3 Cross-Border Investment

Key Trends in Foreign Direct Investment

Asia and the Pacific remains the main destination of investment flows.

Global foreign direct investment (FDI) inflows saw modest growth in 2024 with inflows reaching $1.5 trillion, 4% higher than receipts in 2023.[1] However, growth for the past 2 years had been inflated by activity in European economies with large conduit flows, hinting at some volatility and weakness in FDI activity. Excluding these conduit economies, global FDI inflows fell by 11% (UNCTAD 2025).[2]

Asia and the Pacific remained a significant recipient of foreign investment, attracting about 40% of global flows (Figure 3.1a).[3] After experiencing a sharp decline in 2023, inflows to the region showed signs of stabilizing with a modest 2% decline, amounting to $614 billion in 2024. East Asia is the primary destination of inflows in the region, amassing $285 billion in FDI, followed by Southeast Asia ($225 billion) (Figure 3.1b).

In 2024, Singapore emerged as the top destination of foreign investment in Asia, overtaking Hong Kong, China and the People's Republic of China (PRC). Singapore received $143 billion in investments in 2024, almost twice as much as inflows a decade ago and 6% more than receipts in 2023 (Figure 3.2a). Large gains in investments between 2023 and 2024 from the United Kingdom (UK) (up $11 billion), Canada (up $8 billion), and Japan (up $7 billion) contributed to Singapore's rise in rank. In the same period, investments in Hong Kong, China increased by 3% from 2023 as receipts increased from the PRC (up $52 billion); Singapore (up $16 billion); and Taipei,China (up $15 billion).

Meanwhile, inflows to the PRC in 2024 declined by nearly 30%, with the largest losses in investment from Hong Kong, China (down $37 billion), followed by British Virgin Islands (down $3 billion) and the Netherlands (down $3 billion). As a result, Singapore's share in total regional inflows increased from 14% in 2014 to 23% in 2024, while the PRC's share slid significantly from 24% in 2014 to 19% in 2024 (Figure 3.2b).

Investment from multinational enterprises dipped in 2024, globally and in Asia.

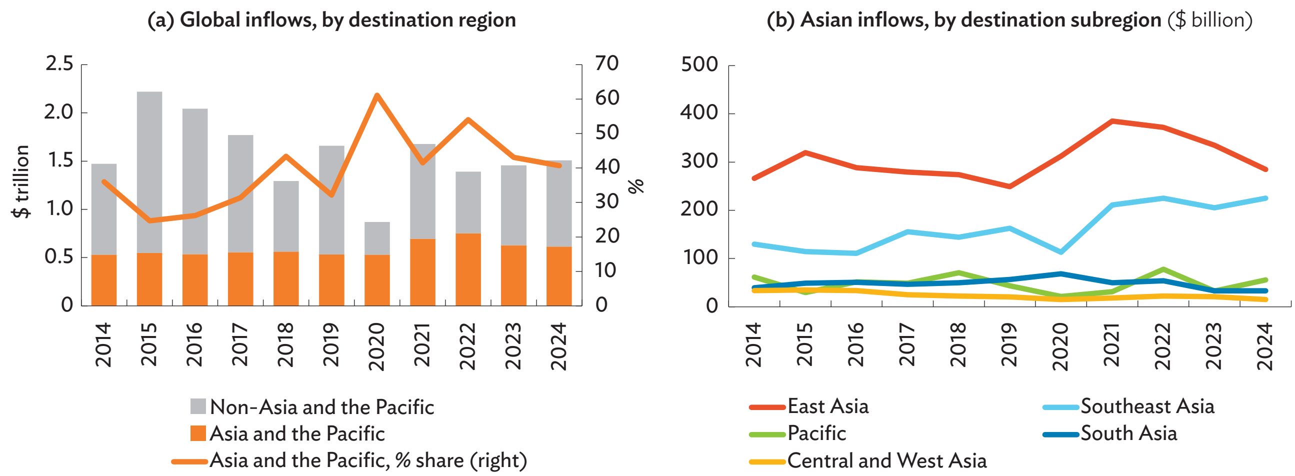
Investment from multinational enterprises (MNEs), often seen as a leading indicator, hint at a slowdown in cross-border investment activity. Global FDI inflows from MNEs dipped by 2% in 2024, marking a second consecutive year of decline. Asia, the European Union (EU) and the UK, and North America remain the largest

[1] For discussions on recent FDI trends, this chapter analyzes standard balance of payments data along with firm-level data by mode of entry (greenfield investment and mergers and acquisitions).

[2] Conduit foreign investment flows are investments that go through an intermediary economy before reaching their destination (i.e., investment from economy A goes through economy C before being deployed in economy B). Investment in conduit economies are typically purely financial and are not usually productive in the conduit economy. Investments of this nature are also referred to as pass-through capital (Casella 2019).

[3] Asia and the Pacific (or Asia) refers to the 50 regional members of the Asian Development Bank (ADB), comprising 47 developing economies as well as three advanced economies—Australia, Japan, and New Zealand. The composition of economies for Central and West Asia, East Asia (including Japan), the Pacific (developing economies plus the advanced economies of Australia and New Zealand), South Asia, and Southeast Asia are outlined in ADB. Asia Regional Integration Center. Economy Groupings. https://aric.adb.org/integrationindicators/groupings. Beginning with this year's edition of the *Asian Economic Integration Report*, Türkiye is included among the developing member economies. For further details, refer to the note in Chapter 6: Statistical Appendix.

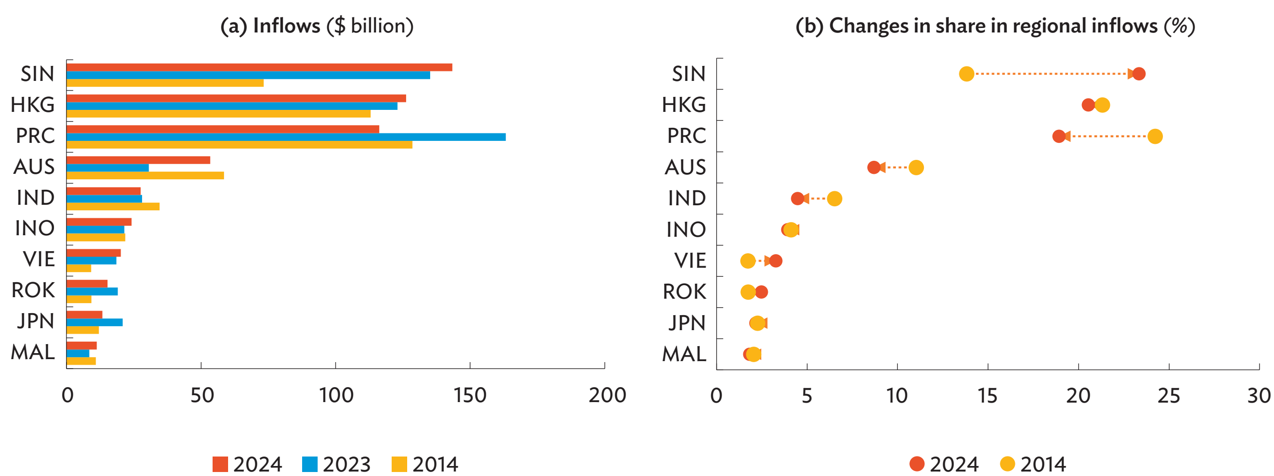
Figure 3.1: Global Foreign Direct Investment Inflows—Balance of Payments



Note: The Pacific includes the Pacific developing economies of ADB plus advanced economies, Australia and New Zealand.

Source: ADB calculations using data from UN Trade and Development. World Investment Report 2025 Statistical Annex Tables. https://unctad.org/topic/investment/world-investment-report (accessed July 2025).

Figure 3.2: Destinations of Foreign Investment in Asia and the Pacific—Balance of Payments



AUS = Australia; PRC = People's Republic of China; HKG = Hong Kong, China; IND = India; INO = Indonesia; JPN = Japan; ROK = Republic of Korea; MAL = Malaysia; SIN = Singapore; and VIE = Viet Nam.

Source: ADB calculations using data from UN Trade and Development. World Investment Report 2025 Statistical Annex Tables. https://unctad.org/topic/investment/world-investment-report (accessed July 2025).

recipients of MNE investment, with the three regions accounting for more than 80% of total inflows. Asia is the preferred destination for greenfield investments, attracting roughly a third of global inflows in 2024 (Financial Times 2025). Meanwhile, EU+UK is the primary destination of mergers and acquisitions (M&As), also garnering about a third of global M&As by value in 2024.

Despite Asia's momentum as a preferred destination, MNE investment in the region declined by 12% in 2024 as transactions in both greenfield projects and M&As lost steam (Figure 3.3a). Greenfield investment declined by 12% to just under $400 billion in 2024, while M&A deal values dipped by 11% to $311 billion. Much of the decline in Asia's greenfield investment is due to a slip in manufacturing, with greenfield investments in those industries dipping by 26% between 2023 and 2024. Meanwhile, M&A deal receipts declined in both primary (down 36%) and manufacturing (down 23%) industries in the same period, with modest growth in tertiary industries (up 3%) unable to cushion the deceleration. By share, Asia remains a service-oriented region, with 58% of MNE investments in 2024 flowing into service industries. Manufacturing is still a significant sector in the region, with 36% of inflows heading toward the sector (Figure 3.3b).

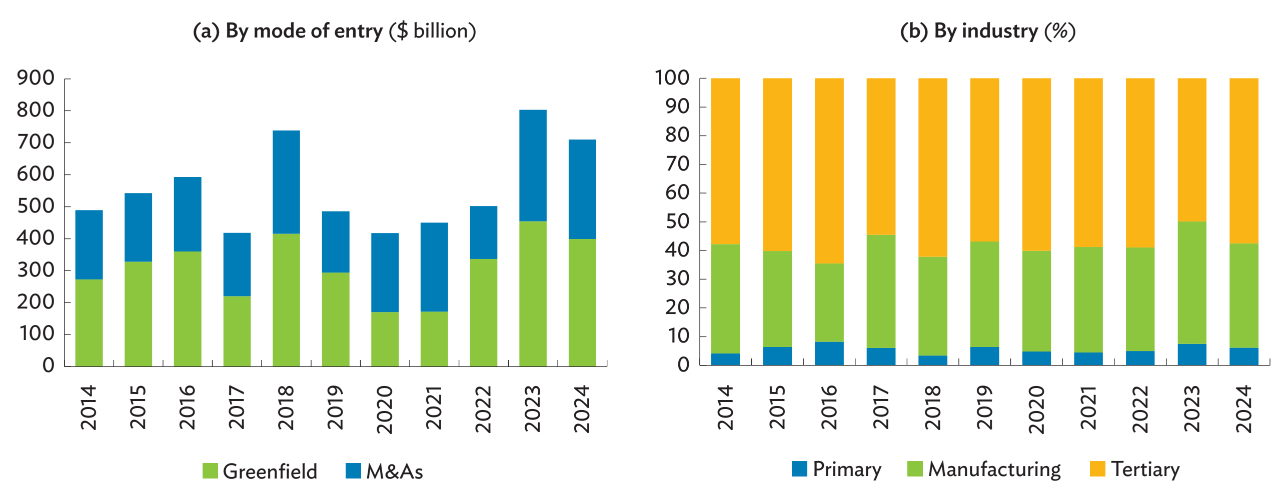
Investors continued to diversify their greenfield investments, as other destinations continued to emerge in 2024 (Figure 3.4a). Lead investors in Asia were the United States (US) with $68 billion (Box 3.1), as well as other Asian economies such as the PRC ($38 billion) and Singapore ($36 billion). By sector, metallic and electronic products manufacturing saw the largest inflows ($61 billion) followed by utilities ($17 billion) and information ($10 billion). Major recipients of greenfield FDI were Australia ($47 billion), the PRC ($37 billion), and Japan ($31 billion).

Metallic and electronic products manufacturing remains the largest sector by value among greenfield projects in Asia (Figure 3.4b). The sector received $138 billion in funds in 2024, with about $40 billion heading into computer and electric product manufacturing, $37 billion in primary metal manufacturing, and $23 billion in electrical equipment. Greenfield investments in the utilities ($75 billion) and information ($65 billion) sectors were also substantial.

In terms of business activity, which focuses on the actual function of the operation and features upstream and downstream activities prioritized by MNEs, greenfield investments confirm the growing importance of digital transformation (Figure 3.5). In 2024, information and communication technology (ICT) and internet infrastructure activities garnered $54 billion in greenfield receipts, 4.5 times the receipts in 2014 ($12 billion). Renewable energy also remained a significant driver of investment in the region, with receipts of about $38 billion in 2024.

Australia was the largest destination of M&A deals by value, with $158 billion of inflows in 2024 (Figure 3.6a). Over half of these receipts were from the US ($87 billion), followed by Japan ($30 billion) and Canada ($16 billion). Australia's information sector saw the most deals by value, receiving over $30 billion in 2024, followed by mining, quarrying, and extraction ($24 billion); professional,

Figure 3.3: Firm-Level Investment in Asia and the Pacific



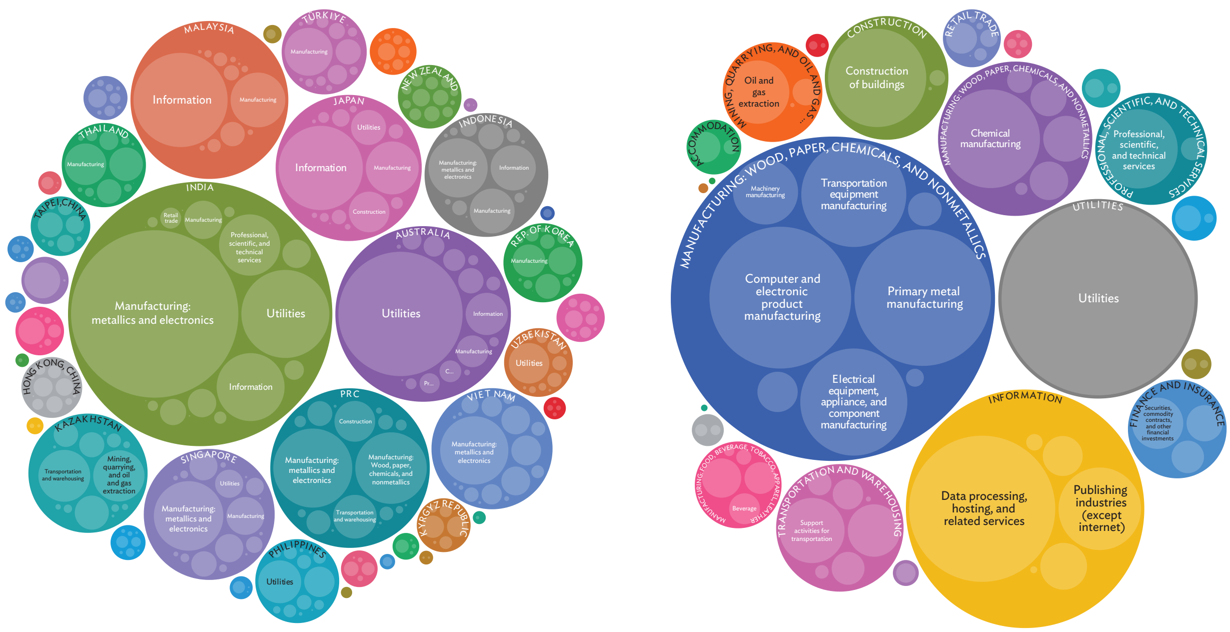
M&A = merger and acquisition.

Sources: ADB calculations using data from Financial Times. fDi Markets; and Moody's Analytics. Orbis M&A (formerly Zephyr M&A Database) (accessed June 2025).

Figure 3.4: Destinations of Greenfield Investment in Asia and the Pacific, 2024

(a) Top destinations

(b) Top sectors



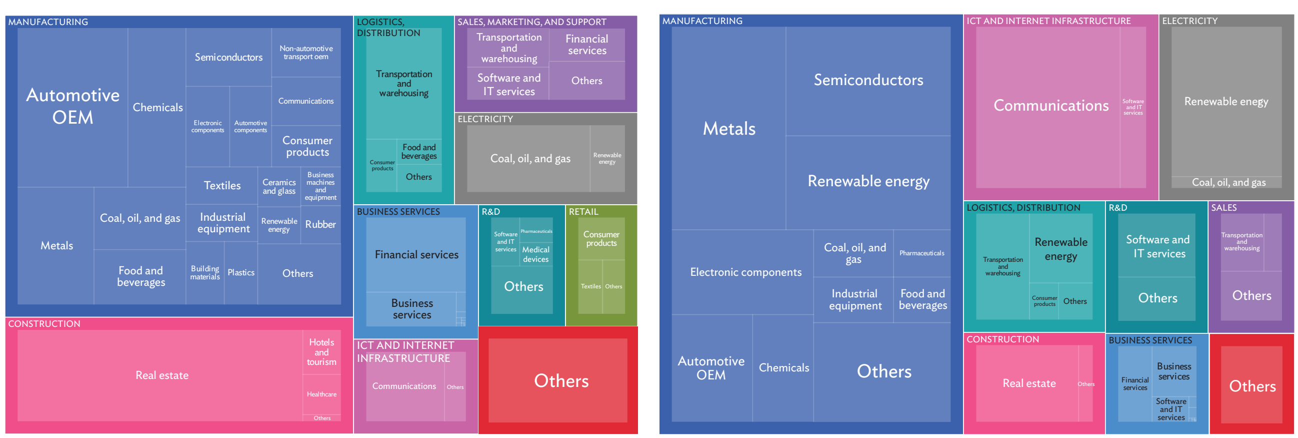
PRC = People's Republic of China.

Sources: ADB calculations using data from Financial Times. fDi Markets; and Moody's Analytics. Orbis M&A (formerly Zephyr M&A Database) (accessed June 2025).

Figure 3.5: Greenfield Investment in Asia and the Pacific, by Business Activity

(a) 2014

(b) 2024



ICT = information and communication technology, IT = information technology, OEM = original equipment manufacturing, R&D = research and development.

Sources: ADB calculations using data from Financial Times. fDi Markets; and Moody's Analytics. Orbis M&A (formerly Zephyr M&A Database) (accessed June 2025).

scientific, and technical services ($18 billion); and finance and insurance ($16 billion). Other prime Asian destinations included Japan ($31 billion) and the PRC ($23 billion).

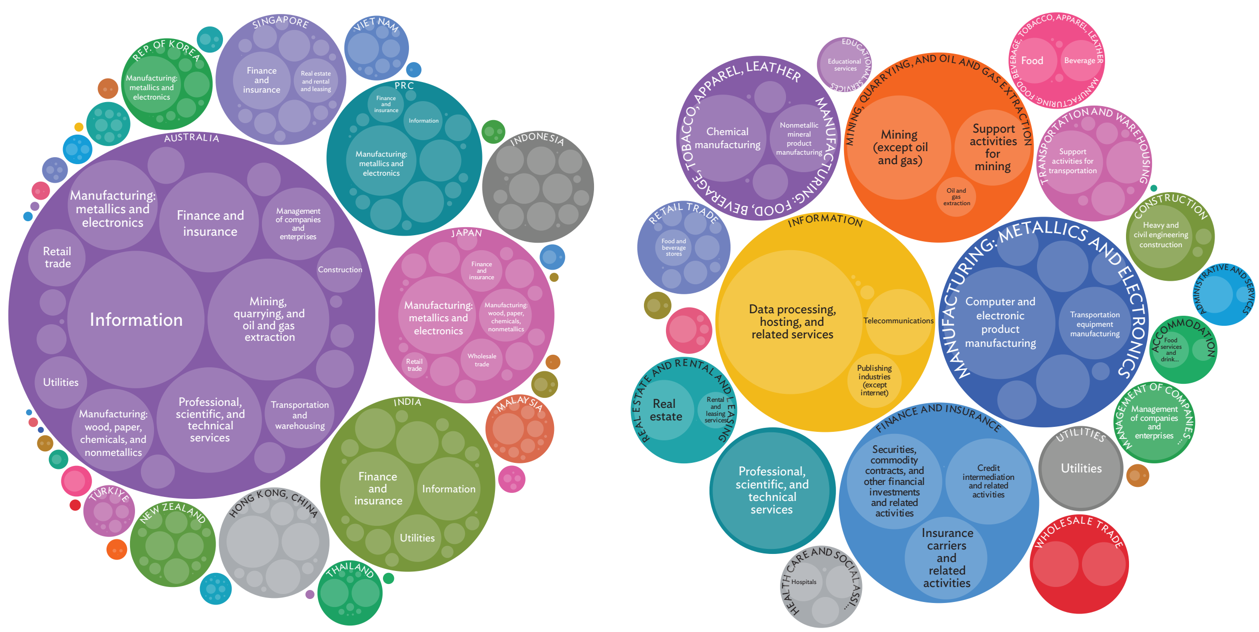
M&A deals also underscore the growing role of digitalization in Asia, with the information sector gaining foothold alongside metallic and electronic products manufacturing (Figure 3.6b). In 2024, M&A deals in the information sector amounted to almost $50 billion, more than double those in 2023. Data processing, hosting, and related services earned the most in investment, with more than 70% of deal receipts in the information sector.

In contrast to the dominant trend over the past 5 years, investments in strategic sectors declined globally (down 15%) and in Asia (down 22%) between 2023 and 2024. While equipment for green energy transition still garnered the highest investment among strategic sectors, large losses were observed in this sector, globally and in Asia. Meanwhile, ICT sectors continued to gain importance in Asia, with about $50 billion in inflows to related sectors. This hints at the role of ICT sectors and the digital economy in driving investments into the region (Figure 3.7).

Figure 3.6: Destinations of Mergers and Acquisitions in Asia and the Pacific, 2024

(a) Top destinations

(b) Top sectors



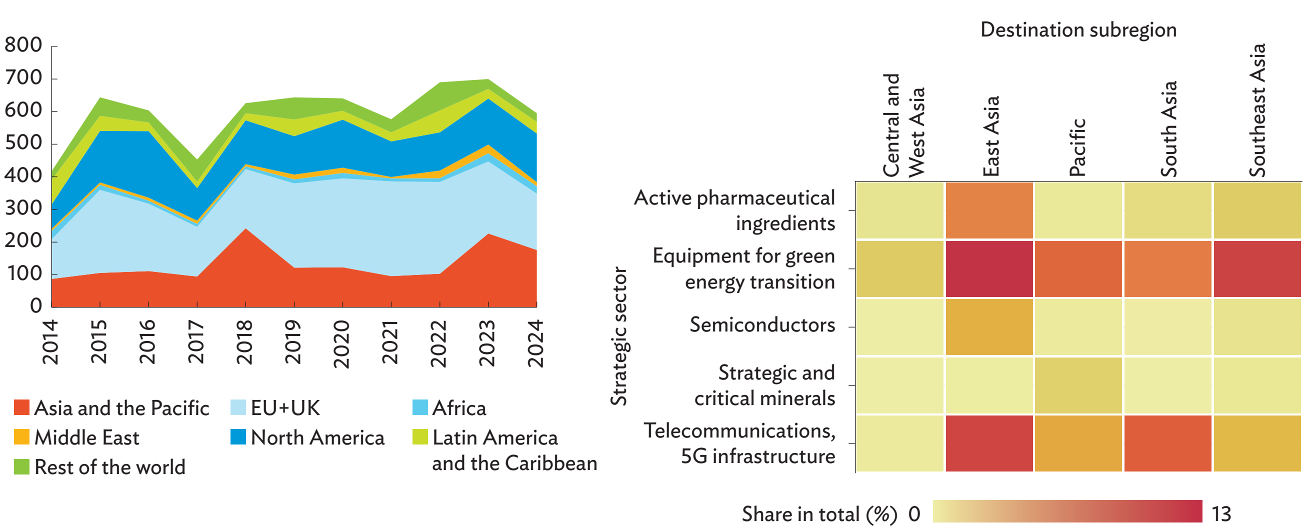
PRC = People's Republic of China.

Sources: ADB calculations using data from Financial Times. fDi Markets; and Moody's Analytics. Orbis M&A (formerly Zephyr M&A Database) (accessed June 2025).

Figure 3.7: Investment in Strategic Sectors by Destination—Firm-Level Investment

(a) Global inflows ($ billion)

(b) Asian inflows, average share in total, 2014–2024 (%)



EU = European Union (27 members), UK = United Kingdom.

Note: The Pacific includes the Pacific developing economies of ADB plus advanced economies, Australia and New Zealand.

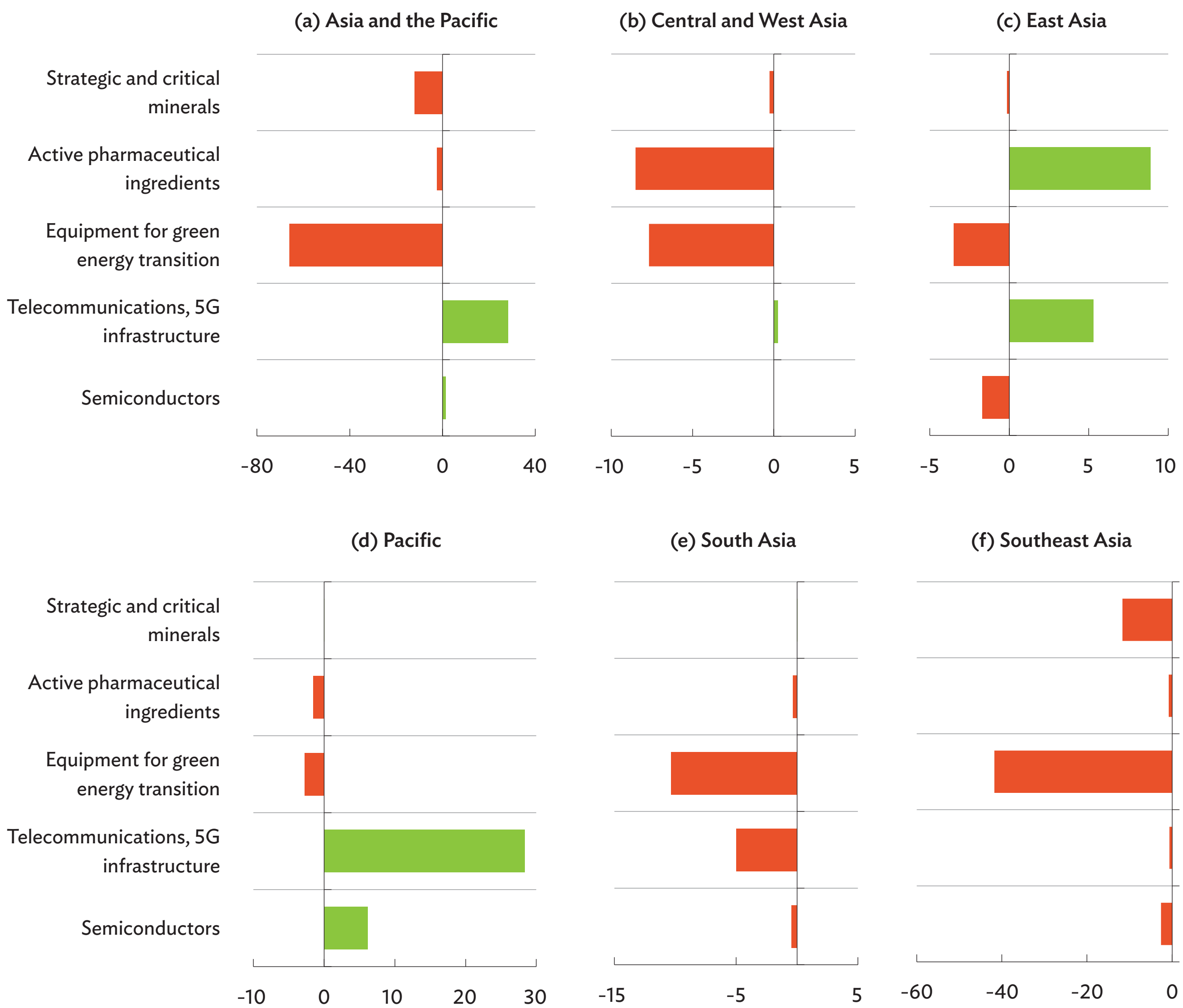
Sources: ADB calculations using data from Financial Times. fDi Markets; and Moody's Analytics. Orbis M&A (formerly Zephyr M&A Database) (accessed June 2025); and methodology from Atlantic Council (2022) and International Monetary Fund (2023).

Large investment losses were observed in various strategic sectors across subregions, with the largest in Southeast Asia's green energy transition equipment, likely due to foreseen scaled down climate commitments, especially from some large investors. Meanwhile, telecommunications and 5G infrastructure saw large gains in the Pacific, primarily from investments in Australia and New Zealand (Figure 3.8).

Investment outflows from Asia remained strong in 2024, with Japan emerging as the second-largest source of investment globally.

Global investment outflows reached $1.6 trillion in 2024, with about 40% from Asian economies. This confirms the important role of former net recipients of FDI, such as the Republic of Korea and the PRC, which have become major investors both within

Figure 3.8: Change in Investment in Strategic Sectors by Destination—Firm-Level Investment 2023–2024 ($ billion)



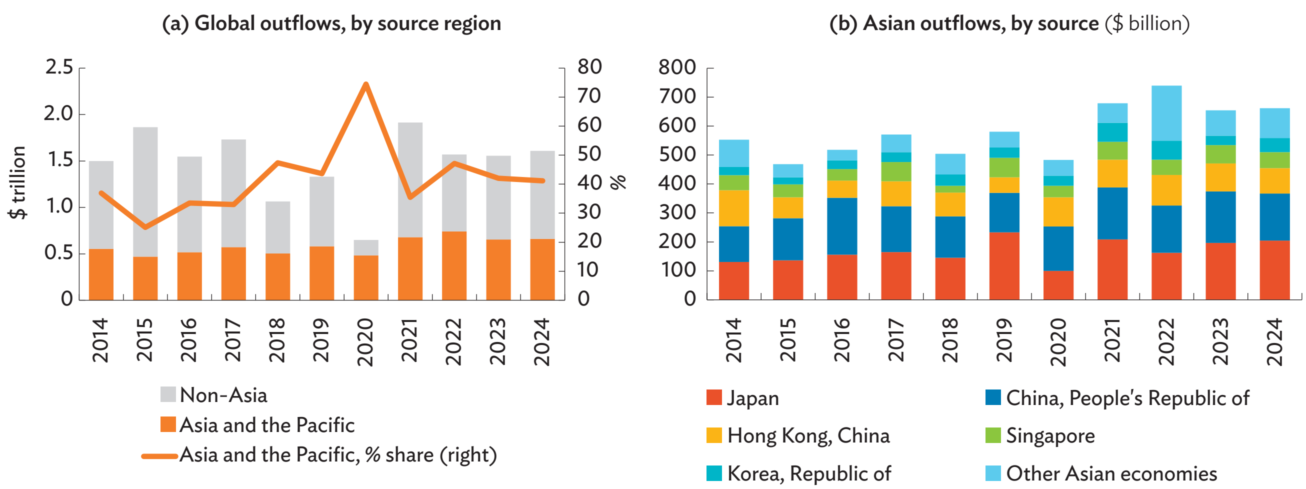
Note: The Pacific includes the Pacific developing economies of ADB plus advanced economies, Australia and New Zealand.

Sources: ADB calculations using data from Financial Times. fDi Markets; and Moody's Analytics. Orbis M&A (formerly Zephyr M&A Database) (accessed June 2025); and methodology from Atlantic Council (2022) and International Monetary Fund (2023).

the region and globally. Japan remained the largest Asian investor overall in 2024, posting $204 billion in outflows. The PRC ($163 billion); Hong Kong, China ($87 billion); Singapore ($55 billion); and the Republic of Korea ($49 billion) were also among major sources of investment in 2024 (Figure 3.9).

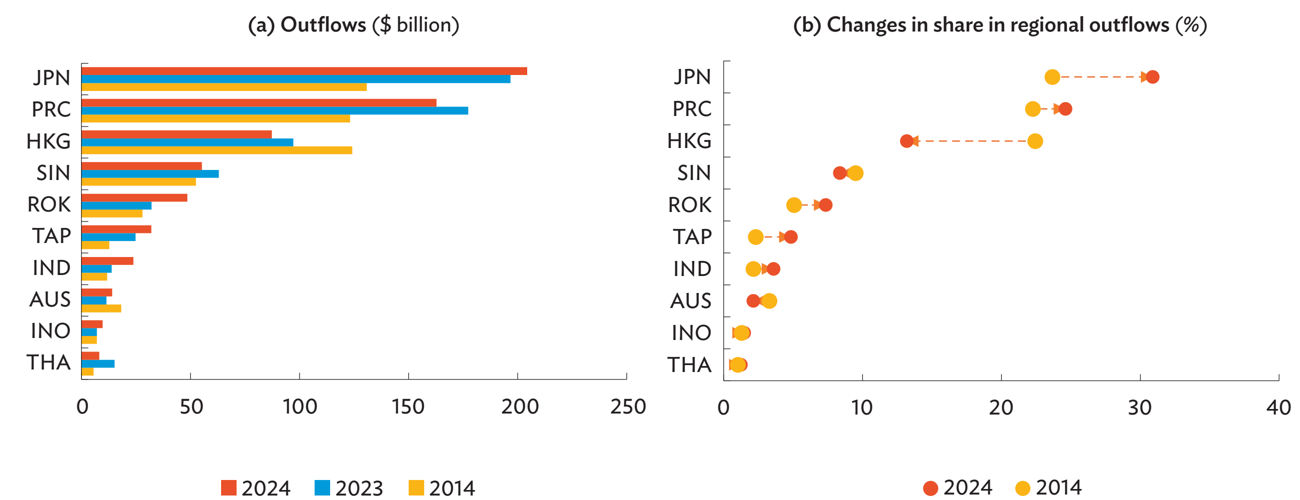
While Asian investors appear relatively unchanged in the last 10 years, minor shifts in ranking are apparent, with the PRC overtaking Hong Kong, China as the second-largest source of FDI among Asian economies, attesting to the PRC's global strategy to expand market access and enhance participation in global production networks (Figure 3.10).

Figure 3.9: Global Foreign Direct Investment Outflows—Balance of Payments



Source: ADB calculations using data from UN Trade and Development. World Investment Report 2025 Statistical Annex Tables. https://unctad.org/topic/investment/world-investment-report (accessed July 2025).

Figure 3.10: Sources of Investment from Asia and the Pacific—Balance of Payments



AUS = Australia; PRC = People's Republic of China; FDI = foreign direct investment; HKG = Hong Kong, China; IND = India; INO = Indonesia; JPN = Japan; ROK = Republic of Korea; SIN = Singapore; TAP = Taipei,China; THA = Thailand.

Source: ADB calculations using data from UN Trade and Development. World Investment Report 2025 Statistical Annex Tables. https://unctad.org/topic/investment/world-investment-report (accessed July 2025).

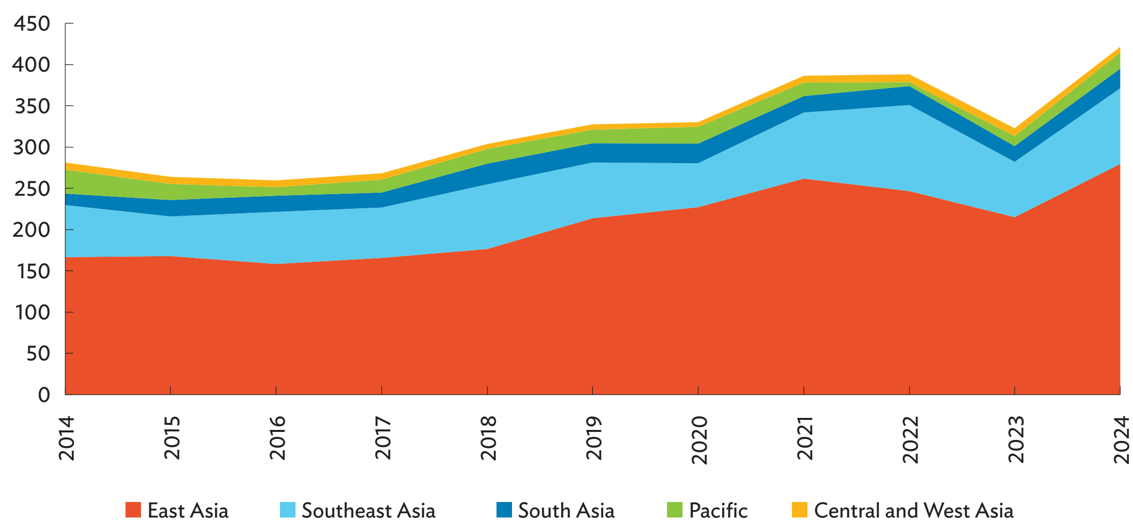
Intraregional linkages are an important source of investment, especially in times of volatility.

Based on balance of payments data, intraregional investment has intensified over the last 5 years, accounting on average for 58% of Asian inflows from 2020 to 2024. Investment gains among Asian economies were particularly large between 2023 and 2024 as intraregional shares rose from 52% to 69% (Figure 3.11). East Asia remains the largest destination of intraregional investments. Links between the PRC and Hong Kong, China favored some of the largest intraregional investments in 2024, as the PRC invested $101 billion in Hong Kong, China. On the flip side, the PRC saw about $74 billion in receipts from Hong Kong, China.

Meanwhile, MNE investments hint at some intraregional reshuffling, with Southeast Asian economies emerging as prime destinations for investment from Asian firms, and the subregion overtook East Asia as early as 2022 (Figure 3.12a). In 2024, Southeast Asia took $98 billion (36%) of intraregional receipts, followed by the Pacific (20%) and South Asia (19%). By sector, metallic and electronic manufacturing, as well as information, saw large intraregional flows. In particular, intraregional investment seemingly favored ICT-adjacent sectors, with large receipts in computer and electronic product manufacturing (16%) and data processing, hosting, and related services (12%) (Figure 3.12b).

While Asia historically has fostered strong intraregional linkages through investment, sustaining these linkages remains essential, especially during times of heightened uncertainty and volatility, including trade tensions and other shocks such as pandemics. Maintaining regional platforms that enable investment, embracing investment facilitation strategies, and modernizing investment agreements, particularly in key and emerging areas such as the digital economy and renewable energy, should remain among Asia's priorities.

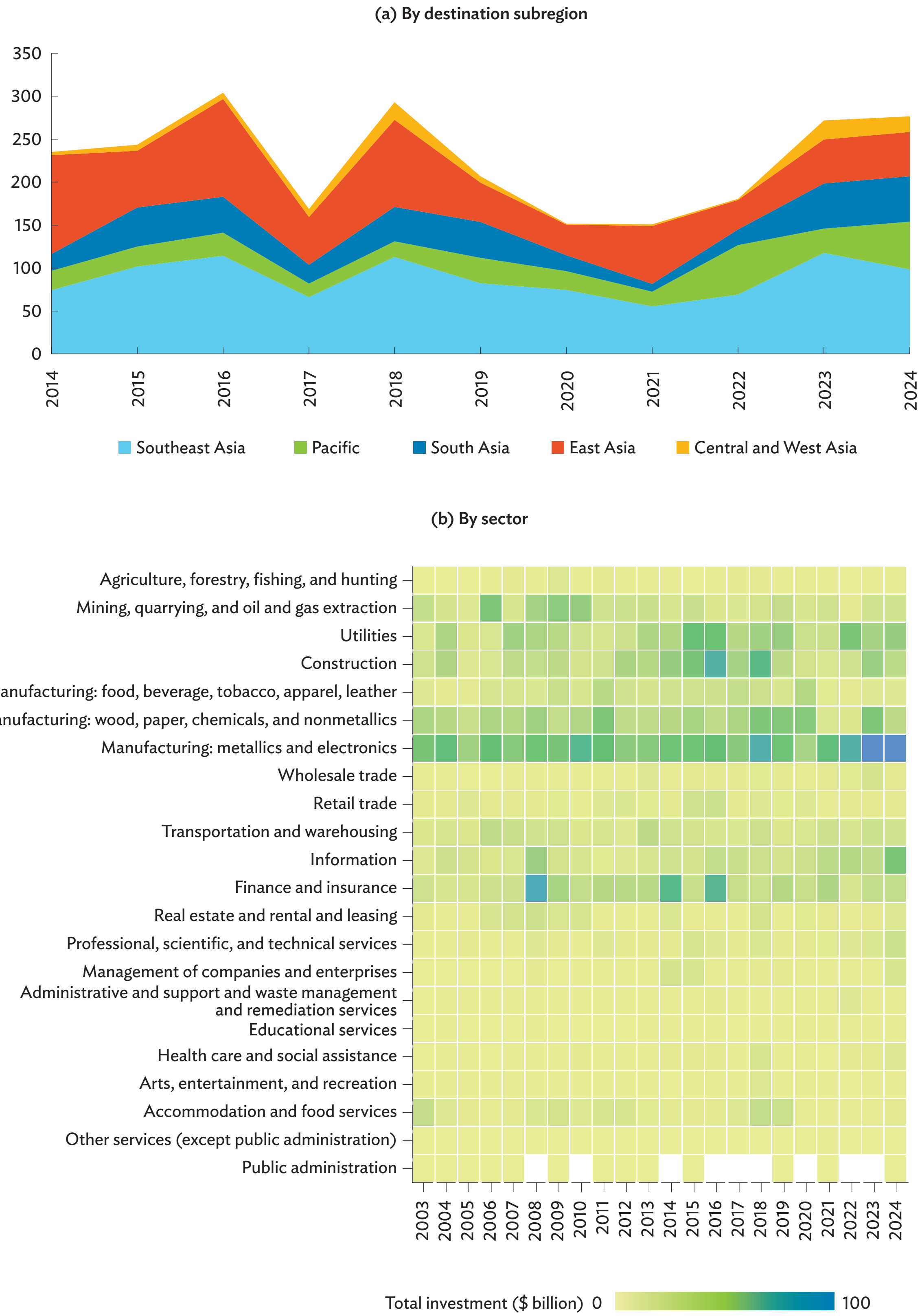
Figure 3.11: Intraregional Investment Flows in Asia and the Pacific—Balance of Payments ($ billion)



Note: The Pacific includes the Pacific developing economies of ADB plus advanced economies, Australia and New Zealand.

Sources: ADB calculations using data from the ASEAN Secretariat. ASEANstats Data Portal. https://data.aseanstats.org (accessed July 2025); CEIC Data Company; Eurostat. Balance of Payments. https://ec.europa.eu/eurostat (accessed July 2025); International Monetary Fund. World Economic Outlook Database, April 2025. https://www.imf.org/en/Publications/WEO/weo-database/2025/April (accessed April 2025); and UN Trade and Development. World Investment Report 2025 Statistical Annex Tables. https://unctad.org/topic/investment/world-investment-report (accessed July 2025).

Figure 3.12: Intraregional Investment Flows in Asia and the Pacific—Firm-Level Investment ($ billion)



Note: The Pacific includes the Pacific developing economies of ADB plus advanced economies, Australia and New Zealand. For panel (b), white cells indicate no data for given years and sectors.

Sources: ADB calculations using data from Financial Times. fDi Markets; and Moody's Analytics. Orbis M&A (formerly Zephyr M&A Database) (accessed June 2025).

Foreign investment activity globally and in Asia and the Pacific faces multiple uncertainties.

With a myriad of headwinds, the outlook for global FDI continues to be negative in the near term. Macroeconomic conditions are expected to weaken in the following year or so, with global output projections, investor sentiment, and financial stability on the downtrend. Moreover, policy uncertainty around reciprocal tariffs and ongoing geopolitical tensions continue to muddy the waters.

Overall, Asia remains an important engine for FDI growth both as a destination and source of global investment. Despite this, the outlook for the region's investment activity is bleak, with early estimates for the first half of 2025 indicating a 4% decline. Persistent geopolitical risks, especially trade tensions, may continue weighing on investment activity and investor sentiment; however, strong inflows into the region's ICT sectors and renewable energy can serve as drivers for growth.

Box 3.1: Mapping Global Ultimate Ownership in FDI in Asia and the Pacific

Conventional bilateral foreign direct investment (FDI) statistics, which record flows based on the immediate investing economy, often have limited information for tracing the true origin of capital. This is largely due to complex corporate ownership structures, the use of intermediary jurisdictions, and the growing role of special purpose entities (SPEs). International FDI data sources, such as those from the United Nations Trade and Development (UNCTAD), the International Monetary Fund (IMF), and the Organisation for Economic Co-operation and Development (OECD), face challenges due to inconsistent reporting practices and limited ability to distinguish genuine productive investments from financial or portfolio flows (Ahmad et al. 2025). Guvenen et al. (2022) highlight how accounting practices like profit shifting among United States (US) affiliates distort aggregate indicators of investment and production. Some official data sources, including the US Bureau of Economic Analysis, rely on firm surveys that can introduce measurement errors. As a result, the recorded bilateral FDI positions frequently misstate both the actual source of capital and the economies that exert real control over foreign enterprises.

Recent studies have sought to address these gaps by accounting for SPEs and tracing the ultimate ownership of cross-border investments. Using ORBIS, Ahmad et al. (2025) developed the Multinational Revenue, Employment, and Investment Database to distinguish between greenfield investments, defined as new affiliate establishments abroad, and mergers and acquisitions (M&A), which involve parent-firm takeovers of foreign entities. By leveraging the Global Ultimate Owner (GUO) variable, they refine the attribution of investment flows to the actual controlling entities. Likewise, Damgaard and Elkjaer (2017) constructed a unique global FDI Network using the IMF's Direct Investment Positions (DIP), applying adjustment ratios to trace investment positions back to the true ultimate investors, bypassing intermediary SPEs. Dall'Olio et al. (2022) combined Orbis and IMF DIP data to create a four-dimensional matrix that maps FDI by host, immediate, ostensible ultimate, and true ultimate investing economies. These studies aim to enhance the accuracy of global FDI measurement by uncovering the real geography of investment control and ownership.

ADB's analysis builds on the approach of Ahmad et al. (2025), using firm-level data from Orbis, which contains ownership linkages and financial information for over 425 million firms worldwide. Ownership networks are reconstructed using company-level identifiers to identify ultimate investors. Given the heavy computational load, the analysis focuses on the top 25 FDI destinations, based on their 2014–2024 average balance-of-payments FDI positions. For each destination, the scope is limited to the top 25 FDI source economies, ensuring a manageable yet representative coverage of global investment flows.

Preliminary estimates suggest that even after accounting for GUO and removing intermediary investments, offshore financial centers continue to play a significant role in greenfield investment. In particular, firms headquartered in these jurisdictions exhibit comparable assets as greenfield investors compared with firms from standard financial hubs or OECD economies that are not typically classified as offshore centers. This pattern suggests that the prominence of offshore financial centers is not solely driven by temporary financial intermediation, but also reflects the widespread use of offshore holding companies as legally established entities, rather than merely as pass-through locations for investment flows.

Source: ADB compilation.

Special Topic: Recent Developments in Digital FDI

The past decade has seen unprecedented advancements in technology, with digitalization and digital transformation becoming a key component in the production and consumption of goods and services. Thanks to the integration of digital tools in economic activity, the digital economy is considered today a key growth driver, and has, at times, outpaced growth of the rest of the economy. In a survey conducted by the Digital Cooperation Organization (2024), the global digital economy was expected to grow by 8.5% in 2025, about three times faster than the global economy. This translates to a value of $24 trillion or about 20% of global output. Asia's digital economy has also been thriving. In Southeast Asia alone, it is estimated to surpass $300 billion in gross merchandise value in 2025, about 2% higher than in 2024 (Google, Temasek, and Bain and Company 2025).

Despite the importance of the digital economy, no universal definition of the concept exists. As digital technologies evolve, the industrial classification of the digital economy is also changing. Most often, two main conceptual frameworks for measuring the digital economy have been considered: (i) bottom-up—where the digital economy is regarded as an "aggregate of a specific indicator (e.g., the sum of value added, the number of employed people)" for a set of industries or sectors; and (ii) top-down—which involves the "identification of broad trends at play in the digital transformation and define the digital economy as the result of their combined impact, including trends enabled by the [...] adoption of digital technologies." While the range of definitions and frameworks is broad, all emphasize the growing importance of digital sectors and transformation in sustainable development (Table 3.1).

On the role of foreign investment on the digital economy, several definitions and frameworks have also been proposed (G20 2025; OECD 2020; UNCTAD 2025). Among these, there is now more consensus on defining a three-tiered approach for the digital economy based on three levels: core, narrow, and broad scope.

The core digital economy includes digital infrastructure (i.e., ICT manufacturing, software, and data centers) and digital services such as telecommunications, data services, and cloud services. The narrow scope builds on this and includes platform-based activities, e-commerce, fintech, and artificial intelligence (AI) automation and services. The broad scope includes these sectors and other applications and digitally enabled sectors such as agriculture, disaster risk management, and health

Table 3.1: Selected Frameworks on the Measurement of the Digital Economy

Framework	Key Features
ADB	• Contribution to GDP of any economic transaction involving both digital products and digital industries • Identifies five main activity groups: hardware, software publishing, web publishing, telecommunication services, and specialized and support services
OECD	• Encompasses all economic activities that rely on digital technologies • Emphasizes the role of data as an economic asset • Highlights the transformative impact of digital platforms, e-commerce, and innovation
ITU	• Digital economy empowered by telecommunications, digital data, and digital technologies • Examines connectivity and broadband access, highlighting digital inclusion and economic participation
World Bank	• Development-focus on how digital economy drives inclusive and sustainable growth • Concentrates on digital financial services, e-governance, and infrastructure development
UNCTAD	• Defines digital economy in terms of production, distribution and consumption of goods and services enabled by digital technologies • Outlines three tiers: core, narrow, and broad scope. Flexible definition for investment analysis

ADB = Asian Development Bank, GDP = gross domestic product, ITU = International Telecommunication Union, OECD = Organisation for Economic Co-operation and Development, UNCTAD = United Nations Trade and Development.

Source: ADB compilation.

Table 3.2: Adopted Framework for Measuring Digital FDI

<table>
<tr><td rowspan="8">Broad Scope</td><td rowspan="7">Narrow Scope: Digital Economy</td><td rowspan="6">Core Scope</td><td>Foundational Infrastructure</td></tr>
<tr><td>Wired telecommunications activities
Wireless telecommunications activities
Satellite telecommunications activities
Other telecommunications activities</td></tr>
<tr><td>Digital Services and Solutions</td></tr>
<tr><td>Software publishing
Computer programming activities
Computer consultancy and computer facilities management activities
Other information technology and computer service activities
E-commerce
Financial services
Transit services</td></tr>
<tr><td>Industrial Development</td></tr>
<tr><td>Manufacture of electronic components and boards
Manufacture of computers and peripheral equipment
Manufacture of communication equipment
Manufacture of consumer electronics
Manufacture of magnetic and optical media
Wholesale of computers, computer peripheral equipment, and software
Wholesale of electronic and telecommunications equipment and parts
Web portals
Repair of computers and peripheral equipment
Repair of communication equipment</td></tr>
<tr><td>Digital Adoption</td><td>Data processing, hosting, and related activities</td></tr>
<tr><td colspan="3">Digitalized agriculture
Digitalized manufacturing
Digitalized services</td></tr>
</table>

FDI = foreign direct investment.

Source: ADB compilation using OECD (2011), UNCTAD (2020), and UNCTAD (2025).

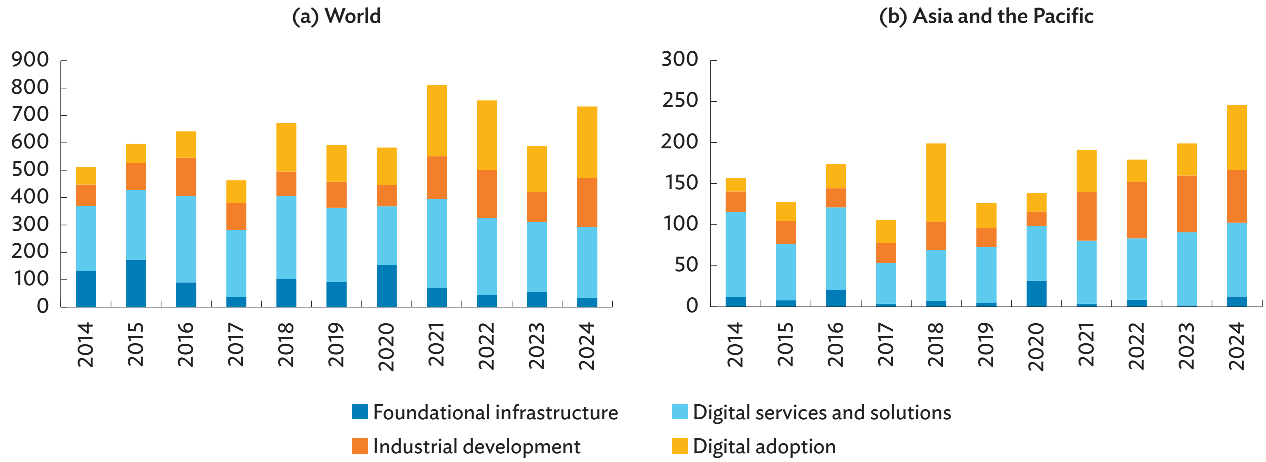
care. This chapter adopts this three-layer framework in quantifying investments in the digital economy, specifically for MNE investments (Table 3.2).

The rationale for adopting a layered framework for measuring digital FDI responds to several objectives. On one hand, robust digital infrastructure is gradually positioning itself as one of the engines of Asia's next economic development phase. On another hand, digitalization has also shown potential for exacerbating divides among populations and social groups, and bridging these gaps will require significant investments. Indeed, the International Telecommunication Union (ITU) estimates for the global needs to close the digital divide and achieve digital connectivity are $1.6 trillion (ITU 2025).

Based on the narrow scope of the framework, FDI into the digital economy—or digital FDI—expanded in 2024, growing about 25% in 2024 both globally and in Asia. The digital economy saw $732 billion in MNE investment globally, with 34% of this volume going to Asia (Figure 3.13). Digital services and solutions and digital adoption attracted about 70% of digital economy investments both globally and in Asia.

By region, Asia and the EU+UK have attracted two-thirds of global investments in the digital economy in the past decade (Figure 3.14a). North America is also a significant destination, attracting about one-fifth of global investments, on average. It is noticeable that digital FDI grows faster than other segments, posting average annual growth of 8% in the past decade

Figure 3.13: Total Investment Inflows by Digital Segment—Firm-Level ($ billion)



Notes: Total investment refers to the sum of receipts from the two modes of entry—greenfield and mergers and acquisitions. Classification is adapted from UN Trade and Development's World Investment Report 2025 framework on the digital economy. For these estimates, the digital economy covers the narrow scope, which includes digital adoption and core scope. Core scope is composed of foundational infrastructure, digital services and solutions, and industrial development. See Annex 3A for details on sector correspondence.

Sources: ADB calculations using data from Financial Times. fDi Markets; and Moody's Analytics. Orbis M&A (formerly Zephyr M&A Database) (accessed June 2025); and methodology based on UNCTAD (2025).

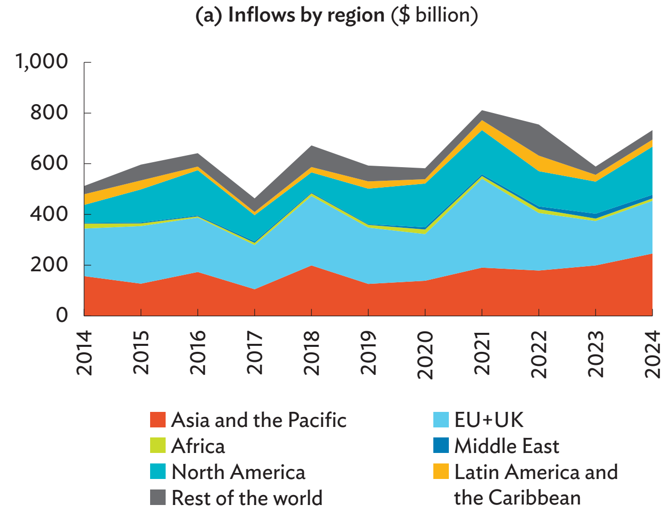
compared with 4% in other segments globally. However, for non-Asian economies, digital FDI appears to have lost some steam in 2014–2024 compared with 2004–2013. In contrast, digital sectors accelerated in Asia, growing an average of 14% in 2014–2024 compared with 9% in 2004–2013 (Figure 3.14b).

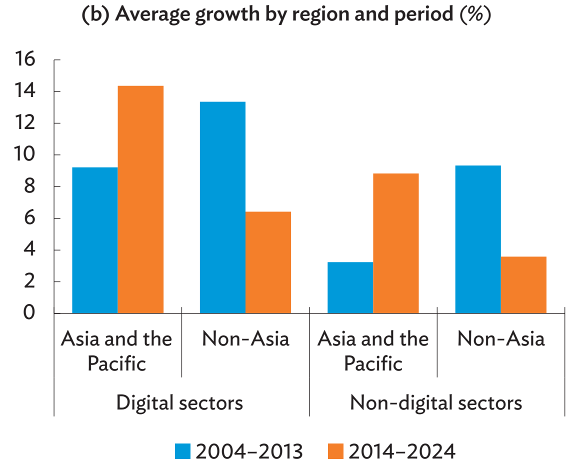
Data centers are concentrating a large part of digital FDI in the region. Data processing, hosting, and related services—which encompass the data centers sector—are drawing large investments in the digital economy, overtaking financial services globally. In 2024, Asian economies received about $80 billion of MNE investments in these activities. Meanwhile, financial services still drew significant inflows, with $51 billion in investments in the same period.

Investment in data centers is increasingly a key component of digital infrastructure. Cloud computing MNEs have a significant role in this space. In general, top investors are using corporate funds, rather than project finance structures, to finance data center projects. This is why most of these investments are only captured in international project finance statistics and not in domestic projects. Another prominent feature of investment in data centers is its high concentration. About 90% of investments in data centers in developing Asia are concentrated in the top four recipients. Amazon, for example, concentrates its investments in economies in South Asia and Southeast Asia (UNCTAD 2025).

With AI widely regarded as a key component in digital transformation, demand for AI and other cloud computing technologies has risen, particularly through greenfield investments. In 2024, global greenfield investment in AI and data centers almost quadrupled from 2023, reaching almost $108 billion from $28 billion in 2023. This represents about 8% of all greenfield investments in 2024. Asia and the Pacific's trajectory follows the same trend, as greenfield investments in AI and data centers doubled in the region from 2023 to 2024, representing about 9% of regional greenfield inflows (Figure 3.15). Apart from the sheer magnitude of greenfield investments in these segments, investors appear to be investing more per project in AI and data centers. Average investment per AI or data center project tripled globally from $51 billion in 2023 to $156 billion in 2024. In Asia, the average AI investment project almost doubled.

Figure 3.14: Global Investment Inflows in the Digital Economy—Firm-Level



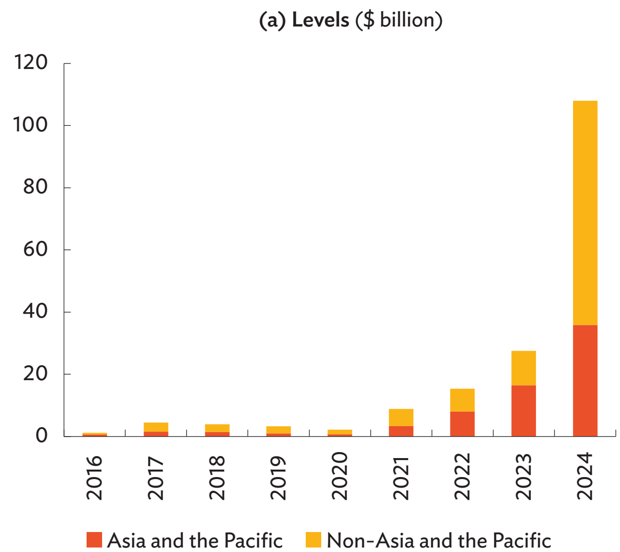


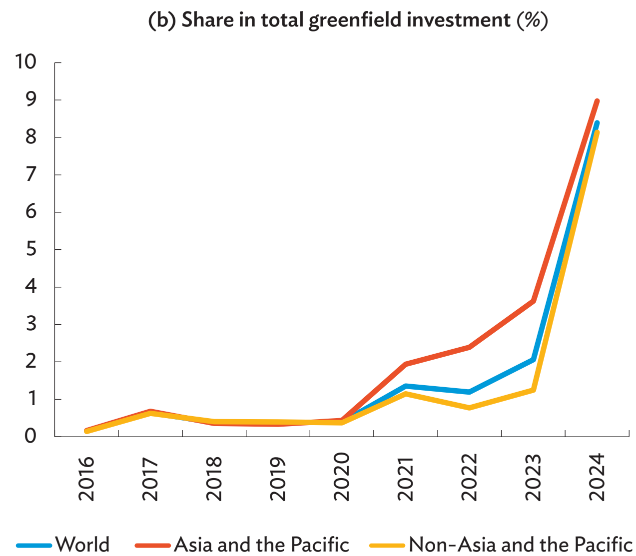
EU = European Union (27 members), UK = United Kingdom.

Notes: Total investment refers to the sum of receipts from the two modes of entry—greenfield and mergers and acquisitions. Classification is adapted from UN Trade and Development's World Investment Report 2025 framework on the digital economy. For these estimates, the digital economy covers the narrow scope, which includes digital adoption and core scope. Core scope is composed of foundational infrastructure, digital services and solutions, and industrial development. See Annex 3A for details on sector correspondence.

Sources: ADB calculations using data from Financial Times. fDi Markets; and Moody's Analytics. Orbis M&A (formerly Zephyr M&A Database) (accessed June 2025); and methodology based on UNCTAD (2025).

Figure 3.15: Greenfield Investment in Artificial Intelligence and Data Centers





Note: Estimates are computed from greenfield projects tagged with data centers, artificial intelligence, or both.

Source: ADB calculations using data from Financial Times. fDi Markets (accessed November 2025).

A closer glance at Asia reveals the evolution of digital economy investments. In 2014, over half of digital FDI was concentrated in East Asia and largely invested in financial services. Come 2024, other subregions have emerged as preferred destinations for digital investments, with financial services taking a backseat

Figure 3.16: Investment Inflows in the Digital Economy by Destination and Sector—Firm-Level, Asia and the Pacific ($ billion)

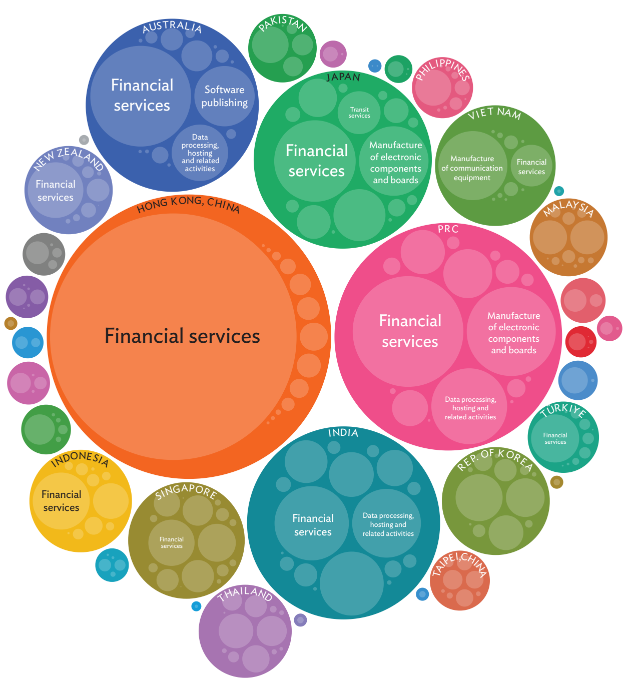
(a) By subregion and segment, 2014

	East Asia	Pacific	Southeast Asia	South Asia	Central and West Asia
Financial services	60.6	10.1	9.2	4.9	2.8
Data processing and related activities	8.8	2.8	1.2	3.5	0.1
Electronic components manufacturing	10.2	0.0	1.1	0.2	0.0
Software publishing	3.9	2.8	1.4	1.4	0.1
Wireless telecommunications activities	1.5	0.9	1.3	4.1	0.3
Other digital sectors	8.5	1.3	9.2	4.6	0.2

(b) By subregion and segment, 2024

	Pacific	East Asia	Southeast Asia	South Asia	Central and West Asia
Data processing and related activities	26.1	22.0	20.2	10.2	0.9
Financial services	18.0	10.4	10.9	10.9	0.9
Electronic components manufacturing	6.0	15.9	13.1	14.1	0.0
Software publishing	2.6	2.7	8.5	4.9	0.1
Computer programming	10.2	1.1	1.4	4.2	0.3
Other digital sectors	9.0	6.7	9.4	4.0	1.1

(c) By economy and segment, 2014



(d) By economy and segment, 2024

PRC = People's Republic of China.

Notes: The Pacific includes the Pacific developing economies of ADB plus advanced economies, Australia and New Zealand. Total investment refers to the sum of receipts from the two modes of entry—greenfield and mergers and acquisitions. Classification is adapted from UN Trade and Development's World Investment Report 2025 framework on the digital economy. For these estimates, the digital economy covers the narrow scope, which includes digital adoption and core scope. Core scope is composed of foundational infrastructure, digital services and solutions, and industrial development. See Annex 3A for details on sector correspondence.

Sources: ADB calculations using data from Financial Times. fDi Markets; and Moody's Analytics. Orbis M&A (formerly Zephyr M&A Database) (accessed June 2025); and methodology based on UNCTAD (2025).

to data processing, hosting, and related activities (Figures 3.16a and 3.16b). By economy, major recipients were Asian financial centers such as Hong Kong, China; the PRC; and Japan in 2014, again invested in these economies' financial service sectors. However, in 2024, investors appeared to favor data processing, hosting, and related services and opted to invest in economies such as Australia and Japan (Figures 3.15c and 3.15d). Digital services and solutions remain important areas of investment for digital FDI. Developing Asia is estimated to attract one-third of global investments in digital services and solutions (UNCTAD 2025). Likewise, investments in ICT manufacturing remain high in developing Asia, concentrated in Malaysia, Viet Nam, and Singapore.

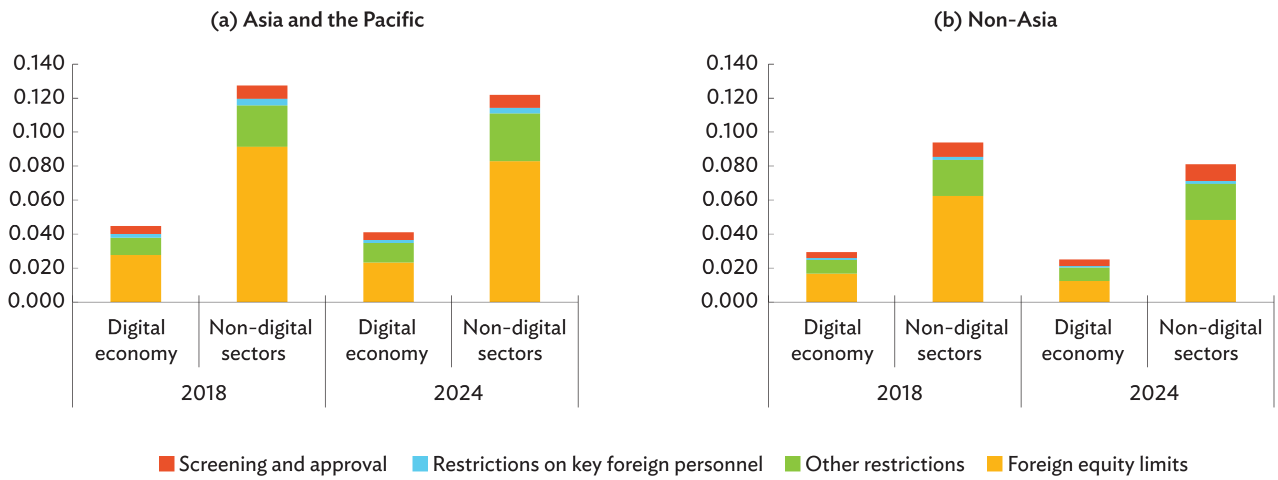
FDI Policy Developments in Digital Sectors

From a regulatory angle, Asian economies are more actively engaging in upgrading legislation pertaining to the digital economy. Domestic policies are being considered or have been implemented in most economies to address core areas of digital regulations including data privacy, cybersecurity, consumer protection, and digital identity. At the same time, more Asian economies are participating in regional or plurilateral agreements with digital elements, to varying degrees (Avendano and Crivelli 2025).

Investment restrictiveness in digital sectors has decreased gradually from 2018 to 2024, both globally and in Asia. However, in relative terms, digital-related sectors, as measured by international metrics such as the OECD FDI Regulatory Restrictiveness Index or European University Institute's digital trade integration, remain more stringent among Asian economies than those outside the region (Figure 3.17). Regulatory restrictiveness also appears to vary between developing and developed economies in Asia, with developed Asian economies showing more open regimes. By restriction type, foreign equity limitations typically factored highest among the main policy categories, regardless of region and economic segment.

While overall restrictiveness appeared broadly stable in Asia between 2018 and 2024, some economies have made significant progress in reducing regulatory barriers to foreign investments in the digital economy. Indonesia, for example, saw significant improvement in policy openness between 2018 and 2024, as it eased foreign equity limitations and foreign personnel restrictions. Similar policy changes were also observed in the Philippines during this period, with a 32% fall in the Regulatory Restrictiveness Index from 2018 to 2024.

Figure 3.17: Foreign Direct Investment Regulatory Restrictiveness Index—By Economic Segment, Policy Category, and Region



Notes: The Regulatory Restrictiveness Index measures statutory restrictions on foreign direct investment in 22 sectors and across time and economies. The index considers restrictions on four main areas: foreign equity limitations, screening and approval, foreign employment restrictions in key personnel, and other restrictions. The index ranges in value from 0 to 1, with 0 being more open and 1 being more closed.

Sources: ADB calculations using data from Organisation for Economic Co-operation and Development (OECD). OECD Data Explorer. https://data-explorer.oecd.org/ (accessed October 2025); and methodology based on UNCTAD (2025).

Overall, the landscape of foreign investment in digital sectors remains stable in Asia and the Pacific and calls for further efforts to enhance regulatory convergence.

Cross-Border Investment and Digital Technology Adoption

A crucial question for policymakers when considering the trade-offs of digital FDI is on the potential spillovers of digital FDI. The impact of FDI on technology transfer has been well studied (with Keller 2004 providing a review). Inward FDI can raise productivity and encourage technology transfer in host economies. Local firms learn from foreign investors through competition, absorption, and supply chain links (Damijan and Knell 2005; Kokko 1994). Indeed, industries with high levels of foreign participation are more productive (Aitken and Harrison 1999), although these effects are contingent on local "absorptive capacity" (Keller 2004). Cultural transfer within multinational firms' networks and to local companies have also been reported in the context of Asian economies (Tang and Zhang 2021).

Indirect spillovers may also exist as domestic firms supply the foreign firms or use their goods as intermediate inputs (Javorcik 2004; Kee 2015). A growing literature also posits that workers learn while employed at multinationals and then transfer this knowledge as they transition to domestic firms (Poole 2013). Recent firm-level studies explore the mechanisms and find that domestic firms located nearby become more productive, especially if they have skilled workers or do some innovation (Gong 2023). Overall, this literature suggests that inward FDI may help domestic firms upgrade their technologies, but the benefits are not automatic.

The impact of outward FDI on the source economy's technology adoption has been less explored. In principle, offshoring allows firms to specialize in different tasks, increasing productivity and technological upgrading (Grossman and Rossi-Hansberg 2008). These effects can spread across supply chains (Park, Santos-Paulino, and Trentini 2022). Overall, outward FDI can help or hurt firms at home depending on how they manage information and technology flows between their domestic and foreign branches (Box 3.2).

Employment and FDI in Digital Sectors

Discussions on the impact of digital FDI have generally focused on productivity and growth, whereas the role of these investments on other inclusion dimensions, such as employment, has been less explored. Employment stocks in MNEs considering all entry modes (greenfield projects and M&As) suggest that digital and non-digital sectors follow broadly similar regional patterns (Figure 3.18). The EU+UK recorded the largest number of jobs in both categories, followed by Asia. In the EU+UK, total employment rose sharply from 2010 to around 2018–2019.

In Asia and the Pacific, employment in non-digital sectors remains more dominant, while digital-sector jobs have gradually increased in recent years. Information, together with finance and insurance, account for most digital-sector jobs in the region. Other industries, such as legal services, also experienced notable growth, particularly after 2015, indicating a wider diffusion of digital-intensive activities beyond traditional ICT domains. Overall, these trends suggest that digital-intensive investments have become an increasingly important driver of employment generated through inward FDI.

Box 3.2: Foreign Direct Investment and Technology Adoption in the Republic of Korea

The Republic of Korea offers a prime setting with which to study the impacts of cross-border investment on technology adoption. As a top source of regional foreign direct investment (FDI), the Republic of Korea is one of the world's most digitally connected economies with a high adoption of artificial intelligence (AI), cloud services, big data, and industrial robotics. Relying on rich administrative firm-level data from the Republic of Korea, Poole et al. (forthcoming) consider the implications of cross-border investment on digitalization across parent economies and subsidiary locations. Authors assess the role of FDI on technology adoption both for foreign or Korean-owned multinational enterprises (MNEs) and consider potential spillovers on domestic firms and the underlying mechanisms behind.

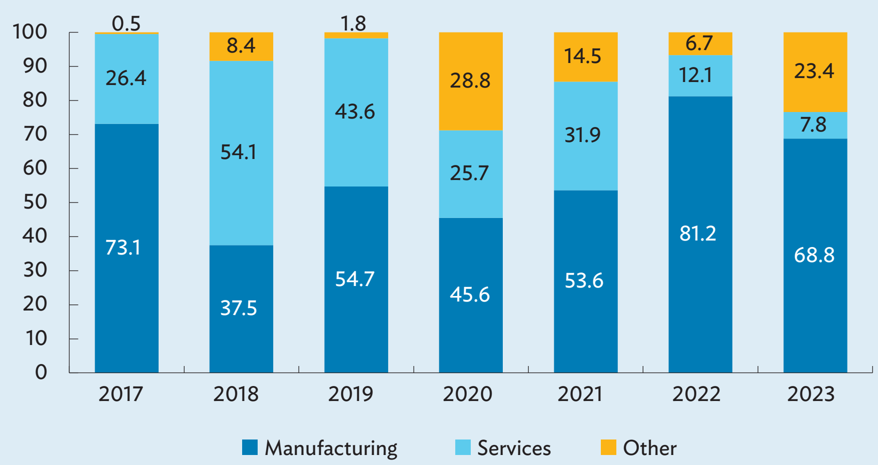
Building on evidence of management practices being transplanted by MNEs (Bloom and van Reenen 2010), the evidence for the Republic of Korea suggests that FDI flows have improved productivity and wages, although effects differ by sector and size (Poole et al. forthcoming). Digital transformation has opened new ways for technology to spread in the Republic of Korea. Evidence on next-generation digital technologies suggests that firms often adopt several technologies together—AI, the Internet of Things, cloud computing, and big data—and that companies with more research and development and intangible assets are more likely to do so (Cho et al. 2023). In sum, digital tools can improve productivity when paired with skilled workers and good management.

The Republic of Korea's Survey of Business Activities provides detailed information on each firm's ownership structure. About 27% of all firms have a parent company, more so for service firms (34%) than manufacturing firms (20%). About 9% of firms are majority-owned by a foreign parent, while 18% are owned by a domestic parent. On the subsidiary side, 44% of firms have at least one subsidiary, and roughly one in four maintains a foreign subsidiary. Foreign subsidiaries are more common in manufacturing (35%) than in services (19%), reflecting the outward orientation of manufacturing activities.

In terms of technology adoption, about 14% of firms report having adopted at least one technology, with adoption rates. Among different categories, data creation and data use technologies are the most commonly adopted, while application of technologies such as 3D printing, robotics, and AR/VR remain relatively limited. Within data creation technologies, the use of big data and the Internet of Things is most prevalent. In data use technologies, cloud computing and AI are components of digital transformation, though adoption remains modest overall.

The empirical analysis is conducted in two parts: first, we investigate whether multinationals in the Republic of Korea bring new technology from headquarter nations to their subsidiaries in the economy and whether Korean firms with foreign subsidiaries upgrade their technological capabilities (direct effect). Next, we consider whether those firms with cross-border investment flows (either inward or outward) can support the spread of digital technologies to purely domestically operating Korean firms (indirect effect).

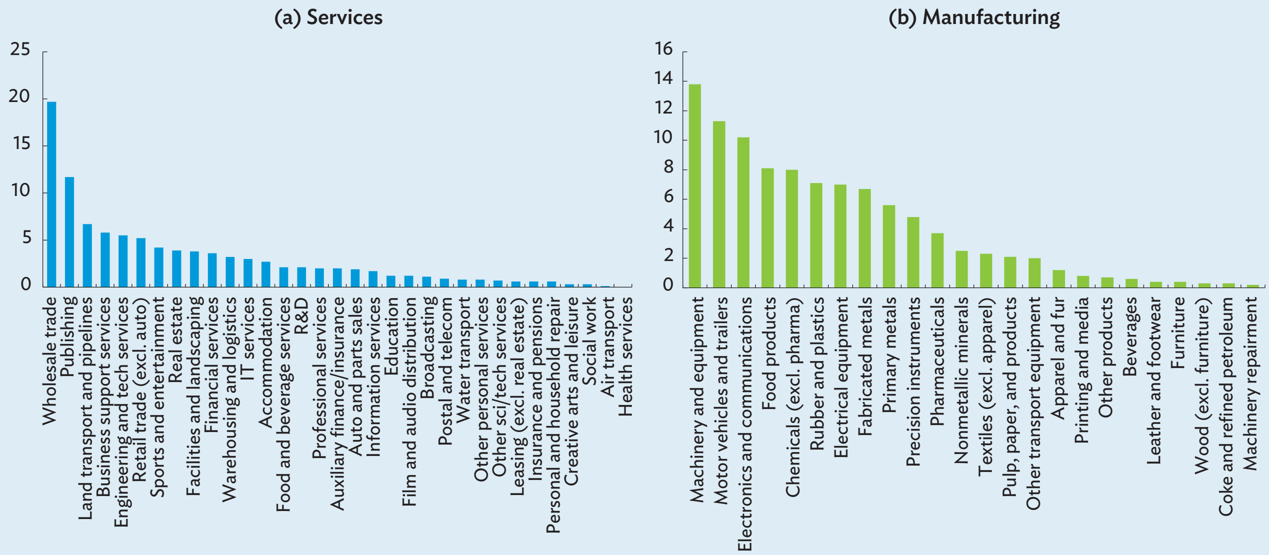
1: Sector Decomposition of Greenfield Investment Projects, 2017–2023—Republic of Korea (%)



Note: "Other" includes agriculture, forestry, fishing, mining, construction, and utility sectors.

Source: Authors' calculations using data from Financial Times. fDi Markets (accessed June 2025).

2: Firm Distribution Across Services and Manufacturing Subsectors, 2023—Republic of Korea (%)



IT = information technology, R&D = research and development.

Source: Authors' calculations.

Foreign Ownership and Digital Adoption

The first step is to estimate the extent to which the adoption of digital technology is influenced by cross-border investment flows across firms. The baseline equation to be estimated is as follows:

$$y_{jt} = \beta_1 FOREIGN_{jt} + \beta_2 KMNE_{jt} + \theta X_{jt} + \delta_{kt} + \varepsilon_{jt}$$

where *j* indexes the firm, *k* indexes the firm's subsector, and *t* corresponds to 2017–2023 in our sample. The variable $FOREIGN_{jt}$ equals one if the firm is owned by a parent firm outside of the Republic of Korea, while the variable $KMNE_{jt}$ equals one if the Korean parent firm owns a subsidiary outside of the Republic of Korea.[a]

The core outcome variable in our primary regressions is a dummy variable equal to one if the firm adopted any of the nine digital technologies.

Estimations report a positive association between operating a foreign subsidiary and any technology adoption (column 2), consistent with the theory in Grossman and Rossi-Hansberg (2008). Korean multinationals are around 0.057 percentage points more likely to adopt digital technologies compared to purely Korean operating firms (without foreign ownership or foreign subsidiaries), even after controlling for firm size. The positive association between digitalization and ownership of foreign subsidiaries is stronger in service sectors than in manufacturing.

Preliminary results also suggest a negative association between inward foreign direct investment and the adoption of AI tools in manufacturing and primarily digital manufacturing sectors. Foreign-owned manufacturing firms in the Republic of Korea are estimated to be less likely to adopt AI than their purely domestic counterparts. As the Korean economy is at the frontier of technology development, one potential hypothesis is that purely domestic Korean firms are in fact more technologically advanced than the foreign parent counterparts.

Spillovers in Domestic Firms

The second part of the analysis focuses on whether local exposure to internationally engaged firms can encourage the digitalization of purely domestic firms with no cross-border investment. The following equation is estimated:

$$y_{jt} = \beta_1 FOREIGN_{kt} + \beta_2 KMNE_{kt} + \theta X_{jt} + \delta_t + \varepsilon_{jt}$$

where the main regressors of interest now reflect the proportion of firms within firm *j's* subsector *k* that report ownership by a foreign parent ($FOREIGN_{kt}$) or ownership of a foreign subsidiary ($KMNE_{kt}$). Importantly, we restrict the sample of firms to only those purely domestic firms.

Initial results suggest that, across all firms, a strong presence of Korean multinational firms within the domestic firm's subsector is positively associated with increased digital

continued on next page

Box 3.2: continued

technology adoption. As Korean firms sit at the frontier of technology adoption around the world, we explore the potential for MNEs to support new digital technologies among those firms least likely to already rely on these technologies.

The following tables present the core spillovers regressions excluding domestic firms operating in subsectors identified as digital sectors. Given the advanced stage of the Korean technology sector, the spillovers associated with MNEs are stronger for firms that are not already at the technology frontier. A higher share of Korean-owned MNEs in a firm's subsector is associated with a stronger probability of digital technology adoption among domestic Korean firms. This association is also robust to broader categorizations of digital technologies. As the share of Korean multinational firms increases, domestically oriented services firms increase their adoption of data creation and data use technologies. All pure domestic firms, however, are more likely to adopt applied technologies, like robotics, for enhancing production techniques.

1: Firm Type and the Likelihood of Technology Adoption

	Adopted Any Technology = 1				
	(1)	(2)	(3)	(4)	(5)
	All Firms	All Firms	Manufacturing Firms	Services Firms	Digital Sectors
Owned by foreign parent = 1	0.026***	0.007	0.004	0.008	-0.018
	(0.008)	(0.008)	(0.011)	(0.010)	(0.028)
ROK multinational = 1	0.090***	0.057***	0.031***	0.094***	0.079***
	(0.005)	(0.005)	(0.006)	(0.010)	(0.014)
Subsector x year FE	Yes	Yes	Yes	Yes	Yes
Firm controls	No	Yes	Yes	Yes	Yes
Observations	86,232	86,232	43,128	43,104	14,940
R-squared	0.131	0.151	0.066	0.207	0.169

FE = fixed effect, ROK = Republic of Korea.

Notes: Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Source: Poole et al. (forthcoming).

2: Spillover Effects and Technology Adoption, Unweighted, no ICT Sector

	Adopted Any Technology = 1			
	(1)	(2)	(3)	(4)
	All Firms	All Firms	Manufacturing Firms	Services Firms
Share of foreign-owned firms	0.157***	0.198***	-0.019	-0.024
	(0.079)	(0.066)	(0.199)	(0.060)
Share of ROK MNE firms	0.091***	0.102**	0.182**	0.518***
	(0.041)	(0.045)	(0.086)	(0.091)
Subsector x year FE	Yes	Yes	Yes	Yes
Firm controls	No	Yes	Yes	Yes
Observations	48,604	48,604	21,822	26,782
R-squared	0.012	0.019	0.018	0.032

FE = fixed effect, ICT = information and communication technology, MNE = multinational enterprise, ROK = Republic of Korea.

Notes: Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Source: Poole et al. (forthcoming).

continued on next page

Box 3.2: continued

This research offers policymakers guidance in supporting the adoption of digital technologies and in facilitating linkages between multinational and domestic firms.

Results suggest that investment facilitation tools can support knowledge sharing and collaboration between firms. Domestically, firms need to develop digital infrastructure and digital skills for the workforce to enhance absorptive capacity. Higher intellectual property protections and data governance are also central to encourage technology spillovers.

3: Spillover Effects and Technology Adoption, Unweighted, No ICT Sector

	Adopted Data Creation Technologies = 1			
	(1)	(2)	(3)	(4)
	All Firms	All Firms	Manufacturing Firms	Services Firms
Share of foreign-owned firms	0.137**	0.169***	-0.119	0.001
	(0.067)	(0.058)	(0.076)	(0.058)
Share of ROK MNE firms	0.000	0.009	0.080	0.349***
	(0.031)	(0.035)	(0.050)	(0.082)
Subsector x year FE	Yes	Yes	Yes	Yes
Firm controls	No	Yes	Yes	Yes
Observations	48,604	48,604	21,822	26,782
R-squared	0.006	0.014	0.011	0.024

FE = fixed effect, ICT = information and communication technology, MNE = multinational enterprise, ROK = Republic of Korea.

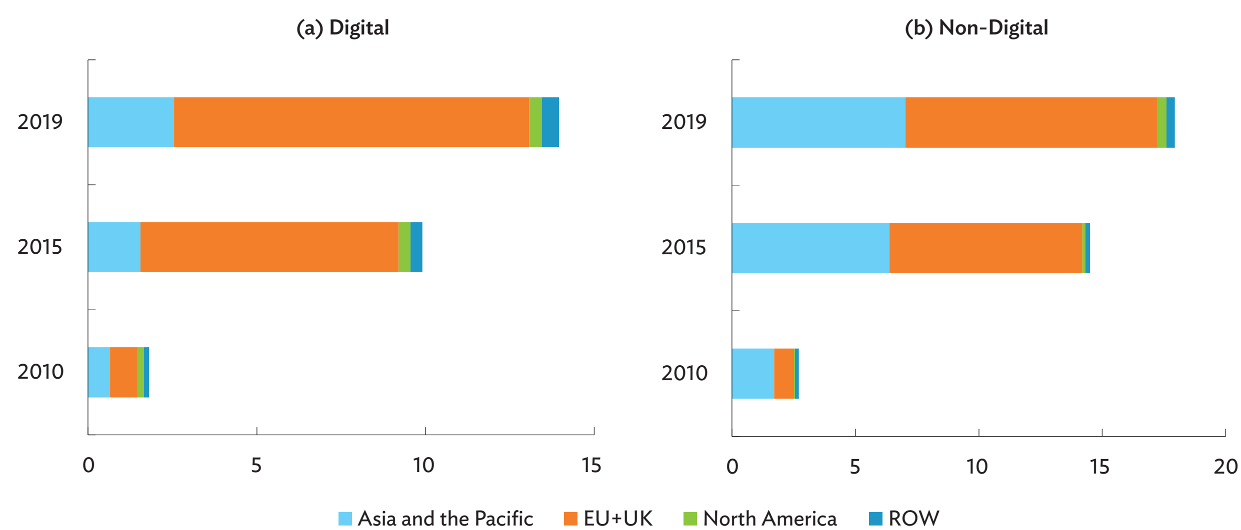
Notes: Standard errors in parentheses. * p < 0.10, ** p < 0.05, *** p < 0.01.

Source: Poole et al. (forthcoming).

[a] The main estimation also includes the firm's log of employment as an indicator to capture general firm size and productivity effects, as the main time-varying, firm-level control (X_{jt}), as well as subsector-by-year fixed effects to account for the sector-specific trends in investment and technology adoption.

Source: Poole et al. (forthcoming).

Figure 3.18: Total Employment Stock in Multinational Enterprises—Digital Versus Non-Digital (million)



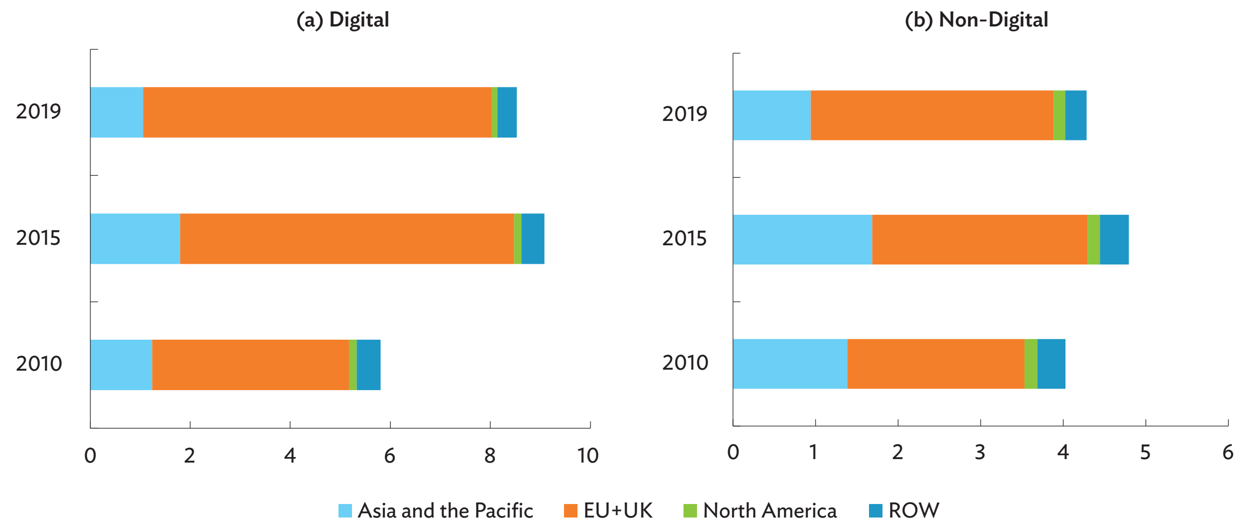
EU = European Union (27 members), ROW = rest of the world, UK = United Kingdom.

Note: Employment figures reflect the total number of employees in all affiliates.

Source: Authors' calculations based on Government of the United States, United States International Trade Commission. Multinational Revenue, Employment, and Investment Database. https://www.usitc.gov/data/gravity/mreid.htm (accessed November 2025).

Employment trends (flows) in greenfield and mergers and acquisitions (M&A) projects reveal distinct patterns in job creation across digital and non-digital sectors (Figures 3.19 and 3.20). As in the case of stocks, the EU+UK generates the largest number of jobs in greenfield projects, followed by Asia and the Pacific. Asia shows a more balanced distribution between the digital and non-digital jobs across MNEs. Employment from

Figure 3.19: Employment in Greenfield Projects—Digital Versus Non-Digital ('000)

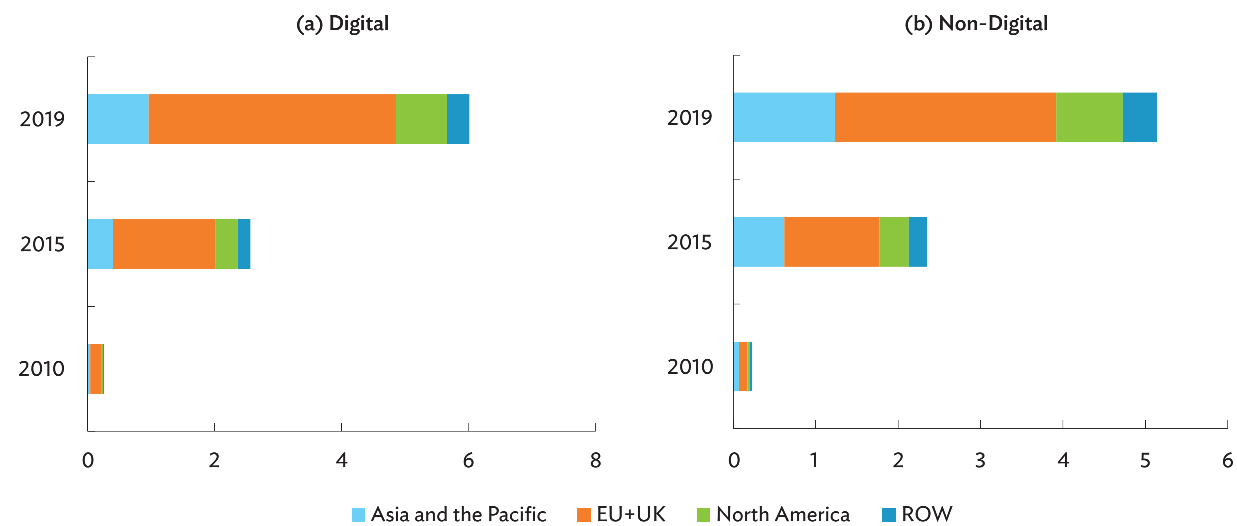


EU = European Union (27 members), ROW = rest of the world, UK = United Kingdom.

Note: Employment figures represent the total number of employees in new greenfield affiliates.

Source: Authors' calculations based on Government of the United States, United States International Trade Commission. Multinational Revenue, Employment, and Investment Database. https://www.usitc.gov/data/gravity/mreid.htm (accessed November 2025).

Figure 3.20: Employment in Mergers and Acquisitions—Digital Versus Non-Digital ('000)

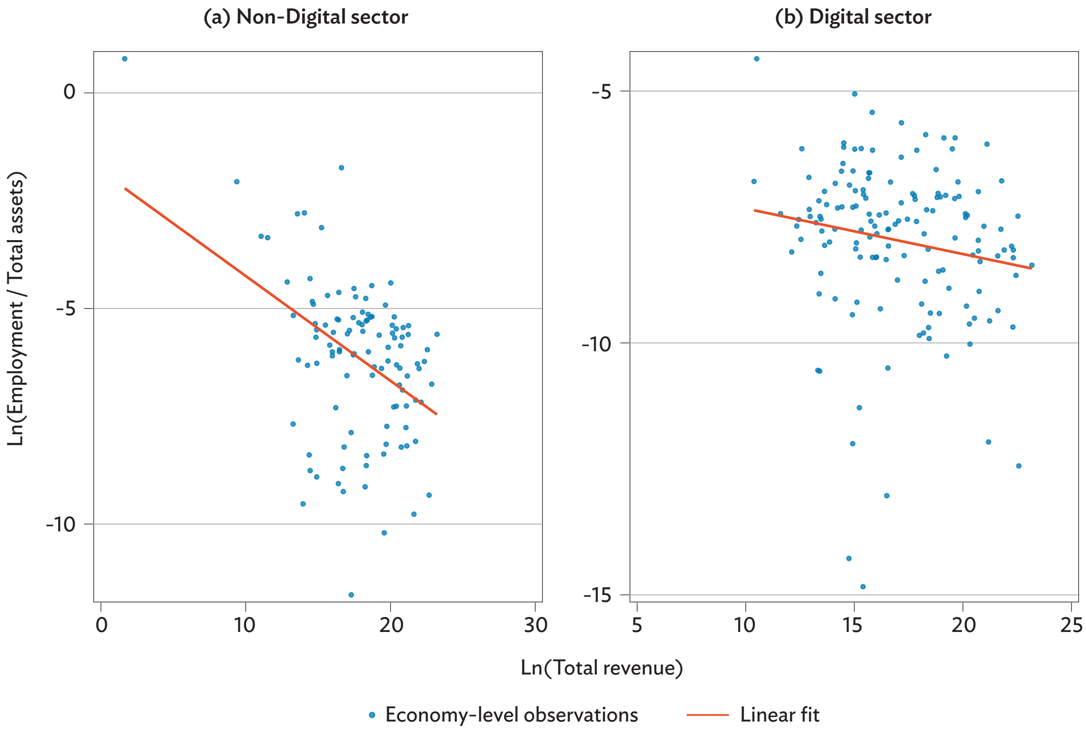


EU = European Union (27 members), M&A = merger and acquisition, ROW = rest of the world, UK = United Kingdom.

Note: Employment figures represent the total number of employees in new M&A affiliates.

Source: Authors' calculations based on Government of the United States, United States International Trade Commission. Multinational Revenue, Employment, and Investment Database. https://www.usitc.gov/data/gravity/mreid.htm (accessed November 2025).

Figure 3.21: Correlation Between Revenue and Employment-to-Asset Ratio, Digital Versus Non-Digital



Ln = natural logarithm.

Note: Each dot represents an economy, with values aggregated across foreign affiliates.

Source: Authors' calculations based on Government of the United States, United States International Trade Commission. Multinational Revenue, Employment, and Investment Database. https://www.usitc.gov/data/gravity/mreid.htm (accessed November 2025).

new greenfield projects surpassed that of M&A activity until around 2020. Greenfield-related employment peaked in the early 2010s and tapered off after 2016–2017, particularly in the EU+UK and Asia, suggesting a slowdown in new project-based job creation. In contrast, employment associated with M&A activity has risen steadily across most regions, with the EU+UK showing the strongest and most sustained increase, especially in digital industries. This divergence points to a structural shift in employment patterns: while earlier gains were driven by the establishment of new digital operations, more recent growth reflects consolidation and acquisition-led expansion within the digital economy.

As firms expand and generate higher revenues, this does not necessarily coincide with proportional increases in employment. Figure 3.21 shows a negative association between revenue and the employment-to-asset ratio across economies, based on aggregates of foreign-invested enterprises. This relationship is steeper in non-digital sectors, which may reflect greater reliance on capital (machinery, technology, or process efficiency) as revenues increase, rather than labor expansion. In digital sectors, the association remains negative but is noticeably flatter, reflecting that these sectors are already less labor-intensive and rely more heavily on scalable intangible assets, such that changes in employment play a more limited role in driving revenue growth. Overall, these patterns suggest that firm growth, especially in non-digital sectors, is increasingly supported by capital and efficiency gains rather than labor.

Policy Recommendations

While national digital strategies have gained traction in the region, there are still challenges in integrating the investment dimension into industrial development strategies. For example, intellectual property agreements

Box 3.3: Competition and Digital Foreign Direct Investment

Competition policy remains an important area for foreign direct investment (FDI) in the digital economy, especially today when digital regulatory regimes are more divergent.

Traditional competition frameworks rely on existing laws (e.g., privacy and consumer protection) or adopt targeted regimes for digital platforms. A strong, rule-based competition policy is vital for attracting multinational activity. There are trade-offs when considering the role of competition policy and FDI. On the one hand, increasing FDI screening in digital and technology sectors may deter investment (OECD 2024). On the other, competition can contribute to control for competitive distortions, such as subsidization of selected sectors or firms or incentives in the digital sector (e.g., Malaysia data centers and tax expenditure programs).

Preventative regulations such as the Digital Markets Act of the European Union (EU) aim to capture practices harmful to competition. Merger oversight is another important area of competition in the digital economy, focusing on revising notification thresholds, preventing killer acquisitions by domestic or foreign companies and enhancing enforcement and improving transparency. Cases on competition policy have increasingly intersected with FDI policy issues in Asia. One such example, from Japan, involves cases on e-commerce platforms (e.g., Amazon, Rakuten) over potential abuse of position against sellers in the marketplace. As a result, FDI rules were tightened to require prior notification. In the People's Republic of China, Alibaba's case for abuse of dominant position resulted in delayed foreign technology mergers and acquisitions under national security and data privacy grounds.

International investment agreements (IIAs) (bilateral investment treaties and investment chapters in free trade agreements) can also overlap with domestic competition law in the context of the digital economy. IIAs are designed to protect foreign investors against discriminatory treatment, in the same way competition policy prevents anticompetitive practices. These agreements often contain nondiscrimination provisions (national treatment, fair and equitable treatment, most-favored-nation treatment), which complement domestic competition law. A growing number of IIAs contain dedicated chapters on competition, which require effective competition laws, procedural requirements, and cooperation for enforcement action. Telecommunications chapters add dedicated disciplines on network access use, interconnectivity, universal services obligations, and the prevention of anticompetitive practices. Some agreements encourage the parties to cooperate in the development of competition laws for the digital economy. Evidence for Asia also suggests that a strong regulatory authority raises the establishment cost for foreign affiliates while at the same time lowering the cost of operations (Nordås and Avendano forthcoming). These examples underscore that competition and investment policy on digital markets will be more entwined in the future, and policy coherence on the scope and objectives of domestic and international frameworks is needed.

Source: ADB compilation based on Organisation for Organisation for Economic Co-operation and Development, Korea Policy Center, and Asian Development Bank. "Antitrust Enforcement and Regulation in Digital Markets" (workshop, Republic of Korea, 4–5 September 2025).

are rarely considered to be part of digital strategies (UNCTAD 2025), highlighting the need for more investment-oriented digital policies.

Leverage policy instruments. Established FDI policy instruments such as international investment agreements (IIAs) can leverage more and better digital FDI. International investment agreements can contribute to attract quality FDI into digital sectors. Provisions on cooperation for promoting skills development, digital literacy, and ICT can support economies in attracting FDI or in favoring technology transfer. Commitments on AI, digital payments, data flows, and cybersecurity are still novel in the region but more common globally. Yet, more can be done to promote digital skills training, small and medium-sized enterprises support, and digital infrastructure development. Increasingly, competition policy and its interaction with FDI policy is important for the digital sector (Box 3.3).

Strengthen national digital strategies. National digital strategies remain a pillar for enhancing FDI into digital sectors. Evidence from industrialized economies in their ICT/digital frameworks (classified as Generation 4 by the ITU in the ICT Regulatory Tracker) highlights the importance of adopting national digital strategies early on. These have improved significantly in quality and sophistication, featuring new instruments (i.e., techno parks, incubators, special economic zones, clusters for technological development).

Support regional strategies. Regional digital strategies have also been important in promoting higher cross-border investment, by aligning standards and interoperability. The most prominent regional strategy in Asia is that of the Association of Southeast Asian Nations (ASEAN), which began with ICT-focused master plans to expand infrastructure. The ASEAN Digital Masterplan 2025 and the Bandar Seri Begawan Roadmap promote cross-border digital trade, e-commerce, digital payments, and cybersecurity. The ASEAN Digital Economy Framework Agreement aims at establishing a legally binding framework for a regional market.

Commit to data governance. Data governance is shaping investments in digital sectors. Data governance initiatives have represented the highest share of digital policy measures in recent years. They focus on data protection and governance. Cross-border data flows remain an important area. In recent years, the adoption of data localization requirements has increased. These include data localization requirements, approval, or prior notification before data transfers, adequacy decisions, standard contractual clauses or model contractual clauses, binding corporate rules, and others.

Enhance intellectual property legislation. Another area of increasing importance is robust and transparent intellectual property laws. Digital technologies are generally protected through patents. Most advanced economies have ratified the World Intellectual Property Organization internet treaties that ensure these mechanisms are functional. Developing economies have adopted a more flexible approach to intellectual property.

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Annex 3A: Sector Correspondence—Digital Economy

Digital Economy Component		UNCTAD/OECD/ ISIC Rev. 4		NAICS 2017		fDi Markets
Narrow Scope: Digital Economy	Core Scope	**Foundational infrastructure**				
		6110	Wired telecommunications activities	517311	Wired telecommunications carriers	Wired telecommunication carriers
		6120	Wireless telecommunications activities	515111	Radio networks	Radio and television broadcasting
				515112	Radio stations	
				515120	Television broadcasting	
				515210	Cable and other subscription programming	Cable and other subscription programming
				517312	Wireless telecommunications carriers (except satellite)	Wireless telecommunication carriers
		6130	Satellite telecommunications activities	517410	Satellite telecommunications	Satellite telecommunications
		6190	Other telecommunications activities	517911	Telecommunications resellers	Other telecommunications
				517919	All other telecommunications	
				812990	All other personal services	n.d.
		Digital services and solutions				
		5820	Software publishing	511210	Software publishers	Software publishers, except video games
						Video games, applications, and digital content
		6201	Computer programming activities	541511	Custom computer programming services	Custom computer programming services
		6202	Computer consultancy and computer facilities management activities	541512	Computer systems design services	Computer systems design services
				541513	Computer facilities management services	Computer facilities management services
		6209	Other information technology and computer service activities	541519	Other computer-related services	Other computer-related services
		4791	Retail sale via mail-order houses or via the internet	454110	Electronic shopping and mail-order houses	Nonstore retailers
		K	Financial and insurance activities	52	Finance and insurance	Financial services
			Transit services	485	Transit and ground passenger transportation	Transit and ground passenger transportation
		Industrial development				
		2610	Manufacture of electronic components and boards	334412	Bare printed circuit board manufacturing	Other (semiconductors) Semiconductors and other electronic components
				334413	Semiconductor and related device manufacturing	
				334416	Capacitor, resistor, coil, transformer, and other inductor manufacturing	
				334417	Electronic connector manufacturing	

continued on next page

Annex 3A: continued

Digital Economy Component		UNCTAD/OECD/ ISIC Rev. 4		NAICS 2017		fDi Markets
Narrow Scope: Digital Economy	Core Scope	2610	Manufacture of electronic components and boards	334418	Printed circuit assembly (electronic assembly) manufacturing	
				334419	Other electronic component manufacturing	
		2620	Manufacture of computers and peripheral equipment	334111	Electronic computer manufacturing	Computer and peripheral equipment
				334112	Computer storage device manufacturing	
				334118	Computer terminal and other computer peripheral equipment manufacturing	
		2630	Manufacture of communication equipment	334210	Telephone apparatus manufacturing	Communications equipment
				334220	Radio and television broadcasting and wireless communication equipment manufacturing	
				334290	Other communication equipment manufacturing	
		2640	Manufacture of consumer electronics	334310	Audio and video equipment manufacturing	Audio and video equipment (consumer electronics)
						Audio and video equipment (electronic components)
				339930	Doll, toy, and game manufacturing	Dolls, toys, and games
		2680	Manufacture of magnetic and optical media	334613	Blank magnetic and optical recording media manufacturing	Magnetic and optical media
		4651	Wholesale of computers, computer peripheral equipment, and software	423430	Computer and computer peripheral equipment and software merchant wholesalers	Wholesale trade (consumer goods)
		4652	Wholesale of electronic and telecommunications equipment and parts	423610	Electrical apparatus and equipment, wiring supplies, and related equipment merchant wholesalers	
				423690	Other electronic parts and equipment merchant wholesalers	
		6312	Web portals	519130	Internet publishing and broadcasting and web search portals	Internet publishing and broadcasting and web search
		9511	Repair of computers and peripheral equipment	811212	Computer and office machine repair and maintenance	n.d.
		9512	Repair of communication equipment	811211	Consumer electronics repair and maintenance	n.d.
				811213	Communication equipment repair and maintenance	n.d.
	Digital Adoption	6311	Data processing, hosting, and related activities	5182	Data processing, hosting, and related services	Data processing, hosting, and related services

AI = artificial intelligence, ICT = information and communication technology, ISIC = International Standard Industrial Classification of All Economic Activities, n.d. = no data, NAICS = North American Industry Classification System, OECD = Organisation for Economic Co-operation and Development, UNCTAD = United Nations Trade and Development.

Notes: AI, automation, and services; digital contents may be covered by some core sectors.

Sources: ADB compilation based on Financial Times; Government of the United States, Census Bureau; OECD; and UNCTAD.