SADI Journal of Interdisciplinary Research
ISSN: 2837-1909| Impact Factor: 6.08
Volume. 10, Number 1; January-March, 2023;
Published By: Scientific and Academic Development Institute (SADI)
8933 Willis Ave Los Angeles, California
https://sadipub.com/Journals/index.php/SJIR/index|

FROM FAST FASHION TO CIRCULAR ECONOMY: ADDRESSING GREENWASHING AND ARTIFICIAL DEMAND CREATION

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Abstract: Fast fashion has transformed the fashion industry by creating an artificially high demand for clothing, leading to a take-make-waste approach that causes significant environmental harm. This paper examines the relationship between greenwashing, artificial demand creation, and the transition to a circular economy. Policymakers have a crucial role to play in incentivizing fast-fashion retailers to move towards a more sustainable and circular business model. This paper focuses on the European Commission, as a powerful political institution, to explore feasible solutions. The methodology involves analyzing and providing solutions from various fields, including law, economics, international business, global studies, and psychology. The introduction explains the rise of fast fashion and the negative environmental impact of its take-make-waste approach. Greenwashing is used to maintain artificially high demand and reduce consumer guilt, hindering the transition to a circular economy. The circular economy is proposed as a solution to this problem. The paper then identifies potential solutions that policymakers can adopt, including taxation, regulations, education, and consumer empowerment. The feasibility of each solution is assessed, highlighting the obstacles that may impede their implementation. This paper concludes that policymakers must take urgent action to address the problems caused by fast fashion, and that the transition to a circular economy is critical. The proposed solutions offer significant opportunities, but their implementation requires a coordinated effort by policymakers, businesses, and consumers. Addressing the issue of greenwashing and artificial demand creation in the fast-fashion industry is a vital step towards achieving a sustainable future.

Keywords: fast fashion, circular economy, greenwashing, artificial demand, sustainability, policy

INTRODUCTION

From Take-Make-Waste to Circular Economy: Tackling Greenwashing and Artificial Demand Creation in Fast Fashion

Before the rise of fast fashion, the fashion industry was punctuated by two seasons (Fall/Winter and Spring/Summer). Zara introduced the concept of "micro seasons" that were delivered every week of the year, for a total of 52 (Lohr, 2014). Subsequently, most fast-fashion retailers adopted this business model. With this shift from four to 52 seasons, the production and consumption of clothes have increased dramatically. Although the overarching principle defining the fast-fashion industry is to increase the speed of clothing production in order to satisfy market demand at its peak, this demand is likely to be artificially created by the sense of urgency consumers experience when purchasing from fast-fashion retailers (Niinimäki et al, 2020). The environmental impact of this drastic increase in the production and consumption of clothing is extremely negative. As consumers increasingly expect their favourite brands to act sustainably (Iglesias et al., 2017), artificial demand creation and its consequences are questioned. To avoid a reduction in sales, retailers use avoidance strategies like greenwashing to maintain the artificially created demand (source). By marketing

their products as environmentally friendly, fast-fashion retailers alleviate consumer guilt and hence encourage them to continue to over-consume clothes (Lee, 2021).

In contrast to the take-make-waste economy, currently dominating the fashion industry, the circular economy emerged as a potential solution to the environmental problems caused by fastfashion retailers (Chen et al., 2021). The intrinsic characteristics of the fast-fashion industry, a.o. artificial demand creation and greenwashing, significantly hinder the transition to a circular economy. Policymakers are the institutions most capable of initiating this transition. As these issues need to be tackled on the largest scale possible, this paper focuses on the European Commission which is a powerful political institution federating the different European countries around important issues such as ecology. Hence, the purpose of this paper is to investigate in what ways can policymakers incentivize fast-fashion retailers to abstain from artificial demand creation and green washing to initiate the transition to a truly circular economy?

In the upcoming section, this paper explains the methodology used to analyse the problem and its solutions. In the second part, the paper elaborates on the very specific concepts relevant to this research and how they relate to each other. Third, it identifies and describes potential solutions that policymakers can adopt. While these solutions present great opportunities, some obstacles might hinder their implementation. Therefore, in the fourth section, this paper assesses the feasibility of each of the solutions proposed. Finally, a conclusion provides a summary of the findings.

METHODOLOGY

This paper is mostly based on literature from academic journals and case law. However, we wanted to support the literature review with the opinions and insights from industry experts. To minimize the required effort, we reached out to parties that are involved in potential solutions to the problems we address. First, we interviewed Bert van Son, founder of MUD jeans, a sustainable clothing company focussed on jeans, on the 4th of April. Second, on the 11th of April, we spoke with Patrick Goodman, a managing partner of a company focused on impact finance (innpact). Over the next two weeks, we processed the gained information and made connections with our previous literary research. With this methodology, we were able to describe the problem, identify solutions, and analyse their feasibility.

PROBLEM DESCRIPTION AND THEORETICAL BACKGROUND

The Circular Economy

The circular economy is a concept devoted to minimising resource inputs, waste, emission, and energy leakage of products, using four distinct strategies: narrowing, slowing, closing and regenerating resource loops (Bocken et al., 2021). Narrowing resource loop, implies the usage of fewer resources per product. The slowing process focuses on the longevity of products and the reduction of overall consumption. Closing is done through post-consumer recycling and regenerating through the active improvement of natural ecosystems. Thereby, the approach contrasts the currently dominant linear ‘take, make, waste’ models of clothing production (Bocken et al., 2021).

The Myth of decoupling growth

Ecological modernists shape political debates by advocating for the possibility of continuous growth and environmental sustainability: Economic growth is decoupled from detrimental environmental impacts. Recent research, however, emphasizes the urgency to reduce consumption and growth in high-consumption countries as decoupling does not sufficiently reduce environmental pressure on ecological limits. While recycling (closing the loop) and the reduction of virgin materials (narrowing the loop) can have important impacts, the recycling processes for example still require a significant amount of energy and virgin raw materials. Therefore, it ultimately will be necessary to slow the loop decentring growth and consumption in wealthy countries (Parrique et al., 2019).

The fast fashion retailers

The textile industry is the second most polluting industry in the world and the fast fashion sector alone contributes to roughly 4% of global greenhouse-gas emissions. (McKinsey, 2020; Impakter, 2021). The supply

chain includes a range of negative environmental externalities such as high levels of water consumption, chemical pollution, exploitation of non-renewable and renewable virgin materials, high energy demands, pollution of soil and water, and increasing levels of waste (Bocken et al., 2021). However, since the fast-fashion industry is an oligopolistic market, the few but large retailers hold considerable power over their customers, they manage to manipulate and disempower consumers with marketing strategies (Xu, 2020). Given the growing awareness of their negative impacts, many fast-fashion retailers have started to adapt to more sustainable production processes and business plans (Khandual & Pradhan, 2019). However, with cases of green marketing increasing it is not transparent whether the negative externalities are being tackled or covered up. The subsequent sections address the cause and implications of increasing demand in fast-fashion and the use of green marketing to avoid negative attention.

Environmental justice prescribes that no population should hold a disproportionate share of negative environmental and social externalities resulting from industrial processes (Energy.Gov, 2022). Given that outsourcing production is cheap, multiple large companies engage in it for profit maximization (Russell, 2020). Currently, most European clothing is manufactured in South-East Asia. While per capita consumption ranks highest in Europe and the US, negative externalities in the production stage have detrimental consequences for countries and communities at sites of production (Common Objective, 2018). Wastewaters and chemicals, for example, lead to land degradation as the water is usually dumped into the surrounding areas, polluting soils and groundwater affecting health and agricultural outputs (Bick et al., 2018).

Further, the massive amounts of textile garbage that can be traced to the fast pace of changing fashion trends in the fast fashion model, are often dumped in Global South countries (Walsh, 2008). Annually, Europe exports millions of worn clothes to East Africa. While some of the clothes are burned or end up in landfills, polluting the area, clothes that are sold suppress the local textile industry as local tailors cannot compete with thrown-away clothes. Since the local textile sector decreased through imports, these countries have become dependent on imported clothes from Europe (Walsh, 2008).

Artificial Demand

Economy vs environment: How marketing and planned obsolescence fuel overconsumption Artificial demand is a rarely used concept in academia which describes demand that would not exist in the absence of the companies that created it. However, it has been addressed under different names. A fundamental problem with this concept is that it seems impossible to distinguish between "natural demand" and artificial demand. Herbert Marcuse was the first academic to address this issue in his 'false needs theory' in which he critiques the false needs imposed by corporations (Marcuse, 1970). This theory received a lot of criticism, and the issue of false needs is debated until today. It therefore makes sense that artificial demand, a concept based on false needs, is not widely accepted. Chomsky comes closest but uses a different name to describe the issue. In "Manufacturing Consent: The Political Economy of the Mass Media", a joint work with Edward S. Herman, Chomsky constructs a propaganda model that explains how corporate mass media is used to create propaganda and mislead consumers (Herman & Chomsky, 1988).

Patsiaouras (2015) supports these views and critiques how companies create a vicious cycle of novel desires by imposing false needs on individuals which in turn triggers a vicious cycle. On a societal perspective, this leads to excessive (or over-) consumption which can cause environmental damage due to high emissions and waste. Although many people are aware of this and show the intention to change their behaviour, they do not (source). There may be many factors (e.g., waste distancing) contributing to this intention-behaviour gap (source). Although there may be a lack of disciplinary power in affluent societies, the burden of reducing overconsumption should not be placed on individuals but rather on companies and policymakers (Nava, 1987).

Per se, consumerism plays a vital role in the economy. However, like most things, consumption becomes problematic when it is excessive. There is significant evidence that the current consumption levels in rich (Western) countries are excessive (Worldwatch Institute, 2004). (Arrow et al. 2004) shows that while some countries overconsume others cannot cover basic needs. Besides not improving the wellbeing or satisfaction of consumers and the abovementioned implications for inequality, overconsumption also has observable,

negative impacts on the amount of waste and the environment (Kasser & Kanner, 2004). In addition to the role of advertising and marketing as addressed by Chomsky, this paper analyses the potential played by planned obsolescence in the creation of artificial demand and driving overconsumption.

In research on both marketing and design practises, there are two-sided debates. While some researchers claim they fuel overconsumption, others reject this idea and see them as neutral tools that play an important role for the economy (Kjellberg, 2008). In the case of marketing, the former appears to outweigh the other, as there is a large body of research on how contemporary marketing is fuelling overconsumption by tempting consumers and thus creating artificially created demand (O'Shaughnessy & O'Shaughnessy, 2002; Abela, 2006).

Design can also play a crucial role in artificial demand creation. Products can be designed so they and their value to the consumer last for a long time or to induce a "premature" replacement to increase profits. This may be a tool to gain market share and drive innovation as some researchers claim (Blonigen et al., 2017, Fishman et al., 1993). However, such planned obsolescence can drastically increase the consumption of a product and the amount of waste this consumption leaves behind (Guiltinan, 2008; Satyro et al., 2018).

Artificial demand in fast fashion

The fast-fashion industry reflects the above-described relationship of marketing and planned obsolescence with overconsumption. Recall the fundamental principle of fast fashion: speed. Or rather the reduction of lead times to get products from design to consumer (Barnes & LeaGreenwood, 2006; Sull & Turconi, 2008). Sheridan et al (2006) and Barnes & Lea-Greenwood (2010) illustrate the importance of a consumer-centred marketing strategy to maximize responsiveness in fashion. In other words, fast fashion retailers need to create artificial demand to increase sales (and raise consumption).

Over the years the product life cycle of fashion trends reduced drastically, and the number of fashion seasons increased from 2 seasons to 52 micro seasons. To achieve this, apart from optimizing processes and marketing, fast fashion retailers utilize planned obsolescence (Abrahamson, 2011). Rather than making the product wear out faster, collections are weekly updated and heavily advertised in order to drive consumers to over consume and buy products they do not need nor want (Bocken et al., 2020). Grewal et al. (2004) compared "unforced", fashion driven replacement decisions to "forced" replacement decisions driven by poor physical performance and found that consumers are more motivated to act in the former. Packard (1960) states that planned obsolescence is especially unethical when a product is hard to replace which is not the case in fashion. However, while the ease of replacement in fashion may provide benefits for the individual consumer, it strengthens the impact on overconsumption and the environment, actively accelerating the consumption of new clothes, artificial demand is falling short of slowing the loop.

These influences of fast fashion retailers on overconsumption have not gone unnoticed. The levels of sustainability awareness among consumers are rising which increases the pressure asserted on fast fashion retailers (Papadopoulou et al., 2022). However, as they have done with their marketing and supply/distribution strategies, they adapt (Sheridan et al (2006). Fast fashion retailers use certain avoidance strategies to avoid change and keep the demand high (Yoon et al., 2020). The most obvious and perhaps most effective one is green washing.

Green marketing, greenwashing, and its effect on consumers

Consumers' increased interest in green products results in a higher demand for them (Hameed, 2021). Blesserholt (2021) shows that 66% of global consumers are willing to pay more for environmentally friendly products. Companies target this with so-called green marketing, which can be defined as 'the incorporation of environmental sustainability concerns into the brand and marketing communications' (Waites et al., 2020). Green marketing is known to have direct and indirect effects on consumers' purchase intention. They exhibit a higher green purchase intention when companies engage in green marketing (Waites et al. 2020). Green promotion and green branding as sub-themes of green marketing positively affect green purchase attitude (Sharma, 2021). Generally, attitude is the judgement one has of a product and services (Ajzen, 1991), and it

has been identified as a significant predictor of purchase intention in the context of green purchases (Graessley et al., 2019).

In the case of greenwashing, these positive effects on purchase intention are exploited. In general, greenwashing can be defined as "poor environmental performance and positive communication about environmental performance" (Delmas & Burbano, 2011). By marketing their products as environmentally friendly, fast-fashion retailers alleviate consumer guilt and hence encourage them to continue to over-consume clothes. Retailer's sustainable collections positively influence purchase intention, as well as factors like organisational legitimacy, corporate social responsibility perception and brand trust (Miotto & Seoumni, 2020). However, they often only focus on a narrow aspect of sustainability within their product that they promote in order to appeal to sustainability-conscious consumers even though the full environmental impact remains negative (Lee, 2021). For example, in 2020 H&M developed a 'conscious collection' which was mainly centred around the use of sustainable cotton. However, they received a backlash from media, scholars and consumers when the Norwegian Consumer Authority pointed out the unsustainability of this collection. It was characterised by the use of elastane, a non-biodegradable and toxic material, in different products, significantly reducing the benefits of using sustainable cotton (Myklebost, 2020) (Lee, 2021). In sum, to meet these new requirements of sustainability-conscious consumers, retailers are incentivized to engage in greenwashing.

Greenwashing and the Circular Economy

Greenwashing actively hinders sustainable, circular consumption and encourages environmentally detrimental production practices. It actively misleads consumers who are dependent on reliable information to make sustainable decisions. Consumers that are willing and able to support ethical and circular business practices are disempowered by limited and untrustworthy product information. Consumer agency is therefore restricted, and the tool of ethical consumerism is paralysed. Further, greenwashing does not provide circular and businesses and companies with due advantage and conversely, relentlessly diminish their genuine effort towards the achievement of a truly circular economy (European Commission, 2022). It ultimately leads to a less green economy, encouraging the maintenance of the status quo instead of the transition to models that encourage slowing, narrowing, closing, and regenerating the circle.

Additionally, greenwashing promotes a discourse that encourages consumption as long as it is "green". Thereby, it diverts attention from the necessity of reducing overall consumption and production (Parrique et al., 2019). Depicting current levels of consumption as compatible with the circular economy model induces overconsumption and production patterns similar to the effects of artificial demand.

There is a positive relationship between greenwashing by the unsustainable companies creating artificial demand, which cultivates the consumption rates and the degradation of the natural sources. Consequently, as the natural sources decline, negative societal impacts at local, regional, and global level emerge.

Solutions This part of the paper will consider two approaches: 'Negative' and 'Positive' reinforcement. Negative reinforcement means the prohibition not to perform a certain conduct. On the other hand, positive reinforcement implies an obligation to perform an act.

Negative Reinforcement: *Advertisement bans*

Taking into consideration the given situation in relation to the artificial demand creation through advertisement, and the impact of unwillingness demonstrated by the unsustainable companies on the greener entities, one might wonder to what extent the policymakers can intervene. This section will first examine the solutions at the national level and analyse what can be done at the EU level. Hence, the policymakers will be the Union institutions in that regard.

Recently, some national systems have taken initiative to better regulate the sustainable argument in advertising, mainly in the field of consumer law. In France, article L.121-2 of the consumer code considers fake allegations, including on environmental performances, as misleading commercial practice. This is punished with a fine of a maximum of 80% of the expenses incurred for the advertisement (art. L. 132-2

French consumer code). In addition, as of 2021, codes of conducts must be put into place within two years to guide the companies (Légifrance, 2021; Cossardeaux, 2021). This combination of codes of conduct and general prohibition on misleading commercial practice is also used in the United Kingdom (CMA guidance on making environmental claims on goods and services, 2021).

The EU could inspire from those flourishing initiatives in order to implement some regulation at a regional level. However, some shortcomings in the national solutions deserve attention. The main criticisms on those systems are twofold. First, there is no actual legal definition of what is sustainable and what is not which leads to legal uncertainty. To illustrate this, the CMA guidance states that it is not exhaustive and does not substitute the law. The Courts might thus decide that a case following the guidelines constitutes misleading advertisement or the contrary. Second, the enforcement methods should be strengthened. For example, in the *Ryanair* greenwashing case, the problematic publicity was just banned with no further consequences (Sweney, 2020). More severe and logical penalties such as fines destined to a sustainability fund might be more adequate. Those imperfections are probably linked to the fact that those instruments are pretty recent. Nevertheless, they should be improved in order to have a sound solution.

This part of the research paper focuses on the matter at the EU level, given that the internal market (Art. 26(2) TFEU) ensures the abolition of trade barriers, allowing free circulation of products, an action not only in the national but at the regional level is essential. The internal market assures the freedom of movement of goods within the EU as it abolishes internal frontiers between the Member States (Art. 26(2) TFEU). Advertisement is the fundamental part of freedom movement of goods as without it, amplification of business growth cannot be observed, and the sale of goods would be minimised.

Restriction on artificial demand as a result of the advertisement strategies, using green indications in a misleading manner might require the detailed examination of competences enjoyed by the EU. According to Art. 114(1) TFEU, the European Parliament and the Council retains the competence to achieve objectives of internal market, and it can harmonise the national laws of the Member States. Nevertheless, this competence is not without boundaries as established in the so-called the Tobacco Advertisement case (*Germany v Parliament and the Council*, 2006). In this case, Germany challenged the legitimacy of the European Directive (*Banning cross-border advertising and sponsorship*, Directive 2003/33/EC) that banned advertising and sponsorship of tobacco products. The Court of Justice indicated the criterion of elimination of likely future obstacles to competition and freedom of movement must be from the internal market among the other set of criteria, and annulled the Directive (*Banning crossborder advertising and sponsorship*, Directive 2003/33/EC). Although there have been other attempts by the national law to regulate tobacco advertising, this power was not recognized for the EU in this context.

If this outcome is applied by analogy to advertisements leading to artificial demand, it appears that the EU cannot ban/fine such advertisements to lower the consumption rate, which could reduce overproduction and as a result the degradation of natural resources. Nevertheless, one can still change its perspective and assert that if a ban is not imposed by the EU, it sets a future obstacle for the greener businesses to enjoy the freedom of movement as a result of the distortion of competition. Hence, the solutions under the French and UK jurisdictions might be implemented at the EU level. As a part of the solution, the EU can prohibit the use of deceiving images such as leaves or flowers and penalise falsified use of them for advertising purposes.

Positive Reinforcement: Transparency

Corporation-centred solutions

In addition, there are other strategies that the EU can pursue for the demolition of artificial demand creation. Transparency as a topic is a must towards this goal (Patrick Goodman). As yet, the Commission adopted the new circular economy action plan on 30 March 2022 (European Commission, 2022). It constitutes one of the essential components of the European Green Deal, a new agenda for sustainable growth. (European Commission, 2022). Being a part of this package, the European Commission proposed ‘Ecodesign for

Sustainable Products Regulation' (European Commission, 2022), where the large companies are required to publicly disclose the number of products and the textiles alone that are destroyed by them.

Nevertheless, the disclosed numbers alone may not be raising awareness for the consumers, who may not acknowledge the importance of the ratio of numbers to the size of the company, and other strategies of transparency retain their utmost relevance. These other strategies include the management of funds and investment (Patrick Goodman, personal communication, April 11th, 2022).

In this regard, the Shared Management of EU Funds under Regulation 2020/2092 (*Regulation of the European Parliament on a general regime of conditionality for the protection of the Union budget*, Regulation 2020/2092), and the transparency requirements for the incorporation of companies and or their branches under Directive 2017/1132 (*Directive of the European Parliament and of the Council relating to certain aspects of company law,* Directive 2017/1132) must be considered. The EU can amend the Regulation 2020/2092 (*Regulation of the European Parliament on a general regime of conditionality for the protection of the Union budget*, Regulation 2020/2092) to require, particularly, for these entities to reveal their ecological footprint publicly (Patrick Goodman, personal connection, April 11th, 2022).

This will allow the individuals to track both the carbon footprint of the establishments and reduce customer disempowerment. This method would be functional as some greenwashing methods such as environmental images or the number of trees planted by a company would not be as effective on the consumers who can compare the environmental damage to the "environmental goods" that are exhibited by the incorporations. Subsequently, the consumers having a new perception of entities falsely claiming to be sustainable would be less likely to buy fashion items. Accordingly, given that the demand is lowered, such behaviour would reflect to the fast-fashion companies to firstly change their strategy so as not to seem sustainable by inaccurate or incomplete information but by reducing their carbon emission under the pressure of being scrutinised by the public.

The same ideology could be applied to the constitution of the companies in Directive 2017/1132(*Directive of the European Parliament and of the Council relating to certain aspects of company law,* Directive 2017/1132). Art. 3 of the Directive (*Directive of the European Parliament and of the Council relating to certain aspects of company law,* Directive 2017/1132) sets out requirements with respect to some information to be included in the statutes or the instrument of incorporation, for instance, the memorandum of the entity. These criteria include essential elements of a company for its constitution and in case an undertaking fails to comply with it, according to Art. 11 of the Directive (*Directive of the European Parliament and of the Council relating to certain aspects of company law,* Directive 2017/1132), the national courts of a Member State may order the nullity of a company, where nullity implies that the corporation is treated in the sense that it has never existed. The criteria under Art. 3 of the Directive (*Directive of the European Parliament and of the Council relating to certain aspects of company law,* Directive 2017/1132) does not include the estimated amount of ecological footprint by which the corporation binds itself not to exceed as a prerequisite to be included in the statutes of association of the corporation. Amendment of the Directive (*Directive of the European Parliament and of the Council relating to certain aspects of company law,* Directive 2017/1132) might be favourable.

Additionally, there must be more specific criteria as to what makes a company sustainable (Patrick Goodman, personal connection, 11th of April 2022). Until now, the Commission has adopted proposals to revise the EU measures to address the pollution from large industrial institutions, where the aim is to progress towards the zero-pollution ambition of the EU for a toxic environment and to support climate change (European Commission, 2022). However, to have a consensus regarding the scientific classification of an "environmentally friendly" production process, there must be a concrete strategy. Not only to dispose of the actual functioning of the companies and transparency, but also how the outcome of this transparency, namely the revealed information, could be processed. This is highly dependent on the impartial research and the number of scholars that are also educated on environmental studies, regardless of their area of study. In this regard, because the quantity of intellectuals rises, the objectivity in the area might be assured given that there would be more research and peer review.

To achieve this, Jean Monnet networks (European Commission, 2022), an action commenced by the Commission in 1989 to enhance excellence in teaching and research, might be a means toward this goal. Since 1989, approximately nine hundred thousand university teachers and roughly a thousand universities in hundred countries have received financial support. As a solution, the Jean Monnet network can have special biannual applications for its funds only for research in sustainability, particularly, the correlation between corporations and the circular economy.

Product-centred solutions

Kim et al. (2016) argue that knowledge is a crucial factor in empowering the consumer in their green purchase behaviour, which includes the identification and selection of the most adequate green consumption option. Thus, it is important to provide the consumer with information about what the problem is, how to solve it and how they can act to participate in the solution (Kim et al. 2016). However, greenwashing undermines this. When faced with green advertising, consumers have difficulty distinguishing between acceptable and deceptive claims. This delegitimizes sincere green advertising made by sustainable companies and hinders efforts of the consumer to make an informed purchase decision and select the best green consumption alternative (Fernandes et al. 2020). This impediment has further negative consequences, like being sceptical or distrusting of, or not believing in green advertising (Cho et al. 2018; do Paco & Reis 2012; Obermiller & Spangenberg 1998). Therefore, it is also important to provide the consumer with means to evaluate the true environmental impact of a product, i.e. reduce greenwashing.

At the time being, there is no legal obligation to disclose environmental impact information of a product to the consumer. This task was taken over by the media and NGOs warning the consumers about greenwashing cases (Delmas & Burbano, 2011). This is complemented by consumers taking the matter into their own hands by creating blogs, websites and Facebook groups to share this information. This shows their willingness to have more information over the products' environmental impact (Chaabane et al., 2010). However, companies like MUD jeans demand policymakers to implement laws that create a level playing field by making transparency obligatory, or laws that inhibit greenwashing (MUD jeans, personal connection, April 4th, 2022).

The psychology behind eco-labels

One way of providing the consumer with information about the environmental impact of a product is using eco-labels, a mechanism already used by several brands today. In general, ecolabels or sustainable labels can be defined as information provided about the environmental impact of a product, at the point of purchase, with the aim to enable the consumer to make an acceptable and informed decision from a sustainable perspective (Thøgersen, 2010). Furthermore, eco-labels can enhance transparency and consumer trust in companies' green claims (Iraldo et al., 2005; Thøgersen, 2002). During the interview, MUD jeans agreed that ECO-labels are one possible solution to the problem of greenwashing or lack of transparency (MUD jeans, personal connection, April 4th, 2022).

Eco-labels also have various marketing benefits. They create a more positive perception of the product (Khachatryan et al., 2021), and a higher willingness to pay more to obtain the product (Khachatryan et al., 2021). For products like sustainable food, eco-labels in different forms can promote the selection, purchase, and consumption of more sustainable food products (Potter et al., 2021). However, sustainability labels for products in the fashion industry, like textile and apparel products, are not as successful as labels in other industries, such as organic food (Aspers, 2008). In a quantitative analysis of focus groups, Brouwer (2016) found that consumers perceived labels to be very effective as a means of persuasion. Moreover, consumers felt that "being made aware was important to their overall decision-making process" (Brouwer, 2016). Some quantitative evidence suggests that when consumers used sustainability labels on apparel products it was associated with an increase in attitude and purchase intentions, among other factors (Ma et al., 2017). Hangtags specifically were shown to create a more positive attitude towards the brand, which in turn predicts purchase intention (Karen et al., 2012).

As of today, those labels do not give a clear overview of the environmental impact of the product for several reasons. First, they only focus on one aspect of the circle of life of a product and, thus, only show one part of the whole picture. Second, because of the first point, those certifications are numerous which makes them confusing (Sabinet & Fouss, 2022). Third, there is little information over the compliance of the producer with the criteria of the labels and what those criteria are themselves. All of this is partly due to the quasi-non-involvement of the state in this sector. The latter could regulate some clear requirements for labels which would in turn decrease their number and make them more comprehensible (van Amstel et al., 2006).

The Eco-score

A very concrete proposition in trying to address these loopholes in the current eco-certification system would be a mandatory eco-score system. An optional version of this instrument was developed and is accessible on different apps (Yuka, Scan-up). It necessitates the producer or the retailers of the product to voluntarily make the information available to those apps Currently, it is mainly used in the food sector. The eco-score classifies a product on a scale from A, being the least negatively impactful on the environment, to E, the most negatively impactful. This score is calculated in two steps. First, it is graded out of one hundred via the Agribalyse program, considering factors relating to its whole circle of life and based on the PEF method developed by the EU. The second step consists in adding bonuses or maluses corresponding to parameters not included in the life cycle such as the recyclability of the package, for example (Willocx, 2021).

Our proposed solution would be to oblige each retailer to furnish the required information for the calculation of this score and add it to the packaging, or tag, of each product. This would allow the consumer to have a clear and synthetic view of the impact of the piece of cloth they are willing to buy. It could also allow them to easily compare the products (Willocx, 2021). This method is already used in the food industry with the nutri-score. Moreover, as a part of the new French law on fighting waste and implementing a circular economy, a similar rating pictogram will be used on an experimental basis potentially leading to a public initiative (CLF industry's federations, 2021)

It is in this spirit that a group of EU students launched 'the Eco-score European Citizen Initiative' with the purpose to render this instrument mandatory all over the EU. A European Citizen initiative is a mechanism by which a group of EU citizens can propose projects requiring EU's action. This takes the form of a petition that must be signed by at least one million EU citizens over several Member States in one year. If this is achieved, the representatives of this initiative will be invited to present their project at a hearing in front of the EU commission. The latter might then take it into account in future proposals (Regulation 211/2011). This precise initiative is in perfect timing with the Green deal, which could be an adequate framework for its implementation.

Due diligence supply chain law

While transparency legislation can lead to increased consumer empowerment, it does not work effectively alone. Corporations can comply with transparency legislation without altering the commercial practices that lead to environmental injustice and exploitation. Further, sanctions for non-compliance and remedies for victims of environmental injustices are lacking (Re:Structure Lab. et al., 2021). As a way of going further, the accountability of lead companies can be assured through the due diligence supply chain law.

Especially, fashion supply chains are characterised by their complex links across diverse countries, reducing visibility and control over a company's supply chain (OECD, 2022). Mandatory due diligence legislation requires companies to address adverse environmental and human rights impacts, linked to their entire global supply chains. This is combined with sanctions, civil liability, and supervision by a public oversight body (Re:Structure Lab. et al., 2021). European companies, as well as companies operating on the EU market, would only be allowed to import clothing goods produced in companies with the contractual obligation to abide by the environmental and human rights standards throughout every step of their supply chain. If non-compliant, lead firms can be held legally accountable even if subcontracting. This seals a loophole companies utilized in the past, when claiming that what happens in their subcontracted factories is not their responsibility,

but instead that of the factory owners (M. Taplin, 2014). Additionally, companies would have to disclose their environmental impacts in a standardized manner and publish them on a centralized platform (SER, 2021). The law has the potential to combat greenwashing as well as artificial demand through the enhancement of circular economy principles along all steps of the value chain and mandatory standardized reporting.

Currently, there are different legislative models in Europe. The French model (Loi de Vigilance) applies to companies with more than 5000 employees (SER, 2021. Since 2019)

These companies have been required to publish "vigilance plans". The plans must include not only a mapping of potential environmental and human rights violation risks but also preventive actions (Pollet, 2022). The German model (Lieferkettengesetz) applies to companies with more than 3000 employees from 2023 and more than 1000 employees from 2024. The federal office for economic affairs and export control will be in charge of supervision and enforcement (SER, 2021).

While Germany, France and the Netherlands have adopted differing models of the law, an EU law would be more effective: As a huge market, the EU would have the power to hold foreign companies doing business within the EU accountable and ensure liability before EU courts (European Comission, 2020). The European Union is currently drafting a Directive on Corporate Due Diligence and Corporate Accountability. The effectiveness of the law, however, will also depend on specific design features of the final directive.

Feasibility of the considered solutions Advertisements bans

As previously mentioned, the EU may use its competence to regulate misleading advertisement strategies. Indeed, those ads cause misperception to the consumers using deceiving images such as leaves or flowers. This would be an inspiration from the French and the British jurisdictions. Nevertheless, in the Tobacco Advertising Case (*Germany v Parliament and the Council*, 2006), the Court created a stringent criterion in order to ban those advertisements completely. There must be a disruption to competition in case the EU does not act. It is thus arguable what the approach of the Court could look like in the present case. A way around this would be for the European judges to consider greenwashing as disruption to competition. Another option for the EU is its consumer protection competence under Art. 4(2)(f) TFEU. It could use this competence to impose certain packaging requirements under its consumer protection power. However, there is still a question mark about if certain corporations could also find a way to circumvent it. Therefore, the EU should also take that into consideration and make its regulation as definite as possible.

On the other hand, Art. 3 of Directive 2017/1132 (*Directive of the European Parliament and of the Council relating to certain aspects of company law*, Directive 2017/1132) with respect to the requirement on the current corporations to disclose their estimated ecological footprint might raise some questions as to its practicability. Given that major corporations are already established, this requirement would not be effective for them. However, under Art. 29 of Directive 2017/1132(*Directive of the European Parliament and of the Council relating to certain aspects of company law*, Directive 2017/1132), the disclosure requirements are also imposed on the branches that a corporation itself opens. Therefore, Art. 29 of Directive 2017/1132(*Directive of the European Parliament and of the Council relating to certain aspects of company law*, Directive 2017/1132) compensates for this limitation and can still be useful. On the other hand, the Shared Management of EU Funds under Regulation 2020/2092 (*Regulation of the European Parliament on a general regime of conditionality for the protection of the Union budget*, Regulation 2020/2092) and disclosure of the ecological footprint of the companies seem more feasible. Furthermore, the use of Jeanne Monnet networks (European Commission, 2022) is more achievable as it is an already-existing mechanism, which can have a special focus to support scholars toward research on sustainability and circular economy.

Information-based policy instruments: The Eco-score

As mentioned above, the ecoscore could solve some of the shortcomings of the current eco labelling system. However, in implementing this solution, some important points must be kept in mind. First, the method of calculation used could be improved, on the scientific side, concerning the accuracy of certain factors such as fertiliser treatment and, on the consumer side, concerning the transparency and comprehensibility of the

method (Montemayor et al., 2022). Second, although the green deal gives the perfect opportunity for an implementation at an EU level, this might not be the easiest task to accomplish. Taking the example of regulation of the existing EU Ecolabel, it only made it a voluntary instrument. However, at the time, this part of EU law was only decided by the Council made of ministers of Member States, protecting their own interest. Now, this is a shared process between the European parliament, acting for EU interest, and the Council. Third, if the ecoscore were to be mandatory, a strong enforcement mechanism would have to be put in place to ensure the correct information is disclosed by the retailers. Otherwise, this might undermine the whole concept of transparency and trust from the consumer. Finally, there might be some concerns as to the privacy of those retailers, although those allegations could be easily dismissed for the public interest. Concerning the European Citizenship Initiative, it is a great way to (add advantages). However, the commission has no obligation to take action upon a successful initiative although, as the ECJ mentioned in the *One of US* judgement, it is a great way to engage a discussion on policy with the institutions (Hiry, 2020)

Due diligence supply chain law

The effectiveness of the final due diligence law directive depends on institutional design features and enforcement measures that still need to be defined: Scope of concrete obligations for companies, monitoring and data gathering, and legal liability.While civil society actors, leftist, and green parties have supported more comprehensive and stringent regulation, business actors, conservative and liberal parties have pushed for less stringency and enforceability, arguing that the law would disadvantage European companies in international competition and impose a burden of non-proportional regulation, and bureaucracy (Schilling-Vacaflor & Lenschow, 2021). In the process of political compromise and lobbying, the law might be weakened, leading to lower effectiveness through reduced regulation (Bauer, 2014):

The scope of future regulations regarding commodities that will be included and thresholds for company staff and turnover subjected to the new regulations still need to be specified (SchillingVacaflor & Lenschow, 2021). The German law limits the responsibility of companies to the first tier in the supply chain, even though the majority of human rights violations take place at the beginning of supply chains, i.e. in the area of subcontractors (Initiative Lieferkettengesetz, 2022). Further, the number of companies included is too small. Instead of including small and medium-sized enterprises in high-impact sectors, only companies with more than 3,000 employees are affected. Staff size is, however, no reliable indicators of how a company is impacting the environment and communities worldwide (Saller, 2022). Therefore, effective due diligence legislation on the European level must ensure that due diligence is applied to all steps of the supply chain, not only including first-tier suppliers, and small and medium enterprises, need to be included.

Another hindrance in terms of feasibility is the scarcity of current data collection. Data about the loss of access of local communities and family farmers to land, water, and livelihoods have been scarce. Therefore, efforts to produce data on environmental and social impacts that have not yet been rigorously assessed need to be increased (Schilling-Vacaflor & Lenschow, 2021). Further, effectiveness depends on the existence of adequate state monitoring and sanctions for non-compliance. Authorities often lack the necessary human and financial resources, political will and knowledge on supply chains to allow for rigorous state monitoring systems (SchillingVacaflor & Lenschow, 2021). The negotiations at the EU and member state level for securing a budget to build up enhanced monitoring capacities will likely be difficult. Building adequate institutional structures for monitoring the extraterritorial impacts of companies headquartered or working in Europe is essential however, as current self-reporting of private actors through CSR led to, for instance, greenwashing and misleading claims towards customers as a consequence of non-monitored self-reporting (Bauer, 2014).

CONCLUSION

The adoption of greenwashing by the fast-fashion industry is likely to play a negative role in the transition to a truly circular economy through the disempowerment of consumers. Fastfashion retailers use greenwashing to maintain their artificially created demand in times of increasingly aware costumers, but they are under the radar of critics, policymakers and consumers now. Through greenwashing, fast fashion retailers support an

ever-growing unsustainable consumption which is disproportionately affecting people in the global south and especially south-east Asia through negative environmental externalities

Therefore, we investigated different policy implementation strategies to combat artificial demand and greenwashing, and scrutinized their effectiveness as well as feasibility and implementation on an EU level. Recent changes by national systems and the European Commission are increasing in popularity as an attempt to limit the freedom with which fastfashion retailers can promote or produce their output. The main challenge that persists is to exactly define which materials and production methods are indeed sustainable, in order to punish greenwashing retailers. The EU still has very limited power when it comes to banning presumably greenwashing advertisements. A more positive action would be to encourage transparency among retailers. The recent adoption of the European Green Deal shows the efforts in requiring retailers to disclose sustainable metrics. A mandatory adoption of eco-labels in the industry is expected to reduce asymmetric information issues. Going further, a strongly regulated due diligence directive would induce not only transparency but also the accountability of powerful fast-fashion lead firms of their global subcontractors and their environmental and social impacts. Although a sustainable fashion industry still appears to be a distant goal, the efforts made by several stakeholders are giving hopeful signs. Consumers are coming up with European Citizen Initiatives to propose green policies; policymakers are tightening several production laws and certain retailers are turning to greener materials.

Limitations and future research

The paper makes use of knowledge coming from different disciplines in several ways. While it is interdisciplinary research, certain parts require larger contributions from specific disciplines in order to ensure coherency and readability. Throughout the paper economics and psychology set the ground to the discussion and describe the problems analysed; law introduces the solutions. Nevertheless, every part enjoys a great level of contribution from every discipline as our objective is to provide interdisciplinary research on the topic. The limitations of the paper can be the starting point of future research. For instance, we did not find fit the inclusion of elaborate business perspectives in our analysis of the solutions. Companies might react differently to the solutions proposed and would be hard to adapt for most of them. However, an in-depth analysis of future economic dynamics in the transition process is beyond the scope of this paper.

The same reasoning can be applied to the psychological perspective of the proposed solutions. Consumers will most certainly react in different ways and a prediction of these reactions might turn out to be mere speculation. Moreover, countless papers already extensively analyse some of the behavioural challenges pointed out in this paper, such as the intention-behaviour gap.

Finally, knowledge deriving from global studies has its impact throughout the whole paper. Global supply chains might experience outstanding changes if the proposed solutions were to be adopted. Yet again, this is beyond the scope of our paper as it is entirely focused on EU actors.

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