

The challenge of improving work health and safety in global supply chains: Institutions and evidence of effectiveness

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Abstract

The challenges for work health and safety (WHS) posed by global supply chains (GSCs) are well known. In a comprehensive review of the literature on the effectiveness of private and public regulatory measures upon relations within and around these chains, this article explores ways to improve prevention practices and their outcomes for WHS. It concludes there are a range of regulatory approaches utilised to achieve improvements but to be effective they require politically supported interventions and better orchestration at global and national levels. Whether, as recent literature suggests, the 2022 amendment adding WHS to the International Labour Organization's *Declaration of Fundamental Principles and Rights* is able to serve as a catalyst for this remains to be seen. Without such support and the political will to drive interventions, however, the analysis suggests that the current operational weaknesses of regulatory approaches to supporting WHS in GSCs are unlikely to be remedied.

Keywords

Global supply chains, health and safety work, ILO Fundamental Principles, regulation

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Introduction

This article considers the role of global supply chain (GSC) relations in work health and safety (WHS) outcomes in low- and middle-income countries (LMICs). The part played by GSCs in shaping the development of emerging economies, and the global economy more generally, is widely acknowledged (see e.g. Gereffi and Kaplinsky, 2001; Gereffi et al., 2005; Kaplinsky, 2000). Their contribution to social development in these economies, however, remains less clear (Barrientos et al., 2011). From the perspective of WHS regulation, there is a paradox evident. On the one hand, it is clear that the scale of employment GSCs generate, as well as the conditions experienced within them, contribute to the disproportionate burden of work-related mortality and morbidity estimated to occur in these countries (WHO/ILO, 2021). On the other hand, it is apparent that lead firms in GSCs often require their suppliers in LMICs to meet the standards of health and safety laid down in their corporate codes of conduct.

Recent international developments in WHS regulation in the global economy suggest that some reflection on this paradox may be warranted. In particular, the long-awaited amendment to the International Labour Organization's (ILO) *Declaration of Fundamental Principles and Rights*, agreed in June 2022, which added the right to a 'safe and healthy work environment' to the fundamental principles and rights at work already covered by the Declaration, provides an incentive to rethink the regulation of WHS in GSCs.¹ This is particularly so given evidence suggesting that the original Declaration exerted a significant influence on standards of practice in the areas it covered. As a result, some commentators anticipate that a similar impact will now occur within the field of WHS as a result of the 2022 amendment (Politakis, 2022). At the same time, the paradox indicated above suggests that such optimism may not be entirely warranted.

In the face of such uncertainty, the present article explores what is known about the regulatory measures which have been used to influence health and safety practices in production and services at the ends of GSCs, the effectiveness of these measures, and the factors that support or constrain their impact. It does so with the aim of contributing to a better understanding of the *operational* challenges involved in implementing the 2022 amendment to the ILO's Declaration to improve health and safety conditions in work at the ends of GSCs, and the policy actions that could be taken to facilitate its effective implementation. The article's analysis proceeds as follows. Following an outline of how it is framed theoretically and the methods it has used, the article argues that there is sufficient evidence in the literature to demonstrate that in many sectors of export-orientated work activity conducted in LMICs, GSCs have been more closely associated with poor WHS outcomes than with influencing their improvement.² It discusses the range of private, public and mixed regulatory pathways that have, to a greater or lesser extent, been brought to bear on the operation of these chains, with the aim of promoting improved WHS practices and outcomes among export-orientated suppliers. Many of these regulatory pathways are those identified in theoretical accounts anticipating the success of the inclusion of WHS in the amended *Declaration of Fundamental Principles and Rights*. The second part of the article then examines evidence regarding the effectiveness of these pathways and the factors either supporting or constraining this. It concludes by summarising knowledge on the effectiveness of the regulatory measures thus analysed,

identifying gaps in this knowledge and indicating where these influences need to be made more effective if the aims of the amended Declaration are to be reliably achieved. In doing so, we draw out some implications for future approaches towards improving the regulation of WHS within GSCs and point to the need for future evaluations of WHS within such chains to extend beyond a focus on compliance with prescriptive standards to encompass how far the types of systematic management approaches and processes required by principle- and process-based standards have been taken up by firms within GSCs, and whether WHS risks to workers have been eliminated or minimised. We also, more broadly, highlight the value within 'labour studies' of utilising a 'regulatory studies' lens to explore the dynamics surrounding attempts to improve WHS standards within global supply chains.

The theoretical orientation of the study and the methods utilised

This section briefly outlines (a) the way the study was framed theoretically, and (b) the methods employed in conducting it

Theoretical frame

The study on which this article is based was conceived within a theoretical framework drawn in part from understandings of the nature and dynamics of regulatory compliance. It applied these understandings to regulatory measures seeking to influence the dynamics of GSCs, with special reference to WHS practices and outcomes in supplier organisations. More specifically, it sought evidence of the role of private voluntary regulation (self-regulatory actions taken by companies to address codes of conduct or to respond to social audits: see Kuruvilla, 2021; Locke, 2013) and social governance (the actions of non-state actors, or 'intermediaries':³ Delautre et al., 2021: 17) in influencing WHS arrangements and outcomes in GSCs; as well as the role of public regulation (that is, the activities of the state and its agencies in making and administering regulatory standards and taking measures to ensure compliance with them).

Thus, a review of what is known about the ways in which private and public regulatory measures have been used to effect better health and safety practices in production and services at the ends of GSCs was conducted, and the evidence of their effectiveness and the factors that support or constrain it were analysed. The discussion of the findings of this analysis was framed in relation to theories of responsive and decentred regulation (Braithwaite, 2006; Coglianese, 2017), that emphasise the role of intermediaries (Abbott and Snidal, 2013) and their orchestration at national and global levels (Abbott et al., 2015, 2017). This framework of analysis was considered to be an appropriate way to situate an exploration of the impact (and potential impact) of different regulatory strategies aimed at improving WHS standards at the ends of GSCs, and factors that influence this.

Throughout this article 'regulation' and 'regulatory influence' are conceived in their broadest sense, to embrace public, private and social regulation, as well as mixtures thereof (see Morgan and Yeung, 2007; Scott, 2004), and to be capable of encompassing

the range of phenomena falling within the scope of the study. This approach was further guided by regulatory compliance theory, and in particular the 'Holistic Compliance Model' developed by Parker and Nielsen (Nielsen and Parker, 2012; Parker and Nielsen, 2011, 2017). This model was adopted since it provides a framework for understanding and integrating diverse findings on how multiple external regulatory measures impact on, and are influenced by, factors internal to the firm (motives and organisational capacities and characteristics) that influence WHS compliance, and the interactions among them in GSCs sourcing in LMICs. These interactions, although evident or implied in the literature, are seldom discussed collectively in relation to WHS.

As a result of the reliance placed on both this compliance model and theories of responsive and decentred regulation, a distinctive theoretical feature of the study was how it utilised important strands of conceptual and empirical analysis drawn from the field of regulatory studies to shed light on the nature of the GSC dynamics, affecting WHS, and how they might be better regulated. This feature in turn, as will be further highlighted later, meant that the study served to highlight how the analysis of WHS within GSCs could be enriched through being framed within strands of the regulatory studies literature focused on understanding and influencing organisational responses to internal and external forms of regulatory interventions.⁴

Study methods

The study undertook an informed, critical review of the relevant literature in parallel with a series of interviews and discussions with key informants.

Reviewing the literature. Understanding *operational* challenges in effectively influencing support for WHS within GSCs necessitated a search of a diverse body of relevant literatures across a range of disciplines, including global and national regulatory studies, economic geography, labour relations, business ethics and strategy, and organisation and development studies, to name a few. The method of systematic review, such as currently favoured in medical and scientific studies and which, theoretically, can be applied in other disciplines too (Okoli, 2015), was initially considered. However, the difficulty of designing such a review in a way that would adequately encompass all of the strands of the literature concerned, and enable adequate exploration and critical comparison of all the relevant parts of its constituent elements, and the dynamics of the various regulatory institutions and processes, caused the researchers to reject this approach. Instead, a scoping and critical review, with a narrative approach, was undertaken to facilitate a more comprehensive discussion of a body of knowledge that encompasses both quantitative and qualitative studies and diverse sources of data that were often not directly or systematically comparable (Grant and Booth, 2009). The acknowledged limitations of this approach notwithstanding, this article argues that the resulting analysis serves to provide a necessary first step in a discussion of the dynamics and possible causality underlying the associations existing between them, and approaches to regulating WHS practices within GSCs.

The review commenced with an initial wide-ranging search of titles and abstracts using a set of terms derived from our research questions to identify relevant sources in

the literature on the dynamics of, and influences on, global supply/value chain/production networks. These terms were then narrowed in an effort to capture literature in which work health and safety featured alongside supply chain dynamics and regulatory influences. This approach initially yielded few sources and broader terms needed to be employed and combined with direct scrutiny of sources in order to scope the literature that implicitly or less directly addressed WHS themes though focusing on labour standards, voice, working conditions, fair or decent work and so on, in work at the ends of supply chains. Sifting such material revealed references to health and safety indicators among those signifying measures of compliance or non-compliance with traditional prescriptive WHS standards. However, there were few accounts analysing influences on the management of WHS risks in conformity with principle- and process-based standards such as those of public regulatory measures on WHS in most advanced economies and global standards like ILO's Health and Safety Convention 155 and guidance accompanying it (ILO, 2009).

Engagement with key informants. At the outset of the study a small group of key informants were approached ($N \sim 12$), and asked if they would be prepared to participate in the study as a reference group to help guide and discuss and refine its investigation and analysis. They comprised representatives of key policy organisations at national and global levels, acknowledged experts in the field of the study and representatives of the social partner organisations at global level. They shared in the design of the study and provided both oral and written feedback on its interim and final reports. A number of functionaries of the International Labour Office ($N \sim 15$), with significant experience and involvement in support of initiatives to improve labour conditions in GSCs, also took part in several discussion groups, conducted both online and in person, in which the brief of the review and its interim findings were explored and commented on in detail.

Regulatory pathways to improve WHS practices in GSCs

From the early 1990s, evidence of poor health and safety management and outcomes, along with concerns about labour standards more generally, prompted growing societal pressures, especially in advanced economies, for action to improve the working conditions at the ends of GSCs (see e.g. Siqueira et al., 2009). These pressures led to the establishment of the first 'vertical' forms of private voluntary regulation – corporate social responsibility (CSR) programmes by individual multinational enterprises (MNEs), incorporating systems of private regulation and labour standards into 'codes of conduct' with which suppliers were expected to comply, together with auditing arrangements to identify non-compliance and prompt remedial actions (Locke, 2013).

Over time, a range of other channels of regulation, operating both vertically (e.g. through GSCs) and 'horizontally' (e.g. in source states), have evolved. These include other forms of private voluntary regulation, for example, where clusters of GSC supplier firms in the same geographical area in source countries take initiatives to improve working conditions in their supply chains, perhaps in conjunction with intermediaries like business associations, chambers of commerce and cooperatives ('the cluster approach'). Unlike the CSR model, where suppliers are expected to comply with externally driven

labour codes which may not ‘fit’ with local institutions and practices, cluster-based initiatives may be better able to take account of local contexts and perspectives, while enabling economic gains for the firms involved (Gereffi and Lee, 2016: 33).

Other regulatory pathways embrace social governance: for example, international framework agreements (IFAs) negotiated between Global Union Federations (GUFs) and (usually single) MNEs. These provide a framework for further negotiations, in which the MNE commits itself to respect core international labour standards (set out as minimum standards and policies in the IFA) throughout its global operations. They exist across many sectors, and there is often more than one IFA in a particular sector. IFAs have been argued to be ‘part of a “continuous bargaining mode” between employers and employee representatives’ (Egels-Zanden, 2009: 540–541), and to represent the global unions’ bilateral and negotiated response to unilateral corporate codes of conduct (Rosado Marzán, 2014: 1749). For their part, MNEs have usually been motivated to negotiate IFAs in response to civil society pressure, reputational concerns, and to a lesser extent regulatory or cultural factors in their countries of origin (Papadakis, 2021).

Multiple-stakeholder initiatives (MSIs) are a development of this approach, and involve combinations of MNEs, unions and NGOs. Perhaps the best known is the (now superseded) ‘Accord on Fire and Building Safety in Bangladesh’ which was built on the model of IFAs. It was created by a legally binding agreement between two GUFs (UNI and IndustriALL) and eight local affiliated Bangladesh unions, on the one hand, and more than 200 MNEs in the garment industry, on the other (Anner, 2021: 624–626). Unlike IFAs and earlier CSR initiatives, however, the agreement took ‘the form of an enforceable contract that directly connected first-world buyers with representatives of the third world laborers of their supply chains’ and provided a ‘new paradigm stressing enforceability and inclusivity’ (Salminen, 2018: 411). More specifically, the Accord addressed building and fire safety standards in 1800 supplier factories, employing 2 million workers, in the signatory MNEs’ supply chains. Its key features included co-governance by the signatories, transparency, worker participation, a complaints mechanism, and processes of workplace inspection, reporting, remediation and training to ensure that suppliers complied with the health and safety standards set out in the Accord agreement (Donaghey and Reinecke, 2018).

Occasionally there is a more exclusive ‘labour centric path’, where workers mobilise and organise to address power imbalances and participate in setting standards and monitoring compliance, using the more traditional approaches of organised labour to the representation of workers’ interests. But the comparative weakness of organised labour in most LMICs and the challenges of global coordination are significant barriers (Anner, 2021). Nevertheless, ongoing studies in economic geography acknowledge the importance of labour regimes in comparative analysis of practices and outcomes at the ends of GSCs (Smith et al., 2018; Wickramasingha and Coe, 2022).

Meanwhile, again reflecting the growing concern since the early 1990s about labour conditions at the end of GSCs, some wealthier countries have taken regulatory action to improve working conditions in export-orientated production in ways that remain congruent with liberalising economic policies. One such regulatory pathway has involved countries inserting ‘social clauses’ within global, multilateral and, most commonly, bilateral trade agreements (Corley-Coulbaly et al., 2022). These clauses seek to use the potential

access to large consumer markets in advanced economies that is facilitated through GSCs as leverage to compel governments in LMICs to implement labour protections and to better enforce them (Dawson et al., 2021).

Yet another form of regulatory action has involved placing requirements on public buyers to only procure goods and services from suppliers who demonstrate that they comply with certain specified labour standards, for example, in relation to child labour, forced labour, excessive working hours and unsafe working conditions (Ludlow, 2016; Martin-Ortega and Methven O'Brien, 2019). The ILO's *Labour Clauses (Public Contracts) Convention (No. 94)* of 1948, the *United Nations Guiding Principles on Business and Human Rights* (UNGPs) (UN, 2011; Martin-Ortega and Methven O'Brien, 2019) and the *OECD Guidelines for Multinational Enterprises* (see OECD, 2017, 2020) each include such requirements at the global level, while many developed economies have enacted such laws, sometimes as part of National Action Plans on Business and Human Rights.

A further regulatory development in the home states of lead firms in GSCs has been the development of vertical disclosure, transparency and due diligence measures addressing labour rights issues arising from the use of supply chains (see LeBaron and Rühmkorf, 2017). These vary in rigour and range from transparency requirements such as disclosure duties, placed on corporations, or requirements for 'comply or explain' disclosure,⁵ to requirements, based on the UNGPs, for human rights due diligence disclosures.⁶ A more robust approach is found in the French law on the duty of oversight of parent companies and commissioning enterprises (the French *Duty of Vigilance Act*), enacted in 2017 (for a detailed analysis see Brabant et al., 2017; Savourey, 2020), and similar provisions in Germany (*Act on Corporate Due Diligence Obligations in Supply Chains*) enacted in July 2021 (see Gustafsson et al., 2023; Weihrrauch et al., 2023) and Norway (the *Transparency Law*) enacted in June 2021 (see Krajewski et al., 2021; Lafarre and Rombouts, 2022; Osborne Clarke, 2021). The French provisions have been designed to strengthen the responsibilities of large France-based parent companies (those with over 5000 staff employed in the head office and overseas subsidiaries) for the protection of workers in their supply chains. Companies have an obligation to establish and implement a due diligence plan, including supply chain risk mapping, monitoring and mitigation, and risk verification, and to submit a publicly available annual implementation report. They may be liable for large civil penalties if they do not comply, and civil proceedings can be initiated by any interested person. In late February 2022, the European Commission released a *Proposal for a Directive on Corporate Sustainability Due Diligence*. This proposal aims to provide a single European framework to better integrate human rights and environmental risk management and mitigation processes into corporate strategies and to improve access to remedies for those affected by the adverse impacts of corporate behaviour. It also, more specifically, seeks to establish a corporate due diligence duty on large European Union (EU) and third country companies, and smaller companies in certain 'high-risk' sectors, to identify and take steps to prevent, mitigate or remedy adverse impacts on human rights and the environment in the companies' own operations, in their subsidiaries, and in all levels of their supply chains (see Lafarre and Rombouts, 2022; Villiers, 2022).

Such ‘home country’ state actions effectively give a degree of legal force to various global standards relating to labour conditions in general, and health and safety more particularly. These global standards include provisions found in ‘core’ ILO Conventions and Recommendations, the *OECD Guidelines for Multinational Enterprises* (OECD, 2011), the ILO’s Declarations on *Fundamental Principles and Rights at Work* and *Social Justice for a Fair Globalization* (which established its Decent Work Agenda) and the UNGPs (UN, 2011). In adopting the international standards, these national legislative developments help to make such standards legally enforceable nationally and offer a means to influence the ‘vertical’, extra-national, dynamics within GSCs.

This is not to say that horizontal, state-based, approaches to public regulation are irrelevant. LMICs invariably have bodies of WHS laws that impose statutory duties on employers to protect the health and safety of employees (and perhaps others). Most writers on GSCs acknowledge the *potential* role of host state regulation to improve WHS in supplier firms of LMICs at the ends of GSCs: either horizontally on suppliers themselves or as a contribution to the ‘layering’ of regulatory measures (Bartley, 2011) on GSC relations overall. In relation to the latter, it has been observed that domestic WHS regulation can potentially operate productively in concert with other regulatory approaches discussed in this section, but only if these properly address other important aspects of the structure and organisation of work – such as the predominance of micro and small firms, the informal economy, and the weakness of support for participatory health and safety management in the absence of a substantial presence of organised labour.

Finally, the ILO makes an important contribution to improving WHS in GSCs through the technical assistance initiatives of the International Labour Office. Its flagship programme, Better Work, which is active in 1700 factories employing more than 2.4 million workers in nine countries, has a supply chain approach to promoting decent work in the garment sector. It promotes public–private partnerships with lead brands and donor agencies in order to improve working conditions and make the sector more competitive. The ILO’s Safety & Health for All flagship programme is claimed to play a key role in achieving the UN 2030 Sustainable Development Goals (SDGs) on decent work and economic growth (SDG8). The Vision Zero Fund (VZF), an integral part of the flagship programme, was established as a multi-donor global prevention fund with the aim of improving working conditions in the poorer production countries along selected supply chains, especially in the textile and agricultural sectors. It has the goal of achieving zero work-related fatalities and severe work-related injuries and diseases by improving WHS practices and conditions in sectors linked to GSCs as well as through strengthening labour inspectorates and employment injury insurance schemes in countries linked to GSCs (ILO, 2021c).

The effectiveness of regulation on WHS at the ends of GSCs

The literature evaluating the effectiveness of the regulatory paths outlined in the previous section is dominated by studies exploring the nature and impact of CSR inspired private regulatory arrangements, and similar MSIs. Within this body of knowledge, WHS issues

have a relatively minor place and when attention *is* paid to them, it is often superficial (see e.g. the review by Distelhorst and Fu, 2018, which highlights these limitations). As we outline in the following subsections, evidence available on the other regulatory paths discussed in the previous section is patchier, both in relation to labour standards generally and health and safety specifically, particularly with regard to their impact and the factors influencing it. The major exceptions to this are the bodies of evidence in respect of the Bangladesh Accord on Fire and Building Safety, the ILO's Better Work programme and the emergent literature reporting the outcomes of its VZF projects. Even in these cases, however, the evidence on WHS remains relatively limited. In the case of the Accord, it is largely restricted to issues of fire and building safety, and in the case of Better Work, largely to compliance with various prescriptive requirements. Although VZF projects are generally more explicitly concerned with WHS issues, the programme itself is relatively recent, so that many of the published accounts are descriptive of the ongoing activities of various projects, rather than full analyses of their strengths and weaknesses, and what determines them in the contexts in which they are situated.

This evidence base made it possible to comment with a reasonable degree of confidence on the capacity of corporate private regulation, and that of private MSIs, to improve compliance with health and safety standards, as well as the factors influencing this. The more limited and emerging literature on the other types of regulatory pathways only enabled more tentative conclusions to be reached regarding how they add to such capacities. Moreover, drawing inferences from this literature often requires extending the reach of published evidence. Judicious evaluation of research findings relating to the way in which these different forms of regulation have impacted on compliance with labour standards – even when health or safety is not explicitly mentioned – sheds further insights into the likely capacity of such regulatory approaches to apply to arrangements for WHS. Linking these insights with findings from the critical literature on health and safety regulation and management in turn enabled better understanding of the likely or potential impact of these regulatory pathways on improving health and safety practices and outcomes. But caution is warranted with such interpretations, for, as pointed out previously, operative conditions governing the detailed application of health and safety standards may not be the same as those for labour standards more widely.

The following subsections summarise what is known about the effects of the various regulatory paths to implementing better labour standards in GSCs, as well as the factors that influence them. They focus initially on what is known about CSR-style private voluntary regulation, and then discuss other approaches within the context of this knowledge. We do this for two main reasons. First, as already noted, this form of regulation constitutes the main focus of the existing literature and the one in which understandings about effects and their influences are most developed. Second, given the ways in which the actions of MNE buyers are so intimately connected to existing labour conditions at the ends of GSCs and the market dynamics that underlie them, a useful way of conducting an evaluation of other regulatory approaches is to consider how far they address the challenges found to confront corporate private voluntary regulation.

The effectiveness of corporate private voluntary regulation

Internal systems of corporate private regulation, in common with their social governance, MSI equivalents, would seem, in logic, likely to be an effective means of enhancing both labour conditions in general, and WHS conditions in particular. This is because, in addition to specifying required standards, they embody mechanisms of audit, oversight and economic incentivisation towards compliance. Moreover, available data indicate that audits do uncover substantial levels of non-compliance with standards, including in some cases those relating to health and safety matters, and so identify areas where improvements are needed (Kuruvilla, 2021; Locke, 2013; Short et al., 2020). The quality of the literature shedding light on the operation and impact of such systems is however, mixed, with many studies narrowly focused on particular interventions, and failing to take account of wider contexts and influences (as noted by Kuruvilla, 2021; Locke, 2013, among others). It nevertheless points to a substantial body of evidence showing the performance of private voluntary regulation to be very mixed and generally disappointing as a consequence of problems with monitoring and enforcement of compliance, the willingness and capacity of suppliers to comply, and the often contradictory, motivations of buyers.

More specifically, evidence indicates that audits are frequently unreliable and often fail to identify violations or indicate adequate remedial actions, with the result that they may convey an overly optimistic picture of supplier compliance (Esbenshade, 2004; LeBaron and Lister, 2015; O'Rourke, 2003). Researchers and others have put forward many reasons for this, including the inadequate training of auditors and the shortness of their visits, and the use of various 'avoidance strategies' by suppliers, such as the falsification of records, bribes and outsourcing of non-compliant work. Auditors have been found, for example, to miss even the most basic WHS violations (Brown, 2019). More widely, it has been argued by Kuruvilla (2021) that the differing standards and audit practices pursued by buyers, and the resulting 'opacity' that these variations engender, hinder suppliers' understandings of 'cause and effect' relationships, creating difficulties for them to adopt compliant behaviour and complicating the identification of non-compliance.

The motivations and capacities of suppliers may mean that they have little inclination to comply with expected standards and/or lack the knowledge and/or resources needed to do so. Furthermore, in such circumstances, it cannot be assumed that the business dynamics within supply relations necessarily provide buyers with the power to enforce their standards on supplying organisations since their orders may represent just a small proportion of a supplier's business or there may be a lack of alternative companies from whom they can obtain supplies (Locke, 2013). Indeed, in certain cases, suppliers may themselves be larger and more powerful than buyers and well placed to ignore their demands.

More widely, a growing body of research points to the fact that tensions frequently exist between the economic logics underlying the upstream business strategies of buyers and the social strategies embedded in their policies to protect and enhance labour standards (Nadvi, 2008). There is, as a result, a circular irony, in which the latter strategies are intended to counter the detrimental consequences of the price, delivery and quality demands emanating from the former, but are simultaneously undermined by them (see e.g. Alamgir and Banerjee, 2019; Locke, 2013; Riisgaard and Hammer, 2011). Thus, in

the agricultural/food, electronics and apparel industries studies have revealed how volatile patterns of demand and short production lead times, as well as downward pressures on prices, may adversely affect working conditions and undermine compliance with labour standards imposed by buyers, through generating excessive working hours, high usage of agency and contract workers, and subcontracting, often to smaller firms that use casual forms of employment. Furthermore, evidence suggests that this decoupling between the procurement strategies and practices of buyers and their pursuit of improved labour standards is frequently compounded by the limited extent to which orders to suppliers are varied in line with their records of labour standard compliance and by the significant difficulties buyers experience in creating such an alignment – even where there is a clear business case for doing so (Amengual et al., 2020; Kuruvilla, 2021: Ch. 8).

In the face of such findings, commentators have pointed to the need for regulatory strategies to directly and rigorously address the tensions and contradictions existing between the business and social logics of buyers. Anner (2018), for example, has stressed the need for strategies addressing ‘the root causes’ that act to generate poor labour conditions in GSCs. In a similar vein, Locke (2013: 153–154) has observed:

... if we are serious about improving working conditions and promoting labor rights in global supply chains, we need to look beyond compliance and/or capability building programmes directed at supply chain factories and begin to examine, systematically, how upstream business practices impact workplace conditions in the factories producing the goods most of us purchase every day.

The role and effectiveness of other pathways of regulation

It follows from the findings of the previous subsection, on corporate private regulation, that a crucial question to ask of the other regulatory approaches, identified and outlined previously, is whether they *potentially* provide platforms that overcome current weaknesses and limitations identified in the literature on corporate forms of private voluntary regulation by realigning the *interests* and *power relations* that lie at their heart and which shape the market dynamics driving supply relations and their labour-related effects.

Reshaping buyer and supplier interests. A feature of all non-corporate regulatory pathways (that is, social governance and public regulation mechanisms) is that they bring into the regulatory domain actors who are not directly parties to the supply relationships between buyers and suppliers. These actors vary, as do their connections to the supply chain partners. Host country health and safety laws, for example, apply directly to supplying organisations, but not to buyers. Similarly, home country business human rights provisions, with their transparency, disclosure or due diligence requirements, apply directly to MNEs based in the countries concerned but carry only indirect implications for overseas suppliers. The same is also true of home country public procurement requirements and MSI certification schemes. In contrast, clauses inserted into trade agreements in effect outsource the implementation of the obligations contained in them to host countries, and to intermediate bodies established to monitor compliance with them. Meanwhile, channels of trade union influence, whether involving IFAs concluded with a single MNE or

participation with others, such as NGOs and representatives of buyers and governments, in forms of social governance, may impact directly on buyers and/or suppliers.

This means that the various other regulatory pathways create a complex landscape of actual and potential regulatory configurations that can encompass both horizontal and vertical forms of influence and inputs from a large cast of actors who may be part of the authorship of a particular type of regulation and/or play a role in its oversight and enforcement. As noted in the previous section, these may include, among others, home, host and international unions, public procuring bodies based in the home countries of buyers, local and international NGOs, sectoral industry bodies operating in home and host countries, and home and host country governments, as well as their supporting inspection and administrative bodies. Crucially though, such actors ‘bring to the table’ other voices whose views and interests likely differ, to a greater or lesser extent, from those of buyers and suppliers. As a result, all the channels of regulation with which they are engaged offer *potential* means of ameliorating the commercial objectives and priorities of buyers and suppliers, albeit with different degrees of directness, that undermine CSR inspired private regulatory arrangements.

Power and influence. It seems clear from the evidence that the extent to which this potential is translated into reality is crucially influenced by the nature of the *regulatory requirements imposed*, and secondly, by the *regulatory weight* (or influence) they carry. Here, the literature offers some cause for optimism about the capacity of the various regulatory pathways to address differences between the aspirations of each regulatory actor to enhance labour standards (including those on health and safety), and the extent to which they are reflected in improved conditions of work at the end of GSCs. That is, there are, in all cases, empirical findings that to some degree indicate that the regulatory pathways possess a potential to influence decision-making in buyer and/or supplier organisations in a way that may lead health and safety to be accorded a higher priority and, in this way, mitigate tensions between the economic and social logics of buying and supplying firms within GSCs. More specifically, it seems reasonable to conclude that, in certain circumstances, each has a capacity to generate one or more of the following categories of effects:

- implementation of legal WHS duties and obligations that serve to raise organisational priorities to protect workers from injuries and ill health;
- support for workers’ voice, unions and other civil society actors sufficient to enable the economic logics that are detrimental to WHS interests to be challenged;
- creation of reputational risks that prompt buyers and/or suppliers to accord a higher priority to health and safety matters in organisational decision-making.

It should also be noted that the evidence to support such effects in relation to particular regulatory pathways is often limited, as the following observations show.

In the case of the imposition in home countries of mandatory disclosure duties requiring specified corporations to release information about their efforts to address human rights issues, these have been found wanting in a number of aspects, including their limited coverage, reach and inclusions of human rights, their weak enforcement and, in

most, the absence of avenues for remedial action. These limitations exist, however, alongside evidence indicating that transparency measures providing information on compliance with labour standards, including in respect of WHS, can *at times* serve to stimulate improvements (see, for example, Robertson, 2020; Short et al., 2020). In addition, findings that indicate that corporate responses to weak self-reporting regimes tend to be strongly informed by a desire to generate reputational benefits or avoid reputational harms arguably add indirect weight to such evidence by suggesting that mandatory transparency measures can prompt defensive (and beneficial) actions aimed at protecting corporate reputations.

Home state legislative provisions obliging large organisations to develop substantive human rights due diligence requirements and monitor and enforce them in GSCs are too recent to reach firm conclusions regarding their value. There are, nevertheless, some positive indications. For example, although the French *Duty of Vigilance Act* has been the focus of criticism,⁷ there is some evidence it has had some positive effects. For instance, an Evaluation Report⁸ on its first five years of operation produced by the French Parliament concluded that the law had protected the reputations of French companies, improved the prospects of ethical supply chains, and strengthened commercial relations with contractors and subcontractors. In a recent review, Lafarre and Rombouts (2022) argue that:

. . . although it should be designed carefully . . . there is a growing consensus that mandatory legislation is indispensable to impacting corporate decision-making in order to address and prevent human rights infringements in [GSCs].

There is also mixed and uncertain evidence regarding the value of imposing requirements on public bodies to take labour standards into account in their procurement processes (Walters and James, 2009; Walters et al., 2012). The evidence that exists on their use and impact in relation to their role in domestic supply chains is encouraging (Walters and James, 2020). At the same time, the same studies make clear that there are grounds to believe that such requirements face similar implementation challenges to those relating to corporate CSR code of conduct arrangements – a concern that raises important issues regarding how compliance is monitored and enforced.

In a somewhat similar vein, and against the backcloth of marked variations in the nature of the labour standards they impose and the arrangements they put in place to monitor compliance, there is some debate about the extent to which the labour provisions of trade agreements serve to improve standards in signatory supplier countries (see e.g. Harrison et al., 2019a: 262–263; Postnikov and Bastiaens, 2014). There is, nevertheless, evidence that they *can* be effective in improving labour conditions and that, therefore, such agreements *might* be productively used to help improve WHS in supply chains too (see Albertson and Compa, 2015; Myant, 2022). But for this to happen, the evidence suggests that their provisions would need to be strengthened so that they: require the implementation of systematic health and safety management and ‘address the supply chain dynamics affecting, among other things, prices paid and delivery times expected, which structure the kind of working conditions and rights at work that employers are able to provide’ (Harrison et al., 2019b: 656); provide for worker representation and

participation in WHS; support the role of civil society institutions in monitoring and enforcement; and embody a commitment to effective enforcement through labour inspectorates (see Brown, 2019; Williams, 2021).

Turning to the other forms of private regulation and social governance discussed in the previous section, given the evidence already referred to concerning the capacity of some suppliers to resist the demands of global buyers, the '*cluster approach*' appears to offer *potential* as a positive regulatory force. This is, perhaps, even more likely to be so in the case of the '*labour centric path*' involving workers' organising and mobilising, given international evidence indicating that health and safety management and outcomes tend to be better where collective voice is present (Walters, 2006); and, more specifically, findings showing that compliance with codes of conduct is better in workplaces where collective agreements have been concluded or effective worker participation committees exist (see e.g. Kuruvilla et al., 2021: 174; Pike, 2020). In both cases, however, problems must also be acknowledged.

For example, clusters may well face severe challenges in pursuing their agenda in the face of the potential for global buyers to take their business elsewhere and/or the desire of host governments to retain buyers' business and grow their country's participation in GSCs. Cluster approaches must also be designed so that they do not breach local anti-trust laws. As regards the '*labour centric path*', many workplaces in LMICs lack a significant union presence, or other mechanisms of collective voice and are located in countries where political support for collective voice is either limited or non-existent (Distelhorst and Locke, 2018): features which are seen to help explain evidence of a weak coupling between the provisions of IFAs and conditions at the workplace level (see e.g. Croucher and Cotton, 2009; Niforou, 2012; Williams et al., 2015). Other studies reveal that while buyers may have an ability to encourage and develop union organisation and other forms of collective voice (see e.g. Reinecke and Donaghey, 2021), audits often pay limited attention to compliance with code of conduct provisions on freedom of association and collective bargaining; and organisations at the ends of GSCs are frequently exposed to government hostility towards, or lack of support for, these rights.

There is some evidence in the literature to suggest that mechanisms of collaborative social governance may offer at least a partial solution to these problems and limitations. Indeed, experiences with the (now superseded) Accord in the Bangladesh garment industry, and outcomes achieved in a range of countries in the same industry under the ILO's Better Work programme, would seem to point to the positive role that collaborative networking approaches can play in the improvement of labour standards. Similar evidence is also emerging in publications on the state of play in projects that are part of the VZF programme.⁹

Unions have played a central role in both the Accord and the Better Work programme – as a party to a joint agreement with global buyers in the case of the Accord and as partners in national Better Work programmes – along with national governments, factory owners, brands and retailers. In the VZF programme collective approaches to improving WHS conditions in chosen cases are strongly emphasised. In all these cases, this collaborative feature exists, however, alongside other distinctive elements that render simple

explanations of their success difficult. In the case of the Accord, these included provisions giving a degree of contract security and financial support, the presence of legally binding commitments on the part of buyers, provisions aimed at advancing factory-level individual and collective voice an extensive, rigorous and common system of workplace inspections (and associated follow-up), the threat of contract terminations and, in the name of transparency, the online publication of inspection results. Better Work programmes similarly publish the results of (common) factory audits, support the establishment of worker participation committees and embody a strong emphasis on establishing mutually reinforcing dynamics between improving labour conditions and the achievement of enhanced organisational productivity, notably through support for factory-level capability building.

These programmes are therefore multidimensional in nature and embody similarities – in union involvement in their operation, inspection processes and transparency, and the encouragement of worker voice. The challenge this poses for ‘cause-effect’ analysis is compounded by the fact that they also differ structurally and in their orientation. In particular, while the Accord was governed jointly by unions and global brands, Better Work operates under the supervision of a management group made up of senior officials from the ILO and the International Finance Corporation, and places greater emphasis on the pursuit of a mutual gains approach with collaborating factories (and governments), as does the VZF programme.¹⁰ These caveats notwithstanding, there seems little doubt that there are crucial operational influences in the way all these initiatives seek to create collaborations that extend beyond those directly engaged in individual supply relations, involve unions and other social actors in their governance, and operate at a sector level – features that, in combination, mean that they work at a degree removed from the commercial pressures and priorities that surround immediate buyer–supplier relationships.

All this said, it needs to be acknowledged that while the design and operation of these initiatives and programmes may carry important lessons for policy, they cannot be viewed as panaceas. For example, Accord inspections did not reach below first tier factories and contract prices continued to be driven down by brands after the conclusion of its founding agreement (James et al., 2019). It also needs to be recognised that the circumstances of their establishment and operation are distinctive and to some degree exceptional. The Accord agreement was created after the occurrence of an appalling disaster that cost many lives and brought widespread international condemnation of working conditions in the Bangladesh garment industry and pressures to reform them. The overall Better Work programme owes its existence to the earlier Better Factories Cambodia initiative, the stimulus for which was the role accorded to the ILO in overseeing compliance with the labour provisions contained in a trade agreement between the US and Cambodian governments. In addition, the programme has developed in a measured and cautious way. As a result, national programmes have only been launched where an extensive evaluation process has indicated that they have a good chance of being successful (Better Work, 2022). In a sense, therefore, they can be argued to operate in relatively conducive national settings. The same is broadly true in relation to the VZF and the projects it supports.

Conclusions

As far as we are aware, this article provides the first comprehensive review of the relevant literature on: (a) the challenges for health and safety at work posed by the structure, organisation and control of work in GSCs and their consequences for improving health and safety arrangements and outcomes; and (b) the capacity of a wide range of influences, including various regulatory measures, to improve WHS prevention practice and outcomes at the ends of GSCs. Overall, the evidence raises justified concerns about these issues, while also identifying where improvements might be achieved. More specifically, the review's analysis has generated important insights in several interrelated areas.

At the most basic level, the review have revealed that while health and safety are referred to frequently in the literature, they are seldom given centre stage either in literatures on GSCs, or in the private codes and other forms of regulation currently utilised to improve labour standards in such chains. Nor, indeed, is this the case in regulatory studies more generally. A consequence of this is that work-related risks to health and safety, and prevention strategies to address them, are rarely treated fully or systematically by the literature on GSCs. Likewise, measures which research has found to be effective in improving prevention practice and outcomes on health and safety outside of the GSC literature are not fully explored or developed in the regulatory approaches that are discussed by the GSC literature. For example, a systems approach to managing health and safety at work is frequently discussed in the specialist occupational health and safety literature. The introduction of ISO 45001: 2018 has further stimulated this discussion. Yet we could find no studies directly addressing systematic safety management practice at the ends of GSCs in this literature,¹¹ nor, as previously noted, is there any significant acknowledgement of the operation of systematic WHS management in the GSC literature. More narrowly, pre-conditions that have been found to influence its effectiveness, such as the information needed for effective risk assessment and innovative enforcement and the supports required for worker participation, are rarely mentioned. This situation has not been aided by the absence, until recently, of explicit mention of safety and health among the 'Fundamental Human Rights' that the literature suggests has been a strong influence on both private and public efforts to improve working conditions at the ends of GSCs.

The review has also highlighted that improving the regulation of WHS in GSCs is a complex and challenging task. Numerous public regulatory, social governance and other private regulatory options are available to address the operational limitations of voluntary corporate regulation identified in the literature. Their potential value is, however, very much tied up with how they are designed and implemented, and to what extent they can be utilised in a complementary and mutually supportive way. Such issues are, in turn, inevitably far from easy to address given surrounding economic and political interests and sensitivities, as well as the frequently limited nature of the relevant research evidence.

More specifically and narrowly, it is clear from the literature that such improvements are unlikely to occur without a responsive approach to designing and coordinating regulatory measures to improve the health and safety of workers in GSCs that builds on knowledge of how formal and informal regulatory institutions, such as those examined in this article, can influence the motives and organisational capacities and characteristics of firms within GSCs to improve compliance, and consequently, WHS within those

firms; and encompasses (a) more comprehensive detailing of the standards of risk management required of suppliers and the systems and processes of risk identification, evaluation and control required to support them, and (b) effective mechanisms for voice, oversight and enforcement. It is further clear from the available evidence that to be effective such actions need to embody a combination of vertical and horizontal influences, and that these can be brought together and contextualised most productively through locally based, collaborative multi-stakeholder platforms of sectoral engagement.

Furthermore, such actions are unlikely to occur spontaneously or solely on the basis of business considerations. As a result, the challenge internationally is to choose international institutions and devise policy approaches that can orchestrate supportive and complementary actions on the part of the many relevant actors involved – home and host country governments, and intermediaries such as NGOs, local and international trade unions, sectoral business organisations and so on.

Ultimately, it would seem that effective and sustainable regulation of GSCs requires both normative and operational changes at all levels in GSCs and in the national and global environments and contexts in which they operate. Normative changes at global and national level – in matters such as regulatory standards and policies – have, however, been found to be problematic. At the global level, efforts to introduce more direct and broad – based change in regulatory standards on GSCs through organisations such as the ILO have for some time reached an impasse as a consequence of what, to date, have amounted to intractable conflicts of interests between stakeholders at this level. While ‘policy entrepreneurs’ have been creative in finding ways to achieve regulatory improvements despite this, the impasse nevertheless remains. Similarly, at national levels, while some home state regulators have moved towards greater use of enforceable human rights due diligence measures, these changes have been slow and uneven and by no means ubiquitous. In host states, under-resourcing, and further seemingly intractable conflicts between economic and social development, continue to limit the role of regulatory standards, inspection and enforcement. In these countries, too, the underdevelopment of systems for WHS and support for wider social, health and welfare provisions, together with very limited social insurance provision, all exacerbate the challenges for effective and sustainable regulatory influences on arrangements and outcomes in work at the ends of GSCs.

All is not lost, however. For our review, at the broadest level, highlights how the understanding of WHS dynamics within GSCs, and, more particularly, how they may be influenced, can be enriched by drawing on insights from regulatory studies. It further provides a theoretically informed indication that all of the regulatory pathways discussed offer potentially valuable sources of positive influence on WHS in organisations at the ends of GSCs. In addition, it highlights the many innovative ways in which relevant public and private regulatory actors and institutions have been able to circumvent current impasses to support better health and safety practice within GSCs. Indeed, arguably the most important conclusion to emerge from the review is that there are a range of regulatory approaches that can be utilised in the name of improving WHS practices and outcomes within such chains. The implication is that the adverse consequences for worker health, safety and well-being currently experienced at the ends of many of these chains are not inevitable. They could be addressed by soundly conceived, better orchestrated and politically supported interventions at global and national levels. Whether, however,

the 2022 amendment to the ILO's *Declaration of Fundamental Principles and Rights* is able to serve as a catalyst for such interventions remains to be seen.

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Notes

1. And consequently, the *ILO Declaration on Social Justice for a Fair Globalization*. Accordingly, the *Occupational Safety and Health Convention (No. 155)* and the *Promotional Framework for Occupational Safety and Health Convention 2006 (No. 187)* became fundamental conventions.
2. See for example Alsamawi et al. (2017), Garcia-Alaminos et al. (2020), Kabir et al. (2019), Lam et al. (2017), Locke (2013), Malik et al. (2021), Prentice and De Neve (2017) and Sandoval and Bjurling (2014).
3. A non-state actor or intermediary is defined as any actor who acts directly or indirectly with a state regulator to affect the behaviour of target firms (see Abbott et al., 2017: 19). They include unions, employer associations, small business organisations, influential firms in supply chains, franchisors, procurers, certification agencies, preventive services, self-help groups, migrant resource networks, auditors, investors, accountants, insurers and others. They may be drawn into regulatory models to address the weaknesses of public regulation, which, in the context of GSCs, include the regulator's limited access to the target of regulation (the firm at the end of the GSC), the restricted means to influence the target's behaviour and inadequate ways of gathering information. They may contribute a range of capacities to improve the effectiveness of regulation, including operational capacity (carrying out activities that the regulator is unable to perform), expertise, independence and legitimacy (Abbott et al., 2017: 18–20).
4. In effect, therefore, the study highlights how 'unit theorising' focused on understanding regulatory processes and effects with regard to WHS within GLCs can be enriched by drawing on broader programmatic theory relating to the regulation of business organisations more generally. On the distinction between 'unit' and 'programmatic' theory, see Aguinis and Cronin (2022). Our thanks to one of the anonymous reviewers for drawing our attention to the work of Matthew Cronin.
5. For example, EU Directive 2014/95/EU disclosure of non-financial and diversity information by certain large undertakings and groups; Danish *Financial Statements Act* (amended 2015).
6. Examples include the USA's *Dodd-Frank Wall Street Reform and Consumer Protection Act* (2010) on minerals from the Congo; and EU Regulation 2017/821, on supply chain due diligence obligations for European Union importers of tin, tantalum and tungsten, their ores, and gold originating from conflict-affected and high-risk areas.

7. Including the lack of detail in its provisions on the arrangements that companies need to put in place, and failure to hold companies liable for the actual failings of contractors. Further, the penalties are civil rather than criminal, and there is no regulatory agency charged with monitoring and enforcing compliance.
8. See www.assemblee-nationale.fr/dyn/15/rapports/cion_lois/115b5124_rapport-information
9. See for example ILO reports: ILO, 2017, 2018a, 2018b, 2020a, 2020b, 2020c, 2021a, 2012b.
10. Better Work does, however, have a tripartite advisory committee comprising international union and employer representatives and expert advisers. National programmes similarly have advisory committees involving representatives from relevant government ministries, employers and unions. In a similar vein, the Accord had an advisory board whose membership extended to encompass, in addition to representatives of global unions and brands, representatives of suppliers, NGOs and local union federations. The VZF programme has similar collective structures.
11. See for example Karanikas et al. (2022) on its role in influencing the adoption systems approach to WHS management generally; Liu et al. (2023) on barriers to its adoption by Chinese firms; and Campanelli et al. (2021) on adoption in Brazil. These papers are typical of a number in the recent specialist WHS literature discussing adoption and operation of ISO 45001, in which no mention is made of the possible influence of supply chain dynamics on these practices.

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