RESEARCH BRIEFING

Research input for policy development based on understanding of clothing consumption

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The EU Commission's 2030 vision for textiles says "*Fast fashion is out of fashion"*. This ambition sets out a much-needed agenda for change within the EU, as well as in the global fashion and textile industry. Consumer research that provides information about the actual use of clothing and textiles is a topic that has not been adequately taken into account in sustainable textile strategies and policies worldwide. At the same time, the use phase is crucial as keeping a garment in use (wears and years) for a long period of time substantially reduces the environmental impact per wear (Klepp et al., 2020; Watson & Wiedemann, 2019). Hence, the issue of fabric and clothing use is of crucial importance, especially if the environmental impact of textiles is to be significantly reduced, as set out in the EU Textile Strategy.

Introduction

This briefing paper builds on research and evidence from Consumption Research Norway's (SIFO)[2] 75 years of consumer research on clothing and the ongoing projects CHANGE[3], Lasting[4] and Wasted Textiles[5], addressing the problem of overproduction of textiles (Clothing Research, 2023). It draws attention to the importance of incorporating the latest consumer research in the design of Extended Producer Responsibility (EPR) and other textile policies currently being developed in the EU. It is written by a diverse group of academics and practitioners who are seeking to support change in the sector.

In a previous paper by SIFO, Critical Review on Product Environmental Footprint (PEF)[6], it was discussed how fast fashion could not have been possible without the rise of textiles made from fibres derived from petrochemical feedstocks (plastic) and the favouring of plastics in the PEF scheme and other LCA-based tools (Klepp et al., 2023). In this paper, we explore state-of-the-art research to regulate the scale of the sector and, in particular, to target the fast fashion business model based on

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[4] https://www.oslomet.no/en/research/research-projects/lasting
[5] https://www.oslomet.no/en/research/research-projects/wasted-textiles
[6] https://clothingresearch.oslomet.no/2023/02/07/new-critical-background-paper-on-pef-for-apparel-and-footwear/

high volume and cheap fossil-based materials to reduce scale. The paper suggests how current EU policy could be adapted to address quantities and the entire production system, and not only deal with individual products, design, and durability. The importance of this perspective is strengthened through the recent amendments proposed by the European Parliament Committee on the Environment, Public Health and Food Safety, stating that: "One core problem is overconsumption and overproduction. A holistic strategy for sustainable textiles can only be genuine, if we reduce the absolute quantity of natural resources used and at the same time reduce the quantity of waste" (Burkhardt, 2022).

Finally, the briefing paper explains the background for the proposal of Targeted Producer Responsibility (TPR)[7] and clarifies the importance of TPR in achieving the objectives of the EU Textile Strategy. TPR is a proposal to address the problems of overproduction and fast fashion by establishing principles for producer responsibility. TPR takes into account the use phase of products (i.e. how long and how much the products have been used) and how the use phase can be effectively integrated into eco-modulation fees based on data from waste analyses (Klepp et al., 2022). TPR takes into account the quantity and age of textiles in the waste stream and the costs of textile waste recovery according to the EU waste hierarchy. This means that the fee will be differentiated based on product's reuse value on the second-hand market, and/or as a material value in recycling streams. The TPR concept contributes to the collection of knowledge and data on the use and durability of products, and can therefore also have a positive impact on other policy measures, such as the Product Environmental Footprint (PEF), the Ecodesign Directive and the EU Ecolabel.

Conflation of durability and quantity

We see a trend in various policy discussions and documents based on the belief that making garments more durable will reduce the quantity of clothing produced. Scientific research does not provide evidence for this. In the following section we will seek to explain why the statement in the EU Textile Strategy: "(e)xtending the life of textile products is the most effective way of significantly reducing their impact on the climate and the environment" is inaccurate. We therefore stress that clothing environmental policy should go beyond the performance of individual products and expand the focus on reducing production volumes if the environmental impacts of the textile sector are to be reduced.

Replacement

Design strategies with the aim of motivating consumers to keep their clothes for longer, such as designing for emotional attachment, or for repair, assume that by prolonging the useful life of a garment will result in the delay of the purchase of a replacement garment. Yet, while it is certainly technically possible to design long lasting garments, specifying robust fabric, durable seam construction and generous seam allowances, etc.; research shows that product replacement drives only a minority of clothing purchase decisions (Maldini & Balkenende, 2017). Most garments are bought independently of what is already owned. In a study mapping all garments coming in and out of 25 Dutch wardrobes during 6 months, Maldini (2019) found that only 4% (12 of 312) of garments documented were bought, or knitted or sewn, to replace unsatisfactory items. On the other hand, occasional opportunities such as sales and items found while looking for other garments, were a

[7] https://uni.oslomet.no/klesforskning/2022/10/24/how-to-make-sure-extended-producer-responsibility-becomes-a-silver-bullet/

main driver, accounting for 89 of the pieces acquired (28%). This is clear evidence that longer-lasting products do not influence purchases significantly.

Further, durability strategies assume that wardrobe flows are driven by “pull” forces, that people buy garments based on need, when the items in their wardrobe are not delivering. However, we also see the influence of “push” forces in the wardrobe: excessive availability of garments, low prices, and aggressive marketing drive garments into wardrobes, leading to accumulation and periodic cleanouts (Maldini & Stappers, 2019; Maldini et al. 2019). In this context, the potential of product durability to reduce overall demand, and therefore production volumes, needs to be questioned. This finding is also supported by other clothing consumption studies which show that only a third of what is disposed of is worn out (Klepp, Sigaard et al., 2022; Laitala & Klepp, 2022). This happens more often in specific garment types such as socks (Klepp, 2001; Laitala & Klepp, 2020).

Repair

The EU Textile Strategy envisions that by 2030 all textile products placed on the EU market will be durable, repairable and recyclable. In general, clothes are already, with very few exceptions, repairable. When clothes are not repaired, it is because it is cheaper and more convenient to buy new (Laitala et al., 2021). It is possible to regulate the market for "non-repairable clothing", which in practice is clothing with non-removable or integrated elements or materials with a limited lifespan (electronics, elastane, etc., that break down before the main material) (Wetterberg et al., 2022). However, forbidding these to enter the market will create new problems. Elastane for example, gives jeans, swimwear and underwear a better fit, and therefore has desired effects that can be hard to argue against, especially because bad fit is as important as wear and tear for the discarding of clothes (Laitala & Klepp, 2022). This example illustrates that the repairability of textiles is difficult to regulate in detail.

If the goal is to increase the number of repairs, there are elements other than product improvements that play an important role for repairs to be more common. These are the prices and quantities of new clothes sold, but also consumer rights, product guarantees, supportive VAT measures, marketing and the level of clothing care, and repairing skills and knowledge in the population. Most repairs are done by consumers themselves and therefore empowering them will be effectful (Laitala et al., 2021). Better knowledge on clothing will also make consumers more able to make informed choices in the market.

Instead of interfering on as detailed a level as is currently proposed, for example by PEF and other measures, it is possible to use a TPR eco-modulation fee, based on the actual durability, which is the actual use of the product and the cost of reuse/recycling. In this instance, a product that brands or consumers, for various reasons repair, and as a result of this or for other reasons, the consumer keeps in use, will be rewarded. It will thus become costly to produce clothes nobody wants or that are only wanted for a short period.

Sharing and reuse

Another approach to extend the useful life of garments is increasing shared use and reuse. However, this approach may not ensure substantial reductions in production either, because the displacement of new product-demand by reused items has limitations. Laitala and Klepp (2021) found that second-hand clothes are used 30% less than new clothes. Estimations of the replacement rate of clothing reuse (the quantity of new purchases that are avoided by recirculation of used garments) range from 28.5% to 85% (Farrant et al., 2010; Fisher et al., 2011; Nørup et al., 2019; Stevenson & Gmitrowicz, 2012). We expect the replacement rate to be higher for some garment types, like wedding dresses,

and lower for others, like T-shirts, but no studies examining the replacement rates of different garment types have been conducted.

The above-mentioned studies of clothing reuse focus on traditional post-consumer textile trade, based on charity shops and street markets in the world. The contribution of new business models for take-back, reuse, re-commerce, shared use etc. is a relatively new field of research (Kant Hvass, 2016; Kant Hvass & Pedersen, 2019; Salmi & Kaipia, 2022), and therefore more in-depth knowledge is needed to accurately assess the environmental impact of reuse and product substitution for different consumer groups and garment types.

The various technical and aesthetic improvements, as well as business models that contribute to sharing, repair, etc., will have no desired effect on the overall environmental impact related to textiles and clothing, if the assumption about "replacement" is not valid. There is no causality between increasing durability and prolonging use of an item and the amount of clothing that is produced. It is therefore important that policy measures address the real problem, the amount of textiles produced/imported, bought and discarded, and not just the effects of this (a short use-life for clothing).

If the EU Textile Strategy aims to reverse overproduction and overconsumption, and discourage the destruction of unsold or returned textiles, more straightforward measures are needed, along with targets for production or imports reductions and a monitoring plan to assess their effect (Coscieme et al., 2022).

Green marketing can lead to more purchases

The EU Textile Strategy has highlighted a goal to ”empower consumers and tackle greenwashing by ensuring the accuracy of companies’ green claims”. While empowering consumers with proper information and enforcing a system where all environmental claims should be validated by third parties is commendable, consumer studies show that green marketing can in itself contribute to increased environmental impacts as it makes it easier to justify additional purchases (Olson, 2022; Sigaard & Laitala, 2023). This can cause a "rebound effect", where products with lower environmental per-unit-production impacts lead to increased levels of production and consumption (Zink & Geyer, 2017). Linking an individual product to collective consumption volumes and their total impact is particularly relevant for textiles, and is also an area where current research is lacking.

In the case of clothing, the use phase is crucial – and keeping a garment in use (wears and years) for a long period of time substantially reduces the environmental impact per wear (Klepp et al., 2020; Watson & Wiedemann, 2019). Yet finding clothes that fit an individual’s body, tastes and needs is difficult enough, without adding or conflating more demands for purchases such as navigating green claims (Heidenstrøm et al., 2021). Consumers’ low interest in green marketing of clothing can – contrarily – be positive both for a person’s own economy and for the environment, because, ironic as it may sound, prioritizing “greener products” potentially *increases* environmental impact by replacing other important factors like fit and taste as primary considerations in consumption decisions.

A recent article about Norwegian consumers’ preferences for fibres shows that “believing that fibres of any kind are sustainable negatively affects willingness for consumption reduction” (Sigaard & Laitala, 2023). This is backed up by similar research on the rebound effect within other consumption areas (Olson, 2022), however, the size of the effect on textiles is, as far as we know, not quantified.

There is a lack of research that indicates that the difference in environmental impact between "green clothing" and other clothing is large enough to make up for the increased purchases that green marketing can lead to. This strengthens the argument that reducing the quantities of clothing have to ensure that the total outcome of new policy is lowering the environmental burden.

In our TPR suggestion, we will also be able to capture if “green” clothing, for example with recycled content as a selling point, is used for longer – or not – and how this clothing withstands wear and tear. This is knowledge we do not have today.

Clothing is culture

Clothing is an important part of culture and tradition for everyone, not least indigenous people (Klepp, Haugrønning et al., 2022; Klepp et al., 2016; Miller et al., 2022). Fast fashion has not only damaged the environment, but also local clothing cultures and the continuation of the crafts involved in these.

Fast fashion is a business model that builds on large quantities, rapid changes, global production and low prices for labour and raw materials through mass production in low-cost countries using fossil fuels as raw material. The opposite of this business model is a diversity of small-scale production based on variety of materials, taste, traditions, crafts, technologies, old and new. In Europe there are remnants of such consumption and production systems. Industry and craftsmen benefit both with the utilisation of raw materials such as wool, linen, fish skins, fur from hunting, and more. This includes both clothing traditions and traditional systems for the production, distribution and use of clothing among indigenous peoples, in the majority population and immigrant groups, that represent clear alternatives to fast fashion. It also shows itself in diverse fashion looks and styles which find expression in distinctive local tastes and variety, not conforming to fast fashion norms.

It is possible to include textiles in several great EU ongoing projects and initiatives, like the *New European Bauhaus*, *Farm to Fork*, and the very new *Soil Mission*. The political will to support local production and distribution has already led to greater diversity in the food sector benefiting the consumers. A recognition of actually working alternatives to fast fashion and the possibility of developing these, is important in the discontinuation of fast fashion and will enable a contribution to clothes being produced (again) more slowly, more lastingly and more adapted to the individual users supporting variety in clothing cultures and consumption practices (Fletcher & Tham, 2019).

The use phase must be included in textile policy

The EU's waste management policy is based on the "waste hierarchy" established by the Waste Framework Directive. At the top of the political priorities, is waste prevention. This priority should be followed in all political measures, regulations, objectives and strategies. Waste-prevention entails fewer products being produced and imported.

As already stated, the main challenge fast fashion represents, is the quantities that are produced and disposed of. This is a systemic problem and cannot be solved through changes in individual products, as argued above. It is therefore necessary to recalibrate the political instruments, from addressing individual products, to a system focus. The environmental burden is – as we all know – much higher on single-use products than on items used 1000 times or for 30 years. Still, most sustainable evaluations of clothing are done without taking this fact seriously. Few clothing LCAs use realistic

numbers of use, and if they do, they show that this does have a very large impact on the overall results (Wiedemann et al., 2020; Wiedemann et al., 2021).

We have suggested implementing TPR as a policy measure to integrate the use phase (Klepp, Måge et al., 2022), and have described how this can be done, through analysing the textile waste. By use of the TPR model, the use phase is effectively integrated in the modulation of the fee, based on how long and how much the products are used. This information will be registered on a brand/producer level.

The same source of information can be used in PEF and other measures, to ensure that the use phase is taken into account. One strength inherent to this solution is that it is not based on information provided by the producers/importers, but on independent analyses. In addition, the collected information will enable to capture the clothing imported via internet sales, which have consistently shown high growth rates over the last 10 years. (Collini et al. 2022). Another strength of analysing product use based on data from waste analyses is that it is empirical and captures the most important aspect of the clothing, the actual use of the product or lack of use.

Concluding remarks

Our input and suggestions are based on state-of-the-art research on the consumption of clothing (including use, care, repair and disposal), which is not always considered in the development of sustainable textiles. The textile and clothing industry, and fast fashion in particular, is sales-driven and its primary concern is not with how the products are used, disposed of and where they end up.

Taking the existing research on clothing consumption into consideration, and especially looking at the clothing that goes out of use, provides a practical and valuable way to include the consumer's voice in the restructuring of the sector. It is a voice that is often the weakest and the least heard.

We firmly believe in developing durable goods and strategies that promote sharing, repair of clothing and recycling of fibres. However, based on research on clothing consumption, this will not have a major impact on the amount of clothing that is produced and bought, nor on the amount of clothing that is disposed of. Durable clothing (and reuse, renewal, repair, local production, recycling) will only be mainstream and economically profitable when the prices of clothing include externalities and the amount of clothing in the sector is reduced . Based on our experience of working with businesses striving for sustainability, one of the most pressing problems they face is that new clothes are so cheap and easy to acquire that it is difficult for them to compete with for example reselling or repairing them. Therefore, for sustainable business models to flourish, it is important to address the issues of low prices and quantities. Reusable, repairable, recyclable and more durable clothes are desirable qualities, but they have no or limited impact on quantities, and this is the metric that matters because it reflects collective environmental harm of the whole system. TPR, is an example on how it is possible to regulate quantities, and thus also lead to the change that is needed.

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