EUTAX Observatory

Supply Chain Due Diligence: Impacts and Avoidance through Legal Havens

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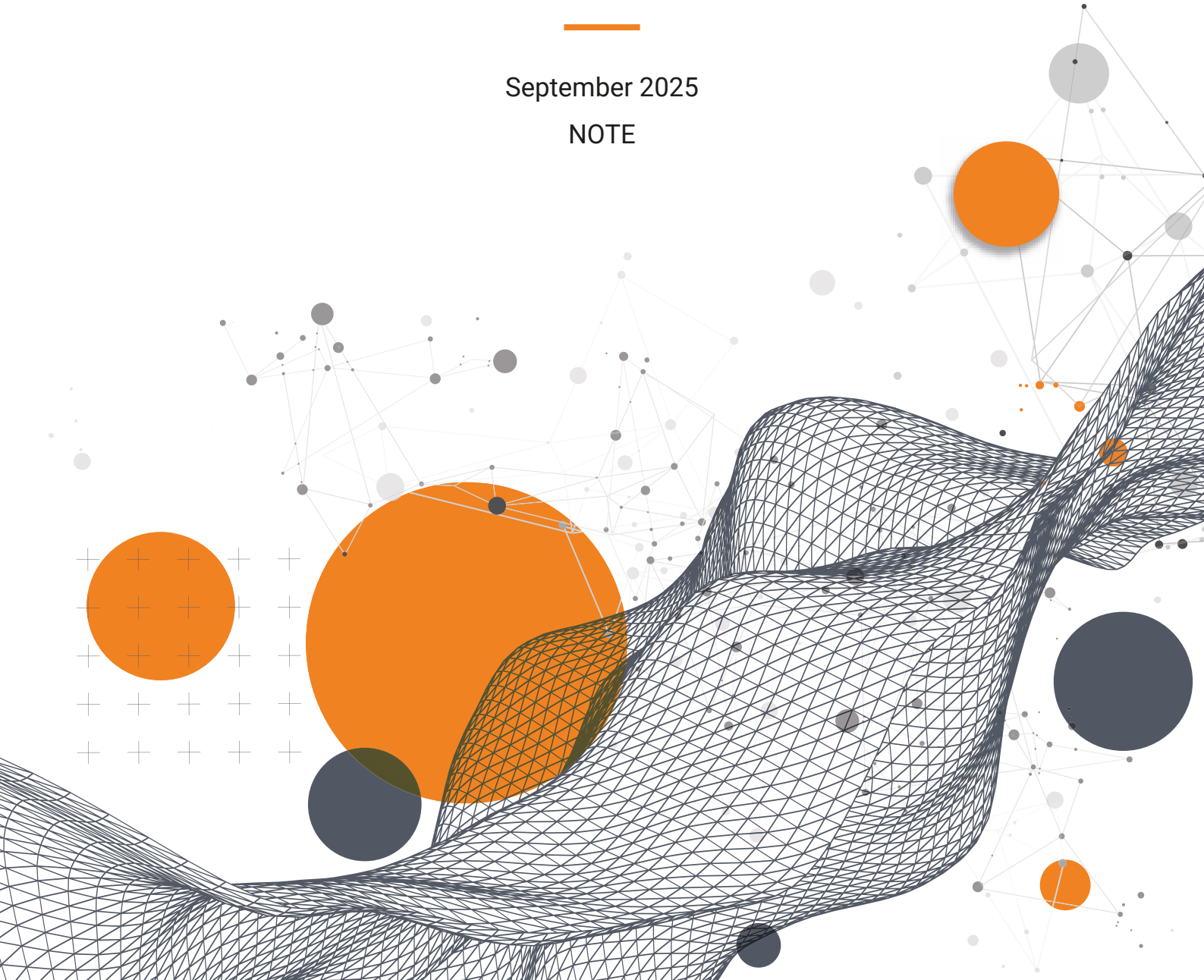


Supply chain due diligence: impacts and avoidance through legal havens

This policy note highlights key results of the Working Paper entitled "No blood in my mobile: regulating foreign suppliers" (2025) by EU Tax Observatory researcher Ninon Moreau-Kastler.

1. Introduction

In recent years, governments worldwide have adopted new rules aimed at making supply chains more sustainable and transparent. From the United States to Europe, these initiatives respond to growing public concern about the role of global trade in environmental destruction, human rights abuses, and the financing of armed conflicts. Their shared ambition is to ensure that goods consumed in developed economies are not tied to harmful practices abroad. For researchers and policymakers, the challenge is not only to design such rules, but also to understand what their impact is, how companies adapt to them, and which loopholes may undermine their effectiveness.

In Europe, the discussion is now at a crossroads. At EU level, the Corporate Sustainability Due Diligence Directive (CSDDD) is being revised under the *Omnibus I* proposal, with options to limit obligations to tier-1 suppliers and reduce reporting frequency. In Germany, the Federal Cabinet recently proposed a draft reform of the *Lieferkettengesetz* (Supply Chain Act) that would ease reporting requirements and sanction violations only in "serious cases," citing the need to reduce bureaucracy. Both developments illustrate a **growing political momentum to scale back obligations**, amid worries about compliance costs and effectiveness.

At the EU Tax Observatory, our work on illicit financial flows and global transparency provides a unique lens on these discussions. A new working paper by Ninon Moreau-Kastler, summarized in this policy note, provides a rare empirical case to assess what such design choices mean in practice: the **Dodd-Frank Act Conflict Mineral Rule** (2010). This law required all US-listed companies to conduct due diligence to ensure that gold and tin, tantalum, and tungsten (3T) in their products were not financing rebel armed groups in the Democratic Republic of the Congo (DRC) and neighbouring countries.

The evidence is striking. Following its adoption, **exports of 3T from the region fell by 76%** across most trading partners, showing that due diligence rules - even if applied only to downstream firms in one country - can reshape sourcing practices far upstream and across borders. However, **one fourth (around 24%) of this decrease can be attributed to diversion of trade to opaque intermediary jurisdictions**, or **"legal havens,"** which re-exported minerals to countries hosting US suppliers, revealing how loopholes can undermine enforcement. **Compliance costs**, while significant at the start, proved **manageable and risk-dependent**, averaging €30,000-€70,000 per year once traceability systems were established. Finally, disclosures under the rule **uncovered more than a thousand smelters and refiners worldwide**

— compared to only around 180 identified before — providing unprecedented transparency into global chokepoints in metal processing.

Building on these findings, this policy note distils lessons that are highly relevant for current due diligence and transparency debates: **(1) due diligence can meaningfully alter corporate sourcing choices; (2) circumvention through legal havens poses a significant threat to effectiveness;** and **(3) the costs of compliance are limited and frontloaded, while the transparency benefits are substantial and enduring.**

2. Background: the Dodd-Frank Act

Section 1502 of the **US Dodd-Frank Wall Street Reform and Consumer Protection Act** introduced the **Conflict Mineral Rule** in 2010. It targeted four metals, **gold** and **tin, tantalum, tungsten (3T)**, sourced from the **Democratic Republic of the Congo (DRC) and nine adjoining countries**, where mineral extraction has long been linked to financing of armed groups and sustained levels of violence.

Obligations fell on US-listed downstream companies, typically large manufacturers in electronics, automotive, aerospace, and industrial equipment. These firms represented more than 9,000 billion USD global sales in 2010. Firms were required to (1) identify whether their products contained 3T; (2) determine the minerals' country of origin; (3) if doubt of origin from DRC and neighbouring countries, conduct enhanced due diligence on smelters/refiners and disclose policies in a public Securities and Exchange Commission (SEC) filing, subject to third-party audit.

The rule did not prohibit sourcing from the region; instead, it used transparency and reputational accountability as enforcement levers. The SEC itself did not verify every report but retained authority to act against false or misleading disclosures. In practice, enforcement relied on a mix of mechanisms: independent auditors certified compliance, the SEC ensured that reports were filed, and civil society actors such as NGOs, investors, and watchdogs scrutinized the disclosures to hold companies accountable. The rule also intended to induce worldwide compliance through the supplier network of the large regulated firms.

While limited in scope, **the Dodd-Frank Conflict Mineral Rule anticipated the wave of international due diligence legislation that followed**. The OECD published its Due Diligence Guidance on Responsible Supply Chains of Minerals in 2011, the EU adopted its own Conflict Minerals Regulation in 2017 (implemented in 2021), and broader horizontal frameworks such as the French Duty of Vigilance Law (2017), the German Supply Chain Act (2021), and the EU Corporate Sustainability Due Diligence Directive (CSDDD - 2024) have since established obligations across sectors and value chains.

These regimes substantially differ in multiple aspects. For example, the Dodd-Frank Act Conflict Mineral Rule focused only on 3T and applied specifically to downstream US-listed issuers, whereas the EU CSDDD, the French and German laws impose cross-sectoral duties on companies above certain thresholds. Enforcement mechanisms also differ markedly:

Dodd-Frank relied primarily on disclosure and independent audit, with reputational pressure as the main sanction; the French law introduced potential civil liability for harms linked to inadequate vigilance plans; the German act entails the possibility of fines and exclusion from public procurement; and the CSDDD combines administrative enforcement by Member State authorities with the possibility of civil liability.

However, despite these differences, the Dodd-Frank Conflict Mineral Rule remains a uniquely valuable case for drawing broader conclusions about due diligence regulation. Its early adoption created one of the first legally binding, cross-border regimes requiring companies to investigate and disclose risks in their supply chains. Precisely because the rule was narrow - focusing only on four minerals and a defined set of countries - it provides a particularly clear setting in which to observe the mechanisms of mandatory due diligence. Therefore, the Dodd-Frank experience offers a rare opportunity to study how due diligence obligations function in practice and to draw insights that remain relevant to the design of other frameworks, where similar questions about scope, enforcement levers, and reporting architecture continue to be debated.

3. Legal havens: what are they?

Global economic exchanges and cross-country production processes interact with a fragmented regulatory framework, formed by national rules and international agreements. **Legal havens**, a concept first defined by legal scholars, are countries or independent territories (i.e., **jurisdictions**) **deriving economic benefits from this fragmentation by providing an opaque legal system around economic agents and exchanges**. In turn, opacity allows these agents to avoid legal obligations in other territories.

This analysis relies on the **list of legal havens developed by Ninon Moreau-Kastler**. It builds on existing literature in international law and public economics, and identifies **four main characteristics** of the legal systems creating legal opacity:

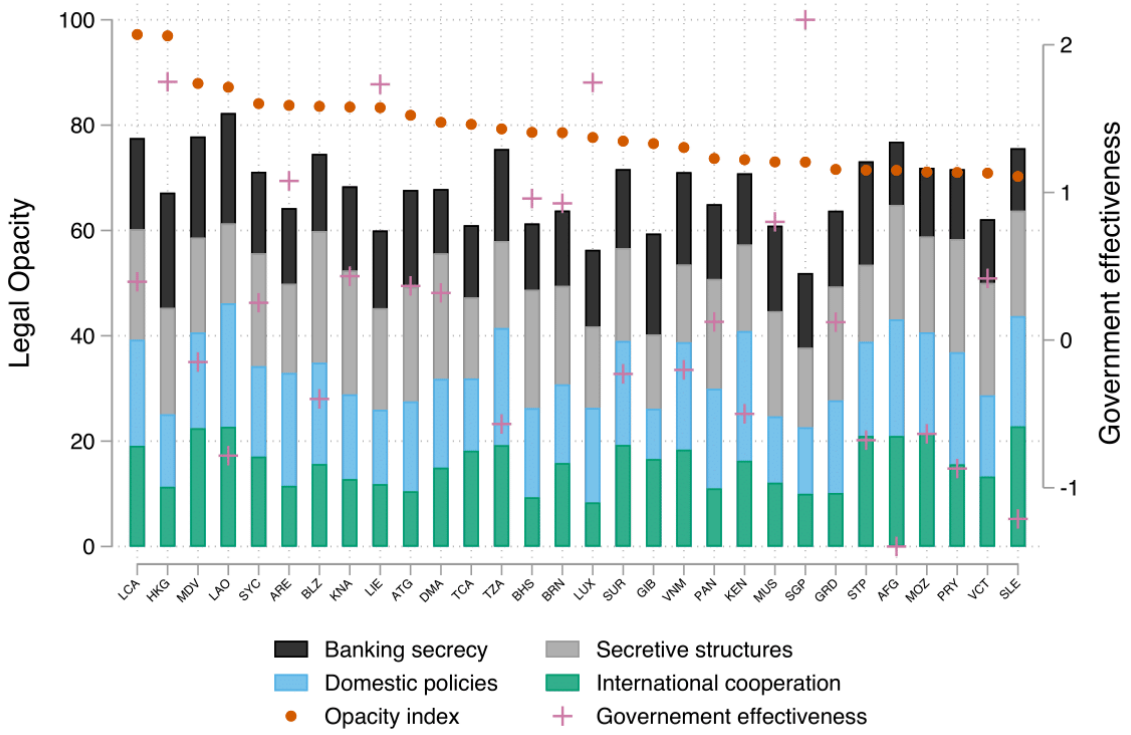
(i) **Financial secrecy** allows proceeds of economic activities to be managed safely and reintegrated into the global financial system.
(ii) **Secretive legal entities and vehicles** disconnect real actors from economic transactions.
(iii) **Internal laws and regulatory frameworks** lower detection probabilities and alter the legal nature of transiting economic flows.
(iv) **Low international cooperation** between legal and economic administrations shields economic agents from international pursuits.

It then develops a new database of *de jure* characteristics about legal opacity across **191 territories**. The data is then measured against the 4 dimensions of legal opacity. Legal havens are identified as the top opaque countries, ranking high in each dimension (see Figure 1)[1].

[1] For a more detailed overview of the methodology, see The Legal Havens and Legal Opacity Database, Ninon Moreau-Kastler (2025)

Compared to most existing measures of uncooperative territories, this list **takes into account each jurisdiction's administrative capacity** to capture intentional opaque legal systems and not administrative resource gaps in low-income countries.

Figure 1: Legal Opacity Index



Source: "The Legal Havens and Legal Opacity Database" (2025) Ninon Moreau-Kastler.

4. The impact of the Dodd-Frank Act

4.1 Significant decline in exports from targeted countries: extraterritorial and upstream effects

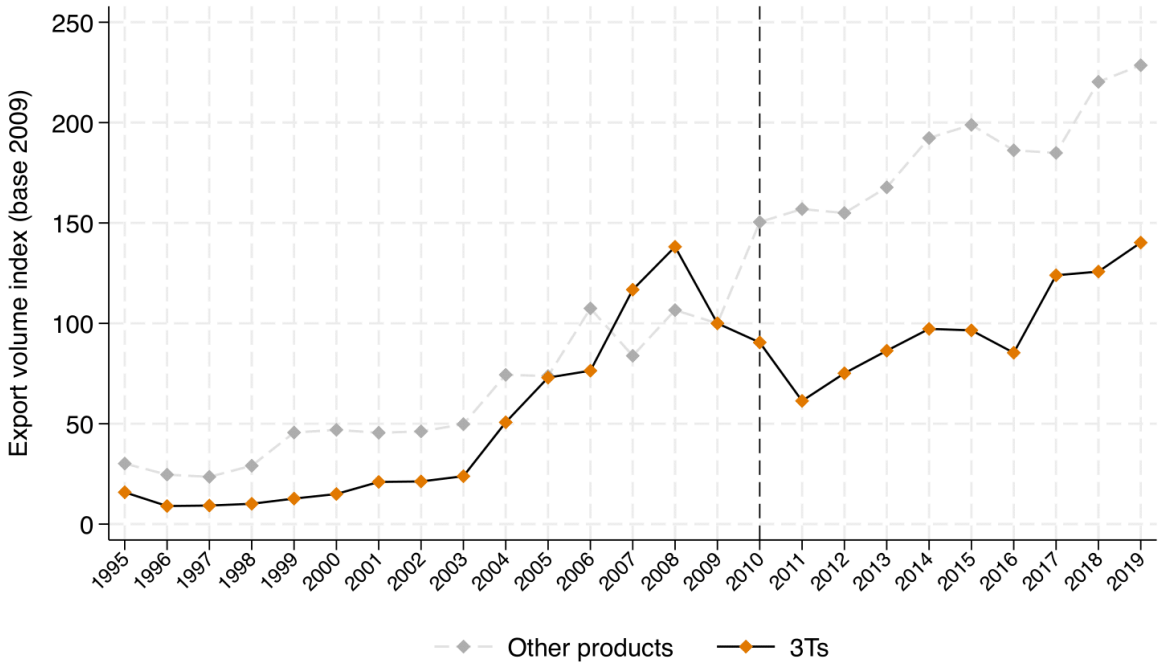
Exports of tin, tantalum, and tungsten from the Democratic Republic of the Congo (DRC) and neighbouring countries collapsed by 76% after the law came into force - as shown in Figure 2. This effect is equivalent to a 25% increase in tariffs on 3T products for the region. Though the rule targeted only US-listed downstream firms, this decline was not limited to shipments destined for the United States, showing that the regulation's effects were extraterritorial in practice.

Given the size of the US market and its importance for 3T trade, the impact rippled through entire supply chains, reaching far upstream to actors never directly regulated. The mechanism driving this global contraction may lay in how suppliers adapted to the new compliance environment. To retain access to US buyers, smelters and refiners worldwide had

to demonstrate "conflict-free" sourcing. Finding it too costly or risky to procure directly from Central Africa, many might have shifted their sourcing upstream toward alternative suppliers.

This evidence underscores the far-reaching potential of binding due diligence regimes. Downstream regulation does not stop at the level of the regulated firms: it reshapes incentives and sourcing decisions all along the chain. In doing so, it exerts extraterritorial influence, altering trade patterns well beyond the regulator's jurisdiction, particularly when it is a large trade partner.

Figure 2: Covered countries export index in volume



Source: "No blood in my mobile: regulating foreign suppliers" (2025) Ninon Moreau-Kastler.

4.2 Legal havens provided an avenue for circumvention

At the same time, the evidence reveals that firms responded not only by changing sourcing patterns but also by exploiting opportunities for circumvention. Traders turned to **legal havens**, to disguise the true origin of minerals while maintaining access to the US and countries hosting its foreign suppliers.

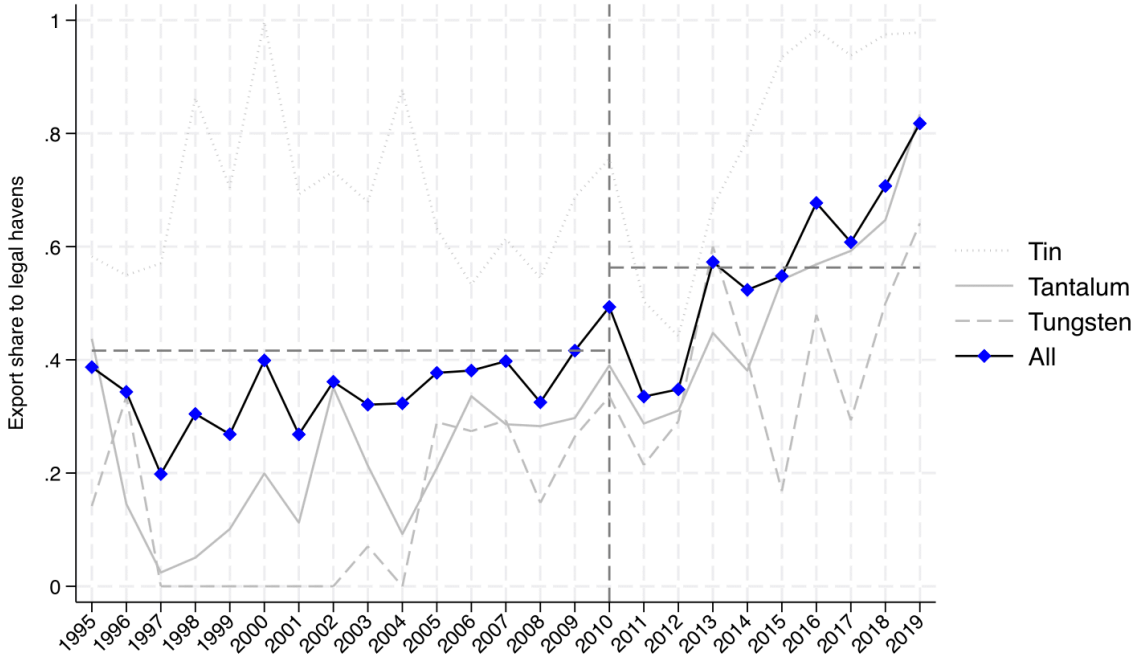
After the enactment of Dodd-Frank, the share of 3T exports from the DRC and its neighbours directed towards such havens rose on average by **15.7 percentage points** (Figure 3), with up to **24 percent of trade** diverted through these intermediary jurisdictions. In particular, diversion was **particularly pronounced in areas closer to the Kivus region, closer to the most violent regions**. Additionally, 3T trade was diverted more intensely in havens that also host a metal transformation industry, which then re-export transformed metal. On their side, legal havens

concentrated their exports of 3T to countries hosting a large share of US firms' foreign suppliers after 2010, suggesting that conflict minerals were still incorporated into the products sold by these firms.

This pattern reflects a form of regulatory arbitrage: rather than eliminating risky sourcing, 3Ts can be rerouted through jurisdictions where public information on metal traders is weak or absent, thereby obscuring the minerals' origin and destination.

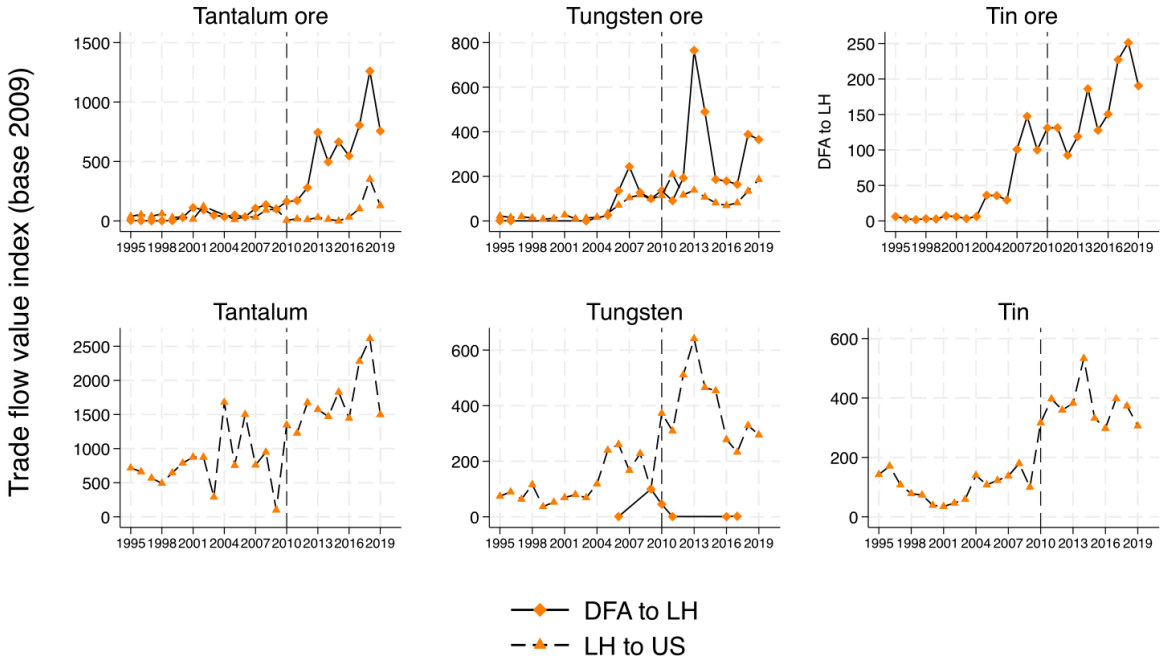
Additionally, **legal havens benefited from a drop in 3T prices** from targeted regions. **In covered countries, mine-gate prices decreased by 16.45%.** This meant that firms sourcing in the region and diverting trade through legal havens could reduce costs, strengthening the incentive for circumvention and benefitting opaque jurisdictions.

Figure 3: Export share to legal havens from covered countries



Source: "No blood in my mobile: regulating foreign suppliers" (2025) Ninon Moreau-Kastler.

Figure 4: Exports to legal havens from covered countries and exports from legal havens to the United States



Source: "No blood in my mobile: regulating foreign suppliers" (2025) Ninon Moreau-Kastler.

4.3 Compliance costs were manageable and frontloaded

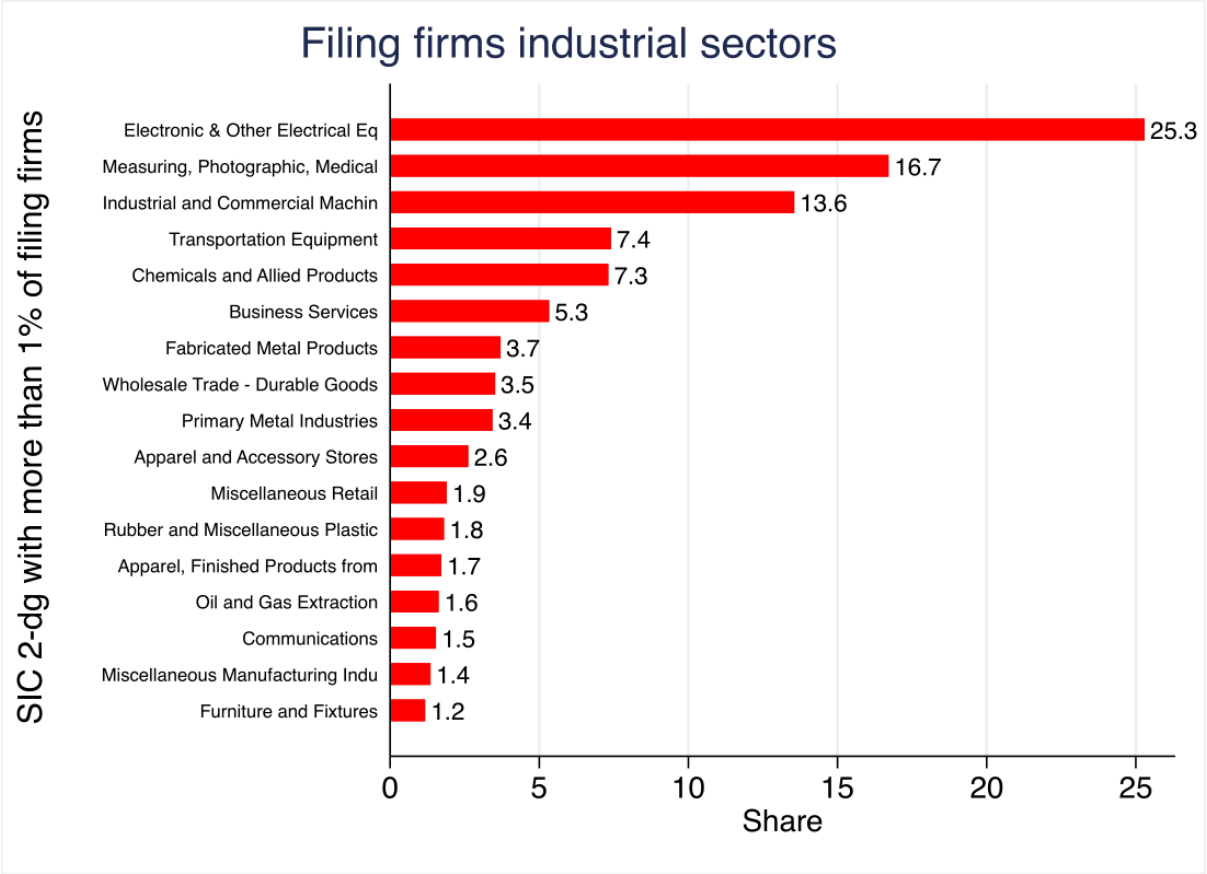
A recurring concern in debates on supply chain due diligence is the cost of compliance for firms. Evidence from the Dodd-Frank Act shows that these **costs were ultimately manageable and proportionate to firm size and risk**. According to firm-level estimates, internal compliance costs ranged between **€30,000 and €70,000 per year**, depending on the complexity of supply chains. Applying a **risk-based approach was a key factor** in determining costs: firms demonstrating low risk had access to simplified reporting, for which the paper observed no cost increase. Costs were instead concentrated in the most upstream firms, carrying the highest amount of risk (as shown by the sector break-down in Figure 5).

An estimate carried out by the SEC shows that most costs occur in the early years as firms set up traceability systems, amounting to approximately $429K-$657K per firm. Once procedures are in place, annual reporting costs decrease dramatically, with overall costs dropping to $34K to $101K per firm - in line with what is found in the paper.

These figures illustrate that due diligence expenses are largely **frontloaded and risk-dependent**. The initial phase, when companies must map their supply chains, establish auditing procedures, and set up internal monitoring systems, generates most of the burden.

Once these systems are in place, however, maintaining compliance requires only incremental updates, meaning annual reporting has low marginal costs. In addition, the regulatory framework included simplified procedures for firms deemed low-risk, ensuring that the costs remained proportionate.

Figure 5: Filing firms sectoral distribution



Source: "No blood in my mobile: regulating foreign suppliers" (2025) Ninon Moreau-Kastler.

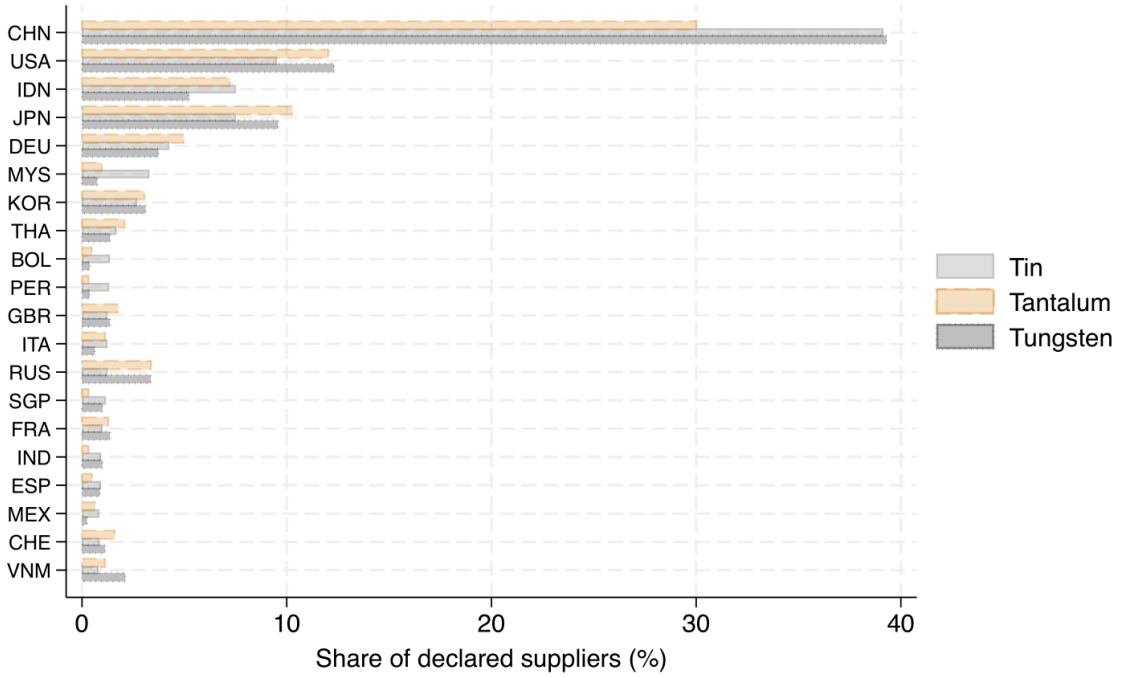
4.4 Strategic supply chain intelligence was gained through extensive reporting

One of the most important outcomes of the Dodd-Frank Conflict Mineral Rule was the degree of transparency it created around global supply chains. The rule required companies to disclose not only whether they used 3T minerals from the DRC region, but also the identity of the key chokepoints of metal supply chains: smelters and refiners.

During the first years of reporting, firms identified 1041 key 3T smelters and refiners worldwide, of which 812 were located outside the United States and the European Union. By comparison, before the introduction of the regulation only about 180 such facilities were publicly identified by the OECD or US authorities. The disclosures therefore substantially expanded the available information on the processing stage of global mineral supply chains and their geography.

Beyond compliance, the reporting also generated practical knowledge for companies themselves. By systematically mapping their suppliers, firms were able to identify previously unknown, critical nodes in their production networks, improve visibility over sourcing risks, and obtain a clearer picture of industry-wide chokepoints.

Figure 6: Geography of identified suppliers



Source: "No blood in my mobile: regulating foreign suppliers" (2025) Ninon Moreau-Kastler.

5. Policy insights

The Dodd-Frank experience provides a rare body of empirical evidence on how mandatory supply chain due diligence operates in practice. Supply chain regulation faces the same structural challenges as other transparency requirements with extraterritorial outreach: secrecy jurisdictions allow for arbitrage, and the effectiveness of rules depends on the availability of high-quality information. Conversely, when disclosure is robust, it reshapes behaviour, generates accountability, and produces long-lasting public goods. Three key insights for policymakers emerge.

5.1 Due diligence can be effective at changing firm behaviour

The analysis of the Dodd-Frank Act indicates that **mandatory due diligence obligations can alter global trade flows**. Exports of targeted minerals from the DRC region fell by more than 76%, equivalent to a 25% tariff on the region. The law demonstrated **extraterritorial reach**: obligations imposed on a limited set of firms in one jurisdiction reshaped sourcing behaviour

across global markets. The result was reinforced by the **size of the US market and its importance as a trade partner**. This highlights the power of transparency-based regulation to generate spillover effects upstream, particularly for large markets that carry a lot of economic weight.

At the same time, the **broader impact on affected populations remains uncertain**: while trade was restructured, it is not yet clear to what extent reduced exports curbed the revenues of armed groups as opposed to harming local communities. More systematic research is needed to assess these distributional consequences and to understand how the benefits and costs of due diligence are shared on the ground.

5.2 Circumvention through legal havens strengthens the need for thorough transparency

The study highlights how **low transparency can open the door to circumvention, at the benefit of less cooperative trade partners**. A large share of regulated trade - about 24% - was diverted to intermediary legal havens. These hubs' **legal opacity could enable firms to maintain access to US markets by re-exporting minerals under a different origin, creating the appearance of compliance while leaving underlying risks intact**. Additionally, legal havens can allow firms to benefit from the drop in local prices in targeted regions, reinforcing incentives for circumvention. The result is an avenue for **regulatory arbitrage:** rather than changing their sourcing patterns, companies can adapt by exploiting legal opacity.

This has significant **implications on the enforcement** of due diligence regulations: to evaluate firm compliance, it is as crucial to tie a mine to its international customers. Opacity provided by legal havens could prevent private auditors, NGOs or authorities from gathering the information needed for proper evaluations. The implication is clear: without full upstream visibility, due diligence regimes are at risk of circumvention. This is particularly crucial in light of current reform proposals in Europe, multiple of which currently include **reducing the depth of due diligence obligations** (e.g. restricting obligations to tier-1 suppliers for the EU CS3D). Such changes **risk exacerbating circumvention through legal havens**, weakening due diligence effectiveness and hampering enforcement.

5.3 Limited costs, high transparency gains

Another lesson from Dodd-Frank concerns the balance between the costs of compliance and the benefits of transparency. Firms incurred significant expenses at the outset to establish traceability systems, map suppliers, and put in place reporting procedures. **Estimates from the paper show that once systems were in place, annual reporting expenses fell to modest levels, generally in the tens of thousands of euros per year, and scaled proportionately with supply chain risk and complexity.**

The **transparency gains**, by contrast, were extensive. Reporting requirements **increased the number of known smelters and refiners from around 180 to more than 1,000 worldwide**, creating a systematic picture of global mineral processing that had never existed before. This information **enhanced oversight capacities for regulators and civil society**, while also giving **firms themselves clearer visibility into potential chokepoints** and vulnerabilities. In a geopolitical landscape marked by unstable trade relations between countries, this information can prove highly valuable for policymakers and companies alike.

Overall, the evidence indicates that the limited, one-off investments required to build disclosure infrastructures produced durable benefits in terms of accountability, public oversight, and strategic intelligence.

6. Conclusions

The experience of the Dodd-Frank Conflict Mineral Rule offers rare and valuable evidence on how mandatory supply chain due diligence operates in practice.

First, due diligence can reshape firm behaviour. Even though obligations applied only to a subset of downstream US-listed firms, sourcing decisions shifted dramatically across borders and upstream, leading to a 76% fall in mineral exports from DRC and neighbouring countries. This extraterritorial reach was reinforced by the sheer size of the US market and its importance as a trade partner, showing how transparency-based rules in a large economy can generate global spillover effects. At the same time, the broader consequences for conflict-affected populations remain uncertain: while trade was restructured, it is not clear to what extent income losses fell on armed groups rather than on local communities. Further research is needed to clarify these distributional impacts.

Second, circumvention through legal havens remains a critical concern. Around a quarter of the lost trade was rerouted via opaque intermediary jurisdictions, allowing companies to maintain access to regulated markets while masking underlying risks. These hubs not only facilitated avoidance but also captured part of the rents from lower regional prices, meaning that local producers in the DRC and its neighbours bore costs while opaque jurisdictions accrued benefits.

Third, the balance of costs and benefits strongly favours robust transparency. Initial compliance expenses were significant but quickly fell to manageable levels, while the transparency gains were transformative: more than 1,000 smelters and refiners worldwide were identified, providing lasting intelligence for regulators, companies, and civil society.

In conclusion, the evidence points to design choices as the key determinant of effectiveness. Shallow reporting risks undermining enforcement by leaving room for circumvention through opaque jurisdictions. Risk-based approaches make costs for firms contained and proportionate. By contrast, transparency frameworks deliver durable benefits: improved supply chain visibility, higher-quality information for regulators and firms, and stronger accountability.