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Circular Economy: Just Sectoral Transition in the Production and Consumption of Textiles

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Abstract

The global textile industry is dominated by the fast fashion paradigm, which causes diverse negative environmental and social impacts. A more circular textile economy is advocated as an answer to unsustainable practices. A transition to a circular economy, based on slowing and closing textile loops, will have social consequences all over the world. This chapter explores the implications for social justice in transitioning to a circular textile economy. It finds that the transition is likely to produce negative and positive outcomes for different regions and people. Circularity in itself might not affect some of the root causes of social harm in global supply chains, but might enable some better practices, for example, through relieving time and prize pressures. Circularity will not likely address power relations that cause oppression, nor improve ill-functioning institutions. Livelihoods in vulnerable regions might be lost, but also gained all over the world. The circular economy transition is necessary but will fail to answer to multiple social justice challenges, unless a strong focus on social justice is explicitly integrated in design, conceptualization, and application.

Keywords: just transitions, circular economy, textile industry, social sustainability, social impacts

1 Introduction

Textiles are an integral part of our everyday lives, and they hold many meanings to humans. One of the world's largest – and most polluting – industries has evolved around textiles. Textile production and consumption cause 6–10% of carbon dioxide emissions, makes up 20% of industrial water pollution, and results in over 92 million tonnes of waste streams each year (Niinimäki et al. [2020](#)). Additionally, social issues – such as low wages and unsafe working conditions – persist in global textile supply chains. This chapter explores how circular-economy principles could improve the textile industry's social sustainability.

The circular economy is one way to organize production and consumption systems. It aims to keep resources in use for as long as possible in order to retain materials' value. The exact definition of circular economy remains contested, but it can be described through reducing, reusing, and recycling. In practice, the circular economy remains very focused on waste recovery, recycling, and efficiency (Stewart and Niero [2018](#)), but the idea of a circular economy is much more than that. Indeed, research on the environmental impacts of a circular textile economy suggests that the greatest environmental benefits can be obtained by reducing the consumption of novel items, using items longer, reusing items as subsequent owners (i.e., selling secondhand), and, finally, by recycling materials (Sandin and Peters [2018](#); Levänen et al. [2021](#)). One dimension of the circular economy is sharing and product-as-a-service schemes. In clothing's case, these aspects can involve, for example, clothing libraries. The environmental benefits of such collaborative consumption

depend on whether items' lifetimes are prolonged and whether the associated additional logistics produce low emissions (Zamani et al. [2017](#); Levänen et al. [2021](#)).

The global textile industry's linear nature manifests in the fast-fashion culture, in which textiles are used only a few times before becoming waste. Some indications suggest the industry is moving in a more circular direction; for example, some major textile companies have started implementing circular business strategies, consumer interest in more sustainable products is increasing, new EU legislation is expected to promote circularity, and related academic research is growing (Jia et al. [2020](#); Harris et al. [2021](#); Vehmas et al. [2018](#)). In practice, however, the level of circularity remains on a superficial level (Stål and Corvellec [2018](#); Brydges [2021](#)). Estimates suggest that, in 2015, only 1% of textile material flows were recycled into new clothing (Ellen MacArthur Foundation [2017](#)). Additionally, clothing consumption has increased while average use times have decreased, though the Covid-19 (coronavirus disease 2019) pandemic has lowered consumption somewhat (Ellen MacArthur Foundation [2017](#); Statista [2021](#)).

The transition to a circular economy entails changes to every step of production and consumption systems – from extracting raw materials to various production stages, the use phase, and beyond. The textile industry is characterized by global value chains, which often involve multiple actors. The European Environment Agency ([2019](#)) estimates that in the case of footwear, clothing, and household textiles, the environmental impacts of clothes consumed in Europe occur mostly outside of Europe, for example, 93% of land use, over 90% of water use, and 75% of greenhouse emissions. The biggest exporters in terms of value of textiles worldwide is China contributing to over a third of all value, followed by the EU, while Bangladesh, Vietnam, India, Indonesia, and Cambodia together produced around a fifth of all clothing (Statista [2020](#)). In addition, the industry employs hundreds of millions of people. Therefore, mitigating its environmental impacts through circular processes and a possible transition to a circular industry will have societal effects globally.

The economic and environmental sustainability aspects of a circular textile system have been the object of multiple studies, but its social impacts remain underexplored (Padilla-Rivera et al. [2020](#); Schöggel et al. [2020](#)). If a circular economy can reduce our dependence on virgin materials, help restore the environment, and lower emissions, then humankind can benefit in many ways. Nevertheless, the circular economy might not be inherently just, and the transition's social implications remain poorly understood (Merli et al. [2018](#); Jia et al. [2020](#)). Geissdoerfer et al. ([2017](#)) note, in their review, that “the Circular Economy clearly seems to prioritise the economic systems with primary benefits for the environment, and only implicit gains for social aspects.” The scientific literature on the circular economy's social impacts frequently focuses on quantitative indicators, such as job creation (Padilla-Rivera et al. [2020](#); Merli et al. [2018](#)). The circular economy could contribute to sustainable development, such as social equity, poverty elimination, decent work, or gender equality, but in many cases the link remains unclear or indirect (Millar et al. [2019](#); Schröder et al. [2019](#)). Such social aspects are also lacking in practice; Stewart and Niero ([2018](#)) note that “social aspects are largely ignored in references to circular economy in corporate sustainability reports.” Walker et al. ([2021](#)), meanwhile, examined companies that include circularity in their operations, finding that social impact assessments were not conducted by the majority of the researched firms, many of which did not deem such assessments feasible or possible despite finding such social aspects important. Yet, some circular-economy textile companies seem to inherently hold social issues as key to their business models, as well as them having foundational meaning (Rovanto and Bask [2021](#)).

The *just transition* concept helps explain how social well-being can be improved during a transition process, how to avoid novel social injustices, and how to heal old ones. One definition could be “a

fair and equitable process of moving towards a post-carbon society” (McCauley and Heffron [2018](#)). The concept is gaining momentum as efforts to combat climate change increase and social issues related to climate change, as well as policies to prevent it, are advanced. Accordingly, this chapter explores the justice implications of the textile sector’s circular economy transition. Defining *justness* in this context, however, is complicated. Depending on one’s perspective, the current textile industry can be regarded as a driver of either favorable developments (such as economic growth, job creation, and the empowerment of certain groups) or unfavorable developments (such as increased pollution and human rights violations). Perceptions of the industry’s justness are further complicated when the circular economy is considered to be a similarly contested concept. It can be regarded as enabling sustainable, green growth or as maintaining the environmentally harmful growth paradigm and its related negative phenomena, such as overconsumption.

Environmental considerations are omitted from our chapter, though the extent to which the circular economy can improve the environment, decrease resource burdens, reduce pollution, and enhance animal lives, as well as the rebound risks related to CE, would have been important topics. These issues are simply out of our scope. Also, the use phase and the justice issues related to it, such as justice in consumption and cultural aspects related to it, are out of our scope, although we recognize them as important. Textile industry refers here to the global industry of textiles, including clothes and other textiles.

The chapter is structured as follows. First, it describes the concept of just transitions. Then, it analyzes the concept’s potential meanings in the context of the circular economy and the textile industry. It will argue that even though the circular economy transition is a necessary one, several justice implications will be left unanswered by it, unless a strong focus on social justice is explicitly integrated in design and application.

2 Just Transitions

2.1 Birth of the Concept

The just transitions concept stems from multiple beginnings (Hughes and Hoffmann [2020](#)). The concept has a strong union background and a related focus on jobs (Stavis and Felli [2015](#)), as the concept was first used in global labor unions’ struggles in the 1980s to discuss the possible inequalities involved in the changing energy industry (Hughes and Hoffmann [2020](#)). Later, global unions have promoted a just transition and green jobs in global environmental and climate negotiations (Stavis and Felli [2015](#)).

The concept can also trace a beginning to research on sustainability transitions and the recent realization that transition research lacks an understanding of how ethical aspects – such as poverty and inequity – can be addressed and understood (Hughes and Hoffmann [2020](#)).

Finally, there have been calls to unite environmental, energy, and climate justice discourses under the just transition concept (e.g., McCauley and Heffron [2018](#); Hughes and Hoffmann [2020](#)). Environmental justice research initially focused on local environmental justice questions, such as pollution disproportionately harming disadvantaged communities, and has later expanded its scope

to involve global-local linkages and a wider range of issues, challenging various socioeconomic structures causing inequality (Schlosberg and Collins [2014](#), Evans and Phelan [2016](#)). The energy justice discourse highlights the social justice risks linked to renewable energy production, energy poverty, and the end of coal mining, as, for example, the needed additional mining of certain metals to build renewable energy devices can pose a “climate colonialism” risk (Zografos and Robbins [2020](#)). Climate justice then again considers “the benefits and burdens of climate change from a human rights perspective” (Heffron and McCauley [2018](#)).

Four types of justice considerations have been outlined in the environmental, climate, energy justice, and (lately) just transitions movements: distributive, procedural, recognitive, and restorative (McCauley and Heffron [2018](#); Schröder [2020](#)). These dimensions can also help to develop an understanding of just circular transitions and design suitable interventions (Schröder [2020](#)). Distributive justice addresses the unjust distribution of benefits and harm. Procedural justice, meanwhile, concerns procedures to avoid the creation or reproduction of injustice in transitions, as well as procedures to bring justice to harmed communities – for example, through communities’ participation and increased resilience. Recognitive justice involves considering marginalized views, knowledge, and values, and recognizing competing developmental interests. Restorative justice, finally, entails repairing injustices or harms against individuals or communities (Schröder [2020](#); McCauley and Heffron [2018](#)).

2.2 Conflicting Visions

The just transition remains a debated concept with various potential meanings, from providing decent green jobs and incremental changes in the current socio-technical system to reimagining the whole capitalist sociopolitical system (Swilling [2019](#); Stevis and Felli [2015](#)).

Power dynamics to some extent influence how transitions play out and how just they will be (Healy and Barry [2017](#)). Newell and Mulvaney ([2013](#)) argue that “who defines what is just, and for whom, will be determined by power struggles in particular contexts.” Transitions’ outcomes will be determined by struggles between a wide range of actors who represent a wide range of interests (Swilling [2019](#)). Accordingly, various strategies related to power have been applied to the just transition concept; Stevis and Felli ([2015](#)) outline union strategies, some of which seek to overthrow current power relations within a socioeconomic system and some strategies that regard a just transition as not necessarily changing power balances but merely amplifying workers’ voices.

Conflicts and trade-offs can also arise between sustainability and justice issues. Ciple and Harrison ([2020](#)) note that the demand for inclusivity might decrease the possibility of rapid and bold actions, while a sufficiency economy might lead to challenges in labor conditions. Combining justness and sustainability in policy and practice in the context of a fast approaching environmental crisis will no doubt be a challenging task.

2.3 Just Transition Policies

Green jobs, inclusive growth, and decent work are the core of the International Labour Organization’s just transition guidelines (ILO [2015](#)). Its recommendations are mainly directed at governments, encouraging the implementation of several policies addressing, for example,

macroeconomic and growth, industries and sectors, skill development, occupational health and safety, social protection, active labor market policies, and encouraging social dialogue and tripartism (ILO [2015](#)). The European Union's just transition mechanism is designed to assist the people and regions most affected by the European green new deal, which aims to lower emissions.

States are often seen as the main actors implementing policies for a just transition (Newell and Mulvaney [2013](#)). Polycentric approaches – involving local participation and coordination, as well as international actors – are also important, and locality has been identified as a key aspect of such measures since it can increase the acceptance of green policies and take advantage of location-specific factors (Oei et al. [2020](#)). Polycentricity becomes emphasized in areas where states fail to promote justness aspects of transitions.

3 Just Transitions in the Context of Circular Textile Economy

The next section looks at what kinds of justice implications are prevalent in the transition to circular economy in the textile sector. The findings are based on existing academic literature, reports, and the authors' own professional experiences, expertise, and communications with several textile companies.

What a circular textile economy might entail in practice remains unknown. Environmentally, the most beneficial circular economy would be based on slowing the industry, promoting sufficiency principles, such as reducing consumption and reusing products (Levänen et al. [2021](#)). This model would entail decreasing consumption, perhaps drastically, and thus could bring about many social changes. The circular economy can also involve narrowing and closing loops, increasing efficient, no-waste production, recycling, and the use of recycled fibers despite consumption levels remaining similar. Replacing virgin material with recycled material, while carrying on with the same pace of consumption, might not lead to expected and necessary GWP-decrease though, due to rebound risks (Levänen et al. [2021](#)). All of the above circular practices imply social changes.

Next, the chapter analyzes present (in)justices in the textile industry that might not change in a transition to circular systems, new injustices that might emerge, and, finally, some injustices that might disappear. The chapter's list of justice issues in textile production is by no means exhaustive; rather, it reflects the kinds of issues that must be considered, especially in the production of textiles and raw materials and end-of-life applications. This chapter examines the circular economy's potential effect on the micro level, such as in factories and farms, and on the macro level, such as in global trade and value chains. It focuses especially on countries of the Global South since major justice implications are evident there.

3.1 Reshoring and Livelihoods

The transition to circular textile systems could change the spatial configuration of production and consumption in at least three ways.

First, the overall demand for and, thus, production of textiles could decline. Increased reuse and prolonged clothing lifetimes could reduce overall clothing consumption, though increasing middle-

class and Global South consumption might offset this decline. With increased recycling, as textile waste becomes the (main) new raw material for clothes, current raw material production – such as cotton farming and certain fiber processing stages – could experience an overall decline (Steenmeijer et al. [2020](#); Schröder [2020](#)).

Second, a reshoring of production could occur. If waste becomes a new raw material, it might be processed close to its sources (i.e., where it is consumed and discarded). As the EU regulations for collecting textiles come into force separately, at least in the European Union, raw material will be available for circular fibers. New recycling facilities could involve high levels of technology and automation, enhancing the attractiveness of processing and production in Europe (Sitra [2021](#)). If circular production favors slow processes over fast processes and quality over quantity, producing and purchasing items could cost more, so the “race to the bottom” (i.e., the clothing industry’s shifting locations in search of the cheapest production) might become a “race to the top” (i.e., shifting locations in search of the best-quality, perhaps most-sustainable production). Such a development would entail a large-scale change compared to the current fast-fashion paradigm, in which affordability has significantly driven production-location decisions, favoring Asia and, more recently, Africa (ILO [2019a](#)). Nevertheless, predicting the future of production is difficult. Investment decisions regarding new facilities, for example, will depend on multiple aspects besides production costs, such as trade preferences, institutional settings, workforce education and skills, innovation, and infrastructure (Lopez-Acevedo and Robertson [2012](#); Oei et al. [2020](#)).

Third, automation, digitalization, and changing consumer patterns encourage modifications to current practices (ILO [2019a](#)). The quest for shorter delivery cycles from factories to consumers, as well as consumer demands, have already led some brands to shift production stages closer to key consumers, and this trend is expected to continue as automation bridges the cost gap between Asian and Western countries (Clarke-Sather and Cobb [2019](#); ILO [2019a](#); McKinsey&Company [2019](#)). Also, the authors’ own discussion with Finnish circular clothing brands revealed that the ideal production location for many of these brands is in or near Finland itself. A normative push to reshore production seems evident, partially affected by consumers’ appreciation for local work and dislike of perceived poor working conditions abroad (McKinsey&Company [2019](#)).

Reshoring’s outcomes for regions that heavily depend on textile or raw material production will partially depend on these regions’ adaptation and ability to attract new circular or other industries. For example, a farming change from cotton to other crops might require education, investment, and profitable outlooks for other crops. Cotton recycling might not be feasible in the same regions as cotton growing – at least not without policies targeting the new industry – since rural areas may lack, for example, the necessary infrastructure and skillset for recycling (Steenmeijer et al. [2020](#)). For large-scale recycling to be feasible and recycling facilities to be built, the coordination of related collection, investment, and public policies is necessary, which can be difficult for some countries (Leal Filho et al. [2019](#)). The circular economy’s new technologies and processes will also require reskilling (ILO [2019b](#)). Poorer countries, failed states and countries with ill-functioning institutions might experience a reduced ability to initiate institutional or other responses to such a changing world (ILO [2019a](#)). Some societies will have to find ways to restructure their economies according to traditional economic diversification principles or find completely new ways to organize, centering human needs and nature’s well-being.

On a positive note, even if some production shifted to Europe or other Global North locations as a result of a circular textile industry, new working opportunities are expected in the businesses of reuse, upcycling, sharing, collection, and sorting recycling all around the world. Indeed, multiple examples of new businesses and jobs have already been created in the circular textile sector globally,

and some of these businesses have an explicit social agenda (Baruque-Ramos et al. [2017](#); Leal Filho et al. [2019](#)). New opportunities can be found in new methods, such as using agricultural waste to make textile fibers (Härri et al. [2020](#)). If cotton fields can be transformed into fields for food production, for example, they might contribute to food security. However, farming food crops does not necessarily advantage farmers; transitioning from cotton to cocoa, for example, might not enhance a farmer's life if their position in the supply chain does not improve (Gayi and Tsowou [2017](#)).

3.2 Vulnerable Regions

One might argue that reshoring away from low-cost countries with frequent human rights violations and environmental degradation would be just. Especially in vulnerable regions, the current textile and raw material industries have been unjust for many participants. For some, the industry has not fulfilled the basic human needs for health and autonomy; for example, given Indian cotton farmers' suicides, deaths at clothing factories and the working poverty of many farmers and workers (Merriott [2016](#); Clean Clothes Campaign [2020](#)).

Justice considerations also involve another side, however; since some countries are extremely dependent on cotton or textile production, the industry's transition might especially affect the garment sector in Asia and the Pacific, which employs around 65 million people (Jackson et al. [2020](#)). Bangladesh alone is home to 4 million garment workers, while India counts 16 million (ILO [2019b](#)). Additionally, in countries such as Bangladesh, Pakistan, and Cambodia, the garment sector accounts for more than half of all export earnings (Jackson et al. [2020](#)). Although wages are very low in many textile-producing countries, they have risen in the textile industry and can be higher than in other sectors (Mair et al. [2016](#)). There are various estimates, but cotton production employs around 350 million (and possibly more) people worldwide (Voora et al. [2020](#)), and for some countries – such as Burkina Faso, Mali, and India – cotton is a critically important economic commodity (Abbot [2013](#)). These countries dependent on the textile industry would, therefore, be especially vulnerable to major changes in the global textile economy.

The Covid-19 pandemic revealed this vulnerability, decreasing global clothing production in 2020 (Statista [2021](#)). The sudden withdrawal of orders severely affected garment workers, many of whom lost their jobs, some without any social protection (Brydges and Hanlon [2020](#)). Developing countries are especially at risk since their fiscal capacity and social security systems are often weaker and the informal economy sector larger, thus leaving people in a more precarious state in times of economic downturns (Castañeda-Navarrete et al. [2020](#)). Workers in the textile industry can be very vulnerable to shocks because they are often uneducated, young, and low-skilled women or migrants (Demeke et al. [2020](#); ILO [2016](#)). Low wages and a lack of other opportunities in turn mean that workers lack alternatives if they lose their jobs (Demeke et al. [2020](#)). Though the transition to a circular economy, and the related possible decrease in demand and jobs, will likely be less abrupt than the Covid-19 pandemic, proactive planning is crucial to minimize social harms (Castañeda-Navarrete et al. [2020](#)).

3.3 Quality of Work

The transition to a circular economy – and the ensuring possible spatial shift of production, declining demand, and changes to production and consumption – might affect working conditions and wages throughout global supply chains.

Some working conditions might, at least theoretically, improve since the circular economy can introduce cleaner production methods; such new approaches could contribute, for example, to better factory work through the better handling and closed circulation of water and chemicals.

Nevertheless, the textile sector's overall chemical burden presents a possible risk if recycling does not accompany safety precautions (Echeverria et al. [2019](#)). A positive example of avoiding further chemicals in shifting to a circular industry is a Finnish company that is using pre-consumer waste to make textiles that always maintain fabrics' original colors and thus can avoid dyeing.

Research suggests that periods of labor scarcity, when factories must compete for workers, can positively affect labor conditions and even decrease sexual harassment (ILO [2016](#); Anisul Huq et al. [2014](#)). On the other hand, scarce work opportunities might entail worsening working conditions in some regions, where workers are forced to accept any kind of jobs and the institutions protecting workers' rights are lacking. Also, increased efficiency and declining costs of automated production might reduce wages and negatively influence working conditions (ILO [2019a](#)).

Novel services especially in the use phase of clothing such as clothing libraries and other sharing services and platforms can bring new jobs, but the quality of those jobs and the overall social impacts of the new platforms should be further investigated (Curtis et al. [2020](#); Schor and Attwood-Charles [2017](#)). For example, in Finland, consumers can “Wolt” clothes, ordering a courier through a digital platform to bring a certain Finnish brand's clothing to their home. Courier businesses in the food sector have received negative attention due to the precarious nature of their couriers' work (see, for example, the campaign *Justice4Couriers*).

Dufourmont et al. ([2020](#)) note that at least in the European market, local circular operations would mean better working conditions, but that even in Europe, there is a risk of precarious work.

Bonfiglioli ([2015](#)) argues that the global race to the bottom and the loss of labor and welfare rights have also harmed working conditions and wages in Eastern and Southeastern Europe, particularly in Macedonia (Bonfiglioli [2015](#)). Reports have noted poor working conditions and wages below the poverty line in Europe (Clean Clothes Campaign [2020](#); Maria-Ariana [2017](#)). From this viewpoint then, nearshoring might not be automatically more ethical.

Waste management, collection, and recycling jobs are expected to increase as waste becomes a new raw material. Many areas in the Global South already have large waste collection and recycling sectors. The organization of these waste sectors varies, but tasks related to waste collection are often performed by poor, individual waste-pickers at dumpsites or sometimes criminal gangs, and the sector is characterized by high levels of irregularity (Velis [2017](#)). Sometimes, well-organized cooperatives of waste-pickers can bring socioeconomic benefits to communities (Gutberlet et al. [2017](#)). But even in Europe, waste jobs can be precarious. Gregson et al. ([2016](#)) argue that “resource recovery within the Northern European member states has resulted in low-paid, dirty, monotonous and physically demanding jobs, some which are physically dangerous.” Additionally, these jobs are often worked by migrants (Gregson et al. [2016](#)).

Recognizing waste workers and their rights, as well as ensuring safe and decent waste working conditions, could offer social benefits for the millions of people involved in these activities, especially if the circular economy will increase these activities. Safeguarding human rights in waste-handling-related work requires institutional responses, including participation, integration, and acknowledgment of the sector and its workers (Gutberlet et al. [2017](#)).

3.4 Circular Business Practices and Wealth Distribution

Circular purchasing practices might enable better working conditions and wealth distribution by relieving the price-and-speed squeeze. Price and speed demands can both affect textile factories' wages and working conditions. The price squeeze (the push for lower prices paid to suppliers) and the sourcing squeeze (the push for shorter lead times) negatively affect wages and working conditions (Anner [2020](#)). Sometimes, providing decent conditions or complying with buyers' social criteria does not make economic sense for producers (Khara and Lund-Thomsen [2012](#)). Compliance with social criteria can be jeopardized when buyers are unwilling to share costs, and some buyers remain willing to buy from noncompliant factories (Huq and Stevenson [2020](#)). Abdulsamad et al. ([2015](#)) argue that "for wages and working conditions to improve the distribution of value along the chain needs to change or the overall price paid must increase."

If the new circular textile industry relies more on slow fashion and quality products that could cost more, then price-and-time squeeze on suppliers and workers could be relieved. Although this change might not necessarily improve conditions and wages, relieving sourcing and price squeezes could act as an enabling factor for such improvements. Dufourmont et al. ([2020](#)) note that circular business models do not, in theory, challenge current wealth distribution, in which large corporations hold wealth and profits, calling for a shift in "the profit-maximising business rationale behind current business models." Relieving the sourcing and price squeeze might not lead to equal wealth distribution in the supply chain between buyers and suppliers, among suppliers, or suppliers and workers, but institutions that protect workers are needed, alongside more balanced power relations.

3.5 Power Imbalances

Power imbalances between buyers and suppliers, among suppliers at different tiers, and between suppliers and workers are also important in ensuring a just transition, and a circular economy might not necessarily lead to more equal power relations. Buyer-supplier relationships and power dynamics influence wages, working hours, and working conditions in global value chains (ILO [2017](#); Anner [2020](#)). The International Labour Organization looked at global value chains, including textiles, and found that, especially in countries with lower human development, suppliers had lower bargaining power and were more likely to sell their products below production costs – often due to pressure from buyers. Buyers' purchasing practices and market power, as well as unionization levels and collective agreements at factories (or the lack thereof), influenced suppliers' ability to provide decent wages and working conditions (ILO [2017](#)). Also Kumar ([2019](#)) argues that ultimately, labor rights will be enhanced, by "increased power of suppliers vis-à-vis buyers, greater workers' bargaining power with their direct employers, and – critically – workers' self-organization." Workers' organization, including the rights to join a union and to collective bargaining, is threatened in many production regions (Arslan [2020](#)). In some cases, powerful brands and factory owners pressure governments, which are then unable to support institutions that could protect workers' conditions, power, and wages (Arslan, [2020](#)). Some suppliers in developing countries have become powerful, and workers might not have benefited from this power; thus, increasing workers' power vis-à-vis their employers is particularly necessary (Kumar [2019](#); Arslan [2020](#)). Some smaller brands have also experienced difficulty in enticing suppliers to meet their needs due to suppliers' large scale and

extensive power (Franco [2017](#)). Moreover, discussions between the current authors and smaller, circular Finnish brands revealed that some of these brands struggle to find socially sustainable suppliers in Asia and feel that they lack the necessary power to influence production conditions in Asia, therefore sourcing from Europe.

Buchel et al. ([2018](#)) note that a transition to circular fashion should address power issues. They argue that the new fashion industry should transparently present the risks and benefits shared across value-chain partners and governments; moreover, they suggest that nongovernmental organizations and citizens should push for legislation and taxation policies that hold the industry accountable (Buchel et al. [2018](#)). Balanced power relations – including workers’ agency, empowerment, and collective action – are, thus, important in ensuring the fairness of future circular supply chains. Institutions that support more equal wealth distribution between buyers and suppliers, and between suppliers and workers, are needed.

Enhancing farmers’ agency is also important. Novel circular practices, such as producing textile fibers from wheat and rice straw, could benefit farmers economically – but not all farmers are equally able to participate in the supply chain due to their limited agency. Härrä et al. ([2020](#)) examined the possible production of fibers from wheat and rice straw, finding that farmers’ agency in this business is limited by institutional voids. Due to restrictive institutions, some farmers might be unable to participate on their own terms, maintaining their marginalized positions in supply chains. Empowering marginalized actors will, thus, enhance their ability to participate (Härrä et al. [2020](#)). The transition from cotton to other crops will be more socially acceptable and just if farmers can use their agency to undergo this shift on their own terms.

3.6 Gender

The majority of textile and garment factory workers are women in many Asian production countries, such as Bangladesh, Vietnam, China, Indonesia, and Cambodia, with as many as 80% of such workers being women in some countries (ILO [2019b](#)). In Europe, almost 71% of overall textile-sector workers are women (EURATEX [2020](#)). In some countries, however – including India – the majority of textile and garment workers are men (ILO [2019b](#)). Dufourmont ([2020](#)) argues that “in the textiles sector, clothing repair and remanufacturing activities are mostly conducted by female workers and the future directions that circular business models take in either perpetuating current trends or shaping new paths towards representation and inclusivity will be key to ensure gender equality is met.” Structural changes to the global textile economy might, then, affect gender justice. Women might be especially affected by production changes, but the gender composition of the global textile workforce varies by country and sector. In cotton farming, for example, some positions are mainly held by men, while gender compositions vary widely between cotton-producing countries and processing stages (International Trade Center [2011](#)). Some studies suggest that suicide is committed more often by male cotton farmers than their female counterparts (Merriott [2016](#)). Protecting all genders is, therefore, important.

3.7 Textile Waste Trade

The trade, or dumping, of second-hand clothing and textile waste between the Global North and the Global South merits further attention in the context of the circular economy and just transitions.

Theoretically, it aligns with circular principles since consumers in the Global North give their old clothes to charities, which then sort the clothing and divert it to domestic second-hand shops, recycling, burning, or, in some cases, countries in the Global South (Brooks [2019](#)). In these receiving countries, these items are then resold, landfilled, upcycled, downcycled, or recycled into new products, depending on their condition (Abraham [2011](#), Kapoor and Khare [2019](#)).

As is often the case with the waste sector in the Global South, this work takes place in the economy's formal-informal spheres, and as such, it can be precarious or even dangerous while failing to provide a decent income (Norris [2015](#); Brooks [2012](#)). Yet, this trade provides a living for many workers, and it can also provide cheap clothing for the poor (Wetengere [2018](#)). Gregson and Crang ([2015](#)) argue that “dumping of waste” might not be a good framing when discussing global waste movements, as these wastes can also be seen as resources and “harvesting them is a significant economic activity, and consequent resource recovery is a key part of the global economy.” At the same time, the waste trade has affected the decline of local textile industries, especially in Africa – though the extent to which cheap imports from Asia have also caused these declines remains debated (Brooks and Simon [2012](#)). Some researchers also argue that the trade maintains a potentially harmful dependency between Africa and the rest of the world and might harm local cultures (Ericsson and Brooks [2014](#); Wetengere [2018](#)). Some countries, such as China, have banned the import of used textiles while others have attempted yet failed to do so. To boost local production, some East African countries tried to ban the used clothing trade but backed down when threatened with revoked preferential market access to the United States (Wolff [2020](#)). Some countries partially allow these imports to support their textile industries (Abraham [2011](#); Kapoor and Khare [2019](#)).

Fast fashion and related heavy consumption have certainly fuelled the trade in used textiles and textile waste (Brooks [2019](#)). In a circular economy, where waste is a precious raw material, and clothes are both long-lasting and valuable, exporting these valuable items might not make sense. In the event of decreasing consumption, such waste might decrease in any case. Rather than judging the trade as inherently bad or good, the literature shows that such evaluations must consider multiple perspectives and considerations of justice. Some key considerations in this context include countries' autonomy, decent working conditions and livelihood opportunities, access to clothing and resources, environmental pollution, and waste handling. Also, one must wonder if poorer countries have the resources to implement the facilities and logistics needed to convert waste into valuable products sustainably.

4 Discussion

Though a circular economy might not address all the underlying harms of the global textile industry, the transition to a circular economy is necessary. Nonetheless, it should be coupled with a strong focus on social justice and much-needed institutional and trade reforms.

The literature on just transitions emphasizes *distributive*, *procedural*, *recognitive*, and *restorative* justice as important. The equal *distribution* of value should be targeted in circular supply chains. The reconfiguration of production's spatial aspects will, for its part, determine value distribution – possibly in favor of the Global North. However, in many producing regions – including Europe – the redistribution of wealth across value chains should be reconsidered to ensure that value is distributed evenly to workers. *Procedural* justice could require, at the very least, including affected people, such as workers, farmers, and suppliers, in the design of circular supply chains and circular futures.

Moreover, different views about sustainable futures should be *recognized*. What do producing countries want their future to be like? Do they want to participate in the global circular textile supply chain as mass producers? Do jobs bring justness? Global trade and politics have not, in recent history, always heeded the poorest members of global society. Perhaps now, as economies are restructured, these voices should be heard. Moreover, the communities damaged and polluted communities by the textile industry should be *restored*.

As Stevis and Fellis (2015) explained, “unless a ‘just transition’ does address the rules that engender deleterious practices, it will simply exacerbate a society-wide rebound effect that will be both destructive and unjust.” The current chapter suggests that the rules that define deleterious practices in the textile industry must change. Trade and power relations and ill-functioning institutions can contribute to unequal wealth distribution and indecent working conditions, and the circular economy is unlikely to automatically resolve these problems. Global rules for trading that better promote equal wealth and power distribution, as well as institutional reform in producing regions, are needed. Institutions protecting human rights, social freedoms, dialogue, and democracy can be good tools to build just societies.

One might ask whether first producing large amounts of clothing, in sometimes environmentally and socially unsustainable ways, and then cutting production and reshoring, possibly leaving former production countries and its workers in jeopardy, is actually just. Buyers’ proactive planning before reshoring, together with affected stakeholders, for mitigation and/or compensation of harm, would be important. Decent wages must be paid, and societies must benefit from trade as much as possible now, so that they are more resilient during the transition to a circular economy.

5 Conclusion

Textile production and consumption form a complex system, with varying social and environmental impacts around the world. The transition to a circular economy will inevitably have consequences, and efforts among global society, academia, governments and companies are needed to ensure a just transition.

The negative and positive impacts of the transition will likely vary between and within regions – depending, for example, on communities’ resilience. Decreasing overall clothing consumption would be the most environmentally beneficial approach; however, it might entail decreasing jobs and affecting people who are already vulnerable. The regions that heavily depend on textile production might be the most vulnerable to such shocks. Countries and workers have different abilities to face shocks and changes to global trading patterns and demand. On the other hand, some textile jobs currently face indecent conditions, and the industry has already contributed to pollution and resource scarcity. The transition to a circular economy in itself might not affect some of the root causes of those indecent conditions, such as power imbalances, but might enable some better practices, for example, through relieving time and prize pressures. Novel livelihood opportunities will result from this industry-wide transition, but such opportunities do not necessarily entail decent livelihoods.

As White (2020) explains, “just transitions will have to be imagined and built, fabricated and realised, coded and created.” Like just transitions, circular economy must also be imagined, built, fabricated, and realized – coded and created – and this process should integrate social justice. The goal should be an economy that centers humanity and nature’s well-being. The circular economy

could offer such a structure, but the concept must be considered and designed through new ideals, integrating social justice and environmental sustainability.

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