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Impact pathways: “Follow the labour”. the labour supply chain and its impact on decent work in product supply chains

Leonardo Marques, Information Systems and Supply Chain Management Department, Audencia Business School, Nantes, France

Alice Erthal, Fundação Dom Cabral, Belo Horizonte, Brazil

Andrew Crane, School of Management, University of Bath, Bath, UK



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Abstract

Purpose – To conceptualise the labour supply chain and its relationship with product supply chains. In doing so, we call for research that follows the flow of labour to advance the field of Operations and Supply Chain Management (OSCM) towards decent work in supply chains.

Design/methodology/approach – A real-time case study of modern slavery in the wine, apple and poultry supply chains in Southern Brazil with interviews including workers, farmers, and a multitude of stakeholders.

Findings – By following the flow of labour, we uncover how temporary workers are used to manage product seasonality, and the role of hidden actors such as labour providers and charities. We show that different product supply chains tend to mimic each other and share the same pool of temporary workers to ensure flexibility at low cost, while exploiting workers.

Originality/value – For decades the OSCM field has used frameworks that follow the product to improve efficiency and traceability. Yet, labour flows across product supply chains remain untraceable. Our research calls for a dynamic perspective on labour to set the basis for an emerging research agenda on the interplay of product and labour flows in supply chains to advance decent work.

Keywords Labour supply chain, Decent work, Modern slavery, Traceability, Flexibility

Paper type Research paper

1. Introduction

Attempts to advance decent work in supply chains have expanded in recent years, with a major focus being on improving traceability of worker exploitation and improving the effectiveness of efforts to enforce better working conditions in the supply chain (Soundararajan et al., 2021). As a result, it has become commonplace to advance the idea that decent work is most likely to occur where supply chain traceability is high, and monitoring of labour standards is well-developed. However, even in such circumstances, there is no shortage of revelations of worker exploitation, including more extreme forms such as modern slavery (LeBaron, 2021).

What can explain this persistence of exploitation even in ostensibly favourable supply chain contexts? We sought to address this question by examining a recent scandal in Brazil where over 200 workers were revealed to have endured slave-like conditions in the wine supply chain located in Bento Gonçalves (G1, 2023), a region known for award-winning wine production. The workers were lodged in a facility with degradable conditions, kept under constant threat, and physically hurt with electric shocks and pepper spray. Common explanations as to why firms engage in exploitation (e.g. Crane, 2013) were largely absent in this case in that while Brazil exhibits weak public governance and poverty, the region of Bento Gonçalves is synonymous with good quality wine, strict certification, well-developed associations of growers and wineries, and a reputation as a close community where everyone knows everyone else (Manfroi et al., 2022).

Our investigation of the scandal revealed the importance of understanding the flows of labour into the product supply chain (which we refer to as the *labour supply chain*), comprising migrant workers, outsourced via labour providers, and serving multiple other product supply chains (such as poultry and apples) with poor labour conditions. We show how these flows undermined traceability and created the conditions for exploitation in the wine supply chain. Based on these insights around the role of the labour supply chain in decent work, we discuss three key implications for OSCM theory, namely labour traceability, the hidden cost of flexibility, and the need to reframe value in product supply chains. Next, we briefly present the theoretical foundations of our study, methods, findings, and conclude by proposing impact pathways for future research.

2. Theoretical background:

For decades, OSCM theory has framed humans as resources – more specifically *transforming resources* – that, together with tools and machines, transform inputs into outputs (Slack & Brandon-Jones, 2019). This has led practitioners and researchers to focus on efficiency through the exploitation of such resources – humans included. Within this framework, outsourcing human labour adds flexibility while ensuring cost minimization. This search for low-cost flexibility has benefited from a global pool of vulnerable workers, fed by poverty, discrimination, limited labour protections, and restrictive mobility regimes. As a result, workers' exploitation became embedded in the supply chain structure (LeBaron, 2021). Conversely, ethical considerations have remained at the periphery of OSCM theorisation. Despite the emergence and relevance of the sustainable supply chain management research stream since late 2000's, the social side of sustainability has been repeatedly framed as the weak link (Miemczyk et al., 2012; Touboullic & Walker, 2015). A recent call for humanizing the supply chain posits that research on social sustainability has failed to promote decent work (Soundararajan et al., 2021).

Within the scant research on labour in OSCM, studies have been limited to available secondary data that do not capture the workers' voice (Strand et al., 2024). Meehan and Pinnington (2021) have shown that firms protect themselves instead of ensuring decent work, exposing defensive mechanisms such as postponing action or transferring responsibilities to suppliers, while reassuring multiple stakeholders that 'modern slavery does not, or could not, exist in their supply chain'. The efficiency logic, global structural injustices, and the focus of supply chain research on product flows have reinforced this scenario (LeBaron, 2021).

We propose a closer look at the *labour supply chain* to advance the understanding of how/when/why supply chains give rise to (in)decent work. This has been defined as "*the sequence of employment relationships that a worker goes through in order to be deployed in a productive capacity*" (Allain et al., 2013, p. 42). We articulate that seeing labour not statically, but as dynamic flows, can be pivotal to bringing the social dimension to the core of OSCM research. Following the flow of labour can unveil how product and labour interact to influence labour conditions. Incipient research has exposed hidden actors such as labour providers (Crane et al., 2019) and unfairness in worker recruitment, while drawing attention to tactics used to exploit migrant workers (Fletcher & Trautrimis, 2024).

Therefore, we ask: *How does the interaction of labour and product supply chains impact (in)decent work; and what are the implications of revealing the labour supply chain to the OSCM field?*

3. Methodology and data analysis

This research takes a qualitative and exploratory approach, where we have captured real-time reactions to the crisis in the Bento Gonçalves winery supply chain over 12 months (Feb-23 to Jan-24). As labour exploitation is a sensitive issue, we included informants with divergent interests and involvement in the scandal. The interview guide was semi-structured, covering the interviewees' understanding of labour exploitation and supply chain transparency, the scandal, and labour flows in the region. We started with online interviews with reporters, consultants, and members of NGOs. We then conducted a local visit which included direct observation, one day of work in grape harvesting, and interviews with wineries, farmers, workers, labour unions, and the local community. We also assessed radio recordings and the Ministry of Labour's term of compliance. In total, we conducted 16 individual interviews and one group interview with seven workers.

4. Findings and emerging impact pathways

4.1 Mapping the labour supply chain: Labour traceability

Temporary workers quickly surfaced as central to the scandal. Grape growing in Bento Gonçalves is fragmented among many small family farms, each managing 5-6 hectares of land. When the harvest season arrives, they need to hire temporary workers during a short period. Historically, these were local workers from nearby cities, in some cases, other farmers. These temporary workers would eat and sleep in the farmer's house, creating bonds over time. Informality had long prevailed, yet these labour relationships were pictured as trust-based and a source of "good money" for the workers:

"It is 'based on the moustache' [trust]. People come here and earn very well, sometimes in 15-20 days of work what they would earn in other places over six months. They get everything: bus tickets, food, clean clothes, a place to sleep and have meals." (I4 Farmer union president)

Arguments for informality included the costs of formalisation for both farmers and workers:

"We have around 200,000 rural workers, and, according to CAGED (Government), we have around 90,000 salaried employees with a formal contract, thus the rest is informality." (...) "If the family farmer hires these workers, and signs a contract for more than 120 days, he is no longer eligible for Social Security benefits, including agricultural financing (...) And the worker that goes there for temporary work, if he signs the contract, he loses the government unemployment support" (I14 Worker union president)

But if labour relationships were healthy, and informality mutually advantageous, why did the scandal emerge? Respondents directed our attention to neighbouring product supply chains more clearly focused on efficiency, such as apples and poultry, which used the same pool of workers but where precarious work seemed to be commonplace.

"There are workers that work in the grape harvest for a certain period, then the grape harvest finishes, and they go to the apple harvest, from apples they go to another crop... And before the grape harvest, they were in the peach harvest". (I4 Farmer union president)

"The process of collecting chicken from cooperative members to the slaughterhouse every day [is always] during dawn, and yet, it uses the same labour of the grape harvest". (I6 Poultry producer association)

At this stage, we re-directed data collection to include these supply chains. Labour costs and regulatory shifts seemed to have led wineries to mimic practices from other crops. A scandal in one product supply chain had uncovered widespread practices in others. Further investigation revealed a change in the profile of temporary workers from locals to migrants from poorer regions and neighbouring countries, who did not experience the same healthy relationships:

"From the Mato Grosso region alone, around 5-7 thousand indigenous people come to pick apples". (I14 Worker union president)

"You might even want to ask yourself this question, the fact that those guys are not from the community, if they're Argentinian, or if they're from Bahia, how much that impacts on how they are going to be treated" (I8 NGO)

Our data exposed the orthogonal nature of the labour supply chain cutting across product supply chains. Although product and labour are intrinsically connected, conditions can radically differ. Even in sectors where product supply chains are highly transparent and traceable, the labour supply chain can remain hidden from sight.

Here, we identify a first impact pathway: *labour traceability*. If the scope of OSCM research has so far been the flow of materials, information, and capital, then labour becomes secondary, beyond traceability efforts – and *temporary* labour an even more fragile link. In a world with an increasing migrant workforce, temporary labour might gain further share in supply chains. If so, tracking labour may help us understand a totally new pathway to OSCM research and the impact of labour flows on product flows.

4.2 Intersecting labour-product supply chains: The hidden cost of flexibility

As the profile of temporary workers changed, vulnerability, lack of understanding of worker rights, and even racism emerged. A local charity institution was created to support workers in-between temporary jobs with food, clothes, and emotional support.

“This year when the harvest began, we had extremely high demand. There were days when we served 200 meals and we had 60, 70 extra people waiting to be fed, to have a shower, to have clean clothes, because these people don't even have clothes.” (I16 Charity owner)

“These workers are very poor people who sometimes don't have much knowledge of their rights as seasonal workers. They do not understand the legislation that protects them. Then we realize that labour providers take advantage of this ignorance.” (I3 Labour lawyer/consultant)

As migrant work gained relevance, labour providers had grown in importance. Such labour providers would in theory also provide lodging and food. But in some instances, conditions degraded to exploitative working arrangements, to the point that charity institutions began to help workers in need. When the wine supply chain borrowed practices from other crops, they got involved in labour exploitation. Justifications quickly turned to blaming labour providers, while framing themselves as victims. Wineries shielded themselves from accusations in two ways. First, by saying that the labour provider's formal documentation was in accordance with regulation. Then, when public opinion grew stronger, by blaming Government pressures as detrimental to business, framing labour providers as a necessary ‘quick fix’.

Informality was, in fact, the surface of a complex labour supply chain where the same worker could work for different product supply chains, to ensure low-cost capacity flexibility. Some rescued workers would work all day at the grape harvest and, after a 12-hour shift, would go to the wineries to unload the boxes, while others would go collect the poultry from farms to supply the slaughterhouses the next day. Multiple product supply chains could share the same workers, who would end up working 20 hr/day. Work relations changed from trust-based to precarious work, tainting supply chains that were likely slavery-free before.

We therefore propose a second pathway: the *hidden cost of flexibility*. We have long looked at capacity from the product perspective. To ensure the best flexibility vs. cost trade-off, humans are seen as resources to be exploited. Once we expose the hidden cost of such flexibility (i.e. precarious work), and consider internalising such hidden costs, firms need to revisit their risk management strategies. Ignoring the true costs of flexibility might bring consequences in product supply chains.

4.3 Revisiting product supply chains: Reframing value

As mentioned before, if workers actually received the promised wage, it would represent good pay. Yet, in reality, the labour provider will deduct lodging, meals, uniform, etc from these allowances, and workers might end up with close to nothing, plus lack of financial freedom to return home. The flexibility provided by outsourced, temporary, migrant labour is therefore not afforded sufficient value to ensure fair pay and decent work.

Labour providers, currently not treated as part of the supply chain by OSCM researchers, seem to appropriate a lot of value, but not sharing with workers. In this case, value capturing by labour providers was confirmed as the Ministry of Labour blocked assets of the owner amounting to half a million dollars to ensure restoration of workers' rights and remediation. Such traceability of value distribution invites a revision of the notion of value in supply chains.

Our third and last pathway thus concerns *reframing value in product supply chains* to include the perspective of ignored actors. Small farmers must get their fair share of value and not be pushed towards easy and informal solutions to survive. Labour providers need to be unhidden, and the value temporary work and the flexibility they bring to supply chains recognized, pulling

1
2
3 them from informality to formality, to ensure value distribution to workers. If a temporary
4 worker is no one's worker, they can be left out of value distribution. If temporary workers are
5 critical to flexible supply chains but need charity to survive, something is wrong with how value
6 is conceived.

7
8 Figure 1 depicts the labour supply chain orthogonal to product supply chains. The same
9 worker can shift across different products, and labour providers are enablers of these flows. Our
10 theorisation highlights three impact pathways when looking at labour, at the labour-product
11 supply chain intersection, and when reframing how we understand value.

12
13 --- INSERT FIGURE 1 HERE ---
14
15

16 **5. A future research agenda on the labour supply chain**

17 We next organise the three emerging impact pathways as a future research agenda.

18 The first pathway concerns *labour traceability*. Note that non-temporary labour is included,
19 but temporary (and migrant) work makes the need to map the labour supply chain more salient.
20 Taking a product perspective, Marshall et al. (2016) conceptualise supply chain transparency
21 as membership and provenance. Can we elaborate this framework further to analyse labour
22 membership and provenance? *What are the implications for OSCM when we include labour
23 flows and labour providers? How can traceability include labour provenance and membership?*

24 To advance this pathway, data collection must reach workers, and especially workers
25 shifting between different product supply chains, as well as labour providers and types of
26 intermediaries. Snowballing from one product to another could be an interesting approach.
27 Theorisation can advance how we should adapt supply chain frameworks to map the flow of
28 labour, and to frame what is 'inside' and 'outside' a supply chain.

29 The second pathway concerns the *hidden cost of flexibility*. As we bring attention to the
30 labour-product intersection, we expose how flexibility in one flow (product) is produced
31 through another flow (labour), where the costs remain hidden and unaccounted for. An
32 expanded network perspective can depict such supply chain complexity. We invite OSCM
33 scholars to adapt the network lens to unveil the dynamic interactions between labour and
34 products, asking: *What happens when labour flows and product flows intercept? How do labour
35 flows produce low-cost flexibility in product supply chains? How can labour flows help revisit
36 the cost vs. flexibility trade-offs?*

37 Data collection could examine the labour supply chain economic and social costs and shared
38 practices across different product supply chains, particularly practice diffusion via associations
39 or co-location (Marques et al., 2020). Theorisation could borrow from institutional theory, i.e.
40 mimetic pressures, diffusion of practices, and organisational misconduct (Marques et al., 2024).
41 Multidisciplinary research could engage with HR and sociology.

42 The third pathway concerns *reframing value in supply chains*. In a product supply chain,
43 value is added at each stage as raw materials flow to become finished products (Slack &
44 Brandon-Jones, 2019). We draw from the notion of value slippage by Lepak et al. (2007) to
45 posit that while labour is treated as a resource to serve product flows, value distribution will not
46 reach the workers, despite their significant role in value creation. It is thus no surprise this
47 framing prompt informal contracting, precarious lodging, and even brutal conditions. We call
48 for a revision of value to include contributions of small farmers, labour providers, charities, and
49 unheard workers (Karaosman & Marshall, 2023) by asking: *How can an expanded notion of
50 value (including labour) reframe value in supply chains? How do we reconcile tensions in value
51 distribution when including long-ignored stakeholders?*

52 Research should discuss how value could be reframed and redistributed in complex labour-
53 product supply networks. *Is informality and precarious work necessarily associated with
54 flexibility, or are there ways to develop flexibility while also ensuring decent work? What would
55*

be the cost of formalisation? Partnering with accounting and CSR scholars could help incorporate non-financial accounting, and discussions on natural capital and social capital are probably good starting points for alternative ways of understanding value.

6. Concluding thoughts

More surprising than finding precarious work in the wine industry was to realise how precarious is the OSCM toolset in understanding labour flows. We build from Allain et al. (2013) initial definition of the labour supply chain to incorporate aspects of traceability, flexibility and value reframing. Therefore, we derive a new definition of the *labour supply chain*:

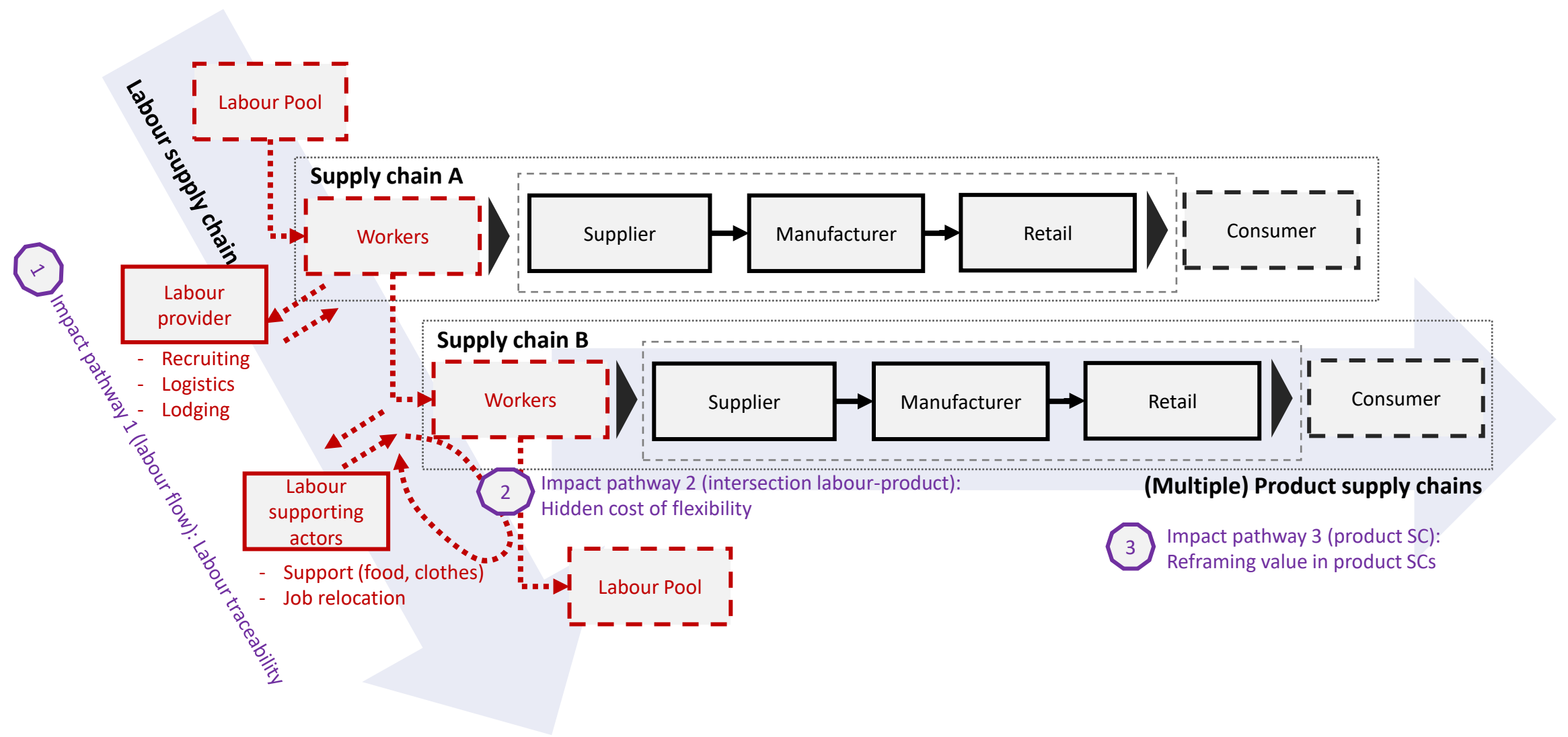
'A labour supply chain consists of the sequence of commercial relationships and transactions involved in bringing a worker to the point of production. It is focused on the flow of people (not materials) involved in producing goods and services, and the aspects of traceability, flexibility and cost/value associated with that flow of people.'

Fifty years ago, investigative journalism coined the phrase 'follow the money'. We suggest that OSCM researchers need to stop focusing solely on products to 'follow the labour'. As challenging as it may be, this is critical to ensuring decent work in supply chains.

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Figure 1: The Labour supply chain and impact pathways



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