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ADVANCING DIGITAL SERVICES TRADE IN ASIA AND THE PACIFIC

Training on ITSS and Digital Economy Statistics
20 March 2023

Key Messages

- Asia's trade in digital services has grown rapidly but its share remains below other regions due to low productivity and high regulations
- The ability to unlock its potential hinges on investment in human and physical capital, digital connectivity, and policy environment (e.g., freer access to internet and data flows)
- Liberalization and deregulation of digitally deliverable services can raise real income and help strengthen GVC participation across the board
- The need for safeguarding cybersecurity, data protection and privacy should be weighed against supporting freer data flows
- Economy-level regulatory reforms should be complemented by bilateral and regional cooperation through FTA, ITC and MRA

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Motivation

- **Third unbundling and servicification**: international division of labor
- **The pandemic:** acceleration of digitalization

❖ *Growing importance of digitally deliverable services: mode 1*

- **Challenges persistent for Asia**: low productivity and competitiveness, and high regulatory barriers
- **Need for fostering international cooperation**: data flows, mutual recognition, cybersecurity, and tax cooperation

➢ How to unlock the potential of digitally deliverable services (DDS) trade in Asia

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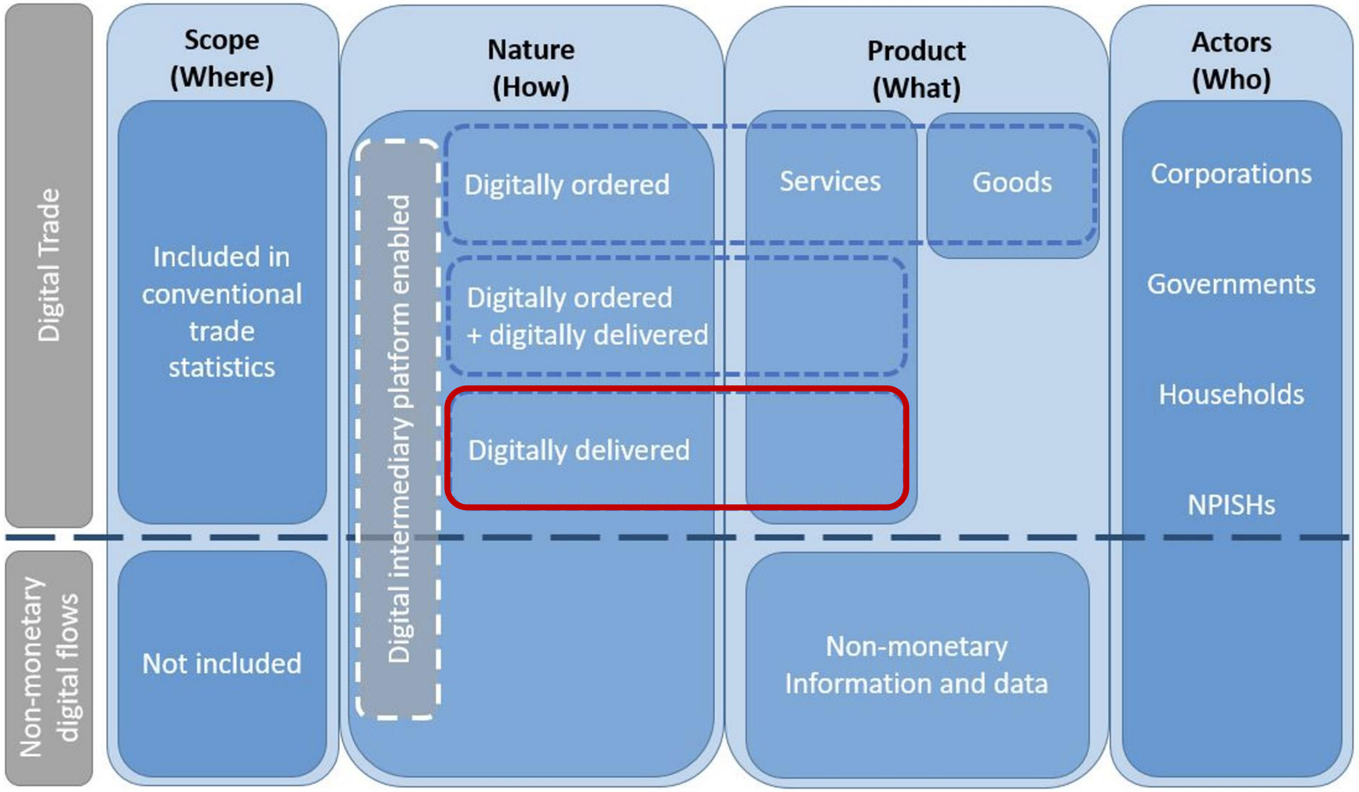
Part 1

- Definition, concept and scope
- Overview/trends in DDS trade in the world and Asia
- DDS development and economic growth

A measurement framework for digital trade in services



Source: OECD-WTO-IMF Handbook on measuring digital trade

- **Definition**:
  "*Digital trade in services encompasses all internationally traded services that are either digitally ordered, or digitally delivered, or both*".

- 'How' (nature of transaction) rather than 'what' is traded → We narrow down to services that *can* be <u>digitally delivered</u>.

- Mode 1 (cross-border supply) services in GATS largely overlaps with concept of **digitally deliverable services**.

- Advantages: coverage, comparability, trade focus
- Limitations: fee-based transactions, gross exports vs. VA

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Digitally deliverable services: scope

Digitally Deliverable Services (DDS)

Code	Service description
SF	Insurance and pension services
SG	Financial services
SH	Charges for the use of intellectual property n.i.e.
SI1	Telecommunications services
SI2	Computer services
SI3	Information services
SJ1	Research and development services
SJ2	Professional and management consulting services
SJ3	Technical, trade-related and other business services
SK1	Audio-visual and related services
SK2	Other personal, cultural and recreational services

Digitally deliverable > Digitally delivered ≈ Mode 1 supplied

Main Sources

- WTO-UNCTAD trade in services
- WTO-OECD Balanced Trade in Services (BaTiS) BPM6
- Trade in Services data by Mode of Supply (TISMOS)

Source: ADB, based on OECD-WTO-IMF Handbook on Measuring Digital Trade, IMF Balance of Payments and Manual on Statistics of International Trade in Services (MSITS 2010)

Digitally deliverable services in Asia: Examples

Insurance and pension services

- Claim underwriting (PRC)
- Claim management
- Digital insurance (Indonesia, Viet Nam)
- Life insurance
- Freight insurance

Charges for the use of intellectual property n.i.e.

- Use of proprietary rights (patents, trademarks)
- Patent portfolio, licenses (PRC)
- Franchises fees

Other business services

- Professional services (legal, accounting, advertising) (India, Kazakhstan, Turkmenistan, Azerbaijan)
- Management consulting services (BPO, BPM) (Philippines)
- Technical services (engineering, architectural, scientific)

Financial services

- FinTech, Digital payments (Singapore)
- Marketplace platforms for SMEs (Indonesia)
- Brokerage services
- Credit card services

Information, Computer and Telecommunications services

- Internet, mobile telephony
- Data transmission, data processing, cloud computing (Pakistan, Georgia), data storage (India)
- ITC support (Tata, Infosys, Wipro)

Personal, cultural, recreational

- Audio visual services
- Health services (PRC, Indonesia)
- Education services (Singapore)
- Heritage and recreational services
- Other personal, cultural, and recreational services (Kyrgyzstan)s

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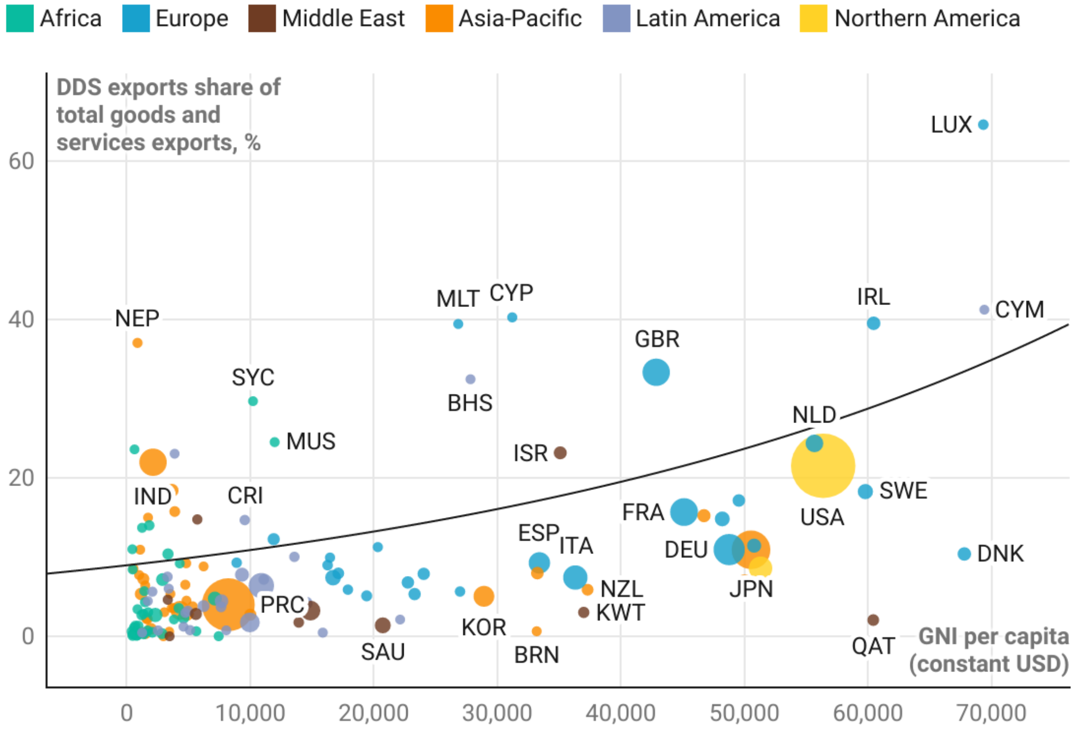
Motivation: Can digital services exports drive economic development?

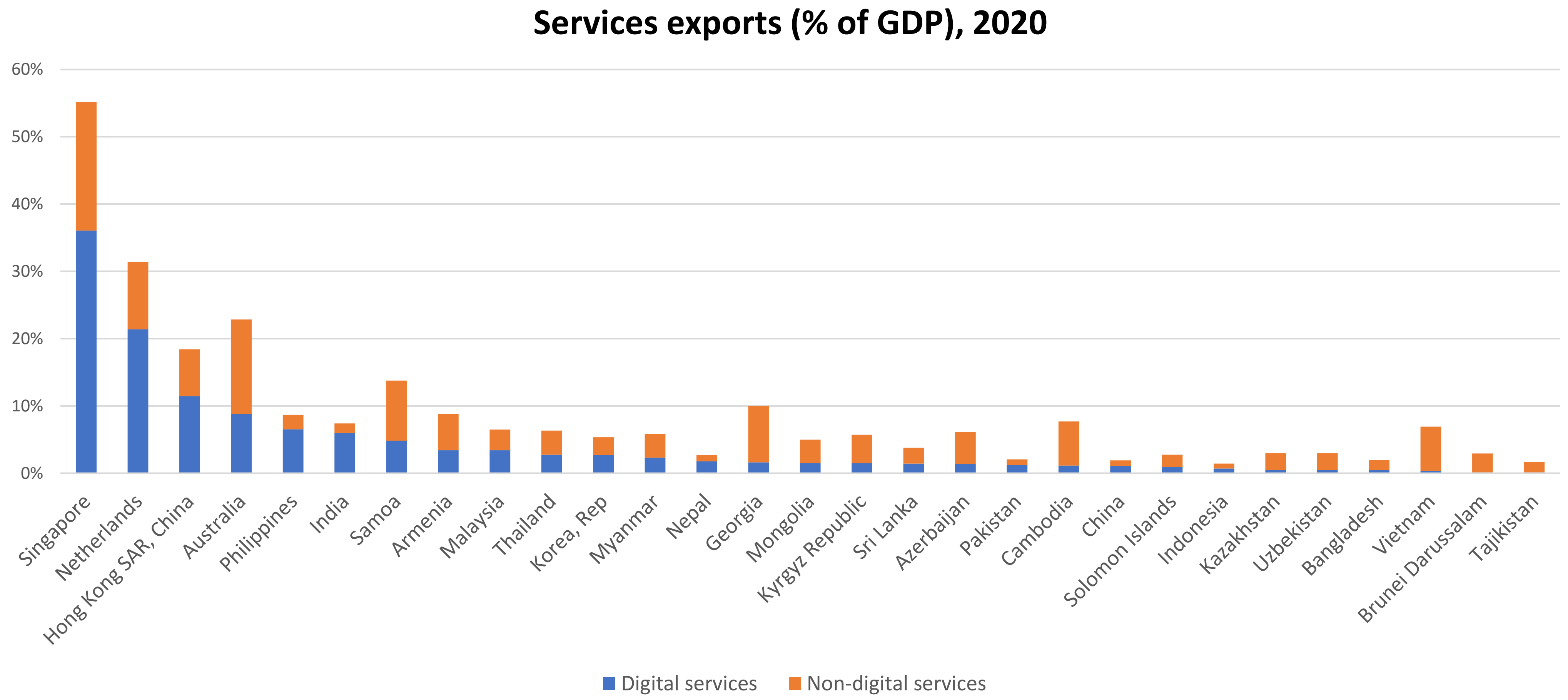
Share of DDS exports in total exports and GNI per capita



Source: ADB calculations using BATIS and World Bank (accessed August 2021).

- High income economies tend to have higher DDS export shares
- Potential for Asian economies to expand DDS exports as development strategy
- Economic size is not precondition for DDS exports or DDS competitiveness
- Can DDS exports cause growth? → A Frankel-Romer approach (positive and significant impact of DDS trade/GDP on GNI per capita)

Participation of services trade (%GDP) in selected economies



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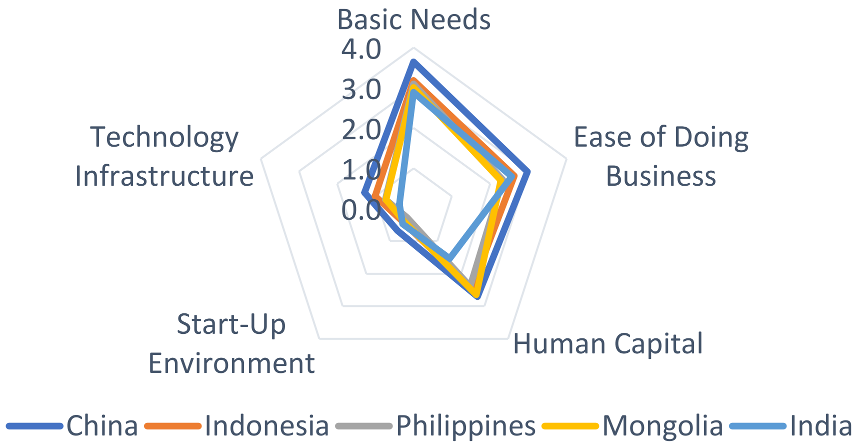
Key Features of Digital Services Trade in Developing Asia

Country profile

- **Group A**: Relatively large and established exporters which are competitive in digital services exports, have high dependence on such exports, and engaged in direct exports to varied export markets (e.g. India, Philippines).
- **Group B**: Other middle and upper-middle income countries, with large digital services exports, but competitiveness lies in manufacturing.
- **Group C:** Countries which have potential but are showing varied performance

Digital e-readiness



Case studies

INDIA

- Largely comprise of B2B delivery of computer and telecommunication services
- Engineering R&D services is the fastest growing

PHILIPPINES

- Accounts for over 12 percent of the global IT-BPM market
- Contact center services are the most important segment

MONGOLIA

- Digital services exports and ICT services exports were quite small
- Engaged in outsourcing of IT services for regional markets like Japan and Korea

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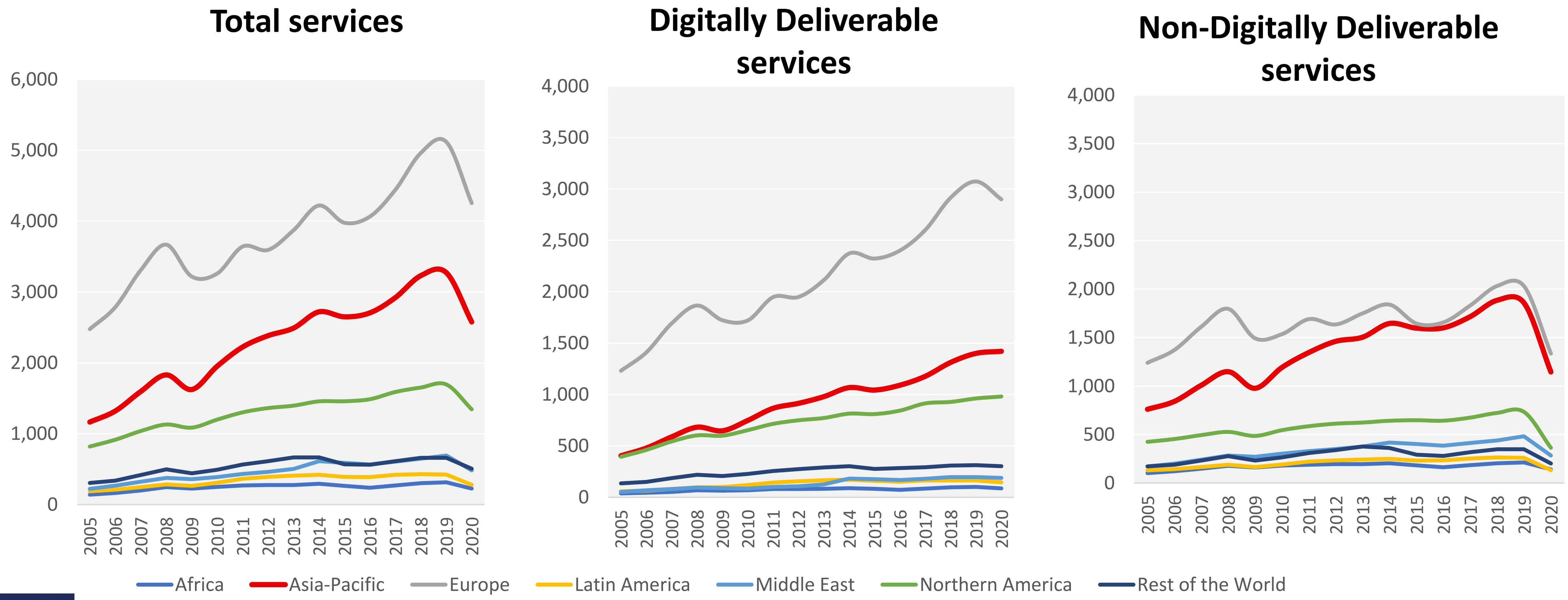
Digital services trade accelerated in Asia Pacific while its global share remained stable



Source: ADB estimates, based on WTO-UNCTAD (accessed 21 July 2021).

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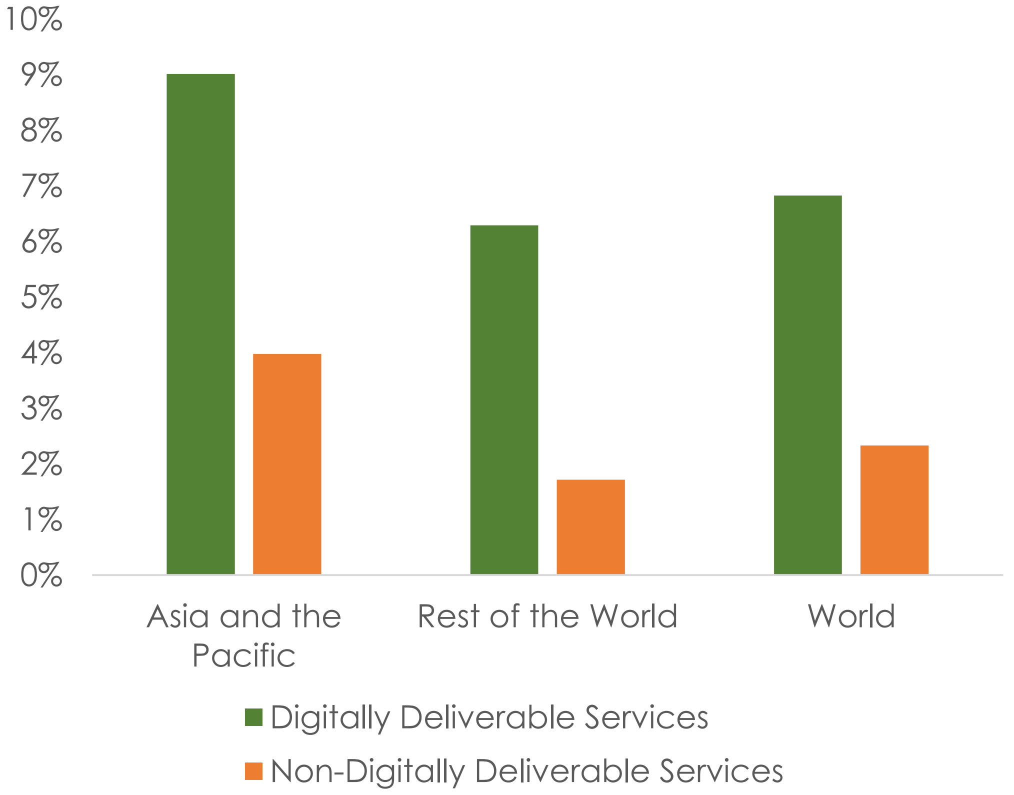
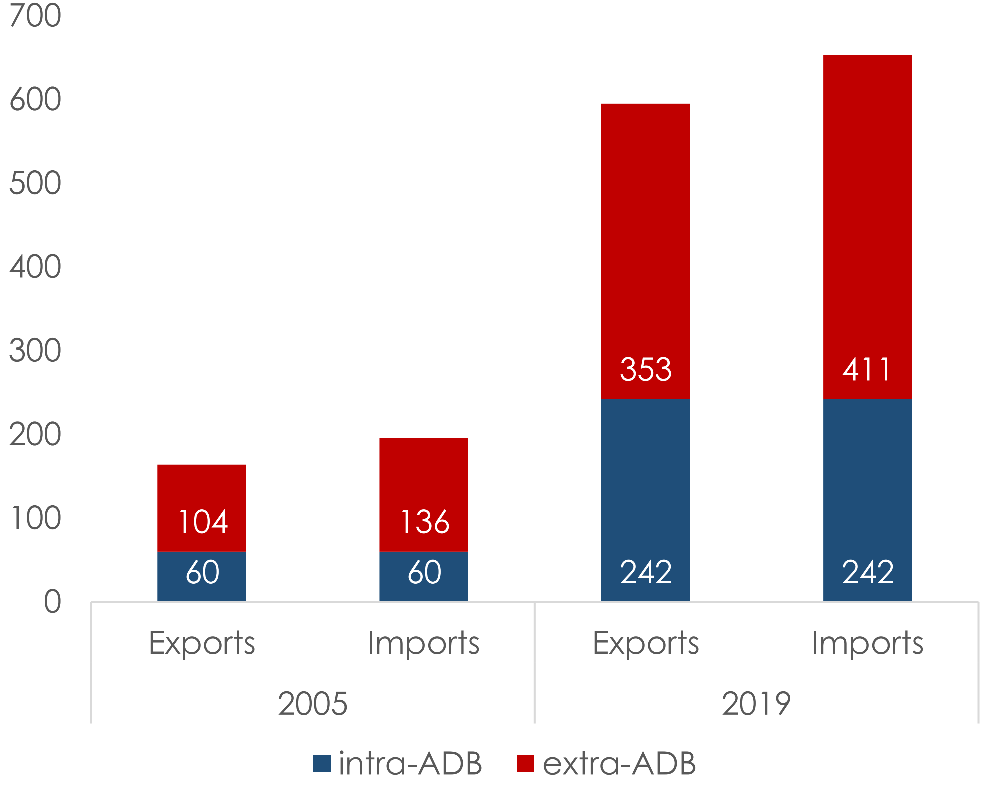
Digital services trade outpaced non digital, with a lower baseline than other regions

Growth in digital and non-digital services trade, 2005-2020



Intra and extra regional trade in digital services in Asia and Pacific ($ billion)



Source: ADB estimates, based on WTO-UNCTAD (accessed 21 July 2021).

Regional growth in digital services trade is driven by East and South Asia

Trade in Services in Digitally Deliverable Services by Asian Subregion ($ billion)

Source: ADB estimates, based on WTO-UNCTAD (accessed 21 July 2021).

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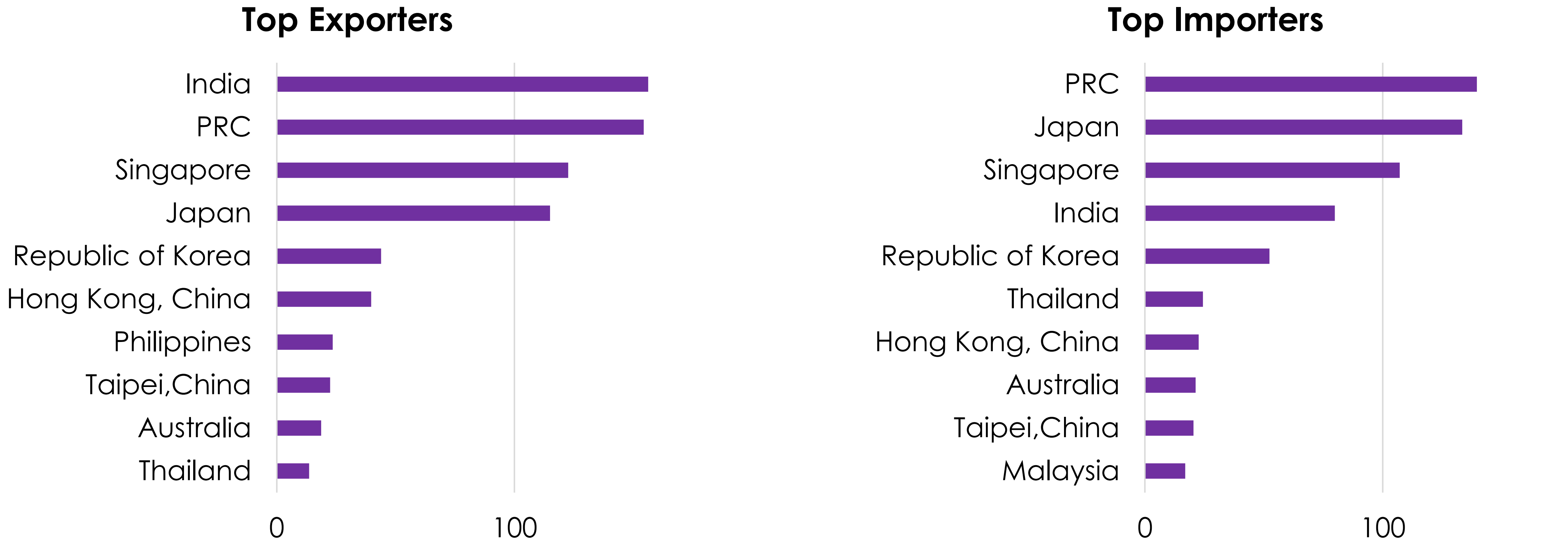
Digital services trade in Asia remains highly concentrated in few economies

Top Asian Exporters and Importers of Digitally Deliverable Services, 2020 ($ billion)

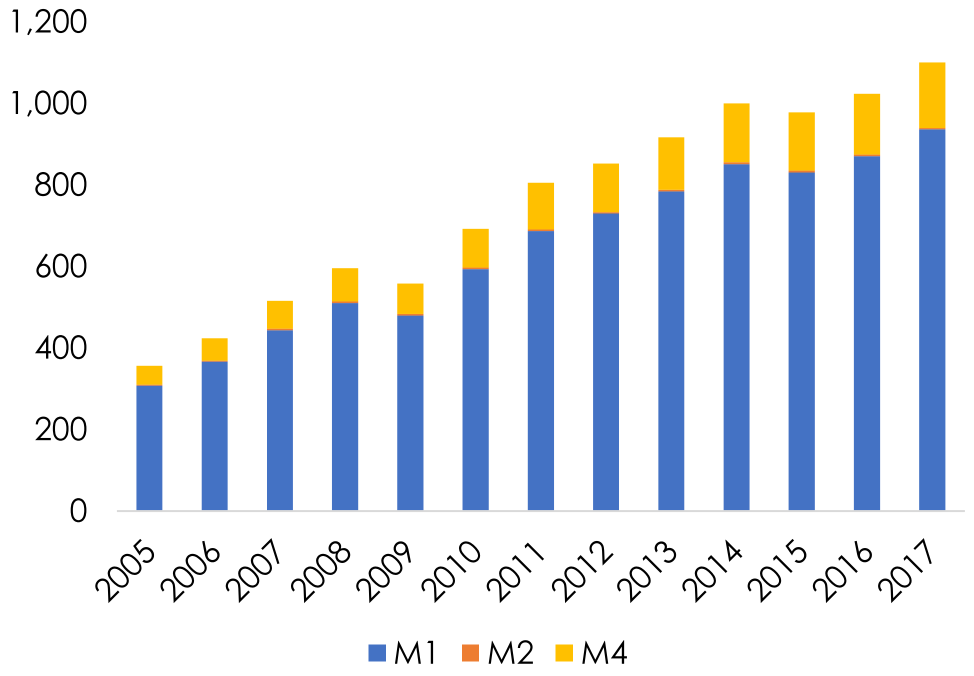


Source: ADB calculations using WTO-UNCTAD (accessed 21 July 2021).

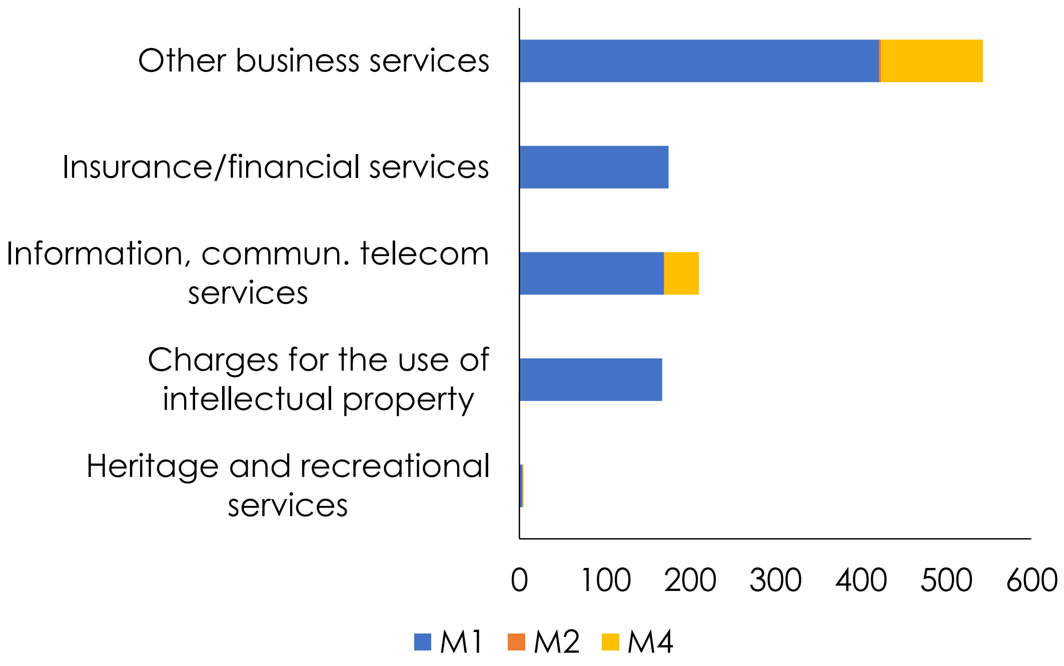
Mode 1 remains the prevalent mode of supply in Asia's digital services trade

Trade in Digital Services in Asia and the Pacific, by Mode of Supply

Share by Mode of Supply



By Services Item



Source: Trade in Services data by mode of supply (TISMOS) database, 2021.

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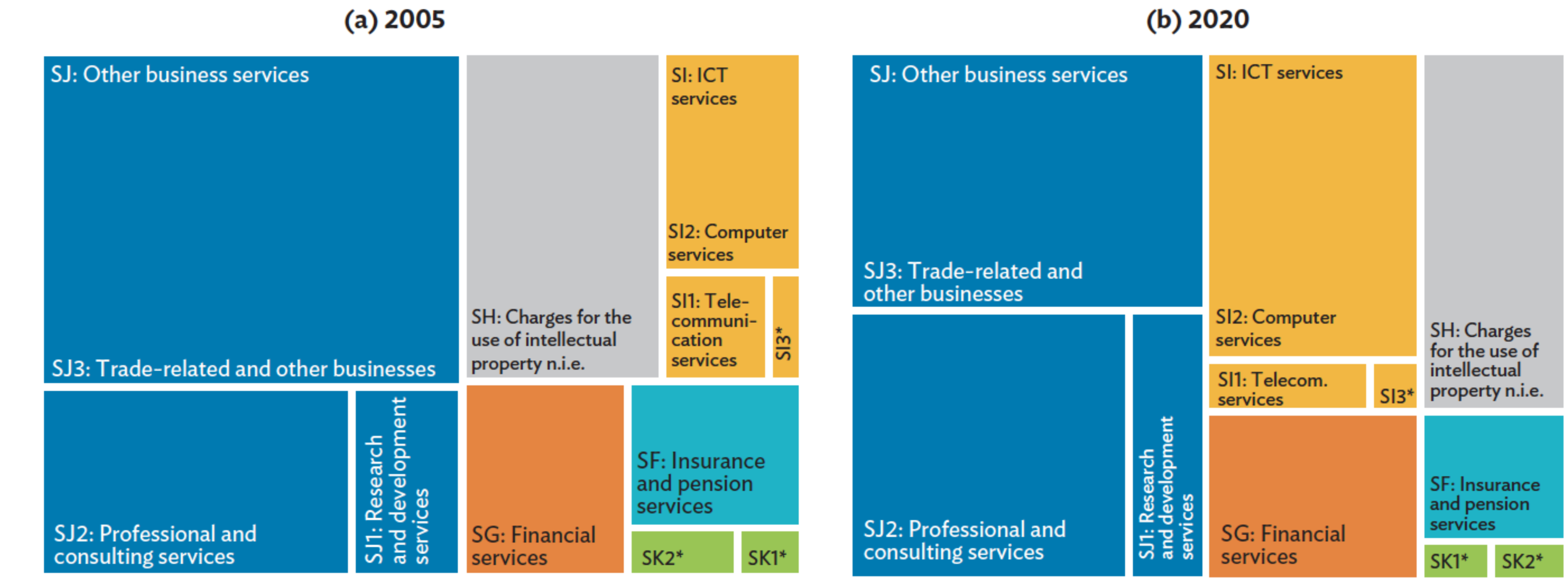
Trade in Digitally Deliverable Services in Asia and the Pacific, by Service Item

Figure 7.14: Trade in Digitally Deliverable Services in Asia and the Pacific, by Service Item



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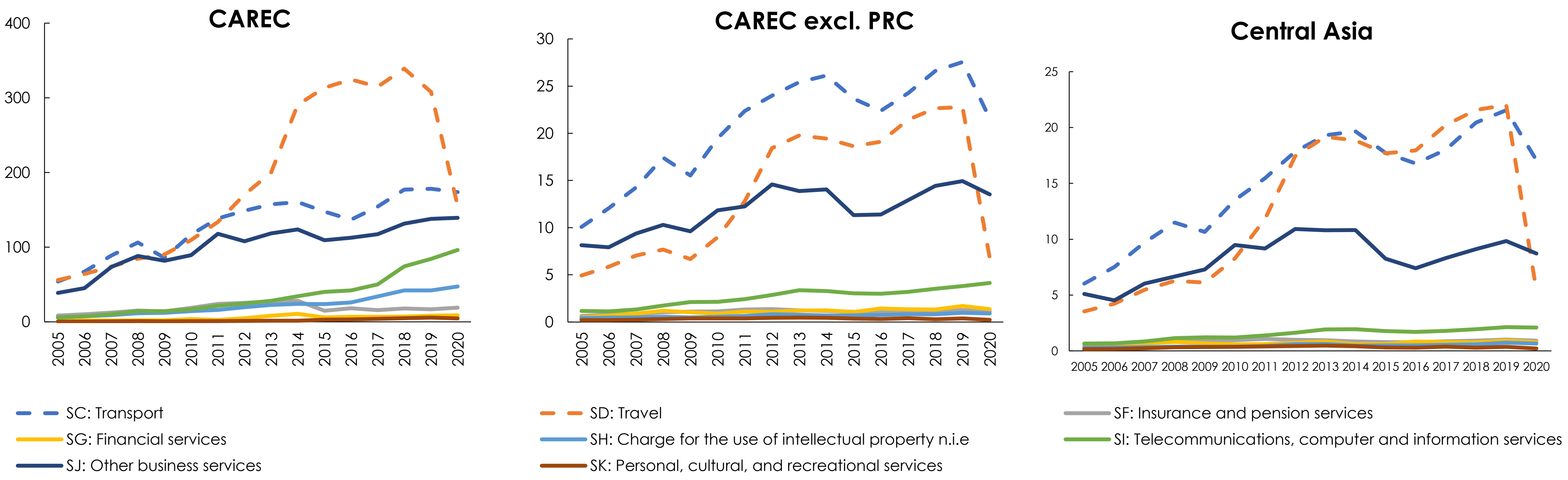
Characterizing digitally deliverable services in CAREC region

Trade in Services in CAREC region and C. Asia, by Sector (in billion USD)

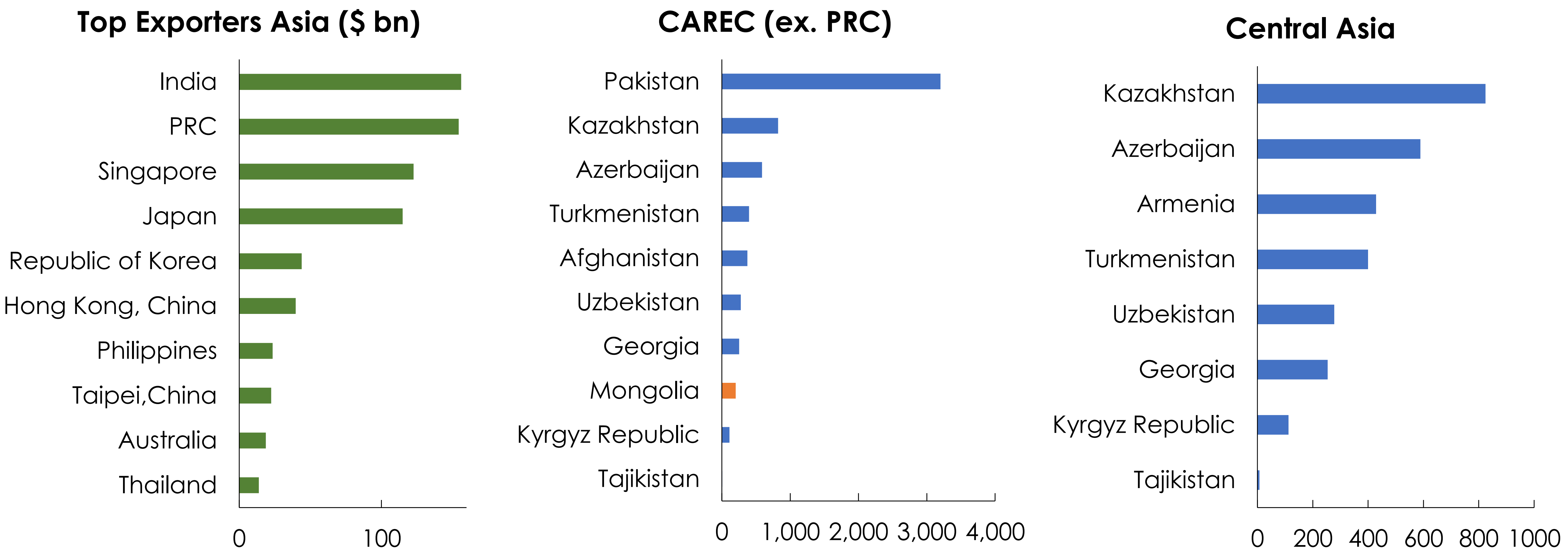


Note: Solid lines denote digitally deliverable services, dotted lines are non-digitally deliverable service items.

Source: Source: ADB calculations using WTO-UNCTAD.

Digital services exports in Asia remain highly concentrated

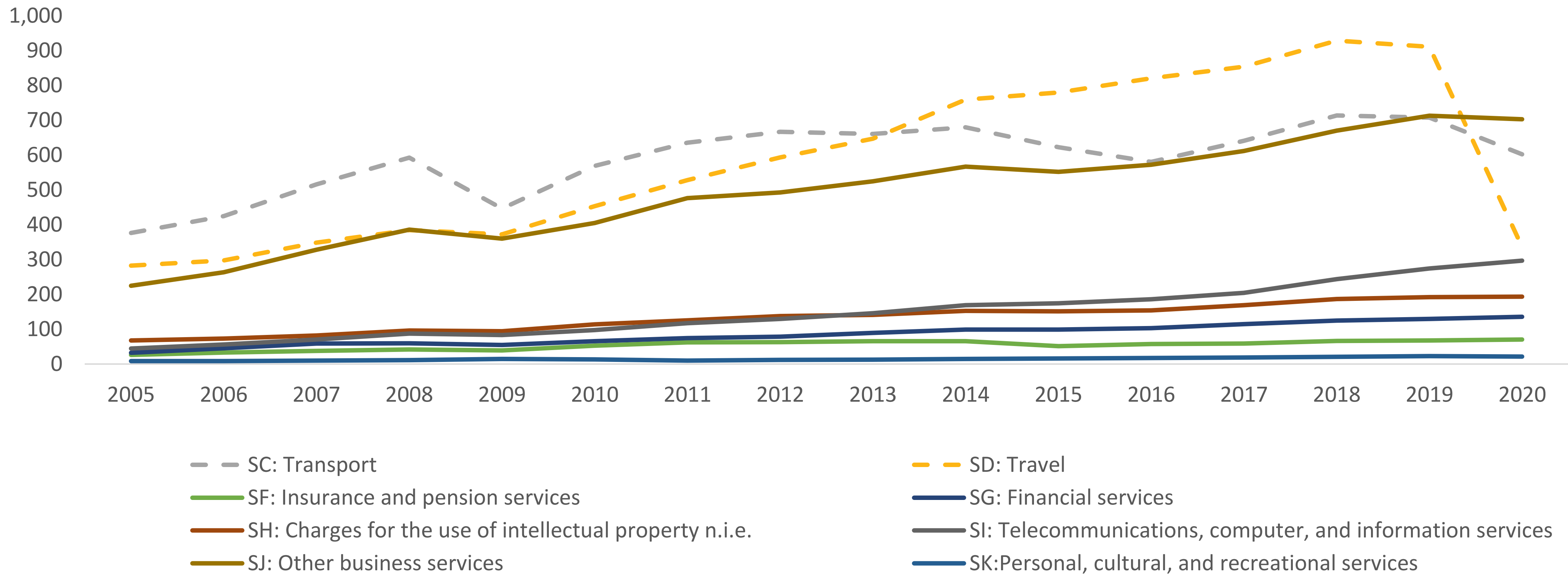
Top Asian Exporters in Asia, CAREC and Central Asia, 2020 ($ million)



Source: ADB calculations using WTO-UNCTAD (accessed 21 July 2021).

Trade in digital services has been more resilient to the COVID-19 shock

Trade in Services in Asia and the Pacific, by Sector (in billion USD)



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Source: ADB calculations using WTO-UNCTAD (accessed 21 July 2021).

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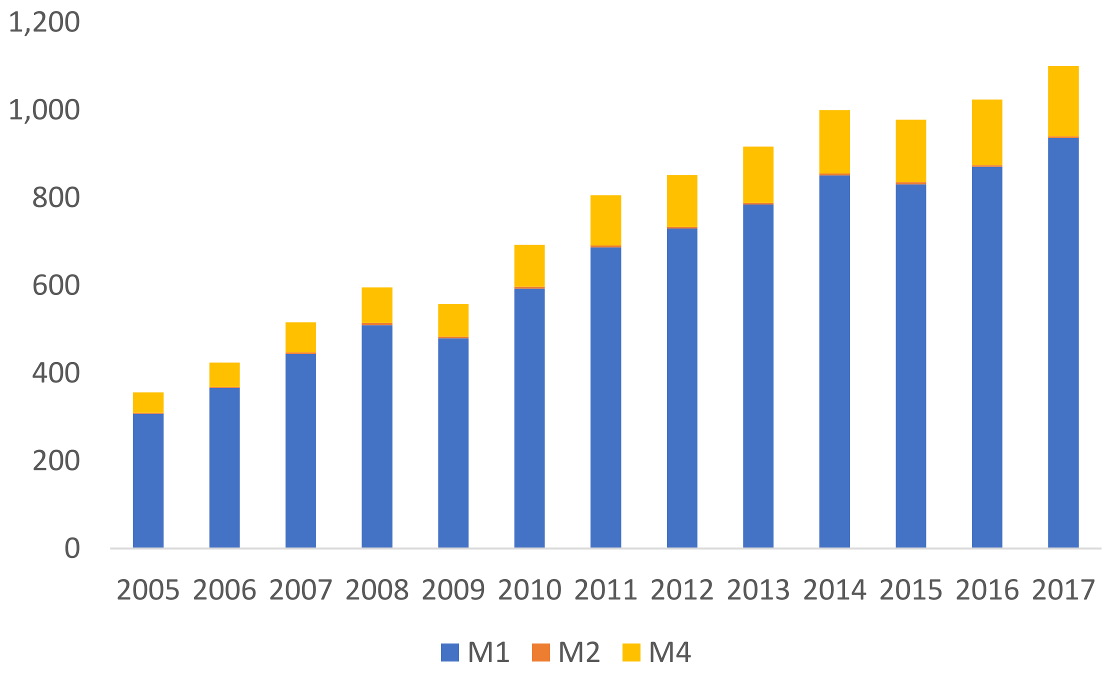
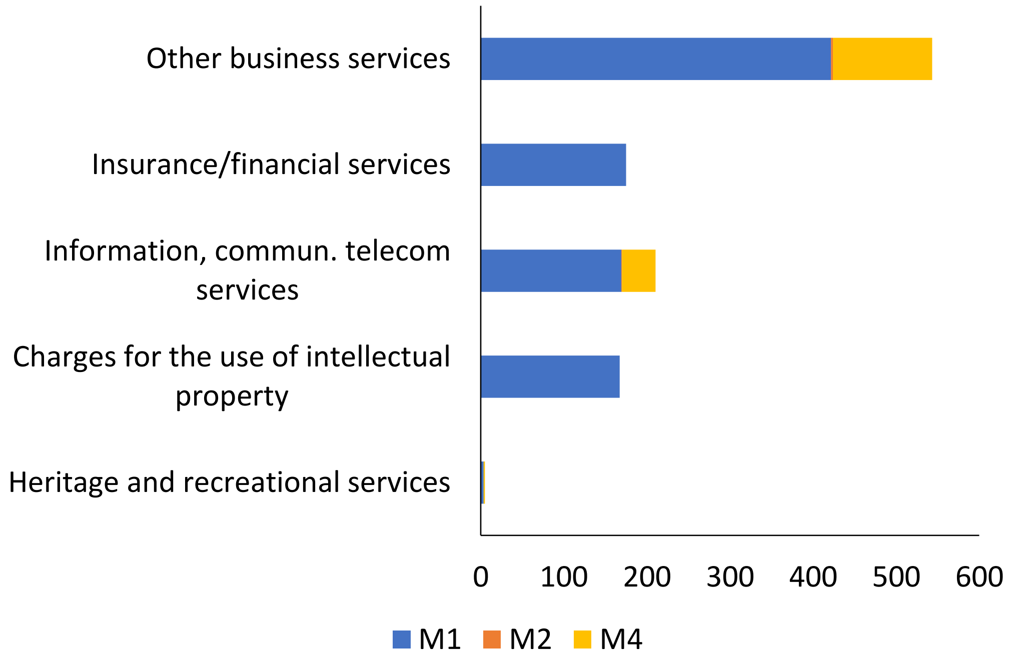
Mode 1 remains the prevalent mode of supply in Asia's digital services trade

Trade in Digital Services in Asia and the Pacific, by Mode of Supply

Share by Mode of Supply



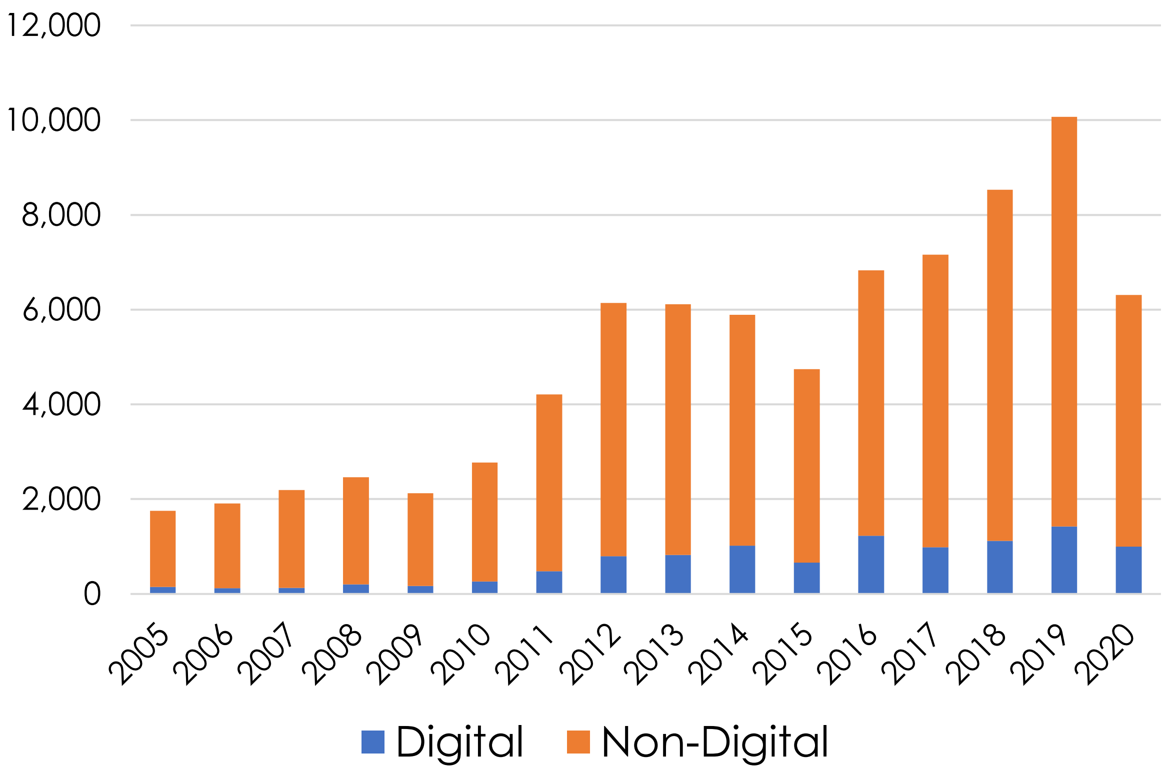
By Services Item



Source: Trade in Services data by mode of supply (TISMOS) database, 2021.

Country focus: Mongolia

Trade in Services in Digitally Deliverable Services in Mongolia ($ million)



Source: ADB calculations using WTO-UNCTAD (accessed 21 July 2021).

- The overall picture that emerges is of a sector that is quite nascent, untapped, and largely focused on the domestic market.
- Ecosystem for e-commerce important for enabling growth in both imports and exports of digital services in Mongolia.

Source: Chanda (2021). Trade in Digital Services in Developing Asia: A Study of Six Selected Economies

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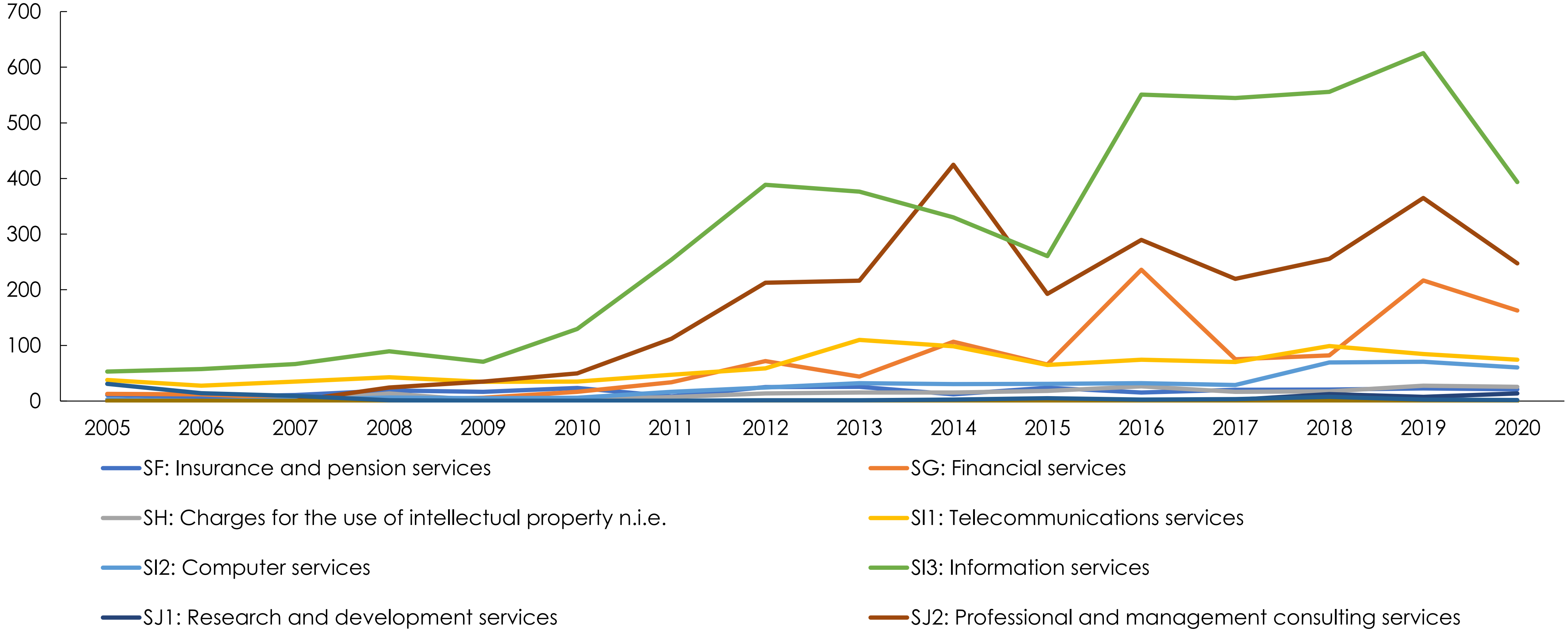
Mongolia is mainly engaged in outsourcing of IT services for regional markets like Japan and Korea

Trade in Services in Digitally Deliverable Services in Mongolia, by sector ($ million)



Source: ADB calculations using WTO-UNCTAD (accessed 21 July 2021).

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Main trends

- Asia's trade in digital services has grown rapidly while its global share remained stable and there is room for improving the region's participation relative to developed economies
- Digital services in Asia been fended off the COVID-19 shock well compared to non digital services
- Digital services trade remains highly concentrated in five economies, with East Asia and South Asia driving Asia's expansion
- Most dynamic DDS service sectors in Asia are other business services and telecommunications, computer and information services.

Part 2

- **Drivers of digital services trade**
  1. Key factors affecting DDS exports: A gravity framework
  2. The impact of data flow restrictions
- **Economic impact of digital services trade**
  1. Economic Impact of trade liberalization and deregulation
  2. Impact of digital services trade on households' welfare
- **International cooperation on digital services trade**
  1. The Role of Global, Regional and Bilateral Agreements
  2. Regulating digital services trade – further challenges and policy recommendations
  3. International taxation Framework

Drivers of digital services trade

1. **Key factors affecting DDS exports: A gravity framework**
2. The impact of data flow restrictions

Drivers of digital services trade

- **Human Capital**: technical skills to make full use of digital technologies
- **Digital connectivity**: availability, quality, and cost
- **Investments:** telecommunication and digital solutions
- **Policies**: regulation (ex. data restrictions), deregulation, trade liberalization (ex. RTA) and international cooperation

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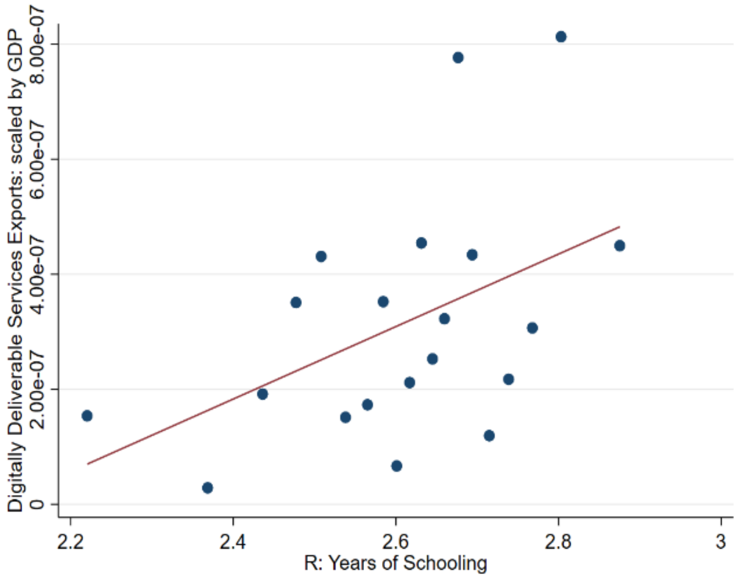
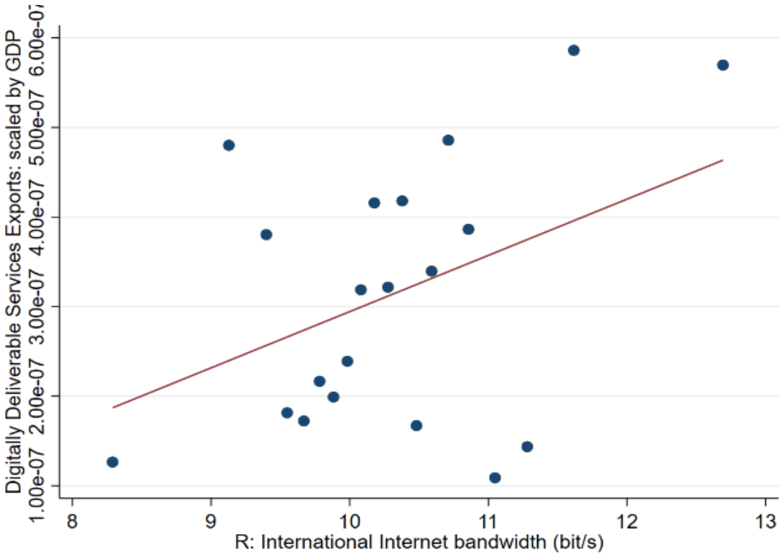
Drivers of digital services trade

- **Human Capital:** educational attainment, technical skills to make full use of digital technologies
- **Digital connectivity:** availability, quality, cost and divide
- **Investments:** telecommunication and digital solutions

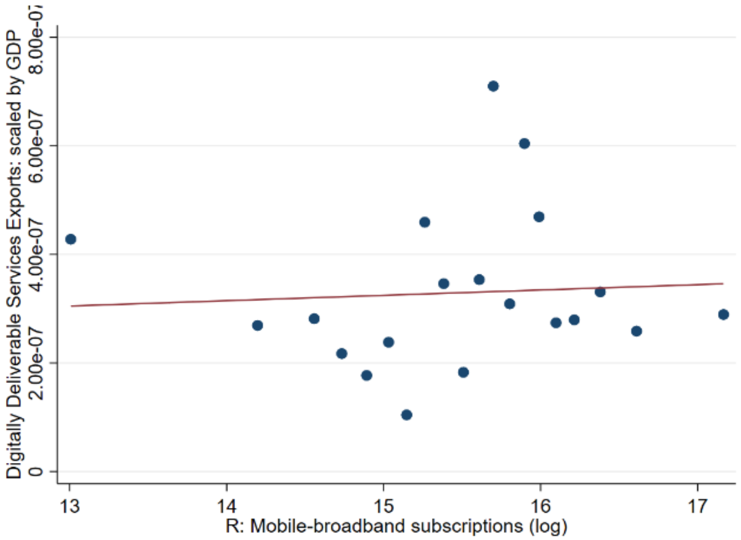
Expected Years of Schooling



International Bandwidth per Internet User (bit/s)



Mobile Broadband Subscriptions



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Note: Values are for reporters.
Source: ADB calculations based on BATIS and UNDP (accessed July 2021)

DDS in Asia

- **Internet connectivity**: effective usage of the network significant in Asia; quality significant in non-Asian countries.
- **Education and investment**: Significant in both Asia and non-Asian economies (different magnitudes).
- **Policies**: No significant differences between Asia-Pacific and non-Asian countries.

	DDS Exports	
	Asia-Pacific	Non-Asia
Mean years of schooling	0.1536***	0.3389***
	(0.0479)	(0.0557)
Mobile-broadband subscriptions	**0.0019*** **	0.0003
	(0.0003)	(0.0004)
International Internet bandwidth (bit/s)	0.0007	**0.0028*** **
	(0.0007)	(0.0005)
Investment in telecommunications	0.0012***	0.0024***
	(0.0003)	(0.0004)
Internet freedom	0.0027***	0.0025***
	(0.0004)	(0.0004)
RTA dummy variable	0.0130	0.0004
	(0.0306)	(0.0179)
Constant	5.2891***	4.3834***
	(0.2926)	(0.3810)
Observations	20893	91647
Pseudo R-squared	0.992	0.993
Ramsey test: Prob > chi2	0.786	0.934

Exporter-year, Importer-year, and Bilateral fixed effects included. Standard errors clustered by country-pair in parentheses; *** p < 0.01, ** p < 0.05, * p < 0.10

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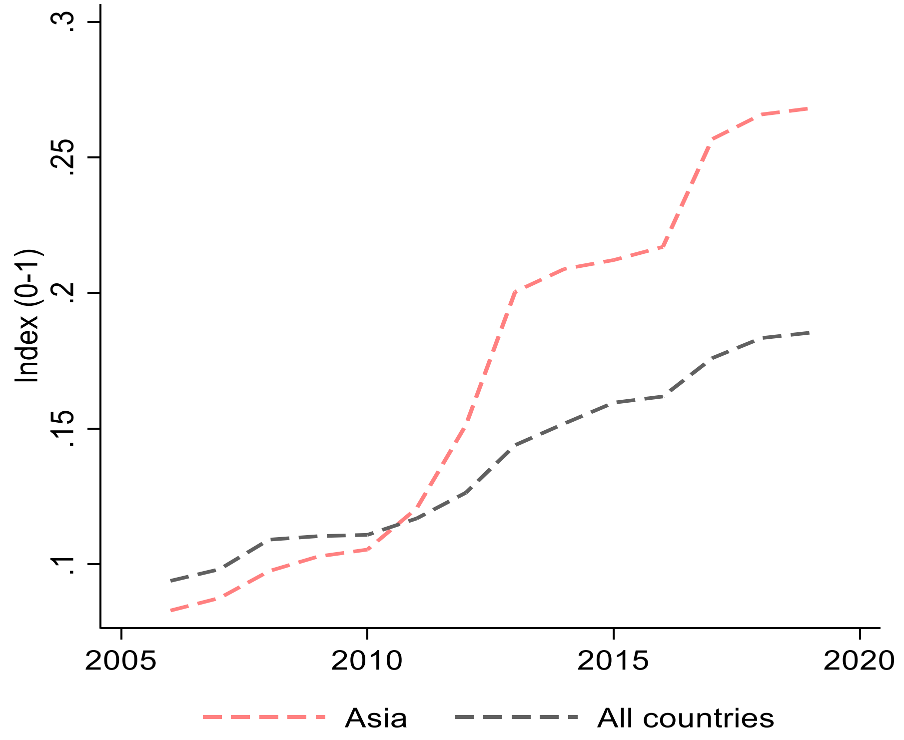
Drivers of digital services trade

1. Key factors affecting DDS exports: A gravity framework
2. The impact of data flow restrictions

Data restrictions and restrictiveness in Asia

- Trade in digital services is reliant on the transmission of data across countries
- Categories of data-related policies
    1. Data localization policies (DL)
    2. Local storage requirements (LS)
    3. Conditional flow regimes (CF)
- Proportion of data localization measures applied by Asian countries is larger than the rest of the world (70%).
- Index of regulatory restrictiveness (composite indicator) in data is higher in Asian countries.

Data policy index for cross-border measures covering for Asia and the World (2006-2020)



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Impact of data restrictions

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Impact of Cross-Border Data Restrictions Summary of Results

		Digital services imports			
		Overall	DL	LS	CF
Sectors/Region		Reference: Non-Digital			
Digital	World	-14%			
Digital	Non-Asia	-9%	**-0.6%**[a]	**-24%**	-8%
Digital	Asia	-70%	**-94%**	**-29%**	-45%

a = statistically insignificant; DS = Telecom, Computer, Information, Insurance, Financial.

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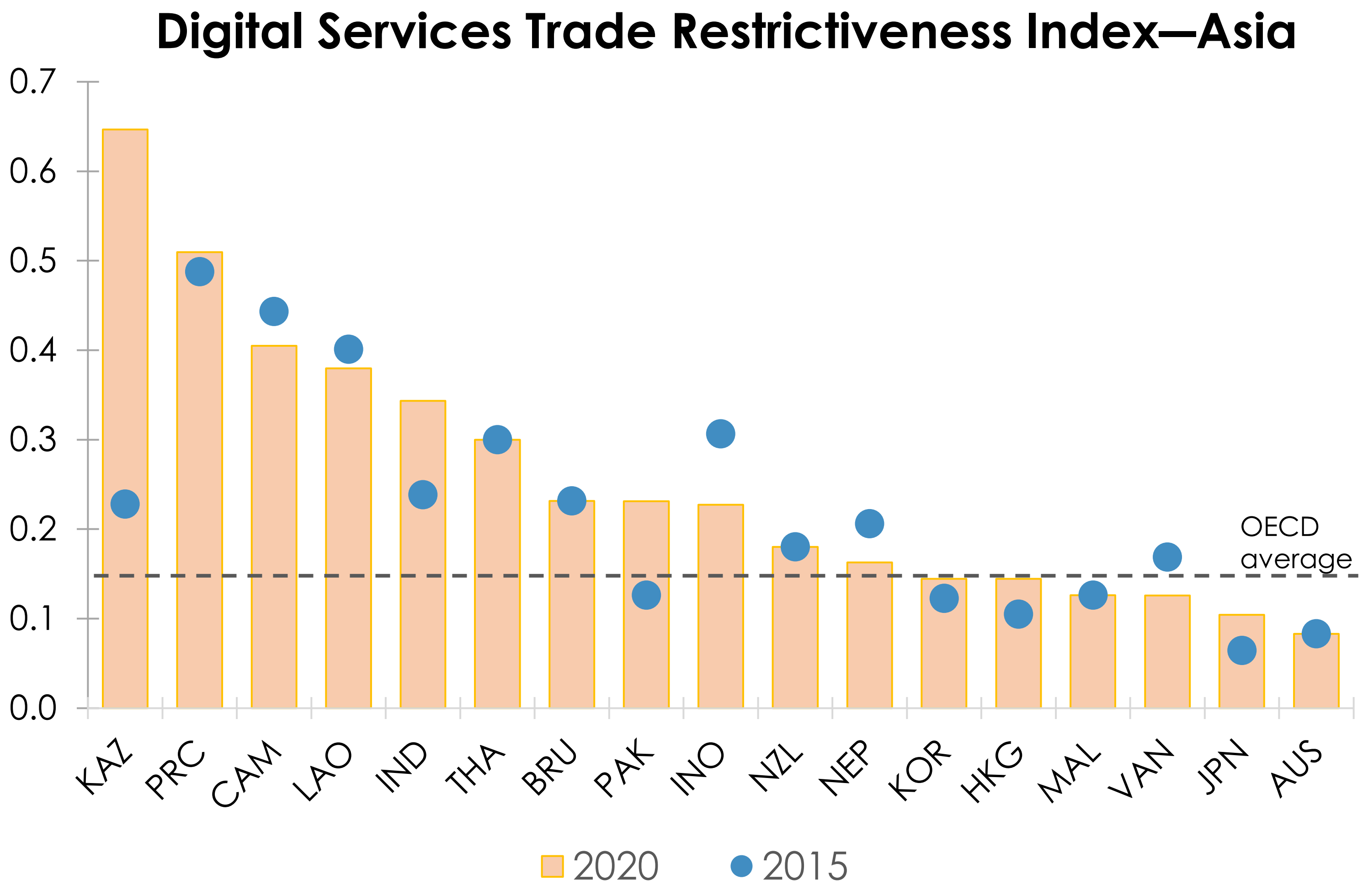
Economic impact of digital services trade

1. **Economic Impact of trade liberalization and deregulation**
2. Impact of digital services trade on households' welfare

Policies: Deregulation and trade liberalization

- Regulation (ex. data restrictions)
- Trade liberalization (ex. Regional trade agreements)
- International co-operation (ex. Mutual recognitions arrangement)



Source: OECD.

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Methodology

- Quantitative general equilibrium model based on the ADB MRIOT for 2019.
- **Two counterfactual simulations:** Reduction of iceberg trade costs in digitally delivered service sectors
    - ❖ **Scenario 1 (Trade Liberalization):** International trade costs reduction by 10% (intranational costs unchanged).
    - ❖ **Scenario 2 (Deregulation):** International and intranational trade costs reduction by 10%.
- Impact on trade flows, aggregate real income, and GVC linkages.

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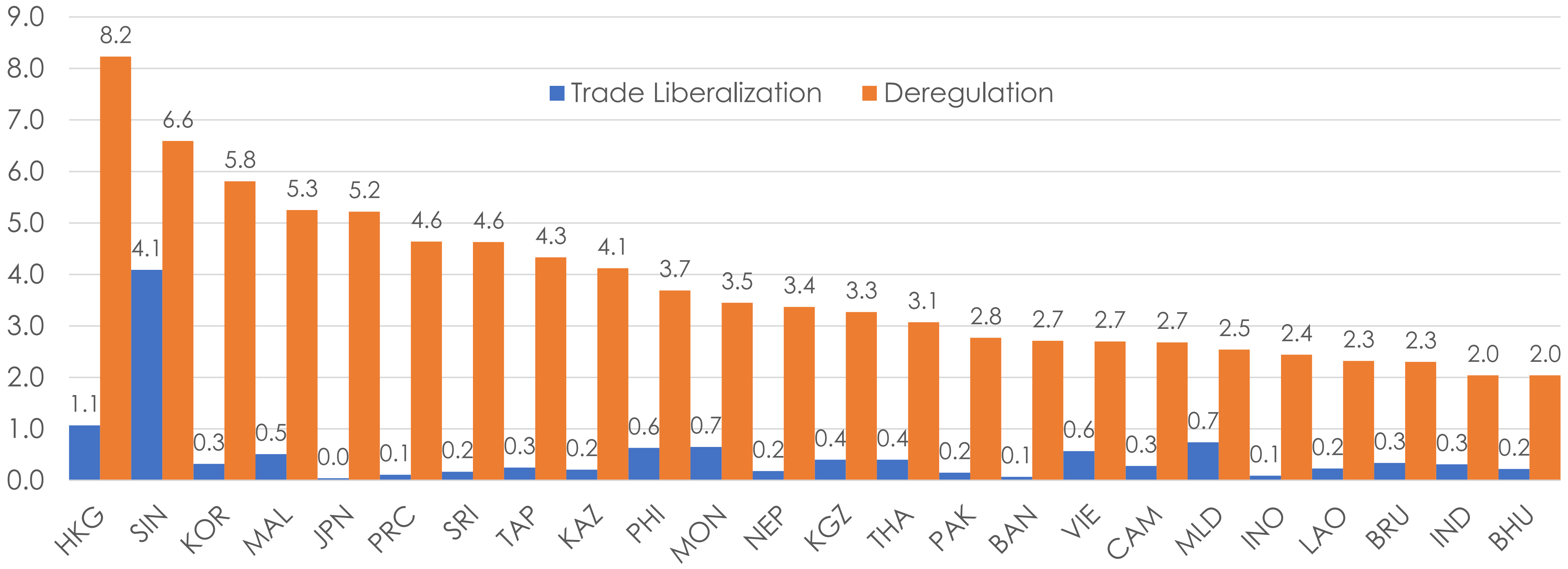
Asian economies are estimated to gain significantly larger real income increase from the deregulation than the trade liberalization scenario

Counterfactual changes in real income by economy, percent of baseline



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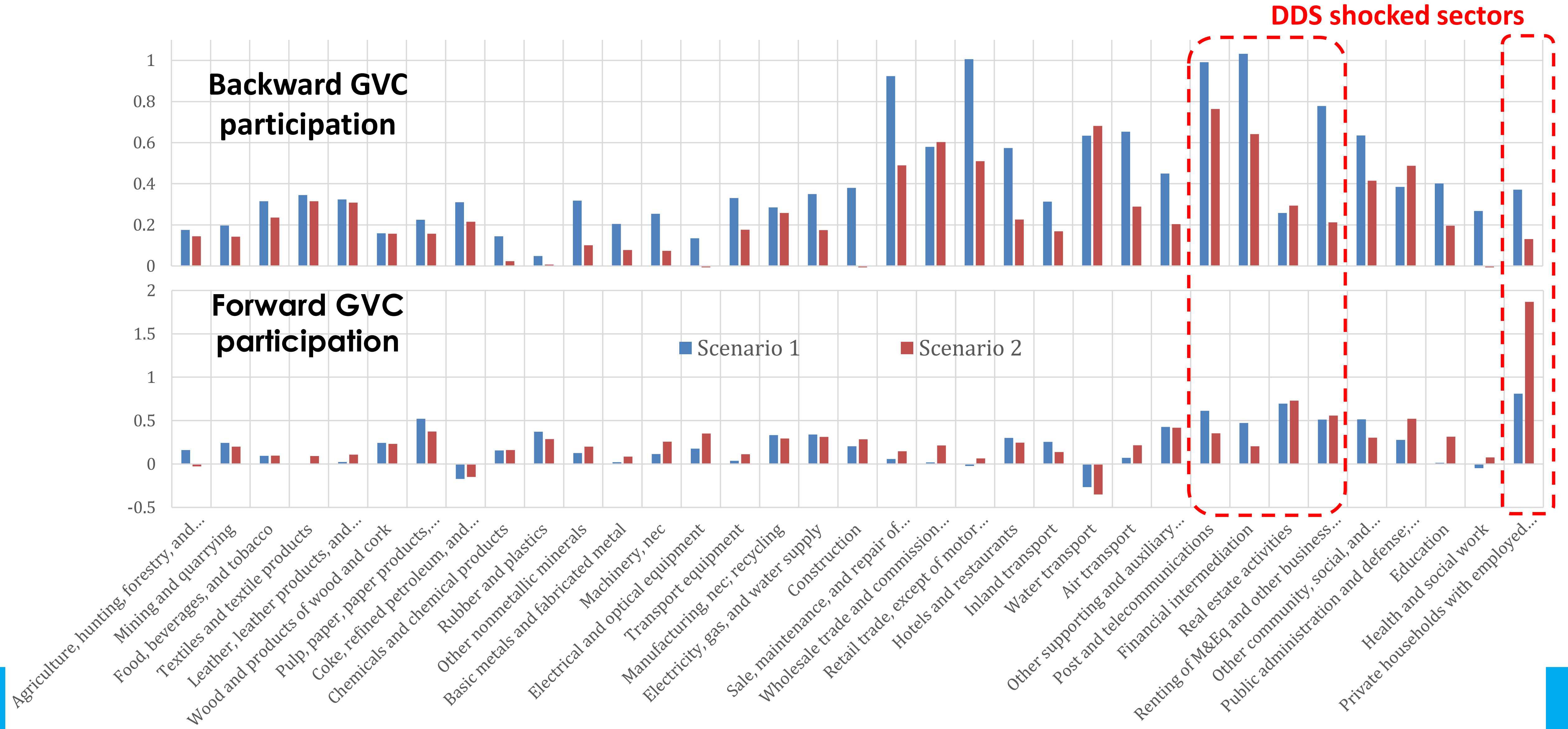
GVC forward and backward linkages

(% of gross exports) by sector, intra-Asia, percentage change over baseline



Economic impact of digital services trade

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International cooperation on digital services trade

1. **The Role of Global, Regional and Bilateral Agreements**
2. Regulating digital services trade – other key issues and policy recommendations
3. International taxation framework

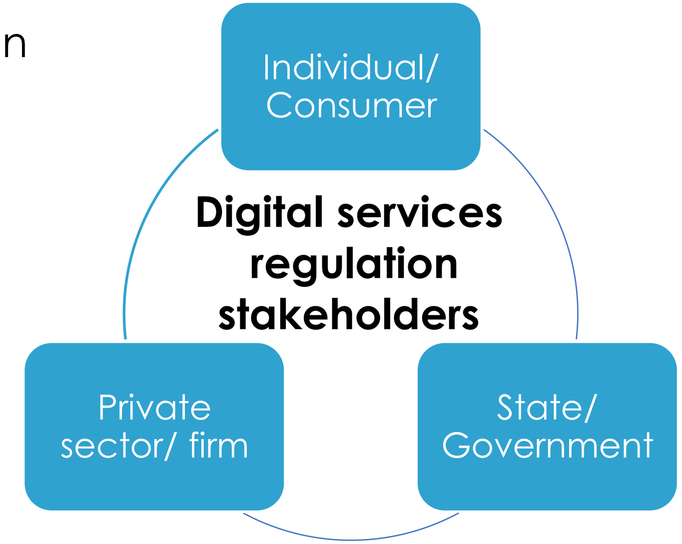
International Regulations

World Trade Organization

- Main obligations of the regulation of digital trade under the existing WTO legal framework can be found in the **GATS Telecom Annex**.

  “service suppliers shall be accorded access to and use of public telecommunications transport networks and services on reasonable and non-discriminatory terms and conditions”

- **Three main issues:**
  - **Classification:** goods or services trade? Critical practical implication on border measures vs. domestic regulations
  - **Liberalization levels**: from «none» to «unbound»
  - **Exceptions:** allowing WTO Members to deviate from their trade obligations



Regional Trade Agreements

- Three main sovereign approaches (United States, the PRC, European Union) reflected in trade agreements
- Balancing the interests of stakeholders with different priorities.

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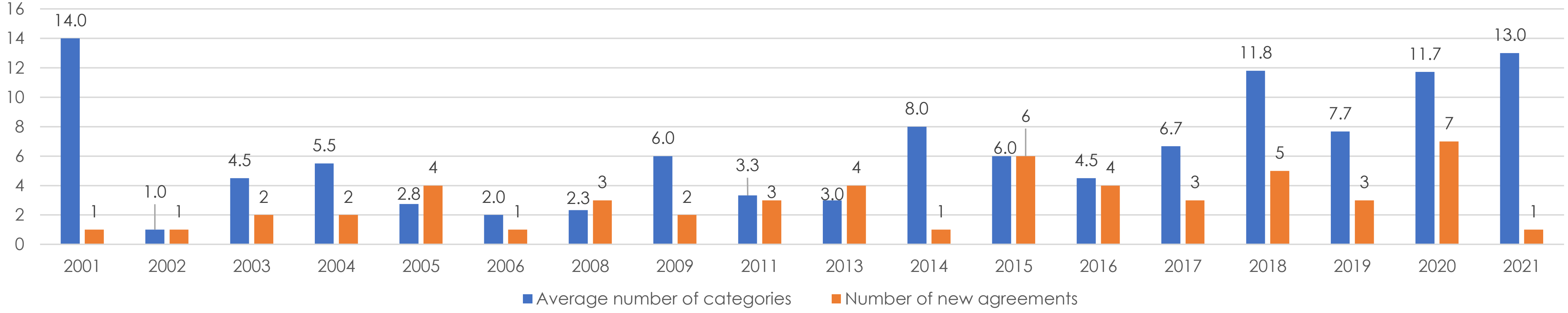
“Digital provisions” of Trade Agreements in Developing Asia

Category	Provisions
Trade facilitation Provisions designed to create a facilitating environment for digital trade in general. These provisions provide the necessary regulatory and technological environment to enable the smooth functioning of digital trade, which also forms the bedrock on which digital services trade can be conducted.	Customs Duties
	Non-Discriminatory Treatment of Digital Products
	Domestic Electronic Transactions Framework
	Electronic Authentication
	Electronic Signatures
	Paperless Trading
Enabling business Provisions to minimize the commercial and regulatory burden for digital services trade providers. These provisions focus on the most common regulatory and commercial obstacles facing digital services trade firms. By removing these obstacles, digital services will be able to flow more freely across countries, creating massive economies of scale with the data they amass across different markets.	Access to and Use of the Internet for Electronic Commerce
	Free Flow of Data
	Prohibition of Data Localization
	Prohibition on Forced Transfer of Source code
	Open Government Data
Consumer protection Provisions to protect the interests of consumers. By addressing the main concerns of consumers, these provisions enhance the trust of consumers in digital services trade and thus indirectly boost the take-up rate of digital services among consumers.	Online Consumer Protection
	Privacy and Personal Information Protection
	Unsolicited Commercial Electronic Messages
Regulatory autonomy preserve the regulatory autonomy of the government. These provisions help the governments to reserve the space necessary to address various social policy objectives even though they might ostensibly be inconsistent with various obligations under the digital trade chapter	Cybersecurity
	Exceptions
	Cooperation
	Dispute Settlement

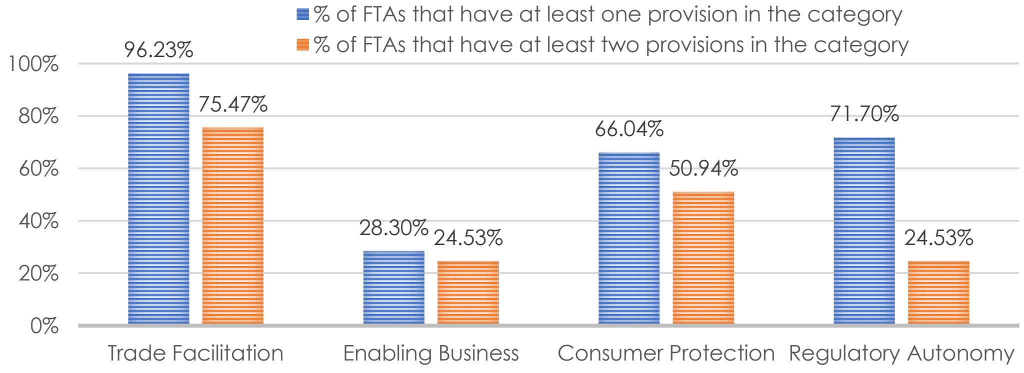
Both, the number of agreements and of digital provisions have been increasing over the last decades

Average number of categories covered in new agreements

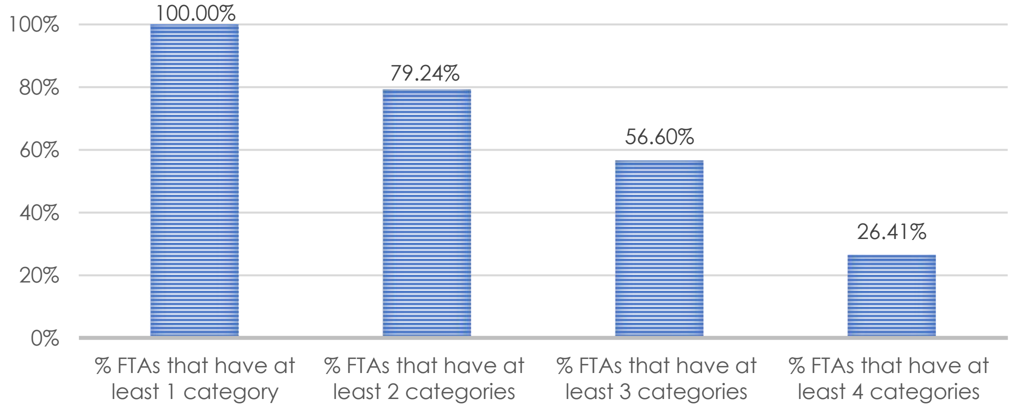


Percentage of FTAs with…

… at least one provision in each category



… provisions in at least one to all categories



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International cooperation on digital services trade

1. The Role of Global, Regional and Bilateral Agreements
2. **Regulating digital services trade – further challenges and policy recommendations**
3. International taxation Framework

Domestic Regulations

Services regulations

- Transparency
- Deregulation
- Qualification requirements and procedures
- Technical standards
- Licensing requirements

Cybersecurity

- Safety of digital services trade transactions – cybercrime prevention
- Confidentiality, integrity, and availability of information
- Legitimate policy objectives vs. Protectionism?
- Lack of adequate regulatory framework and limited human and financial capacity in DC and LDCs

International Cooperation in Domestic Regulations

- Mutual recognition agreements
- Formal (e.g., WTO plurilateral negotiations) or informal cooperation arrangements (e.g., MoU) cooperation among like-minded economies

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Policy recommendations

- Promote:
  - ❖ **Deeper commitments and expanded coverage** of relevant provisions in RTAs.
  - ❖ **Dispute settlement procedure** and **limited number of exceptions**.
- Pursue market liberalization at the regional level through **RTAs** and/or **DEAs**.
- Develop **mutual recognition agreements** on services in developing countries
  - ❖ Ex. countries with similar regulatory frameworks can develop MRAs at the bilateral and regional levels first, before expanding them to a wider level.
- In parallel, explore the possibility to join **plurilateral negotiations** held at the WTO through Joint Statement Initiatives in the area of e-commerce and services domestic regulations.

International cooperation on digital services trade

1. The Role of Global, Regional and Bilateral Agreements
2. Regulating digital services trade – further challenges and policy recommendations

3. International taxation framework

New international tax rules and digital services: Implications for Asian economies

Tax revenues

- Different impacts across jurisdictions
- Higher tax certainty and sustainability
- Trend towards VAT/GST collection on imported digital services

Trade

- Risks of unilateral measures, tariffs or other barriers to trade
- Consistency between tax and WTO rules to prevent future disputes

Compliance

- Domestic and international law amendments required
- Administrability of tax admin., firm-data collection
- Coordination to enter into force in 2023

Competition / FDI

- Ensuring level playing field between foreign and domestic providers
- Change in preferential tax regimes may be necessary following Pillar 2 implementation

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Policy Recommendations

- Investments in human capital (digital capacity), ICT infrastructure and connectivity
- Services sector deregulation and trade liberalization
- Balancing between data protection/privacy and data flows
- International cooperation for transparent, fair and harmonized regulations, taxations, and liberalization through RTA and DEPA
- Possible differential impacts and trade-offs, for example for skilled vs. unskilled workers, or in urban vs. rural area

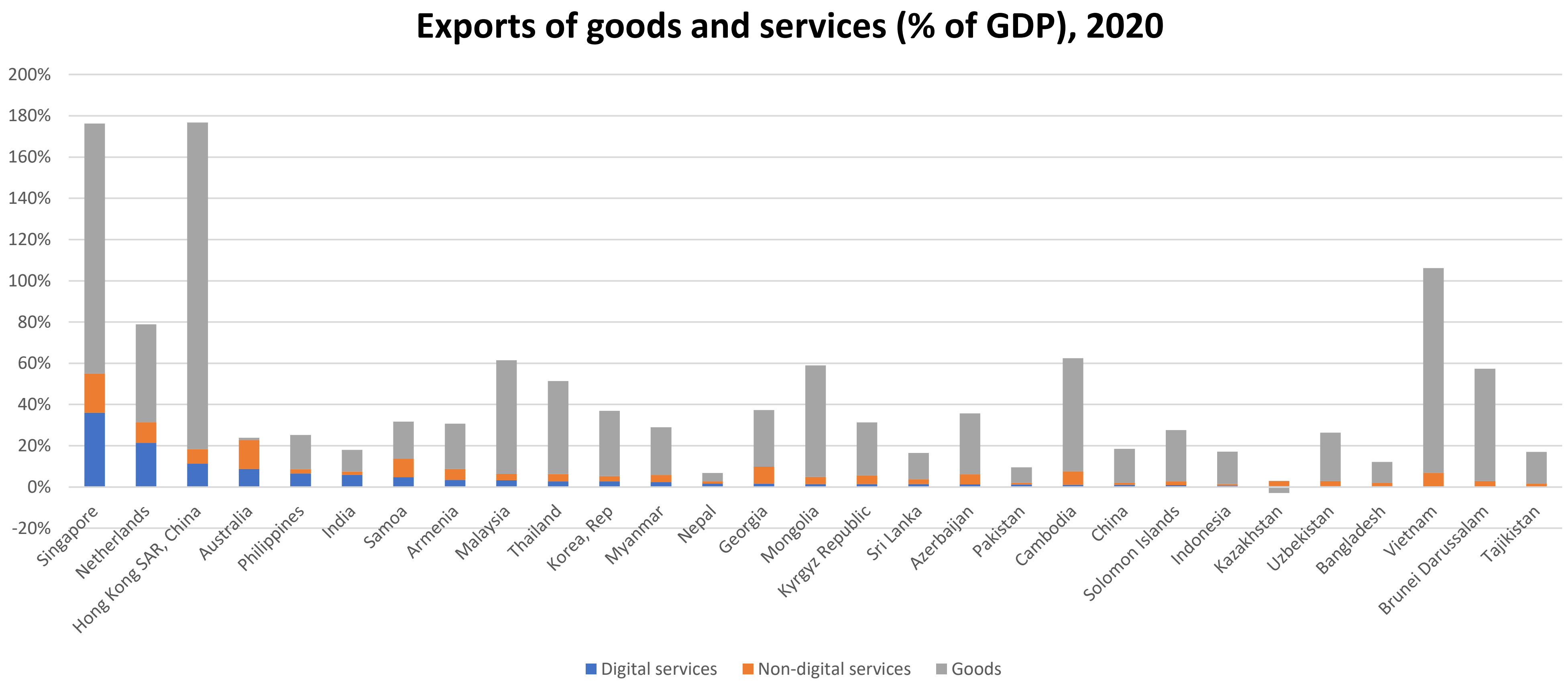
→ Governments' role in fostering competitiveness of digital services across society and addressing digital divide and distributional impact

ADB

Q&A

Annex

Participation of services trade in selected economies



Source: World Development Indicators, and WTO-UNCTAD services trade statistics, 2021.

ADB

Examples – DDS exports by economy