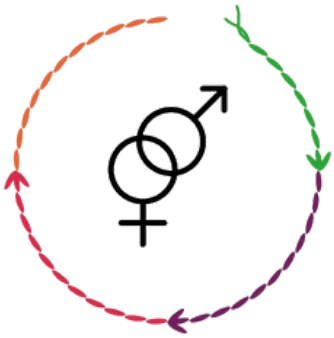
CIRCULAR STRATEGIES AND SOCIAL IMPACTS IN THE SPANISH TEXTILE VALUE CHAIN



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ABOUT

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This report is part of a larger collaborative four-year research project. Founded by Laudes foundation and having as partners of Utrecht University, Conserve India in India, Smart Green Industry in Spain and Ashoka, for its Ashoka fellows. It analyses the Fashion Value Chain from a Global and local perspective with emphasis in India, Spain, and the Netherlands. Using a novel framework to assess social impact for CE called the SIAF-CE, the first phase of the research project aims to provide evidence of quality of jobs, community wellbeing and gender equality of applied circular strategies in the fashion field. The second phase is concerned in co-designing alongside of key stakeholders of the global apparel value chain, images of the future that are both circular and inclusive and that leaves no one behind. The series of inclusive Circular fashion Futures workshops uses techniques of futuring (ToF), to develop inclusive circular fashion pathways for the industry of 2050 and aims at developing a set of policy and industry recommendations to increase uptake of inclusive circular fashion. The third phase comprises a piloting phase with both startups and incumbents where a selection of environmental and social impact recommendations and will be implemented and evaluated with different businesses in the three countries. Finally, the fourth phase consists of an analysis of power dynamics, barriers, opportunities, threats, and levers to a transition to a more Inclusive, and fair circular fashion Apparel Value Chain.

The research team is led by Lis Suarez-visbal Ashoka fellow and Dr. Ir. Jesus Rosales-Carreón and composed of members from Utrecht University and the Copernicus Institute of Sustainable Development. The team also includes the two poles that connect the research with India, from the organisation Conserve India, and with Spain, from Smart Green Industry.

This report is based in the scientific publication called "The Social Impacts of Circular Strategies in the Apparel Value Chain; a Comparative Study Between Three Countries" by Lis J. Suarez-Visbal et al, 2022 published in the journal Circular Economy and Sustainability in September 2022. See the whole publication in this link.

SPAIN AND THE GLOBAL TEXTILE & APPAREL VALUE CHAIN

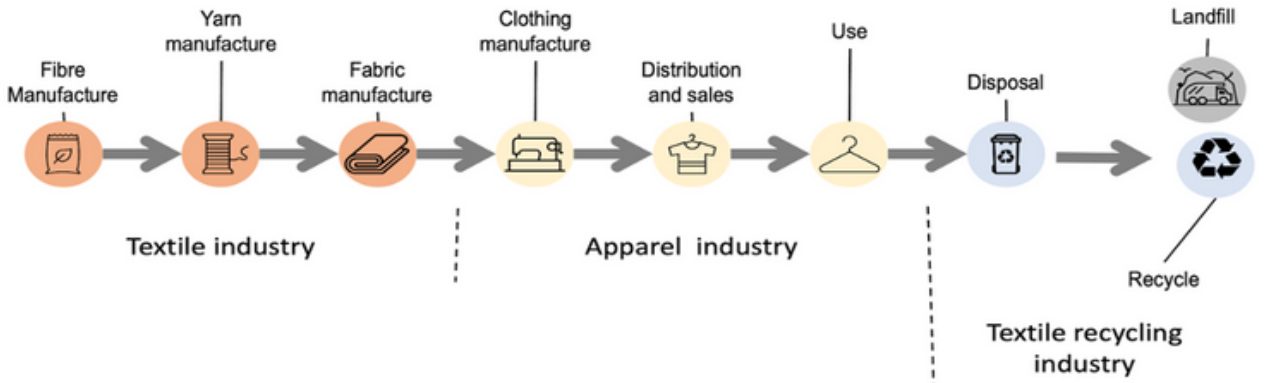
When analysing the sustainability impacts of textiles, it is essential to consider the whole value chain. The global textiles and apparel (T&A) value chain is composed of at least three main industries, operating across multiple geographical locations. As shown in figure 1, i) Textile, where raw materials (fibre, yarn, and fabric) are created, ii) Apparel, where raw materials are processed into clothing and distributed to end consumers and iii) Recycling which involves different stages of collection *of used textiles*, sorting, recycling, and final disposal (Thangavel & Duraisamy, 2014).

According to an estimate constructed from various sources, the global Textile and Apparel subindustries employ at least 430 million people (excluding jobs in synthetic, cellulosic fibres, leather, wool manufacturing, and retail sectors [1], representing 12.65% of the World Bank's 2017

[1] Whilst they include workers in the major garment producing countries, they do not include workers in all countries. They don't include workers involved in the manufacture of synthetic fibres, or cellulosic fibres – which account for substantial shares (65% and 8.7% respectively) of global fibre consumption. They don't include workers in the retail sector or agricultural workers involved in raising cattle or sheep for leather or wool production.

global workforce estimate of 3.4 billion (Common Objective, 2018).According to a 2020 report, the potential number of jobs if Europe's 12 million tons of annual textile waste were properly sorted, is estimated 24 possible jobs for every 1,000 tons produced (AERESS, 2020, p.22).

Figure 1. The Textile and apparel value chain



Source: Suarez-Visbal et al 2023

Within the last four decades, the Spanish T&A sector has faced significant challenges, including national and global financial crises, a shift towards European integration in the 1980s, and the continuous struggle to contend with lower-priced imports (boosted in 2005 by the elimination of import quotas previously established by the Multi-Fiber Arrangement). The combination of these factors consistently decreased domestic production output. In addition, competing with cheap manufacturing labor from China and developing countries notably reduced the many jobs once offered by the industry (Costa, M.T. & Duch, N. 2005). Nevertheless, the sector is still vital to the Spanish economy and plays a significant role in the European textile field. A study conducted in 2020 found that Spain's T&A sector (excluding the textile recycling sub-industry) sustained its presence through over 60,000 points-of-sales, resulting in 2,8% of the national GDP and contributing 6 billion Euros in taxes. It represented 4.1% of the job market and claimed 8.7% of all exports (Ernst & Young, S.L., 2020). After Covid-19, the sector generates approximately 127,000 jobs (Herranz, F. 2022).

As for the textile recycling sub-industry, detailed information about employment is scarce. However, some studies can help us understand the number of jobs in this sector. In Spain, 890.244 tons of textile waste are generated annually, of which only 108,296 tons are sorted (Moda-re, 2021, p.33). Applying the previous calculation to these figures, we could estimate around 2,500 current textile recycling jobs and an additional 19,000 positions if the totality of textile waste was properly sorted.

ENVIRONMENTAL AND SOCIAL CHALLENGES IN THE SECTOR

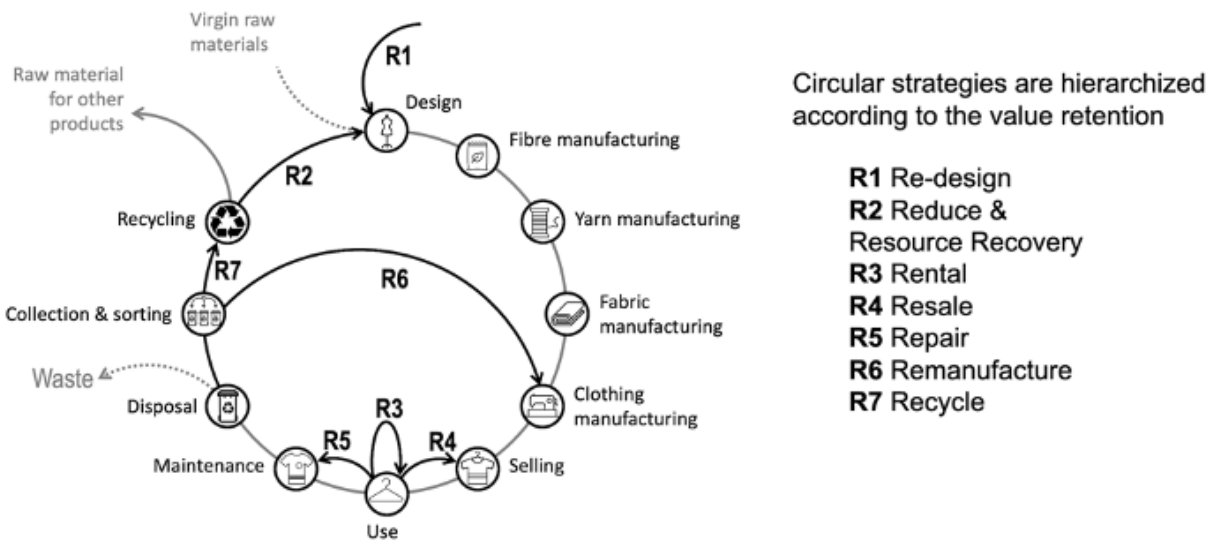
Despite being recognised as one of the most economically relevant industries, the T&A sector exhibits severe sustainability problems, ranging from the extraction of raw materials to the end-of-life phase. The environmental challenges include the overexploitation of resources, such as water in the extraction and manufacturing stage, soil and water pollution, and greenhouse emissions (EPRS, 2017; UN, 2018). Water pollution is caused by the discharge of untreated effluents such as dyes and other chemicals during production and the release of microfibers during the (consumer use) washing of synthetic garments. These microfibers can eventually enter the food chain via fish consumption, creating a human health issue (Mers, T. 2020). Additionally, more than 1 million tonnes of textile waste, mostly from households, makes its way to landfills every year, increasing soil and air pollution and contributing to the greenhouse effect (Bairagi, N. 2017).

Apart from the environmental concerns, the T&A value chain is also laden with critical social impacts. According to the International Labour Organisation (ILO) (2015), most workers at the manufacturing stage work under questionable conditions, where penalties for not meeting production targets, verbal abuse, lack of voice and representation, and excessive overtime are common. Additionally, the global recycling industry is known to have high levels of informality, where workers' voices and representation rights are minimal, and where the risk of accidents and health issues is very prominent (Priya, S., & Gupta, S. 2020). In Spain, the most vulnerable workers in the recycling phase often lack formal contract agreements. Cases of refugee and illegal migrant exploitation have also become prevalent (Suarez-Visbal et al.; 2022b).

CIRCULAR ECONOMY AS A SUSTAINABLE ALTERNATIVE TO THE LINEAR APPAREL VALUE CHAIN

Striving to achieve sustainability with positive environmental, economic, and social considerations, businesses are adopting the Circular Economy as a new production model (Henry et al., 2020). Explained in simple terms, the Circular Economy aims at minimising resource flows (input of raw materials and output of waste) by implementing different circular strategies (CS) that extend the life of materials and products, reducing negative impacts on the environment and creating new job opportunities. The seven most relevant CS in the T&A value chain, represented in figure 2, use an R and a number to illustrate implementation hierarchy. The smaller the number, the higher the priority (Guldmann,

Figure 2. The circular Strategies used in the textile and apparel value chain



Source: Suarez-Visbal, Stuckrath, & Rosales Carreón. (2023). Circular Economy: An overview of global trends, challenges, and opportunities. In Accelerating Sustainability in Fashion, Apparel & Textiles. Manuscript submitted for publication.

2016; Stahel, 2016; Jung & Jin, 2016; Accenture, 2019). These strategies close the loop of materials with different processes, where a shorter loop represents a higher product value retention (Kirchherr et al., 2018).

While different businesses address the economic and environmental dimensions of CE, the social impacts (such as decent pay, gender equality, and labour conditions) have not yet garnered sufficient attention (Elia, Gnoni, and Tornese, 2017; Millar, McLaughlinand Börger 2019; Suarez-Visbal et al.; 2022b). CE's social dimension has been defined in literature by the number of jobs created (Millar, McLaughlin, and Börger, 2019). This definition is incomplete as it does not consider the type of job, its quality, and the potential individual and community impacts or trade-offs between different kinds of workers (Suarez-Visbal et al., 2022b).

THE SPANISH CIRCULAR ECONOMY AN OVERVIEW

Locally, Spain has an evolving ecosystem to promote CE. In terms of policy, it has developed a Circular Economy (CE) strategy with special provisions for the T&A sector, known as the "Spanish CE Strategy and action plans 2030". This policy draws from the European green deal and the European strategy for Circular textiles (Suarez-Visbal et al., 2022b). Additionally, the ecosystem includes businesses of all sizes, NGOs, academic institutions, and think tanks strengthened by government-sponsored programs and funds. However, there is still a lot of fragmentation in the sector, and companies continue to operate in silos. According to interviews conducted by Suarez-Visbal et al. (2022b), the ecosystem is not fully functional as there is an enormous gap separating two sides of the value chain: manufacturers with recyclers and recycled textiles. Furthermore, even though consumers are now receptive to more sustainable products, circular businesses still struggle to increase their sales and create sustainable incomes (Suarez-Visbal et al., 2022b).

According to Suarez-Visbal et al. (2022b), the most prominent Circular strategies in Spain

are rental (R3) and resale (R4), catapulted by B2C (business to costumers) and C2C (costumer to costumer) platform models. Yet, Resale (R4) has an additional presence through NGOs and businesses, running vintage shops and second-hand stores. Repair (R5) is a traditional craft operated by independent workshops. However, innovation in the sector has started through a recent movement of green tech start-ups offering monthly subscription models to clients and self-employment entrepreneurial opportunities via franchise mechanisms. Finally, recycling (R7) in Spain, as in other countries, is mainly mechanical and labor intensive (Suarez-Visbal et al., 2022b).

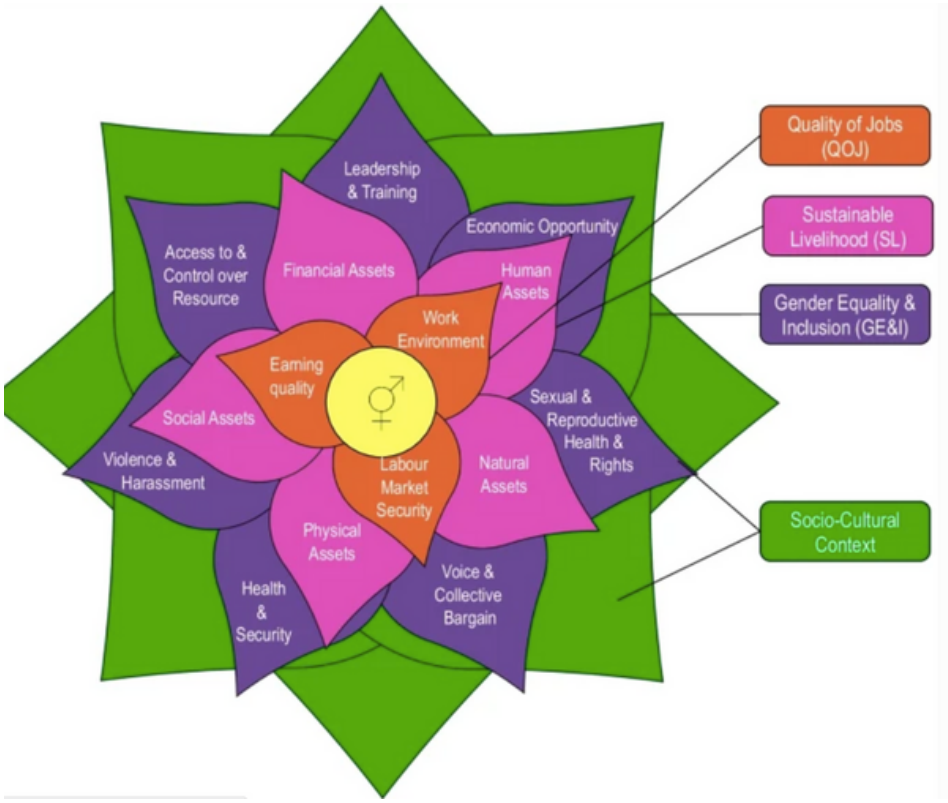
Additionally, according to TEXFOR, Spain is considered the leading manufacturer of recycled fiber in Europe. Producing around 61.000, of which 50.000 tons derive from pre-consumer textile waste (Moda-re, 2021, p.18). The estimated textile waste rate in Spain (19kg/person/year) has made the country a top European exporter of second hand-clothing. And while this includes more than 60% of the municipal textile recovered, only 12,16% of the country's total textile waste is recovered and sorted for recycling (Moda-re, 2021)

*Photo: *Love not landfill*

THE SOCIAL IMPACTS OF CIRCULAR STRATEGIES IMPLEMENTED BY SPANISH BUSINESSES

Until not long ago, there was no framework to assess the social impact of CE (Millar, McLaughlin, and Börger, 2019).Suarez-Visbal et al. (2022a) recently presented the SIAF-CE⚥ (figure 3), the first attempt to construct a social impact assessment framework for circularity. It takes workers' perspectives to address critical issues in the T&A VC, such as gender inequality, inclusiveness, and just transition. The SIAF-CE⚥ measures 15 composite, multi-attribute, qualitative indicators within three dimensions; the quality of job dimension (QOJ), the wellbeing/sustainable livelihood dimension (SL), and gender equality and inclusivity (GE&I). This framework was developed to help businesses, NGOs, and government officials to i) collect relevant gender-disaggregated data of the workers; ii) track, document, and monitor the development of different circular jobs and iii) identify measures to improve the quality of life of workers in the T&A value chain.

Figure 3. The SIAF-CE (Social impact framework for Circularity)



Source: Suarez Visbal et al. 2022(a)

Suarez Visbal et al. 2022(b) used the SIAF-CE⚥ to provide evidence of the current social impact of circular strategies in three countries, including Spain. With a sample of over 210 workers surveyed and 90 managers and experts interviewed in the three countries [2], they developed an inventory of circular jobs with respective demographic (annexe #1).

This study evidenced that in Spain, businesses employing CS in the T&A sector shared very similar characteristics to the traditional linear AVC, with few specific exceptions. For example, even though most people involved in rental (R3) are white-collar workers: young, single females, with 60% of them obtaining permanent contracts, those that do attain high earnings (for both male and female workers) experience a low level of labour security since 100% of the companies are start-ups (fig.4). Even though it shows a potential to generate higher earning quality and reduce pay gap inequalities.

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In resale (R4), a split between platforms and traditional NGO run brick and mortar is present. In the later, most hired staff are part-time, short-term, minimum wage-earning workers, much like in the traditional retail sector; while platform resale jobs show higher salaries but benefiting less women workers. Volunteers and interns are prominent due to the notable presence of NGOs and start-ups. A not-for-profit running a brick and mortar outlet reported that of the 1,136 people they employ, 53% are female workers, and 48% of the positions are reserved for those suffering or at risk of social exclusion (Moda-re, 2022)

In repair (R5), women hold approximately 66% of the jobs, but they are mainly part-time positions with salaries close to minimum wage. And in remanufacture (R6), see figure 4, pronounced gender pay gaps are present, favouring males even though most machine operators and tailors are women (Suarez-Visbal et al., 2022b).

[2] The total sample size for the study conducted by Suarez-Visbal et al. included individuals (both directly and indirectly) involved in implementing CS for both start-ups and established companies. The population in Spain was comprised of 30 interviewees and more than 55 people surveyed. Care to attain an equal representation of female and male workers was taken.

Figure 4. The social impact of selected Spanish Circular strategies

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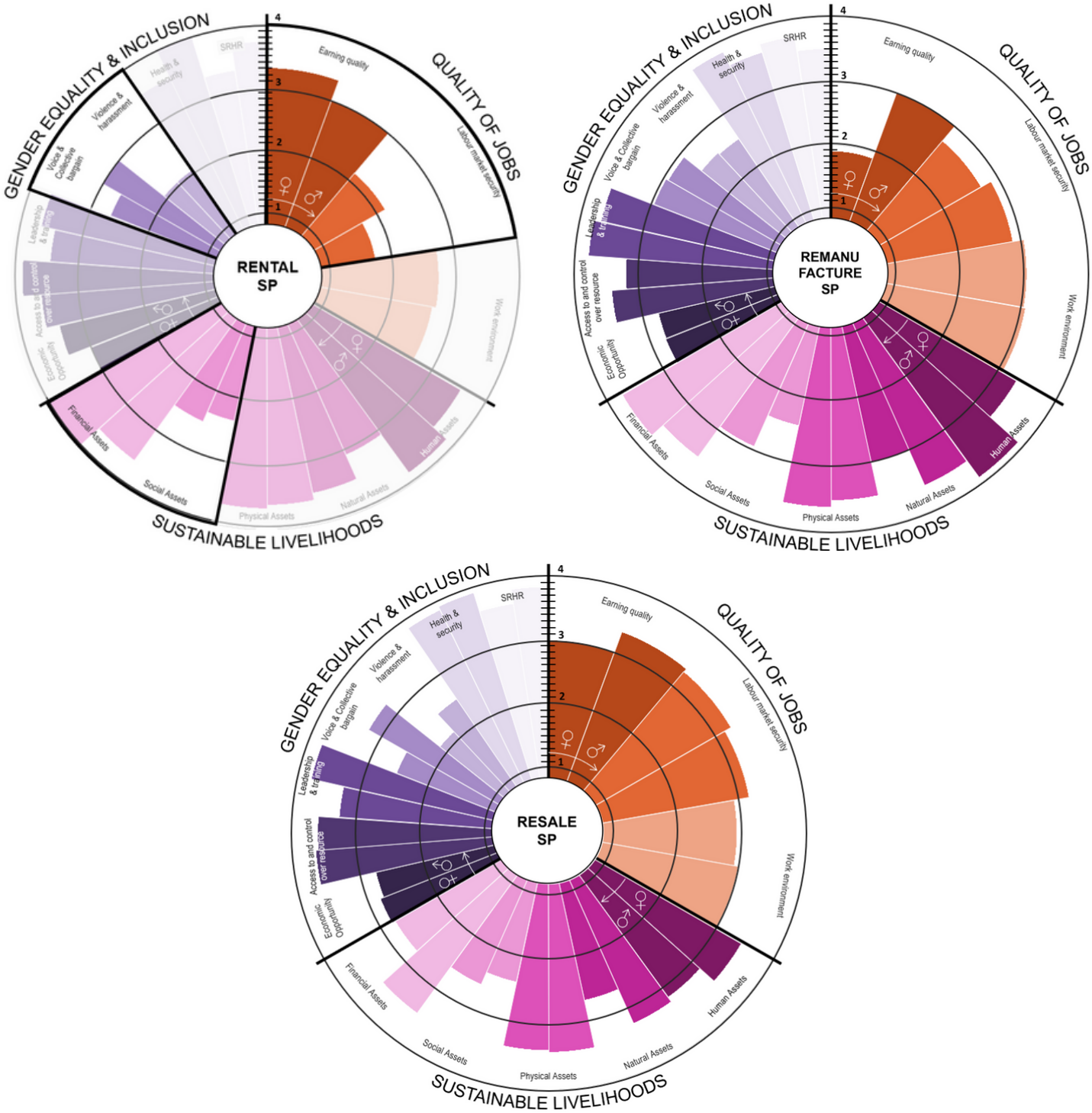

Source: Suarez-Visbal et al., (2022b).

Even though a substantial presence of NGOs and social businesses comprises recycling (R7), the quality of jobs is lower because earnings also gravitate towards the minimum wage. Additionally, this segment suffers from high informality and a continuous influx of illegal workers (Suarez-Visbal et al., 2022b).

Furthermore, in terms of gender equality and inclusivity, it seems that violence and harassment, and collective bargaining are lower for Resale (R4), rental (R3), and remanufacture (R6), as seen in figure 4.

Unfortunately, as applied today is seems that CE jobs are not equally transformative for workers, especially for women workers. Critical attention to gender equality and equal opportunities for all workers are essential. Real growth opportunities, better salaries training in desirable skills should be present. The Job of social enterprises is considerable in the sector, however, more attention should be focus on creating lasting quality jobs for the workers, their families, and their communities, rather than only focusing in creating jobs. (Suarez-Visbal et al., 2022b).

These findings show the imperative of a just and inclusive transition of the Circular Economy in the sector. If CE is to be considered the new economic and societal model to adopt, businesses and policymakers must work hand in hand to establish a stronger social impact ambition in their definition of Circularity in the sector.

CONCLUSION & RECOMMENDATIONS

The adoption of the CE model represents an opportunity for countries like Spain to reduce their environmental impact while creating an economic gain. Although, as of now, CS show certain similarities with the linear AVC, like gender inequality, the uncertainty of working conditions low labour security and in some cases low earning quality, promising aspects that can be secured and further developed are present.

Additionally, start-ups can play a pivotal role in bringing social impact, but it must be intentional and clearly articulated within the circular mission and business strategies of the company. Socio-economic considerations must be integral to have a positive social impact.

For an inclusive circular transition of the sector, businesses adopting circular strategies should:

1. Conduct an Impact Assessment (including social and environmental considerations)

- This Assessment will help management to identify (high-hierarchy circular strategies) and potential hotspots and trade-offs of their current model.
- Use a social impact assessment tool (such as the SIAF-CE or any other) to understand the social gaps and opportunities to improve the quality of life of their direct and indirect workforce and establish along with workers collective KPI.
- Report on environmental and social impacts associated with circular strategies/practices identifying existing commonalities and potential collaborations.

2. Redesign the Business circular hierarchy

- Ensure, via training & capacity building, that both upper management and operations are aligned to the definition of circularity and its goals.

3. Improve social impact by

- Support the creation of workers committee that allows voicing their opinion on decisions that concern them.
- Revising workers' contracts to guarantee equal working conditions for male and female workers for the same job are respected and enforced.
- Privilege fixed extended contracts over short-term contracts with highly fluctuating hours-based jobs.
- Collaborate with local and community NGOs to reduce the vulnerability of informal workers by transitioning to more community organised and formalised jobs that offer more security.

4. Develop a stakeholderMapping and Collaboration

- Align and develop collaborations with direct and indirect upstream and downstream stakeholders of the respective value chains, including international brands, governments, NGOs, and local vocational training centres, to address collec©tively most pressing social and environmental impacts of circularity.
- Identify common needs and co-develop skills training for their employees (especially women) in areas such as circular design, machine operation, communication, and IT,in preparation for the advancement of automation and possible shifts in employment demands.

ANNEXE 1

Gender baseline of Circular jobs in the Spanish T&A Value chain

CIRCULAR STRATEGY	JOBS	SOCIO-DEMOGRAPHICS/GENDER BASELINE					
		EDUCATION	GENDER	AGE	MARITAL STATUS	MIGRATION	CHILDREN
REPAIR	Floor Staff (Machine operator)	66% secondary school 33% technical degree	100% women	66% 36-60 33% 51-65	100% married or de facto with children	33%	100% less than 3
RENTAL	Management (Manager)	60% university 40% other (no education)	40% men 60% women	80% 19-35 20% 36-50	20% married or de facto with children 80% single	0%	60% no child 20% less than 3 children
RESALE	Design + Management (Manager, Floor Manager, Designer)	67% university 33% other	50% men 50% women	33% 19-35 67% 36-50	17% married or de facto with children 66% married or de facto without children 17% single	17%	17% no child 17% one child 33% less than 3 children
	Floor Staff (sales assistant, marketing)	50% university	100% women	100% 19-35	83% single	50%	67% no child
REMANUFACTURE	Design + management (manager, project manager, designer)	40% university 10% technical degree 50% other	30% men 70% women	40% 19-35 60% 36-50	30% married or de facto without children 70% single	0%	80% no child
	Floor Staff (tailor, buyer, sales assistant)	11% primary school 11% secondary school 56% university 22% technical degree	11% men 89% women	33% 19-35 56% 36-50 11% 51-65	44% single 56% married or de facto with children	33%	67% no child 22% less than 3 children 11% less than 5 children
RECYCLE	Floor staff (technician)	66% secondary school 33% technical degree	100% women	66% 36-50 33% 51-65	66% married or de facto with children	33%	33% no child 33% one child 33% less than 5 children

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