

Can the Application of Blockchain Technology Broaden the Horizons for Arbitration?

Kluwer Arbitration Blog

August 8, 2018

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Please refer to this post as: Dena Givari, 'Can the Application of Blockchain Technology Broaden the Horizons for Arbitration?', Kluwer Arbitration Blog, August 8 2018, <http://arbitrationblog.kluwerarbitration.com/2018/08/08/blockchain-mining-disputes-scheduled/>

In recent years, consumers, governments, and public interest groups have increasingly raised concerns over human rights abuses in the mining sector. Businesses are facing growing pressure from the public in this regard and various countries have as a result adopted legislation imposing a variety of due diligence and reporting obligations on corporations sourcing and using in their supply chains and products, minerals extracted from known conflict areas.[fn]UK Modern Slavery Act, French Due Diligence Law, USA Section 1502 of the Dodd-Frank Act (although this is currently under threat from the Financial Choice Act which seeks to undo the regulations imposed on financial institutions post 2008 economic crash) and in 2021 the EU's Regulation 2017/821 of the European Parliament and of the Council will come into force across the EU.[/fn] The possibility of being tainted by human right violations can harm the reputation of businesses as well as that of the host countries and weaken a corporation's social license to operate in those jurisdictions.

While public scrutiny and the adoption of such legislation constitute commendable efforts to protect human rights globally, these measures can impose a significant burden on businesses that are part of the supply chain. Blockchain technology can reduce this burden by facilitating transparency in the supply chain. The application of this technology in the mining sector has the potential to have a significant effect on the arbitration of mining-related disputes.

CSR legislation and the role of Blockchain

On August 22, 2012, the United States implemented a law which impacts thousands of companies globally: section 1502 of the U.S. Dodd-Frank Wall Street Reform Act ("DF 1502"). The statute for the first time required all companies listed on the U.S. Stock Exchange to declare the use of minerals determined by the Secretary of State to be financing conflict in the Democratic Republic of the Congo (DRC) or in adjoining countries.

This imposes a significant due diligence burden on industries which use such minerals when producing goods such as those in the electronics and automotive industries. The burden is exacerbated by the fact that mining supply chains consist of complex multi-tiers with multiple actors, all of which militates against a transparent and traceable record.

On January 1, 2021 the European Union's Regulation (EU) 2017/821 (the "EU Regulation") is set to come into effect. This legislation was motivated by the concept of "responsible sourcing" touted by the OECD Guidelines for Multinational Enterprises and the UN Guiding Principles on Business and Human Rights as the principle of encouraging businesses to verify, via due diligence procedures, that they are not purchasing minerals from sources which fund armed group activities in designated

conflict areas.

The EU regulation is anticipated to directly affect between 600 and 1000 EU importers and indirectly affect about 500 smelters and refiners. It requires importers to identify smelters and refiners in their supply chains and to check whether they have the correct due diligence practices in place.

Specifically, the regulation requires importers to follow a five-step framework set out by the OECD:

1. Establish strong company management systems;
2. Identify and assess risks in the supply chain;
3. Design and implement a strategy to respond to identified risks;
4. Carry out an independent third-party audit of supply chain due diligence at identified points of the supply chain; and,
5. Report on supply chain due diligence.

In the European Commission's Executive Summary of the Impact Assessment for this legislation, an "opaque supply chain" is cited as one of the main obstacles to European Union companies complying with these requirements.

Organizations such as the ITRI Tin Supply Chain Initiative (iTSCi) are attempting to address this issue. iTSCi is a joint initiative of governmental authorities, companies and civil society organizations working with mineral supply chains in Burundi, the DRC, Rwanda, and Uganda to carry out due diligence on mineral supplies in accordance with the OECD due diligence framework. The process used is to audit mines for human rights violations and then apply a bag and tag system whereby each sack of minerals is given a barcode that identifies details such as the miner's name and weight of the sack. This information is then recorded in a paper logbook. The logbooks are stored in boxes secured by three padlocks which are controlled by each of the Service for Assistance and Supervision of Artisanal and Small-Scale Mining (SAEMAPE), mining cooperatives and the concession owner. The problem is that this process is not very efficient and is vulnerable to corruption.

Blockchain technology can help address this very issue of supply chain transparency and efficiency by providing a platform on which ownership information of tagged minerals is recorded on a digital ledger that can only be updated or modified upon pre-determined conditions such as when all members of the blockchain network agree to the modification.

This is exactly the kind of initiative that Cobalt Blockchain, a mineral resource company, is launching. As reported in the article, "Cobalt Blockchain tries new model in DRC"^[fn]R. Quarisa, "Cobalt Blockchain tries new model in DRC", *The Northern Miner*, April 16-29, 2018, VOL. 104 Issue 8.^[/fn], the company's goal is to produce ethically sourced cobalt from artisanal mines in the Congo using a bagging and tagging system and adhering to the iTSCi requirements regarding supply chain information. Cobalt Blockchain believes blockchain can close loopholes in the iTSCi system and protect it from tampering. The company plans to partner with DLT Labs, the creator of a supply chain and logistics management product called DL Asset Track, to develop a new blockchain-based platform for tracking base and precious metal supply chains.

How Might Arbitration Benefit?

Disputes arising from mining are often the subject of domestic, international and investor-state arbitrations. Such disputes invariably pit the often-foreign mining company seeking to exploit a natural resource against local or national governments seeking to regulate it, with indigenous populations on whose land or territory the extractive activities take place in the middle and being the most affected.

Arbitrators should be prepared for the arrival of blockchain technology in the realm of mining sector disputes and should welcome it. This is because automating transparency in the supply chain will help manage the evidence and will make it easier to make findings relating to the origin of a mineral. It will do this by removing the need to spend time and energy backtracking the chain of ownership and sifting through the evidence to establish whether the mineral was sourced from a mine in a conflict area and whether anyone benefitted from human rights violations when doing so.

Blockchain technology will also assist in the determinations that an arbitrator will be called upon to make relating to breaches of contract amongst members of the supply chain. The Working Group on International Arbitration of Business and Human Rights described the impact that can be expected from inserting human rights commitments and arbitration clauses into contracts between members of a supply chain in this way:

These contracts could contain perpetual clauses that require each member of a supply chain, in turn, to insert such clauses in contracts with its own suppliers. An entire supply chain could be covered by an arbitration arrangement that allows the originating business to instigate arbitration against any supplier in the chain that breaches the commitment to observe human rights. This would not be expanding its own liability, only exposing any breaching supplier to relatively prompt enforcement.^[fn]C. Cronstedt, J. Eijsbouts et. al, "International Arbitration of Business and Human Rights: A Step Forward", Kluwer Arbitration Blog, November 16, 2017, <http://arbitrationblog.kluwerarbitration.com/2017/11/16/international-arbitration-business-human-rights-step-forward/?print=print>, <June 3, 2018>.^[/fn]

By adopting the smart contract functionality of a blockchain, members of the mining supply chain can ensure compliance with such clauses by creating a blockchain whose protocol will only allow the transfer of ownership of minerals if the transferor transfers ownership of the mineral through a smart contract which obligates the transferee to agree to be subject and to adhere to the human rights commitment and arbitration clause. In this way, a subsequent transferee will have certainty that all the members of the supply chain have contractually committed to the human rights standard. This will reduce the risk of exposure to human rights related liability arising from the acts or omissions of another member of the supply chain. The blockchain protocol can even be made to notify all the members in the supply chain when supply chain members have commenced arbitration over a human rights related matter.

Corporate social responsibility requirements on businesses together with smart contract enabled blockchain are creating opportunities for arbitration to become a more effective dispute resolution mechanism^[fn]If it is stipulated that every member in the network is notified when a dispute is submitted to arbitration over a human rights matter, members in the supply chain (i.e. members of the network) are incentivized to comply with due diligence requirements. A system that requires compliance with due diligence requirements and which exposes human rights violations to your business partners will incentivize members of a supply chain to comply thereby becoming a self-regulating system and reduce the need to resort to the regulator or to the court system. ^[/fn] in this context. The increased concerns over transparency in the mining supply chain and the burden that related legislation impose on businesses together call for the application of novel technologies that can help facilitate compliance. As companies are drawn to the application of blockchain, arbitrators should be considering and preparing for how this development will impact the process of arbitrating disputes. At a minimum, the smart contract capability of blockchains will assist arbitrators to play a more effective role in arbitrating issues as to the formation, verification and performance of agreements among the members of the mining supply chain.