



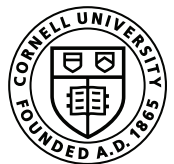
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Measuring Supply Chain Due Diligence: **Labor Outcomes Metrics**

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Introduction

Value Chain due diligence laws introduced by the European Union and member states in recent years are momentous. They mark a turn from voluntary and private regulation by global corporations of their supply chain practices to binding public regulation.¹ This turn reflects widespread acceptance by policy makers that twenty-five years of private voluntary regulation and ‘best practices’ guidance has done little in the aggregate to limit harms to both people and planet across global supply chains.

The French Duty of Care Law enacted in 2017 requires that large firms (employing over 5000 workers) have an affirmative obligation to prevent human rights violations and environmental abuse within the firm’s operations as well as those of its upstream and downstream business partners (including subcontractors and suppliers. The law allows aggrieved parties to sue the companies in the French courts. Germany’s Act on Corporate Due Diligence Obligations in Supply Chains (Lieferkettensorgfaltspflichtengesetz, or LkSG), implemented in 2023, likewise requires large firms operating in Germany to carry out human rights and environmental due diligence in their own operations and among direct suppliers, but it relies largely on administrative enforcement of its provisions by its Federal Office for Economic Affairs and Export Control (BAFA) and only permits German unions and non-government organizations to bring civil suits in Germany on behalf of others. Norway—not an E.U. member state—adopted a Transparency Act in 2022 administered by the Norwegian Consumer Authority. It requires covered firms to account for their human rights and labor practices for the entirety of their upstream and downstream value chains.

The European Union’s Corporate Sustainability Due Diligence Directive’s (CSDDD) was approved in early 2024 by the European Council and Parliament. Member of the European Parliament Lara Wolters, the ‘rapporteur’ or lead in CSDDD negotiations, noted that “this law is a historic breakthrough—large companies will now be responsible for potential abuses in their value chain, ten years after the Rana Plaza tragedy”.² Final approval will mean that all member states must transpose the legislation, which covers only very large firms, into their national laws within two years of its publication in the ‘Official Journal of the European Union’. The due diligence directive is paired with the E.U.’s new Corporate Sustainability Reporting Directive (CSRD) which should provide regulators as well as “investors and other stakeholders with relevant, reliable and comparable information on the sustainability performance, risk and impact of companies”.³ What firms are required to disclose under the reporting rule will inform the choices due diligence regulators make and, therefore, how lead firms and their upstream and downstream business partners behave.

Under CSDDD, and German and French laws, covered companies or ‘lead firms’ will have to identify, assess, and mitigate or prevent their negative impacts (and those of their upstream and downstream partners) on people and the planet. To do so, companies will be required to produce plans to reduce risk to people and planet, provide access to remedy for those affected by their actions, communicate publicly regarding their due diligence policies, and monitor their effectiveness. National administrative agencies will monitor whether companies comply with their obligations and

1 Laws have been enacted in France, Germany, Norway, Netherlands, while there are proposals pending in Austria, Belgium, Finland, and Spain. (The Netherlands is considering an expanded version of their law which initially focused on child labor only.

2 See <https://www.europarl.europa.eu/news/en/press-room/20231205IPR15689/corporate-due-diligence-rules-agreed-to-safeguard-human-rights-and-environment>

3 Iozelli, Laura and Velasco, Maria del Carmen Sandoval (2023). [Mandatory or Voluntary? The hybrid nature of sustainability disclosure in the EU’s CSRD](#). Policy Paper, Robert Schuman Centre for Advanced Studies, Florence School of Banking and Finance.

can impose fines on non-compliant companies⁴. Third parties can bring complaints against lead firms in member states' courts.

In this working paper we focus on a crucial implementation question: How will European regulators and lead firms themselves know who is harming workers or running big risks for the environment? And, how will the rest of us—business partners, (including upstream suppliers), workers and their unions, investors and researchers—know which lead firms and which practices are failing and which ones are delivering good outcomes?

We present here a set of quantitative metrics that measure labor outcomes—actual impacts for workers. For regulators, the metrics point them to the hard measures required of firms to measure their performance against their due diligence obligations. The metrics also allow regulators to track the effectiveness of company efforts to reduce risks or remediate harms to people along their value chains and to compare performance across companies. For firms, our 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 over time and across suppliers, countries and tiers. 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 to see and compare outcomes.

A useful analog is the U.S. Securities and Exchange Commission's required 10-K reports, which provide a comprehensive overview of the 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—provide crucial information that markets require. They also allow the democratic network that helps to hold corporations accountable to do its work.

Our GLI metrics put reporting on labor 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. Labor outcomes 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".⁵

Outcome metrics are clearly necessary under a mandatory due diligence regime. Recall that under voluntary private regulation, lead firms gather data about supply chain labor conditions by themselves or by outsourcing it to social auditing companies and multi-stakeholder programs.⁶ Lead firms use that intelligence as they please—to revise sourcing strategies, to remediate conditions in factories, or to do nothing at all.⁷ And lead firms are also largely free to report only what they care to report. Even firms that obtained extensive intelligence about working conditions among suppliers tend to report only a select subset of that information and that, too, in aggregate terms.

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 Due Diligence Guidelines for Responsible Business Conduct, the Workforce Disclosure Initiative and the Global Reporting Initiative (GRI), are examples. These reporting frameworks focus

4 The Implementing Authority, BAFA, has published detailed guidance for companies to undertake due diligence. Through its principle of appropriateness, enterprises have the necessary discretionary power and scope of action for implementation of their due diligence obligations, while the principle of effectiveness requires that risks and violations must be effectively addressed by enterprises. We refer to these principles in our discussion of the metrics in this policy brief. See https://www.bafa.de/EN/Supply_Chain_Act/Appropriateness_and_Effectiveness/appropriateness_and_effectiveness_node.html

5 See Recital 11 of CSRD.

6 Social audits as practiced under voluntary regulation have attracted wide criticism. For a summary of those criticisms, please see Kuruvilla (2012), Chapter 1.

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

largely on *inputs*; that is, they require companies to report on their plans, policies and processes regarding human rights in their supply chains. Although input-based reporting may be *necessary* to indicate what companies are doing, they are not *sufficient* under a mandatory due diligence regime as they tell us little or nothing about whether those policies improve outcomes. Hao, Dragomir and Radu (2023) note the general lack of rigor: “the 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”.

To be sure, these descriptions of corporate policies and procedures indicate the efforts companies are making to uphold labor rights in their supply chains. But they are highly selective and emphasize 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 labor policies and workplace practices that matter most.

We know only in broad terms how reporting requirements will contribute to administration of European due diligence regimes. The European Sustainability Reporting Standards (ESRS) drafted by the European Financial Reporting Advisory Group (EFRAG) has used the GRI template of input-based reporting for the initial CSRD requirements. In fact, the advisory group emphasizes the inter-operability of CSRD requirements with GRI and other inputs-focused reporting frameworks including those from the Sustainability Accounting Standards Board (SASB) and Taskforce on Climate Related Financial Disclosures (TCFD).

Given the extensive business literature on the *de-coupling* between firms’ policies and outcomes, we would expect to see clear, strong demands from regulators and investors for quantitative outcomes-based reporting. But we have not. This will have to change. Effective regulation needs uniform quantitative outcomes metrics. Mandatory disclosure of *outcomes* data to regulators and others complement and emphasize the shift from private regulation to accountability and public regulation.

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LABOR OUTCOMES METRICS

What does outcomes-based reporting look like? What data and analysis does it require? In the case of working hours, for example, inputs-based reporting might require firms to describe the policies that they have put in place to ensure that there are no violations of working hour standards among suppliers. Outcomes-based reporting would require that firms break out regular and overtime hours and report monthly averages by facility. Gender discrimination efforts in input-based reporting could invite firms to describe supply chain policies and number of managers or workers trained. Outcome-based reporting would require firms to show, for example, male-to-female earnings ratio (controlling for job types and years of service) by supplier.

We detail here a set of labor outcomes metrics that we have designed to capture impacts for workers, including climate impacts on workers and workplaces. Outcomes-based metrics have several advantages. The first is written on the package: 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 programs—do not make the lives of due diligence regulators (or lead firm’s 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 programs 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 organizations, investors and more. 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 our 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. Labor and environmental compliance data are ritually collected from suppliers through the auditing process. Researchers have used this information—when shared by firms—to evaluate the impacts of private regulation.⁸

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 labor 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 work global production are hard to see and difficult to measure. We do not have a measure among our 25 metrics of child or forced labor. The number of forced labor cases reported, for example, is not an indicator of the overall risk or prevalence of forced labor. 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 at the micro level.

8 See, for example, work by Locke (2013), Kuruville et al (2020), Kuruville (2021) Amengual, Distelhorst and Tobin (2020), Short, Toffel and Hugill (2019) and Bird, Short and Toffel (2018, 2019).

Our metrics are directly and immediately relevant for the emerging due diligence and reporting regimes such as the German Supply Chain Act. In fact, they are quite tightly coupled. Germany's BAFA is implementing the law and provides detailed guidance regarding due diligence and risk analysis along with specific examples.⁹ In presenting our metrics and the rationale for each, we refer to recent scholarship and show how each metric is consistent with the principles and requirements of the German law. Our metrics will also likely be consistent with CSDDD and CSRD requirements and will fit comfortably within—or largely in lieu of—broad input-focused reporting requirements.¹⁰

Metrics and their rationale

We group our 25 metrics into six groups. In each category we highlight the outcomes that we want to measure, show the metrics that operationalize the individual measures and—where appropriate—gauge their congruence with the requirements of the German Supply Chain Act.

Group 1 includes measures relevant to sourcing risk. Do firms source responsibly and have the management systems to reduce the risk or harms to which their sourcing practices contribute? Group 2 metrics relate to upstream workforce risks. Group 3 metrics focus on labor rights and working conditions outcomes among firms' producers. Group 4 metrics capture outcomes for worker representation rights. Group 5 metrics, arising out of our research on climate change on workers in apparel, focuses on work and pay standards due to heat and flooding. A final group of metrics focus on the quality and diligence of firms' intelligence-gathering processes. This last group is not outcome measures, to be sure, but are contextual in that they provide information that is relevant to the interpretation of the metrics in Groups 2 - 5, as long as lead firms use external auditors as a source of information for their risk analysis.

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 to 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 labor 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. A summary of all outcomes metrics is available in Table 1.

⁹ https://www.bafa.de/SharedDocs/Downloads/EN/Supply_Chain_Act/guidance_risk_analysis.html?nn=1469810

¹⁰ BAFA handout "Identifying, weighting and prioritizing risks", available online at https://www.bafa.de/SharedDocs/Downloads/DE/Lieferketten/handreichung_risikoanalyse.pdf?__blob=publicationFile&v=6. See section on Appropriateness.

GROUP 1: SOURCING RISK MEASURES

Measure 1: Overall sourcing risk

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 the company's business activity and value chain. Much of labor outcome risks for firms is determined by these macro-level choices. We measure overall sourcing risk using firms' *sourcing breakdown (percentage) by country in terms of both value and volume*.¹¹

Many apparel firms, for example, already report where their contract suppliers are located and the number in each country; Gap, Adidas, Patagonia, Marks and Spencer and H&M among others do this. But most do not report the value and volume sourced from each country which is quite crucial for risk assessment. (Adidas is one of the few that report some sourcing *volumes* by country; Adidas 2023 Annual Report).¹² If, for example, 30 percent, 20 and 10 percent 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 of association (Anner 2012), inadequate wages (Begum and Ahmed 2023) and escalating climate impacts on workers (Judd et al 2023).

This measure is consistent with the German law, which provides guidance on the principle of appropriateness, that is, the appropriate manner of acting in accordance with due diligence obligations.¹³ The first criterion under this principle is the nature and extent of firms' business activities. The task here is to examine the “complexity of the nature and type of products or services, the diversity of services and business relationships, whether the company has a supra-regional or international orientation and whether there are factors for country, sector or commodity group-specific risks”. The guidance requires companies to look into their operations broadly, from a supply chain perspective in countries or sectors where there are high risks to human rights or the environment. CSDDD provides for stricter regulations in many ways. It broadens the scope beyond just Tier 1 supply chains to the whole value chain, it introduces civil liability and with stricter sanctions, and includes climate considerations.¹⁴ Although CSDDD does not use the specific appropriateness criteria used in the German law, there are similarities and this metric (and the ones below) will be useful for risk analysis under CSDDD as well.

11 As with all metrics, these need to be reported for three years.

12 <https://report.adidas-group.com/2023/en/group-management-report-our-company/global-operations.html#:~:text=Cambodia%20was%20the%20largest%20sourcing,2022%3A%20482%20million%20units>.

13 Compliance for the German Act with the E.U.'s CSDDD by 2026 may require changes in use of the 'appropriateness' standard and data to be collected.

14 For differences between CSDDD and the German Act, see Baker McKenzie, March 2024. 'European Union and Germany: Sustainable supply chains - Comparing legal requirements'.

Measure 2: ‘Leverage’ and relevance

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 the company has over the supplier, which could translate into the amount of influence the company could exert over supplier labor practices. Prior research shows that share of production or ‘leverage’ is an important predictor of suppliers’ overall compliance (Locke 2013, Kuruvilla, 2021) and a useful indicator for regulators when determining credit for improvements or responsibility for harms.

The relevant leverage metric is the percentage of each supplier’s production that is reserved for the firm, on average by year. 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 German law has specific guidance on this issue under the second criterion of its appropriateness principle—the company’s ability to influence. The guidance acknowledges that it is not possible for a company to influence if it only has a small percentage of a suppliers’ production. It notes that “the ratio of this company’s order volume to a suppliers’ total turnover might be difficult to answer for many companies at the beginning. After all, the suppliers’ total turnover is rarely known. But it is possible for companies to work towards more transparency.”¹⁵ So leverage percentage is clearly an important issue to report since leverage determines whether companies will be held accountable for harms.

Measure 3: Length and quality of relationships

Empirical research indicates that long-term buyer-supplier relationships characterized by commitment or partnership promotes compliance and good labor standards (Locke, Amengual and Mangla 2009; Kuruvilla 2021). Our third metric *is the number of years of sourcing relationship and annual changes in value/volume for each factory*. 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 labor standards compliance. Most companies do not currently report this information on their websites.

In terms of consistency with the German law, the guidance with regard to the fourth criterion of the principle of appropriateness—the nature of causal contribution—highlights how companies can cause or contribute to supply chain risks. Other things equal, long term partnership based relationships help due diligence relative to sourcing models that are short lived and frequently changing.

Measure 4: Supplier turnover

An important complement to our ‘leverage’ and ‘length of relationship’ measures is the *annual turnover of suppliers by country* in a lead firm’s production base. Supplier turnover rates are a key indicator of sourcing volatility and 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. 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).”¹⁶

15 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. Federal Office for Economic Affairs and Export Control, p 4-12

16 CSRD Disclosure Requirements SBM 3.

It has now increasingly the norm for lead firms to have a set of strategic suppliers with which 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.

Measure 5: Sourcing and labor performance alignment

Perhaps the most important indicator is whether and how well sourcing and human rights (or labor) compliance is integrated within the lead firm. Does the sourcing management system incentivize suppliers to improve labor standards? Specifically, does the firm reward suppliers with better compliance and labor practice records with more orders and, over time, reduce orders to suppliers with weaker and un-remediated records? Are the worst suppliers pushed out? In other words, once a supplier is approved for orders, the right hand (compliance) does not know or care what the left hand (sourcing) is doing. Lead firms with good management systems tend to demonstrate close alignment between sourcing and compliance. For an example of a case where alignment was not achieved despite efforts to integrate sourcing and compliance, see research by Amengual, Distelhorst and Tobin (2020). For research that shows how a large retailer is achieving such alignment, see Kuruvilla (2021). For examples of ongoing company efforts to achieve this alignment see research by Toffel, McNeely and Preble (2019) and Hsieh, Toffel and Hull (2019).

All that is required for this analysis is data on sourcing volumes and compliance scores over time, by factory. *The specific metric is the correlation between sourcing and compliance over time—a negative correlation between order volumes and labor violations (or a positive correlation between order volumes and a total compliance score for each factory).*

This measure is consistent with the notion of the appropriateness of a firm's efforts to influence supply chain labor practices, i.e. does the risk arise from within the firm due to this lack of alignment, or does the risk arise only due to supplier practices? It is also evidence that is useful in demonstrating effectiveness under the German law—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 incentivize compliance, we do not develop quantitative measures of purchasing practices for several reasons. First, lead times for delivery of orders—often mentioned as a purchasing practice that affects workers—vary according to the business model. 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. Finally and perhaps most importantly, lead firms are unwilling to share information about price, a crucial purchasing practice that affects working conditions.

GROUP 2:

WORKFORCE RISK MEASURES

Measure 6: Legal status of workers

Research in multiple sectors shows that migrant workers are particularly susceptible to exploitation, increasing risk of harms for workers and for lead firms whose suppliers rely on workers who are internal or cross-border migrants (Balch 2016).

The specific metric to be used here is the percentage of migrant (foreign) in the workforce (by factory). 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 risk of forced labor. A second, related percentage—migrant workers with recruiting/placement debts—is a useful measure of forced labor risk among migrants. This data is harder to find but should be collected by firms conducting meaningful due diligence.

This metric is consistent with the nature of causal contribution identified in the guidance that accompanies the German law. Specifically, the question is whether the supply chain structure of the company causes it to be susceptible to human rights risk. If suppliers have a high proportion of migrant workers in their workforce, that constitutes susceptibility for forced labor violations, and whether the company permits, enables or motivates that action, the company could be contributing to the risk. The metric therefore is useful for companies in their analysis of risk.

Measure 7: Precarious employment relationships

Contingent workers are, in general, likely to have fewer rights and more prone to labor exploitation than permanent workers. If a large share of workers in a factory are contingent, casual/temporary or even on a series of short-term contracts, then labor risks for both workers and lead firms increase. *The specific metric is the number of Temporary/Casual workers as a percentage of the total workforce (by factory, by year).* As with worker legal status above, this data is readily available to employers and lead firms. This metric, like the one above, is an example of susceptibility to risk identified under the principle of appropriateness.

Measure 8: Worker turnover

Workers leave jobs for many reasons but high worker turnover in factories indicates high labor 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—shows that higher worker turnover in supplier factories is associated with violations of code provisions and, more specifically, to labor standards violations (as opposed to violations of other code provisions). Within the labor cluster, high turnover was due primarily to wage and benefits violations (Li and Kuruvilla, 2022). This relationship was stronger in lower-wage countries.

The specific metric to report here is the turnover rate, calculated as the number of workers who have left employment, divided by the total number of workers for the year or month. Worker turnover data is kept by most factories or can be easily calculated from payroll data.

This metric, in combination with others, is a useful gauge under the German act's principle of effectiveness. Very high turnover indicates worker dissatisfaction and could be due to lead firms' sourcing practices such as pricing "squeezes" (Anner 2012) relatively low wages, or wage theft and other abusive labor practices at the factory level (Kuruvilla 2021, Li and Kuruvilla 2022). For lead firms, the turnover metric is an indicator of a variety of human rights risks.

Measure 9: Gender pay equity

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".¹⁷ Tchibo's code states that "No discrimination shall be tolerated on gender, age, religion, race, caste, social background, disability, ethnic and national origin, nationality, membership in workers' organizations including unions, political affiliation or opinions, sexual orientation, family responsibilities, marital status, or any other personal characteristics. This applies in particular to hiring, compensation, access to training, promotion, termination or retirement".¹⁸ H&M's policy states that "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. *The metric is female wages as a percent of male wages in like-for-like production roles, i.e. 100% is perfect equality.*

This metric is required under the 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, 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.

17 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

18 https://www.tchibo-nachhaltigkeit.de/media/pages/mm_download-files/7755c1ef7b-1709218037/tchibo-human-rights-report-non-food-2021-english.pdf

Measure 10: Gender equity, gender based harassment and violence

Women now form the majority of the global apparel workforce, but men form the majority of management and supervisory staff. The mismatch increases risk for gender-based harassment and violence, and reducing the ratio—that is, upping the share of women among supervisors—reduces the 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: “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”.¹⁹ H&M reports an input measure—leadership training programs for women workers—but not yet the ratio. Gap Inc has a similar goal: “achieving gender equity at the supervisor level in all of our strategic factories driven by our Supervisory Skills Training program.” An analysis of an undisclosed company’s supply chain data (Kuruville, Bratton-Benfield and Judd, 2023)) 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 the metric to report here is the ratio of female supervisors to female workers*. This metric is a simple parsimonious way of indicating the risk for harassment and violence.

This metric is consistent with the principle of effectiveness in the German law, and due diligence expectations that firms combat discrimination as well as gender-based harassment and violence in the supply chain.

19 <https://hmgroupp.com/sustainability/fair-and-equal/gender-equality-in-our-supply-chain/>

GROUP 3:

WORKING CONDITIONS RISK MEASURES

The composite factory working conditions measure below—Measure 11—include violations for all working conditions and labor rights provisions, but we use separate metrics for key measures including wages, working hours and freedom of association.

Measure 11: Factory working conditions violations

Most firms that use social audits to obtain intelligence about compliance with and violations of labor conditions specified in national law and their voluntary codes of conduct. Based on this intelligence, lead firms assign scores to their supplier factories. Locke (2013) demonstrates how Nike assigns its factories a grade based on their aggregated performance (violations) on all code of conduct provisions. Kuruville (2021) shows how a major global retailer assigns a total score for each factory which is then a key input into sourcing decisions. Other lead firms assign different weights to different types of violations, but arrive at a grade or rating for their factories. The ILO's Better Work program, reports findings on eight 'clusters' of labor rights and standards, making it possible to assign compliance scores on a per-labor-standard basis or a total audit score basis (see Brown et al 2018). The specific metric to report *is the total number of violations by labor standard category* for each factory.

Of course, it is key that the lead firm's data be reliable, and legislation in Germany and the E.U. that includes legal liability for due diligence failures should induce companies and their auditors to ensure reliability of their intelligence regarding factory working conditions.

In terms of the German law, this measure is at the core of consistent with the principle of effectiveness. Business are required to exercise due diligence in a manner appropriate to them with the aim of preventing or minimizing human rights or environment related risks. What this metric indicates is, do the firm's actions over time contribute to fewer labor violations in the supply chain? Comparisons of violations between audit firms and countries can be difficult but flat or rising rates of violations indicate working conditions risk. Based on this data companies can assess whether there is human rights risk or not. If violations on all labor issues are declining over time, companies can conclude that there is minimal HR risk.

Measure 12: Hours

Hours of work are governed by ILO conventions 1 and 30 and national laws that set workplace standards. Working hours have bearing on worker safety and health and the composition of workers' earnings. For regulators and firms themselves, consistently high levels of overtime is an indication of the impact of an employer's poor management and/or a buyer's poor purchasing practices (Distelhorst and McGahan 2023). A measure of risk and also a measure of effectiveness consistent with the German law, the specific metric that we require is the *actual average hours worked by month, and the average hours of overtime worked by month for each factory*.

Measure 13: Wages

Wages are a subject of mandatory due diligence, national regulation as well as private regulation. Section 2.8 of the

German 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 that is determined according to the regulations of the place of employment”. This appears to void the ‘withholding’ requirement above: decades of academic research demonstrates that minimum wages in apparel exporting countries are not ‘living wages’ (Anner 2019; Kabir, Maple, Islam and Usher 2022). Voluntary codes of conduct require that factories pay local minimum wages, living wages—but without actual wage levels—or wage 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 income*—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. See for example, Kuruvilla (2021) for detailed wages data for brands and audit firms, and Fair Labor Association reporting on wages.

Measure 14: Accidents

National law and corporate codes can include as many as 200 items regarding safety and health 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: *Number of recorded injuries, accidents and work-related illnesses (by factory, annually)*.

Accidents are recorded by factory management which may mis-represent 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 organizations.

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

Measure 15: Grievances

The German law and CSDDD mandate that all aggrieved parties have access to remedy—ways in which their complaints can be heard and addressed. Most remedy mechanisms include either a formal grievance system at the factory level or phone-based complaints mechanism run by/for lead firms. A factory in which workers feel comfortable submitting grievances is a possible indicator of positive labor management relations, especially if there is a union and a collective bargaining agreement in the factory. On the other hand, a large number of grievances may also indicate poor working conditions and desperate workers.

Harrison (2023) suggests that the characteristics of various grievance mechanism 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”. Many global apparel brands have instituted ‘hot lines’ 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 (Alamgir 2020).

The guidance as to the effectiveness of the grievance mechanism includes that it must be seen as legitimate, accessible, predictable, equitable and transparent. *The key metric here is the existence of worker trusted grievance/hotline system and where trusted, the number of grievances/hotline calls*. But as with employer-reported accidents and illness, this metric can be manipulated and requires that lead firms triangulate evidence using the testimony of workers (away from the workplace) to determine workers’ trust in the system.

GROUP 4:

REPRESENTATION RIGHTS METRICS

Measure 16: Freedom of association and union presence

Freedom of Association is a core human right and all due diligence regimes in Europe require lead firms to respect this right in their operations and that of their supply chains. The German law “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 (Section 2(6)). Most firms and their multi-stakeholder groups collect information on worker organizing rights—typically reduced to the presence or absence of unions—through social audits. Legal prohibitions against worker organizing (China) or effective monopolies on union-formation (Vietnam) deny workers this fundamental right.

On the other hand, the presence of a union by itself does not signify that the right to freedom of association is being upheld. Unions could be company controlled, or as in the case of China, unions could be controlled by the communist party. Recent research (Li, Kuruvilla and Bae 2024) based on the analysis of data from Better Work, describes apparel supplier factories engaging in symbolic compliance by allowing unions to form in the factory, but also engaging in substantive non-compliance, by restricting the right of the union to operate within the factory. Thus, the existence of a union by itself is not enough evidence that FOA exists. *The metric we suggest here is the share of workers in democratically elected activist unions (i.e. unions that bargain/challenge management on core workplace issues).* 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.

Measure 17: Collective bargaining agreement presence

Freedom of association is designed to, among other things, advance another core labor right—collective bargaining at the workplace and industry levels. Analyses of ILO 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 (Fischer-Daly, Raymond and Kuruvilla 2021). But decades of research in industrial relations show that even where workers are able to build union, the employer often refuses to bargain (or to bargain in good faith).

As many factory-level agreements are formalistic—often dictated by the employer—and generally re-state legal provisions, the existence of a collective bargaining agreement does not by itself indicate that the right is respected (Li and Kuruvilla, 2023, Anner 2012). Employers often refuse to engage in bargaining, or engage in formalistic bargaining as is the case in China (Kuruvilla and Zhang 2016). *Our metric is the share of workers covered by enforceable collective bargaining agreements with negotiated provisions better than state-specified minimums, by factory.*

Like the above measure for freedom of association, this metric is consistent with the German law and—as the research noted above demonstrates—a key measure of the commitments of supplier and lead firm (in the aggregate) to both labor rights and workplace systems that reduce significantly risk of harms to workers.

Measure 18: Workplace governance representation

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—and broader ones such as works/workplace or health and safety committees. Factories participating in the ILO Better Work program have the latter type, called performance improvement consulting committees. The Bangladesh and Pakistan ‘Accords’ requires signatory companies to set up health and safety committees be set up in all factories that supply them, and that these committees function according to national law and applicable ILO Standards. Safe and healthy workplaces—now included by the ILO as a core labor right—generally require worker representation and engagement with management.

The German law does not make any specific mention of representation by committees, but Germany has a strong tradition of works councils that are necessary in their home operations, and this metric is clearly consistent with this workplace labor relations institution.

It is important that committee candidates are chosen by workers and not nominated by management, and elected democratically by workers, *and our metric is binary: are committee members chosen by workers?*

Measure 19: Workplace governance representation by gender

Gender equality requires that women be represented in various workplace committees in proportion to their numbers in the workforce. Our metric is the *gender ratio of committees compared to gender ratio of workforce*. As with our gender equity and harassment measures above, some firms have recognized 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 specific goals. Gap Inc has a goal that “100% of workers employed in our strategic factories will have their voices heard through gender-equitable workplace committee”. Relatively few firms report relevant metrics. H&M, for example, states that 66% of workplace dialogue committees in their tier 1 factories are women²⁰.

Our measure is broadly consistent with the principle of gender equality and non-discrimination—a core labor right also under the German law.

20 See Codes of conduct statements and sustainability reports from Adidas, Gap Inc, and H&M

GROUP 5:

WORK CLIMATE IMPACTS

Measure 20: Extreme heat

New research from Cornell GLI analyzes climate vulnerability—extreme heat, intense flooding—and the looming economic damage for apparel producing countries that fail to make investments in climate adaptation. High heat and humidity combine to make work and life difficult for workers. They can cut deeply into productivity at work and workers’ earnings, and they can harm the health of workers and their families. In Cambodia, for example, nearly two-third of factories between 2015 and 2022 had heat levels above 32 C (dry bulb) and 69 percent experienced indoor temperatures that were higher than outdoor temperatures in the dry (hot) season (Judd et al, 2023). A 2022 survey of Cambodian workers shows that at least 25 percent of 200 workers across eight factories interviewed report experiencing increased heat stress (Lawreniuk et al., 2022). And intense flooding can disrupt production for days and even weeks at a time.

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, labor 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 wet bulb globe temperature (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 (Schwingshackl et al., 2021; Somanathan, 2021). *Our metric is the number of days per year on which the indoor WBGT exceeds 30 C, by factory. (Or, outdoor WBGT exceedance days until indoor readings are available).*

The German law defines violations of occupational health and safety provisions—now a core labor standard according to the ILO—as a human rights risk and refers to “the lack of measures to prevent excessive physical and mental fatigue, in particular through inappropriate work organization in terms of working hours and rest breaks”.

Measure 21: Intense flooding

“[An] inundation of 0.25 meters from rainfall, riverine or coastal flooding in factories may cost hours or even days. But major flooding of one meter more can halt or slow production and transport for weeks. Flood events in workers’ neighborhoods—typically lower-lying areas with relatively poor infrastructure—makes it difficult for workers to get to work” (Judd et al 2023).

Factories lose production, governments lose export earnings, and workers lose income, and are at risk for a variety of illnesses such as rashes, diarrhea, and dengue resulting in loss of income (material risks for workers), and lost production and exports (a material risk for global buyers). Prior research (Sebastio 2018) 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”.

What is important to report here is, has the supplier factories has 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

the global buyers require that the factories do a flood analysis to prepare. *The key metric is site inundation by 2030 in 10-year future flood projections (RP 10) with projected outside flood levels of 0.25 m or more (by factory).* (Return Period (RP) refers to the frequency in years of a projected future flood event. RP 10 is a ten-year flood event, and is used in this metric because it represents a significant flood event.)

As above, the German law defines violations of occupational health and safety provisions—now a core labor standard according to the ILO—as a human rights risk that firms must anticipate, act to prevent and, where necessary, remedy. The German law does not make provision for the effects of heat and humidity on workers, so these metrics will be new, however, OSH is a core labor standard to which the German law applies, and hence this metric is useful for the analysis of risk.

Measure 22: Worker Health—Workplace

In high heat and humidity, workers will need more frequent rest breaks. Flooding affects workers health, to be sure, but also affect workers ability to travel to the factory, resulting in lost earnings. 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 in national laws, as well as codes of conduct. The proposed metric is *Actual paid breaks as share of work day hours during high heat stress days, disaggregated by regular and overtime work, by factory.*

The German law 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.

Measure 23: Worker Health—Illness

A key measure of factory-level and national policy-level forbearance when climate events affect workers' ability to work is *paid sick days used as a share of available days, by factory.* Higher use of sick days in climate-vulnerable regions indicates adaptability of production and policy to climate events.

Measure 24: Worker health—Force majeure

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 the health or lives and should be paid for those days. The COVID-19 crisis established a new baseline for workplace furlough policies and compensation. The relevant metric if they have done so is *the number of paid force majeure days available both in policy and used in practice, by year, by factory.* These data will need to 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 (Kuruvillea 2021). But social audits are still the means used by global firms to collect data on labor practices among suppliers. European due diligence laws require firms to ‘know and show’ their understanding of working conditions and labor rights protections along their supply chains.

The development of self-assessments, scaled-up by the buyer-led Social and Labor Convergence Project, 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 law and CSDDD, and administrative fines in the German law, may provide an incentive for companies to improve their intelligence-gathering. We suggest below a number of *context metrics* to help regulators better *interpret* the data that companies report.

Measure 25.1: Name of auditing firm/person

Effective firm-level due diligence needs reliable, high-quality intelligence/data that go beyond ticking the box. Disclosure by firms regarding intelligence-gathering methods and service providers indicate the quality of the firm’s 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 the company’s website. Transparency regarding the names of the auditing company/auditing personnel is consistent with this principle of public disclosure.

Measure 25.2: Audit duration per factory

Audit duration is one indicator of audit reliability. Short-duration audits increase the risk that the information is not accurate. 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. 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. *The specific metric here is the ratio of audit person-days to factory workforce, by factory.*

Measure 25.3: Who pays the auditor?

Our final auditing disclosure measure—does the firm or the supplier pay the auditing fee?—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. Lead firms are responsible for collection and analysis of findings and 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). *The specific metric here is who pays the auditor, the lead firm or supplier, by factory.*

Are labor outcomes metrics difficult to collect?

One objection voiced by lead firms to new legislation such as the German law and CSDDD has been that it creates new burdensome requirements for companies. As has been well documented, voluntary regulation is private and there has been no requirement over the last two decades that companies disclose data on labor outcomes in the supply chain. Companies define their measures of progress and disclose what they would like to disclose, often in the aggregate for their supply chain. (Under pressure from campaigns, 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 can easily obtain them. All lead firms have our sourcing measures, even if their sustainability (or labor compliance) departments do not have ready access to it. And with regard to various labor outcome measures most companies practice 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 GLI and other researchers who have analyzed the data and published results in scholarly journals (see for example, Locke 2013, Brown et al (2018), Amengual et al. (2020), Kuruvilla (2020, 2021), and many other case studies (for a detailed list, see Appendix 3 in Kuruvilla 2021).

Even when they disclose data, leading companies tend to report in the aggregate, not at the supplier factory level. Since the aggregate data is the sum of individual factory data, these firms could easily meet and exceed the requirements of the German law and CSDDD and CSRD, if the rules require outcome-based reporting. Table 2 in the Annex provides examples of global brands who report only a percentage of the data they have or who provide data in the aggregate.

CONCLUSION

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 CSRD aims to 'equalize' financial reporting—like that required in the U.S. 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 financial results, there would be no basis to judge whether firms are meeting their obligations to shareholders and regulators. Our outcome metrics on "S" perform a similar function. For investors and other stakeholders, they provide clear quantitative information that will help in 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 improvement to and, in part, a substitute for input measures required in existing 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 are *outcome-based*, *parsimonious*, *of utility to multiple stakeholders* (regulators, lead firms, investors, unions), *readily available*, and *adaptable* to multiple industries.

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Table 1: GLI Labor outcomes metrics.

| No | Group | Measure | Metric |
|-----|-------------------------|---|--|
| 1 | Sourcing | Overall Sourcing Risk | Sourcing share by volume (by country) |
| 2 | Sourcing | Leverage/Relevance | Sourcing share of production (by factory) |
| 3 | Sourcing | Length/Quality of Relationship | Number of years and changes in volume/value (by factory) |
| 4 | Sourcing | Supplier Turnover | Annual change (percent) in suppliers (all suppliers, and by volume) |
| 5 | Sourcing | Sourcing and Labor Performance Alignment | Sourcing volumes and labor compliance scores (by factory) |
| 6 | Workforce | Legal Status | Migrant (foreign) workers as percentage of workforce (by factory) |
| 7 | Workforce | Precarious employment | Temporary/Casual workers as percentage of workforce (by factory) |
| 8 | Workforce | Worker Turnover | Average annual turnover (by factory) |
| 9 | Workforce | Gender Pay Equity | Female pay as a percentage of male pay for same/ comparable jobs and tenures (by factory) |
| 10 | Workforce | Gender Equity, GB Harassment and Violence | Female supervisors as share of all supervisors vs female share of total workforce (by factory) |
| 11 | Working conditions | Factory Working Conditions Violations | Total violations by labor standards category (by factory) |
| 12 | Working conditions | Hours | Average working hours with disaggregation of overtime hours, monthly (by factory) |
| 13 | Working conditions | Wages | Average monthly production worker pay (with disaggregation of overtime, bonuses, and deductions, by factory) |
| 14 | Working conditions | Accidents | Number of recorded injuries, accidents and work-related illnesses (by factory) |
| 15 | Working conditions | Grievances | Existence of worker-trusted grievance system/hotlines/ mechanisms and (where trusted), number of grievances/ calls (by factory) |
| 16 | Rights (Representation) | Freedom of Association Union Presence | Share of workers in activist unions (unions that bargain/ challenge management on fundamental issues) (by factory) |
| 17 | Rights (Representation) | Collective Bargaining Agreement Presence | Share of workers covered by collective bargaining agreement(s) (w/negotiated provisions are better than state-specified minimums) or enforceable agreements (by factory) |
| 18 | Rights (Representation) | Workplace Governance Representation | Worker-chosen candidates serve on representative committees |
| 19 | Rights (Representation) | Workplace Governance Representation by Gender | Gender ratio of committee members to workforce |
| 20 | Work-Climate impacts | Extreme Heat | Indoor WBGT Exceeds 30 C WBGT and/or national standard (days per year, by factory) |
| 21 | Work-Climate impacts | Intense Flooding | Site inundation in 10 year flood projections (RP 10) > 0.25 m (by factory) |
| 22. | Work-Climate impacts | Worker Health (workplace) | Paid breaks as share of work day on high heat-stress days (disaggregated regular and overtime, by factory) |
| 23 | Work-Climate impacts | Worker Health (illness) | Paid sick days used as share of available days (workforce, by factory) |

| No | Group | Measure | Metric |
|------|----------------------|-------------------------------|--|
| 24 | Work-Climate impacts | Worker Health (force majeure) | Paid force majeure days (by factory) |
| 25.1 | Intelligence/ Audit | Auditors | Name of audit firm and auditor(s) |
| 25.2 | Intelligence/ Audit | Duration of Audit | Number of person-days (by factory) |
| 25.3 | Intelligence/ Audit | Costs | Paid by supplier or lead firm (by factory) |

Table 2: What do leading companies disclose publicly? Annual reports, 2022.

| Measure | Metric | Gap | PVH | H&M | Adidas | Nike |
|-----------------------------------|--|--|--|--|--|--|
| Overall Sourcing Risk | Country share by volume | No | Yes | No | No | No |
| Leverage | Buyer share of factory production (by factory) | No | No | No | No | No |
| Length/Quality of Relationship | Number of years and changes in volume/value over time (by factory) | Partial, statement re: partnerships with strategic suppliers | Partial, statement re: partnerships with strategic suppliers | Partial, statement re: partnerships with strategic suppliers | Partial, statement re: partnerships with strategic suppliers | Partial, statement re: partnerships with strategic suppliers |
| Supplier Turnover | Annual change in suppliers, percentage | Partial, number of suppliers by tier | Partial, number of suppliers | Partial, number of suppliers | Partial, change in number of suppliers | Partial, number of suppliers |
| Sourcing and Compliance alignment | Sourcing volumes and compliance score (by factory) | Yes, percentage spend by supplier compliance rating. | No | No | No | No, number of Suppliers: Nike Column: Number of suppliers Sourcing and Compliance: Nike Column: NO Functioning of committees, H&M column: NO Climate Risks: Nike Column: NO |
| Overall Workforce Risk | Ratio of temporary workers to permanent workers by migration status (by factory) | Partial, aggregate workers | Partial, workers by region | Partial, number of workers by country | No | Yes, number of workers, female and migrant percentages by factory and temps in aggregate |

| Measure | Metric | Gap | PVH | H&M | Adidas | Nike |
|---|--|----------------------------------|-----------------------------------|---|---|---|
| Factory Working Conditions Risk (Audit Score) | Total violations by labor standards category, or audit score over time (by factory) | Partial, audit scores aggregate | Partial, audit score by aggregate | Partial, letters issued to suppliers by year, aggregate Higg score, fem score | Partial, KPI ratings aggregate + Specific violations, aggregate | Aggregate non compliance by issue + aggregate audit score |
| Hours | Average actual working hours (including overtime hours) (by factory) | No | No | No | Partial, aggregate violations | No |
| Wages | Average monthly production worker basic wages with deductions, not including overtime and bonuses. | No | No (will report in 2023-4) | Yes, aggregate avg monthly wage/local minimum wage by country | Partial, aggregate by country, minimum wage, glwc benchmarks | No |
| Accidents | Number of accidents per factory (over three years) | No | No | No | No | No |
| Grievances | Number of grievances or hotline calls per factory (three years) | Yes, aggregate | No | Partial, issues brought to nat. committees | Yes | No |
| Worker Turnover | Average turnover per factory per year (three years) | No, for own workforce only | No | No | No | No |
| Gender Equity risk | Female pay as a percentage of male pay for same job and tenure. | No | No | No | No | Yes, aggregate |
| Gender Equity, Discrimination and Harassment | Parity, percent of female supervisors parity with percent of female workers | Yes | Yes, for own workforce only | Yes, aggregate percentage of female supervisors | No | No |
| Freedom of association Union Presence | Presence of democratically elected union | No | No | Yes, aggregate percentage | No | No |
| Collective Bargaining Agreement | Presence of genuine collective bargaining agreement | No | No | Yes, aggregate percentage | No | No |
| Election of workers to union and committees. | Does management interfere with elections | Yes, aggregate data on factories | No | Partial, percentage of factories with committees | No | No |

| Measure | Metric | Gap | PVH | H&M | Adidas | Nike |
|--|---|---|---|---|---|---|
| Functioning of Committees | Number of meetings, minutes of meetings and results of meetings | No | No | No | No | No |
| Gender representation in committees | Parity: percent of female representatives to percent of female workers. | No | No | Yes, aggregate percentage | No | No |
| Climate Risk-Heat | Number of days where indoor wgbt temp exceeds x and presence of passive/ active cooling systems | No | No | No | No | No |
| Climate Risk, Flood Analysis | Flood plan in place | No | No | No | No | No |
| Climate Risks, Heat, Flood and Worker Rights | Workers rights/pay policy for work stoppage due to climate | No | No | No | No | No |
| Name of Auditor/ company | Name at aggregate/ individual level | Yes, aggregate | Yes, aggregate (SLCP and Better Work) | Yes, aggregate | Yes, aggregate | Yes, aggregate |
| Duration of Audit | Number of person days, per factory | No | No | No | No | No |
| Payment to Auditors | Company or supplier? | No | No | No | No | No |
| Comment | | Descriptive aggregate statements on some issues (for e.g., % of workers enrolled in female empowerment program PACE). | Descriptive aggregate statements on some issues (for e.g., % of factories enrolled in female empowerment program PACE). | Many descriptive aggregate statements on several issues | Many descriptive aggregate statements on several issues | Many descriptive aggregate statements on several issues |



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