



Australian Government
**Department of Industry,
Innovation and Science**

Submission to the Joint Standing Committee on Trade and Investment Growth

Inquiry into the trade system and the digital economy

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Inquiry terms of reference

The Joint Standing Committee on Trade and Investment Growth shall inquire into and report on:

1. the responsiveness of Australia's trade architecture and regulatory system to the contemporary needs of the digital economy and disruptive technology, and
2. measures to improve the cyber resilience of Australia's trade-focused business sector.

Introduction

The Department of Industry, Innovation and Science (the Department) welcomes the Joint Standing Committee on Trade and Investment Growth inquiry into the trade system and the digital economy and considers it a timely opportunity to examine a topic of growing economic importance. Digital technologies provide opportunities to drive efficiencies, transform industries and boost productivity. They are changing jobs, business models, and markets with profound effects on the operating environment for businesses and government. For Australia, this transformation is occurring at the same time as long-term productivity and structural adjustment challenges, including increasing doubts about economic and social equity resulting from globalisation.

Departmental responsibilities

The Australian Government's objective for economic policy is to improve the wellbeing of Australians by promoting economic growth and jobs. The Government aims to build an agile economy powered by strong, self-reliant and innovative businesses.

The Department plays a key role in this agenda by facilitating the growth and productivity of globally competitive industries. The Department also provides industry and business perspective on a range of matters that impact on productivity and competitiveness across government, including competition policy, skills and the labour market, infrastructure, taxation, trade and foreign direct investment.

The Department has national policy responsibility for the digital economy. The government's vision for Australia in an age of disruption is a thriving, digitally sophisticated economy which will drive productivity within existing industries, and open up new sources of growth to sustain Australia into the future. The Department also supports international engagement on digital economy policy and provides advice on major international digital policy trends.

The Department is currently consulting on development of Australia's **Digital Economy Strategy**. The Strategy will set how government, the private sector, and the community can work together to enable and support the digital economy; build on our areas of competitive strength; and empower all Australians through digital skills and inclusion. A copy of the Digital Economy Consultation Paper is attached. The Government recognises that how Australia adapts to and takes advantage of a digitising economy, and how well we seize the trade opportunities arising from that transition are of key importance to future prosperity. A key focus is improving digital literacy. The **National Innovation and Science Agenda** contains several initiatives to equip young Australians to create and use digital technologies, and inspire STEM literacy in early education.

The Department's broader portfolio has interests in other aspects of digital. These include:

- the recent Data61 reports on blockchain technology;
- development of a new industry-led cyber security Cooperative Research Centre;
- inclusion of a digital section in all Sector Competitiveness Plans for the Industry Growth Centres;
- working closely with the Department of Prime Minister and Cabinet on the Industry 4.0 initiative, Government's open data initiative, and the Office of the Cyber Security Special Adviser.

Further, Standards Australia is leading the International Organization for Standardization's work on developing new international blockchain standards. This work is overseen by the Department which is responsible for managing the Australian Government's Memorandum of Understanding with Standards Australia.

This Submission

This submission will address those aspects of the terms of reference most relevant to the Department. In particular it will highlight work the Department is doing on the national Digital Economy Strategy and related topics.

Digital economy and trade

Digital technologies have immense potential to drive competition, innovation and productivity. Business investment in digital technologies results in higher productivity¹ but Australian businesses are not fast adopters of technology by international standards.²

Digital technologies are transforming global trade as cross border flows of information and data continue to surge year by year. The cross-border bandwidth to carry the extra data flows, which is highly correlated to internet traffic, increased on average by 52 per cent each year between 2005 and 2014, from around 5 terabits per second (Tbps) in 2005 to 211 Tbps in 2014.³ This bandwidth is forecast to grow to 1914 Tbps in 2021. Around 12 percent of the global goods trade is conducted via international e-commerce and digital flows now exert a larger impact on GDP growth than trade in physical goods.⁴ It is estimated that the potential economic impact of digital trade on the global economy could be as much as US\$11.1 trillion a year in 2025.⁵

With the free flow of data, digital products like books, movies, architectural drawings and finance can move easily and cheaply across borders. Digital platforms and services such as Amazon and Alibaba provide global reach and opportunity for even the smallest domestic business. These platforms can resolve information asymmetries by arming consumers and small businesses with information previously only available to large companies. They can solve other competition problems by lowering barriers to entry to markets.

Globalisation of the internet and the ability to move data across borders is transforming the nature of international trade in four key areas:

- *Businesses can use the internet (particularly digital platforms) to export.* This is a particular opportunity for small and medium enterprises (SMEs) who can use these platforms and the comprehensive set of ancillary services they provide, such as online payment mechanisms, to reach consumers globally.
- *Services can be increasingly traded online, particularly IT, professional, financial and education services.* New digital service such as cloud computing have also been developed and are becoming crucial business inputs.

¹ Shahiduzzaman, M., Layton, A. and Alam, K. (2015). On the contribution of information and communication technology to productivity growth in Australia. *Economic Change and Restructuring*, 48(3-4), p.300. Abstract available online at <https://eprints.usq.edu.au/29017/>

² Australia ranks in the middle of OECD countries on a range of digital indicators. See OECD (2015), *OECD Digital Economy Outlook 2015*, OECD Publishing, Paris. Available online at: <http://www.oecd.org/internet/oecd-digital-economy-outlook-2015-9789264232440-en.htm>

³ McKinsey Global Institute (February 2016) *Digital globalization: The new era of global flows*,

James Manyika, Susan Lund, Jacques Bughin, Jonathan Woetzel, Kalin Stamenov, and Dhruv Dhingra

⁴ Ibid. p.41

⁵ McKinsey & Company (January 2016) *How Digital Trade is Transforming Globalisation*, Susan Lund and James Manyika

- *Data collection and analysis is allowing new services (often also provided online) to add value to goods exports.* For example, in the mining sector Caterpillar has a technology solution, CAT MineStar, which collects real-time data analytics on grading accuracy, load quantities and quality of work to help customers minimize fuel costs and downtime and improve productivity.
- *Global data flows underpin global value chains.* ⁶

Digital technology now underpins and enables virtually every kind of cross-border flow and the boundary between physical and digital products is becoming increasingly blurred. The old notion that digital was part of the services sector no longer applies and now virtually every type of cross-border transaction has a digital component, including most physical goods.

Studies have found that SMEs that export are more productive, pay higher wages and are more capital and skill-intensive. Through international trade, they gain exposure to ideas, research, technologies, talent, and best practices from around the world. Trade forces domestic businesses to compete with imports. This increases overall productivity in the economy, supporting higher wages and increasing overall welfare.⁷

As tariffs have reduced and the globalisation of supply chains and cross-border data flows have increased, the development of international standards becomes increasingly important. In particular, the role of the International Organization for Standardisation (ISO) in developing consensus based globally accepted standards is important as they seek to prevent the potential innovation and financial impacts associated with proprietary technologies. The World Trade Organization (WTO) Treaty on Technical Barriers to Trade (TBT) requires that there should be harmonisation and the adoption of international standards where they are available, and there are no regional or national characteristics justifying alternatives. The Department has policy responsibility for the WTO TBT Agreement and supports adoption of international standards particularly where they are referenced in regulation.

The digital economy is increasingly recognised by major regional and multilateral economic fora as a platform for international trade. Digital trade has become a key focus on the agendas of international fora such as the Group of Twenty (G20), Asia Pacific Economic Cooperation (APEC), and the 34 members (and 70 non-members) of the Organisation for Economic Cooperation and Development (OECD).

⁶ <https://www.brookings.edu/testimonies/global-digital-trade-1-market-opportunities-and-key-foreign-trade-restrictions/>

⁷ <http://e15initiative.org/wp-content/uploads/2015/09/E15-Digital-Meltzer-Final.pdf>

There are many key markers of the digital economy and one is the ease with which digital data can be generated, accessed and productively used. Although the intensity of firms' use of data is strongly associated with productivity increases, a recent study found that only seven per cent of businesses made significant use of big data. However, the pay-off for those that did use big data was 17 per cent profit growth.⁸

Australia already has areas of competitive strength, such as energy resources and medical and mining related technologies, as well as significant opportunities in emerging sectors like fintech and precision agriculture. If we move quickly to get in front of our competitors, build on these strengths and become a world leader in digital innovation, it's predicted we could boost the Australian economy by \$140 billion to \$250 billion over the next 8 years.⁹

The Digital Economy Strategy

The Australian Government's Digital Economy Strategy will set out how government, the private sector, and the community can work together to enable and support the digital economy; build on our areas of competitive strength; and empower all Australians through digital skills and inclusion.

The Government already supports action on a diverse range of digital economy initiatives across multiple agencies. A key purpose of the strategy will be to draw together, complement and build on these existing initiatives. The government will launch the strategy in the first half of 2018, following an open conversation with governments, businesses and the community. The launch will set the scene for continuing discussion and debate with the Australian public on our digital future. To make sure we stay up to date, the strategy will evolve over time.

Trade issues, particularly digitally-enabled trade, will be an important component of the strategy. While a significant proportion of e-commerce is still conducted domestically, the nature of digital trade means that Australian businesses of all sizes can readily target markets around the world. This potential extends even to small businesses which would not previously have had the capacity to develop overseas markets. Australian business can leverage worldwide reputational advantages for Australia as a producer of safe, high quality products across a range of sectors.

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[http://cdn.aigroup.com.au/Speeches/2017/Industrial Internet Summit Innes Willox Speech 15 Feb 2017 FINAL.pdf](http://cdn.aigroup.com.au/Speeches/2017/Industrial%20Internet%20Summit%20Innes%20Wilcox%20Speech%2015%20Feb%202017%20FINAL.pdf)

⁹ McKinsey & Company (2017). *Digital Australia: Seizing the opportunity from the Fourth Industrial Revolution*. Available online at: <http://www.mckinsey.com/global-themes/asia-pacific/digital-australia-seizing-opportunity-from-the-fourth-industrial-revolution>

Opportunities for industry

Digital trade offers huge opportunities for industry, particularly for SMEs. Digital platforms such as Alibaba, Amazon and eBay allow SMEs to be ‘born’ export ready. These e-commerce marketplaces provide small firms with “plug-and-play” infrastructure, allowing even the smallest enterprises to be global players. For example, a 2016 survey found that 86 percent of tech-based start-ups reported some type of cross-border activity.¹⁰

Over a decade global flows have raised world GDP by roughly 10 percent over what would have resulted in a world in without any flows. In 2014 alone they generated roughly \$7.8 trillion in value. Flows of goods and FDI account for about half of this impact while data flows account for \$2.8 trillion.¹¹

Digital technologies offer opportunities to participate in global value chains where previously SMEs lacked the resources and networks. They enable the production of goods and services to be globally dispersed and highly disaggregated. This is creating opportunities for SMEs to cater to highly specialised and niche segments of global value chains and is opening up markets and businesses that were previously closed off to SMEs or may not even have existed prior to digitisation. It is estimated more than 70 per cent of trade is now in intermediate and capital goods and services which is a measure of the extent of global value chains.¹²

However, there are also risks that may impede business from reaping the full benefits of digital trade. These include:

- the use of non-tariff protectionist measures, including legal and administrative barriers such as the requirement by some countries that data centres be located within their own jurisdictions
- concerns about IP piracy and cybersecurity that erode business confidence about trading online
- inadequate interoperability between national ICT and logistics systems that may result in systems fragmentation
- an inefficient international e-payment system that cannot match the huge increase in trade volumes enabled by digital technologies
- inadequate investment in human capital that impedes businesses from obtaining the skills they need
- unclear or ineffective trade rules, standards and administrative processes that stifle innovation and drive up costs.

¹⁰ McKinsey Global Institute, *Digital globalization: The new era of global flows*, February 2016

¹¹ *Ibid*

¹² OECD, WTO and World Bank Group, *Global Value Chains: Challenges, Opportunities and Implications for Policy*, Report prepared for submission to the G20 Trade Ministers Meeting Sydney, Australia, 19 July 2014.

The importance of digital trade to the Australian economy has been reflected by the inclusion of e-commerce provisions in nine of Australia's 10 existing FTAs. The nature of these provisions has evolved over time, with earlier FTAs focussing on paperless trading, protection of online consumers, and excluding electronic transmissions from customs duties. Importantly, more recent FTAs have also included provisions concerning the protection of personal information, cross border data flows, disclosure of source code and location of computing facilities.

The department supports greater international cooperation on digital trade through both multilateral fora and FTAs. We actively participate in all of Australia's current FTA negotiations and advise the Department of Foreign Affairs and Trade on a range of issues, including e-commerce.

The constantly evolving nature of the digital economy means that future FTAs will likely require new provisions that reflect and facilitate the use of innovative technologies and business practices. It is also important to ensure that commitments in Australia's existing FTAs continue to facilitate trade and do not become unnecessary obstacles to trade. In particular, commitments concerning the movement of finance, privacy, and consumer protection must reflect the modern trading environment while optimising economic and social benefits. As such, the Department supports the use of existing mechanisms (FTA committees) where there is potential to strengthen cooperation or to address barriers related to digital trade.

Policies supporting digital trade

It is important that policy makers get the policy settings right to maximise the opportunities for Australian businesses to participate in the new digitised trade environment. While industry sectors and individual businesses must respond to new opportunities and challenges in their own way, there is scope for Government to work with industry to facilitate business transformation and help Australia make the most of the global digital economy and the trade opportunities it brings. Development of Australia's Digital Economy Strategy will provide a forward looking plan to maximise the potential of digital technology to improve the nation's productivity and competitiveness, while minimising its negative effects.

Ensuring Australia's regulatory system is responsive to the contemporary needs of the digital economy is a challenge in balancing the trade opportunities and the potential privacy, security and ethical risks. These policy needs are outlined in the Digital Economy Strategy consultation Paper which focuses on the following three themes:

- enabling and supporting the digital economy (through digital infrastructure, standards and regulation, and trust, confidence, and security)
- building on our areas of competitive strength to drive productivity and raise digital business capability
- empowering all Australians through digital skills and inclusion.

The Digital Economy Strategy will complement other Government initiatives, including the Department of Foreign Affairs and Trade's recently launched *Australia's International Cyber Engagement Strategy* to promote, protect and develop Australia's international digital interests; as well as Department of the Prime Minister and Cabinet's *Australia's Cyber Security Strategy* (released 2016) which sets out a four year plan to build a secure and trusted digital economy.

There is currently little robust evidence on Australia's preparedness for a new trading environment dominated by digital technologies and the steps that Australian government and industry should take to harness its opportunities. To help address this policy gap, the Department is supporting the Brookings Institution in Washington to deliver an independent report on digital trade and its implications for Australia.

The paper will analyse Australia's digital trade opportunities and scope for pursuing digital trade outcomes in international forums and negotiations. It will focus on the use of digital platforms to export and in particular the opportunities for SMEs, the importance of access to digital services such as cloud computing and big data, and the internet and data's role in enabling participation in global value chains and increasing the services value-add of goods exports.

The paper will examine the scope for government action across a range of areas including regulatory reform, competition policy, and skills development. The paper will also look at global trade policy and Australia's scope for engaging in global rule making.

Conclusion

The implications of digital trade for Australia are far from understood and the Department welcomes this Joint Standing Committee on Trade and Investment Growth inquiry into the trade system and the digital economy. A strong, yet flexible, policy and regulatory environment is required to enable businesses to fully exploit the trade opportunities created by digital technology.

The Department is cognisant of the opportunities provided by the innovation and digital agenda and has supporting policies in place. However, as the Committee notes, the digital economy is challenging traditional business models. Through the Digital Economy Strategy the Department will explore a range of policy options to create a consistent, predictable and stable environment relating to digitalisation for business.

This inquiry will make a timely contribution in supporting development of Australia's Digital Economy Strategy.