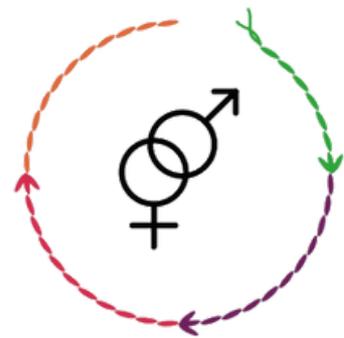


# The Social Impacts Of Circular Strategies In The Indian Textile and Apparel Value Chain



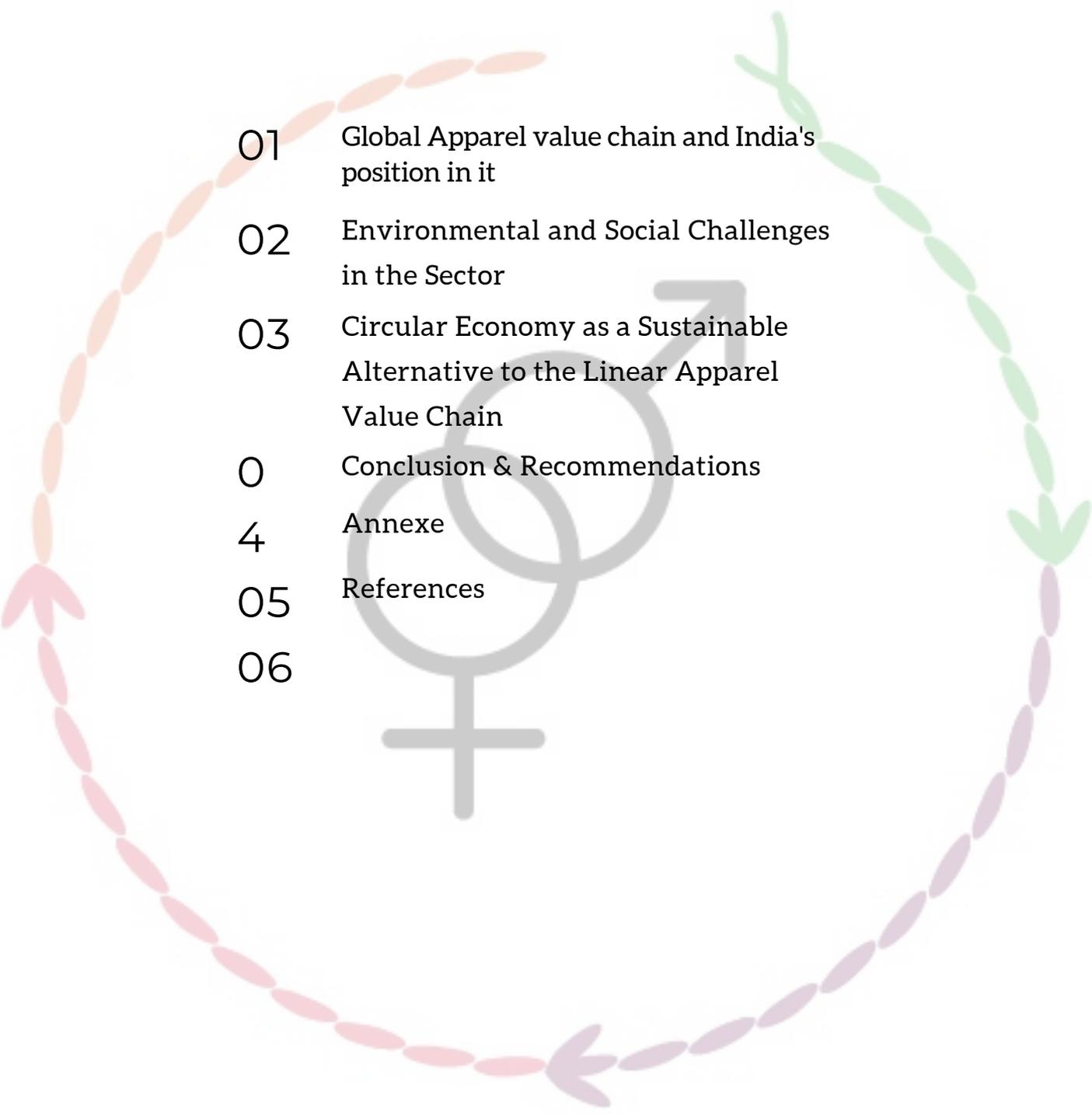
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# ABOUT

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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](#). This report was originally published as an [article](#) in the Circular Economy journal published on 28 February 2023 by the International Council for Circular Economy with the Indian Plastic Institute.





## INDIA AND THE GLOBAL APPAREL VALUE CHAIN

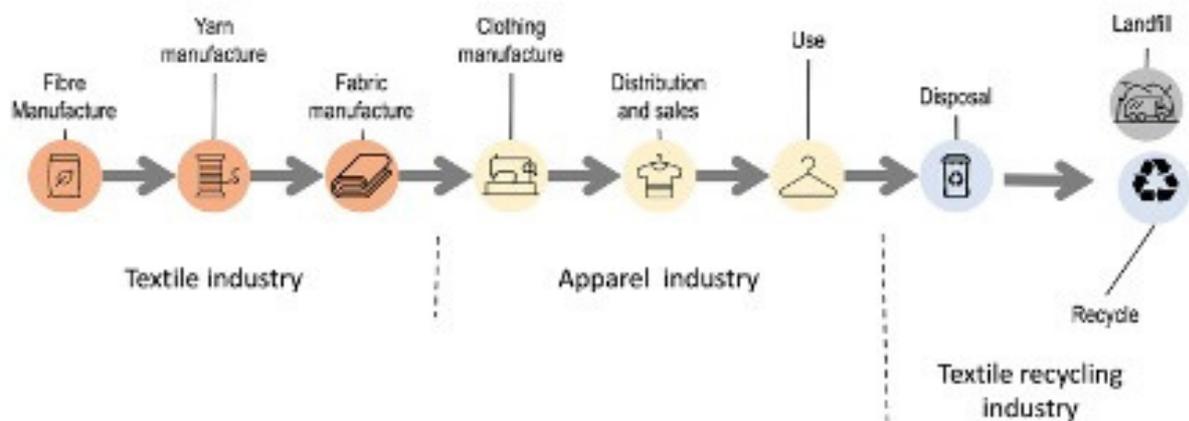
The global textiles and apparel (T&A) value chain is a composition of at least three main industries operating across multiple geographical locations, i) Textile, where raw materials (fibre, yarn, and fabric) are created, ii) Apparel, where raw materials are processed into clothing and distributed to end consumers and iii) Recycling which involves different stages of collection of used textiles, sorting, recycling, and final disposal (Thangavel and Duraisamy 2014). Globally, it employs 9.3 per cent of the working population and creates a source of livelihood for millions of workers, as shown in figure 1 (De Souza et al., 2010; Franco, 2017; Ozturk et al., 2016; World Bank, 2013).

India's textile and apparel industry forms 11 per cent of the country's total exports basket (Raichurkar and Manickam 2015). The Indian textiles sector, currently sized at USD 108 billion, is expected to grow to USD 141 billion by 2021 (CITI, 2018; Baskaran et al., 2012; Verma, 2002), making it the fifth-largest



exporter of textiles and apparel in the world (UN Comrade and Wazir Analysis 2021). The existence of over 3000 spinning and composite mills across India explains why it is an outsourcing hub for the global T&A value chain (CITI, 2018; Baskaran et al., 2012; Verma, 2002). It is also the second-largest employer in the country after agriculture. It is also a direct source of employment for 45 million people and indirectly for around 60 million people.

**Figure 1 The Textile and apparel value chain**



*Source: Suarez-Visbal et al 2023*

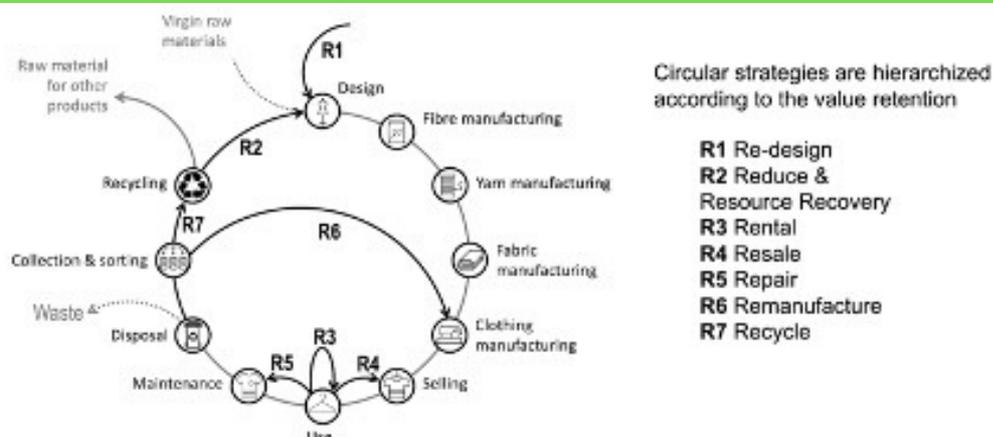
Panipat, globally known as the Handloom City in the textile recycling sector, has become a hub for the recycling industry. This industry currently employs around 20,000 people and brings over \$62 million in annual revenues (Sikka et al., 2018). While Panipat may be helping in managing the discards of the planet, on the other hand, the textile-recycling business in India abounds with unattractive features.



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

In an attempt to adopt a new framework to achieve sustainability compliant with environmental, economic, and social considerations, businesses in India and across the world are adopting the Circular Economy as a new production paradigm (Henry et al., 2020). The Circular Economy helps reduce environmental impacts by minimising resource flows (input of raw materials and output of waste) via the implementation of different circular strategies. These Circular strategies (CS) close the loop of materials with different processes where the shorter the loop, the higher the product value retention (Kirchherr et al., 2017). These circular strategies in the T&A sector are identified in figure 2, with an R and a number that illustrate the implementation hierarchy. The smaller the number, the higher the priority (Guldmann, 2016; Stahel, 2016; Jung & Jin, 2016; Accenture, 2019). While economic and environmental dimensions have been addressed by different businesses, the social impacts of CE (e.g., decent pay, gender equality, labour conditions) are low (Elia, Gnoni, and Tornese 2017; Millar, McLaughlin, and Börger 2019; Suarez-Visbal et al.;2022b).

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



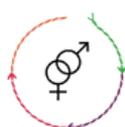
Source: Suarez-Visbal, Stuckrath, & Rosales Carreón. (2023). Circular Economy An overview of global trends, challenges, and opportunities. In *Accelerating Sustainability in Fashion, Apparel & Textiles*. Manuscript submitted for publication.



While there are many social impact considerations, CE's social dimension has been defined in literature mainly by the number of jobs created (Millar, McLaughlin, and Börger, 2019). This is not a well-rounded definition since 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., 2023). Until not long ago, there was no framework to assess the social impact of CE (Suarez-Visbal et al., 2022) (a) recently presented the *SIAF- CE $\phi$*  (figure 3 left-side), a 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 $\phi$*  measures 15 composite, multi-attribute, qualitative indicators within three dimensions; the quality of job dimension (QOJ), the wellbeing /sustainable livelihood dimension 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.

Suarez Visbal et al. 2022(b) used the *SIAF-CE $\phi$*  to provide evidence of the current social impact of circular strategies in the Indian context (see figure 3 right-side). With a sample of over 100 workers surveyed and 40 managers interviewed in India, they developed an inventory of circular jobs with respective demographic (annexe 1). They found out that India has low quality of jobs due to the rather low wage and job security indicators (especially for female workers). They also brought evidence of the significant disparity between male and female workers for the same position when different circular strategies are implemented.

Additionally, they corroborate that informality plays a critical role for workers in repair (R3) and resale(R4). Furthermore, both male and female workers in these CSs have the lowest social security level and have the lowest earnings. They also have the lowest access to financial assets in the livelihood dimension, as their earning and saving capacity are hampered due to the low income generated. These findings suggest that informal women migrant workers active in resale (R4) and recycling(R7) are the most vulnerable workers as they do not have minimum rights guaranteed and have the lowest voice and bargaining power.



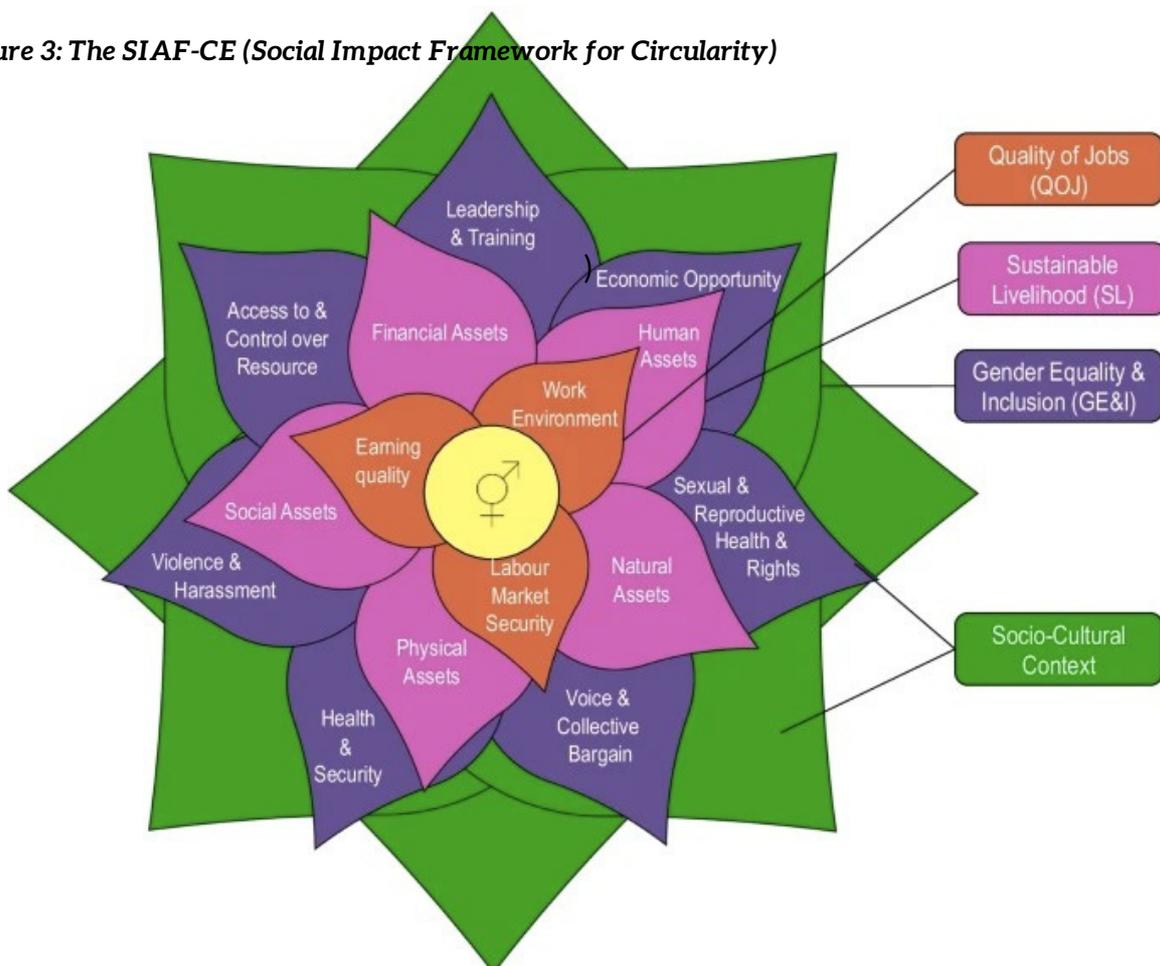
Even though they seem to consider working conditions as high, as they can have great flexibility in organising their workload, this perception might be shadowed by the lack of comparison with other types of working conditions and the fact that overtime is also significant in this group of workers.

Another interesting finding is that resale (R4) and rental(R3) based on internet platform models have the highest earning quality among the different circular strategies compared, true for both male and female workers. However, the rank on position and the pay gap amongst gender for the same position persist (Suarez-Visbal et al., 2022) (b). 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 follow, businesses and policymakers must work hand in hand to establish a stronger definition of social consideration for the Circular Economy.

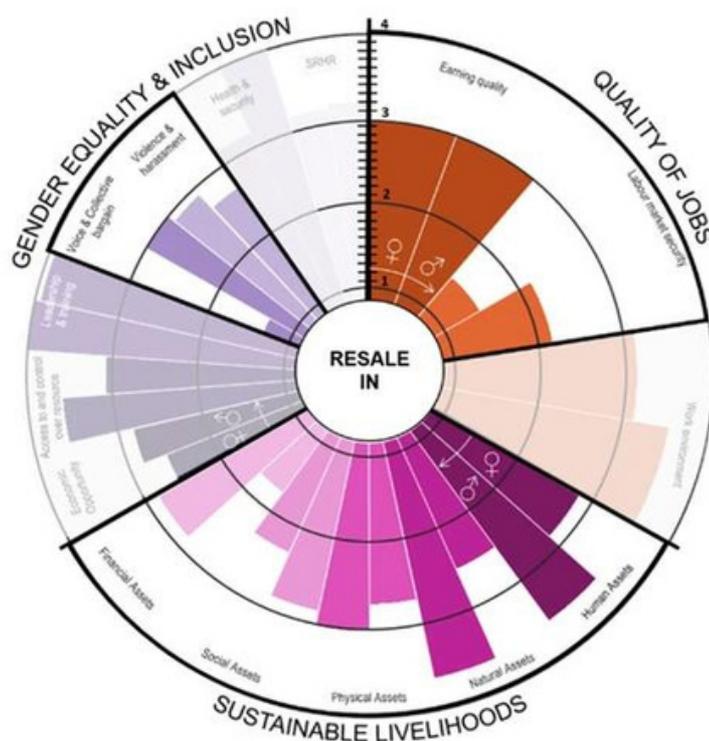
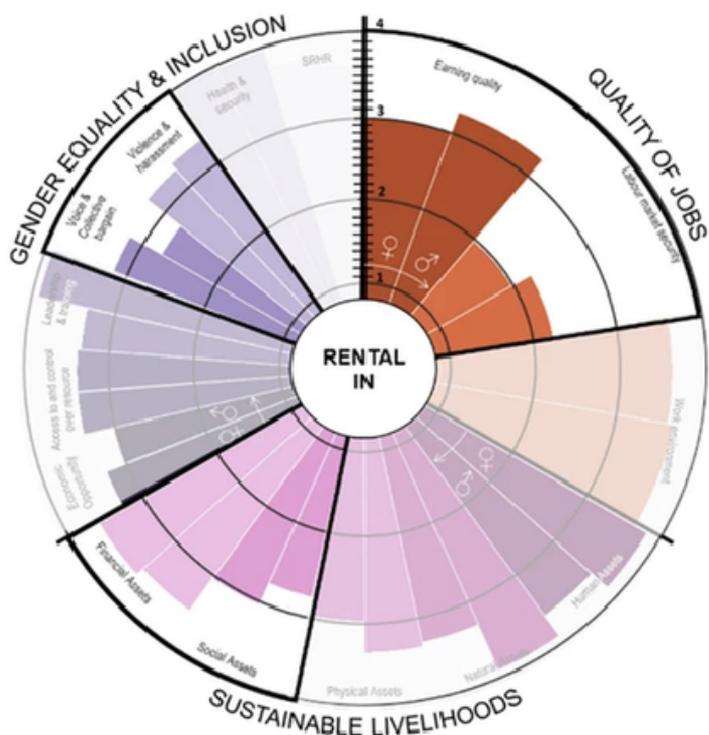
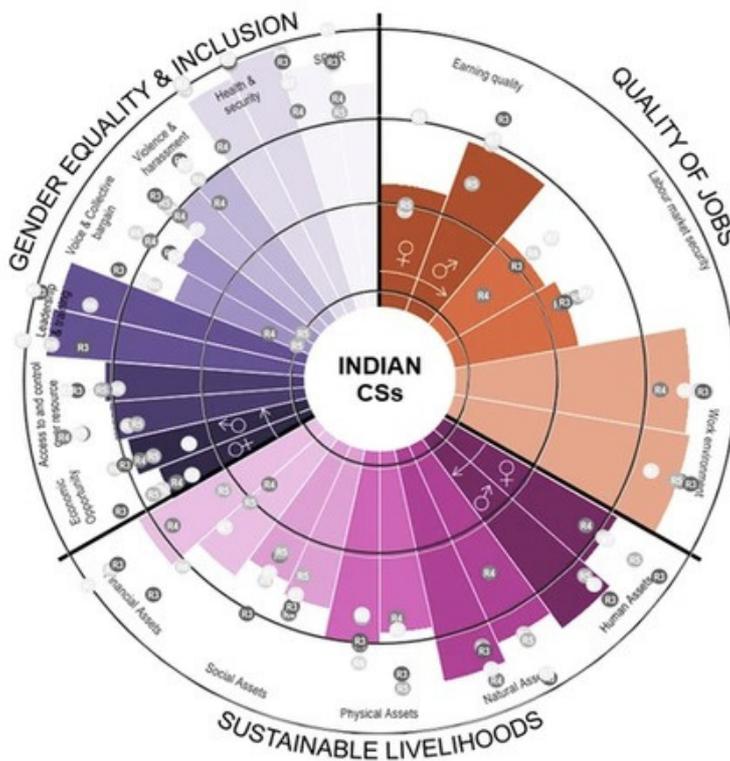
**Figure 3: The SIAF-CE (Social Impact Framework for Circularity)**



**Source: The social impact of circular strategies in the Apparel Value Chain; a comparative study between three countries (Suarez-Visbal et al., 2022b)**



Figure 4: Visual representation of SIAF-CE results in India



Source: The social impact of circular strategies in the Apparel Value Chain; a comparative study between three countries (Suarez-Visbal et al., 2022b)



# CONCLUSION & RECOMMENDATIONS

The Circular Economy represents a great opportunity for countries like India to reduce their environmental impact while creating an economic gain. However, to have a positive social impact, socio-economic considerations must go from the simple creation of jobs to the creation of jobs with good quality for the workers and their families. This should be accompanied by offering at least equal access to opportunities and inclusion to a variety of workers.

As a pivotal player in the global T&A, India must be mindful of the potential trade-offs that can be produced if circularity is applied in other segments of the global T&A value chain. Businesses willing to adopt circular strategies in their business model should:

- Conduct a circular assessment for their business that helps them to identify higher and multiple circular strategies to their current model. Collect, monitor, and report on environmental and social impacts associated with circular strategies/practices.

- Develop resources and stakeholder map to identify synergies and common barriers that can be developed in collaboration with direct and indirect upstream and downstream stakeholders of their respective value chains.

- Make sure both upper management and operation are aligned on the definition of circularity for the business and aligned in the goals and roles.

- Revise workers' contracts to guarantee equal working conditions for male and female workers for the same job is respected and enforced.

- Facilitate the association of workers that allows voicing their opinion on decisions that concern them.

- Reduce worker's contract uncertainty, ensuring workers access to social security governmental schemes in hard times.

- Privilege, when possible, fix extended contracts over short, highly fluctuating hours jobs.

- Work with local and community NGOs to reduce the vulnerability of informal workers by transitioning to a more formalised job offering more security.



- Collect data using 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.
- Finally, companies should work with international brands, local governments, NGOs, and vocational training centres to identify and plan ongoing skills training for their employees (especially for women workers) in areas such as machine operation and communication and IT as a preparation for the advancement of automation and possible shifts in employment demands.



## Current Circular Jobs Inventory with Demographics in India

CIRCULAR STRATEGY	JOBS	SOCIO-DEMOGRAPHICS/GENDER BASELINE						
		CONTRACT	GENDER	AGE	EDUCATION	MIGRATION	MARITAL STATUS	CHILDREN
REPAIR 	Self-employed (informal worker) (tailor, sewing machine operator, dry cleaner, repair worker, cobbler)	67% men no contract 88% men overwork  100% women no contract 100% women work part-time  75% men	82% men 18% women	27% 19-35 55% 36-60 18% 51-65	27% of primary school 46% of secondary school 9% university 18% others (not educated)	0%	100% married or de facto with children	9% 1 child 27% less than 3 64% less than 5
	Management (Manager, HR Manager)	permanent contract 100% men overwork 100% women permanent 100% women overwork	75% men 25% women	100% 19-35	100% university	0%	25% married or de facto with children 50% married or de facto with no children 25% single	75% no child 25% one child
RENTAL 	Floor Staff (Sales Assistant, Tailor, Logistics Clerk)	60% men permanent contract 100% men overwork 100% women permanent contract 100% men permanent contract	67% men 33% women	100% 19-35	50% university 50% secondary school	0%	33% single 17% married or de facto with no children 50% married or de facto with children	50% no child 17% one child 33% less than 3 children
	Self-employed (informal worker) (Shopkeeper, independent repairer)	permanent contract 100% men overwork 100% women no contract 100% women overwork	44% men 56% women	11% 19-35 22% 36-50 67% 51-65	22% secondary school 78% other (no education)	0%	89% married or de facto with children 11% single	11% no child 44% more than one child 33% less than 5 children
RESALE 	Floor Staff (sales assistant, technician, logistics clerk)	90% men permanent contract 10% men yearly contract 100% men overwork 100% women yearly contract 100% women overwork	91% men 9% women	55% 19-35 45% 36-50	36% secondary school 55% University 9% Technical degree	0%	64% married or de facto with children 9% married or de facto with no children 27% single	36% no child 18% one child 36% less than 3 children
	Design + management (manager, designer)	100% men overwork 75% women permanent contract 25% women yearly contract 100% women overwork	60% men 40% women	40% 19-35 60% 36-50	40% university 60% secondary school	0%	60% married or de facto with children 40% single	40% no child 60% less than 3 children
REMANUFACTURE 	Floor Staff (sewing machine operator, technician, logistics clerk, tailor, thread clipper)	50% men permanent contract 75% men overwork 54% women permanent 46% women no contract	38% men 62% women	46% 19-35 43% 36-50 5% 51-65	2% primary school 46% secondary school 15% university 21% other (no education)	46%	10% single 72% married or de facto with children 3% married or de facto with no children 6% divorced with children	55% more than one child 30% less than 3 children 15% less than 5 children
	RECYCLE 	Floor staff (logistics clerk, clipper)	100% men permanent contract 100% men overwork  100% women permanent contract 100% women overwork	17% men 83% women	67% 19-35 33% 36-50	33% primary school 33% secondary school 17% technical degree 17% other (uneducated)	0%	83% married or de facto with children 17% married or de facto with no children

Source: The social impacts of circular strategies in the Apparel Value Chain; a comparative study between three countries (Lis Suarez-Visbal et al. 2022b)

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