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Committee Secretary
Joint Standing Committee on Trade and Investment Growth (Inquiry into the Trade System and the Digital Economy)
PO Box 6021
Canberra, ACT

RE: INQUIRY INTO THE TRADE SYSTEM AND THE DIGITAL ECONOMY

Dear Secretary,

The Blockchain Innovation Hub at RMIT University is the world's first research centre on the social science of blockchain. Our team of researchers brings together economics, sociology, public policy and political economy to understand the impact of blockchain technology on the economic system and society, including its impact on the trade system and the digital economy.

Based on new economic theory and analysis developed at the Blockchain Innovation Hub, we believe that the next generation of advance in globalisation will come from a significant lowering of the information costs of trade and that this will be ushered in by a large-scale infrastructural shift to blockchain technology. Specifically, we expect significant improvements in the handling of the data

and information that accompanies the cross-border movement of goods and services, including financial capital, digital assets and even people.

The challenge for Australia is developing a new regulatory and policy architecture to facilitate this transition, and to do so in coordination with our trading partners. Our main recommendation to the committee, therefore, is to recommend a further inquiry into the potential impact of blockchain technology on our trade system, and particularly how trade could be facilitated through cross-jurisdictional regulatory harmonisation.

BLOCKCHAIN IS A NEW ECONOMIC INFRASTRUCTURE FOR TRADE

The invention of the shipping container in 1956 led to a revolution in international trade, birthing a new phase of globalisation.

Blockchains, invented in 2009, promise a similar revolution. Blockchains offer a fundamental architectural change in the way firms and governments manage international trade, with enormous efficiency and productivity gains.

But, just as the shipping container required significant investment to bear fruit—and came up against the interests of the unions, regulators and ports—blockchain-enabled trade will require substantial upfront investment in new systems and will inevitably challenge existing interests.

In the 1950s the shipping container was the solution to the problem of the high expense in money, time, and security to load cargo in and out of ships. Handling costs were high, operations were slow, and theft was rife.

Today the constraints on trade consist of the ever-increasing complexity of the data, records, payments and regulatory permissions that accompany goods as they travel across the world.

Every good moving along a supply chain is accompanied by a data trail, often still as paperwork, to track bills of lading, invoices of receipt and payment, origin, ownership and provenance, as well as compliance with vast schedules of trade prohibitions and environmental regulation, taxes and duties.

Recently IBM has announced partnerships with Maersk, a shipping company, and Walmart, a retailer, to integrate their information workflows into its Hyperledger blockchain technology. By focusing on inter-firm blockchains, IBM is now more a business consultancy than a seller of mainframes. The effect of this technological revolution on the productivity and cost of global trade could be as significant as that of the shipping container.

BLOCKCHAIN AND GOVERNMENT

Economic cooperation, however, needs more than just businesses working together. Indeed, trade does not occur within a regulatory vacuum—businesses must encounter multiple regulatory jurisdictions as they exchange products across borders. This implies that national governments have a role in international cooperation.

Blockchain promises to bring economic benefits, but realising those gains will only arrive when distributed ledger technology can thread global payments networks and supply chains together.

To achieve this, we will need to coordinate national blockchain regulation, standards and policy toward global harmonisation and interoperability. Shipping containerisation required physical infrastructure harmonisation. Blockchain enabled trade will require regulatory infrastructure harmonisation. This is because many of the data costs and complexities of global supply chains imposed by governments require information about content, origin and destination in order to track compliance with regulations, customs and taxes, trade agreements, technology standards, security concerns, and so on.

Even nominally consumer, labour and business concerns (such as product labelling, provenance, or workplace practices) are often enacted through government legislative requirements that are manifest as expensive information requirements and auditing on traded goods.

Blockchain technology, because of its properties of trustlessness, immutability, security, and transparency, can dramatically reduce the costs of data workflow along global supply chains.

But to implement these gains along a global supply chain will require high level policy coordination at the government end of each of these processes. In short, governments will need to move their requirements onto blockchains for these potential efficiency gains to be realised.

Moreover, many different parts of each government (customs and trade, tax authorities, environmental agencies, competition authorities, security agencies) will need to become blockchain capable and coordinate in a whole-of-government manner.

This is clearly ambitious, especially when governments individually struggle to develop joined up technology solutions across interdepartmental silos.

Even harder to achieve will be the international harmonisation necessary to exploit blockchain opportunities. We have existing organizations such as APEC and the OECD that can help facilitate coordination on new technology standards and protocols. It is likely to be necessary to develop special purpose forums to drive this initiative.

The next great leap in globalisation will not come from moving things more efficiently (although we can still look forward to perhaps modest technological and productivity improvements in that realm). The real gains will come from fundamentally tackling the main barrier of the vast complexity and cost of moving goods brought by ever-growing government requirements over information and compliance along global supply chains.

The private sector is already working to develop and adopt this innovative new technology, as the IBM-Maersk-Walmart example discussed above illustrates.

Blockchain technology could do for the data side of trade what the shipping container did for physical side. But for that we’re going to need governments to cooperate and help facilitate the blockchain revolution.

RECOMMENDATIONS

We recommend that the Committee recommends that the Productivity Commission or Treasury further examine how blockchain technology could underpin a new economic architecture for the data and information flows that coordinate and regulate global trade. A greater understanding of the impact of blockchain on global trade will inform the regulatory adjustments necessary to realise the full potential of blockchain for Australians.

We also recommend further examination into the need for intra-governmental coordination with respect to blockchain standards for document handling and permissioning, as well as intergovernmental harmonisation among Australia's trading partners. This could include the development of a high level organisation—a *Regional Blockchain Policy and Standards Forum*—to negotiate and coordinate on common regulatory and policy settings.

We trust that our contributions and recommendations will be of assistance to the Committee. We would be pleased to answer any questions you may have regarding our submission, and we would be pleased to appear before the Committee if the opportunity arises.

Yours Sincerely,

Blockchain Innovation Hub at RMIT University, Melbourne.
https://sites.rmit.edu.au/blockchain-innovation-hub/

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