







# Economic impact of adopting digital trade rules

18 May 2023



# The context – defining digital trade

Comprises digitally ordered goods and services, and digitally delivered services

		Type of product (What)	
		Goods	Services
Nature (How)	Digitally ordered 	 <b>Component 1:</b> Trade in digitally ordered goods and services (i.e., cross-border e-commerce - purchasing a wallet or booking a hotel stay abroad via an online portal)	
	Digitally ordered and delivered 	 <b>Component 1:</b> Trade in digital content (i.e., music, games purchased on digital platforms)	 <b>Component 2:</b> Trade in digitally deliverable services (e.g., financial services and telecommunications services) <sup>1</sup>
	Digitally delivered 	Note: Based on definitions in the OECD-WTO-IMF handbook, only services can be digitally delivered. However, this study makes an exception to include digital content <sup>2</sup> (digitally delivered goods) under Component 1	

### Key takeaways from OECD-WTO-IMF Handbook on Measuring Digital Trade

1. Digital trade is all (international) trade that is **digitally ordered and/or digitally delivered**
2. Digital trade transactions are in principle included in existing trade statistics, although: they are **not visible**, and there are **several challenges to record them**

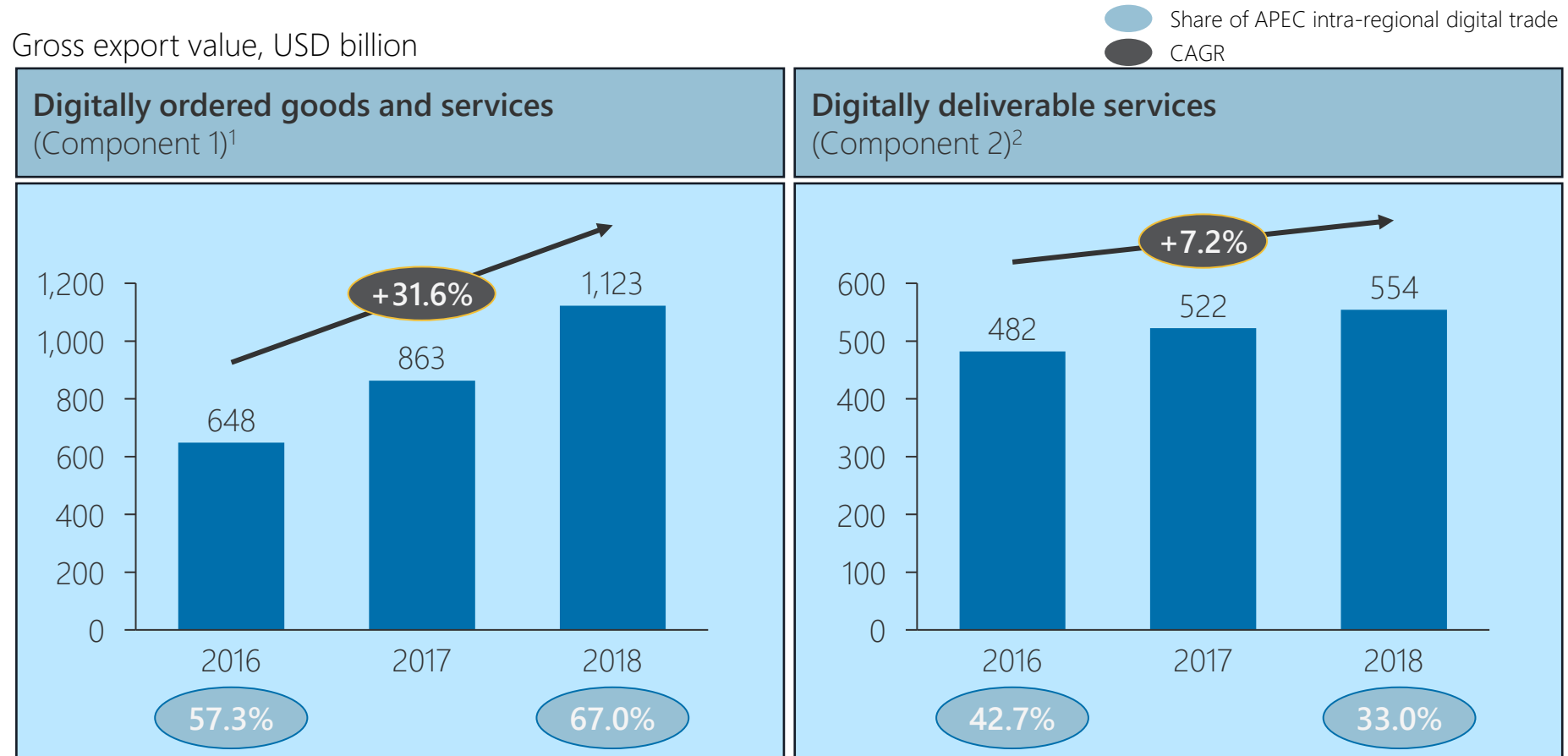
<sup>1</sup>This includes publishing, audio-visual, and broadcasting activities; telecommunications services; IT and other information services; financial and insurance activities; professional, scientific, and technical activities; and administrative and support services.

<sup>2</sup> OECD-WTO-IMF (2019). Available at: <https://www.oecd.org/sdd/its/Handbook-on-Measuring-Digital-Trade-Version-1.pdf>



# APEC intra-regional digital trade in 2018 was around USD 1.68 trillion

Digitally ordered trade and digitally deliverable services trade between APEC economies, 2016 to 2018



1. Commercial services include distributive trade, transport, accommodation, and food services (ISIC 45 to 56); real estate services (ISIC 68); and digitally deliverable services as defined below. Trade data includes all bilateral digital trade within APEC economies (excluding Papua New Guinea due to lack of data).

2. Digitally deliverable services include publishing, audio-visual, and broadcasting activities (ISIC 58 to 60); telecommunications services (ISIC 61); IT and other information services; (ISIC 62 to 63); financial and insurance activities (ISIC 64 to 66); professional, scientific, and technical activities (ISIC 69-75); and administrative and support services (ISIC 77 to 82). Trade data includes all bilateral digital trade within APEC economies (excluding Papua New Guinea).

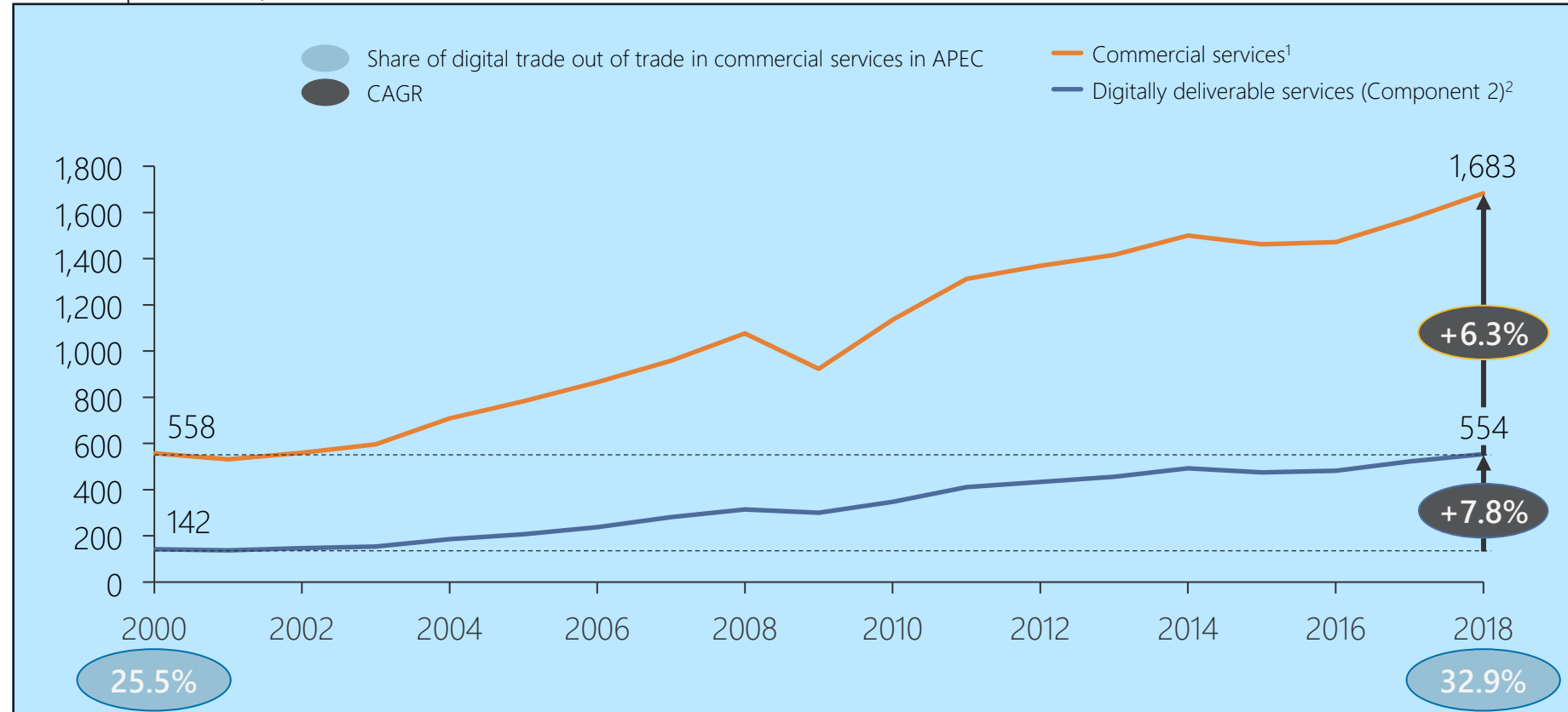
SOURCE: Access Partnership analysis, Euromonitor, OECD-WTO Trade in Value-Added (TIVA) database (2021 revision), UNCTAD



# APEC digital trade grew faster than that of conventional trade

Digitally deliverable services trade and overall commercial services trade between APEC economies

Gross export value, USD billion



1 Commercial services includes distributive trade, transport, accommodation and food services (ISIC 45 to 56); real estate services (ISIC 68), and digitally deliverable services as defined below. Trade data includes all bilateral digital trade within 20 APEC economies (excluding Papua New Guinea).

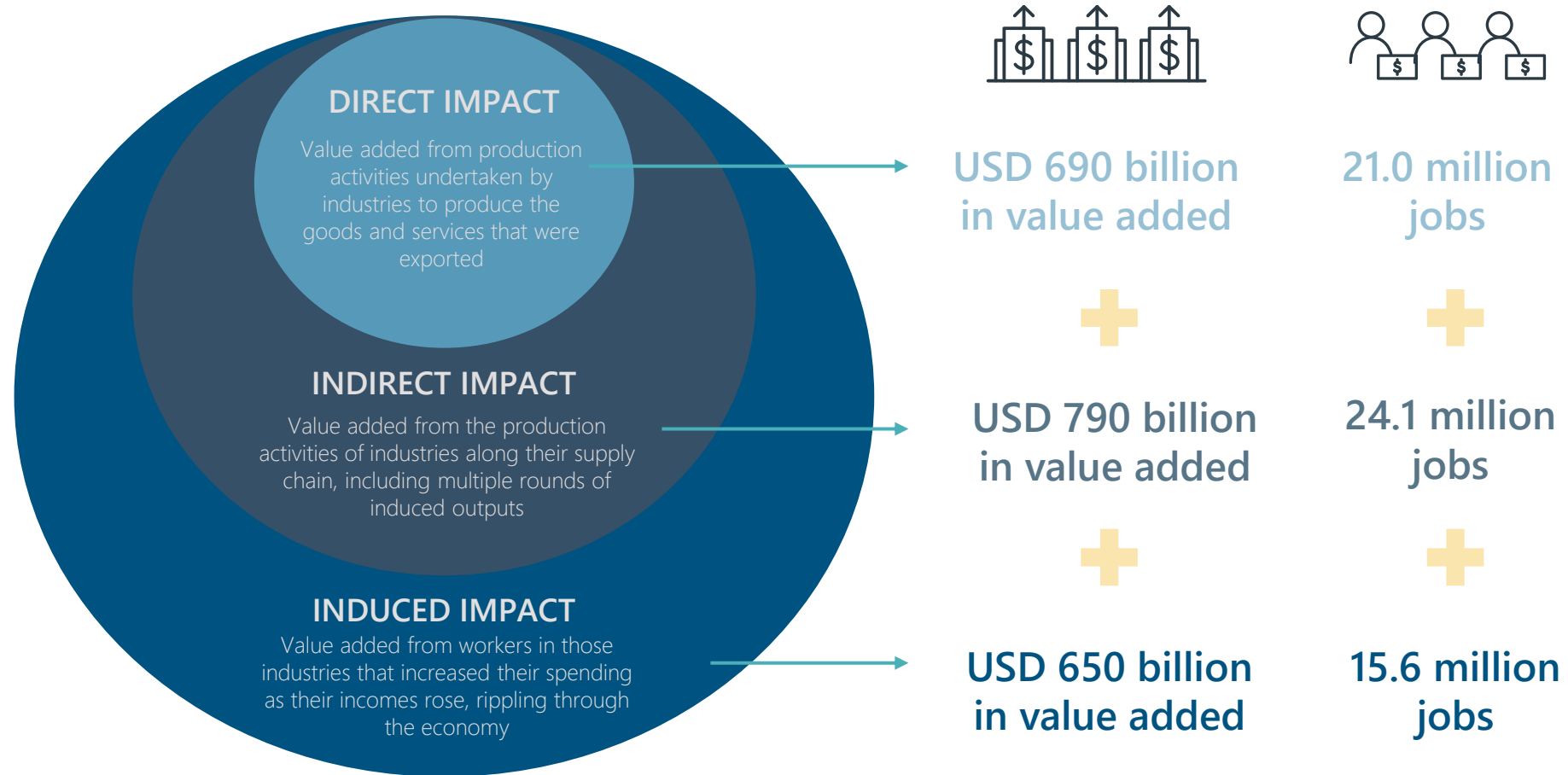
2 Digitally deliverable services includes publishing, audio-visual, and broadcasting activities (ISIC 58 to 60); telecommunications services (ISIC 61); IT and other information services; (ISIC 62 to 63); financial and insurance activities (ISIC 64 to 66); professional, scientific, and technical activities (ISIC 69-75); and administrative and support services (ISIC 77 to 82). Trade data includes all bilateral digital trade within 20 APEC economies (excluding Papua New Guinea due to lack of data).

SOURCE: Access Partnership analysis, OECD-WTO Trade in Value-Added (TiVA) database (2021 revision)



# In 2018, APEC intra-regional digital trade contributed USD 2.1 trillion to regional GDP and supported over 60 million jobs

Breakdown of value added and employment impact from digital trade<sup>1</sup>

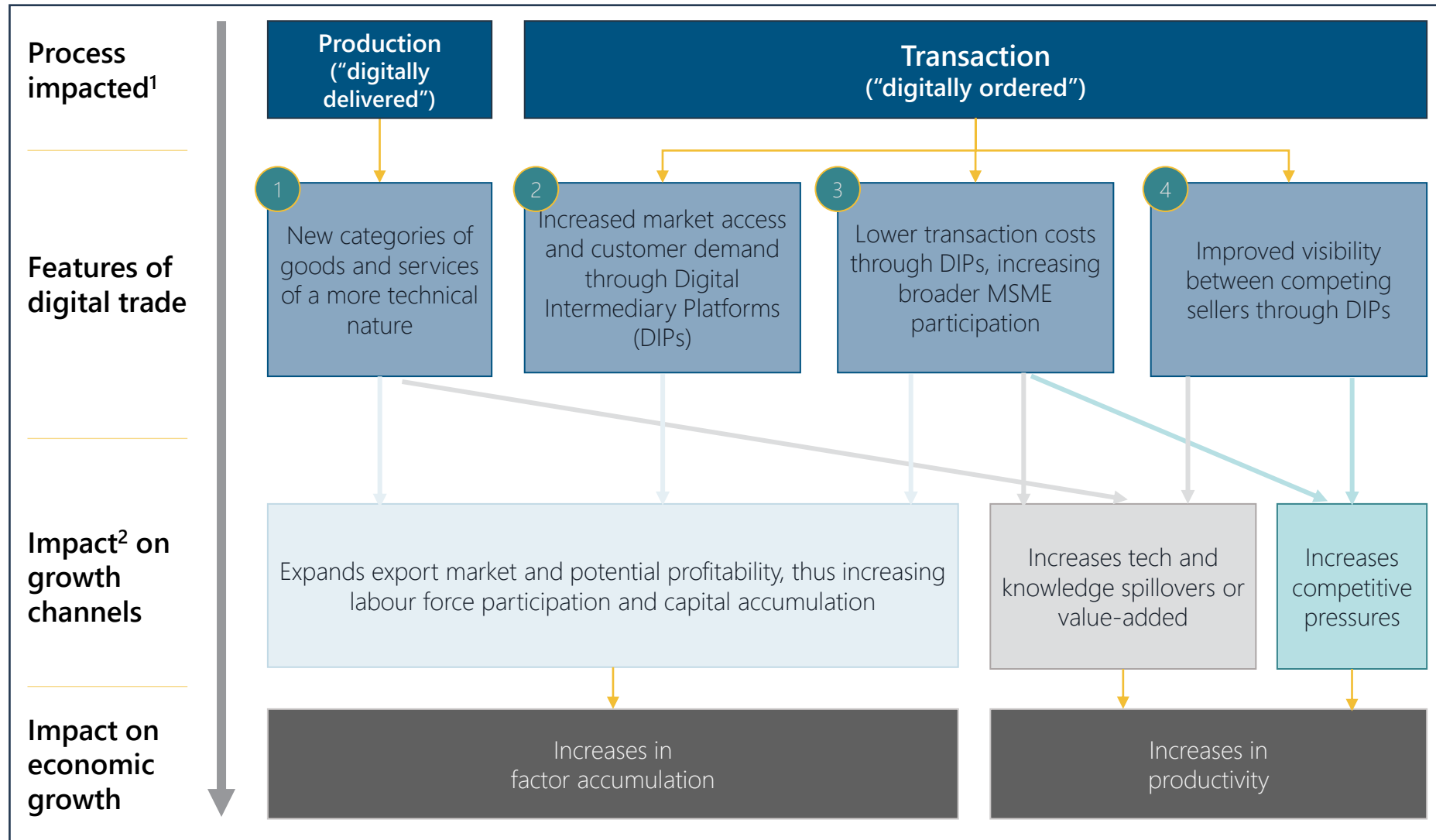


1. Cross-border e-commerce market sizes (used to size digitally ordered trade) were not available for Brunei Darussalam; Chile; Malaysia, New Zealand; Papua New Guinea; Peru; Viet Nam, creating an underestimate for digitally ordered exports from other APEC economies to the above economies. Data for digitally deliverable services exports was also not available for Papua New Guinea.

Source: Access Partnership modelling, data from World Input-Output Database and ADB



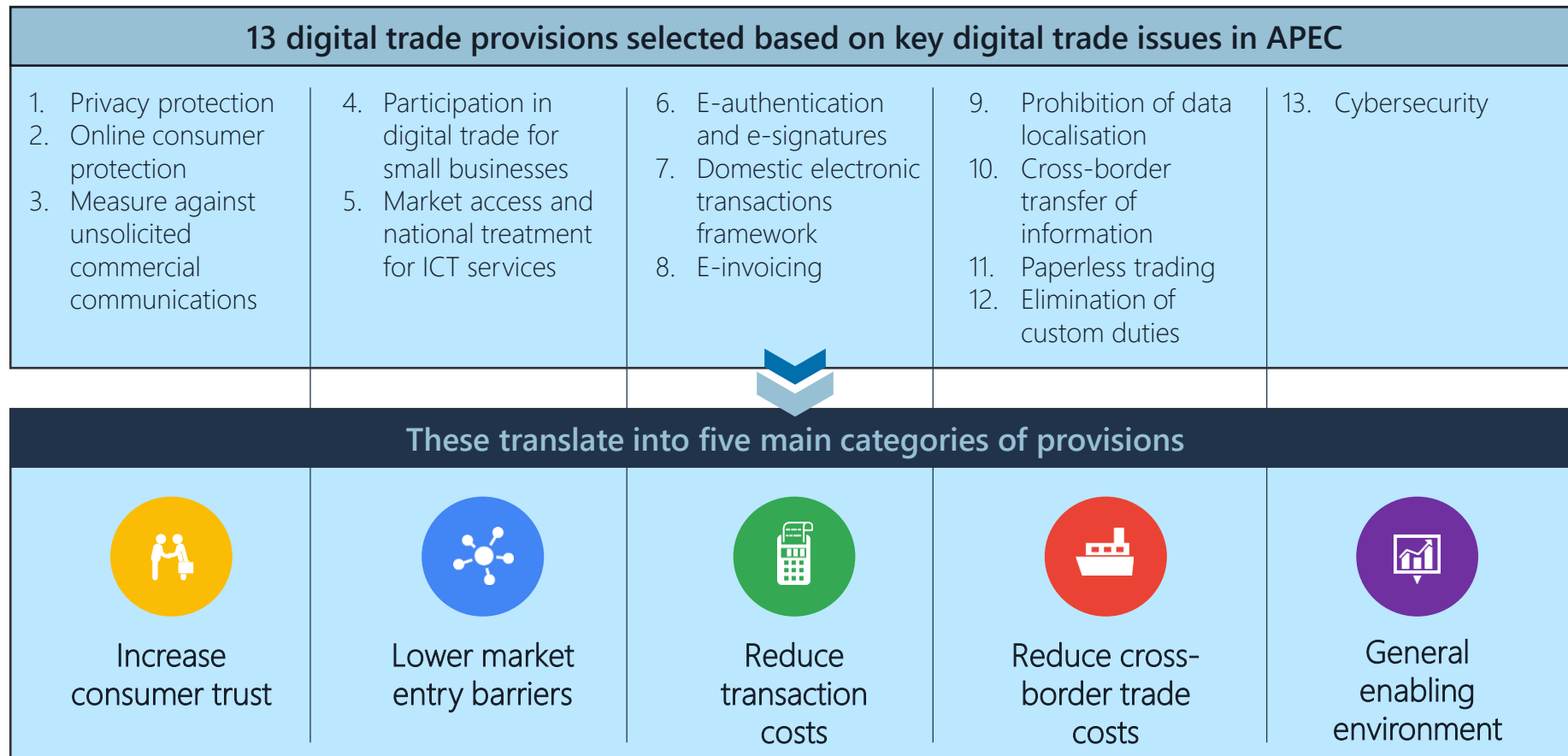
# Digital trade contributes to economic growth by expanding export markets, facilitating competition, and enabling productivity gains



1 Despite this classification, some goods and services can be both digitally ordered and digitally delivered, e.g., music and streaming downloads  
2 The extent of impact is contingent on other enablers e.g., a digitally skilled workforce, capacity to support digitalisation and digital trade initiatives  
SOURCE: Literature review, Access Partnership analysis



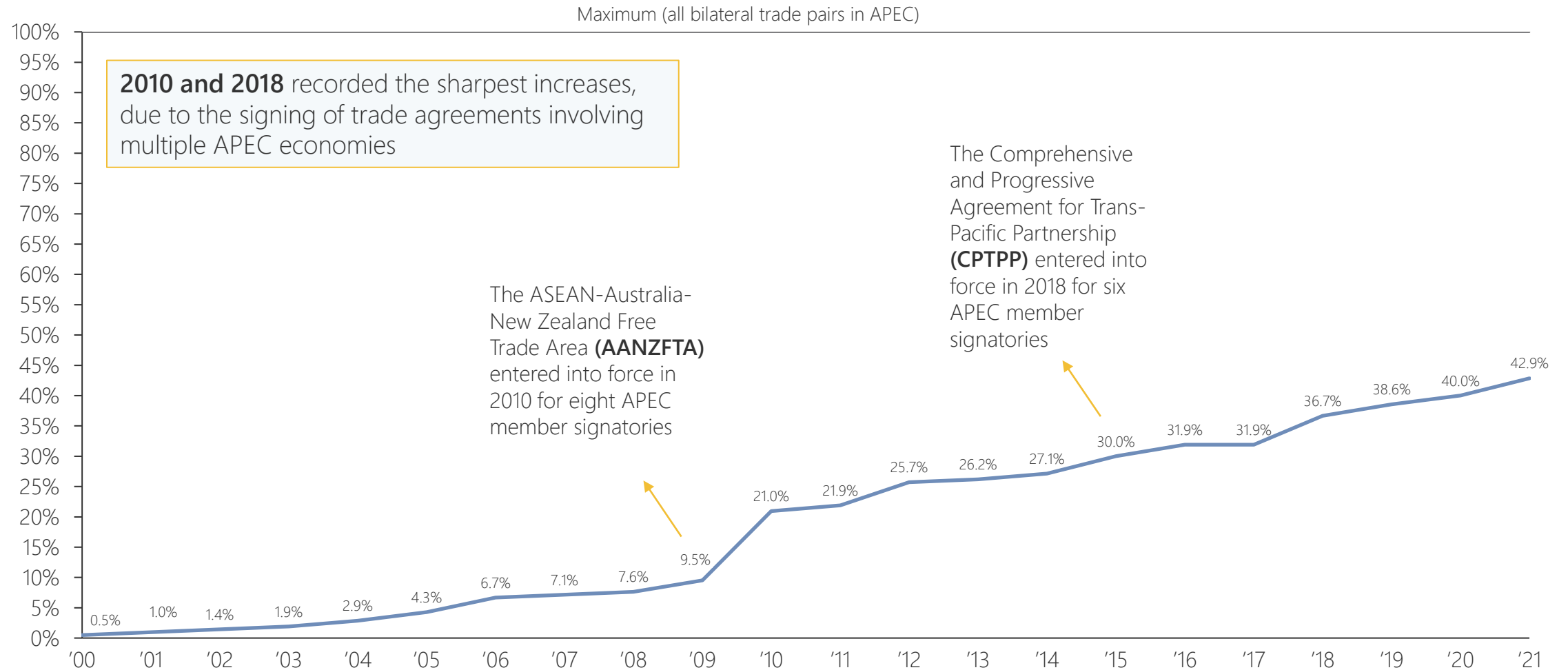
There has been increasing inclusion and commitment to digital trade provisions in bilateral and regional free trade agreements





# Provision coverage among APEC economies increased over the past two decades, but there is still scope for increase

Percentage of trade pairs within APEC which have provisions in force between them (non-zero DTOI), 2000-2021



SOURCE: Access Partnership analysis, TAPED



Overall, the increased coverage of digital trade provisions had an observable effect of increasing digital trade flows



What is the impact of changes in digital trade rules on digital trade flows among APEC economies?



Increased digital trade provision coverage has had a **positive impact on digital trade flows** between APEC trade pairs

- Digitally delivered trade flows (Component 2) increased by **2.3%** for every additional digital trade provision that came into force between two trading partners on aggregate ( $p < .01$ )<sup>1</sup>
- There was no statistically significant relationship observed for digitally ordered goods and services (Component 1) at the aggregate level, but **provision-level analysis revealed an impact**



The aggregate level analysis showed that digital trade provisions that came into force between 2000 and 2018 added around **USD 40.1 billion or 2.9%** to digitally delivered trade flows in **2018**.

<sup>1</sup> In other words, this percentage change occurs for every 1-point increase in the DTOI. While digital trade provision coverage and exports of digitally ordered goods and services (Component 1) did not reveal an observable relationship at the aggregate level, significant positive relationships were found for individual provisions



At the provision-level, adoption of specific provisions increased digital trade flow components by between 11% - 44% in successive years

Impact of digital trade provisions on digital trade components in the long-run<sup>1</sup>

Provision	Digitally ordered	Digitally delivered	Provision	Digitally ordered	Digitally delivered
Cybersecurity	X	25.0%	E-authentication and e-signatures	18.8%	21.3%
Privacy protection	11.2%	X	Domestic electronic transactions framework	X	✓
Online consumer protection	21.4%	✓	E-invoicing	X	44.0%
Measures against unsolicited commercial communications	32.5%	X	Prohibition of data localisation	X	✓
Participation in digital trade for small businesses	24.6%	✓	Cross-border transfer of information	X	✓
Market access and national treatment for ICT services	19.9%	29.1%	Paperless trading	X	17.0%

Impact<sup>2</sup> | A% Strong statistical significance ( $p < .05$ ) Weak statistical significance ( $p < .1$ ) X No statistical significance

Mechanism of impact | General Increase consumer trust Lower market entry barriers Reduce business transaction cost Reduce business trade cost





<sup>1</sup> The long-run impact is defined as the total impact of each trade provision on flows in each digital trade component in the next 2 years (for digitally ordered trade) or next 3 years (for digitally delivered trade) and is expressed as a percentage of digital trade flows in the year in which the provision comes into force.

<sup>2</sup> Statistical significance quantifies how likely a relationship between two variables is likely to be attributed to a specific cause instead of pure chance. In the absence of “Strong statistical significance” or “Weak statistical significance”, the provision does not have a statistically significant impact on digital trade flows (observed relationship is likely to be due to chance).

SOURCE: Access Partnership analysis

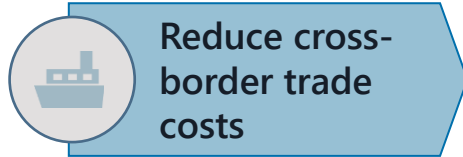


Consumer trust was most important for digitally ordered trade, while reducing transaction costs for businesses and enabling the general environment were most important for digitally delivered trade

Categories <sup>1</sup>	Impact on bilateral digital trade	Insights
 Increase consumer trust	✓ Significant <b>positive</b> relationship with <b>digitally ordered trade</b>	Trust is critical as digital platforms are likely to be used by individual consumers or MSMEs to engage sellers and buyers from abroad
 Lower market entry barriers	✓ Significant <b>positive</b> relationship with <b>both digitally ordered and delivered trade</b>	Reduction of market entry barriers allow firms to enter and compete in overseas markets more easily
 Reduce transaction costs	✓ Significant <b>positive</b> relationship with <b>digitally delivered trade</b>	Reduced operating costs and shortened payment cycle can relieve working capital needs for firms, particularly benefitting MSMEs with less access to capital
 Enable the general environment	✓ Significant <b>positive</b> relationship with <b>digitally delivered trade</b>	Strong incident response and regional cybersecurity cooperation increases trust for firms to participate in digital trade



Supporting free flow of data is important, particularly for digitally delivered trade, but potentially requires more effective implementation



## Results of econometric analysis

### Prohibition of data localisation provisions

Positive albeit weak statistically significant relationship with flows of *digitally delivered* goods and services, and **no statistically significant relationship** with *digitally ordered* goods and services

### Provisions related to cross-border transfer of information

Positive albeit weak statistically significant relationship with flows of *digitally delivered* goods and services, and **no statistically significant relationship** with *digitally ordered* goods and services

### Paperless trading provisions

Positive albeit weak statistically significant relationship with flows of *digitally delivered* goods and services, and **no statistically significant relationship** with *digitally ordered* goods and services

## Insights

- **The econometric analysis suggests that provisions may not be as effective as desired.** Limitations to data flows can impact a firm's ability to process and store business data abroad and create significant costs for firms.
- **Limited impact can be attributed to implementation gaps.** Provisions are more likely to be in-force between economies where there is mutual trust in data storage processes, so that data flows are facilitated anyway. Provisions could also be subject to specific sectoral carveouts that weaken their impact.

# Seven recommendations under three policy pillars can support different groups of stakeholders involved in digital trade



## Recommendations



Support coverage and implementation of digital trade provisions

- 1 Increase coverage of digital trade provisions between APEC member economies
- 2 Support implementation of provisions that encourage cross-border trade flows
- 3 Promote interoperability as a core principle in the development of digital trade infrastructure



Support stakeholder confidence in the digital trade environment

- 4 Focus on provisions to build consumer trust to improve participation of individual consumers and MSMEs in digital trade
- 5 Focus on cybersecurity collaboration to strengthen digital trade infrastructure in APEC



Support digital trade participation through capacity building and monitoring

- 6 Pursue programs that support consumers, businesses and policymakers to more actively participate in contributing to a vibrant digital trade environment
- 7 Pursue initiatives to track the implementation of digital trade provisions to support development of targeted capacity building initiatives



## Some lessons



### Digital trade is economically important

1. Intra-regional digital trade contributed **USD 2.1 trillion** to economies in the APEC region in 2018, approximately **4.1%** of regional GDP.
2. Digital trade will impact the economy through similar channels to conventional trade, but the **effects could be more pronounced, and it can be more inclusive** – participation of MSMEs and new-to-digital rural consumers.

### Digital trade rules have unlocked digital trade flows

2. Provisions that came into force between 2000 and 2018 added USD 40.1 billion to digitally delivered trade flows in 2018. Adoption of specific provisions increased flows of digitally trade components by **11% - 44%** in successive years.

### Need to consider provisions to reduce costs, increase participation, and ensure trust

4. Provisions to **reduce business transaction costs** had a positive relationship with digital trade flows. Reduced operating costs from e-transactions can relieve working capital needs, especially for MSMEs with weaker access to capital.
5. **Cybersecurity provisions** had a positive relationship with flows of digitally delivered services, showing the importance of collaboration to increase confidence in digital trade.
6. **Consumer trust provisions** had a positive relationship with digitally ordered trade flows. Trust is important for individual consumers and MSMEs to participate in digital trade.
7. There is scope to improve the implementation of provisions that enable **cross-border data flows**.



Any questions?





Spares

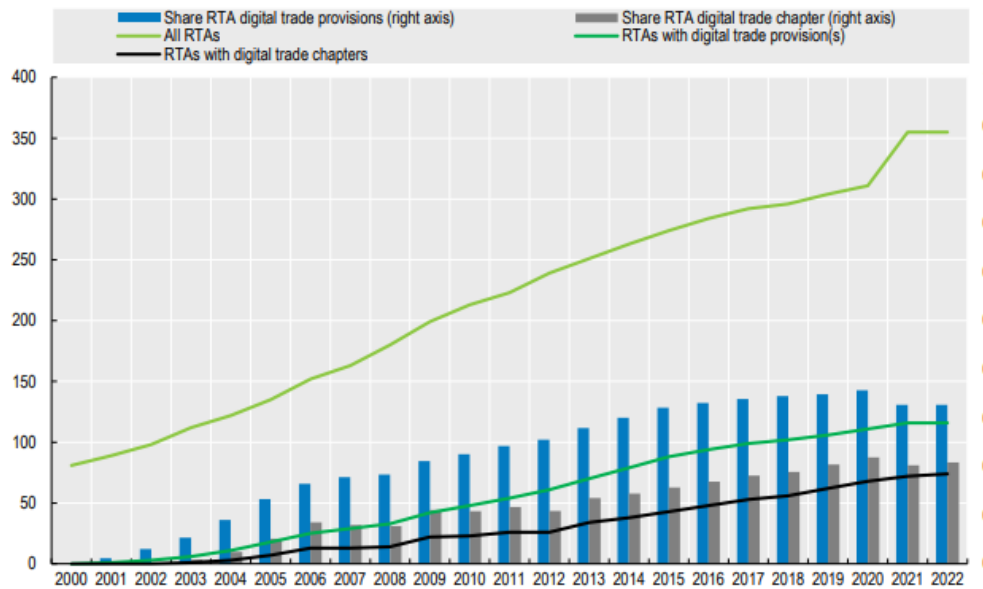




# Digital trade provisions in trade agreements are growing

OECD (2023). Of Bytes and Trade: Quantifying the Impact of Digitalisation on Trade.

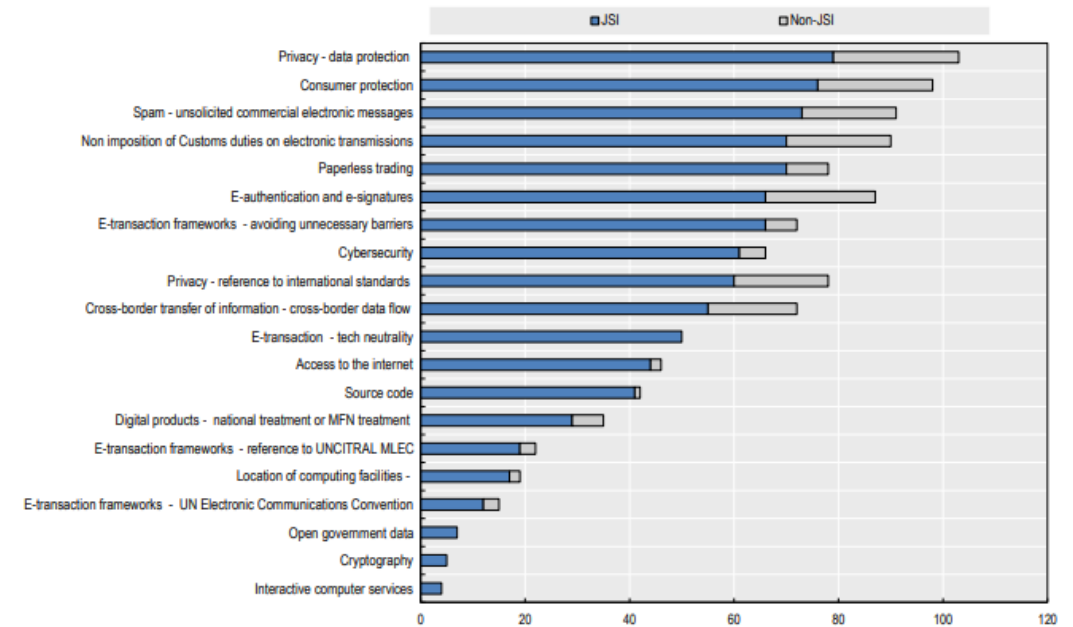
Figure 5. A growing number of RTAs have digital trade provisions



Note: Analysis only considers agreements currently in force. RTA with digital trade provisions refers to there being at least one e-commerce/digital trade provision, whether in a separate chapter or not (e.g. IP provisions which might be important for the digital economy but are not in an individual e-commerce chapter).  
 Source: Own calculations. RTAs are identified from the WTO RTA database. Digital provisions from the TAPED database.

Figure 6. Coverage of digital trade issues in trade agreements

Number of jurisdictions and coverage of issues in RTAs



Note: Figure identifies number of countries with different digital trade provisions in their RTAs according to whether they are participating in the Joint Statement Initiative (JSI) on e-commerce or not.  
 Source: Nemoto and López-González (2021<sup>[10]</sup>).

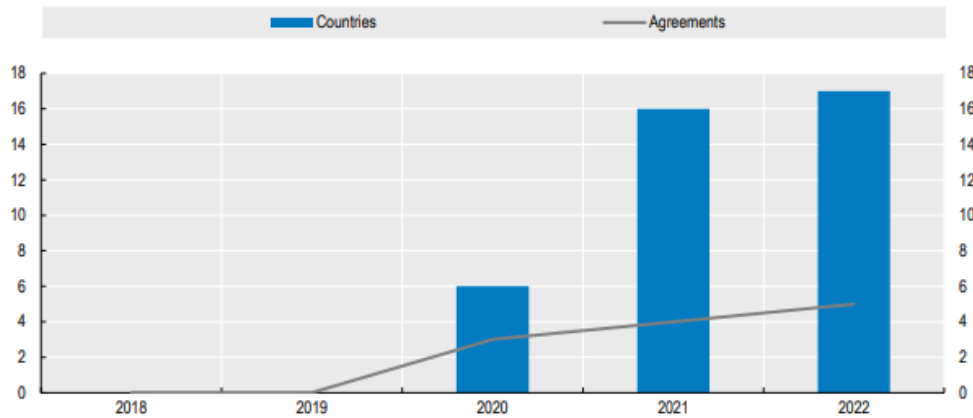


# New digital economy agreements are emerging

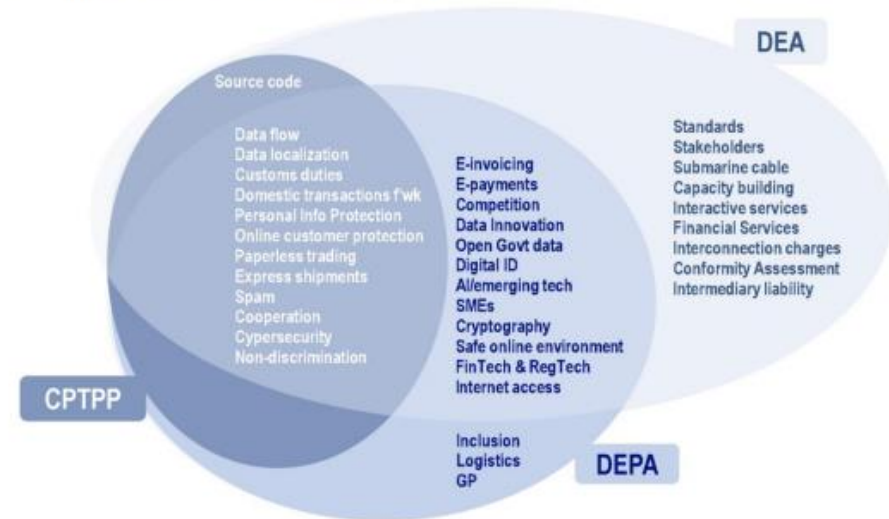
OECD (2023). Of Bytes and Trade: Quantifying the Impact of Digitalisation on Trade.

Figure 8. Digital economy agreements discussing broader digital economy issues are emerging

## A. Number of countries and agreements



## B. Example of content of these digital economy agreements



Sources:

Panel A: Based on TAPED database, agreements entered into force by 2022 considered.

Panel B: Honey (2021<sup>[11]</sup>), <https://www.tradeexperettes.org/blog/articles/untangling-the-digital-noodle-bowl-the-case-for-depa>.

 Thank you



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