

## ONLINE ANNEX 1

### A: Intraregional and Extraregional Trade Values Annual Growth Rate by Region

Figure 1: Intraregional Trade

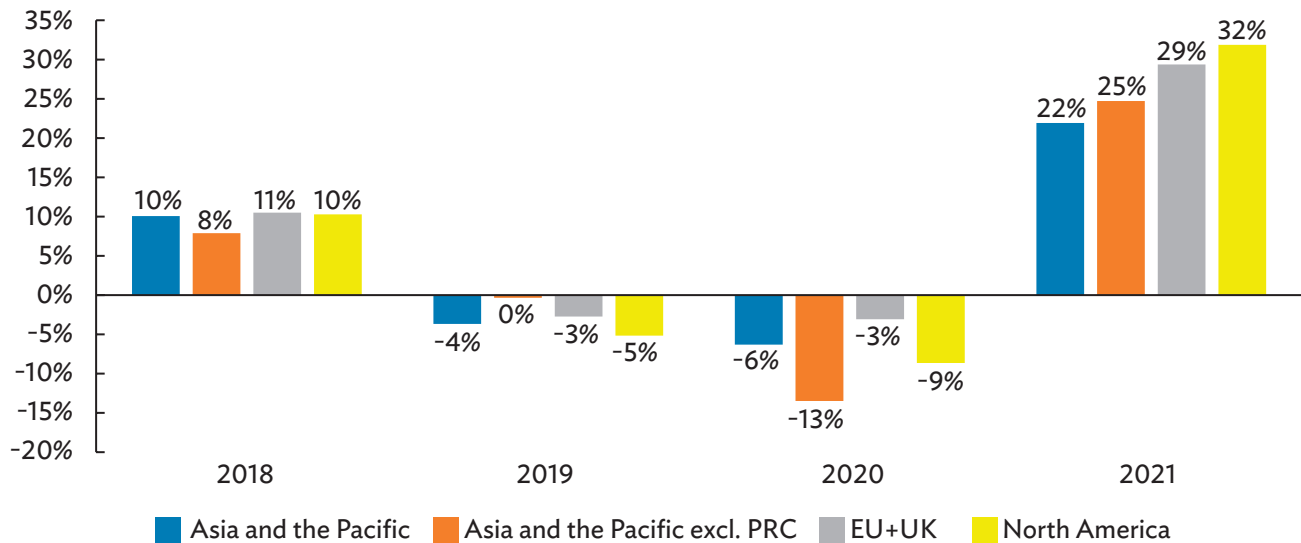
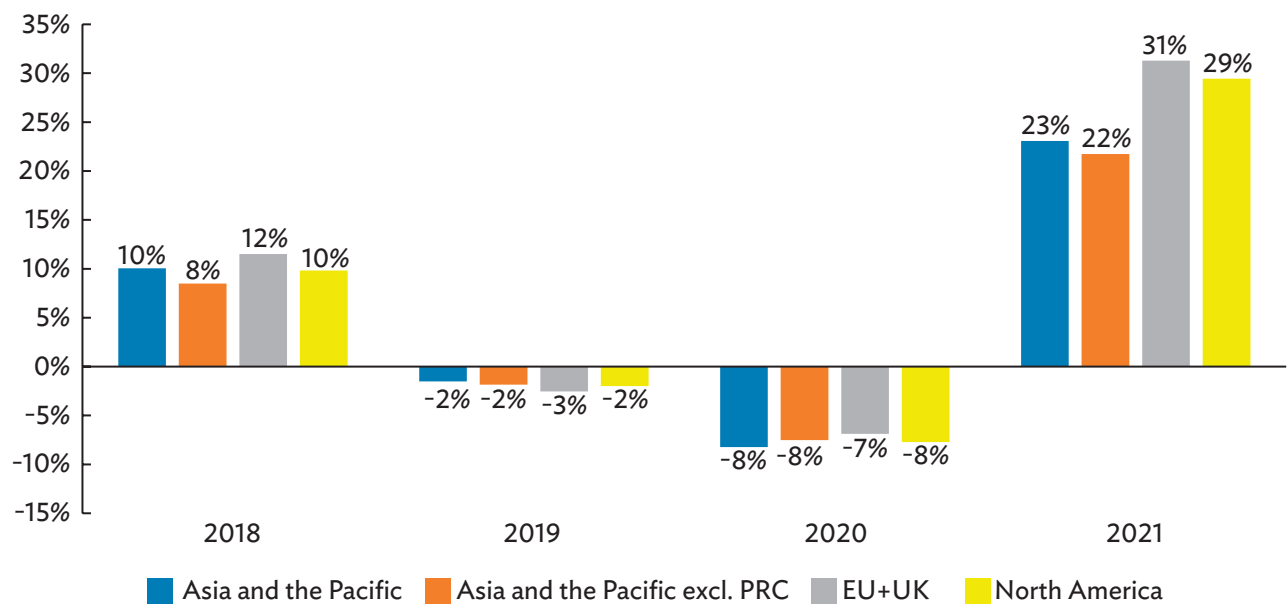


Figure 2: Extraregional trade



EU = European Union, PRC = People's Republic of China, UK = United Kingdom.

Notes: North America covers Canada, Mexico, and the United States.

Source: ADB calculations using data from International Monetary Fund. Direction of Trade Statistics. <https://data.imf.org/dot> (accessed December 2022).

## B: Growth Rates of RVC-GVC Intensity Components at Economy Level, 2021 (%)

Economy	Overall				Complex			
	A	B	C	D	A	B	C	D
Australia	5.0	6.6	6.5	5.4	9.0	6.6	11.7	5.4
Bangladesh	20.9	18.2	18.8	13.5	12.9	18.2	19.0	13.5
Bhutan	122.5	18.3	111.9	25.7	24.3	18.3	74.4	25.7
Brunei Darussalam	-7.9	-6.8	-7.6	-7.3	-10.2	-6.8	-7.7	-7.3
Cambodia	10.8	15.2	12.9	10.3	22.1	15.2	20.9	10.3
China, People's Republic of	18.6	21.1	34.2	30.5	22.6	21.1	39.2	30.5
Fiji	-11.9	-3.4	7.2	9.4	-13.0	-3.4	13.3	9.4
Hong Kong, China	20.2	22.8	20.0	18.2	28.2	22.8	26.2	18.2
India	17.6	19.7	34.5	33.2	19.4	19.7	46.8	33.2
Indonesia	46.7	47.6	45.4	39.9	45.8	47.6	49.6	39.9
Japan	13.2	15.5	18.7	15.9	16.8	15.5	25.3	15.9
Kazakhstan	15.1	13.4	29.3	26.6	27.3	13.4	39.7	26.6
Korea, Republic of	24.2	25.8	32.3	25.7	26.3	25.8	37.2	25.7
Kyrgyz Republic	79.5	68.2	48.8	50.3	93.8	68.2	60.6	50.3
Lao People's Democratic Republic	36.2	36.4	40.0	36.7	41.4	36.4	47.4	36.7
Malaysia	27.3	26.6	27.1	24.0	29.4	26.6	28.7	24.0
Maldives	78.8	87.2	99.6	92.9	83.2	87.2	110.0	92.9
Mongolia	15.1	18.2	18.2	17.8	14.9	18.2	22.5	17.8
Nepal	-6.5	-14.1	-14.2	-18.0	-23.3	-14.1	-20.3	-18.0
Pakistan	22.6	29.9	11.8	12.8	25.4	29.9	21.8	12.8
Philippines	13.6	11.4	15.8	11.4	24.4	11.4	19.9	11.4
Singapore	15.3	14.4	15.2	14.3	17.1	14.4	16.8	14.3
Sri Lanka	9.1	12.5	12.7	17.9	8.2	12.5	21.8	17.9
Taipei,China	31.1	30.6	35.6	32.3	33.3	30.6	38.6	32.3
Thailand	10.4	13.2	18.9	14.3	13.8	13.2	23.7	14.3
Viet Nam	11.4	13.9	22.0	17.4	17.3	13.9	27.7	17.4
Asia and the Pacific	18.8	20.3	27.6	24.8	22.5	20.3	32.7	24.8

GVC = global value chain, RVC = regional value chain.

Notes:

- (i) A refers to exports between two Asian economies that involves at least two economies in its value chain network. All third economies are within Asia as well.
- (ii) B refers to exports between two Asian economies that may involve both Asian and non-Asian third economies in its value chain network.
- (iii) C refers to exports that involves at least two economies in its value chain network.
- (iv) D refers to gross exports.
- (v) RVC participation rate = A / B
- (vi) GVC participation rate = C / D
- (vii) RVC-GVC intensity = RVC participation rate / GVC participation rate.
- (viii) Negative growth rates are in red. Under "Complex", A and C are modified to include only exports with value chain network crossing at least two borders.

Sources: ADB calculations using data from ADB. Multi-Regional Input-Output Tables; and methodology by A. Borin and M. Mancini. 2019. Measuring What Matters in Global Value Chains and Value-Added Trade. *Policy Research Working Paper*. No. 8804. Washington, DC: World Bank. <https://openknowledge.worldbank.org/handle/10986/31533>.

## C: Digital Policy Interventions

Digital policy interventions implemented by Asian economies within their respective jurisdictions can have beneficial cross-border spillovers. Australia’s Telecommunications Legislation Amendment (International Production Orders) Bill 2021 seeks bilateral or multilateral agreements with economies willing to join Australia’s international crime cooperation efforts by obtaining International Production Orders that requires designated communications provider overseas. This bill aims to establish cross-border access to data and information. In addition, Indonesia’s Presidential Regulation 10/2021 (PR 10/2021), which is also known as Positive Investment List, liberalizes telecommunications, transportation, and energy sectors. The list either removes the total ban or increases the maximum limit of foreign ownership or investment in telecommunication tower providers, media and broadcasting activities, e-commerce, and internet service providers.

Note that digital policy interventions can also have detrimental cross-border spillovers. While the People’s Republic of China’s (PRC’s) Personal Information Protection Law permits the processors of personal information to provide data outside the territory of the PRC—if and only if the requirements are satisfied, e.g., security assessment—for business, the PRC may impose reciprocal measures to economies or regions that adopt discriminatory or restrictive measures in the protection of personal information. Another example is Bank Indonesia Regulation No. 22/23/PBI/2020 Concerning Payment Systems.<sup>1</sup> This regulation aims to advance digitalization of the banking sector; however, this reduces the allowable level of foreign participation in payment system operations.

### Digital Policy Interventions—Selected Asian Economies

Implementing Economies	Policy Title and Entry into Force	Purpose	Regional Cooperation and Integration
Australia	Telecommunications Legislation Amendment (International Production Orders) Bill 2021, 23 July 2021	<ul style="list-style-type: none"> <li>Amends the Telecommunications (Interception and Access) Act of 1979.</li> <li>Provides a legislative framework to obtain International Production Orders requiring designated communications provider overseas.</li> <li>Aims to intercept communications and provide access to stored communications and telecommunications data from economies with which Australia has a designated international agreement only.<sup>a</sup></li> </ul>	<ul style="list-style-type: none"> <li>Assists Australian agencies in its international crime cooperation efforts as it seeks to negotiate bilateral and multilateral agreements for reciprocal cross-border access to data and information.<sup>b</sup></li> </ul>
Australia, Singapore	Australia–Singapore Digital Economy Agreement, 8 December 2020	<ul style="list-style-type: none"> <li>Replaces the provisions stipulated in the Electronic Commerce chapter of the Australia–Singapore Free Trade Agreement.</li> </ul>	<ul style="list-style-type: none"> <li>Establishes bilateral cooperation to help businesses and financial sector capitalize in the digital economy by facilitating cross-border data flows between Australia and Singapore; not requiring data storage in either jurisdiction; improving protection for source code; committing to compatible e-invoicing and e-payment frameworks; and improving consumer experiences and safety online.<sup>c</sup></li> </ul>

<sup>1</sup> Government of Indonesia, Bank Indonesia. 2020. Bank Indonesia Regulation Number 22/23/PBI/2020 Concerning Payment System. 29 December. [https://www.bi.go.id/id/publikasi/peraturan/Pages/PBI\\_222320.aspx](https://www.bi.go.id/id/publikasi/peraturan/Pages/PBI_222320.aspx).

## Digital Policy Interventions—Selected Asian Economies

Implementing Economies	Policy Title and Entry into Force	Purpose	Regional Cooperation and Integration
China, People's Republic	Announcement No. 63 [2020] of the Ministry of Commerce of the People's Republic of China and the General Administration of Customs of the People's Republic of China, 1 January 2021	<ul style="list-style-type: none"> <li>• Obligates import and export operators of commercial encryption products such as encrypted phones, VPN devices, cryptographic devices, and other software and technology to submit licenses to the Ministry of Commerce.<sup>d</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Implements new import and export licensing requirements for commercial encryption products.<sup>e</sup></li> </ul>
China, People's Republic	Data Security Law of the People's Republic of China, 1 September 2021	<ul style="list-style-type: none"> <li>• Regulates data processing—including data collection, storage, use, processing, transmission, provision, and disclosure—and warrants data security.<sup>f</sup></li> <li>• Promotes the cross-border security and free flow of data (Article 11).</li> </ul>	<ul style="list-style-type: none"> <li>• Wields the state's control on data that are needed to secure national security and interest while fulfilling international obligations (Article 25).</li> <li>• Allows only the competent authorities to handle data requests from foreign judicial or law enforcement agencies in accordance with international treaties and agreements or with the principle of equality and reciprocity (Article 36).</li> </ul>
China, People's Republic	Personal Information Protection Law of the People's Republic of China, 1 November 2021	<ul style="list-style-type: none"> <li>• Protects the rights and interests, regulates the processing, and promotes the rational use of personal information.<sup>g</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Permits the processors to provide personal information outside the territory of the PRC for business needs if: (i) the security assessment is passed; (ii) the personal information protection is certified; and (iii) the contract with the overseas recipient, stipulating rights and obligations of both parties, is established (Article 38).</li> <li>• Acknowledges that the PRC may impose reciprocal measures to economies or regions that adopt discriminatory and restrictive measures in the protection of personal information (Article 43).</li> </ul>
India	India–United Arab Emirates (UAE) CEPA, 17 February 2022	<ul style="list-style-type: none"> <li>• Includes Digital Trade chapter that fosters conducive environment to advance digital trade between India and the UAE.</li> </ul>	<ul style="list-style-type: none"> <li>• Supports the cross-border flow of information and open data; enhances cooperation in adopting regulations on unsolicited commercial electronic messages; banning of custom duties on electronic transmissions between India and the UAE; facilitates the advancement of electronic invoicing and electronic payments; and enhance cybersecurity.</li> <li>• Commits to apply the Digital Trade chapter in the CEPA with best endeavors—dispute settlement mechanism does not apply.<sup>h</sup></li> </ul>
India	[The Government of India, Ministry of Electronics and Information Technology invoked its power under Section 69A of the Information Technology Act, 2 September 2020]	<ul style="list-style-type: none"> <li>• Preserves the sovereignty of India and ensures the security of state and public order.</li> </ul>	<ul style="list-style-type: none"> <li>• Blocks 118 mobile apps that are considered as threats to the sovereignty of India and the privacy of its citizens.<sup>i</sup></li> </ul>

<b>Implementing Economies</b>	<b>Policy Title and Entry into Force</b>	<b>Purpose</b>	<b>Regional Cooperation and Integration</b>
Indonesia	Bank Indonesia Regulation No. 22/23/PBI/2020 Concerning Payment Systems, 1 July 2021	<ul style="list-style-type: none"> <li>• Advances digitalization of the banking sector, integration of digital economy, and interconnection of fintech and the banking sector while protecting the national interests in cross-border transactions and ensuring innovation, consumer protection, and good business competition.<sup>l</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Reduces the permitted level of foreign participation in payment system operators. In effect, foreign investors engaged in a new business classified as non-bank Payment Services Infrastructure Provider / Penyelenggara Infrastruktur Sistem Pembayaran can only have a maximum of 20% shareholding and voting rights.<sup>k</sup></li> </ul>
Indonesia	Presidential Regulation 10/2021 (PR 10/2021)–also known as Positive Investment List, 4 March 2021	<ul style="list-style-type: none"> <li>• Replaces Presidential Decree No. 36/2010–also known as Negative Investment List.</li> <li>• Liberalizes businesses in telecommunications, transportation, and energy sectors for foreign investments. Note: foreign investors are entitled to receive fiscal and non-fiscal incentives depending on type of investments.<sup>l</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Removes the total ban on foreign investments, i.e., 100% closed for foreign investment, in telecommunication tower provider and now opens without condition (except for tower construction using simple or intermediate technology which is assigned to micro, small, and medium-sized enterprises or cooperatives).</li> <li>• Retains the maximum of 20% foreign ownership in private and subscription-based media and broadcasting activities; and increases the maximum foreign ownership from 0% to 49% in publicly listed media and broadcasting activities.</li> <li>• Increases the maximum foreign investment from 49% to 100% (and has no investment value requirement) in digital platform business activities–also called as e-commerce.</li> <li>• Increases the maximum foreign investment from 67% to 100% in internet service providers.<sup>m</sup></li> </ul>
Japan	Amendment to the Telecommunications Business Act, 1 April 2021	<ul style="list-style-type: none"> <li>• Promotes fairer competition between domestic and foreign operators of telecommunication services.</li> <li>• Protects the users from data leaks and communication failures involving foreign operators.</li> </ul>	<ul style="list-style-type: none"> <li>• Requires foreign operators to register or submit advanced notification to the Ministry of Internal Affairs and Communications prior to the onset of operations; and subjects foreign operators to obligations stated in the amended act.</li> <li>• Publicly discloses both domestic and foreign operators that have violated their obligations.</li> <li>• Obligates foreign operators to assign a representative of any nationality that must be residing in Japan.<sup>n</sup></li> </ul>
Japan	United Kingdom–Japan Comprehensive Economic Partnership Agreement (CEPA), 1 January 2021	<ul style="list-style-type: none"> <li>• Implements the comprehensive trade deal between Japan and the United Kingdom, which includes provisions on data protection and localization.</li> </ul>	<ul style="list-style-type: none"> <li>• Enables cross-border flow of goods, services, and data in digital economy between Japan and the United Kingdom by banning the establishment of unjustified data localization; preventing unjustified restrictions on free flow of data; encouraging the release of anonymized government datasets where appropriate; protecting personal information; and ensuring open internet access.<sup>o</sup></li> </ul>

Implementing Economies	Policy Title and Entry into Force	Purpose	Regional Cooperation and Integration
Japan	United States–Japan Digital Trade Agreement, 1 January 2020	<ul style="list-style-type: none"> <li>Promotes the most comprehensive trade agreement addressing digital trade barriers between Japan and the United States.</li> </ul>	<ul style="list-style-type: none"> <li>Ensures cross-border of data flows by all suppliers, including financial service suppliers, in Japan and the United States; prevents data localization in either jurisdiction, and recognizes rules on civil liability with respect to third-party content for Internet platforms.<sup>p</sup></li> </ul>
New Zealand, Singapore	Digital Economy Partnership Agreement (DEPA) between Chile, New Zealand, Singapore, 7 January 2021 (for Singapore and New Zealand only)	<ul style="list-style-type: none"> <li>Aims to complement the World Trade Organization (WTO) negotiations on e-commerce as cross-border data flows–proxy for digital trade–increase exponentially.</li> </ul>	<ul style="list-style-type: none"> <li>Assists the business, especially small and medium-sized enterprises (SMEs), to join in digital trade and take advantage of its benefits.</li> <li>Advances paperless trading, e-invoicing, and e-payments; bans the imposition of custom duties on electronic transmissions; establishes faster customs procedures for express shipments; and commits to the transmission of information between DEPA partners.</li> <li>Serves as a living agreement open to all WTO members.<sup>q</sup></li> </ul>
Philippines, Singapore	Philippine–Singapore FinTech Cooperation Agreement, [signed] 8 November 2021	<ul style="list-style-type: none"> <li>Facilitates interoperable real-time and quick response (QR) payments between the Philippines and Singapore.</li> </ul>	<ul style="list-style-type: none"> <li>Establishes integrated and interoperable cross-border payment system between the Philippines and Singapore and explores the linkages within the Association of Southeast Asian Nations (ASEAN) and with economies outside the region.<sup>r</sup></li> </ul>
Republic of Korea	Amendment to the Telecommunications Business Act (TBA), 10 December 2020	<ul style="list-style-type: none"> <li>Demands value-added telecommunications service providers (VSPs) that surpass the threshold limit to secure stable and convenient supply.</li> </ul>	<ul style="list-style-type: none"> <li>Offshore VSPs that meet the threshold need to appoint local representative that will handle user-related interests and complains and take on the role of meeting the regulators.</li> <li>Targets new requirements to be imposed on major global offshore content providers such as Facebook, YouTube, and Netflix.<sup>s,t</sup></li> </ul>
Singapore	United Kingdom (UK)–Singapore Digital Economy Agreement, 14 June 2022	<ul style="list-style-type: none"> <li>Replaces the provisions stipulated in the Electronic Commerce section of the UK–Singapore Free Trade Agreement.</li> </ul>	<ul style="list-style-type: none"> <li>Enables cross-border data flows between the United Kingdom and Singapore by establishing rules to prevent unjustified restrictions and by committing not to require data localization as both economies pursue digitized trade in goods and services.<sup>u</sup></li> </ul>

Note: The compiled information covers digital policy interventions that entered into force from January 2019 to July 2022.  
Source: ADB compilation based on information available as of August 2022.

<sup>a</sup> Barker, C. 2020. 2020–21: Telecommunications Legislation Amendment (International Production Orders) Bill 2020. Bills Digest. No. 1. Canberra: Government of Australia, Department of Parliamentary Services. [https://parlinfo.aph.gov.au/parlInfo/download/legislation/billsdgs/7421644/upload\\_binary/7421644.pdf;fileType=application/pdf](https://parlinfo.aph.gov.au/parlInfo/download/legislation/billsdgs/7421644/upload_binary/7421644.pdf;fileType=application/pdf).

<sup>b</sup> Government of Australia, Department of Parliamentary Services. 2021. Telecommunications Legislation Amendment (International Production Orders) Bill 2021. Revised Explanatory Memorandum. [https://parlinfo.aph.gov.au/parlInfo/download/legislation/ems/r6511\\_ems\\_941bf105-24f3-4bf6-be33-91911d5047d7/upload\\_pdf/Revised%20Explanatory%20Memorandum%20-%20Telecommunications%20Legislation%20Amendment%20\(International%20Production%20Orders\)%20Bill%202021.pdf;fileType=application%2Fpdf](https://parlinfo.aph.gov.au/parlInfo/download/legislation/ems/r6511_ems_941bf105-24f3-4bf6-be33-91911d5047d7/upload_pdf/Revised%20Explanatory%20Memorandum%20-%20Telecommunications%20Legislation%20Amendment%20(International%20Production%20Orders)%20Bill%202021.pdf;fileType=application%2Fpdf).

- <sup>c</sup> Government of Australia, Department of Foreign Affairs and Trade. Australia–Singapore Digital Economy Agreement. Department of Foreign Affairs and Trade. <https://www.dfat.gov.au/trade/services-and-digital-trade/australia-and-singapore-digital-economy-agreement>.
- <sup>d</sup> Government of the People’s Republic of China, Ministry of Commerce of the People’s Republic of China. 2021. Announcement No. 63 of 2020 by the State Encryption Administration of the Ministry of Commerce of the People’s Republic of China and the General Administration of Customs of the People’s Republic of China. Policy release. 22 January. <http://www.mofcom.gov.cn/article/b/g/202101/20210103033181.shtml>.
- <sup>e</sup> Digital Policy Alert. [People’s Republic of] China: Implementation of Import Licensing Requirement for Commercial Encryption Products. <https://digitalpolicyalert.org/event/30-implementation-of-import-licensing-requirement-for-commercial-encryption-products>.
- <sup>f</sup> Government of the People’s Republic of China, National People’s Congress of the People’s Republic of China. 2021a. Data Security Law of the People’s Republic of China. 10 June. <http://www.npc.gov.cn/npc/c30834/202106/7c9af12f51334a73b56d7938f99a788a.shtml>.
- <sup>g</sup> Government of the People’s Republic of China, National People’s Congress of the People’s Republic of China. 2021b. Personal Information Protection Law of the People’s Republic of China. 20 August. <http://www.npc.gov.cn/npc/c30834/202108/a8c4e3672c74491a80b53a172bb753fe.shtml>.
- <sup>h</sup> Government of India, Ministry of Commerce and Industry. 2022. Comprehensive Economic Partnership Agreement (CEPA) Between the Government of the Republic of India and the Government of the United Arab Emirates (UAE). 27 March. <https://commerce.gov.in/international-trade/trade-agreements/comprehensive-economic-partnership-agreement-between-the-government-of-the-republic-of-india-and-the-government-of-the-united-arab-emirates-uae>.
- <sup>i</sup> Government of India, Ministry of Electronics and Information Technology. 2020. Government Blocks 118 Mobile Apps which are Prejudicial to Sovereignty and Integrity of India, Defense of India, Security of State and Public Order. Press release. 2 September. <https://pib.gov.in/PressReleasePage.aspx?PRID=1650669>.
- <sup>j</sup> *ASEAN Briefing*. 2021a. Bank Indonesia Issues Regulation on Payment Systems. 18 January. <https://www.aseanbriefing.com/news/bank-indonesia-issues-regulation-on-payment-systems>.
- <sup>k</sup> Pardede, G., E. Hakim, and D. M. Bakrie. 2021. Indonesian Central Bank Regulation Introduces New FDI Restrictions in Payments Sector. ABNR. 11 February. <https://www.abnr.com/news/indonesian-central-bank-regulation-introduces-new-fdi-restrictions-in-payments-sector>.
- <sup>l</sup> *ASEAN Briefing*. 2021b. Indonesia’s Omnibus Law: The Positive Investment List and the Liberalization of Business Sectors. 2 March. <https://www.aseanbriefing.com/news/indonesias-omnibus-law-the-positive-investment-list-and-the-liberalization-of-business-sectors>.
- <sup>m</sup> Situmorang, M., A. Putri, and A. Rahmawati. n.d. Indonesia’s New Investment Regime: Telecommunication, Media, and Technologies Sector. *Lexology*. <https://www.lexology.com/library/detail.aspx?g=56bc7597-2295-410e-b771-8b36a0ad0940>.
- <sup>n</sup> Fujikouge, T. and C. Bigg. 2020. Japan’s Telecommunications Business Act to Be Amended: What to Know. DLA Piper. 22 October. <https://www.dlapiper.com/en/us/insights/publications/2020/10/japans-telecommunications-business-act-to-be-amended>.
- <sup>o</sup> Government of the United Kingdom, Department for International Trade. 2020. UK–Japan CEPA: Digital and Data Explainer. Promotional material. 4 November. <https://www.gov.uk/government/publications/uk-japan-cepa-digital-and-data-explainer>.
- <sup>p</sup> Government of the United States, Office of the United States Trade Representative. 2019. US–Japan Digital Trade Agreement. Fact sheet. 7 October. <https://ustr.gov/about-us/policy-offices/press-office/fact-sheets/2019/october/fact-sheet-us-japan-digital-trade-agreement>.
- <sup>q</sup> Government of New Zealand, Ministry of Foreign Affairs and Trade. Overview: Digital Economy Partnership Agreement (DEPA). <https://www.mfat.govt.nz/en/trade/free-trade-agreements/free-trade-agreements-in-force/digital-economy-partnership-agreement-depa/overview>.
- <sup>r</sup> Government of the Philippines, Bangko Sentral ng Pilipinas. 2021. BSP and MAS to Pursue Cross-Border Payment Linkages. Media release. 8 November. <https://www.bsp.gov.ph/SitePages/MediaAndResearch/MediaDisp.aspx?ItemId=6014>.
- <sup>s</sup> Ryoo, K. H., J. Yoon, and J. H. Lee. 2020. [Republic of] Korea Passes Telecom Law Amendment that Will Require Major Content Providers (CPs) to Take Measures for Maintaining “Stable” Services, and, If Offshore, to Appoint Local Representative. *Lexology*. 22 May. <https://www.lexology.com/library/detail.aspx?g=c6b34562-8cc1-43d8-91bb-b5e9652c6cb7>.
- <sup>t</sup> Park, M.C., S. Bang, and J. Lee. 2020. New Requirement and Enhanced Obligations for Value-Added Telecommunications Service Providers to Secure Means for Stability of Service. *Kim & Chang*. 28 September. [https://www.kimchang.com/en/insights/detail.kc?sch\\_section=4&idx=22016](https://www.kimchang.com/en/insights/detail.kc?sch_section=4&idx=22016).
- <sup>u</sup> Government of the United Kingdom, Department for International Trade. 2022. UK–Singapore Digital Economy Agreement: Final Agreement Explainer. Promotional material. 14 June. <https://www.gov.uk/government/publications/uk-singapore-digital-economy-agreement-explainer/uk-singapore-digital-economy-agreement-final-agreement-explainer>.