Measuring Risk-based Human Rights Due Diligence: Sourcing and labour outcome metrics

Jason Judd and Sarosh Kuruvilla

Abstract

In contrast to existing guidance frameworks for due diligence that focus on global firms describing their programmes (inputs), in this article, we argue that quantitative data on labour outcomes are required to hold global firms to account for human rights harms in their supply chains. We present twenty-five metrics that measure both lead firm sourcing practices and supplier firm labour rights and working conditions. We argue that these metrics are useful for regulators to assess how lead firms covered under due diligence legislation are addressing human rights harms in their supply chains. In addition, they are particularly useful to lead firms themselves in order to assess the level and salience of risks.

Keywords: human rights, risk-based due diligence, labour practices, global supply chains, CSDDD

Suggested citation: J Judd and S Kuruvilla, 'Measuring Risk-based Human Rights Due Diligence: Sourcing and labour outcome metrics', *Anti-Trafficking Review*, issue 26, 2026, pp. 71-96, https://doi.org/10.14197/atr.201226265

Introduction

'If you can't measure it, you can't improve it.'[1]

Interest in and support for due diligence legislation peaked over the past decade. The French *Duty of Vigilance Law* (2017) was followed by the Dutch *Child Labour Due Diligence Act* (2019), the Norwegian *Transparency Act* (2021), the Swiss *Supply*

[1] The phrase 'If you can't measure it, you can't improve it' is most commonly attributed to management consultant Peter Drucker, but that exact wording does not appear in his published works. The saying is a paraphrase that grew out of Drucker's broader ideas about objectives, measurement, and effectiveness. It has also been attributed to Lord Kelvin and Edward Demming.

Chain Act (2022), and the German *Supply Chain Act* (2023), as well as the EU's *Corporate Sustainability Reporting Directive* (CSRD) (2022) and finally the *Corporate Sustainability Due Diligence Directive* (CSDDD) (2024). Although these laws differ in significant ways in terms of scope, coverage, obligations of companies, and penalties for non-compliance, the commonality across them is that they attempt to hold companies *accountable* for human rights and environmental harms in their operations and global supply chains.

The impetus for these value chain due diligence laws has been the growing disillusionment with private voluntary regulation efforts by companies over the last twenty-five years, given their failures to sustainably improve human rights in supply chains,[2] and tragedies like the Rana Plaza factory collapse. In some sense, the laws reflected widespread acceptance by European policymakers that twenty-five years of private voluntary regulation and 'best practices' guidance for due diligence had done little to limit harms to both people and planet across global supply chains.

While the EU Omnibus Package, discussed below, seeks to 'defang' the EU due diligence directive and could be used to dilute existing due diligence laws in effect in EU member states, the central concept—that of covered companies (lead firms) accounting for human rights and environmental risks in their supply chains—will likely remain. And if that remains, there is the burning question of how regulators will know who is harming workers or running big risks for the environment. Another question is how stakeholders—business partners (including upstream suppliers), workers and unions, investors and researchers—will know which lead firms and practices are failing and which ones are delivering good outcomes.

The central argument in this article is that a risk-based due diligence regime requires new forms of disclosure by covered corporations. We suggest that, in order for a risk-based due diligence regime to deliver information about human rights and risks in the supply chains of global corporations, there is a need for companies to disclose data on human rights *outcomes* in their supply chains. Under the old private regulation regime, lead firms monitored their supply chains themselves and were not required to disclose the results of their efforts.

To that end, we (researchers at the Cornell Global Labor Institute) have developed a series of quantitative outcomes metrics. By focusing on outcomes for workers in the supply chain, they provide the crucial human rights *evidence* that is necessary

[2] R M Locke, *The Promise and Limits of Private Power: Promoting Labor Standards in a Global Economy*, Cambridge University Press, Cambridge, 2013; S Kuruvilla, *Private Regulation of Labor Standards in Global Supply Chains: Problems, Progress, and Prospects*, Cornell University Press, Ithaca, 2021.

for the conduct of due diligence. Such outcomes data is critical for regulators to monitor and review the performance of companies and to assess the effectiveness of companies' targeted approach to risk. Such data is also useful for lead firms themselves, because it provides them the evidentiary base to prioritise risks and decide which ones are more salient or urgent.

We contribute to the regulation literature through our focus on outcomes, in contrast to the variety of existing guidance frameworks that overwhelmingly focus their disclosure requirements on what firms do (their programmes) rather than whether these programmes are effective (outcomes). We argue that while programme-based reporting may be *necessary* to indicate what companies are doing, it is *insufficient* under a mandatory due diligence regime, as they tell us little or nothing about whether those actually improve outcomes. Outcomes-based disclosures help solve the policy-practice decoupling that has been a common criticism of private voluntary efforts.

Due Diligence Risk Assessment and Reporting

On 26 February 2025, the European Commission introduced its 'Omnibus Simplification Package'—a set of proposals aimed at streamlining EU sustainability regulations. It proposes to postpone the application of the CSDDD until January 2027, reduce the number of companies covered by the CSRD, eliminate EU-wide civil liability, limit the focus of the legislation to first-tier suppliers only rather than the whole supply chain, and require due diligence once every five years rather than annually (amongst a series of other proposals).

In limiting the due diligence obligations to only Tier 1 suppliers, the Omnibus Package would reduce the CSDDD to a pale shadow of the 2024 law that applied to all tiers of the supply chain and all significant business relationships. Furthermore, in removing the EU-wide civil liability provision that gives the law its teeth, due diligence remains mandatory but is not very different from the private voluntary regime that has been in place for the last 30 years. However, what will remain, in our best guess, is that firms will be still be required to undertake risk-based due diligence, which will then be the basis on which firms can be held accountable for harms to human rights in the supply chain. The key question is how regulators can hold firms accountable.

In the old private regulation regime, lead firms gathered data about supply chain labour conditions by themselves or by outsourcing it to social auditing companies and multi-stakeholder programmes.[3] Lead firms used that intelligence as they pleased—to revise sourcing strategies, to remediate conditions in factories, or to

[3] Kuruvilla.

do nothing at all.[4] Lead firms were also largely free to report only what they cared to report. Even firms that obtained extensive intelligence about working conditions among suppliers tended to report a select subset of such information, and only in aggregate terms.[5]

In this voluntary regime, several guidance frameworks emerged to help lead firms define their approaches, track their progress, and showcase their efforts. The OECD's *Guidelines for Multinational Enterprises on Responsible Business Conduct* and its *Due Diligence Guidelines for Responsible Business Conduct*, the Workforce Disclosure Initiative, and the Global Reporting Initiative (GRI) are examples. These guidance frameworks focus largely on *inputs*; that is, they require companies to disclose their plans, policies, and processes regarding human rights in their supply chains. Hao, Dragomir, and Radu note the general lack of rigour: '[T]he limitations [in non-financial reporting] include inconsistent formats, lack of standardization, weaknesses in the reliability and comparability of information used in decision-making process, and limited assurance'.[6]

To be sure, these descriptions of corporate policies and procedures indicate the efforts companies are making to uphold labour rights in their supply chains. But they are highly selective and emphasise the positive. They are used by lead firms as much for display as for disclosure and often combine future goals with carefully curated data in reports with titles such as 'Circular & Climate Positive' and 'Fair & Equal'. What is missing in these firms' reporting is evidence: uniform outcomes data for the labour policies and workplace practices that matter most.[7] In other

4 In a due diligence regime, collecting reliable data on working conditions and labour rights is an obligation of the lead firm. Legislation in Germany and the EU that includes legal liability for due diligence failures should drive changes and new investment in intelligence-gathering.

5 S Kuruvilla and J Judd, *Measuring Supply Chain Due Diligence: Labor Outcomes Metrics*, Global Labor Institute, Cornell University, May 2024.

6 NS Hao, V D Dragomir, and O M Radu, 'Effects on Corporate Stakeholders and Limitations of the Implementation of the Non-financial Reporting Directive (2014/95/EU)', *Journal of Accounting and Management Information Systems*, vol. 22, issue 4, 2023, pp. 609–630, https://doi.org/10.24818/jamis.2023.04002.

7 We know only in broad terms how reporting requirements will contribute to the administration of European due diligence regimes. The European Sustainability Reporting Standards (ESRS), drafted by the European Financial Reporting Advisory Group (EFRAG), have used the GRI template of input-based reporting for the initial CSRD requirements. In fact, the advisory group emphasises the inter-operability of CSRD requirements with GRI and other input-focused reporting frameworks including those from the Sustainability Accounting Standards Board (SASB) and Taskforce on Climate-related Financial Disclosures (TCFD). These requirements are revised—i.e. 'simplified'—as part of the 2025 Omnibus revision.

words, under private regulation, the description of inputs does not make it easy to hold firms accountable.

Evidence is crucial given that mandatory due diligence requires companies to focus efforts on the highest-risk areas within a company's operations, value chain, or business relationships. This approach recognises that not all risks are equal and allows businesses to allocate resources efficiently by prioritising actions based on the severity and likelihood of potential adverse impacts. Prioritisation of which risks are significant requires data and evidence. How else can a company assess whether a risk is significant or not? Data also allows companies to tailor due diligence solutions appropriately, allowing them to allocate resources more effectively. Data is also crucial for monitoring and review, and to assess the effectiveness of the company's targeted approach to reduce risk.

We present here a set of quantitative metrics that measure labour outcomes—actual impacts for workers. These metrics are 'hard' measures required of lead firms that will allow regulators to track the performance of those firms against their due diligence obligations. They also allow regulators to track the effectiveness of company efforts to reduce risks or remediate harms to people along their value chains and compare performance across companies. For firms, the metrics are particularly useful for a clear-eyed and quantitative assessment of risks and outcomes. Regulators and firms alike will be able to compare outcomes across suppliers, countries, tiers, and over time. What firms are required to report in a due diligence or corporate accountability regime will inform the choices regulators make and, therefore, how lead firms and their upstream and downstream business partners behave. Public disclosure under the accompanying reporting regime can balance the need-to-know against legitimate business confidentiality claims, so that unions, campaigners, investors, and researchers can see and compare outcomes.

A useful analogue are the US Securities and Exchange Commission's (SEC) required 10-K reports, which provide a comprehensive overview of a company's business and financial conditions, including audited financial (outcomes) statements and other information such as earnings per share, debt, gross profit, and more. These quantitative metrics are uniform across firms and can differ from those covered in the company's annual report to shareholders. The 10-K is a useful tool for firms themselves, regulators, investors, researchers, and others. Outcome metrics for people and planet—which, like core financial reporting, cannot be said to be confidential business information—similarly provide crucial information that markets require and that allow the democratic network that holds corporations accountable to do their work.

The metrics we have developed put reporting on labour outcomes in the same class as reporting on financial outcomes. That is, they require firms to present uniform quantitative data on *results* that regulators can compare between firms and their supply chains, and over time. Labour outcome metrics will also allow

regulators and firms themselves to put CSRD 'double materiality' standards into practice by accounting for the 'financial implications of those [material sustainability] risks, as well as growing awareness of the risks and opportunities from other environmental issues and from health and social issues, including child and forced labor'.[8]

Effective regulation of due diligence efforts to surface human rights risks, and for companies, the ability to analyse risks, to decide which are salient or less salient, requires uniform quantitative outcomes metrics. Mandatory disclosure of *outcomes* data to regulators and others complement and emphasise the shift from private regulation to accountability and public regulation.

Labour Outcomes Metrics for Risk Analysis and Disclosure

We draw on the long tradition of industrial relations scholarship to develop outcomes metrics for risk analysis and reporting and disclosure. These metrics are designed to capture impacts for workers, including climate impacts on workers and workplaces. Outcomes-based metrics have several advantages. The first is they measure outcomes, not inputs, and more clearly *indicate impacts* for workers. They also track progress for suppliers and lead firms.

Second, they are *parsimonious*. Inputs reporting—descriptions of company policies and programmes—do not make the lives of due diligence regulators (or lead firms' compliance teams) easy. They will struggle to peruse countless pages of each firm's input-focused reporting, compare it against others, and make meaningful determinations about compliance with due diligence requirements. And, after completing their burdensome task, regulators will still not know whether these policies and programmes actually reduce environmental impacts or improve working conditions and advance worker rights.

The third advantage of outcome-based metrics is their *utility* for multiple stakeholders. As we note above, outcomes data can be put to work by regulators, firms themselves, industry groups, worker organisations, investors, and others. And outcome metrics give companies a clear sense of what information to collect and how to improve their analysis of risk. New due diligence requirements carry the risk of legal liability for lead firms. A more precise analysis of harms and risks should soon be a priority, and outcome metrics enhance precision.

A fourth advantage of outcome metrics is that they are *readily available*. The data required for our outcomes metrics are based on data that is routinely available inside global firms. Labour and environmental compliance data are ritually

[8] See Recital 11 of CSRD.

collected from suppliers through the auditing process. Researchers have used this information—when shared by firms—to evaluate the impacts of private regulation.[9]

Finally, while our metrics have been designed for the apparel industry, they are *adaptable* for other sectors. Our outcomes measures are, we believe, the closest possible proxies for the most common or gravest labour abuses found in apparel value chains. And taken together, they produce both an outcomes- and risk-rating system that works at the supplier, national, and global levels. We offer an important caveat here. Some aspects of global production are hard to see and difficult to measure. We do not have a measure among our 25 metrics of child or forced labour. The numbers of reported forced labour cases or detected child labour cases, for example, are not, by themselves, indicators of the overall risk or prevalence of forced labour or child labour. From a due diligence perspective, the risks here are relatively easy to identify at the macro level—dependence on migrant workers, political turmoil, extreme poverty—but less amenable to a meaningful quantitative measure.

In presenting the rationales for these metrics, we refer to recent scholarship and note how they are consistent with the principles and requirements of recent due diligence legislation, including the German *Supply Chain Act*, the CSDDD, and the CSRD.[10]

---

[9] See, for example: Locke; Kuruvilla; S Kuruvilla *et al*., 'Field Opacity and Practice-Outcome Decoupling: Private Regulation of Labor Standards in Global Supply Chains', *Industrial and Labor Relations Review*, vol. 73, issue 4, 2020, pp. 841–872, https://doi.org/10.1177/0019793920903278; M Amengual, G Distelhorst, and D Tobin, 'Global Purchasing as Labor Regulation: The Missing Middle', *Industrial and Labor Relations Review*, vol. 73, issue 4, 2020, pp. 817–840, https://doi.org/10.1177/0019793919894240; J L Short, M W Toffel, and A R Hugill, *Beyond Symbolic Responses to Private Politics: Codes of Conduct and Improvement in Global Supply Chain Working Conditions*, Harvard Business School Working Paper 17–001, 2018; Y Bird, J L Short, and M W Toffel, 'Coupling Labor Codes of Conduct and Supplier Labor Practices: The Role of Internal Structural Conditions', *Organization Science*, vol. 30, no. 4, 2019, pp. 847–867, https://doi.org/10.1287/orsc.2018.1261.

[10] Our metrics are directly and immediately relevant for due diligence and reporting regimes such as the German Supply Chain Act. In fact, they are quite tightly coupled. See Federal Office for Economic Affairs and Export Control (BAFA), *Identifying, Weighting and Prioritizing Risks: Guidance on Conducting a Risk Analysis as Required by the German Supply Chain Due Diligence Act "Lieferkettensorgfaltspflichtengesetz" or "LkSG"*, BAFA, 2022, https://www.bafa.de/SharedDocs/Downloads/EN/Supply_Chain_Act/guidance_risk_analysis.html, and *Risiken ermitteln, gewichten und priorisieren: Handreichung zur Umsetzung einer Risikoanalyse nach den Vorgaben des Lieferkettensorgfaltspflichtengesetzes*, BAFA, 2022, https://www.bafa.de/SharedDocs/Downloads/DE/Lieferketten/handreichung_risikoanalyse.pdf.

We group our 25 metrics into six groups. In the first five groups, we highlight the outcomes that we want to measure and show the metrics that operationalise the individual measures. The final group of metrics focuses on the *quality and diligence of firms'* intelligence-gathering processes. This group is not focused on outcomes; the metrics are contextual in that they provide information that is relevant to the interpretation of the metrics in the previous groups.

In addition to disclosure of corporate 'demographics'—locations, ownership, workforce size, and so on—we suggest that all metrics be reported annually and show data for the preceding three-year period in order to provide a baseline and allow tracking of changes over time. We have designed the measures so that regulators (and firms and others) can convert them into scorable metrics that allow them to compare the relative labour performance of regulated firms globally, and by country, by year. And within supply chains, lead firms can measure and compare the performance of different suppliers. Below, we discuss each metric, what it seeks to measure, and the rationale for why that measure is necessary.

Group 1: Sourcing Risk Metrics (Lead Firm)

Metric 1: Lead firms' sourcing breakdown (percentage) by country in terms of both value and volume.
Measure: *Overall sourcing risk*
Rationale: Macro- or country-level measures are important for gauging and comparing firms' overall tolerance for risk of harms to workers. Due diligence legislation requires some overview of companies' business activities and value chains. Much of labour outcome risks for firms is determined by these macro-level choices.

Many apparel firms, for example, already report where their contract suppliers are located and the number in each country; Gap, Adidas, Patagonia, Marks & Spencer, and H&M, among others, do this. But most do not report the value and volume sourced from each country, which is crucial for risk assessment. (Adidas is one of the few that report some sourcing *volumes* by country.)[11] If, for example, 30, 20, and 10 per cent of an apparel brand's product comes from China, Bangladesh, and Cambodia, respectively, that firm is indicating—among other things—tolerance for large-scale harms or risks to workers regarding freedom

[11] See N.A., *Annual Report 2023: Global Operations*, Adidas, 2024, retrieved 20 November 2025, pp. 65–69, https://report.adidas-group.com/2023/en/_assets/downloads/annual-report-adidas-ar23.pdf.

of association,[12] inadequate wages,[13] and escalating climate impacts on workers.[14]

Metric 2: The percentage of each supplier's production that is reserved for the lead firm, on average, by year.
Measure: *Leverage*
Rationale: Micro- or factory-level choices matter, too, as they indicate how lead firms view 'partnership' and 'leverage' with contract suppliers. Closely related to the above is the leverage companies have over the suppliers, which could translate into the amount of influence they could exert over supplier labour practices. Prior research shows that share of production or 'leverage' is an important predictor of suppliers' overall compliance[15] and a useful indicator for regulators when determining credit for improvements or responsibility for harms.

Most buyers know their share of their Tier 1 factories' production and, although it should not be regarded as confidential business information, none report this information publicly. The guidance for the German law acknowledges that it is not possible for a company to have any influence if it only has a small percentage of a supplier's production. It notes that 'the ratio of the order volume to the supplier's (total) turnover might be difficult to answer for many companies at the beginning. After all, the supplier's total turnover is rarely known. Companies can try to gradually work towards more transparency'.[16] So leverage percentage is clearly an important issue to report, since leverage determines whether companies will be held accountable for harms.

Metric 3: The number of years of sourcing relationships and annual changes in value/volume for each factory.

---

12 M Anner, 'Corporate Social Responsibility and Freedom of Association Rights: The Precarious Quest for Legitimacy and Control in Global Supply Chains', *Politics & Society*, vol. 40, issue 4, 2012, pp. 609–644, https://doi.org/10.1177/0032329212460983.

13 T Begum and R Ahmed, 'Bangladesh Garment Workers Fighting for Pay Face Brutal Violence and Threats', *The Guardian*, 15 November 2023, https://www.theguardian.com/global-development/2023/nov/15/bangladesh-garment-workers-fighting-for-pay-face-brutal-violence-and-threats.

14 J Judd and S Kuruvilla, 'Climate Change and the Apparel Industry in Southeast Asia', *Southeast Asia Program (SEAP) Spring Bulletin*, Cornell University, 2025, https://ecommons.cornell.edu/bitstreams/cf6aeb74-4f3b-48fa-bfaf-d89f78e37809/download.

15 Locke; Kuruvilla.

16 See Federal Office for Economic Affairs and Export Control (BAFA), 'Appropriateness: Handout on the Principle of Appropriateness According to the Requirements of the Act on Corporate Due Diligence Obligations for the Prevention of Human Rights Violations', BAFA, December 2022, pp. 4–12, https://www.bafa.de/SharedDocs/Downloads/EN/Supply_Chain_Act/guidance_appropriateness.html.

Measure: *Length and quality of relationships*
Rationale: Empirical research indicates that long-term buyer–supplier relationships characterised by commitment or partnership promote compliance and good labour standards.[17] Other things being equal, long-term partnership-based relationships help due diligence relative to sourcing models that are short-lived and frequently changing. Companies will have this data in their sourcing database, so reporting the metric is relatively easy. Using this data, regulators ought to be able to correlate length of relationship with labour standards compliance. Most companies do not currently report this information on their websites.

Metric 4: Annual change of suppliers by country.
Measure: *Supplier turnover*
Rationale: An important complement to our 'leverage' and 'length of relationship' measures is the annual change in a lead firm's production base. Supplier turnover rates are a key indicator of sourcing volatility and an indicator of risk for workers. This data exists within sourcing departments of all lead firms and can be instantly produced. Relatively few companies disclose this metric publicly. The CSRD's disclosure requirements mandate that the 'undertaking shall disclose the main features of its upstream and downstream value chain, including a description of the main business actors (including key suppliers, customers, distribution channels and end users).'[18]

It is now increasingly the norm for lead firms to have a set of strategic suppliers with whom they have more stable, longer-term relationships, and to maintain a subset of non-core and non-strategic suppliers. Requiring supplier turnover disclosure is relevant, in addition to the metric above, since supplier churn, even in the non-core strategic supplier base, indicates short-lived relationships that could pose risks to workers.

Metric 5: Correlation between sourcing and compliance over time.
Measure: *Sourcing and labour performance alignment*
Rationale: Perhaps the most important indicator is whether and how well sourcing and human (or labour) rights compliance is integrated within lead firms. Does the sourcing management system incentivise suppliers to improve labour standards? Specifically, do the firms reward suppliers with better compliance and labour practice records with more orders and, over time, reduce orders from suppliers with weaker and un-remediated records? Are the worst suppliers pushed out?

---

17 R Locke, M Amengual, and A Mangla, 'Virtue out of Necessity? Compliance, Commitment, and the Improvement of Labor Conditions in Global Supply Chains', *Politics & Society*, vol. 37, issue 3, 2009, pp. 319–351, https://doi.org/10.1177/0032329209338922; Kuruvilla.

18 CSRD Disclosure Requirements SBM 3.

Lead firms with good management systems tend to demonstrate close alignment between sourcing and compliance.[19]

All that is required for this analysis is data on sourcing volumes and compliance scores over time, by factory. It should show a relationship between factories' labour compliance records (see our metrics on labour compliance below) and order volumes that suppliers receive. As the compliance score improves, suppliers should receive more orders.

This measure is consistent with the notion of the appropriateness of firms' efforts to influence supply chain labour practices, i.e. whether risks arise from within firms due to this lack of alignment, or from the suppliers' practices. It is also evidence that is useful in demonstrating effectiveness—specifically, that lead firms' sourcing systems provide clear incentives and clear consequences for suppliers.

While our metric here is focused on the existence of management systems that incentivise compliance, we do not develop quantitative measures of purchasing practices for several reasons. First, lead times for the delivery of orders—often mentioned as a purchasing practice that affects workers—vary in accordance with the respective business models. Appropriate lead times for retailers may differ from appropriate lead times for fast fashion brands. Second, shorter payment terms provide suppliers with relief from interest payments on their working capital needs, but the variation in payment terms is large, with no sense of what is ideal. Third, poor sourcing practices will show in outcomes measures such as overtime hours and worker turnover rates. Due diligence requires that firms unearth risks and harms to workers, and then work back to identify and deal with the causes.

Group 2: Workforce Risk Measures (Suppliers)

Metric 6: The specific metric to be used here is the percentage of migrant (foreign) workers in the supplier workforce (by factory). In countries where migration across states or provinces requires permissions or specific work authorisations in the employing state, the metric may have to list the state/province of origin as well.
Measure: *Migration and citizenship status of workers*
Rationale: Research in multiple sectors shows that migrant workers are particularly susceptible to exploitation, increasing the risk of harms for workers and for

[19] For an example of a case where alignment was not achieved despite efforts to integrate sourcing and compliance, see Amengual, Distelhorst, and Tobin. For research that shows how a large retailer is achieving such alignment, see Kuruvilla. For examples of ongoing company efforts to achieve this alignment see M W Toffel, E McNeely, and M Preble, *New Balance: Managing Orders and Working Conditions*, Harvard Business School Case, 2019, and N-h Hsieh, M W Toffel, and O Hull, *Global Sourcing at Nike*, Harvard Business School Case 619-008, 2019.

lead firms whose suppliers rely on workers who are internal or cross-border migrants.[20]

This data is readily available to supplier management and external auditors. The larger the ratio of migrant workers, the greater the risk for workers, including the risk of forced labour. A second, related percentage—migrant workers with recruiting/placement debts—is a useful measure of forced labour risks among migrants. This data is harder to find but should be collected by firms conducting meaningful due diligence.

Specifically, the question is whether the structure of the labour force in supply chain factories, represents a risk for the companies that source from them. If suppliers have a high proportion of migrant workers in their workforce, this constitutes a level of risk for forced labour violations. The metric, therefore, is useful for companies in their analysis of forced labor risk.

Metric 7: Number of temporary/casual workers as percentage of the total workforce (by factory, by year).
Measure: *Precarious employment relationships*
Rationale: Contingent workers are, in general, likely to have fewer rights and more prone to labour exploitation than permanent workers. If factories employ a large share of contingent or casual/temporary workers, or even workers on a series of short-term contracts, then labour risks for both workers and lead firms increase. As with worker legal status above, this data is readily available to employers and lead firms.

Metric 8: Turnover rate, calculated as the number of workers who have left employment, divided by the total number of workers for the year or month.
Measure: *Worker turnover*
Rationale: Workers leave jobs for many reasons but high worker turnover in factories indicates high labour risk. A 2022 analysis of social audit and worker turnover data in 622 supplier factories in 28 countries—all producing for a large US apparel retailer—showed that higher worker turnover in supplier factories was associated with violations of code provisions and, more specifically, with labour standards violations (as opposed to violations of other code provisions). Within the labour cluster, high turnover was due primarily to wage and benefits violations.[21] This relationship was stronger in lower-wage countries.

---

[20] O Balch, 'Abuse of Migrant Workers Is Now a Top Risk for Businesses', *The Guardian*, 16 February 2016, https://www.theguardian.com/sustainable-business/2016/feb/16/migrant-workers-top-risk-businesses.

[21] C Li and S Kuruvilla, 'Corporate Codes of Conduct and Labour Turnover in Global Apparel Supply Chains', *British Journal of Industrial Relations*, vol. 61, issue 3, 2023, pp. 481–505, https://doi.org/10.1111/bjir.12705.

Worker turnover data is kept by most factories or can be easily calculated from payroll data. Very high turnover indicates worker dissatisfaction and could be due to lead firms' sourcing practices such as pricing 'squeezes',[22] relatively low wages, or wage theft and other abusive labour practices at the factory level.[23] For lead firms, the turnover metric is an indicator of a *variety* of human rights risks that could trigger deeper inquiry.

Metric 9: Female wages as a percent of male wages in similar production roles.
Measure: *Gender pay equity*
Rationale: All forms of discrimination are generally prohibited in both private and public regulation of work. But in apparel production, where women form the majority of the workforce, we pay particular attention to gender discrimination and pay equity, in particular, consistent with ILO conventions 100 and 111. Most global brands include gender equity in their codes of conduct. For example, ALDI Nord's commitment to gender equality includes the statement that 'Sex or gender, marital status, or pregnancy should not lead to disadvantages during hiring, employment, training, promotion and remuneration'.[24] H&M's policy states: 'We are working to improve wages in our supply chain by helping factories to bring in effective wage management systems. These systems empower workers by raising awareness about wages and developing skills to improve them. They also help factories set a fair wage structure that isn't influenced by a worker's gender.'

However, despite 25 years of private regulation in the global apparel industry, virtually no apparel lead firm reports on its website the gender pay differential for production employees among suppliers. The simplest measure here is the average monthly pay by gender for similar work and for the same level of tenure.[25]

---

22 Anner.

23 Kuruvilla; Li and Kuruvilla.

24 See N.A., *International Policy on Gender Equality in ALDI's Supply Chains*, ALDI, November 2021, https://www.aldi-nord.de/content/dam/aldi/germany/verantwortung/umbau_cr_bereich/menschenrecht/Gender_Policy_final_EN.pdf.res/1635858497708/Gender_Policy_final_EN.pdf and N.A., 'Gender Equality in Our Supply Chain', H&M Group, n.d., retrieved 1 December 2025, https://hmgroup.com/sustainability/fair-and-equal/gender-equality-in-our-supply-chain.

25 This metric is required under German law. Section 2(7) of the Act refers to the prohibition of unequal treatment in employment, including, for example, on the grounds of national and ethnic origin, social origin, health status, disability, sexual orientation, age, gender, political opinion, or religion or belief. Unequal treatment includes, in particular, the payment of unequal remuneration for work of equal value. The metric, tracked over time, is also consistent with the lead firm's need to show effectiveness.

Metric 10: The ratio of female supervisors to female workers.
Measure: *Gender equity, gender-based harassment and violence*
Rationale: Women now form the majority of the global apparel workforce, but men form the majority of management and supervisory staff.[26] This mismatch increases the risk of gender-based harassment and violence, and reducing the ratio—that is, upping the share of women among supervisors—reduces that risk. For parity, the percentage of female supervisors should equal the percentage of female workers in the factory. H&M is one of a few lead firms to articulate a clear goal: 'Our ambition is that the ratio of women supervisors matches the ratio of women workers. However, in 2022 only 27% of supervisors in our supplier factories were women, while 62% of the workforce were women.'[27] H&M reports an input measure—leadership training programmes for women workers—but not yet the ratio. Gap Inc. has a similar goal: 'Our goal of achieving gender equity at the supervisor level in all of our strategic factories will be driven by our Supervisory Skills Training program.'[28] An analysis of an undisclosed company's supply chain data[29] shows wide variation in the ratio of female supervisors to female workers across factories, within and across countries. The number of male and female supervisors and workers is easily accessible from factories and represents a simple way of indicating the risk for harassment and violence.

Group 3: Working Conditions Risk Measures (Suppliers)

The composite factory working conditions metric below—Metric 11—includes violations for all working conditions and labour rights provisions, but we use separate metrics for key measures, including wages, working hours, and freedom of association.

Metric 11: Total number of violations by labour standard category for each factory.
Measure: *Factory working conditions violations*
Rationale: Most firms use social audits to obtain intelligence about compliance with and violations of labour conditions specified in national law and their voluntary codes of conduct. Based on this intelligence, lead firms assign scores to

26 S Kuruvilla, *The Dindigul Agreement to End Gender-Based Violence and Harassment. Has It Worked?*, Global Labor Institute, 2025.

27 See 'Gender Equality in Our Supply Chain'.

28 N.A., 'Gap Inc. Announces Landmark 2025 Goals to Drive Women's Empowerment in Its Supply Chain', Gap Inc., 15 March 2021, https://www.gapinc.com/es-us/articles/2021/03/gap-inc-announces-landmark-2025-goals-to-drive-wom.

29 I Bratton-Benfield, S Kuruvilla, and J Judd, 'Gender Discrimination in Fashion Supply Chains: What Should Companies Report?', *The Sourcing Journal*, 8 November 2023, https://sourcingjournal.com/topics/thought-leadership/gender-discrimination-pay-gap-apparel-factories-levi-strauss-cornell-university-464585.

their supplier factories.[30] Of course, it is key that lead firms' data be reliable, and legislation in Germany and the EU that includes legal liability for due diligence failures should induce companies and their auditors to ensure reliability of their intelligence regarding factory working conditions.

Businesses are required to exercise due diligence in a manner appropriate to them with the aim of preventing or minimising human rights or environment-related risks. What this metric shows is whether firms' actions over time contribute to fewer labour violations in their supply chains. Comparisons of violations between audit firms and countries can be difficult, but flat or rising rates of violations indicate risky working conditions. Based on this data, companies can determine whether violations of working conditions are, on the whole, declining over time.

Metric 12: Actual average hours worked by month, and the average hours of overtime worked by month for each factory.
Measure: *Working hours*
Rationale: Hours of work are governed by ILO conventions 1 and 30 as well as national laws that set workplace standards. Working hours have bearing on worker health and safety and the composition of workers' earnings. For regulators and firms themselves, consistently high levels of overtime are an indication of the impact of an employer's poor management or a buyer's poor purchasing practices.[31]

Metric 13: Actual average monthly income for production jobs, compared to local minimum wage, prevailing manufacturing wages for the local area, and living wage estimates.
Measure*: Wages*
Rationale: Wages are a subject of mandatory due diligence as well as national and private regulations. Section 2(8) of the German *Supply Chain Act* prohibits the 'withholding of an adequate living wage, where the adequate living wage amounts to at least the minimum wage as laid down by the applicable law and apart from

[30] Locke demonstrates how Nike assigns its factories a grade based on their aggregated performance (violations) on all code of conduct provisions (Locke). Kuruvilla shows how a major global retailer assigns a total score for each factory which is then a key input into sourcing decisions (Kuruvilla). Other lead firms assign different weights to different types of violations but arrive at a grade or rating for their factories. For example, the ILO's Better Work programme reports findings on eight 'clusters' of labour rights and standards, making it possible to assign compliance scores on a per-labour-standard basis or a total audit score basis (D K Brown, R H Dehejia, and R Robertson, 'The Impact of Better Work: Firm Performance in Vietnam, Indonesia and Jordan', Discussion Paper 27, *SSRN*, August 2018, https://doi.org/10.2139/ssrn.3130946).

[31] G Distelhorst and A McGahan, 'Socially Irresponsible Employment in Emerging-Market Manufacturers', *Organization Science*, vol. 33, no. 6, 2022, pp. 2135–2158, https://doi.org/10.1287/orsc.2021.1526.

that is determined according to the regulations of the place of employment'. This limitation appears to void the 'withholding' requirement: decades of academic research have demonstrated that minimum wages in apparel exporting countries are not 'living wages'.[32] Voluntary codes of conduct require that factories pay local minimum wages, living wages—but without actual wage levels—or wages agreed via collective bargaining.

Given the lack of clarity, what should firms report? At the minimum, firms should be collecting and calculating actual average monthly incomes—breaking out entry level wages, average base wages, bonuses, all overtime pay, and deductions—for each production role in the factory. They should also report the local minimum wage, prevailing manufacturing wages for the local area, and living wage estimates for the region.[33]

Metric 14: The number of recorded injuries, accidents, and work-related illnesses (by factory, annually).
Measure: *Accidents*
Rationale: National law and corporate codes can include as many as 200 items regarding health and safety measures, so we rely on reporting of workplace accidents. Most national laws require factories to keep a record of workplace accidents, injuries, and illnesses consistent with our proposed metric.

Accidents are recorded by factory management which may misrepresent or understate the numbers of accidents, injuries, and illnesses. Due diligence requires that lead firms spend time triangulating evidence on this issue, via off-site interviews with workers and leaders of worker organisations.[34]

Metric 15: a) The existence of a worker-trusted grievance/hotline system and b) where trusted, the number of grievances/hotline calls.
Measure: *Grievance mechanism*
Rationale: Due diligence regimes and enforceable agreements, for example, mandate that all aggrieved parties have access to remedy—ways in which their complaints can be heard and addressed. Most remedy mechanisms include either

---

32 Anner; H Kabir *et al.*, 'The Paradoxical Impacts of the Minimum Wage Implementation on Ready-made Garment (RMG) Workers: A Qualitative Study', *The Indian Journal of Labour Economics*, vol. 65, 2022, pp. 545–569, https://doi.org/10.1007/s41027-022-00375-9.

33 See, for example, Kuruvilla for detailed wages data for brands and audit firms and the Fair Labor Association's reporting on wages.

34 Since Section 2(5) of the German law prohibits disregarding health and safety obligations applicable under the national law of the place of employment, data regarding accidents, injuries, and illnesses indicate risk for lead firms and constitutes evidence of compliance over time.

a formal grievance system at the factory level or a phone-based complaints mechanism run by/for lead firms. A factory in which workers feel comfortable submitting grievances is a possible indicator of positive labour management relations, especially if a union and a collective bargaining agreement has been established. On the other hand, a large number of grievances may also indicate poor working conditions and desperate workers.

Harrison suggests that the characteristics of various grievance mechanisms as well as the contexts in which they operate significantly affect human rights outcomes: 'even the most successful mechanisms only manage to produce remedies in particular types of cases and contexts.'[35] Many global apparel brands have instituted 'hotlines' that substitute for or supplement grievance procedures at the local level. Hotline calls have been used quite successfully in the case of the Bangladesh Alliance.[36]

Effectiveness of grievance mechanisms requires that workers see them as legitimate, accessible, predictable, equitable, and transparent. However, as with employer-reported accidents and illnesses, this metric can be manipulated and requires that lead firms triangulate evidence using the testimony of workers (away from the workplace) to determine their trust in the system.

Group 4: Representation Rights Metrics

Metric 16: The share of workers in democratically elected activist unions (i.e. unions that bargain with/challenge management on core workplace issues).
Measure: *Freedom of association and union presence*
Rationale: Freedom of association is a core human right, and due diligence regimes generally require lead firms to respect this right in their operations and those of their supply chains. The German *Supply Chain Act*, for instance, 'prohibits disregarding freedom of association, according to which employees are free to form or join trade unions; the formation, joining or membership in a trade union must not be used as a reason for unjustified retaliation; trade unions are allowed to operate in accordance with the applicable law of the place of employment which includes the right to strike and the right to collective bargaining'.[37] Most firms and their multi-stakeholder groups collect information on worker organising rights—typically reduced to the presence or absence of unions—through social audits.

---

[35] J Harrison and M Wielga, 'Grievance Mechanisms in Multi-Stakeholder Initiatives: Providing Effective Remedy for Human Rights Violations?', *Business and Human Rights Journal*, vol. 8, issue 1, 2023, pp. 43–65, https://doi.org/10.1017/bhj.2022.37.

[36] H Alamgir, 'The North American Helpline Initiative in Bangladesh for Garment Workers', *Journal of Occupational Health*, vol. 62, issue 1, 2020, pp. e12178, https://doi.org/10.1002/1348-9585.12178.

[37] German *Supply Chain Act*, Section 2(6).

Legal prohibitions against worker organising (China) or effective monopolies on union formation (Vietnam) deny workers this fundamental right.

At the same time, the presence of a union by itself does not signify that the right to freedom of association is being upheld. Unions could be controlled by a company or, as in the case of China, by the Communist Party. Recent research based on an analysis of data from the ILO Better Work programme describes apparel supplier factories engaging in symbolic compliance by allowing unions to form in their factories, but also engaging in substantive non-compliance by restricting the right of the union to operate within them.[38] Thus, the existence of a union by itself is not enough evidence that freedom of association genuinely exists. Assessing whether unions are activist and challenge management on fundamental issues requires intelligence-gatherers to interview workers, usually away from the factory premises to get accurate information.

Metric 17: The share of workers covered by enforceable collective bargaining agreements (including enforceable brand agreements) with negotiated provisions better than state-specified minimums, by factory.
Measure: *Collective bargaining agreement presence*
Rationale: Freedom of association is designed to, among other things, advance another core labour right—collective bargaining at the workplace and industry levels. Analyses of Better Work data demonstrate that compliance with legal (and voluntary) workplace requirements is significantly higher in factories with both a union and a collective bargaining agreement.[39] But decades of research in industrial relations show that even where workers are able to unionise, employers often refuse to bargain (or to bargain in good faith).

As many factory-level agreements are formalistic—often dictated by employers—and generally re-state legal provisions, the existence of a collective bargaining agreement does not by itself indicate that the right is respected.[40] Thus, it is critical to interview workers and union representatives to determine the legitimacy of collective agreements.

[38] C Li, S Kuruvilla, and J Bae, 'Between Legitimacy and Cost: Freedom of Association and Collective Bargaining Rights in Global Supply Chains', *Industrial and Labor Relations Review*, vol. 78, issue 3, 2025, pp. 435–462, https://doi.org/10.1177/00197939251314867.

[39] S Kuruvilla, M Fischer-Daly, and C Raymond, 'Freedom of Association and Collective Bargaining in Global Supply Chains', in S Kuruvilla, *Private Regulation of Labor Standards in Global Supply Chains: Problems, Progress, and Prospects*, Cornell University Press, Ithaca, 2021, pp. 148–180.

[40] Li and Kuruvilla; Anner.

Metric 18: Are members of representative committees chosen by workers?
Measure: *Workplace governance representation*
Rationale: National laws, corporate codes of conduct, and some collective agreements such as the Bangladesh Accord provide for workplace representation, typically irrespective of the presence of a representative union. Workplace representation usually takes the form of committees with specific and sometimes narrow responsibilities—canteen committees, social events committees, etc.—and broader ones such as workplace or health and safety committees. Factories participating in Better Work have the latter type, called performance improvement consulting committees. The Bangladesh and Pakistan Accords require health and safety committees be set up in all factories that supply the signatory firms, and that these committees function in accordance with national law and applicable ILO standards. Safe and healthy workplaces—now included by the ILO as a core labour right—generally require worker representation and engagement with management.

It is important that committee candidates are chosen by workers—not nominated by management—and democratically elected by workers.

Metric 19: Gender ratio of committees compared to gender ratio of workforce.
Measure: *Workplace governance representation by gender*
Rationale: Gender equality requires that women be represented in various workplace committees in proportion to their numbers in the workforce. As with our gender equity and harassment measures above, some firms have recognised this need, and some report on them. Some lead firm policies are couched in broad terms. Adidas' code states that 'women are to be guaranteed equality of opportunity in access to training, employment, promotion, organization and decision-making', while others have more specific goals. Gap Inc. lists as goal that '100% of workers employed in our strategic factories will have their voices heard through gender-equitable workplace committees'. Relatively few firms report relevant metrics. H&M, for example, states that 66% of workplace dialogue committee members in their tier 1 factories are women.[41]

Group 5: Work Climate Impacts

Worker health and safety—now a core labour standard according to the ILO—is inadequate where there is a lack of measures to prevent excessive physical and mental fatigue, in particular through inappropriate work organisation in terms of working hours and rest breaks. Metric 14 above captures some workplace health and safety outcomes but does not account for the special and underrated risk posed for workers by climate breakdown. Note that these metrics are necessary

[41] See codes of conduct statements and sustainability reports from Adidas, Gap Inc., and H&M.

given the climate crisis, rising heat levels, and increased flooding. These occur in tropical and coastal countries, where most of the world's apparel factories are concentrated, such as Bangladesh, Vietnam, or Indonesia. Even more importantly, there are no consistent national or international standards protecting workers from heat and other catastrophic climate events. Our five outcomes metrics below are dedicated to pinning down the impacts of climate events on workers (and production).

Metric 20: The number of days per year on which the indoor wet bulb globe temperature (WBGT) exceeds 30°C, by factory. (Or, outdoor WBGT exceedance days until indoor readings are available).
Measure: *Extreme heat*
Rationale: Recent research has analysed climate vulnerability—extreme heat, intense flooding, etc.—and the looming economic damage for apparel producing countries that fail to make investments in climate adaptation. High heat and humidity make work and life difficult for workers. Intense flooding can disrupt production for days and even weeks at a time. They can cut deeply into productivity at work and earnings for both workers and employers, and they can harm the health of workers and their families. In Cambodia, for example, nearly two-thirds of factories between 2015 and 2022 had heat levels above 32°C (dry bulb) and 69% experienced indoor temperatures that were higher than outdoor temperatures in the dry (hot) season.[42] Global Labor Institute's 2024 *Hot Air* policy brief analysed changes in heat stress waves (wet bulb globe temperatures), revealing significant increases since 2005 in leading apparel production centres, including Ho Chi Minh City, Hanoi, and Karachi.[43]

But there is little by way of national standards or global guidance for indoor heat and dealing with its impacts on workers and production. In Bangladesh, labour law refers to 'tolerable' heat levels, and Cambodian law only notes that work must be undertaken in a thermal environment that 'does not affect workers' health'. The most commonly used measure of heat stress levels for workers is the WBGT, a combined measure of heat and humidity. Workplace research sets a WBGT of 30.5°C as the safe limit for moderate effort, including apparel production.[44]

---

42 J Judd *et al.*, *Higher Ground? Report 1: Fashion's Climate Breakdown and Its effects for Workers*, Global Labor Institute, Cornell University, September 2023, https://www.ilr.cornell.edu/sites/default/files-d8/2024-09/GLI%20Report%201_Rev_9-19-24.pdf.

43 J Judd *et al.*, *Hot Air: How Will Fashion Adapt to Accelerating Climate Change?*, Global Labor Institute, Cornell University, December 2024, https://www.ilr.cornell.edu/sites/default/files-d8/2024-12/gli-hot-air-4-december-2024.pdf.

44 C Schwingshackl *et al.*, 'Heat Stress Indicators in CMIP6: Estimating Future Trends and Exceedances of Impact-relevant Thresholds', *Earth's Future*, vol. 9, issue 3, 2021, pp. e2020EF001885, https://doi.org/10.1029/2020EF001885; E Somanathan *et al.*, 'The Impact of Temperature on Productivity and Labor Supply: Evidence from Indian

Metric 21: Flood Analysis – Site inundation in 10-year flood projections (RP 10) with projected outside flood levels of 0.25 m or more (by factory).[45]
Measure: *Intense Flooding*
Rationale: Flooding can cause factories to lose production, governments lose export earnings, and workers lose income. They also place workers at risk for a variety of illnesses such as rashes, diarrhoea, and dengue, resulting in loss of income (material risks for workers) and lost production and exports (a material risk for global buyers). Prior research has calculated that 'an increase in 100 millimeters of average monthly rainfall precipitation— expected between the start of the monsoon season and its peak [in tropical zones that are home to apparel production]—is associated with an increase in sick leave rate by 10 percentage points per month'.[46]

What is important to report here is whether supplier factories have prepared adequately for intense flooding. Is there a contingency plan? Are there both short- and long-term plans to deal with flooding impacts? The key measure is whether factories carry out flood analyses to prepare.

Metric 22: Paid breaks as share of work day hours during high heat stress days, disaggregated by regular and overtime work, by factory.
Measure: *Worker health, paid rest breaks*
Rationale: In high heat and humidity, workers will need more frequent rest breaks. Flooding affects not just workers' health but also their ability to travel to the factory, resulting in lost earnings. In national laws, as well as in codes of conduct, there are too few or unclear standards for paid breaks, paid sick leave, pay during force majeure work stoppages, and the right to halt dangerous work. The proposed metric is whether rest breaks are paid.

The German law, for example, refers to the lack of measures to prevent excessive physical and mental fatigue, including changes to working hours and rest breaks, as a human rights risk.

Metric 23: Paid sick days used as a share of available days, by factory.
Measure: *Worker health, illness*
Rationale: A key measure of factory-level and national policy-level forbearance when climate events affect workers' ability to work is the provision of paid sick leave. Currently, many countries do not have formal laws regarding sick leave. It

manufacturing', *Journal of Political Economy*, vol. 29, no. 6, 2021, pp. 1797–1827, https://doi.org/10.1086/713733.

45 Return Period (RP) refers to the frequency in years of a projected flood event. RP 10 is a ten-year flood event.

46 F Sebastio, 'Climate Change Is Threatening the Garment Industry', *Trellis*, 27 March 2018, https://trellis.net/article/climate-change-threatening-garment-industry.

should be part of workplace policy. Higher use of sick days in climate-vulnerable regions indicates adaptability of production and policy to climate events.

Metric 24: Number of paid force majeure days available both in policy and used in practice, by year, by factory.
Measure: *Worker health, force majeure*
Rationale: Flooding and heat waves can directly disrupt production, and indirectly via public breakdowns in transport and communications systems. During force majeure events, workers should not have to risk their health or lives and should be paid for sick days and days when work cannot be offered to them. The COVID-19 crisis established a new baseline for workplace furlough policies and compensation. The relevant metric is whether there are provisions for worker pay due to force majeure events. These data will need to be reviewed by regulators and firms in the context of climate events in the region.

Group 6: Intelligence-gathering/Auditing Risk Measures (for Context and Disclosure Only)

The failure of social auditing to improve working conditions in the aggregate is well-documented in the literature.[47] But social audits are still the means used by global firms to collect data on labour practices among suppliers. European member state laws as well as the CSDDD and CSRD require firms to 'know and show' their understanding of working conditions and labour rights protections along their supply chains.

The development of self-assessments, scaled-up by the buyer-led Social and Labor Convergence Program, followed by in-person verifications, is little different from the traditional audit (with the attendant problems) and often done by the same auditing companies. But the threat of civil liability in the French *Duty of Vigilance Law* and the previously passed CSDDD, as well as administrative fines in the German law, may provide an incentive for companies to improve their intelligence-gathering. This may lead to better and longer audits and reduce audit fraud (as auditors may be sued for poor performance as well). The purpose of these metrics is for transparency. It will surface the audit duration, which provides a clue as to whether the audit has been long enough to uncover violations. There are potentially many different measures that could be used here, but our focus on parsimony leads us to use just a few, and these are *context metrics* to help regulators and others better *interpret* the data that companies report.

Metric 25.1: Auditor Disclosure.
Measure: *Name of auditing firm/person*
Rationale: Effective firm-level due diligence needs reliable, high-quality intelligence/data that go beyond ticking the box. Disclosure by firms regarding

47 Kuruvilla.

intelligence-gathering methods and service providers indicate the quality of their due diligence efforts and—in the case of unreliable findings—represent a reputational risk for service providers.

The German law requires that companies prepare an annual report on the fulfilment of its due diligence obligations and publish it on their website. Transparency regarding the names of the auditing company/auditing personnel is consistent with this principle of public disclosure. This is quite similar to financial/accounting audits. What this measure is focused on is making auditing firms and auditors accountable.

Metric 25.2: The ratio of audit person-days to factory workforce, by factory.
Measure 25.2: *Audit duration per factory*
Rationale: Audit duration is one indicator of audit reliability. Short-duration audits increase the risk that the information is inaccurate. Academic research shows that the average number of audit days for a 1,000-worker factory is two person-days, i.e. two auditors auditing for one day.[48] In-house auditors, e.g. Nike staff or contractors, often spend much more than one day. ILO Better Work assessors visit factories more regularly, and their assessments are generally deemed more reliable.

Metric 25.3: Are auditing fees paid by the lead firms of suppliers? (by factory).
Measure 25.3: *Audit fee payment*
Rationale: Our final auditing disclosure measure—i.e. whether firms or suppliers pay the auditing fees—goes to conflict of interest, risk of collusion, and reliability of findings. Lead firms once paid for audits themselves, but during the last ten years, factories are increasingly expected to bear the costs of audits. In the case of the Social and Labor Convergence Program, a new initiative that attempts to reduce duplication in audits, suppliers choose from a pre-approved list and pay for the verification of their self-assessments. Lead firms are responsible for the collection and analysis of findings and the reporting to regulators and should, as a matter of legal liability, set the terms and make the choices. (We are not requiring disclosure of the amount of fees, although such disclosure could also provide a clue about the quality of the audit.)

Discussion and Conclusion

We have argued in this article that holding lead firms accountable for human rights risks in their supply chains requires lead firms to have enough 'intelligence' about working conditions in their supply chains, as well as to ensure that they are not the cause of harms (by ensuring that their purchasing practices are aligned with their human rights requirements). Hence, we have offered guidance in the form of quantitative metrics that lead firms can use to assess the level of human rights

[48] *Ibid.*

risk for each supplier facility. The sourcing metrics also help lead firms analyse their own sourcing practices to ensure that they do not incentivise exploitative work practices at the supplier level.

We also suggested that these metrics are useful to regulators (for example, the German regulator, BAFA, which is responsible for the administration of the German law, or the Norwegian Consumer Authority, which is responsible for the regulation of the *Transparency Act*). The metrics allow regulators to see how well the covered lead firms are doing in terms of identifying risks in their supply chains. Since the metrics proposed here are factory by factory indicators, they allows regulators to see the performance of lead firms across their supply chains. It also allows the lead firms themselves to compare performance across their factories. It is possible to create scoring systems to compare the performance of various lead firms on the sourcing metrics, or to compare the performance of various supplier factories on the other metrics.[49] And if transparently reported, it allows all stakeholders (including consumers) to see the human rights risks and to judge which ones are more salient. Hence, it is important that the use of the metrics by companies be transparently displayed on a factory-by-factory basis in their annual sustainability reports, and possibly displayed on the websites of the national regulators. As an example, the ILO's Better Work programme displays factory-by-factory performance on the respective Better Work websites in each country.

Who might object to these quantitative measures? Lead firms have thus far managed to get by with reports about their inputs and might thus balk at the use of outcome measures—but they would have to comply if regulations demanded it. Hence, as we have seen in the case of lead firms' responses to the CSDDD, they are likely to argue that these metrics create new burdensome requirements. We argue here that collecting these metrics does not present an additional burden. Under pressure from campaigners, unions, or regulators, some firms have disclosed elements of their supply chain such as where their first-tier factories are located, but most, including some of the world's largest brands and retailers, have not.

We argue that, even though companies disclose relatively little, they have all of the underlying data to report on most, if not all, of the metrics we advocate, or they can easily obtain them. All lead firms have our sourcing measures, even if their sustainability (or labour compliance) departments do not have ready access to it. Companies only disclose a small percentage of the data they have. The tendency is for lead firms to report in the aggregate, not at the factory-by-factory level. Since the aggregate data is the sum of individual factory data, these firms

[49] There are many considerations in developing scoring systems or an index of performance, which is beyond the scope of this article.

could easily meet and exceed the requirements of the German law as well as the CSDDD and CSRD, if the rules were to require outcomes-based reporting. And with regard to various labour outcome measures, most companies practise social auditing, and auditors could be instructed to obtain these outcome data. We have evidence from a variety of cases where global companies, *on a non-disclosure basis*, have shared data with researchers who have analysed the data and published results in scholarly journals,[50] and many other case studies.[51]

Lead firms could also object on the basis that collecting and reporting such data could potentially expose them to civil liability. While that is true, it is the very intent of the legislation in France, and was also the intent under the CSDDD that was passed in 2024, which has been weakened since then. On the other hand, such quantitative metrics also allow companies to mount a defence of their due diligence policies. They can show through their data that they generally have good programmes, even if one or two factories in a 1,000-factory supply chain pose a risk. In the longer run, the data will be useful in any civil liability process, in any courtroom.

Administrators of due diligence laws in each country could object that this imposes an administrative burden on them to collate and display reports. But the transparency requirement significantly eases those burdens. Since most laws require that companies send in their due diligence reports to regulators while also posting them on their websites to make them easily available, AI technologies could be easily utilised to collate and display evidence.

Observers and experts could object to our metrics on the grounds that they are incomplete and that many more could be added. And they may be correct, because it is important for measures to be as complete as possible. On the other hand, there is also value in parsimony, and we suggest that the twenty-five metrics reported here provide reasonable indicators of risks to human rights in supply chains. In the trade-off between completeness and parsimony, we argue that the latter trumps the former.

In summary, the purpose of mandatory due diligence legislation—and the public reporting that accompanies it—is to make clear which human rights and environmental risks are material to firms' financial results, and to hold firms accountable for harms to people and planet. Legislation like the CSRD aims to 'equalise' financial reporting—like that required in the US SEC's 10-K reports—and non-financial reporting. In the case of financial reporting, if lead firms were to report only on input-based policies and processes rather than

[50] See, for example: Locke; Brown, Dehejia and Robertson; Amengual, Distelhorst, and Tobin; and Kuruvilla.

[51] For a detailed list, see Appendix 3 in Kuruvilla.

financial results, there would be no basis to judge whether they are meeting their obligations to shareholders and regulators. Our outcome metrics regarding human rights perform a similar function. For investors and other stakeholders, they provide clear quantitative information that will help in environmental, social, and governance (ESG) investment decisions. For regulators and firms themselves, they provide strong and clear measures of progress (or its lack) without an undue administrative burden.

To reiterate and conclude, we argue that these 25 metrics constitute a valuable complement to improvement to and, in part, a substitute for input measures required in existing guidance frameworks. Our quantitative metrics ease the reporting and analytical burdens on firms and their regulators who will be able to see at a glance which firms are making progress and fulfilling their due diligence obligations. They overcome the limitations of inconsistent formats, lack of standardisation, and weaknesses in the reliability and comparability of information used in decision-making processes.[52] It is also possible to use the context variables to examine auditing across lead firms and across factories. Thus, the metrics, if publicly available, lend themselves to further analysis and research, and can be a basis for all stakeholders to assess the severity of human rights risks.

Jason Judd is the Executive Director of the Global Labor Institute at Cornell University. Email: jasonj@cornell.edu

Sarosh Kuruvilla is the Andrew J. Nathanson Professor of Industrial Relations and Asian Studies of the ILR School and Global Labor Institute at Cornell University. Email: sck4@cornell.edu

[52] Hao, Dragomir, and Radu.