



Psychological and Behavioural Science

Weaving a web:

**How can the fashion industry be mobilised to increase
transparency about labour conditions in their supply
chain?**

Annabel Ross

Tarini Sharma

Elaine Shi

Victoria Waterböhr

London School of Economics and Political Science

**PB403 Psychology of Economic Life Summative coursework
March 2023**

**Course convenors: Dr. Fred Basso & Prof. Saadi Lahlou
Other teachers: Dr. Maxi Heitmayer**

Table of Contents

Background	3
1. Introduction	3
2. Problem identification	4
1. Buyer and supplier relationship.....	5
2. Multi-layered supply chain	5
3. Pressure and risk transfer.....	6
<i>Research question</i>	<i>6</i>
3. Methodology	7
4. Stakeholder analysis.....	7
Role of the Chief Purchasing Officer	9
Activity Theory and Installation Theory for the CPO.....	9
4. Theoretical analysis	13
<i>A. The awareness-intention gap.....</i>	<i>13</i>
<i>B. Intention-behaviour gap</i>	<i>13</i>
<i>C. Data challenges.....</i>	<i>14</i>
<i>D. Agency Theory.....</i>	<i>14</i>
<i>E. Installation Theory.....</i>	<i>15</i>
5. Suggested solutions	16
<i>A. Education programme.....</i>	<i>17</i>
<i>B. Employee incentive alignment.....</i>	<i>18</i>
<i>C. Digital supply chain mapping.....</i>	<i>19</i>
<i>D. Support progressive regulation for garment workers' rights.....</i>	<i>20</i>
6. Limitations and further research	21
7. Conclusion	22
References.....	24
Appendices	26
<i>Appendix A – Supporting evidence of problem.....</i>	<i>26</i>
<i>Appendix B – Garment journey.....</i>	<i>27</i>
<i>Appendix C – Blockchain case studies.....</i>	<i>28</i>
<i>Appendix D – Sample of initiatives working on human rights in fashion</i>	<i>30</i>

Background

On April 24, 2013, Rana Plaza, the manufacturing complex that housed 5 garment factories in Bangladesh collapsed, killing 1,132 workers (Rahman, 2022). The worst disaster in the global garment industry drew worldwide attention to the dark side of fast fashion. The “fast fashion” terminology describes a business model that mass-produces a high volume of cheap and fashionable clothing (Bick et al., 2018). The design ideas sampled from catwalks and celebrity culture are turned quickly into garments displayed in high street stores to meet consumers’ demand for catching the fashion trend (Turker & Altuntas, 2014).

With the rise of globalization, fast fashion now has an international supply chain where the production of garments is subcontracted to labour-intensive countries, such as Bangladesh, India and China (Backs et al., 2021). The garment and textile industry employs approximately 75 million people worldwide, with women forming 75% of the global workforce (Global Living Wage Coalition, 2018). Many retail companies in western countries like H&M cut across transnational borders to save labour costs and take advantage of lenient labour standards in other countries. This raises serious labour concerns in the supply chain, and the problem is exacerbated by the lack of transparency. In fact, 96% of the world’s largest fashion brands do not disclose key information regarding the number of workers in their supply chain paid a living wage (Fashion Transparency Index, 2022). A large part of the supply chain thus remains unknown.

Like others, end consumers also do not have visibility of the people who take part in production of the garments they buy (Fashion Revolution, n.d.). When asked, around 30% of people stated that they intend to buy ethically produced products, whereas, only 4% of them consume products that hold labels such as Fairtrade, FSC- and MSC-certified, etc. (Davies et al., 2012). This implies that consumers are aware, at least for the most part, of their unethical purchases. For this to change, one can educate or intervene the consumers or go directly to the fashion companies which are the powerful parties that are more likely to bring systemic change.

Hence, the fashions brands are deemed responsible for ensuring sustainability prevails along the supply chain (Hartmann & Moeller, 2014). Fashion companies are encouraged to do so not only because they should contribute to social sustainability, but also because open channels of communication and information in turn could play a crucial role in rebuilding consumer trust to help the business thrive (Bick et al., 2018). When this is done correctly, this could be a win-win situation. More importantly, if action is initiated from the inside, the most unethically sourced products will not even make it to the shelf, thus not giving the consumer the pressure and responsibility to make ethical purchases.

1. Introduction

As outlined in the background, the rise of fast fashion industry is accompanied by ethical issues along the supply chain. In fact, Anner et al. (2013) suggested that the primary root cause of worker exploitation within international supply chains lies in the sourcing practices of fashion brands and retailers. Given in recent

years, the labour situation has been exacerbated by growing competition among fast-fashion players and the disruptions in supply chains caused by volatile demand and the Covid-19 pandemic (Hedrich et al., 2021), the current fashion industry underwent significant changes and therefore worth re-investigation.

In this study, we first present three primary problems that arose from our literature review of the fashion industry: (1) buyer and supplier relationships, (2) multi-layered supply chains, and (3) transfers of pressure and risk. We arrive at our research question - **How can the fashion industry be mobilised to increase transparency about labour conditions in their supply chain?** - and briefly cover our methodology. The third section analyses stakeholders, and the study is situated in the context of a mass-market fashion company, focusing on the activity theory and installations of the Chief Purchasing Officer (CPO) as a strategic decision-maker in mitigating the problems identified. In section 4, we then examine the psychological and situational context to understand the challenges faced by our subject in achieving sustainable behaviours. After collating the scaffolds and constraints using Installation Theory, we propose four solutions that together seek to address the problems identified around transparency about labour conditions in fashion industry supply chains. Limitations and future research mark the end of our study, which seeks to challenge both the company in question and the fashion industry at large to keep the worst products off the shelf.

Table 1 - Summary of problems, theory, solutions, and success metrics presented in this study

Problems	Theories leveraged	Proposed solutions	Metrics of success
1. Buyer and supplier relationship	Awareness-intention gap Principal-agent theory Embodied competencies	A. Education programme B. Employee incentive alignment	Employees and suppliers are educated about working conditions. Incentives channel ethical behaviour. Contractual system is updated to include metrics about living wage, length is extended, and turnaround times don't require worker exploitation.
2. Multi-layered supply chain	Data challenges Physical affordances Social institutions	C. Digital supply chain mapping of company purchases e.g., blockchain	CPO and consumer have visibility of 75% of their supply chain, and disclose important information publicly
3. Pressure & risk transfer	Intention-behaviour gap Principal-agent theory Embodied competencies Social institutions	D. Support progressive regulation for garment worker's rights	Joint and legal liability for violations Cross-border tax for noncompliance Apparel advertising standards

2. Problem identification

We carried out a literature review to understand the social (as opposed to environmental) sustainability of fashion. Supply chain transparency is a core concept for this study and the definition used is the act of

sharing sustainability information with the public. In other words, it means more than having knowledge internally, and instead means sharing accurate auditable data on human rights responsibilities (Ruggie, 2011. p15).

1. Buyer and supplier relationship

Since fashion companies renew their stock as frequently as possible to attract consumers, the adoption of highly flexible and responsive supply chain strategies is essential to guarantee just-in-time sourcing - see Appendix A supply chain mapping (Turker & Altuntas, 2014). As a result, this trend in the industry leads to increasing recruitment of short-term labourers and faster turnaround times. Suppliers are accustomed to meeting purchasing demands requested by fashion brands, usually under uncertain circumstances. For example, Covid-19 pandemic led fashion brands to cancel more than \$40 billion orders without payment even when the work has already completed, resulting in devastating consequences for suppliers and workers (Fashion Transparency Index, 2021). The last-minute cancellation, along with delayed payments and the lack of legally binding contracts altogether contributed to the unstable commercial relationships between buyer and supplier, and eventually harming the lower-tiered workers (Guercini & Runfola, 2021). The information around purchasing practices and what action, if any, fashions brands are taking to stabilise their commercial relationships with suppliers remains opaque. Later in the essay we use principal-agent theory to explain why this might be and why transparency can help to address this.

2. Multi-layered supply chain

“The world’s second largest clothing retailer, H&M, sources from some 1,900 [first tier] factories in which about 820 suppliers ... employ about 1.6 million people. Beneath these factories lies a web of smaller suppliers, conducting embroidery, printing, washing, spinning, knitting, weaving, and dyeing, along with cotton growing, trading, and ginning” (LeBaron et al., 2018, p.42).

Given the fashion supply chain is multi-tiered and spread across the globe, it is difficult to track the working conditions surrounding the production of a garment. In a recent report, while 47% of fashion retailers publish the information of their first-tier suppliers who in the final stage of production oversee shipping garments to fashion warehouses, lower-tiered suppliers further upstream remained untraceable (Fashion Transparency Index, 2022). The lack of traceability leaves room for labour exploitation in smaller suppliers, where due diligence is less likely to reach. At the same time, the physical and contractual distance allows fashion companies to get away with labour issues without risking reputation damage (LeBaron et al., 2018). What is hidden behind the rhetoric and empty words of companies’ claims is the lack of accessibility to details necessary for scrutiny (Fashion Transparency Index, 2022).

Complex multi-tier sub-supplier networks are costly for businesses; when malpractices are exposed in their supply chains, there are detrimental effects on sales, shareholder value and reputation (Czinkota et al., 2014). Due to stakeholder demands and the fact that supply chain partners' activities can have a major impact on

mass markets, large companies are becoming more concerned with and accountable for the choices their lower suppliers make (Hartmann & Moeller, 2014; Touboul et al., 2014).

3. Pressure and risk transfer

“The only ham left in the sandwich is our labour costs. If they [the companies] squeeze us, it’s the only place where we can squeeze” – factory owner in South Africa (LeBaron et al., 2018, p.43).

The price that fashion companies pay has knock-on effects along the supply chain, as subsequent suppliers at lower tiers share the remaining slices of the pie. Although fashion companies attempt to reduce their retail prices to remain competitive in the market, they tend to target a profit margin, so lower retail prices get passed upstream to suppliers and workers. This imbalanced power between fashion brands and workers results in increasing risks and pressures on the lower levels of the supply chain, exacerbating the working conditions of garment workers (Fashion Revolution, n.d.). As a result, only 0.6% of the retail price of a tshirt goes to the pocket of the factory workers (Fairtrade International, 2022). Moreover, further to monetary exploitation, the faster turnaround time required by downstream buyers also leads to excessive overtime, fatigue, and increased vulnerability to other health issues for workers (Fashion Transparency Index, 2022).

Research question

The problems identified in our literature review led us to the research question:

How can the fashion industry be mobilised to increase transparency about labour conditions in their supply chain?

To frame the scope of this essay, we shall say briefly what this essay is not about. It is not about whether or how one can improve labour conditions. Furthermore, it is not about the consequences an increase of transparency might have for the workers within the supply chain. We shall solely focus on the intervention to improve supply chain transparency around labour conditions.

As literature review demonstrates, the issue of fashion company labour condition transparency is complex. Change is needed at the institutional level, as well as in organisational and social settings, and individual behaviour. We take a corporate focus to the essay, rather the retail customer. Despite the important role that end consumers and social norms play in setting demand expectations, consumer awareness campaigns have been going for at least three decades, without the progress we need to see (Carrington et al, 2016). While we encourage education campaigns to continue and expect for our solutions to impact both the information and choices that consumers can access, our study starts with the worldview that it is essential to address the root causes of the problem from a cooperate buyer-supplier perspective so that the worst products don’t make it to the shelf.

3. Methodology

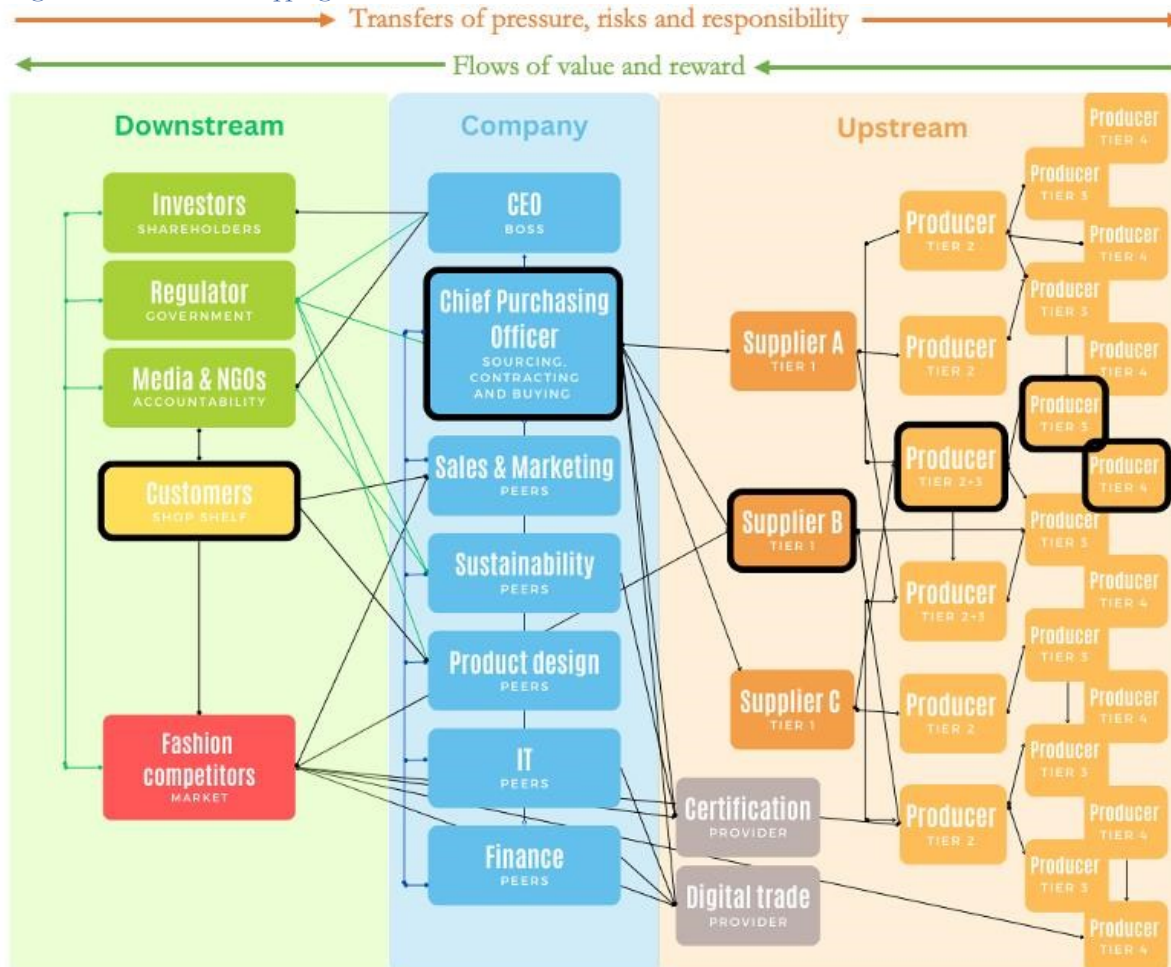
Due to the time and desk research nature of the study, we choose appropriate research methodologies to gain more comprehensive understanding of the theme. Firstly, we built our analysis on secondary research where data and findings from industry reports, fashion indexes, and academic literature were used. Given there is limited research that focuses on the CPO, we consulted academic advisors, held four interviews with industry experts, and attended fashion-focused public lectures. Across these we heard from sustainability consultants, fast-fashion buyers (reporting into a CPO), an international supplier and sustainable fashion companies.

The audience for which we hope research is relevant are fast fashion companies and non-governmental organisations who are working on addressing labour conditions. We contribute to the existing literature by applying novel theories to the body of research on supply chain management.

4. Stakeholder analysis

Mapping fashion industry stakeholders helps us understand social interactions and routes to increasing transparency on labour conditions. We situate the problem in a mass-market fashion company. The mapping was derived from desk research and interviews - see Figure 1.

Figure 1 – Stakeholder mapping



Source: Authors

Key takeaways from Figure 1 are:

- Many stakeholders have overlapping relationships;
- Arrows represent transfers of pressure, risk and responsibility from 'downstream' (green) to 'upstream' (orange), while the value and rewards flow in the reverse direction (Environmental Audit Committee, 2019);
- Suppliers operate not in a chain, but in a matrix, or web. They outsource, which may not be visible to the fashion company;
- Inside the company (blue), the Chief Purchasing Officer is strategically positioned. Firstly, as a senior contact for external suppliers and secondly, collaborating with colleagues.

From this, we identify the Chief Purchasing Officer (CPO) as an important stakeholder for the fashion industry's supplier transparency. In the next few sections, using both practical and theoretical analysis, we investigate how socio-technical positioning supports and constrains a CPO's power in business redesign.

Role of the Chief Purchasing Officer

CPO's responsibilities typically include establishing (Hedrich et al., 2021; Kern et al., 2011):

- sourcing policies and procedures;
- forecasts of garment demand;
- price and time targets;
- technology investments;
- relationships with colleagues; and
- external relationships with suppliers, regulators and collaborative initiatives – see [Appendix D](#) for those working on human rights in the fashion supply chain.

We assume the CPO reports into the Chief Executive Officer (CEO), and that the CEO is supportive of transparency of supply chain labour conditions but has not yet applied appropriate incentives to the CPO's performance.

Activity Theory and Installation Theory for the CPO

To better understand the CPO's activity relating to labour condition transparency, we employ Activity Theory and its conceptual framing to analyse the context for business redesign (Lahlou et al., 2022).

Lahlou's Installation Theory (2017) is layered onto the tasks to understand the scaffolds and constraints faced at each stage of activity. The crux of the activity for our research question is when, how and what task 7's collecting of labour conditions data happens.

Subject: Chief Purchasing Officer

Ultimate goal: Achieve supply chain resilience, meeting sustainability criteria. Receive recognition from colleagues, and brand reputation improves as non-governmental organisations (NGOs) and customers start to trust fashion company purchasing processes.

Weaving a web - Supporting labour conditions transparency in fashion supply chains

Table 2 - Activity Grid for contract negotiation from viewpoint of a CPO.

Colour-coded italics are areas of potential redesign and implementation of installations. (Lahlou et al., 2022, Lahlou, 2017).

Tasks	CPO's Motives and Goals	Contributions from CPO	CPO's Rewards	Environment: Affordances	Subject: Competences	Institutions: Social regulation
1. Forecast demand	Budget accurately to fulfil demand. Visibility of customer demand.	Work with colleagues on market research and design.	Supply meets demand and no unsold product.	Communication channels. Access to information on sales, trends, budget.	Expertise in forecasting tools. Collaboration.	Authority. Human resources. Customer norms. Competitors.
2. Plan pricing and timing terms	Get best profit margin possible.	Approve draft tender terms. Includes labour conditions in terms.	Budget efficiently. Accurate turnaround times.	Financial opportunities or constraints. Contract template .	Risk assessment. Education in labour code of conduct.	Customer social norms. Competitor actions. Supplier bargaining power. Buyer-supplier relationships.
3. Shortlist suppliers	Minimise business risks.	Review supplier database . Choose companies that can fulfil demand. Direct colleagues to approach shortlist.	Clear view of options. Minimise time spent.	Database access. Information availability.	Education in labour code of conduct.	Supplier market access.
4. Select supplier	Minimise business risks and maximise profits. Identify issues and resolve.	Review bid responses. Choose best based on commercial criteria and labour conditions too .	Clarity on which supplier working with.	Response tracking technology e.g., email or portal.	Negotiation skills.	Buyer-supplier relationship
5. Collect labour conditions data. Consider labour conditions earlier in process before shortlisting (no.3).	Information easily available. Doesn't hold up deal. Collate new data in monitoring system.	Read data from system. Query supplier compliance. Call held with supplier to fill-in missing data. Realise must support suppliers to invest in data collection and worker conditions .	New information gathered.	Platform access. Digital supply chain visibility of labour rights.	External relationship skills. Education in labour code of conduct.	Supplier limited ability to provide data. Multilayered supply chain. Standardised labour certification .

Weaving a web - Supporting labour conditions transparency in fashion supply chains

6. Meet sustainability code of conduct	Sustainability approval is quick.	Send to sustainability team. Highlight shortfalls and transition plan. Receive approval.	Colleagues pleased with submission.	Company code of conduct metrics.	Internal relationship skills. Form submission.	NGO/ voluntary standards. <i>Regulatory requirements.</i>
11						
7. Approve supplier contract	Smooth contract review. Closes deal.	Sign off contract. Contact supplier to confirm order. Set up sustainability real time monitoring.	Productive time management.	Contract template. Digital traceability platform.	Expertise in contracts.	Trust supplier to comply with contract.
8. Receive garments according to contract	Minimise business risks.	Confirm timely delivery. Review quality control. Release to stores. Authorises payment to supplier.	Productive time management (See Appendix B for garment journey). Completes deal. Moves onto next.	International transport affordances.	Judgment in risks prepayment.	Supplier outsourcing increases potential risks. Factory worker delivery.
9. Achieve preferred buyer status	Form long-term relationship with supplier. Gain advantages over competitors	<i>Regular calls, good treatment.</i> Efficient data capture on labour conditions.	Make deals smoother and faster. <i>Traceability available.</i> Stronger buyersupplier relationship.	Supplier database updated.	External relationship skills.	Comparison with competitors. Suppliers.
10. Enhance professional reputation	Valued by colleagues in contribution to sustainability and profit. Avoid being targeted by NGOs and regulators.	Communicate success of contract to colleagues.	Expressed satisfaction by colleagues. Meets targets and expectations from boss. Progresses in career. Wins awards for production sustainability.	Channels of communication. Career evaluation incentives.	Impression management.	Colleagues. Boss. Regulatory compliance. Award bodies.
Task	CPO's Motives and Goals	Contributions from CPO	CPO's Rewards	Environment: Affordances	Subject: Competences	Institutions: Social regulation

Source: Authors

Now that we understand more about the activity and installations that a CPO faces when considering a contract and closing a purchasing deal, we explore the psychological and economic theory that might affect their ability to contribute to improving the transparency of supply chains.

4. Theoretical analysis

In this section, we present five psychological and economic concepts that explain some of the internal and external pressures that block action, some of which we saw in the Activity Theory.

A. The awareness-intention gap

We assume that the CPO has some awareness of the consequences their purchasing actions entail. However, for this awareness to turn into behavioural change, the awareness-intention gap needs to be minimised. Their intention for upholding high labour standards across the supply chain must become stronger and have a more determined goal.

Reasons for the awareness-intention gap existing range from a lack of motivation and lack of self-regulation to environmental factors and unrealistic expectations. “The nature of the focal goal, the basis of intention, and properties of intention each influence the quality of the respective intention and its likelihood of enactment” (Sheeran & Webb, 2016, p.504). Closing the gap between awareness and intention, while not sufficient on its own, is a first step in achieving behavioural change. It often involves education to evolve personal beliefs and change attitudes that lead to action (Sheeran & Webb, 2016, p.505).

B. Intention-behaviour gap

A crucial reason why the CPO struggles to overcome barriers is the intention-behaviour gap, which can materialise due to the priority of self over the environment or in our case, social justice, or ethical values. This is rooted in Hedonic Theory and Rational Choice Theory. According to Hedonic Theory, individuals are driven to seek pleasure and evade pain (Stanford Encyclopaedia of Philosophy, 2019). This means that they are more likely to prioritize their own immediate needs and desires over long-term ethical concerns. Similarly, the Rational Choice Theory suggests that individuals make decisions based on self-interest and will choose the option that maximizes their own utility, rather than altruistic values (Amadae, 2021).

In the case of the CPO, the pressure of the competitive landscape of fast fashion is another factor that increases the desire to act self-interested. The CPO is assumed to follow organisational guidelines, such as meeting financial goals, by e.g., decreasing production costs and ensuring timely delivery. Hence, they are most likely detached from the ethical consequences and are focused on performing well at their job, which doesn't yet reward prosocial behaviours. As mentioned above, the CPO is likely to prioritize their career success over the greater good, even if aware of malpractices. Unless their incentives and career evaluation metrics are aligned with ethical labour rights objectives, it will be hard to close the gap between intention and behaviour. This gap extends to colleagues and the broader fashion industry, including suppliers – it is highly likely that resistance to change will be exhibited and through our solutions we seek to mitigate this (Rehman et al, 2021).

C. Data challenges

As we saw in both the Activity Theory and Installation Theory's physical affordances, a lack of labour conditions data created a barrier to action and caused a deviation versus what the CPO intended to do in task 5, where the goal was that labour condition information was easily available and didn't cause delays in closing the contract.

Transparency is ultimately about having access to data that is relevant, useable, and insightful, and being able to accurately share it to regulators, NGOs and customers. The data challenge originates from buyersupplier relationships that lack trust, as well as the multi-layered supply chains where outsourcing is hidden from view.

To date, while there is considerable optimism about the power of digital open-source data in redressing the imbalances of the fashion industry, there are very few examples where methodologies and data are achieving this goal. There are gaps in industry knowledge, standardisation of sustainability codes, scalability, speed of transactions and issues related to security and privacy, among others (Benstead et al, 2022). Companies like H&M that have a fragmented supply network require more organisational effort and funds allocated to obtain specific data to enhance blockchain traceability so assuming a mass-market fashion company, size and scale will help influence and reach, but have complexity and cost implications (Meinlschmidt et al., 2018). To ensure that the data gap is addressed by the CPO, emphasis is required to assess, choose, and include indirect suppliers. Routes to achieve this can be through membership alliances for sustainability (see [Appendix D](#)), and regulatory instruments.

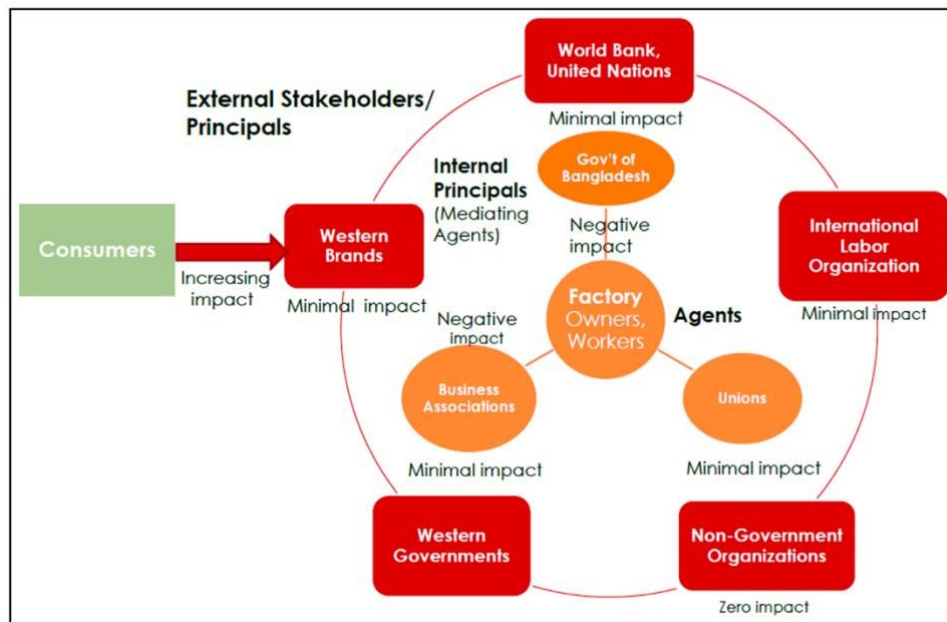
D. Agency Theory

Agency theory - also known as the principal-agent problem - helps us understand the three problems presented in this study, and to further explain why data may not be readily offered by stakeholders in the fashion industry. Sitting within the economic literature, agency theory applies when a (principal) actor employs an agent to carry out a value-generating activity (Bosse & Phillips, 2016). Different incentives materialise when principals (the fashion CPO in our case) request improved labour conditions. Intermediaries (e.g., Tier 1 suppliers) might prefer to stay in the existing equilibrium state, and agents (e.g., factory owners) fear loss of business.

Asymmetry of power as covered in the transfer of risk and pressure problem and the intention-behaviour gap, can lead to dominance of self-interest values over ethical values, per the theory covered above in the intention-behaviour gap. The outcome of this dynamic can lead to risk-averse factory owners, fearing losses due to price rises correlated with compliance (with for example, paying living wage), not altering business practices, unless the impact of non-compliance is significantly severe.

Figure 2 - *Agency Theory applied to fashion purchasing decisions*

Agency theory model [Color figure can be viewed at wileyonlinelibrary.com]



Source: (Bosse & Phillips, 2016)

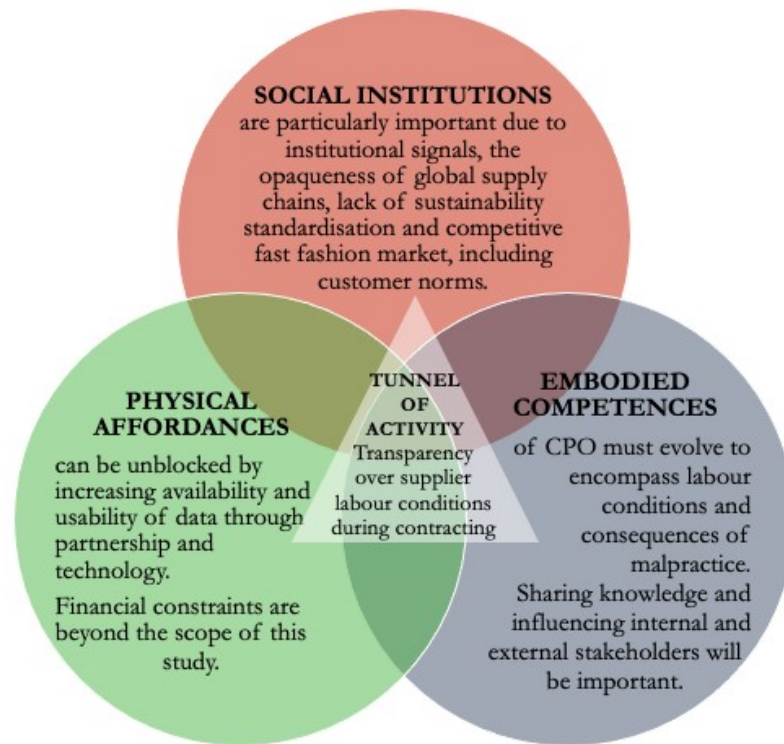
Relevant to our research problem, agency theory suggests two conditions that can alter behaviour: contracts to provide fair wages, and transparency for monitoring supply chain compliance. If contractual stipulations are enforced strictly and rewarded appropriately, suppliers would be relieved of the fear of business loss, resulting in willingness to change, improving wages and working conditions. Increased transparency and outcome-based contracts would aid in collaborating between multiple entities like workers and factories and extend to governments. Digital real-time information and regulation will play a role in overcoming agency theory issues, as will stakeholder engagement and support for suppliers who do not have access to resources for business redesign.

E. Installation Theory

“Viewed as a geometric figure, the ant’s path is irregular, complex, hard to describe. But its complexity is really a complexity in the surface of the beach, not a complexity in the ant.” (Simon, 1957, p.51).

To achieve sustainable behaviours, in this study we look at both the psychological and situational context. We selected Lahlou’s Installation Theory (2017) to map **how the fashion industry can be mobilised to increase transparency about labour conditions in their supply chain**. It allows us to focus on the tunnel of activity for the subject and the context. *Figure 3 - unblocking activity constraints to build scaffolds for sustainable behaviour* collates the target of transparency and Section 3’s stakeholder mapping and Activity Grid and Redesign ideas, from the perspective of the CPO.

Figure 3 - *Installation Theory (Lahlou, 2017) – unblocking activity constraints to build scaffolds for sustainable behaviour.*



Source: Authors

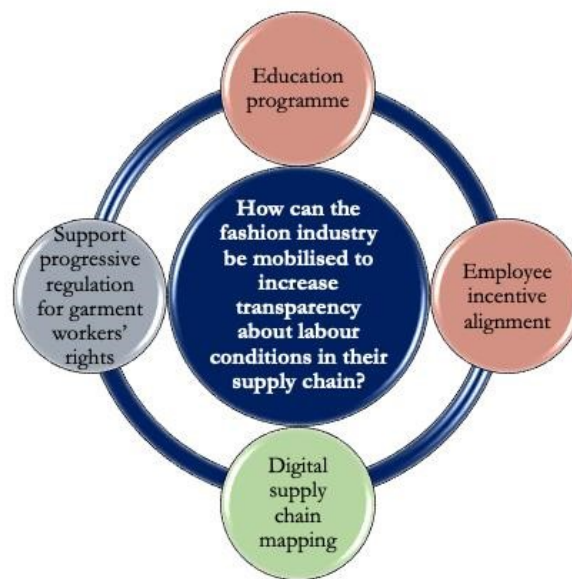
Leveraging the theory showcased in this section, we now present solutions that research shows is expected to contribute to overcoming the problems of the buyer-supplier relationship, multi-layered supply chains and pressure and risk transfer.

5. Suggested solutions

The four solutions proposed in this paper address the issue of lack of transparency of unethical behaviour in the supply chain. The first two solutions involve education and incentive alignment, encouraging CPOs to visit factories and participate in educational programmes to raise awareness of the impact of their work. The focus is on building lasting awareness and changing behaviour without overly inducing guilt. Incentives can be developed by the CEO, and desired behaviours rewarded according to career performance indicators. This will redirect the CPO to adopt more ethical behaviour and champion transparency.

The third suggested solution involves a digital supply chain map of the company's full web of procurement. By investing in better traceability technology, CPOs can make more informed decisions about their multilayered supply chains and unlock the physical barriers that prevent companies and suppliers from finding information on labour conditions. This will lead to better planning, develop more lasting business partnerships, and mitigate the negative impact on sales, shareholder value, and reputation when bad practices in the supply chain come to light, as per the CPO's activity theory goals. The final solution sees our CPO subject take bold action outside of the company structure, seeking to enact regulation through international collaboration, taxes and advertising standards. This carries potential to scaffold and constrain

social institutions in support of transparent supply chains and better labour conditions. *Figure 4 – suggested solutions*



Source: Authors

A. Education programme

The first solution we propose is education, to address the problem of the **buyer-supplier relationship** and builds on the theoretical arguments of **embodied competences** and of the **awareness-intention gap**. As shown in *Table 2 - Activity Grid*, this could be implemented in preparation for planning contractual terms and shortlisting suppliers so that labour conditions are considered earlier in the process.

Suggested structure of the programme includes the CPO making factory visits mandatory, at least once a year for everyone involved with products. This is complemented by educational programmes for the CPO and wider colleagues, as well as suppliers as re-education is more effective, and change met with less resistance when done at group, rather than individual, level (Lewin, 1956). This would ensure that after the factory visit the information and impressions would not be forgotten but rather processed and analysed in a constructive manner.

The goal in this stage is to create lasting awareness of their work and their impact. It is crucial to highlight that if the CPO is made to feel emotions of guilt and negativity, with no prospects of betterment, the chances of pro-social behaviour change are low, and those of resignation would be high (Fritzsche et al., 2018). Therefore, the CEO should be encouraged to approach this with the hero metaphor, rather than the villain narrative. As the CPO's awareness of the problem increases, so can their intention to act. Ultimately, they can become the hero that improved transparency over work environments for garment workers. This can be seen as a strong motivational factor to increase the intention to change behaviour.

However, even if the intention exists, the pressure of competitors or superiors – such as CEO, the Board, and investors – can be overbearing and the cause for egoistic behaviour, as covered in section 4.B, on intention-behaviour gap.

B. Employee incentive alignment

Aligning incentives to encourage prosocial behaviours can help to address the problems of **buyer-supplier relationship** and of **transfers of risk and pressure**. It can serve to reduce the **intention-behaviour gap** by bringing **social institutions**, particularly those that signal what behaviour is rewarded (e.g., profit making, collaboration and labour condition monitoring).

The incentives should be set by the CEO to showcase what behaviour is rewarded, thereby updating the psychological contract and contractual behaviour (Coyle-Shapiro, 2008). This desired behaviour shall be measurable in pre-defined key performance indicators (KPIs). For instance, a KPI could be to rewrite labour law contracts with 75% of their suppliers in a certain timeframe. If that KPI is achieved, the CPO would get a reward, such as a promotion, bonus, or other recognition. These measurable KPIs act to update the reciprocal obligations between organisation and employee (Coyle-Shapiro, 2008). Once the education programme has been successful, especially because it can be satisfying for the CPO to see that the training was leading to tangible results. By aligning incentives, you can also ensure that educational participation is taken seriously. Furthermore, this would align behaviours as self-prioritisation, thanks to incentives that channel activity, rewards ethical purchasing choices.

Figure 5 – Scorecard and incentives

EMPLOYER SCORE CARD

EMPLOYEE	# FACTORY VISITS	# OF ATTENDED TRAININGS	## OF RENEWED CONTRACTS	% OF CONTRACTS WITH TOP RATING*
CPO	Yes/ No?	X out of 12 (1 per month)	X% out of 100%	X% out of 100%
Points	Yes=1; No=0	1 point per training	1 point per %	1 point per %
Example	1	6 (due to 6 attended trainings)	10(due to 10% of renewed contracts)	10(due to 10% of renewed contracts)
Score	27			

*AT [HTTPS://BETTERBUYING.ORG/](https://betterbuying.org/)

SCORE INCENTIVES

EMPLOYEE

Score	>27*	- Internal recognition in form of a feature in their newsfeed or intranet as an ethical employee - Financial bonus of 1% of their salary at the end of the year
Score	>50*	- Promotion - Financial bonus of 5% of their salary at the end of the year

* WITH THE CONDITION, THAT 50% OF THE SCORE NEEDS TO COME FROM THE #% OF RENEWED CONTRACT

Source: Authors

Ultimately, we hope that the education and the incentive alignment proposals target a change both in embodied competences of the company's employees and suppliers, as well as updating the institutional signals for rewarded ethical behaviours. They serve to unfreeze the status quo and "concern the relation of motivation to action and the effect of a group setting on the individual's readiness to change or to keep certain standards" (Lewin, 1959. p197). How will they know if they're successful in addressing the buyersupplier relationship and the risk and pressure transfer? When contracts include metrics about living wage, their length is extended, and supplier turnaround times don't require worker exploitation.

C. Digital supply chain mapping

Our third proposed solution sees the CPO champion investment and implementation of better traceability technology. Digital supply chain mapping of company purchases can address **the problems of multilayered supply chains, buyer-supplier relationships and data challenges**. It can **unblock Physical Affordances** through enhancing the **Activity Theory** search for labour condition information.

Tracing the journey of garments from source to shelf would change the way the textile industry functions as it would allow for transparency and facilitate accountability.

By employing smart contracts rather than using manual transactions, blockchain replaces centralised private information systems with unified and decentralised digital mapping that is open source. As this help with data management and efficiency, bringing compliance and business information into one place, so better decisions can be made integrating labour conditions (UNECE, 2019). Commercial case studies are provided in [Appendix C](#).

Structures proposed are:

- CPO works with IT and Sustainability colleagues to find technology partners who could build and integrate the infrastructure needed by the company, so it can be used in Activity Theory tasks 1, 2, 5 and 7 (Wang et al, 2020).
- CPO partners with International Labour Organisation, other fashion companies and supplier networks (see [Appendix D](#)) to ensure data requests are standardised across the industry. This can reduce duplication of efforts and include affected suppliers in dialogue. (See next regulation solution for more information).
- CPO (who has been educated and has their incentives aligned as per first two solutions) launches an engagement plan with suppliers to make sure the digitisation process is fair and that small suppliers with fewer resources have the support they need, to not exacerbate injustices in supply chain.

By taking these actions, a proposed measure of success is that the CPO and consumer have visibility of 75% of their supply chain, and disclose important information publicly. Greater supplier transparency can aid development of longer-lasting commercial partnerships among supply chain participants, reduce business risks (activity goal of CPO), lower chance of violations of human rights and reputation risk (As per [Activity Theory Table 2](#) tasks 8, 9 and 10).

D. Support progressive regulation for garment workers' rights

“[I]f one wants to change the installation one should take the control of institutions” (Lahlou, 2017, p. 299)

Regulation is the final step in this study's proposals, designed to catalyse a culture of transparency and accountability and keep the worst products off the shelf. Structured appropriately, regulation for garment workers' rights can address the **pressure and risk transfer problem** and the **buyer-supplier relationships**. It primarily addresses the **social institutions** installations from section 4 – stakeholder analysis and reduces the **intention-action gap** as the CPO will operate in a more conducive environment.

Voluntary standards, such as OECD's *Due Diligence Guidance for Responsible Supply Chains in the Garment and Footwear Sector* (signed by 48 governments but not enforced by law), are useful but limited in their system level impact due to the optional nature. We therefore suggest that ambitious CPOs working for industry-leading companies should act collaboratively and not block widescale and progressive regulation for garment worker's rights. Regulatory structures proposed are:

- **Joint and legal liability** on fashion retail companies for violations of garment workers' rights (e.g., paying 120% of local living wage) (Anner et al., 2013; Moreira et al., 2022)
- **Cross-border tax for non-compliance** with high labour standards (e.g., exemption list of environmental goods for UK Global Tariff (IISD, 2020)
- **Fashion industry advertising standards**, so that consumer ideals are not at the expense of worker rights (Moreira et al., 2022)

This proposed solution involves the CPO showing support strong and public engagement with regulators and NGOs, campaigning for higher quality command and control interventions (e.g., ILO and OECD and others in [Appendix D](#)).

‘Command and control’ regulation can create a more level playing field, thereby making it harder for fast fashion companies to undercut each other by underpaying suppliers. Regulation can apply globally, or at the least, at national borders, like the EU’s imminent Carbon Border Adjustment Mechanism. It can contribute to rebalancing power, shifting responsibility of garment production from low-tier producers to the retail company. To comply with regulation, fashion companies will need to upgrade traceability infrastructure and supplier relationships. They would shift company resources from their current bias on brand and sales growth, towards more budget being spent on responsible sourcing and production.

6. Limitations and further research

There are methodological limitations to this study, though we sought to overcome these by enhancing desk research by consulting fashion sector actors to gain first-hand experiences. We stayed in scope of the research question and as such were not able to explore the full fashion system, for example the consumer perspective, nor the environmental or finance angle. Ideas for future research are suggested below.

Limitations to the solutions we propose are important to acknowledge as proposals are ambitious and will require multi-stakeholder approaches, financing and time and expertise. Firstly, we assumed CEOs, the CPOs’ bosses, have the intention to be sustainable, but this is often not the case. Without consistent support from top management, business redesign will be even harder. To bridge this issue, group decisions around sustainability targets, metrics, skills, mission and organisational structure can be made and should be publicly reported (Lewin, 1956). An example of progress is that H&M promoted its sustainability chief to the CEO position (H&M Group, 2020); this is the revolution the fast-fashion industry needs.

A universal definition for transparency, and international sustainability standards are yet to be agreed (Berg et al, 2019). This ambiguity creates problems for research and action on labour conditions, though the definition we shared of providing information externally and taking responsibility, will help to focus efforts on achieving agreement.

Cross-cultural differences in global supply chains mean manufacturer workers can be unaware of their legal rights (Huq, 2014; Merk, 2009; Stigzelius & Mark-Herbert, 2009). This highlights the role of cultural, political and economic contexts (Huq, 2014; Autcher, 2015). Social development and supporting vulnerable parties in the transition to higher labour standards and transparency will be an important part of the massmarket fashion companies’ stakeholder engagement, as well as that of governments and NGOs.

Benefits of transparency include increased legitimacy that enhances social and consumer acceptance (Brammer & Pavelin, 2006) and better business practices facing less opposition from local law and consumer and labour groups when expanding operations into new markets. However, industry experts reported a

sentiment that interventions to enhance transparency do not necessarily reach or benefit every stakeholder in the supply chain. By standardising and regulating, there is a risk that disclosure becomes a low-impact compliance check-box exercise. On top of that, commercial companies are unlikely to want stricter regulation as this increases costs of doing business (Moreira et al., 2022).

Future research could explore the practical implementation of radical traceability and transparency in the supply chain of fast fashion brands (Amed, 2019). What would it change in supplier networks if they were technically capable of tracing labour conditions? How can the education programme be structured to address higher-level restrictions within companies whose employees might feel under pressure to pursue financial goals over labour condition improvements. Other stakeholders and the journey of the garment could be explored to look at other areas of transformation in the fashion industry.

7. Conclusion

In a world where we only ever see the final product, we are in desperate need of more transparency in garment supply chains. To date, no truly effective solution has developed, and this is impacting millions of lives for the worse. Hence, transparency is fundamental to achieve systemic change. In our essay, we contributed to making the change happen by firstly identifying three major problems that jeopardise labour conditions along fashion supply chains, including unsustainable buyer and supplier relationships, multilayered supply chains, and the pressure and risk transfer from downstream to upstream. By situating our analysis within a mass-market fashion company, we focus on the CPO who has a strategic positioning on the thread that connects consumers with producers. Activity Theory was used to map the motives and tasks of CPO, and challenges they faced that impeded sustainability progress were subsequently identified.

Grounded in Installation Theory, our first two solutions - education programme and employee incentive alignment were proposed to address the awareness-intention gap and intention-behaviour gap respectively so that the CPO can establish awareness around labour conditions, have stronger intention to promote ethical standards, and eventually change behaviour. Through these interventions that target embodied competences, we hope that the CPO negotiates with suppliers in a way that not only takes into account the corporate profit, but also the impact of their purchasing choices on lower-tier workers. Ideally, the modified contract will result in a shift in purchasing practices so that factory workers take a higher (than 0.6%) proportion of retail price and health and safety is vastly improved. Moreover, our digital supply chain (blockchain) solution aims to unblock physical affordances where transparency along the multi-layered supply chain could be improved. Lastly, targeting the social institutional level, the progressive regulation that supports joint liability and tax should be in place to hold fashion companies accountable for noncompliant behaviour, and advertising standards in apparel industry should be more stringent.

Ultimately, the question to a CPO is: given your company's size, resources and influence are you doing everything you can to improve labour conditions? If the answer is no, then the solutions we propose in this

study are viable steps to achieve that. Even by moving one step in the right direction, positive real-world impact on supply chain workers can be made.

References

- Amed, I., Balchandani, A., Beltrami, M., Berg, A., Hedrich, S., & Rölken, F. (2019, February 14). *What radical transparency could mean for the fashion industry*. McKinsey & Company. Retrieved March 18, 2023, from <https://www.mckinsey.com/industries/retail/our-insights/what-radical-transparency-could-mean-for-the-fashion-industry>
- Amadae, S. (2021, March 11). Rational choice theory. Encyclopedia Britannica. <https://www.britannica.com/topic/rational-choice-theory>
- Anner, M., Bair, J., & Blasi, J. (2013). Toward joint liability in global supply chains: Addressing the root causes of labour violations in international subcontracting networks. *Comparative Labor Law and Policy Journal*, 35(1), 1-44.
- Atkinson, L., & Kim, Y. (2015). "I Drink It Anyway and I Know I Shouldn't": Understanding Green Consumers' Positive Evaluations of Norm-violating Non-green Products and Misleading Green Advertising. *Environmental Communication*, 9(1), 37–57. <https://doi.org/10.1080/17524032.2014.932817>
- Auchter, L. (2015). Supply chain responsibilities and the need for an integrative ethic Management in Emerging Economies. *International Journal of Business and Economic Development (IJBED)*, 3(1).
- Backs, S., Jahnke, H., Lüpke, L., Stücken, M., & Stummer, C. (2021). Traditional versus fast fashion supply chains in the apparel industry: an agent-based simulation approach. *Annals of Operations Research*, 305(1–2), 487–512. <https://doi.org/10.1007/s10479-020-03703-8>
- Berg, A., Hedrich, S., Ibanez, P., Kappelmark, S., Magnus, K-H., and Seeger, M. (2019). Fashion's new must-have: sustainable sourcing at scale. McKinsey Apparel CPO Survey 2019. *McKinsey & Company*.
- Bick, R., Halsey, E., & Ekenga, C. C. (2018). The global environmental injustice of fast fashion. *Environmental Health: A Global Access Science Source*, 17(1), 1–4. <https://doi.org/10.1186/s12940-018-0433-7>
- Bosse, D. A., & Phillips, R. A. (2016). Agency theory and bounded self-interest. *Academy of management Review*, 41(2), 276-297.
- Brammer, S., & Pavelin, S. (2006). Voluntary environmental disclosures by large UK companies. *Journal of Business Finance & Accounting*, 33(7-8), 1168-1188.
- Carrington, M. J., Zwick, D., & Neville, B. (2016). The ideology of the ethical consumption gap. *Marketing Theory*, 16(1), 21–38. <https://doi.org/10.1177/1470593115595674>
- CISL. (2019, August 19). Trado: New Technologies to fund fairer, more transparent supply chains. Cambridge Institute for Sustainability Leadership. Retrieved March 18, 2023, from <https://www.cisl.cam.ac.uk/resources/sustainable-finance-publications/trado-new-technologies-to-fund-fairer-more-transparent-supply-chains>
- Coyle-Shapiro, J. (2008). Psychological contracts. *SAGE Publications*.
- Czinkota, M., Kaufmann, H. R., & Basile, G. (2014). The relationship between legitimacy, reputation, sustainability and branding for companies and their supply chains. *Industrial Marketing Management*, 43(1), 91–101. <https://doi.org/10.1016/j.indmarman.2013.10.005>
- Davies, I., Lee, Z. and Ahonkhai, I. (2012). Do Consumers Care About Ethical-luxury?. *Journal of Business Ethics* 106(1): 37-51. <https://doi.org/10.1007/s10551-011-1071-y>
- Environmental Audit Committee. (2019). *Fixing fashion: clothing consumption and sustainability*. <https://publications.parliament.uk/pa/cm201719/cmselect/cmenvaud/1952/full-report.html#heading-6>
- Fairtrade International (2022, July 19). *Demand a living wage for the people who make our clothes – Sign now*. Retrieved 16 March 2023, from: <https://www.fairtrade.net/news/demand-a-living-wage-for-the-people-who-make-our-clothes-sign-now>
- Fashion Revolution. (n.d.). *The impact of Covid-19 on the people who make our clothes*. Retrieved 16 March 2023, from: <https://www.fashionrevolution.org/covid19/>

Fashion Transparency Index. (2022). *Fashion Revolution*. Retrieved 30 November 2022, from: <https://www.fashionrevolution.org/about/transparency/>

Fashion Transparency Index. (2021). *Fashion Revolution*. Retrieved 8 February 2023, from https://issuu.com/fashionrevolution/docs/fashiontransparencyindex_2021

Fritsche, I., Barth, M., Jugert, P., Masson, T., & Reese, G. (2018). A social identity model of proenvironmental action (SIMPEA). *Psychological Review*, 125(2), 245–269. <https://doi.org/10.1037/rev0000090>

Global Living Wage Coalition. (2018). Garment/Textile. Retrieved 30 November 2022, from: <https://www.globallivingwage.org/industries/garment-textile/>

Guercini, S., & Runfola, A. (2021). Adapting business models in buyer-seller relationships: paradoxes in the fast fashion supply chain. *Journal of Business and Industrial Marketing*, 36(8), 1273–1285. <https://doi.org/10.1108/JBIM-07-2019-0336>

Hartmann, J., & Moeller, S. (2014). Chain liability in multitier supply chains? responsibility attributions for unsustainable supplier behavior. *Journal of Operations Management*, 32(5), 281–294. <https://doi.org/10.1016/j.jom.2014.01.005>

Hedrich, S., Hügl, J., Ibanez, P., & Magnus, K.-H. (2021). Revamping fashion sourcing: Speed and flexibility to the fore. McKinsey Apparel CPO Survey 2021. *McKinsey & Company*

H&M Group. (2020). Sustainability Performance Report 2019. Stockholm: *H&M Group*. <https://hmgroupp.com/wp-content/uploads/2020/10/HM-Group-Sustainability-Performance-Report2019.pdf>

Huq, A. (2014). Social sustainability in developing country suppliers. *International Journal of Operations & Production Management*, 5, 610–638. <https://doi.org/10.1108/IJOPM-10-2012-0467>

IISD. (2020, June 10). The U.K.'s Global Tariff: A new broom sweeps green? *International Institute for Sustainable Development*. <https://www.iisd.org/articles/uk-global-tariff-new-broom>

Kath, S. (n.d.). Everlane: Focusing on an ethical supply chain. *The Momentum*. Retrieved March 18, 2023, from <https://www.themomentum.com/articles/everlane-focusing-on-an-ethical-supply-chain>

Kern, D., Moser, R., Sundaresan, N., & Hartmann, E. (2011). Purchasing Competence: A StakeholderBased Framework for Chief Purchasing Officers. *Journal of Business Logistics*, 32(2), 122–138. <https://doi.org/10.1111/J.2158-1592.2011.01011.X>

Lahlou, S., Heitmayer, M., Pea, R., Russell, M. G., Schimmelpfennig, R., Yamin, P., Dawes, A. P., Babcock, B., Kamiya, K., Krejci, K., Suzuki, T., & Yamada, R. (2022). Multi-layered Installation Design: A framework for analysis and design of complex social events, illustrated by an analysis of virtual conferencing. *Social Sciences & Humanities Open*, 6(1), 100310. <https://doi.org/10.1016/j.ssaho.2022.100310>

Lahlou, Saadi. (2017). Installation theory: the societal construction and regulation of behaviour. *Cambridge University Press*.

LeBaron, G., Howard, N., Thibos, C., & Kyritsis, P. (2018). Confronting Root causes: Forced Labour in Global Supply Chains. *OpenDemocracy*, 20(123), 1–69. <https://repository.uantwerpen.be/docman/irua/70fd54/149544.pdf>

Lewin, K. (1959). Group Decision and Social Change. In T. M. Newcomb & E. L. Hartley (Eds.), *Readings in Social Psychology* (2nd ed., pp. 197–211).

Meinlschmidt, J., Schleper, M. C., & Foerstl, K. (2018). Tackling the sustainability iceberg: a transaction cost economics approach to lower tier sustainability management. *International Journal of Operations & Production Management*.

Merk, J. (2009). Jumping scale and bridging space in the era of corporate social responsibility: Crossborder labour struggles in the global garment industry. *Third World Quarterly*, 30(3), 599–615.

<https://doi.org/10.1080/01436590902742354>

Stanford Encyclopedia of Philosophy. (2019). Edward N. Zalta (ed.), <https://plato.stanford.edu/archives/win2019/entries/hedonism/>

Moreira, N., Mizrachi, M. P., & Tal, A. (2022). Regulation for Promoting Sustainable, Fair and Circular Fashion. <https://doi.org/10.3390/su14010502>

Rahman, K. (2022, April 21). Nine years since the Rana Plaza Tragedy: Has fast fashion ironed out their deadly corruption problems? Transparency International.

<https://www.transparency.org/en/blog/ranaplaza-tragedy-fast-fashion-deadly-corruption-problems>

Rehman, N., Mahmood, A., Ibtasam, M., Murtaza, S. A., Iqbal, N., & Molnár, E. (2021). The Psychology of Resistance to Change: The Antidotal Effect of Organizational Justice, Support and Leader-Member Exchange. *Frontiers in Psychology*, 12, 3215. <https://doi.org/10.3389/FPSYG.2021.678952/BIBTEX>

Rozemeijer, F. A., van Weele, A., & Weggeman, M. (2003). Creating Corporate Advantage through Purchasing: Toward a Contingency Model. *Journal of Supply Chain Management*, 39(4), 4–13.

<https://doi.org/10.1111/J.1745-493X.2003.TB00145.X>

Ruggie, J., (2011). Report of the Special Representative of the Secretary-General on the issue of human rights and transnational corporations and other business enterprises. UN Human Rights Council, A/HCR//17/31.

Sheeran, P., & Webb, T. L. (2016). The Intention-Behavior Gap: The Intention-Behavior Gap. *Social and Personality Psychology Compass*, 10(9), 503–518. <https://doi.org/10.1111/spc3.12265> Simon, HA. (1957). Models of Man. New York: John Wiley & Sons.

Stigzelius, I., & Mark-Herbert, C. (2009). Tailoring Corporate Responsibility to suppliers: Managing SA8000 in Indian Garment Manufacturing. *Scandinavian Journal of Management*, 25(1), 46–56.

<https://doi.org/10.1016/j.scaman.2008.04.003>

Testa, J., Friedman, V., & Paton, E. (2020, July 26). Everlane's promise of 'radical transparency' unravels. The New York Times. Retrieved March 18, 2023, from

<https://www.nytimes.com/2020/07/26/fashion/everlane-employees-ethical-clothing.html>

Touboulis, A., Chicksand, D., & Walker, H. (2014). Managing imbalanced supply chain relationships for Sustainability: A power perspective. *Decision Sciences*, 45(4), 577–619. <https://doi.org/10.1111/deci.12087>

Turker, D., & Altuntas, C. (2014). Sustainable supply chain management in the fast fashion industry: An analysis of corporate reports. *European Management Journal*, 32(5), 837–849.

<https://doi.org/10.1016/j.emj.2014.02.001>

UNECE. (2019). Blockchain / distributed ledgers for traceability and due diligence in garment and footwear value chains in a circular economy. United Nations Economic Commission for Europe (UNECE) - OECD.

https://unece.org/DAM/trade/SustainableTextile/2019_Paris_BlockchainUNECE-OECD_Report.pdf

Wang, B., Luo, W., Zhang, A., Tian, Z., & Li, Z. (2020). Blockchain-Enabled Circular Supply Chain Management: A system architecture for fast fashion. *Computers in Industry*, 123, 103324.

<https://doi.org/10.1016/j.compind.2020.103324>

Appendices

Appendix A – Supporting evidence of problem

Multi-layered supply chains

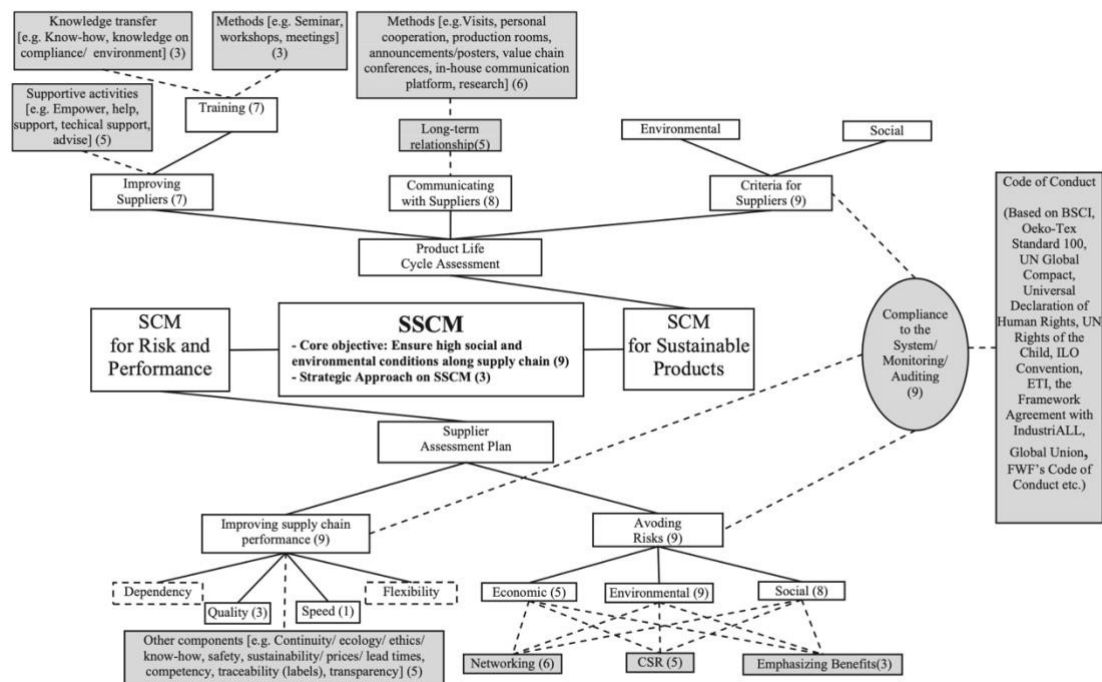


Fig. 2. A Map of sustainable supply chain management in textile and apparel sector. *Note 1:* The new categories that are proposed as a result of this analysis are shown in dark shapes and their links to the original theoretical model are shown by dashed lines; the numbers assigned to each shape indicate the number of companies that are actively doing this activity; the categories that are not observed during the analysis (e.g. Dependency, Flexibility) are exhibited with a dashed box on the figure *Note 2:* Business Social Compliance Initiative (BSCI); corporate social responsibility (CSR); Ethical Trading Initiative (ETI); Fair Wear Foundation (FWF); International Labour Organization (ILO); supply chain management (SCM); sustainable supply chain management (SSCM).

Source: Turker & Altuntas, 2014

Brands' purchasing practices that may impact working conditions

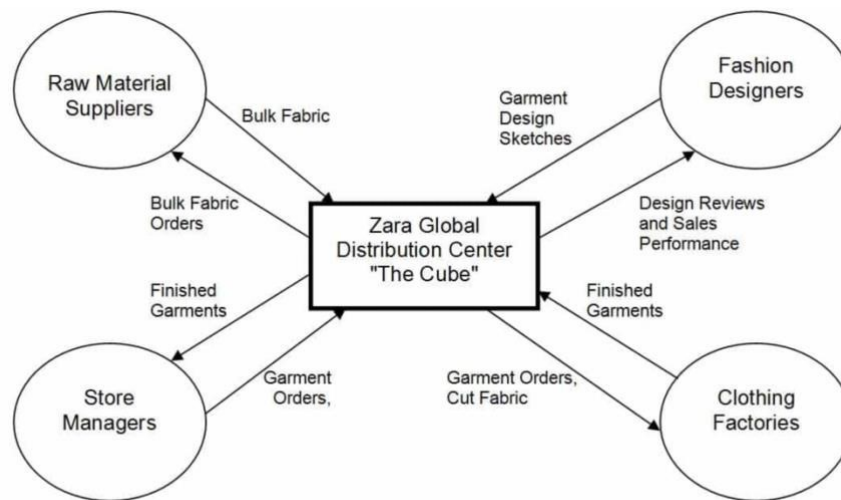
The below table is compiled with reference to data from *Better Buying* and *Human Rights Watch*.

STAGE OF PRODUCTION CYCLE	BRAND PURCHASING PRACTICES	SUPPLIER RESPONSE	IMPACTS ON WORKERS
PLANNING AND FORECASTING	Sudden changes in order volumes Delays in providing order specifications or approvals; last minute changes Short lead times	Suppliers' ability to plan regular and overtime work for its workers Abusive, humiliating verbal abuse and forcing workers to work more quickly Restrict toilet, water and meal breaks	Excessive overtime, reduction in productivity, potential to make more mistakes that lead to accidents and injury; disruption of family life; isolation and increased vulnerability to illness Stress, anxiety, productivity reduction Fatigue and other health issues; gendered impact for women workers who need additional rest breaks during menstruation
COST & COST NEGOTIATION	Negotiate lower prices or ask for discounts	Outsource/subcontract to smaller, low-cost units	Exploitative working conditions could thrive in hidden facilities, where workers may be left with little recourse to access remediation or compensation as difficult to establish links to lead firm Workers could receive piece-rate wages
PAYMENT & TERMS	Negotiate lower prices or ask for discounts	Suppliers unable to invest in fire and building safety improvements due to price pressures	Unsafe working conditions making them vulnerable to injuries and even death
MANAGING THE PURCHASING PROCESS	Order cancellation Unwarranted penalties issued to suppliers to cut costs (i.e. asking for discounts)	Unable to pay workers' wages, having already fronted production costs like raw materials and labour	Stress, anxiety, hunger, taking on debt to afford basic needs like food, housing, education medical care and so on

Source: Fashion Transparency Index. (2022). P86

Appendix B – Garment journey

This relates to the Activity Theory and stakeholder analysis. The decision-making process and physical journey of a garment is relevant to how labour conditions unfold.



Source: <https://www.scmglobe.com/zara-clothing-company-supply-chain/>

Appendix C – Blockchain case studies

(like the CPO), as well as to consumers. See Appendix C for data model architecture.

Case study 1 - Trado: New technologies to fund fairer, more transparent supply chains

The Trado pilot, led by The University of Cambridge, in collaboration with Unilever, Sainsburys and BNP Paribas and technology partners, tested blockchain technology in a **Malawi Tea supply chain** (CISL, 2019).

Sustainability data was collected from farmers about labour, environmental and living conditions. This data facilitated greater certainty about ethical sourcing and was rewarded with shorter times between delivery and payment to smallholder farmers. Some complexity was removed, by cutting out middlemen between tea farmers and the ultimate shop shelf.

Blockchain technology benefitted the Malawi Tea supply chain by enhancing smallholder engagement and delivering information to purchasing decisions

The Trado Model Architecture (CISL, 2019)

Case study 2 - Everlane: A pioneer winning customers through radical transparency

Everlane, an ethical fashion brand has the distinct selling proposition of a radically transparent supply chain. The top authority officials of the brand identified some shadow areas within the production line, especially within the vendor factories they deal with.

A few manufacturers were visibly not following or respecting the domestic labour laws. This led them to adopt blockchain technology to provide visibility to consumers of the entire life cycle and costs of the product (The New York Times, 2020).

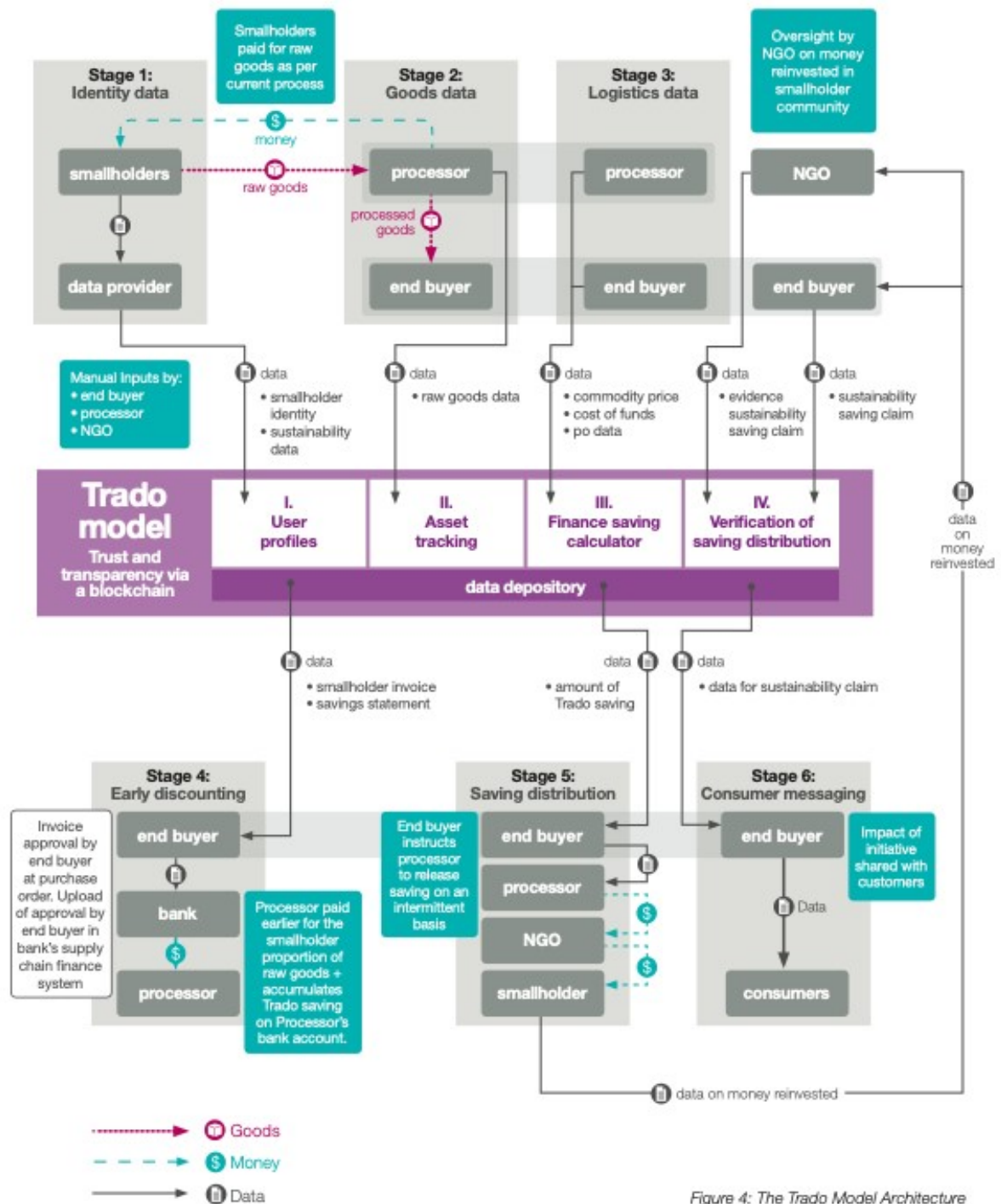
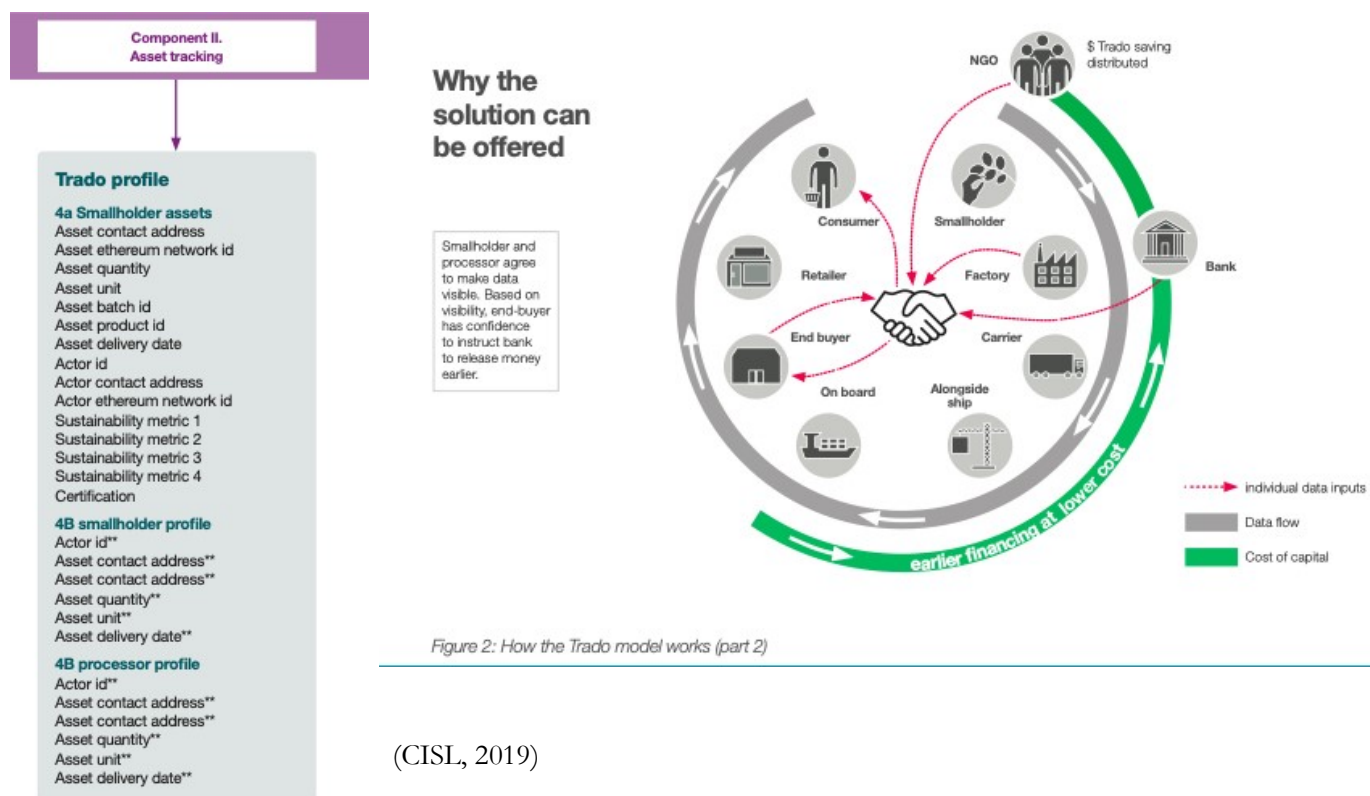


Figure 4: The Trado Model Architecture

Zoom into Component II. Asset Tracking:



(CISL, 2019)

Appendix D – Sample of initiatives working on human rights in fashion

- The United Nations Alliance for Sustainable Fashion
- Fixing Fashion – UK government
- G7 Leaders' Declaration – Fashion Pact
- OECD's Due Diligence Guidance for Responsible Supply Chains in the Garment and Footwear Sector. 2017
- The Fashion Pact
- The sb62 bill 2021
- The Australian Modern Slavery Law 2018
- UK Modern Slavery Act: Chapter 6 on Transparency in Supply Chains
- Better Cotton Initiative (BCI)
- Fashion Revolution. Tools and campaigns: Fashion Transparency Index and Who Made My Clothes. Vision: A global fashion industry that conserves and restores the environment and values people over growth and profit.
- International Labour Organisation - Textiles, clothing, leather and footwear sector
- Global Living Wage Coalition – Garment/ textile industry
- Social Accountability International SA8000 – help companies with supply chain
- Goodweave – ending child labour in textiles industry
- Transparency Pledge
- Apparel 100
- Sustainable Markets Initiative Fashion Taskforce – digital ID

Data sources on social risk in supply chains:

- MSCI ACWI currently disclose whether they implement initiatives to reduce social risks in supply chains
- Workforce Disclosure Initiative ○ Provenance

Citizen focused fashion campaigns

- Good Clothes Fair Pay by Fashion Revolution ○ Love your Clothes with WRAP. ○ Who Made my Clothes (2014) by Fashion Revolution ○ <https://www.globalslaveryindex.org> ○ WaterMatterz by Sustainable Fashion Matterz ○ WeNeverStopVoting (2017) by Sustainable Fashion Matterz
- Ethical Fashion Africa (2012) by Vivienne Westwood, Friends of the Earth, Amnesty International, War Child ○ Conscious Fashion Campaign by the UN