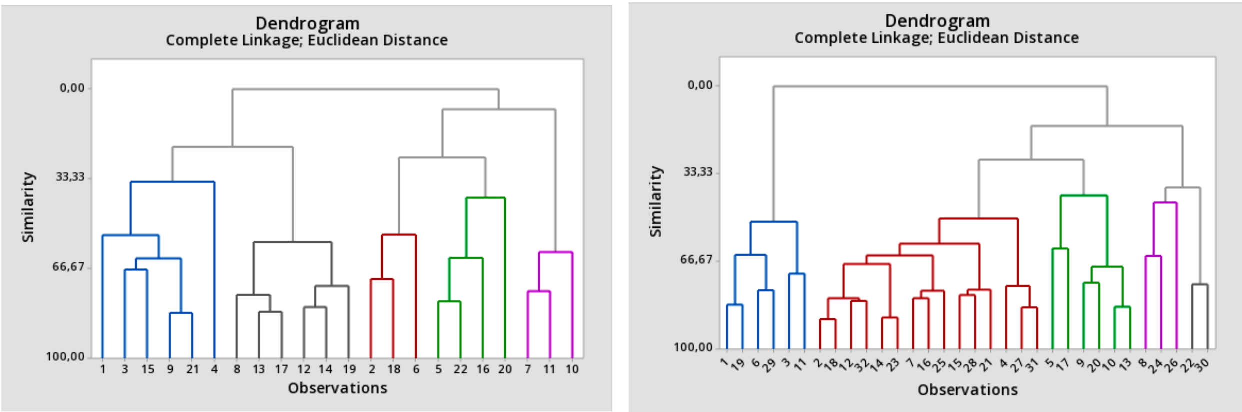

LEFT: Dendrogram for textile company (minimum acceptable similarity 34%) - RIGHT: Dendrogram for textile company (minimum acceptable similarity 41%)

Maturity assessment of textile companies clusters (LEFT) and brand owners clusters (RIGHT)