

TRENDS IN DIGITAL SERVICES TRADE IN ASIA AND THE PACIFIC

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2.1 Defining Digital Trade

International trade statistics are traditionally compiled around “what” is being traded: which goods and services. However, digitalization is changing that, transforming the way goods and services are produced, traded, and delivered. The focus has shifted from “what” to “how.”

Several approaches have emerged for improving the measurement of international trade in goods and services while acknowledging the effects from digitalization. The United Nations Conference on Trade and Development (UNCTAD) (2019) examines trade in digitally delivered services and the scope of value creation in the information and communication technology (ICT) sector, including telecommunications and computer services. The Asian Development Bank (ADB) (2021a) proposes an input-output framework to measure the digital economy and contribution to national and global production processes. The 2019 *Handbook on Measuring Digital Trade* by the Organisation for Economic Co-operation and Development (OECD), the World Trade Organization (WTO), and the International Monetary Fund (IMF) provides a statistical definition and conceptual framework for the measurement of digital trade (Figure 2.1).

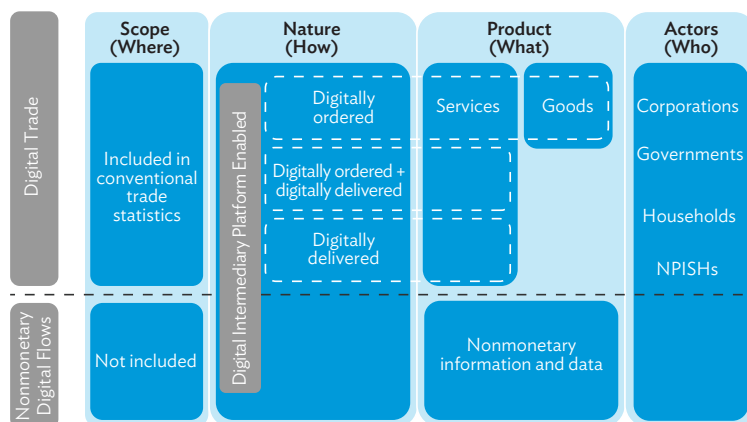
In this framework, digital trade is all (international) trade which is digitally ordered and/or digitally delivered. Digitally ordered trade comprises “the international sale or purchase of a good or service, conducted over computer networks by methods specifically designed for the purpose of receiving or placing orders.”¹ Digitally delivered trade is defined as “international transactions that are delivered remotely in an electronic format, using computer networks specifically designed for the purpose.”

In the current framework, it is considered that only services (not goods) can be digitally delivered. Hence, digital trade in services should encompass all internationally traded services that are either digitally ordered, or digitally

¹ The definition of digitally ordered trade is equivalent to the OECD’s definition of e-commerce (OECD 2011).

delivered, or both. From the measurement perspective, the concepts of “ordering” and “delivering” are not mutually exclusive, and many digitally delivered services are also digitally ordered.²

Figure 2.1: Conceptual Framework for Digital Trade



NPISH = nonprofit institutions serving household.

Source: Organisation for Economic Co-operation and Development, World Trade Organization, and International Monetary Fund. 2019. *Handbook on Measuring Digital Trade*. Version 1. Paris: OECD Publishing.

However, it is important to remember that for services, certainly more than for goods, the “how” became an important aspect long before the advent of digitalization. The General Agreement on Trade in Services (GATS) identifies four ways of delivering services internationally, or four modes of supply, defined based on the location of the supplier and the consumer when services are rendered, the nationality of the supplier, and the way in which the service is provided (United Nations et al. 2002, paragraph 2.15). Mode 1, or cross-border supply, takes place when a service is supplied from the territory of one WTO member into the territory of any other, implying that both the supplier and the consumer remain in their respective territories when the service is rendered and consumed.

² However, it is also likely that many digitally delivered services transactions are not digitally ordered. For instance, roaming mobile communications charges incurred while abroad are digitally delivered but not digitally ordered; also, most large-scale transactions in services between firms, and especially intra-firm services, may also be digitally delivered but not digitally ordered (OECD, WTO, and IMF 2019).

**Figure 2.2: Measuring Trade in Digital Services:
A Schematic View on Possible Proxies**



Note: Mode 1, or cross-border trade in services, takes place when a service itself is supplied from the territory of one World Trade Organization member into the territory of any other member.

Source: Authors' illustration.

It is thus clear that the GATS definition of mode 1 greatly overlaps with the coverage of digitally delivered services, although it is worth noting that some services are deemed to be supplied via mode 1 but are not digitally deliverable (such as transport) and that some services can be digitally delivered and consumed abroad (i.e. via mode 2). Additionally, the notion of digital delivery is also very close to the pre-existing concept of “ICT-enabled services,” defined as “services products delivered remotely over ICT networks” in UNCTAD (2015).

With the objective of achieving better alignment with mode 1 delivery and ICT-enabled services, while at the same time making measurement efforts easier, a second version of the Handbook on Measuring Digital Trade provides a simplified definition of digitally delivered trade which includes “all international transactions that are delivered remotely over computer networks” (OECD-WTO-IMF-UNCTAD, forthcoming).

Figure 2.2 illustrates the relationships between the different statistical concepts. Importantly, these relationships apply to both the original (2019) and the updated (forthcoming) definition of digitally delivered trade.

While digital transformation entails that more services become tradable across borders through digital tools, new services business models are also created, which are inherently *digital* (e.g., based on data analytics or cloud computing). Within this group, services provided by digital intermediation platforms are particularly relevant. The services provided by digital intermediation platforms are defined as “online, fee-based, intermediation services enabling transactions between multiple buyers and multiple sellers, without the intermediation platform taking economic ownership of the goods or rendering services that are being sold (intermediated)” (OECD, WTO, and IMF 2019). Digital intermediation platforms

not charging a fee, involving nonmonetary transactions, are out of the scope to measure digital trade in this framework.³

The *Handbook on Measuring Digital Trade* template (OECD, WTO, and IMF 2019), by providing a way to report digital trade transactions in a harmonized way, can support efforts for improving statistics in digital trade for goods and services. In the case of services, it would allow identification of digitally delivered services and services that are digitally ordered, including through a breakdown by service category. The second (forthcoming) edition of the Handbook will provide some conceptual clarifications as well as enhanced compilation guidance to assist compilers in producing better digital trade statistics.

2.2 Digital Trade In Services: What Can We Currently Measure?

Existing statistics do not (yet) allow the separate identification of digitally ordered or digitally delivered trade in services. While some countries have produced estimates of digitally delivered trade, reliable global estimates are not yet available.

In particular, accurate estimates of “digitally ordered” trade are difficult to achieve based on current data sources and compilation methodologies. However, it seems reasonable that many digitally delivered services are also digitally ordered.

The “digitally delivered” part is somewhat easier to measure. Many national statistical offices use surveys to compile trade in services statistics, and the most direct way to produce estimates of digitally delivered trade would be to ask respondents to indicate, for each service exported or imported, the amount (or percentage) that was remotely delivered. The United States, the United Kingdom, Canada, and other countries have recently started to phase in similar approaches to produce first estimates of digitally delivered trade. Most often, these efforts aim at also gathering information on services trade through mode 1, since by definition all digitally delivered cross-border services transactions are mode 1. Hence, the share of cross-border exports or imports that were digitally delivered also provide a (lower bound) view of mode 1 service delivery (for those same products). Likewise, surveys aimed at measuring mode 1 delivery provide an upper-bound estimate of cross-border digitally delivered trade in those service categories where digital delivery is relevant.⁴

³ Some platforms provide “free” (advertising-driven) services to users. These are excluded from the measurement framework.

⁴ For instance, while transport services are mostly supplied through mode 1, they cannot be considered digitally delivered. On the contrary, computer or business services supplied via mode 1 are most likely digitally delivered.

Although gradually more countries have been compiling this information, those efforts remain sporadic and reliable global estimates of digitally delivered (or mode 1) trade are not yet available.

Recent initiatives do, however, shed light on the potential of available official statistics to capture these trends. Notably, the UNCTAD-led Partnership on Measuring ICT for Development introduced the concepts of *ICT-enabled services* and *potentially ICT-enabled services* in an effort to identify the “digital” component in existing statistics (UNCTAD 2015). While *ICT-enabled services* are defined as “services delivered remotely over ICT networks,” *potentially ICT-enabled services* refer to those services that in principle can be delivered remotely over ICT networks, as opposed to those that require physical proximity or movement of physical objects or people.

Building on the above definitions, this chapter considers the scope of services that can in principle be digitally delivered as largely overlapping with the UNCTAD-developed list of potentially ICT-enabled services.⁵ The concept of *potentially ICT-enabled services* is therefore broadly equivalent to that of *digitally deliverable services* and can be used as a reasonable proxy for *digitally delivered services* trade.

Table 2.1 identifies in bold an initial list of services categories that are considered digitally deliverable (or potentially ICT-enabled). The list includes not only inherently digital services like telecommunications and computer services, but also services whose ability to be traded internationally is greatly enhanced by digital tools, such as insurance and financial services, services related to intellectual property, and many types of business services.

Results of UNCTAD-led pilot surveys conducted in Costa Rica and Thailand confirm, as expected, that digitally deliverable services (or potentially ICT-enabled services) are, most of the time, digitally delivered.⁶ Although some service categories likely include a component of non-digital transactions, this component is likely to account for a minor share.

Existing statistics on international trade in services (on a balance of payments basis) for the service categories can provide reasonable upper-bound estimates of trade in digitally delivered services. When possible, this chapter presents trends and insights on trade in digitally deliverable services for ADB members, following the definition provided in Table 2.1. When detailed categories are not available, figures follow a less detailed breakdown, as specified in the “parent category” column of Table 2.1.

⁵ Minor differences in coverage exist—OECD, WTO, and IMF (2019). Chapter 4 provides more details. Those differences have marginal weight in total services trade.

⁶ A survey in Costa Rica, for instance, showed that 97% of exports in digitally deliverable services were digitally delivered. UNCTAD. Meeting: UNCTAD Training to Help Launch New Pilot Survey on International Trade in ICT-Enabled Services. <https://unctad.org/meeting/unctad-training-help-launch-new-pilot-survey-international-trade-ict-enabled-services>.

Table 2.1: Digitally Deliverable Services

Code	Service Description	Digitally Deliverable	Parent Category
SA	Manufacturing services on input owned by others		Manufacturing services on input owned by others
SB	Maintenance and repair services n.i.e.		Maintenance and repair services n.i.e.
SC	Transport services		Transport services
SD	Travel		Travel
SE	Construction		Construction
SF	Insurance and pension services	✓	Insurance and pension services
SG	Financial services	✓	Financial services
SH	Charges for the use of intellectual property n.i.e.	✓	Charges for the use of intellectual property n.i.e.
SI1	Telecommunication services	✓	Telecommunication, computer, and information services
SI2	Computer services	✓	Telecommunication, computer, and information services
SI3	Information services	✓	Telecommunication, computer, and information services
SJ1	Research and development services	✓	Other business services
SJ2	Professional and management consulting services	✓	Other business services
SJ3	Technical, trade-related, and other business services	✓ ^a	Other business services
SK1	Audiovisual and related services	✓	Personal, cultural, and recreational services
SK2	Other personal, cultural, and recreational services	✓ ^a	Personal, cultural, and recreational services
SL	Government goods and services n.i.e.		Government goods and services n.i.e.

n.i.e. = not included elsewhere.

Note: Items in bold are services categories that are considered digitally deliverable, or potentially information and communication technology (ICT)-enabled.

^a For technical, trade-related, and other business services, subcomponents such as operational leasing services, waste treatment and depollution and trade-related services are not considered to be digitally deliverable; in other personal cultural and recreational services, other personal services (covering social services, membership dues of business associations, domestic services) are not generally considered to be yet digitally deliverable. In both cases, however, the traded values in those categories are negligible and therefore including them in the aggregate of digitally deliverable services does not affect the observed trends.

Source: Based on Organisation for Economic Co-operation and Development, World Trade Organization, and International Monetary Fund. 2019. *Handbook on Measuring Digital Trade*. Version 1. Paris: OECD Publishing.

2.3 Trends in Asia and the Pacific

2.3.1 Global Landscape

Asia's participation in digital services trade and their economic development suggests there is room for improvement. Overall, a mild positive relationship exists between gross national income (GNI) per capita and the digitally deliverable services exports share (Figure 2.3). High-income economies seem to have a competitive advantage on exporting digitally deliverable services, possibly because generally they are endowed with more advanced technologies and better access to technological goods and services than lower-income economies.

The relationship between economic size and share of digital services exports in total exports is less clear, with European and North American countries better positioned than most developing regions.

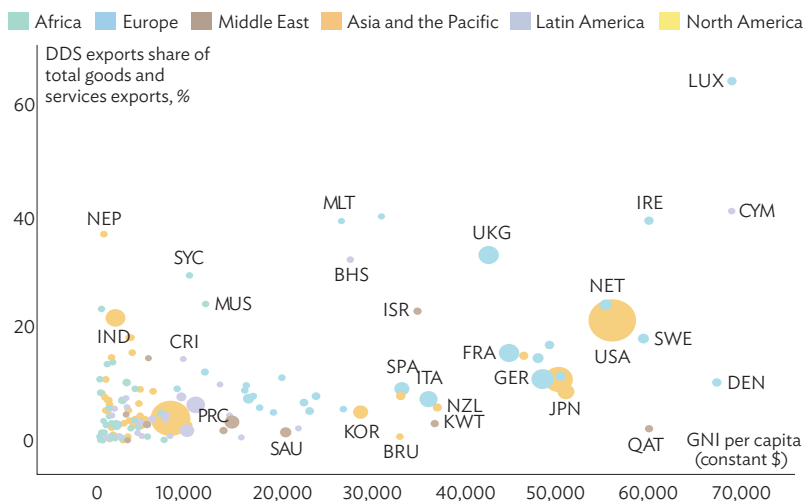
Even relatively advanced economies in Asia and the Pacific such as Australia and the Republic of Korea hover low on the scale in comparison. On balance, it seems that economic size does not necessarily determine competitiveness in digitally deliverable services.

2.3.2 Regional Trends

Three main data sources illustrate trends in digitally deliverable services trade: (i) WTO–UNCTAD trade in services database, which provides the most recent overview of services trade trends from 2005 to 2020, allowing to observe the effects of COVID-19; (ii) WTO–OECD Balanced Trade in Services Dataset (BaTIS), which provides a comprehensive picture on bilateral trade in services flows from 2005 to 2019; and (iii) WTO's Trade in Services by Mode of Supply (TISMOS). These data sources have been reconciled to ensure consistency.⁷

⁷ The WTO–UNCTAD trade in services dataset is the most comprehensive set of official statistics on services trade and is publicly available via UNCTADStat. It presents exports and imports of commercial services in conformity with the Extended Balance of Payments Services Classification (EBOPS 2010), based on the sixth edition of the IMF's *Balance of Payments and International Investment Position Manual* (BPM6). It is also the starting point for the WTO–OECD BaTIS (released in January 2021), an analytical dataset providing a complete bilateral matrix of services trade for 2005 to 2019, covering 202 economies and the 12 main EBOPS 2010 service categories. Both WTO–UNCTAD and BaTIS cover data from balance of payments, which include modes of supply 1, 2, and 4 in the GATS definition. Supplementary data and information—such as on data availability and differences, as well as charts and tables on trends—for the three datasets on trade in services are presented in online Annex 1b of ADB's *Asian Economic Integration Report 2022* available at http://aric.adb.org/pdf/aeir2022_onlineannex1.pdf.

Figure 2.3: Share of Digitally Deliverable Services Exports in Total Goods and Services Exports in Relation to the Size of an Economy (by Region), 2019



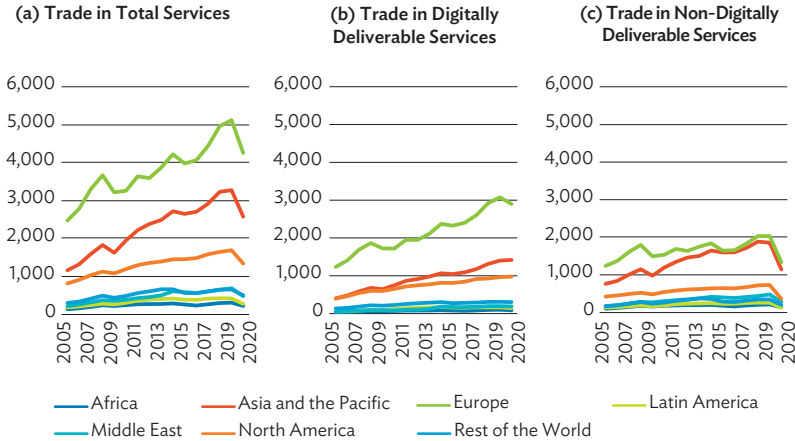
BHS = The Bahamas, BRU = Brunei Darussalam, CRI = Costa Rica, CYM = Cayman Islands, DEN = Denmark, DDS = digitally deliverable services, FRA = France, GER = Germany, GDP = gross domestic product, GNI = gross national income, IND = India, IRE = Ireland, ISR = Israel, ITA = Italy, JPN = Japan, KOR = Republic of Korea, KWT = Kuwait, LUX = Luxembourg, MLT = Malta, MUS = Mauritius, NEP = Nepal, NET = Netherlands, NZL = New Zealand, PRC = People's Republic of China, QAT = Qatar, SAU = Saudi Arabia, SPA = Spain, SWE = Sweden, SYC = Seychelles, UKG = United Kingdom, USA = United States.

Notes: The x-axis is GNI per capita (constant 2010 \$), while along the y-axis is the share of digitally deliverable services exports as percentage of total goods and services exports (log-transformed). The size of the circle is determined by the GDP (constant 2010 \$). The figure plots 144 economies. Only those with complete data were included. Economy groupings follow the Asian Economic Integration Report classification.

Sources: Authors' calculations using World Trade Organization—Organisation for Economic Co-operation and Development Balanced Trade in Services Dataset (BaTIS)—BPM6. https://www.wto.org/english/res_e/statis_e/trade_datasets_e.htm; and World Bank. World Development Indicators. <https://databank.worldbank.org/source/world-development-indicators> (both accessed August 2021).

Trends between 2005 and 2019 confirm total services and digitally deliverable services trade in Asia and the Pacific is growing. Globally, the region is the world's second-largest trader of total services and digital services, after the European Union (Figure 2.4a). From \$403.4 billion in 2005, the region's digitally deliverable services trade increased to \$1.4 trillion in 2019 (Figure 2.4b). As a result, Asia's global share in digitally deliverable services trade grew from 17% to 24% over the same period. In 2020, digital services trade represented 55% of total services trade in the region. Other emerging regions, including the Middle East and Latin America, experienced considerably less growth over this period.

Figure 2.4: Trade in Services by Region
(\$ billion)



Notes:

- (i) Digitally deliverable services include insurance and pension services; financial services; charges for the use of intellectual property not included elsewhere (n.i.e.); telecommunications, computer, and information services; other business services; and personal, cultural, and recreational services.
- (ii) Non-digitally deliverable services include manufacturing services on physical inputs owned by others; maintenance and repair services n.i.e.; transport; travel; construction; and government goods and services n.i.e.
- (iii) Total services is the sum of digitally deliverable services and non-digitally deliverable services.
- (iv) Economy groupings follow the Asian Economic Integration Report classification. All economies not included in the integration indicators groupings are classified as Rest of the World.
- (v) Figures in conformity with the sixth edition of the International Monetary Fund *Balance of Payments and International Investment Position Manual (BPM6)* as well as the 2010 edition of the *Manual on Statistics of International Trade in Services* (United Nations et al. 2012).

Source: United Nations Conference on Trade and Development (UNCTAD). UNCTADStat: World Trade Organization–UNCTAD (BPM6) International Trade in Services Annual Dataset. <https://unctadstat.unctad.org/> (accessed July 2021).

Growth in global and regional services trade was upended with the onset of COVID-19 in early 2020. Global trade in total services contracted by 21% from 2019 to 2020. Digital services trade was relatively resilient globally, with a 3% year-on-year contraction (Figure 2.4b), while non-digital services plunged by 39% (Figure 2.4c). Asia and the Pacific experienced a moderate increase of 1% in digital services trade in 2020, while other regions experienced slowdown. Consistent with the global decline, trade in non-digital services in Asia and the Pacific contracted by 38% in 2020.

Asia's participation in digital services trade has increased within and outside the region (Table 2.2). From \$120.8 billion in intraregional trade in digital services

in 2005, it tripled its volume to \$483.5 billion by 2019. The region has also strengthened linkages with other regions, notably in Europe (where Asia's share in digital services trade grew to 11.9% in 2019) and in North America (26.3%).

Table 2.2: Shares of Digitally Deliverable Services Trade, 2019
(%)

Reporter	Partner						
	Africa	Asia and the Pacific	Europe	Latin America	Middle East	North America	Rest of the World
Africa	3.3	20.7	45.0	1.8	4.1	19.6	5.6
Asia and the Pacific	1.5	38.8	27.5	2.0	3.3	22.2	4.7
Europe	1.4	11.9	58.2	2.2	2.8	14.2	9.2
Latin America	0.9	13.1	33.5	5.3	1.7	41.0	4.5
Middle East	2.1	22.6	44.9	1.7	5.6	17.2	5.9
North America	1.7	26.3	39.1	7.3	3.0	12.3	10.2
Rest of the World	1.0	11.6	56.4	1.7	2.1	22.6	4.4

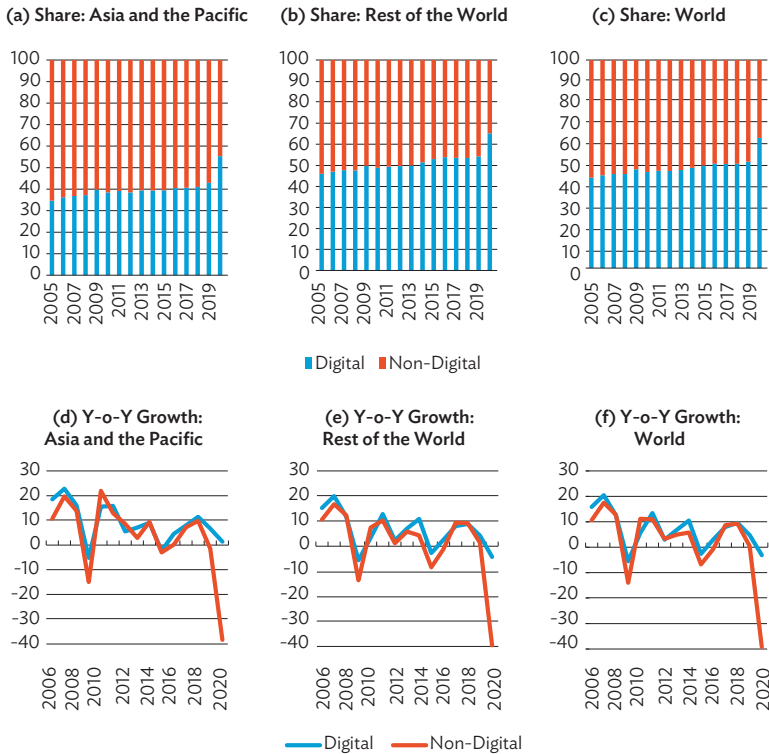
Notes: Orange cells indicate increased shares from 2005 and red indicates decreased shares from 2005. The table indicates the share of bilateral trade from one region to another (extraregional) and one region to its own region (intra-regional) in 2019. The bilateral trade levels are presented in ADB's *Asian Economic Integration Report 2022* online Annex 1 (Tables 1b.3 and 1b.4) available at http://aric.adb.org/pdf/aeir2022_onlineannex1.pdf.

Source: Authors' calculations using World Trade Organization—Organisation for Economic Co-operation and Development Balanced Trade in Services Dataset (BaTIS)—BPM6. https://www.wto.org/english/res_e/statistics_e/trade_datasets_e.htm (accessed May 2021).

The data confirm a fast-growing share of Asia's digital services trade in total services trade, from 43% in 2005 to 55% in 2020 (Figure 2.5). Indeed, the surge in 2020 as a result of COVID-19 was larger than the accrued improvements observed during the previous decade. Digital services thrived in grueling circumstances during the pandemic. If these trends are generally positive, they also highlight Asia's lower share of digital services trade in total services trade in comparison to the rest of the world.

Services trade has grown faster in Asia and the Pacific than in most other regions (Figure 2.6). Between 2005 and 2020, total services trade in the region grew by 6.0%, well above the 4.5% global average and only comparable to the expansion in the Middle East. Digitally deliverable services, in particular, expanded at an average 9.0% annually, compared with a 6.8% global average. Growth in digital services exports (10%) has outpaced imports (8%) in Asia and the Pacific. That rapidity could be explained in part by noting that many Asian economies started from a lower baseline than developed economies.

Figure 2.5: Shares and Growth of Digitally and Non-Digitally Deliverable Services Trade (%)



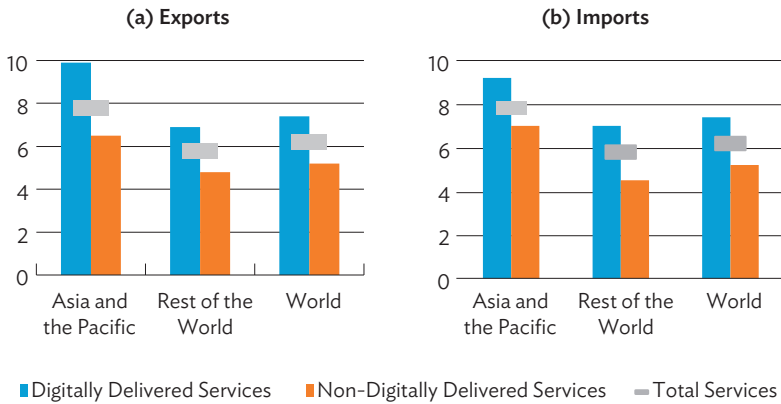
y-o-y = year-on-year.

Notes:

- (i) The values refer to the digitally and non-digitally deliverable services trade (exports plus imports) with the world.
- (ii) The following groupings were used: (a) 43 economies from Asia and the Pacific, (b) 160 economies (all economies in the dataset minus Asia and the Pacific), and (c) world aggregate.
- (iii) Digital includes insurance and pension services; financial services; charges for the use of intellectual property not included elsewhere (n.i.e.); telecommunications, computer, and information services; other business services; and personal, cultural, and recreational services.
- (iv) Non-digital includes manufacturing services on physical inputs owned by others; maintenance and repair services n.i.e.; transport; travel; construction; and government goods and services n.i.e.
- (v) The data conform with the sixth edition of the International Monetary Fund's *Balance of Payments and International Investment Position Manual* (BPM6) as well as the 2010 edition of the *Manual on Statistics of International Trade in Services* (United Nations et al. 2012).

Source: Authors' calculations using United Nations Conference on Trade and Development (UNCTAD). UNCTADStat: World Trade Organization-UNCTAD (BPM6) International Trade in Services Annual Dataset. <https://unctadstat.unctad.org/> (accessed July 2021).

Figure 2.6: Average Annual Growth of Services Trade by Region, 2005–2020 (%)



Notes:

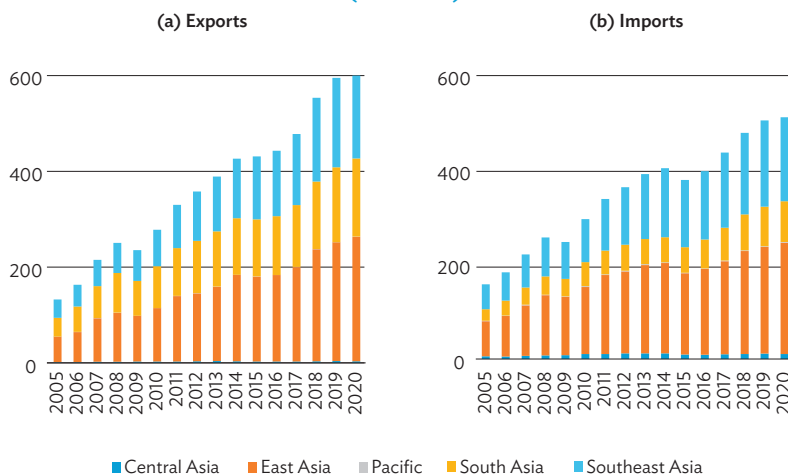
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- (iv) The data conform with the sixth edition of the International Monetary Fund's *Balance of Payments and International Investment Position Manual* (BPM6) as well as the 2010 edition of the *Manual on Statistics of International Trade in Services* (United Nations et al. 2012).

Source: Authors' calculations using United Nations Conference on Trade and Development (UNCTAD). UNCTADStat: World Trade Organization–UNCTAD (BPM6) International Trade in Services Annual Dataset. <https://unctadstat.unctad.org/> (accessed July 2021).

2.3.3 Subregional Trends

With the People's Republic of China (PRC) playing a major role, East Asia (excluding Japan) is the most dynamic region trading digital services in developing Asia (Figure 2.7). In general, exports grew faster than imports in most subregions between 2005 and 2020, led by Southeast Asia (average annual export growth of 11.2%) and South Asia (10.6%), followed by East Asia (9.8%), Central and West Asia (6.0%), and the Pacific (4.7%). Digital services are now important sectors in a number of economies in Southeast Asia and South Asia.

Figure 2.7: Trade in Digitally Deliverable Services of Developing Asia, by Subregion
(\$ billion)



Notes:

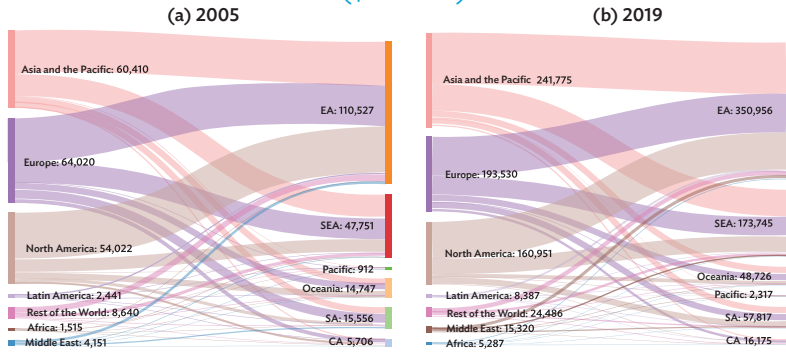
- (i) Economy groupings follow the Asian Economic Integration Report classification of the Asian Development Bank (ADB).
- (ii) Digitally deliverable services include insurance and pension services; financial services; charges for the use of intellectual property not included elsewhere; telecommunications, computer, and information services; other business services; and personal, cultural, and recreational services.
- (iii) The data conform with the sixth edition of the International Monetary Fund's *Balance of Payments and International Investment Position Manual (BPM6)* as well as the 2010 edition of the *Manual on Statistics of International Trade in Services* (United Nations et al. 2012).

Source: Authors' calculations using United Nations Conference on Trade and Development (UNCTAD). UNCTADStat: World Trade Organization-UNCTAD (BPM6) International Trade in Services Annual Dataset. <https://unctadstat.unctad.org/> (accessed July 2021).

Among subregions, East Asia accounts for the highest volume of digital services trade with the rest of the world (Figure 2.8). It received a volume worth more than \$110.5 billion in 2005, which increased to \$351.0 billion in 2019. Aside from intraregional trade (30.7%), North America (31.6%) and Europe (29.8%) were top contributors to East Asia. A similar picture emerges for Southeast Asia, with Europe (33.7%) and North America (21.9%) as important providers of digital services for the subregion.

Asia's top exporters and importers of digitally deliverable services point to the central role of some economies in the region's emergence as a digital services hub. Figure 2.9 lists the most dynamic economies that are exporting and purchasing digital services.

Figure 2.8: Digitally Deliverable Services Exports to Asia and the Pacific
(\$ million)

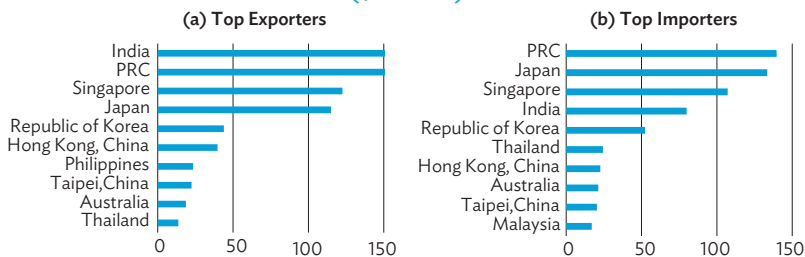


CA = Central Asia, EA = East Asia, SA = South Asia, SEA = Southeast Asia.

Notes: Bilateral trade flows from the different regions of the world to various Asian subregions in 2005 and 2019. Economy groupings follow the Asian Economic Integration Report classification. All economies not included in the integration indicators groupings are classified as Rest of the World. Digitally deliverable services include insurance and pension services; financial services; charges for the use of intellectual property not included elsewhere; telecommunications, computer, and information services; other business services; and personal, cultural, and recreational services.

Source: World Trade Organization—Organisation for Economic Co-operation and Development Balanced Trade in Services Dataset (BaTIS)—BPM6. https://www.wto.org/english/res_e/statis_e/trade_datasets_e.htm (accessed May 2021).

Figure 2.9: Top Asian Exporters and Importers of Digitally Deliverable Services, 2020
(\$ billion)



PRC = People's Republic of China.

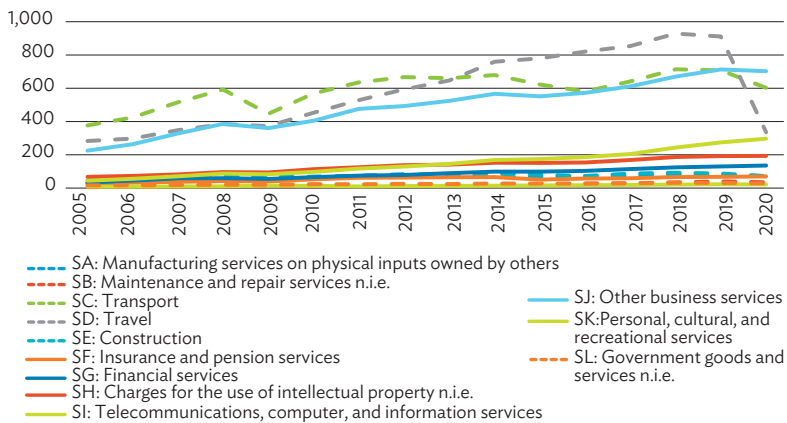
Notes: Digitally deliverable services include insurance and pension services; financial services; charges for the use of intellectual property not included elsewhere; telecommunications, computer, and information services; other business services; and personal, cultural, and recreational services. The data conform with the sixth edition of the International Monetary Fund's *Balance of Payments and International Investment Position Manual* (BPM6) and the 2010 edition of the *Manual on Statistics of International Trade in Services* (United Nations et al. 2012).

Source: Authors' calculations using United Nations Conference on Trade and Development (UNCTAD). UNCTADStat: World Trade Organization—UNCTAD (BPM6) International Trade in Services Annual Dataset. <https://unctadstat.unctad.org/> (accessed July 2021).

2.3.4 Sector Trends

Overall, services trade displayed steady growth until the arrival of the pandemic. Figure 2.10 underlines the predominance of three main services sectors in the region: travel services (SD), transport (SC), and other business services (SJ). Travel and transport (which includes passenger transport) suffered greatly, given the need for physical presence, and were severely affected by tightened restrictions to international travel. Other business services contracted much less as most services in this category can be digitally delivered and do not require physical proximity.

Figure 2.10: Trade in Services in Asia and the Pacific, by Sector
(\$ billion)



n.i.e. = not included elsewhere.

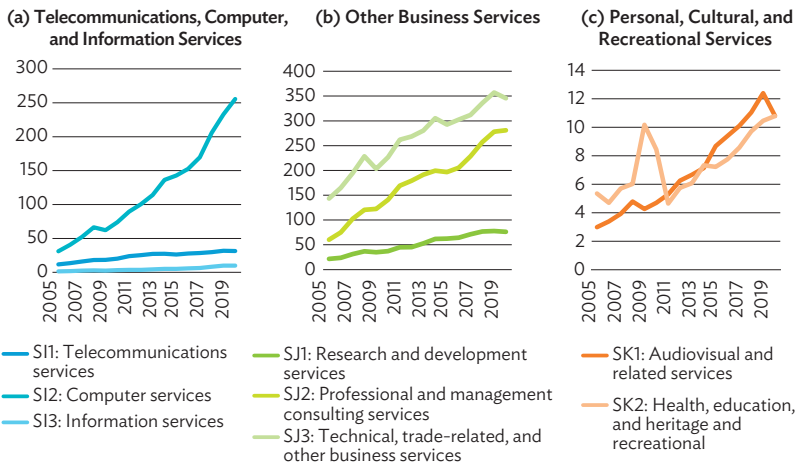
Notes: Solid lines are digitally deliverable services, while dotted lines are non-digitally deliverable service items. The data conform with the sixth edition of the International Monetary Fund's *Balance of Payments and International Investment Position Manual* (BPM6) as well as the 2010 edition of the *Manual on Statistics of International Trade in Services* (United Nations et al. 2012).

Source: Authors' calculations using United Nations Conference on Trade and Development (UNCTAD). UNCTADStat: World Trade Organization-UNCTAD (BPM6) International Trade in Services Annual Dataset. <https://unctadstat.unctad.org/> (accessed July 2021).

Figure 2.11 further dissects trends in digitally deliverable services, in particular for telecommunications, computer, and information services (SI); other business services (SJ); and personal, cultural, and recreational services (SK). Trade in computer services, which includes, for example, computer software,

cloud computing, and data storage services, displayed the steepest and most continuous growth, increasing eightfold from \$31 billion in 2005 to \$256 billion in 2020 (Figure 2.11a). For trade in other business services, growth since 2005 has been steady for professional and management consulting services, including legal services, accounting, auditing, advertising, and market research services. Finally, the region's trade in personal, cultural, and recreational services, which includes health and education, expanded—though it remains relatively modest in size.

Figure 2.11: Trade in Services in Asia and the Pacific, by Sector Breakdown
(\$ billion)



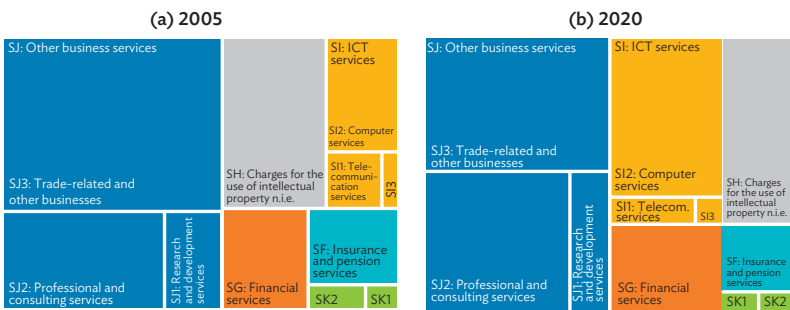
Notes: The figure shows the breakdown of total services trade (exports plus imports) in three sectors: telecommunications, computer, and information services (SI); other business services (SJ); and personal, cultural, and recreational services (SK). The data conform with the sixth edition of the International Monetary Fund's *Balance of Payments and International Investment Position Manual* (BPM6) as well as the 2010 edition of the *Manual on Statistics of International Trade in Services* (United Nations et al. 2012).

Source: Authors' calculations using United Nations Conference on Trade and Development (UNCTAD). UNCTADStat: World Trade Organization-UNCTAD (BPM6) International Trade in Services Annual Dataset. <https://unctadstat.unctad.org/> (accessed July 2021).

These trends attest to the changing composition of the region's services trade toward digital services (Figure 2.12). Between 2005 and 2020, digital services trade expanded, in particular, telecommunications, computer, and information services (13.8%); followed by financial services (10.6%); other business services (8.2%); insurance and pension services (7.7%); charges for the use of intellectual

property not included elsewhere (7.5%); and personal, cultural, and recreational services (7.4%). The COVID-19 shock exacerbated this trend. Between 2019 and 2020, the region's trade in telecommunications, computer, and information services grew by 8.1%; followed by financial services (4.3%), and insurance and pension services (3.9%). In contrast, other business services recorded a mild (-1.4%) contraction.

Figure 2.12: Trade in Digitally Deliverable Services in Asia and the Pacific, by Service Item



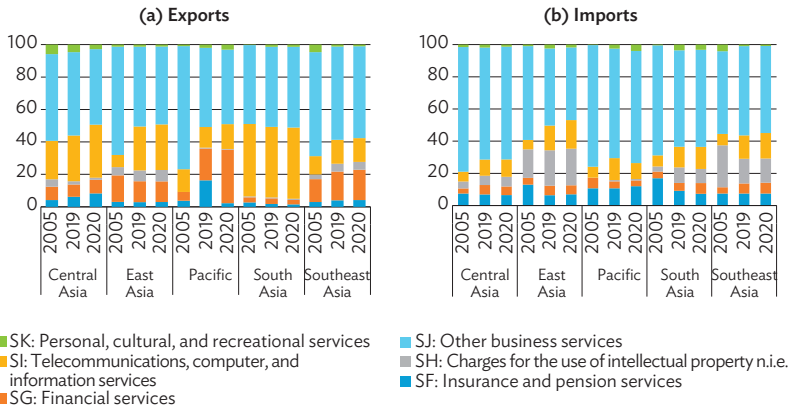
ICT = information and communication technology; n.i.e. = not included elsewhere; S13 = information services; SK1 = audiovisual and related services; SK2 = other personal, cultural, and recreational services.

Note: The data conform with the sixth edition of the International Monetary Fund's *Balance of Payments and International Investment Position Manual (BPM6)* as well as the 2010 edition of the *Manual on Statistics of International Trade in Services* (United Nations et al. 2012).

Source: Authors' illustration using United Nations Conference on Trade and Development (UNCTAD). UNCTADStat: World Trade Organization-UNCTAD (BPM6) International Trade in Services Annual Dataset. <https://unctadstat.unctad.org/> (accessed July 2021).

Asian subregions show some differences in digital services trade participation (Figure 2.13). Other business services and telecommunications, computer, and information services are dominant in most Asian subregions. Other business services account for almost 50% of digital services in most subregions, and for 80% in the Pacific. Telecommunications, computer, and information services exports are notably larger in South Asia. In general, the COVID-19 pandemic disrupted the volume, if not the composition, of digital services trade in most subregions, except for the Pacific. Box 2.1 presents some examples of digitally deliverable services.

Figure 2.13: Digitally Deliverable Services Trade in Asian Subregions (% share)



n.i.e. = not included elsewhere.

Notes: The data conform with the sixth edition of the International Monetary Fund's *Balance of Payments and International Investment Position Manual* (BPM6) as well as the 2010 edition of the *Manual on Statistics of International Trade in Services* (United Nations et al. 2012).

Source: Authors' calculations using United Nations Conference on Trade and Development (UNCTAD). UNCTADStat: World Trade Organization-UNCTAD (BPM6) International Trade in Services Annual Dataset. <https://unctadstat.unctad.org/> (accessed July 2021).

2.3.5 Modes of Supply

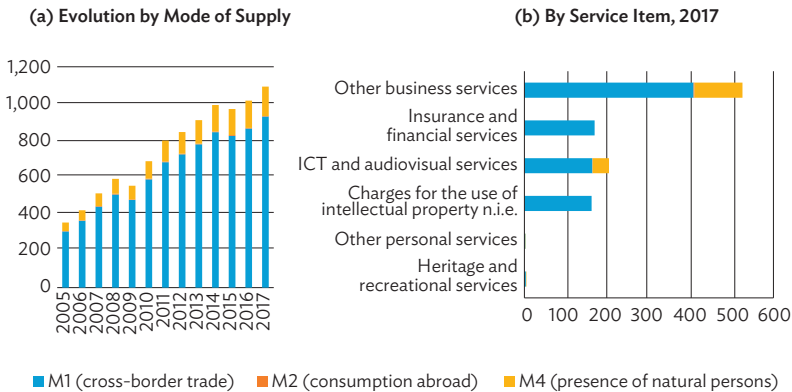
To complement the information provided in WTO-UNCTAD and BaTIS on digitally deliverable services, the WTO's Trade in Services by Mode of Supply (TISMOS) provides estimates of trade in services broken down by the four modes of supply, as defined in the General Agreement on Trade in Services (GATS).

By including services provided through having commercial presence (besides modes 1, 2, and 4), TISMOS depicts a more comprehensive picture of global trade in services. Indeed, mode 3 (commercial presence) is Asia's predominant mode of services supply, both for exports and for imports, mirroring the global trend. Globally, the mode 3 share remained stable, around 60%, between 2005 and 2017. Over the same period, Asia's services imports as a share of mode 1 increased from 13% to 14%, while exports as a share of mode 1 declined from 14% to 11%.

Leaving aside commercial presence, TISMOS data confirm the relative importance of mode 1 within the identified cluster of digital services and for

refining the upper-bound estimates of digital services presented so far.⁸ In some cases, the international supply of digital services may require physical presence of the service supplier in the territory of the consumer and so involve a non-negligible mode 4 component. Figure 2.14 replicates Figure 2.8 but highlights, for digital services, the actual mode of supply.⁹ As expected, mode 1 is the predominant mode of supply in Asia's services exports.

Figure 2.14: Trade in Digitally Deliverable Services in Asia, by Mode of Supply
(\$ billion)



ICT = information, computer, and telecommunication; n.i.e. = not included elsewhere;
TISMOS = Trade in Services Data by Mode of Supply.

Notes: Other business services exclude trade-related services. The World Trade Organization (WTO) defines the modes of supply as: M1 (cross-border trade)—from the territory of one WTO member into the territory of any other member; M2 (consumption abroad)—in the territory of one member to the service consumer of any other member; and M4 (presence of natural persons)—by a service supplier of one member, through the presence of natural persons of a member in the territory of any other member. Data for 2017, which is the latest available year in TISMOS.

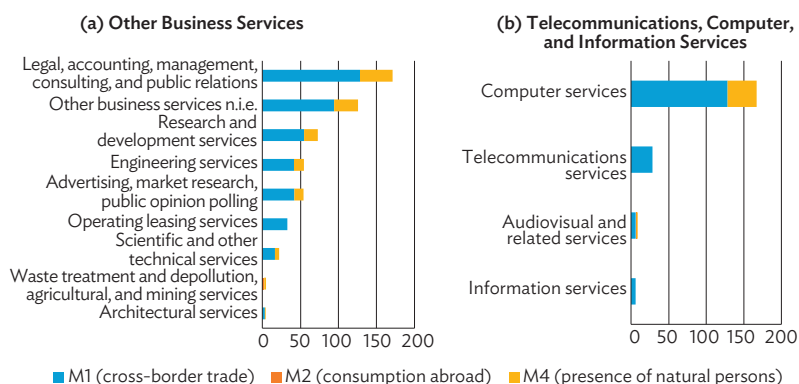
Source: WTO and Directorate-General for Trade of the European Commission. TISMOS. https://www.wto.org/english/res_e/statis_e/trade_datasets_e.htm (accessed July 2021).

⁸ Notwithstanding the (minor) differences between digital delivery and mode 1. See the section on the measurement framework and definitions on pages 10-13.

⁹ It has to be noted, however, that TISMOS includes estimations by the WTO.

Figure 2.15 provides a further decomposition of services grouped under other business services and telecommunications, computer, and information services, with each service category broken down by mode of supply. Although the assumption that digitally deliverable services are remotely delivered still holds in most cases, the figures suggest that for services such as computer, legal, accounting, management consulting, and research and development, the physical presence of the supplier is still important for service delivery. Box 2.2 presents brief case studies on the role of digitalization for the shift in the delivery mode of services and implications for the region.

Figure 2.15: Asia's Largest Digitally Deliverable Services Subsectors, by Mode of Supply
(\$ billion)



n.i.e. = not included elsewhere.

Notes: Other business services exclude trade-related services. The World Trade Organization (WTO) defines the modes of supply as: M1 (cross-border trade)—from the territory of one WTO member into the territory of any other member; M2 (consumption abroad)—in the territory of one member to the service consumer of any other member; and M4 (presence of natural persons)—by a service supplier of one member, through the presence of natural persons of a member in the territory of any other member.

Source: WTO and Directorate-General for Trade of the European Commission. Trade in Services Data by Mode of Supply (TISMOS). https://www.wto.org/english/res_e/status_e/trade_datasets_e.htm (accessed July 2021).

Box 2.1: Recent Developments in Digitally Deliverable Services in Developing Asia

Asia's expansion in digitally deliverable services exports encompasses a wide range of industries, geographic hubs, and ecosystems. Some examples from the region in the six categories defined in the conceptual framework are presented here.

Insurance and Pension Services (SF). Digital technologies are redefining how insurance services are being accessed and distributed, with big data, data analytics, and artificial intelligence (AI) increasingly used for underwriting and the pricing of risk. Other digitally enabled services in the industry include claims management, data management, new insurance service offerings, marketing and distribution, platforms, and partnerships. For example, the People's Republic of China (PRC) online insurer ZhongAn has automatized more than 95% of claim underwriting and settlement rates, with more than 70% of customer service claims managed through AI.

Financial Services (SG). Financial services driven by digital technologies—or fintech—have evolved quickly, with big data, cloud computing, and distributed ledger technology becoming ubiquitous in the sector. Fintech adoption in Asia and the Pacific has grown substantially over the past 2 years, with digital payments accounting for 86% of Asia's fintech transaction value.^a The increasing use of digital payments by governments-to-individuals (G2P) or governments-to-companies (G2B) has contributed to this trend.^b

Card and e-money are dominant and rising cashless payment instruments in Asia and the Pacific. Singapore's Coda Payments helps digital content providers monetize their products and operates as a platform for processing transactions for purchases online and charge them to prepaid accounts. Another payments platform, Nium, focuses on business-to-business (B2B) transactions and supports businesses to accept and make online payments. Also, Japan's Crowd Credit provides debt capital to peer-to-peer lending platforms, nonbank financial institutions, microfinance institutions, and renewable energy businesses.

Charges for the use of intellectual property not included elsewhere (SH). Services in this category include payments and receipts between residents and nonresidents for the authorized use of proprietary rights (such as patents, trademarks, copyrights, industrial processes and designs including trade secrets and franchises) and for the use, through licensing agreements, of produced originals or prototypes and related rights.

Telecommunications, Computer, and Information Services (SI). Information and communication technology services are the fastest growing component of the global trade in services. Services including the internet, mobile telephony, and data transmission provide the basic infrastructure for other services to be provided digitally. The provision of high-speed connectivity, 5G, and the development industry-specific software has accelerated this expansion.

Other Business Services (SJ). Increasing multinational activity and outsourcing has led to a considerable rise in exports of other business services, including research and development services, professional and management consulting services (such as legal, accounting, advertising, and management consulting services), architectural, engineering, scientific, and other technical services.

Box 2.1 *continued*

The Philippines is one of the major hubs for the services exports through business process outsourcing (BPOs) such as call centers and high-end outsourcing or knowledge process outsourcing and business process management. About 788 companies provide IT-BPO services to domestic and international firms including Accenture, Citi, Convergys, HSBC, and JP Morgan. In legal services, the PRC law firms are pursuing international strategies. FenXun Partners provides legal counseling to investors doing business in the PRC and now advises the PRC firms expanding overseas.

Personal, Cultural, and Recreational Services (SK). Services included in this group include audiovisual and creative industries (audiovisual production, movies, and television programming rights to use audiovisual products), health services, education services, heritage, and recreational services. While trade in some of these sectors is still relatively small, it is growing rapidly.

Digital health services thrived during the coronavirus disease (COVID-19) pandemic to reduce patients' exposure and avoid overburdening the national health systems. Cross-border health services include shipment of laboratory samples, screening, diagnosis, and teleconsultations. In several economies such as the PRC and Indonesia, digital health services grew during the pandemic. Education services were already on the rise before the pandemic, with school and university closures exacerbating this trend. While many of the virtual education initiatives during the pandemic targeted domestic demand, some economies expanded their foreign operations. The expansion of massive open online courses has opened opportunities in this regard. Malaysia, Singapore, and several other regional economies have also pursued an internationalization strategy to become important global education hubs.

^a Asian Development Bank. 2021. *Asian Economic Integration Report 2021: Making Digital Platforms Work for Asia and the Pacific*. Manila.

^b In the context of services trade, the Extended Balance of Payments Services Classification (EBOPS 2010) definition of financial services include, among others, brokerage and market-seeking services, underwriting and private placement services, credit card and other related services, financial management services, and electronic funds transfers.

Sources: Authors based on Baur, Yew, and Xin (2021); and Osborne Clarke (2020).

Box 2.2: Key Features of Digital Services Trade in Developing Asia

Digital services have been the fastest growing area of trade in recent years. Their contribution within manufacturing and services exports (excluding information and communication technology) has grown globally and in Asia and the Pacific, underscoring their indirect (embedded) contribution to exports. Using mode 1 data as a proxy for digital services trade, trade (exports and imports) for these economies is dominated by business, professional, and computer and information services, followed by financial and insurance services. There is a significant shift from mode 4 toward mode 1, indicating the growing role of digital services trade as opposed to that based on the mobility of people.

Three profiles among the selected economies can be identified. The first group consists of large and established exporters, which are competitive in digital services exports with consistently strong performance in this area, depend on such exports, and are engaged in direct exports to varied export markets. The second group includes other middle- and upper middle-income economies. Although their exports of digital services are large, growth is strong, and their significance in overall services exports is high and growing, their competitiveness essentially still lies in manufacturing and not in digital services, and performance in digital services exports seems to be linked to growth in other parts of the economy (like manufacturing and e-commerce). The third group includes jurisdictions that are showing varied performance. They tend to have high growth in digital services exports but at a nascent stage, with a limited basket and export markets. They have potential, but growth remains weak.

The economies also show characteristics distinctive of their stage as digital services exporters. They differ greatly in the scale and diversity of export segments, from conventional call center and business process outsourcing (BPOs) services, to domain and skill-specific outsourcing, to higher value-added segments such as artificial intelligence (AI)-based solutions and predictive analytics.^a There is also a distinct difference between economies with global presence (e.g., the Philippines) with offshore delivery centers worldwide, and regional exporters (e.g., Fiji, Indonesia, Mongolia). These economies differ in the extent and nature of integration of digital services exports with other economies.^b

An examination of the digital readiness and regulatory environment for the selected economies reveals differences and helps identify scope for improvement. What emerges is a gap in technological infrastructure and the startup environment, followed by inadequacies in human capital and the ease of doing business. There are restrictions to trade arising from infrastructure and connectivity issues, as well as conditions on electronic transactions, data protection, and other regulatory requirements.

The Philippine Case

The Philippines has a large and globally competitive information technology (IT)-BPO industry. The country currently accounts for over 12% of the global IT-BPM market and is expected to cover 15% of the global outsourcing market by 2022.^c Exports are diversified spanning subsectors: contact centers, knowledge process outsourcing and back offices, software development, animation, game development, medical transcription, and engineering design.

Box 2.2 *continued*

Contact center services are the most important segment. The industry generated \$24.7 billion in revenue in 2018, with call centers accounting for about half of the total. Contact center services are provided to companies such as Accenture, Transcom, and Concentrix. The country is the second-largest offshore location for global shared services, driven by high growth areas such as data analytics, automation, and security. The Philippines is also an important player in business segments such as transcription, engineering services outsourcing, high-value services for specific industry verticals, and animation and game development. According to industry experts, potential also exists in indirect digitally enabled services, AI-based knowledge process outsourcing, construction design, and platform-enabled trade. Key industry verticals and applications include financial, accounting, travel and hospitality, health care, content moderation, network services, cybersecurity, and digital customer experience management (CXM).

The Philippines shows a broad diversity in services provided and its client base. The online advertising segment, which has grown due to online video platforms, is expected to grow to \$79 million by 2030.^d In the animation and games development segment, the Philippines provides services to international game developers and producers such as France's Ubisoft. Other clients include Disney, Cartoon Network, DreamWorks, Nintendo, and Warner Brothers. The Philippines is a prominent offshore-nearshore location for health services delivery in care management, medical coding, transcriptions, claims processing, telemedicine, and health analytics, given the presence of many United States (US)-registered nurses and its mix of medical know-how and customer servicing skills.

Key Features in Developing Asia

Several salient features emerge for developing Asia's digital services trade:

- Economies are distinctive of their stage as digital services exporters. They differ greatly in export scale and diversity, from conventional call center and BPO-type services, to domain and skill-specific outsourcing, to higher value-added segments such as AI-based solutions and predictive analytics.
- Market size emerges as both an opportunity and a constraint. While large markets can support digital services solutions that are exportable or can provide the human resources needed to export a wide range of digital services, small markets (e.g., Mongolia) can provide a laboratory to experiment with niche solutions and applications.
- Digital literacy and adoption are important. Digital transformation in key sectors such as education, banking and finance, business-to-business (B2B) trade, and commerce has been important, and the growth of online financial transactions, in particular, appears an important facilitator of digital services trade.
- The role of investment (foreign direct investment and venture capital funding in unicorns) emerges as important for growth prospects in digital services exports for most economies. Thus, modalities of digital services exports may be bundled to include different modes of delivery.
- Several factors that can be leveraged to boost exports of digital services include well-recognized cost-based arbitrage, availability of skills, location, language, digital infrastructure, and less recognized factors such as "servicification" (increasing use, production, and supply of services by manufacturers), e-commerce, digital innovation, and domestic market-led scale economies. Several economies have potential for indirect exports of digital services in certain products (automotive, health devices).

continued on next page

Box 2.2 continued

- All economies reflect the importance and complementarities of digital services imports alongside exports, indicating the importance of supporting two-way trade and cross-border data flows. Trade openness has a bearing on ability to export.

^a Some economies are present in all parts of the digital services export value chain, whereas others are present in specific segments. More mature economies want to move toward higher value digital services, based on innovation and in specific domains or verticals.

^b In the case of the People's Republic of China, digital services exports are linked to strengths in manufacturing, e-commerce, and the wider digital economy. For the Philippines, digital services exports are related to overseas demand with potential export-related spinoff effects. In Indonesia, it is largely the domestic market which creates opportunities for expanding digital services exports. For Mongolia, the emergence of technology-based startups with innovative solutions is a potential source for digital services exports.

^c Everest Group. 2020. *Recalibration of Industry Growth Forecasts 2020–22*. Manila: IT and Business Process Association of the Philippines.

^d Hinrich Foundation. 2020. *The Data Revolution: How the Philippines Can Capture the Digital Trade Opportunity at Home and Abroad*. Scottsdale, AZ: Digital Trade Research Project.

Source: Chanda (2021).

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