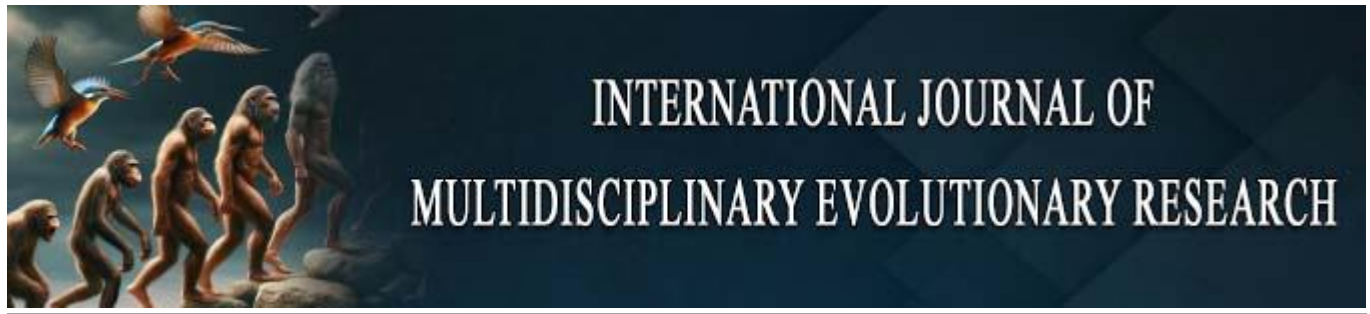




Shared Responsibility and Multi-Jurisdictional Alignment in Global Supply Chain Governance

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Abstract

The year 2021 marked an inflection point in the regulation of global supply chains. Within a twelve-month period, Germany adopted the Supply Chain Due Diligence Act, Norway enacted the Transparency Act, the European Parliament called on the Commission to table binding due diligence legislation, the United States signed the Uyghur Forced Labor Prevention Act into law, and the United Kingdom Supreme Court permitted a parent company negligence claim to proceed in *Okpabi v Royal Dutch Shell*. These developments coincided with the tenth anniversary of the United Nations Guiding Principles on Business and Human Rights and with a pandemic that exposed the brittleness of lean, geographically dispersed production networks. This paper argues that the resulting governance architecture is best characterised not as a transition from voluntary to mandatory regulation, but as the uncoordinated distribution of a single regulatory function across many jurisdictions and many actors. Drawing on the shared responsibility literature in international law and on global value chain theory, the paper develops a five-part typology of multi-jurisdictional misalignment: substantive, scalar, temporal, evidentiary, and remedial. It applies the typology to four sites of contestation, namely Xinjiang-linked commodities, cobalt sourcing in the Democratic Republic of the Congo, ready-made garments in South Asia, and pandemic-era medical goods. The paper concludes that alignment should be pursued through interoperability rather than harmonisation, and proposes four design principles: a common due diligence core with jurisdictional variation confined to enforcement, conditional safe harbours tied to verified conduct rather than documentary compliance, mandatory allocation of remedial capacity to affected rights-holders, and structured participation for producer states whose exclusion from standard-setting currently converts due diligence into a mechanism of exclusion.

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Introduction

A cotton boll harvested in Xinjiang may be spun in Anhui, knitted in Vietnam, assembled in Bangladesh, financed through Hong Kong, insured in London, warehoused in Rotterdam, and sold in Berlin, Toronto, and Melbourne. If forced labour taints the first step, the question of who bears responsibility for the last has no single legal answer. It has at least eight, and those answers are drawn from instruments that differ in their triggering thresholds, their definitions of the supply chain, their evidentiary demands, their sanctions, and their theories of what responsibility means.

This is the governance problem that 2021 brought into focus. The problem is not an absence of regulation. By the close of that year, a firm placing textiles on the European market was potentially subject to the French duty of vigilance, the German Supply Chain Due Diligence Act, the Dutch Child Labour Due Diligence Act, the Norwegian Transparency Act, the United Kingdom Modern Slavery Act, the Australian Modern Slavery Act, the California Transparency in Supply Chains Act, section 307 of the United States Tariff Act of 1930, and an anticipated European Union directive on corporate sustainability due diligence, alongside contractual obligations flowing from buyer codes of conduct and certification schemes. The problem is that these instruments were designed in isolation from one another, each responding to a domestic political moment, and each implicitly assuming that it was the operative rule rather than one of many.

The question this paper takes up is how responsibility for supply chain harm is distributed across jurisdictions and actors in the governance architecture that crystallised during 2021, and what forms of misalignment that distribution produces. The argument proceeds in three moves. First, supply chain governance is a case of *shared responsibility* in the technical sense used in public international law, meaning a situation in which multiple actors contribute to a single harmful outcome and in which responsibility is distributed among them without being fully borne by any one of them. Second, shared responsibility in this domain is compounded by *jurisdictional multiplicity*: the actors sharing responsibility are governed by legal orders that do not recognise each other's allocations. Third, the resulting misalignment is not merely inefficient. It is substantively distorting, because it channels corporate effort toward the demands that are cheapest to document rather than toward the harms that are most severe, and it displaces cost onto suppliers and workers who have no voice in the jurisdictions where the rules are made.

The prescriptive conclusion is that the appropriate policy goal is *interoperability* rather than harmonisation. Full harmonisation is politically unattainable and normatively undesirable, since jurisdictions legitimately differ on remedies and enforcement. Interoperability requires only that instruments share a due diligence core, recognise each other's compliance evidence, and avoid imposing contradictory obligations on the same conduct.

Three bodies of work are drawn on and, in the process, connected. The business and human rights field supplies the account of why mandatory due diligence emerged; the shared responsibility framework, developed largely for state responsibility in public international law, supplies the analytical vocabulary for contributions that are individually insufficient; and the applied procurement, assurance, and supply chain literature surveyed in section 2 supplies the mechanism by which regulatory demands travel along chains and are absorbed asymmetrically by actors with unequal bargaining power. Bringing the three together makes visible something none of them shows alone, namely that the transmission of a due diligence obligation down a chain systematically relocates its cost away from the party holding the duty.

Value Chain Governance and Shared Responsibility Global Value Chains and the Governance Deficit

The foundational insight of value chain analysis is that lead firms exercise governance over production networks they do

not own. Chain relationships range from arm's length market transactions through modular, relational, and captive forms to full hierarchy, each generating a different degree of buyer control over supplier conduct. Where a lead firm dictates specifications, audits processes, and controls market access, it exercises functional authority closely resembling managerial direction, yet the legal separation of corporate entities insulates it from the liabilities that such direction would attract inside a single firm. Applied procurement research describes the same asymmetry from the buyer's side, treating supplier selection, evaluation, and materials availability as instruments of control exercised across organisational boundaries (Okonkwo *et al.*, 2018a; Ahiaeke Patrick *et al.*, 2021; Okonkwo *et al.*, 2021a).

Participation in a chain does not by itself distribute gains, since value capture depends on positioning and on the standards regime that governs entry. Improvements in productive capability, moreover, do not automatically translate into improvements in labour conditions, which is the precise gap that supply chain regulation targets. Studies of value chain access in agricultural and small enterprise settings document this directly, showing that market participation is constrained by finance, extension support, and technical capability rather than by willingness to comply (Michael & Ogunsola, 2019a; Michael & Ogunsola, 2021e; Ambali *et al.*, 2021).

This mismatch between economic control and legal responsibility is the governance deficit that supply chain regulation attempts to close. It is conventionally described as a governance gap created by globalisation, in which economic activity crosses borders faster than the regulatory capacity to sanction wrongdoing or to provide reparation. The initial response came from firms rather than states, in the form of supplier codes of conduct whose contractual reach exceeds that of any single public regulator, a pattern visible in procurement frameworks that embed compliance conditions directly into sourcing and vendor qualification (Okonkwo *et al.*, 2021b; Akinleye & Adeyoyin, 2021; Aifuwa *et al.*, 2020).

The Limits of Private Governance

A substantial body of work has tested whether private governance delivers. The recurring finding is that compliance-based auditing produces limited and unstable improvements in supplier conditions, and that gains are greatest where buyers invest in supplier capability rather than merely monitoring for violations. Management systems appear to matter more than inspection frequency, and transnational private standards frequently layer onto weak domestic enforcement rather than displacing it. The audit and assurance literature reaches compatible conclusions about control environments generally, finding that periodic sampling detects documented failures far more reliably than concealed ones and that risk-based design outperforms uniform inspection (Akomolafe & Agu, 2019a; Akomolafe & Agu, 2018; Obogo *et al.*, 2020a).

A related concern is independence, since the monitored firm ordinarily selects and pays the monitor. Studies of internal audit quality and of contractor compliance systems identify the same structural weakness in adjacent domains, where the assessing party depends commercially on the assessed one (Akomolafe & Agu, 2019c; Obogo *et al.*, 2019b; Obogo *et al.*, 2021c). Transparency claims also routinely outrun the traceability infrastructure available to support them, a gap the

information systems literature makes explicit in showing that any downstream assertion inherits the integrity of the upstream systems that generated it (Mbonu *et al.*, 2020b; Mbonu *et al.*, 2020c).

Three limitations recur across this literature. Auditing detects observable and documentable conditions, so it systematically underperforms on concealed abuses such as forced labour, debt bondage, and unregistered subcontracting. Certification creates a market in assurance whose customers are the audited firms, generating an incentive structure that rewards leniency. And private schemes lack remedial capacity, since a decertification decision removes a buyer from a site without compensating the workers harmed there.

From Voluntarism to Mandate

The United Nations Guiding Principles on Business and Human Rights, endorsed by the Human Rights Council in 2011, provided the conceptual vocabulary for the mandatory turn. The Guiding Principles rest on three pillars: the state duty to protect human rights, the corporate responsibility to respect them, and access to effective remedy. The second pillar introduced human rights due diligence as an ongoing process of identifying, preventing, mitigating, and accounting for adverse impacts, and it distinguished among causing, contributing to, and being directly linked to a harm, with different response obligations attaching to each. The OECD Due Diligence Guidance for Responsible Business Conduct (2018) operationalised this into a six-step cycle and extended it to environmental and governance impacts.

The mandatory turn translated this soft-law architecture into binding law, but incompletely. Legislated due diligence tends to codify the process obligations of the Guiding Principles while omitting the remedial pillar, so that firms acquire duties to identify and report without corresponding duties to repair. The transparency-based model exemplified by section 54 of the UK Modern Slavery Act generated widespread but shallow reporting, with statements frequently failing to disclose substantive action. More generally, disclosure regimes assume an audience capable of processing and acting on the information disclosed, an assumption that the reporting literature rarely supports; work on statutory reporting and budget compliance finds that publication obligations are satisfied procedurally long before they change conduct (Dogbatsey & Ebhojie, 2018; Dogbatsey *et al.*, 2019).

Shared Responsibility as an Analytical Frame

Shared responsibility arises where multiple actors contribute to a single harmful outcome and responsibility for that outcome is distributed among them rather than concentrated in one. As developed in public international law, the concept identifies three recurrent difficulties: the attribution problem, since contributions may be individually insufficient to cause the harm; the apportionment problem, since international law offers few principles for dividing responsibility once shared; and the invocation problem, since injured parties must typically pursue each responsible actor separately.

The applied supply chain literature supplies the operational counterpart. Governance mechanisms weaken sharply beyond the first tier, and sub-supplier management requires deliberate delegation arrangements rather than contractual extension alone, since a first-tier supplier acts simultaneously as the buyer's agent and as a principal over its own suppliers. Work on contractor management in industrial settings

addresses this directly, showing that obligations extended to entities one does not employ depend on qualification, monitoring, and access rights that are frequently absent (Arumosoye & Obriki, 2020; Obogo *et al.*, 2021c; Agbabiaka *et al.*, 2019), while research on inventory visibility and materials readiness shows that risk concentrates precisely where visibility is lowest (Okonkwo *et al.*, 2018b; Okonkwo *et al.*, 2021a).

The frame draws on what is often called the problem of many hands, the observation that in complex organisations the diffusion of contributions across many agents makes it difficult to hold any single agent responsible for an outcome that all of them together produced. A supply chain is an extreme instance. A single garment may pass through a recruiter who charged an illegal fee, a subcontractor who concealed the arrangement, a first-tier supplier who tolerated it, a buyer whose price and lead-time pressure made it economically necessary, a certification body that missed it, a host state that failed to inspect, and a home state that imported the product without inquiry. Each contribution is real; none is sufficient; and no legal order currently apportions among them.

Extraterritoriality and Jurisdictional Multiplicity

Supply chain regulation is territorial in form and extraterritorial in effect. A German statute regulating German firms alters conditions in Bangladeshi factories. The jurisdictional literature distinguishes direct extraterritorial regulation, which purports to govern conduct abroad, from domestic measures with extraterritorial implications, which regulate a local actor whose compliance necessarily alters conditions elsewhere. The second technique attracts far less objection than the first, and it is the technique on which supply chain due diligence relies almost entirely. Reasonableness rather than formal territorial nexus increasingly governs whether such assertions are regarded as permissible.

The critical point for this paper is that these assertions are made unilaterally and without coordination. Each jurisdiction defines the covered firm, the covered chain, and the required conduct according to its own legislative logic. The result is a set of overlapping regulatory claims over the same conduct, made by states that do not consult one another and applied to actors located primarily in states that participate in neither the design nor the enforcement.

Adjacent and Applied Literatures

The instruments analysed in this paper operate on organisations whose supply chain practice is shaped by an applied literature largely separate from the business and human rights scholarship reviewed above. That applied work, spanning procurement engineering, assurance, information systems, safety management, and sectoral operations, is relevant here for a specific reason: it describes the organisational machinery through which any due diligence obligation must actually be discharged. A legal duty to identify risk in a supply chain is executed by procurement officers using vendor evaluation systems, by auditors using control frameworks, by information security teams managing data flows across supplier boundaries, and by health and safety functions running hazard identification processes. Where that machinery is weak, the duty is nominal regardless of how the statute is drafted.

Procurement Systems and Operational Supply Chain Risk

A substantial applied literature models procurement as a governance function rather than a purchasing function, addressing supplier selection, bid evaluation, materials readiness, inventory availability, and the relationship between procurement decisions and operational continuity (Okonkwo *et al.*, 2018a; Okonkwo *et al.*, 2018b; Okonkwo *et al.*, 2019; Agbabiaka *et al.*, 2019). Subsequent contributions extend this to vendor evaluation using structured and geospatial data, enterprise resource planning integration, logistics efficiency, and resilience frameworks for critical infrastructure (Ahiaeké Patrick *et al.*, 2020; Ahiaeké Patrick *et al.*, 2021; Okonkwo *et al.*, 2020; Okonkwo *et al.*, 2021a; Ogunwole *et al.*, 2021), and to regulatory-compliant procurement in regulated operating environments (Okonkwo *et al.*, 2021b). Parallel work addresses procurement process automation, performance measurement, and analytics-supported operations management (Akinleye & Adeyoyin, 2021; Efobi *et al.*, 2021; Akin-Oluyomi *et al.*, 2020), decision frameworks reconciling chemical safety obligations with circular economy targets (Okojie & Abioye, 2020), and process improvement and multi-stakeholder alignment in smaller enterprises operating as suppliers rather than as lead firms (Ambali *et al.*, 2021; Eyetsemitan *et al.*, 2020; Eyetsemitan *et al.*, 2021). This literature matters to the present argument because it describes the systems into which due diligence obligations are inserted, and because it consistently finds that procurement decisions are driven by cost, availability, and uptime rather than by conduct criteria.

Assurance, Audit, And Control Environments

Because legislated due diligence relies on internal control and third-party assurance, the audit literature is directly relevant. Work on risk-based internal control, technology-enabled audit quality, and integrated governance and compliance describes the control architecture on which regulators implicitly depend (Akomolafe & Agu, 2018; Akomolafe & Agu, 2019a; Akomolafe & Agu, 2019b; Akomolafe & Agu, 2019c). Studies of budget compliance, statutory reporting, reconciliation control, and cross-border segregation of duties address the same problem in public and multi-jurisdictional settings (Dogbatsey & Ebhojie, 2018; Dogbatsey *et al.*, 2019; Dogbatsey *et al.*, 2021), and predictive analytics applied to financial crime detection illustrates the shift from sampling toward continuous monitoring (Atakpa, 2021). Closest to the present subject is work explicitly addressing environmental, social, and governance auditing and sustainable procurement, including predictive approaches to supplier assessment and programmatic integration of sustainability criteria into sourcing decisions (Aifuwa *et al.*, 2020; Ike *et al.*, 2021; Nnabueze *et al.*, 2021; Yeboah & Ike, 2020).

Data Governance, Information Security, And Supplier Boundaries

Due diligence generates data flows across organisational boundaries: supplier declarations, audit findings, worker grievance records, and traceability evidence. The information governance literature addresses the legal, ethical, and technical conditions under which such flows are managed, including comparative data protection regimes, identity and access management, risk-based business continuity, and infrastructure governance (Mbonu *et al.*, 2018; Mbonu *et al.*, 2019a; Mbonu *et al.*, 2020a; Mbonu *et al.*, 2021a; Mbonu *et al.*,

et al., 2020b; Mbonu *et al.*, 2020c). Related work addresses automated log analytics, forensic analysis, and artificial intelligence techniques applied to threat detection (Mbonu *et al.*, 2019b; Mbonu *et al.*, 2021c; Mbonu *et al.*, 2021b), enterprise security audit and incident response (Dosunmu & Ogundele, 2019; Dosunmu & Ogundele, 2020; Dosunmu & Ogundele, 2021), and the security of operational technology in utilities and critical infrastructure, where supplier access is itself a risk vector (Adegbite *et al.*, 2020; Ahmed *et al.*, 2021). Platform and service management studies address the systems through which supplier data is actually held and moved, including integration design, platform governance, directory services, and service delivery models (Badmus *et al.*, 2018; Badmus *et al.*, 2019a; Badmus *et al.*, 2019b; Badmus *et al.*, 2020; Ladapo *et al.*, 2018; Ladapo *et al.*, 2019; Ogbole *et al.*, 2021; Okoruwa *et al.*, 2020). The relevance is direct: a traceability claim is only as reliable as the information system that produces it, a point the regulatory literature rarely engages.

Analytics and Predictive Decision Systems

The move from periodic audit toward continuous monitoring depends on analytical capability. Applied studies address demand forecasting, predictive cash flow modelling, audience and segment forecasting, and dashboard frameworks designed to resolve executive visibility problems (Tonoyan *et al.*, 2021a; Tonoyan *et al.*, 2021b; Basnet *et al.*, 2021; Sanni & Atima, 2021b), together with analytics-driven approaches to market measurement, positioning, product management, and compliance-sensitive go-to-market design (Sanni & Atima, 2021a; Sanni *et al.*, 2020a; Sanni *et al.*, 2020b; Sanni *et al.*, 2020c). A related body of work models financial analytics as an enterprise decision system, covering capital allocation, planning, cross-border tax governance, transfer pricing risk, and executive decision support (Lawal & Oduleye, 2021a; Lawal & Oduleye, 2021b; Lawal & Oduleye, 2018a; Lawal & Oduleye, 2018b; Lawal & Oduleye, 2019a; Lawal & Oduleye, 2019b), and extends this to treasury consolidation, foreign exchange risk, and finance leadership in joint venture structures (Dada *et al.*, 2021a; Isiekwu *et al.*, 2021; Dada *et al.*, 2021b). These literatures describe the analytical infrastructure that severity-based prioritisation, proposed in section 8, would require.

Traceability and Remote Monitoring Technologies

Physical verification of upstream conditions is a persistent constraint on due diligence. Work on unmanned aerial systems, geographic information systems, and integrated sensing for corridor and asset monitoring demonstrates both the capability and its limits, since remote sensing verifies physical infrastructure far more readily than labour conditions (Dagodzo, 2018a; Dagodzo, 2018b; Dagodzo & Ahiaeké Patrick, 2020; Dagodzo & Ahiaeké Patrick, 2021a; Dagodzo & Ahiaeké Patrick, 2021b).

Health, Pharmaceutical, and Diagnostic Supply Systems

The pandemic case examined in section 7 connects to work on health system financing, access models, and the data foundations of health system transformation (Ilodigwe & Adesemoye, 2019a; Ilodigwe & Adesemoye, 2019b; Ilodigwe & Adesemoye, 2020; Ilodigwe & Adesemoye, 2021), and to studies of diagnostic infrastructure, regulatory-compliant facility design, capital project delivery under risk, and sustainable materials selection (Aminu-Ibrahim *et al.*,

2018; Aminu-Ibrahim *et al.*, 2019; Aminu-Ibrahim *et al.*, 2020; Ogbete *et al.*, 2018; Ogbete *et al.*, 2019; Ogbete *et al.*, 2020; Ogbete *et al.*, 2021). This literature is useful precisely because it treats regulatory compliance and physical delivery as a single problem rather than as separate ones.

Occupational Safety Governance

The largest applied literature bearing on supply chain conditions concerns occupational safety management, and it is directly analogous to human rights due diligence in structure. Work on hazard identification, near-miss reporting, human error causation, and data-driven risk control describes the identification stage (Obriki & Arumosoye, 2018; Obriki & Arumosoye, 2019; Obriki & Arumosoye, 2020; Arumosoye & Obriki, 2018; Arumosoye & Obriki, 2019); work on contractor safety performance, compliance systems, and governance-oriented models describes the problem of extending obligations to entities one does not employ (Arumosoye & Obriki, 2020; Obogo *et al.*, 2019b; Obogo *et al.*, 2021c; Obogo *et al.*, 2019a); and work on safety culture, organisational learning, maturity models, and institutionalisation describes why process compliance and actual protection diverge (Arumosoye & Obriki, 2021; Obriki & Arumosoye, 2021; Obogo *et al.*, 2021a; Obogo *et al.*, 2021b). Studies of internal quality, health, safety and environment audit systems, heavy lifting risk, and incident prevention address the verification stage (Obogo *et al.*, 2020a; Obogo *et al.*, 2020b; Obogo *et al.*, 2020c; Obogo *et al.*, 2019c). Sectoral work on aviation safety oversight reaches parallel conclusions about predictive compliance monitoring and adaptive regulatory models in resource-constrained regulatory environments (Adeyelu, 2018; Adeyelu, 2019; Adeyelu, 2020; Adeyelu, 2021).

Energy, Infrastructure, and Resilience

Supply chain regulation intersects with energy transition policy, and applied work addresses renewable forecasting, failure prediction in distribution networks, and the trade-off between technical performance and community affordability, which is a distributional question closely analogous to the one raised in section 5 (Komi, 2021; Komi & Adamolekun, 2021; Komi & Adeniji, 2020). Related studies address integrity management, non-destructive testing, and predictive maintenance (Atta *et al.*, 2018; Atta *et al.*, 2020; Atta *et al.*, 2021; Sunday *et al.*, 2020), solar integration and load optimisation in small-scale manufacturing (Sunday & Omoegun, 2018; Sunday & Omoegun, 2019; Sunday *et al.*, 2019), and power systems and telecommunications deployment underpinning industrial capacity (Amayo, 2017; Amayo & Popoola, 2017a; Amayo *et al.*, 2015; Oshevire *et al.*, 2017; Amayo & Popoola, 2017b). The operations literature on resilience supplies the conceptual frame for section 7, addressing disruption severity, relational competence, and network viability (Ogunwale *et al.*, 2021; Sunday *et al.*, 2020).

Producer-Side Capacity and Agricultural Value Chains

The legitimacy problem identified in section 8 concerns producers who bear compliance costs without shaping rules. Applied work on agricultural value chains addresses the determinants of enterprise finance access, extension services and innovation adoption, digital tools, climate-smart practice, and the alignment of sectoral policy with development priorities (Michael & Ogunsola, 2019a; Michael & Ogunsola,

2021e; Michael & Ogunsola, 2021b; Michael & Ogunsola, 2021d; Michael & Ogunsola, 2021a; Michael & Ogunsola, 2021c), together with agribusiness education and competency development (Michael & Ogunsola, 2019b) and livestock production research illustrating the technical basis of upstream productivity (Aye & Tawose, 2015; Aye & Tawose, 2016; Ekeocha *et al.*, 2021). This work describes the capacity constraints that determine whether upstream actors can meet buyer requirements at all.

Capability Building and Communication

Finally, a body of work on pedagogy, professional development, cross-cultural communication, and digital learning platforms addresses how competence is actually transferred to the people expected to implement new requirements (Yeboah *et al.*, 2019; Boakye *et al.*, 2020; Boakye *et al.*, 2021; Bobga *et al.*, 2018; Ogbona *et al.*, 2020a; Ogbona *et al.*, 2020b; Lilian *et al.*, 2020; Orise & Niniola, 2020). Since due diligence obligations are ultimately discharged by trained individuals in supplier organisations, the training question is not peripheral to the regulatory design question.

Two observations follow from this survey. The first is that the applied literature is overwhelmingly concerned with capability, systems, and information quality, while the regulatory literature is concerned with duty, scope, and liability. The two rarely meet, which helps explain why instruments are drafted without regard to whether the organisational machinery to execute them exists. The second is that the applied work is disproportionately produced in and about the jurisdictions that host production rather than those that legislate, which reinforces the participation asymmetry examined in section 8.

Framing the Analysis

The framework used in this paper holds that supply chain governance in 2021 is constituted by three simultaneous distributions:

1. **A functional distribution**, in which the regulatory tasks of standard-setting, monitoring, verification, sanctioning, and remediation are allocated across states, lead firms, auditors, certification bodies, financiers, and civil society.
2. **A jurisdictional distribution**, in which authority over the same conduct is claimed concurrently by home states, host states, market states, and transit states.
3. **A distributional consequence**, in which the costs of compliance and the burdens of non-compliance settle unevenly, concentrating on actors with the least bargaining power in the chain.

Misalignment occurs when these three distributions fail to correspond, meaning that the actor assigned a task lacks the jurisdictional authority or the economic capacity to perform it, or that the actor bearing the cost is not the actor holding the duty.

Approach and Sources

The analysis is qualitative and comparative. Legal instruments are read doctrinally to establish their content, compared to identify convergence and divergence, and then traced through four commodity contexts to show how the resulting configuration operates in practice. Three source categories are used: primary legal materials, comprising

statutes, regulations, directives, executive orders, and judicial decisions in force or issued by 31 December 2021; institutional materials from the United Nations, the OECD, and the ILO, together with national action plans and regulatory guidance; and secondary scholarship in law, political economy, management, and the applied procurement, assurance, information systems, and safety

literatures surveyed in section 2, supplemented by civil society and industry documentation where it supplies factual material not otherwise available.

The four cases were selected on a most-different logic, varying the type of harm, the structure of the chain, the geography of production, and the regulatory technique deployed.

Table 1

Case	Primary harm	Chain structure	Dominant regulatory technique
Xinjiang-linked cotton and polysilicon	State-linked forced labour	Deep, opaque, multi-tier	Trade prohibition and import presumption
Cobalt from the Democratic Republic of the Congo	Child labour, hazardous artisanal mining	Bifurcated industrial and artisanal	Sectoral due diligence and disclosure
Ready-made garments in South Asia	Building and fire safety, wage suppression	Broad, subcontracted, buyer-driven	Binding private agreement plus home-state litigation
Pandemic-era medical goods	Order cancellation, export restriction, access inequity	Concentrated inputs, dispersed assembly	Emergency executive measures

The temporal boundary is 31 December 2021. Instruments adopted but not yet in force at that date, including the German and Norwegian acts, are treated as part of the landscape because they had already begun to shape corporate behaviour through anticipatory compliance, while measures not yet tabled are treated as expectations rather than obligations. What this design can and cannot support is taken up in section

8.

The 2021 Regulatory Landscape Overview

The landscape as of the end of 2021 can be organised into five families of instruments, each embodying a different theory of how corporate behaviour changes.

Table 2

Family	Theory of change	Representative instruments
Disclosure	Information enables market and reputational discipline	California Transparency in Supply Chains Act; UK Modern Slavery Act s.54; Australian Modern Slavery Act; Norwegian Transparency Act
Mandated due diligence	Process obligations restructure internal decision-making	French duty of vigilance law; German Supply Chain Due Diligence Act; EU Conflict Minerals Regulation; Dutch Child Labour Due Diligence Act
Trade prohibition	Market exclusion removes the commercial return on abuse	US Tariff Act s.307 and withhold release orders; Uyghur Forced Labor Prevention Act; EU Timber Regulation
Liability	Judicial remedy internalises harm through damages	Parent company negligence claims; Alien Tort Statute litigation; national tort actions
Soft law and private ordering	Shared expectations coordinate voluntary conduct	UN Guiding Principles; OECD Guidance; ILO MNE Declaration; certification schemes; binding private accords

Mandated Due Diligence in Europe

France: The 2017 duty of vigilance law remains the template. It requires large French companies to establish and publish a vigilance plan covering their own operations, their subsidiaries, and the suppliers and subcontractors with whom they maintain an established commercial relationship. The plan must include risk mapping, assessment procedures, mitigation actions, an alert mechanism, and a monitoring scheme. Enforcement operates through injunction and through civil liability under general tort principles. Early litigation, particularly against energy companies, exposed uncertainty about the required specificity of plans and about the standard of care.

Germany: The Supply Chain Due Diligence Act was passed by the Bundestag on 11 June 2021 and promulgated the following month, entering into force on 1 January 2023 for enterprises with at least 3,000 employees in Germany and extending to those with at least 1,000 employees from 2024. Its structure differs from the French model in three respects that matter for alignment. First, it grades obligations by tier, imposing full due diligence on a firm's own business area and direct suppliers while triggering indirect supplier obligations only upon substantiated knowledge. Second, it is enforced administratively by the Federal Office for Economic Affairs and Export Control, with fines calculated by reference to

group turnover and with potential exclusion from public procurement. Third, it expressly provides that breach does not give rise to civil liability beyond that arising under general law, while permitting trade unions and non-governmental organisations to litigate on behalf of affected persons under a special standing provision.

Norway: The Transparency Act was adopted on 10 June 2021 and entered into force on 1 July 2022. It combines a due diligence obligation modelled on the OECD Guidance with a right of any person to request information from a covered enterprise about how it addresses adverse impacts, with responses required within a defined period. The information right is the Act's distinctive contribution, converting disclosure from a periodic publication into an on-demand duty.

The Netherlands: The Child Labour Due Diligence Act, adopted in 2019, requires a declaration of due diligence regarding child labour but had not entered into force by the end of 2021, pending implementing regulation and amid discussion of replacement by broader legislation.

Switzerland: The Responsible Business Initiative was rejected in November 2020 despite receiving a majority of the popular vote, because it failed to secure the required majority of cantons. The indirect counter-proposal that consequently took effect imposes reporting duties and

targeted due diligence on child labour and conflict minerals, a materially narrower regime than the initiative proposed.

European Union Instruments

The Conflict Minerals Regulation became applicable on 1 January 2021, imposing supply chain due diligence obligations on Union importers of tin, tantalum, tungsten, and gold above defined volume thresholds, with obligations modelled on the OECD minerals guidance. The Timber Regulation continued to prohibit the placing of illegally harvested timber on the Union market and to require an operator due diligence system.

On the horizontal front, the European Parliament adopted a resolution on 10 March 2021 with recommendations to the Commission on corporate due diligence and corporate accountability, annexing a draft directive that would have covered value chains comprehensively, applied to listed and high-risk small and medium enterprises, and coupled due diligence with civil liability. The Commission's own sustainable corporate governance initiative was repeatedly delayed during 2021, in part following critical scrutiny of its impact assessment. In her State of the Union address in September 2021, the Commission President announced an intention to propose a ban on products made with forced labour, signalling a shift toward trade instruments alongside due diligence.

In parallel, the sustainability reporting architecture was being rebuilt. The Sustainable Finance Disclosure Regulation began to apply in March 2021, and the Commission tabled its proposal for a Corporate Sustainability Reporting Directive in April 2021, substantially expanding the population of reporting entities and mandating assurance. These instruments matter for supply chain governance because they transmit due diligence expectations through capital allocation rather than through direct regulation of the operating firm.

United States Measures

The dominant American technique is trade prohibition rather than due diligence. Section 307 of the Tariff Act of 1930 prohibits the importation of goods made wholly or in part by forced labour, and the removal of the consumptive demand exception in 2016 revitalised its use. Customs and Border Protection issued a series of withhold release orders during 2020 and 2021, including region-wide orders covering cotton and tomato products from Xinjiang in January 2021 and an order covering silica-based products from a named producer in June 2021. The Uyghur Forced Labor Prevention Act, signed on 23 December 2021, went further by establishing a rebuttable presumption that goods mined, produced, or manufactured wholly or in part in the Xinjiang Uyghur Autonomous Region are made with forced labour and are therefore inadmissible, with rebuttal requiring clear and convincing evidence.

Disclosure obligations remain narrower. The California Transparency in Supply Chains Act requires covered retailers and manufacturers to disclose efforts on five specified dimensions without mandating any substantive action. Section 1502 of the Dodd-Frank Act requires conflict minerals disclosure, though its scope was constrained by litigation over compelled speech.

Executive Order 14017 of 24 February 2021 directed a review of critical supply chains, with the resulting hundred-day report addressing semiconductors, large-capacity batteries, critical minerals, and pharmaceuticals. Its framing

was resilience and strategic autonomy rather than human rights, illustrating a second and distinct policy logic operating on the same chains.

Judicial Developments

Three 2021 decisions reshaped the litigation landscape in divergent directions.

In *Okpabi v Royal Dutch Shell*, decided on 12 February 2021, the United Kingdom Supreme Court allowed a claim by Nigerian communities against a United Kingdom parent to proceed to trial, holding that the lower courts had conducted an inappropriately detailed factual evaluation at the jurisdictional stage and confirming the approach set out in *Vedanta v Lungowe* (2019) that a parent may owe a duty of care where it exercises or holds out that it exercises control over relevant operations. Group-wide policies, if implemented through supervision, can give rise to such a duty.

In *Nestlé USA, Inc. v. Doe*, decided on 17 June 2021, the United States Supreme Court held that general corporate activity in the United States was insufficient to overcome the presumption against extraterritorial application of the Alien Tort Statute where the alleged conduct occurred abroad, continuing the narrowing begun in *Kiobel* (2013) and *Jesner* (2018).

In *Milieudefensie v Royal Dutch Shell*, decided by the Hague District Court on 26 May 2021, the court ordered a parent company to reduce group emissions, including those of suppliers and end users, by a specified percentage relative to a 2019 baseline. Although an environmental case, its significance for supply chain governance lies in its acceptance that an unwritten standard of care can generate obligations extending across a value chain that the defendant does not own.

The pattern is one of divergence. European courts moved toward accepting value chain duties grounded in domestic tort law while the American federal courts continued to close the statutory route that had once made the United States the principal forum for transnational human rights litigation.

Soft Law and Private Ordering

The tenth anniversary of the Guiding Principles in 2021 produced a stocktaking exercise and a roadmap for the following decade, which acknowledged uneven uptake and identified the remedy pillar as the least developed. The open-ended intergovernmental working group on a binding treaty circulated a third revised draft in August 2021, though state engagement from major home jurisdictions remained limited. In the private sphere, the successor to the Bangladesh Accord on Fire and Building Safety was agreed in 2021 and took effect from 1 September, extending a binding, arbitrable agreement between brands and global unions and creating a mechanism for potential expansion to other countries. The Accord model matters analytically because it is the clearest instance of a private instrument that supplies what most public instruments omit: a binding commitment, an independent inspectorate, and an enforceable remedial pathway.

How Responsibility Is Distributed Who Shares?

The Guiding Principles distinguish three modes of corporate involvement in harm: causing it, contributing to it, and being directly linked to it through operations, products, or services.

The distinction is analytically useful and practically unstable. A buyer that sets a price below the cost of lawful production has arguably contributed to the wage theft that follows. A buyer that merely purchases from a supplier with a pre-existing violation is directly linked. In practice the two are difficult to separate, because purchasing practices and supplier conditions are jointly determined over time.

Applying the shared responsibility frame yields at least seven categories of contributor to a typical supply chain harm:

1. The proximate employer, which commits the violation.
2. Intermediaries, including labour recruiters, agents, and unauthorised subcontractors, whose conduct is frequently the operative cause of forced labour through recruitment fees and document retention.
3. First-tier suppliers, which may subcontract without disclosure to absorb demand volatility.
4. Lead firms, whose purchasing practices, including price pressure, short lead times, and late order changes, structure the economic conditions in which violations become rational for suppliers.
5. Assurance providers, including auditors and certification bodies, whose failure to detect converts risk into apparent compliance.
6. Host states, which may lack inspection capacity, may tolerate violations to preserve competitiveness, or may themselves organise coercive labour programmes.
7. Home and market states, which permit importation and public procurement of tainted goods and which have historically declined to regulate the conduct of their firms abroad.

The applied procurement literature adds a further consideration to this list, namely that the systems used to select and evaluate suppliers rarely encode conduct criteria at all, so the intermediary decision points where responsibility might attach are structurally blind to it (Okonkwo *et al.*, 2018a; Ahiake Patrick *et al.*, 2021; Akinleye & Adeyoyin, 2021).

Financial actors constitute an eighth category whose position was actively contested in 2021, with the European Parliament's draft favouring inclusion and several national instruments treating financial services ambiguously.

The Three Problems Restated

Attribution: No contributor's act is sufficient on its own. Price pressure does not compel wage theft; it makes it commercially attractive. Audit failure does not create abuse; it conceals it. Classical causal tests, requiring that the harm would not have occurred but for the defendant's act, struggle with contributions of this kind. This is why legislated due diligence shifts from outcome liability to process obligation: it is easier to prove that a firm failed to conduct risk mapping than that its purchasing practices caused a particular violation. But the shift purchases enforceability at the cost of severing the legal duty from the harm it exists to prevent.

Apportionment: Even where multiple contributors are identified, no instrument surveyed apportioned responsibility among them. The German Act allocates duties by tier proximity, which is a proxy for control rather than for contribution. Trade prohibitions allocate the entire consequence to the importer, which may be a distributor with no leverage over the offending producer. Private contracts allocate risk downward to suppliers through indemnities and warranties, precisely inverting the distribution that

contribution analysis would suggest.

Invocation: Affected workers must locate a forum, establish jurisdiction, fund litigation, survive limitation periods, and overcome corporate separation, all typically from a different country than the defendant. Every step is a filter. The consequence is that the remedy pillar functions less as an entitlement than as a rare event contingent on the involvement of well-resourced intermediaries.

The Inversion Problem

The most significant finding of the shared responsibility analysis is an inversion. Responsibility flows toward the actors with the least capacity to discharge it.

Consider the transmission mechanism. A lead firm subject to a new due diligence obligation responds by amending its supplier code, requiring contractual warranties of compliance, demanding audits at the supplier's expense, and reserving termination rights. The regulatory burden has been converted into a contractual burden and passed down. The supplier, operating on thin margins in a competitive market, absorbs audit costs and compliance documentation expense without a corresponding price increase, because the buyer's own competitive position does not permit one. The supplier then manages the cost by intensifying work, delaying wages, or subcontracting to unmonitored facilities, which are the very behaviours the regulation was designed to prevent.

This is not a hypothetical failure mode. It follows from the structure of buyer-driven chains combined with instruments that impose obligations on buyers without regulating buyer purchasing practices. The German Act's inclusion of a duty to consider one's own contribution through purchasing behaviour is a partial corrective, as is the Guiding Principles' contribution category, but neither is coupled with an enforceable price or terms obligation.

The inversion has a jurisdictional dimension as well. The rules are made in consuming states, applied to firms in consuming states, and absorbed by firms and workers in producing states, who participate in neither the legislative process nor the enforcement machinery. Producer-state governments have characterised aspects of this as protectionism, a characterisation that is self-interested but not therefore baseless.

Five Forms of Misalignment

Five forms of misalignment can be distinguished. They are analytically separable although they frequently co-occur.

Substantive Misalignment

Instruments differ in what they require. The Dutch Act addresses child labour alone. The Conflict Minerals Regulation addresses four minerals from conflict-affected areas. The Norwegian Act addresses human rights and decent working conditions. The German Act enumerates protected positions by reference to specified international conventions and adds selected environmental obligations. The French law covers human rights, fundamental freedoms, health and safety, and the environment without enumeration.

A firm operating across these regimes must satisfy the union of all requirements while structuring its systems around whichever framework its principal regulator applies. Substantive misalignment produces two distortions. It creates *risk-category tunnel vision*, in which firms build sophisticated capability on the enumerated risks and remain blind to unlisted ones. And it generates *definitional arbitrage*,

since a firm may characterise a given practice as falling outside an enumerated category in one jurisdiction while acknowledging it in another.

Scalar Misalignment

Instruments differ in how far down the chain they reach and in which firms they capture.

Table 3

Dimension	Variation observed in 2021
Chain depth	Full value chain (Parliament draft); established commercial relationships (France); direct suppliers with conditional indirect reach (Germany); first import point (trade measures)
Entity threshold	3,000 then 1,000 employees (Germany); 5,000 then 10,000 employees (France); turnover and balance sheet tests (Norway); no threshold for import prohibitions
Sectoral scope	Horizontal (Germany, France, Norway); sectoral (conflict minerals, timber); commodity and region specific (Xinjiang measures)
Actor coverage	Manufacturers and retailers universally; financial institutions inconsistently; state-owned enterprises rarely addressed

Scalar misalignment produces a *threshold cliff*. Firms just below an employee threshold face no direct obligation but receive the full contractual weight of their customers' obligations, without the guidance, enforcement dialogue, or safe harbour available to regulated entities. It also produces *depth incoherence*: a trade prohibition holds an importer accountable for a raw material input four tiers upstream, while the due diligence statute governing the same importer requires substantive diligence only at tier one. The importer is thus liable for what it has no statutory duty to investigate.

Temporal Misalignment

Instruments enter into force on different dates, apply to different reporting periods, and demand different reporting frequencies. During 2021 a large multinational was simultaneously reporting under the UK Act for one financial year, preparing for German obligations effective in 2023, anticipating Norwegian obligations effective in 2022, awaiting an EU directive of unknown content, and responding to trade measures with immediate effect and no transition period.

The consequence is *anticipatory over-compliance followed by structural rigidity*. Firms build systems against the strictest anticipated requirement in order to avoid rebuilding, which sounds efficient but in practice means systems are designed for the requirement that is most legible, generally documentation, rather than the one that is most protective. Once built, these systems become expensive to reconfigure, so later instruments are absorbed into an architecture optimised for an earlier one.

Evidentiary Misalignment

Instruments differ in what counts as proof and on whom the burden falls. The German Act requires a firm to demonstrate that it established and operated specified procedures, with the

regulator assessing appropriateness. The French law leaves adequacy to judicial evaluation against an undefined standard. The Uyghur Forced Labor Prevention Act reverses the burden entirely, requiring an importer to rebut a statutory presumption by clear and convincing evidence.

Reversed burdens create an acute problem where the underlying facts are unverifiable by ordinary means. Where independent auditing is not feasible in a territory, and where major audit firms had by 2021 withdrawn from conducting labour audits in the region concerned, the evidentiary standard cannot be satisfied through the standard toolkit. The rational corporate response is not improved diligence but categorical disengagement, meaning wholesale withdrawal from a region or from any input traceable to it.

The verification literature reinforces the point. Remote sensing and geospatial monitoring can establish facts about physical assets and land use but not about employment relationships (Dagodzo & Ahiaeké Patrick, 2021a; Dagodzo & Ahiaeké Patrick, 2021b), while information governance research shows that the reliability of any supplier-reported claim depends on the integrity of the systems that generate and transmit it (Mbonu *et al.*, 2020b; Mbonu *et al.*, 2020c; Mbonu *et al.*, 2021a).

Disengagement is a defensible policy outcome where the state is the perpetrator, since leverage is absent by definition. But as a general regulatory dynamic it is corrosive. It transfers harm rather than remedying it, penalises workers who are already victims, and rewards opacity, because a supplier that cannot trace its inputs may face less exposure than one whose transparency reveals a problematic link.

Remedial Misalignment

Instruments differ in what happens after a finding, and this is where divergence is greatest.

Table 4

Instrument type	Consequence of breach	Who receives redress
Disclosure statutes	Publication of non-compliance, occasional injunction	No one
Administrative due diligence regimes	Fines to the state, procurement exclusion	The state treasury
Trade prohibitions	Goods excluded, importer bears loss	No one; workers may lose employment
Tort litigation	Damages	Claimants, where the action succeeds
Binding private accords	Contractual remedy, arbitration, remediation funding	Workers, through funded corrective action

The pattern is that the instruments with the strongest enforcement have the weakest remedial content, while the instrument with the most direct remedial content, namely private accords, has the narrowest coverage. A German fine, a United States import exclusion, and a United Kingdom modern slavery statement all leave the affected worker in

exactly the position she occupied before. This is the deepest misalignment identified in this paper, because it means the architecture is optimised for deterring firms rather than for repairing harm, and it therefore under-delivers on the pillar that the Guiding Principles identified as least developed.

Four Cases

Xinjiang-Linked Cotton and Polysilicon

The Xinjiang case is the hardest test of the architecture because the alleged perpetrator is a state, the products are deep-tier inputs, and the two dominant regulatory techniques point in opposite directions.

Cotton and polysilicon are both fungible inputs that enter chains far upstream and are commingled during processing. A finished garment or solar module may contain material from dozens of sources, blended at spinning or ingot stage. Conventional traceability therefore fails, and firms turned to isotopic testing, transaction certificates, and full vertical resegregation of supply lines.

Regulatory responses diverged sharply. The United States adopted exclusion with a reversed evidentiary burden. The European Union, lacking an equivalent instrument in 2021, relied on due diligence expectations and announced a future prohibition. Due diligence logic, as articulated in the OECD framework, ordinarily directs a firm to use and build leverage before disengaging, and to disengage only where leverage cannot be built. Exclusion logic directs immediate severance. A firm subject to both is instructed to remain engaged and to withdraw simultaneously.

The case also illustrates evidentiary misalignment in its sharpest form. Where audit access is not credible, no quantity of diligence generates admissible proof of absence. The consequence was a bifurcation of global supply, with firms building parallel chains serving American and non-American markets. This is arguably the most consequential structural effect of 2021 regulation, and it was produced not by any single instrument but by the interaction of two.

Cobalt in the Democratic Republic of the Congo

Cobalt tests the architecture against a harm embedded in the livelihood structure of the producing region. Artisanal and small-scale mining supplies a meaningful share of Congolese production and supports large numbers of households, while also involving hazardous conditions and child labour.

The dominant regulatory technique has been sectoral due diligence derived from the OECD minerals guidance, transmitted through downstream electronics and automotive firms and through industry assurance schemes at the refiner level. The EU Conflict Minerals Regulation, which became applicable in 2021, does not cover cobalt, so the regulatory pressure on this chain is largely private and reputational rather than statutory.

Two lessons follow. First, the conflict minerals precedent in the Democratic Republic of the Congo demonstrated that disclosure-driven pressure can produce de facto embargo, as firms avoid a region entirely rather than manage risk within it, with documented adverse effects on artisanal livelihoods. Second, the alternative approach, involving formalisation of artisanal sites, mine-site monitoring, and purchase commitments, requires sustained investment and host-state cooperation of a kind that no consuming-state instrument currently requires or funds. Due diligence law tells firms to identify and address risk; it does not fund the developmental work that addressing this particular risk requires.

Ready-Made Garments in South Asia

The garment case supplies the architecture's clearest positive result and its clearest illustration of remedial misalignment. After the Rana Plaza collapse in 2013, the Accord on Fire and Building Safety in Bangladesh established a binding,

arbitrable agreement between international brands and global unions, with independent inspection, a public remediation database, and a commitment to bear costs. Two arbitrations brought under the agreement were settled with substantial payments toward remediation. Independent assessments credited the programme with substantial improvement in structural, fire, and electrical safety across covered factories. The successor arrangement agreed in 2021 preserved the binding and arbitrable character and created a route to expansion beyond Bangladesh.

What made the Accord effective was precisely the combination that public instruments lack: a defined and inspectable standard, an independent inspectorate with access, a funded remediation obligation, and an enforceable consequence available to worker representatives rather than only to a state agency.

The counterexample arrived in 2020 and persisted through 2021. When pandemic-related closures reduced demand, brands cancelled or suspended orders on goods already produced or in production, transferring the loss to suppliers and, through them, to workers who went unpaid or were dismissed. No due diligence statute in force or announced during 2021 rendered order cancellation a due diligence failure, despite it being the clearest possible instance of a buyer causing harm through its own conduct rather than being linked to harm through another's. This is the inversion problem in its purest form: the architecture regulates what buyers must ask of suppliers and not what buyers may do to them.

Pandemic-Era Medical Goods

The medical goods case reveals a second regulatory logic operating on the same chains and largely unreconciled with the first.

During 2020 and 2021, states imposed export restrictions on personal protective equipment, active pharmaceutical ingredients, and vaccine inputs; concentrated inputs including specialised filtration media, lipid nanoparticle components, and single-use bioprocessing consumables became bottlenecks; and access to finished vaccines diverged sharply between high-income and low-income countries. The proposal for a waiver of certain intellectual property obligations, tabled in late 2020 and debated throughout 2021, remained unresolved.

Executive Order 14017 and comparable European industrial strategy measures framed supply chains as a matter of national resilience, directing firms toward diversification, reshoring, and stockpiling. These directions are not necessarily inconsistent with human rights due diligence, but they are not integrated with it. A firm told simultaneously to shorten its chain for resilience, to deepen visibility into it for due diligence, to exclude an entire region for trade compliance, and to maintain competitiveness on price receives four instructions from four regulators, none of whom has considered the other three.

The operations literature had already established that resilience and efficiency trade off against each other, and that recovery capability depends on network structure and relational depth rather than on inventory alone. Applied work on critical infrastructure resilience and on demand forecasting under volatility reaches compatible conclusions (Ogunwale *et al.*, 2021; Tonoyan *et al.*, 2021a).

The case also raises a distributional question that the human rights framing largely omits. Allocation of scarce goods

among countries is a supply chain governance outcome with life-and-death consequences, yet no due diligence instrument addresses whether a manufacturer's allocation decisions engage its responsibility to respect the right to health.

Discussion: Designing for Interoperability

The analysis suggests that harmonisation is the wrong objective. Jurisdictions legitimately differ on enforcement institutions, remedial traditions, and administrative capacity, and a single global instrument would require a level of consensus that the treaty process has not produced in seven years of negotiation. The achievable objective is interoperability, meaning that instruments recognise each other, avoid contradiction, and share a common core. Four principles follow.

A Common Core with Enforcement Variation

Jurisdictions should converge on the substantive due diligence obligation while retaining freedom in enforcement design. The OECD six-step cycle already supplies a *de facto* core: embed responsible conduct in policy and management systems; identify and assess adverse impacts; cease, prevent, and mitigate; track implementation and results; communicate; and provide for or cooperate in remediation. All the major 2021 instruments approximate this cycle, so convergence requires alignment of definitions rather than invention of a new standard.

Convergence should extend specifically to the definition of the covered chain, the enumerated risk categories, and the risk-based prioritisation principle that permits firms to sequence attention by severity and likelihood rather than by tier proximity. Tier-based scoping, as adopted in Germany, is administratively convenient and analytically wrong, because severity does not correlate with contractual distance. Prioritisation by severity, as the OECD framework already provides, is the better organising principle and should be the shared core.

Conditional Safe Harbours Tied to Conduct

Firms should be able to rely on compliance in one jurisdiction as evidence of compliance in another, but only where the reliance is grounded in verified conduct rather than in documentation. A safe harbour should attach to demonstrated participation in a credible scheme with independent verification, worker participation, and a funded remediation mechanism, and it should be rebuttable by evidence of actual harm.

The assurance literature suggests that the qualifying criteria should be drawn from established internal control practice rather than invented, since risk-based control design, auditor independence, and continuous monitoring are already well specified in that field (Akomolafe & Agu, 2019a; Akomolafe & Agu, 2018; Atakpa, 2021).

This design has a specific purpose. Unconditional mutual recognition would create a race to the least demanding regime. A conduct-conditioned harbour instead creates competitive pressure among assurance schemes to demonstrate substantive rigour, since only rigorous schemes

would qualify. It also directly addresses the audit reliability problem identified in the private governance literature, by making the legal value of an audit contingent on its methodological quality.

Mandatory Remedial Capacity

The remedial gap identified in section 6 is the architecture's most serious defect and the most tractable. Three measures would narrow it.

First, penalties should be at least partly hypothecated to remediation. A fine paid to a national treasury does nothing for the workers whose conditions gave rise to it. A proportion directed to a remediation fund accessible to affected persons converts deterrence into repair.

Second, the safe harbour described above should be conditioned on maintaining an operational grievance mechanism meeting the effectiveness criteria set out in the Guiding Principles, namely legitimacy, accessibility, predictability, equitability, transparency, rights-compatibility, and derivation from engagement with affected stakeholders.

Third, and most significantly, purchasing practices should be brought within the scope of due diligence obligations as a matter of the firm's own conduct. Where a buyer's price, lead time, or cancellation behaviour makes lawful production economically impossible, that behaviour is a contribution to harm within the Guiding Principles framework and should be treated as a diligence failure. This single change would address the inversion problem more directly than any expansion of chain depth.

Structured Producer-State Participation

The architecture's legitimacy deficit is that its rules are made by consuming states and borne by producing ones. Three responses are available.

Consuming states should provide transition financing and technical assistance where their instruments impose material compliance costs on suppliers in lower-income jurisdictions, on the model used in trade capacity-building rather than as a discretionary aid function. Standard-setting bodies, whether public or private, should include producer-state regulators and worker representatives in governance rather than in consultation. And consuming states should coordinate the sequencing of instruments so that suppliers face a predictable schedule of requirements rather than a series of unrelated demands arriving from separate jurisdictions in overlapping cycles.

Evidence from the applied literature on producer capability supports the sequencing argument. Where extension services, finance access, and training infrastructure are weak, requirements transmitted through contracts are absorbed as cost rather than converted into capability (Michael & Ogunsola, 2019a; Michael & Ogunsola, 2021e; Michael & Ogunsola, 2019b; Yeboah *et al.*, 2019).

Absent such measures, due diligence law will continue to operate, in effect if not in intent, as a barrier to participation in global markets by exactly the producers whose workers it is meant to protect.

Summary of Proposals

Table 5

Misalignment type	Proposed response	Primary implementing actor
Substantive	Convergence on OECD six-step core and shared risk definitions	Legislatures, coordinated through OECD
Scalar	Severity-based prioritisation replacing tier-based scoping	Legislatures
Temporal	Coordinated commencement schedules and transition periods	Inter-governmental coordination
Evidentiary	Conduct-conditioned safe harbours with rebuttable presumptions	Legislatures and regulators
Remedial	Hypothecated penalties, mandatory grievance mechanisms, purchasing practice duties	Legislatures

What the Analysis Can and Cannot Establish

Four qualifications bear on the foregoing. The study analyses legal form and reported corporate practice rather than measured outcomes, so it establishes what the architecture requires and not whether workers are better protected as a result. The 2021 boundary captures a system in rapid motion, so several instruments are assessed on their text rather than on their operation. The source base is weighted toward European and North American materials, underrepresenting the producer-state regulatory perspectives that the argument itself identifies as structurally excluded. And the transmission mechanism described in section 5, while consistent with existing work on purchasing practices, is advanced here as an analytical claim rather than as an independently tested finding.

Each qualification points to work that could be done. The staggered commencement dates created by the German thresholds, which capture firms above 3,000 employees from 2023 and above 1,000 from 2024, generate a natural experiment permitting difference-in-differences comparison of suppliers serving just-covered and just-exempt buyers. Transaction-level data on unit prices, lead times, and order stability before and after commencement would test the cost-transmission claim directly. Comparative study of employment, wages, and informality following *de facto* embargo, in both the Xinjiang and conflict minerals settings, would clarify whether categorical exclusion protects the affected population or merely relocates the harm. Systematic evidence on grievance mechanism usage, outcomes, and worker perceptions would supply the empirical basis that the safe harbour design proposed above currently lacks. The analytics and information systems literature surveyed in section 2 further suggests that supplier risk might be assessed continuously from transaction, payment, and production data rather than through scheduled inspection (Tonoyan *et al.*, 2021a; Basnet *et al.*, 2021; Mbonu *et al.*, 2020c), though whether such approaches detect the concealed abuses that defeat conventional auditing remains open. Finally, content analysis of due diligence systems in firms subject to one, two, or several regimes would allow the claim that fragmentation channels effort toward documentation to be tested rather than asserted.

Conclusion

The year 2021 is best understood not as the year supply chain regulation became mandatory but as the year its incoherence became visible. Germany legislated, Norway legislated, the European Parliament demanded legislation, the United States reversed an evidentiary burden, and the United Kingdom Supreme Court opened a litigation route that the United States Supreme Court was closing. Each of these developments is defensible in isolation. Together they constitute a regime in which the same conduct is governed by

instruments that define the supply chain differently, reach different distances into it, demand different proof, and impose consequences that fall on different parties.

The paper has argued that this configuration should be analysed as a case of shared responsibility under conditions of jurisdictional multiplicity. That frame identifies three difficulties that the current architecture does not resolve. Attribution is evaded rather than solved, through the substitution of process obligations for causal responsibility. Apportionment is not attempted, so contribution to harm does not determine allocation of duty. And invocation remains so demanding that remedy functions as an exception rather than an entitlement.

It has further argued that the distribution of duties is inverted relative to capacity. Obligations imposed on lead firms are converted into contractual demands on suppliers and absorbed by workers, while the purchasing practices through which lead firms most directly shape supplier conditions remain almost entirely unregulated. The pandemic-era cancellation of orders on completed goods is the clearest available demonstration: a buyer act that caused immediate and widespread harm and that no due diligence instrument in force during 2021 characterised as a diligence failure.

The corrective is not a single global instrument. It is interoperability built on four principles: a common substantive core organised around severity-based prioritisation rather than tier proximity; safe harbours conditioned on verified conduct rather than documentary compliance; remedial capacity made mandatory through hypothecated penalties, operational grievance mechanisms, and the inclusion of purchasing practices within the scope of due diligence; and structured participation for the producer states and workers who currently bear the architecture's costs without shaping its rules.

The measure of success for supply chain governance is not the number of statutes enacted or the volume of statements published. It is whether a worker in a spinning mill, a mine, or a cutting room is safer, better paid, and able to obtain redress. On that measure the architecture assembled by the end of 2021 remained substantially unproven, and its most conspicuous weakness was the one its founding framework had already identified a decade earlier: the pillar of remedy.

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