DEVPOLICYBLOG

Backing blockchain with strong policy

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[Blockchain technology](#) will bring the next wave of globalisation by radically upgrading the world's trade infrastructure.

We are now seeing intense competition to replace laborious centralised processes of tracking goods with more decentralised supply chain platforms powered by blockchains.

Discovering what policy changes are necessary to facilitate this new economic infrastructure, however, will require significant policy entrepreneurship through [a new dedicated international policy coordination body](#).

The new body would facilitate experimental trials of regulatory recognition, coordinate new free trade agreements, and encourage the emergence of technical and information standards.

Blockchain technology also offers a new way of governing information along the supply chain – especially amongst those that lack a degree of trust. While most modern records are maintained and updated by centralised third parties – such as banks or governments – information stored in blockchains are managed through tamper-resistant and decentralised processes.

Some information currently entrusted with third parties will shift to decentralised blockchain governance. Recent [surges](#) in interest and investment in the technology attempt to gauge where the technology will be useful and how organisational boundaries will shift.

The modern global economy is ultimately made of supply chains. These supply chains link together the mining of raw materials – through their transformation and production – and the final retail process. All of this must be tracked, often across several countries and between parties where strong business relations are yet to be forged.

Understandably, governments, consumers, and producers demand a wide variety of

information about goods. Questions may range from whether a product falls under fair trade standards to how fresh its ingredients are.

But accurate answers are sometimes difficult to come by because of the logistical difficulties that arise in recording each individual bit of information. Tracking the millions of parts in a modern aeroplane or the production conditions of a sub-component in an old building, for example, may prove challenging.

Today, we attempt to answer these questions by passing information between hundreds of supply chain participants. Those communications are often paper-based bills of lading, certificates of origin, and ship manifests. This results in fraud, errors, and information loss. Indeed, global food fraud is [estimated](#) to cost over $50 billion each year.

A lack of visibility down supply chains also risks safety. One memorable example is when Australia's strawberries were found to be [contaminated with needles](#) just last year and frantic efforts to recall them followed.

There have been some welcome efforts to digitise supply chain information. But without blockchain, the integrity of this information remains reliant on third party maintenance and provision of databases.

Blockchain can act as a new infrastructure for modern supply chains. Accurate measurements of temperature, quality conditions, and locations are all examples of data that can be captured using sensors. Once updated to a decentralised blockchain, it is extremely difficult to change.

What can we do with this more detailed, cheaper, and trusted supply chain data?

Better supply chain data won't just make it easier for goods to cross borders. The world can [expect](#) more niche product offerings with premium prices, shifts in the capture of value, and a movement away from storing information in closed companies towards platform-based decentralised storage. It will also see a greater use of artificial intelligence to optimise supply chain coordination.

What, then, is the role of government? To be sure, blockchain supply chains are being privately built by companies such as IBM and Maersk, as well as Australian companies such as AgriDigital, BeefLedger, and UCOT.

But supply chains must interact with regulation. Governments demand information about goods as they cross borders, including their labour conditions and biosecurity risks. This raises many questions around blockchain supply chain policy.

Will governments recognise blockchain-based information as proof of the quality and origins of a good? How will smart contracting technology interact with preferential trade deals? What are the implications for competition policy? These are only a few of the issues that policymakers and industry members must discuss together.

We can't know the precise answers to these policy questions given the nascent nature of the technology. But we do know that regulatory environments that enable testing and experimentation will see inflows of investment, and that discovering this must occur at an international level, in a dedicated international policy coordination body.

This article is based on the author's paper with Chris Berg, Sinclair Davidson, Mikayla Novak, and Jason Potts published in the Asia & the Pacific Policy Studies (APPS) journal. You can read the full paper, 'International policy coordination for blockchain supply chains', [*here*](here)*.*

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