Cross-Border Investment

Overview

Global investment activity tempered in 2022 against a backdrop of persistent global uncertainty. While global foreign direct investment (FDI) recovered in 2021, persistent pressures on the global landscape weighed against cross-border flows,¹⁵ and global investment inflows in 2022 eased by 12% to \$1.3 trillion.¹⁶ Meanwhile global outflows dipped by 14% to \$1.5 trillion after reaching a 5-year peak in 2021 (UNCTAD 2023). This easing is expected to continue, as global economic conditions remain lukewarm amid persistent geopolitical tensions, uncertain financial market conditions, and elevated interest rates.

In Asia and the Pacific, both inward and outward FDI continued to grow, though at a more tempered pace than the previous year.¹⁷ Inward FDI into the region grew by 8% in 2022, while outward FDI rose by 18% in the same year, slightly down from 24.9% the year prior (Figure 3.1). As investment to and from non-Asian economies slid in 2022, Asia's share in global investment activity rose. Overall, investment to Asian economies accounted for 52% of global inflows, while investment from Asian economies comprised 48% of global outflows.

Regional Inward Investment in M&As Slowed Significantly

After 2 years of sustained growth, merger and acquisition (M&A) deal receipts in Asia slid in 2022. Both intraregional and extraregional M&As declined in value by roughly 30% each (Figure 3.2a). An uncertain economic environment, high prices, and increasing interest rates have exacerbated this trend. Meanwhile, greenfield investment expanded further in 2022, including from non-Asian sources, showing resilience despite the challenging investment environment. Greenfield projects in the region expanded by 79% in 2022, with intraregional greenfield investment growing by 54%. In 2022, another feature of inward investment was the considerable number of mega projects—projects above \$1 billion in capital investment. A total of 41 were reported in Asia in 2022, mainly concentrated in hightech manufacturing sectors such as semiconductors and in service sectors such as renewable energy.

¹⁵ 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).

¹⁶ The United Nations Conference on Trade and Development World Investment Report excludes the Caribbean financial centers from its total estimate. These include Anguilla, Antigua and Barbuda, Aruba, the Bahamas, Barbados, British Virgin Islands, the Cayman Islands, Curaçao, Dominica, Grenada, Montserrat, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Saint Maarten, and the Turks and Caicos Islands.

¹⁷ Asia and the Pacific, or Asia, consists of 49 member economies of the Asian Development Bank (ADB). The composition of economies for Central Asia, East Asia, the Pacific and Oceania, South Asia, and Southeast Asia subregions are outlined in ADB. Asia Regional Integration Center. Economy Groupings. https://aric.adb.org/integrationindicators/groupings.

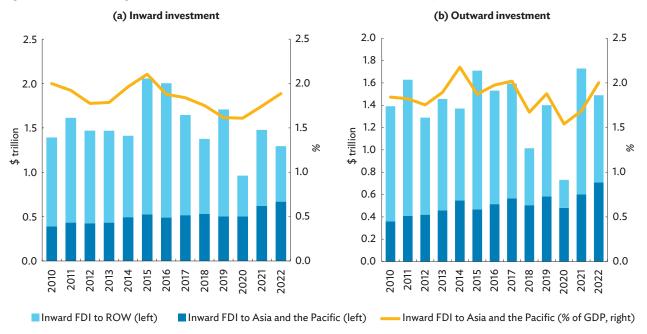


Figure 3.1: Global Foreign Direct Investment Inflows and Outflows, Balance of Payments

FDI = foreign direct investment, GDP = gross domestic product, ROW = rest of the world.

Notes: GDP estimates are obtained from the International Monetary Fund's World Economic Outlook. Estimates used are in current US dollars.

Sources: ADB calculations using data from ASEAN Secretariat. ASEANstats Data Portal. https://data.aseanstats.org (accessed July 2019); CEIC Data Company; Eurostat. Balance of Payments. https://ec.europa.eu/eurostat (accessed November 2023); International Monetary Fund. World Economic Outlook October 2023 database. https://www.imf.org/en/Publications/WEO/weo-database/2023/October (accessed October 2023); and United Nations Conference on Trade and Development. World Investment Report 2023 Statistical Annex Tables. https://unctad.org/topic/investment/world-investment-report (accessed July 2023).

Investment outflows from Asian companies rose by 32% in 2022, with investments to non-Asian economies driving this growth, largely heading towards the United Kingdom and the United States (US). Greenfield investments from Asian corporations grew by 89%, while M&As from the region slid by 5% (Figure 3.2b). Overall, Asia strengthened its external investment linkages through both entry modes, with greenfield projects to non-Asian economies doubling in 2022 and M&As to non-Asian economies expanding by 20%.

By major industry, firm-level investments to Asia continue to largely flow into the tertiary industries, which mostly involve services.

Global investments into Asia's tertiary industries accounted for 60% (\$292 billion) of global flows in 2022, with 57% (\$166 billion) of greenfield investments and 65% (\$126 billion) of M&A receipts in Asia going to this industry (Figure 3.3). Manufacturing comprised the second-largest share in both modes of entry in the same year, accounting for 39% (\$114 billion) of greenfield investments and 29% (\$56 billion) of M&As into Asia. Traditionally, greenfield projects in the region have focused on manufacturing, whereas M&As dominate in tertiary sectors. This trend persists, even in recent years.

Within the tertiary sector, wind electric power and other forms of renewable power generation amassed the largest greenfield investments in 2022. Major investments in energy transition, the digital economy, and reallocation of manufacturing are today driving forces of foreign direct investment (FDI). Foreign investments in renewable energy sectors continue to consolidate in the region. Wind electric power accounted for 11% of all greenfield investment in Asia's tertiary industry, while other forms of renewable power generation comprised roughly one-fourth of all greenfield investments in Asia's tertiary industry. Meanwhile, investments in digital sectors have been

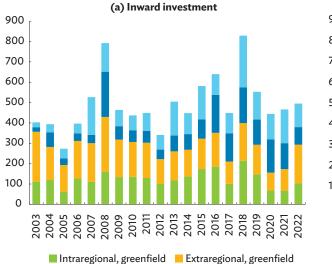
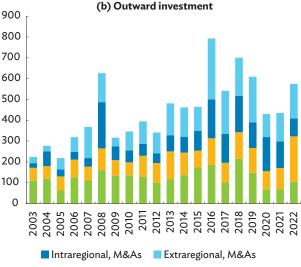


Figure 3.2: Investment Flows for Asia and the Pacific by Mode of Entry



M&A = merger and acquisition.

Sources: ADB calculations using data from Bureau van Dijk. Zephyr M&A Database; and Financial Times. fDi Markets (both accessed April 2023).

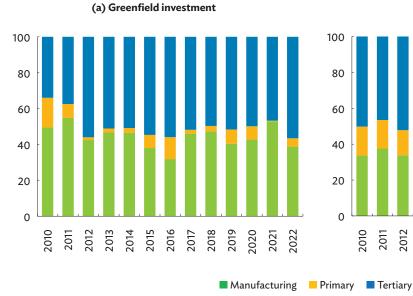
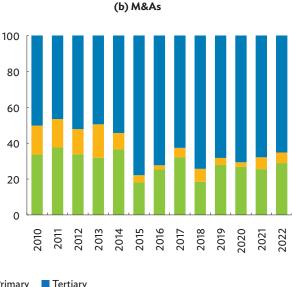


Figure 3.3: Sectoral Composition of Firm-Level Investment in Asia and the Pacific—Global Investments, by Mode of Entry (%)



M&A = merger and acquisition.

Sources: ADB calculations using data from Bureau van Dijk. Zephyr M&A Database; and Financial Times. fDi Markets (both accessed April 2023).

driving the region's FDI landscape for some time now. Data processing, hosting, and related services accounted for the largest portion of M&As in Asia's tertiary sector at 14%. As for the manufacturing industry, semiconductors

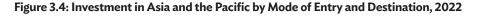
accrued the largest share (34%) of manufacturing greenfield receipts in Asia, while computer and electronic product manufacturing garnered the highest share (27%) in M&As.

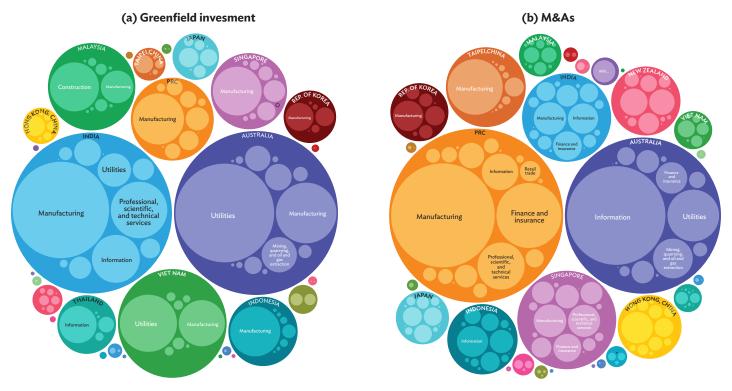
Asia Continues to Attract Investment, Led by Australia, India, and the People's Republic of China

Australia, India, Viet Nam, and the People's Republic of China (PRC) are the main recipients of foreign investment in the region. By economy, 2022 saw large greenfield projects flowing in Australia (mainly in the utilities and manufacturing sectors), India (in the manufacturing; and the professional, scientific, and technical services sectors) and Viet Nam (utilities and manufacturing). Meanwhile, large M&A receipts were logged in the PRC and in Australia in 2022 (Figure 3.4). In the PRC, large chunks of receipts were in the manufacturing and finance and insurance sectors, while in Australia, deal inflows were mostly in the information and utilities sector.

Intraregional linkages remain an important investment engine in the region.

Intraregional receipts through greenfield projects and M&As declined in 2022, though at a slower pace. The recovery in intraregional greenfield investment cushioned the fall in intraregional M&As, resulting in a more tempered 2% decline overall in 2022 compared with the previous year's sharp 16% fall. By Asian subregion, the Pacific and Oceania saw large greenfield investments from East Asia in 2022, with this subregion amassing about \$41 billion, or roughly 40% of total intraregional greenfield receipts (Figure 3.5). The increase is partly explained by megadeals such as the Republic of Korea's POSCO project in Australia for nearly \$40 billion to build a green steel production factory and green hydrogen manufacturing facility. Southeast Asia was the second-largest recipient subregion with about \$30 billion—30% of intraregional





M&A = merger and acquisition, PRC = People's Republic of China.

Notes: A bubble represents investment in US dollars received by each economy, and nested bubbles represent investment received in each sector. The size of the bubble is scaled using the amount of inflows.

Sources: ADB calculations using data from Bureau van Dijk. Zephyr M&A Database; and Financial Times. fDi Markets (both accessed April 2023).

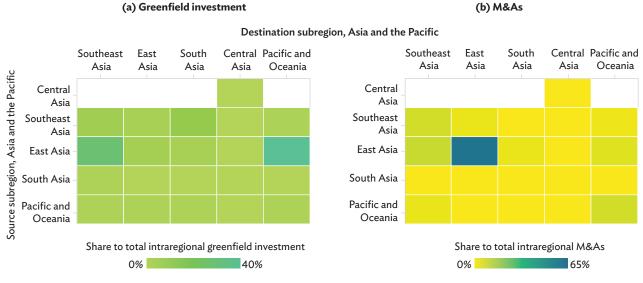


Figure 3.5: Intraregional Linkages in Asia and the Pacific by Mode of Entry and Subregion, 2022 (% of total intraregional investment)

M&A = merger and acquisition.

Notes: Data used are shares to total intraregional investment, by mode of entry. Color scale and intensity are set with a maximum of 100% for consistency. Sources: ADB calculations using data from Bureau van Dijk. Zephyr M&A Database; and Financial Times. fDi Markets (both accessed April 2023).

greenfield investment—from East Asia. Meanwhile, East Asia forged strong intrasubregional M&A linkages in 2022, with nearly \$53 billion or 62% of total intraregional M&A transactions circulating within the subregion that year. Southeast Asia also reinforced linkages with East Asia, attracting \$7 billion—8% of total intraregional M&A deals—in M&A deals from East Asia.

Greenfield Investments of Multinationals Shift to High-Tech and Green Energy Sectors

Greenfield investments are prioritizing a different range of activities in the operations of multinational enterprises. Investment by business activity, available for greenfield projects only, focuses on the actual function of the operation and allows the identification of upstream and downstream opportunities in the value chain where multinationals are investing more actively. Business activity data for Asia show continued dominance in manufacturing, attracting roughly half of the region's greenfield investment. However, 2022 saw a shift toward manufacturing activities in the semiconductors and other electronic components compared with large inflows in basic chemicals in 2003 (Figure 3.6; Box 3.1). In line with global trends, the region saw an increase in investments in renewable energy, electric mobility, and other sustainability sectors in 2022 (IEA 2023).

After manufacturing, investment in electricity-related activities garnered the largest greenfield inflows, with wind and solar power dominating. This shift toward more sustainable practices is more visible with the fall in investment in extraction activities. In 2003, extraction activities pulled in the second-largest greenfield investment, whereas in 2022, there was a large drop in inflows for these activities. The regional trend is similar to other regions, as investments in renewable energy and sectors related to green energy transition continue to accelerate (ADB 2023a, 2023b; Financial Times 2023). While the trend for Asia is positive, evidence for 2023 suggests activity in the oil and gas sector has found its way back in other regions, particularly in the Middle East, due to a reshaping of energy investments after the Russian invasion of Ukraine. A new focus on energy security, investing in renewables while ensuring access to hydrocarbons for the energy transition has gained ground (Financial Times 2023).

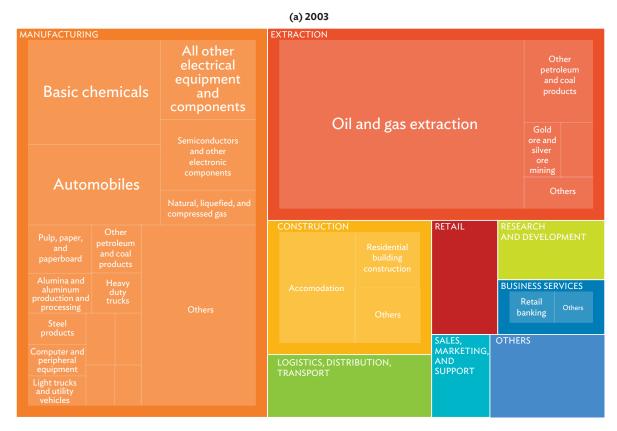


Figure 3.6: Greenfield Investment in Asia and the Pacific, by Activity and Subsector

(b) 2022

	(6) 2022			
	ELECTRICITY	BUSINESS SERVICES		
	Wind electric	Corporate and investment banking Custom computer		
Other electric	power	programming services		
generation (Renewable	Solar electric _{Others}	RESEARCH AND DEVELOPMENT Custom computer programming services Others		
Energy)	power	Other (software and IT services)		
	CONSTRUCTION	SALES, MARKETING, LOGISTICS,		
Others	Commercial and institutional building construction	AND SUPPORT DISTRIBUTION TRANSPORT		
	ICT AND INTERNET	EXTRACTION RETAIL		
	Data processing, hosting, and related services	OTHERS		
	power generation (Renewable Energy)	Construction Cother electric power generation (Renewable Energy) Construction Construction Commercial and institutional building construction Co		

ICT = information and communications technology.

Sources: ADB calculations using data from Bureau van Dijk. Zephyr M&A Database; and Financial Times. fDi Markets (both accessed April 2023).

The general outlook for Asia's investment landscape remains cautious.

The year 2022 proved to be challenging for global economic activity, especially with the after-effects of the Russian invasion of Ukraine and persistent pressures from food inflation, high energy prices, looming recession, and debt sustainability issues in several economies. These factors have contributed to more volatile investment flows, especially to and from more developed economies. Despite the bleak backdrop, investment in Asia remained strong in 2022. Together with these developments, the landscape of international investment agreements continues to change in Asia. New international investment agreements signed since 2020 include large regional agreements such as the European Union (EU)–PRC FTA and the Regional Comprehensive Economic Partnership (Box 3.1). The global landscape was still challenging in 2023 given ongoing geoeconomic tensions and volatile capital markets. As such, leveraging investments in and enacting enabling policies to attract efficiency-seeking investment—which is surmised to contribute to the ability to compete and participate in international markets, as well as allow for export diversification and advance in the value chain—may continue to support development in Asia.

Box 3.1: Recent Developments in International Investment Agreements

Since 2020, the landscape of international investment agreements (IIAs) in Asia and the Pacific has developed. IIAs include bilateral investment treaties (BITs), self-standing instruments to attract foreign direct investment and safeguard economic interests of host economies and foreign investors, as well as free trade agreements (FTAs) and other comprehensive cooperation agreements with an investment chapter or provisions. Based on ADB's International Investment Agreement Tool Kit, 16 new agreements have been signed in Asia since 2020, bringing the total number of concluded IIAs to 1,155 (box table). These new generation agreements reflect some changes in investment policies, particularly regarding environmental protection and investor-state dispute settlement (ISDS). In 2022, for the first time, the number of effective treaty terminations surpassed new agreements.

ADB's IIA Tool Kit provides granular information on IIAs by mapping 15 investment provisions and evaluating whether they grant extensive or circumscribed rights to the investor (ADB 2021). Since 2020, the most recent IIAs signed in the region suggest that treaties have introduced stronger provisions for safeguarding states' rights to regulate (box figure). For example, all IIAs signed since 2020 include environmental or climate related references in at least one provision. Likewise, more circumscribed provisions in the noneconomic standards and exception clause could indicate that states are gradually incorporating sustainability issues in their investment treaties. Recent investment chapters in FTAs, such as the Australia–United Kingdom agreement, include stronger environmental provisions or a dedicated chapter on environment. Some reinforced provisions have been included in the ISDS since 2020. All IIAs include specific mechanisms for investor-state dispute settlement, which may include procedures for appointing arbitrators, obligations of contracting parties, enforcement of awards, and so on. Recent BITs in Asia grant more circumscribed rights to investors, whereas investment chapters in FTAs grant more extensive rights. Transparency in investor-state arbitration has substantially improved in new IIAs, denoting an effort to include, for example, stipulations on public arbitration hearings. The use of the umbrella clause, where a state agrees to meet specific undertakings toward foreign investors, is also less recurrent in recent agreements. The average umbrella clause in new IIAs is more circumscribed, both in BITs and FTAs indicating a more restrictive jurisdiction for application of the agreement, which in principle should limit the state responsibilities and offer investors less protection.

From the recent FTAs including investment provisions in the region since 2020, the Regional Comprehensive Economic Partnership (RCEP) is arguably the most visible. RCEP investment provisions cover investment liberalization, protection, and dispute settlement. It provides for most favored nation and national treatment, fair and equitable treatment before and after foreign investment is established and protection for the transfer of funds, expropriation, and compensation. Whereas provisions for the ISDS are not included, state-to-state dispute settlement provisions are. Overall, RCEP is expected to enhance investment through investment protection, market access and digital provisions, including in digital privacy and paperless trade.

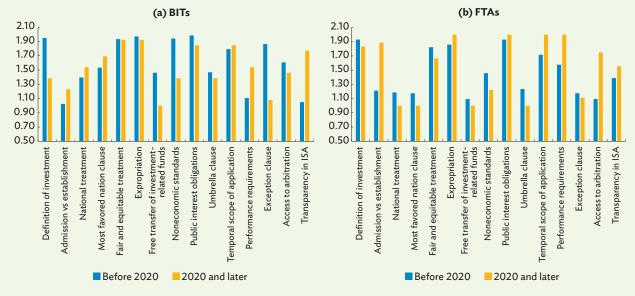
Box 3.1: continued

Updates on Investment Treaties—Bilateral Investment Treaties and Free Trade Agreements

	Participating Economies	Date of Signature	Date Entered into Force
	Japan-Morocco	2020	—
	Brazil–India	2020	—
	Côte d'Ivoire-Japan	2020	2021
BIT	Hong Kong, China-Mexico	2020	2021
	Hungary–Kyrgyz Republic	2020	2022
	Georgia-Japan	2021	2021
	Indonesia-Switzerland	2022	_
	Cambodia-PRC	2020	2022
	Japan-UK	2020	2021
	RCEP	2020	2022
	Indonesia-Republic of Korea	2020	2023
FTA	Israel-Republic of Korea	2021	_
	Australia–UK	2021	—
	Pacific Alliance–Singapore	2022	_
	New Zealand-UK	2022	_
	PRC-EU	2021*	_

* = agreement in principle, BIT = bilateral investment treaty, EU = European Union (27 members), FTA = free trade agreement, PRC = People's Republic of China, RCEP = Regional Comprehensive Economic Partnership, UK = United Kingdom.

Source: ADB International Investment Agreement Database. https://aric.adb.org/database/iias (accessed November 2023).



Average Score for Provisions in Asia's International Investment Agreements

BIT = bilateral investment treaty, FTA = free trade agreement, ISA = investor-state arbitration.

Note: Provisions are scored depending on whether they grant circumscribed rights (score = 1) or extensive rights (score = 2) to the investor. Source: ADB calculations using data from ADB International Investment Agreement Database. https://aric.adb.org/database/iias (accessed November 2023).

The increasing ambition in investment provisions in Asia also highlights the increasing use of FTAs and other regional cooperation agreements as an investment policy instrument. It also underlines the trend in Asian economies, particularly after COVID-19, to strike a balance between protecting their right to regulate investment while attracting and retaining new investment. Despite these positive developments, some important areas of IIA reform are still not part of new generation agreements, for example on investor obligations or investment facilitation.

Source: ADB, based on data from International Investment Agreement Database. https://aric.adb.org/database/iias (accessed November 2023).

Investment Policy

Over the past 5 years, global investment activity has shown signs of fragmentation and disruption. The COVID-19 pandemic highlighted the need for more resilient supply chains, which resulted in multinationals reassessing the need to bring production back home or diversify production bases. Besides logistical considerations, mounting geopolitical tensions have continued to drive the relocation of production and investment. In these developments, the investment criteria of multinational enterprises have moved beyond labor and input cost considerations. Other factors, including reshoring and friend-shoring strategies, targeted industrial policies, and an increasing geopolitical alignment are increasingly important to explain recent investment trends.

While some economies are benefiting from these trends, developing economies may be more vulnerable.

Emerging and developing economies, which typically rely on and benefit from cross-border investment, are also more exposed to the effects of investment reallocation (IMF 2023a). As geopolitical tensions continue to shape cross-border transactions in the region, multinational enterprises from industrialized economies have begun to implement de-risking investment strategies, particularly with regard to the PRC, which have contributed to a slowdown in investments since the latter half of 2022. In tandem, economies such as those in Southeast Asia are viewed as viable alternatives owing to a favorable investment climate and competitive labor and input costs. As such, it becomes important for them to define investment strategies that attract quality investment, with clear spillovers to host economies, and maximize development gains.

Supply Chain Disruptions, Geoeconomic Tensions Prompt Multinationals to Adjust Investments in Strategic Sectors

As supply chain disruptions and economic tensions intensify, multinationals have taken steps to adjust their investments, particularly in strategic sectors. Geopolitical alignment in foreign investment was brewing pre-pandemic and has accelerated in recent years. Trade tensions between the US and the PRC embody this trend and have resulted in both economies relocating production centers and future investment, with US and European multinationals reshoring investments or targeting other Asian economies. Meanwhile, the PRC has strived toward becoming more self-sufficient in semiconductor and high-tech production while strengthening economic relations with partners outside the region, including the Russian Federation (The Straits Times 2023). This shift is nowhere more visible than in strategic sectors, which generally include five main industries: semiconductors; telecommunications and 5G infrastructure; equipment for green energy transition; active pharmaceutical ingredients; and strategic and critical minerals (Atlantic Council 2022; IMF 2023a).

Industrialized economies have implemented ambitious policies targeting strategic sectors to bolster self-sufficiency and resilience in domestic industries.

The US' Creating Helpful Incentives to Produce Semiconductors (CHIPS) and Science Act, aims to boost research and development for the domestic production of semiconductors. CHIPS is a combined package of subsidies, tax credits, and domestic content rules for \$52.7 billion. Its investment tax credits are contingent on recipients refraining from making new investments in PRC manufacturing facilities. Meanwhile, the US Inflation Reduction Act (IRA), introduced in August 2022, stepped up US efforts in addressing climate change and has been instrumental for encouraging large investments in green technologies (Government of the United States, The White House 2022, 2023). As in the CHIPS, the IRA foresees financial incentives, including tax credits on electric vehicles and investment in renewables conditional on domestic content requirements.¹⁸ Thanks to IRA and similar policies, e-mobility technologies have become a strategic area of foreign investment. Meanwhile, the European Chips Act also aims to bolster production and investments in microelectronics and semiconductors (European Commission n.d.). The PRC is also taking similar strides, as the government announced a \$143 billion package to strengthen its semiconductor industry (Reuters 2022).

The effects of domestic policies in strategic sectors implemented by developed economies are still to be seen. In the case of the IRA, by discriminating against products manufactured outside the United States-Mexico-Canada Agreement, the provisions are expected to adversely impact other economies via trade and relocation channels, including in Asia. These effects imply not only that investment will relocate toward the US to comply with domestic content requirements, but also a potential relocation of productivity gains from green investments. Estimated impacts from IRA for some Asian economies could be significant. In a conservative scenario, India, Japan, the PRC, and the Republic of Korea could lose up to 10% of their exports to North America in electrical and optical equipment. Relocation effects, captured through production, could also be large. IRA could entail production losses estimated at 1% to 5% for the PRC, 3% to 18% for Malaysia, and 2% to 13% for Viet Nam (Attinasi, Boeckelmann, and Meunier 2023).

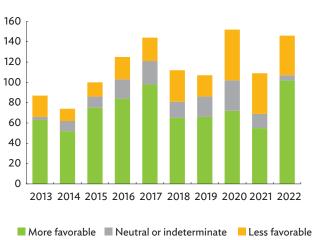
While not always explicit, new industrial policies entail a form of investment policy tightening, including in strategic sectors.

Domestic investment policies in the region have in general remained favorable to foreign investment; however, less favorable measures to FDI still accounted for 30% of new policies enacted in 2022 (Figure 3.7a) (UNCTAD 2023). Furthermore, policy changes in strategic sectors, associated with innovation and research and development spillovers, information technologies, or energy security, have followed. After recently implemented measures, an uptick in overall FDI restrictiveness is reported since 2019, especially in non-Asian economies. FDI restrictions in strategic sectors outside of Asia, which are generally lower, have also tightened since 2018 (Figure 3.7b). Meanwhile, Asia's regulatory restrictions, which remain higher than other regions, remained stable in 2019 and 2020.

Foreign investments in strategic sectors continue to grow in Asia, with telecommunications and 5G infrastructure and green energy transition leading among these sectors.

Foreign investment in strategic sectors has increased in recent years, both globally and in Asia. Globally, they averaged almost \$1 trillion between 2020 and 2022, roughly double the average flows to these sectors between 2010 and 2014. In Asia, strategic sector investments averaged \$180 billion between 2020 and 2022, almost doubling in value from average investments in 2010–2014 (Figure 3.8). Trends in investment toward strategic sectors reflect global and regional priorities in production and investment. Decarbonization policies have made investments in strategic sectors under equipment for green energy transition increase considerably, with average investments reaching \$368 billion globally from 2020 to 2022 (Box 3.2). Telecommunications continue to attract investments, with global investments averaging \$367 billion in 2020-2022. Meanwhile, semiconductor investments have shifted significantly, tripling on average between 2010-2014 and 2020-2022. Foreign investment for sourcing critical minerals for e-mobility remains lower than in other strategic sectors, but it should increase in 2024 to match the increasing needs of the sector.

¹⁸ To qualify for tax credits for electric vehicles, final assembly and origin of components and minerals should take place in North America or economies where the US holds a free trade agreement. For investments in renewable energy, the IRA includes an additional tax credit of components produced in North America.



(a) Changes in domestic investment policies

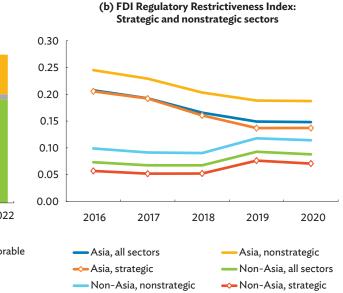


Figure 3.7: Restrictive and Facilitative Investment Measures in Asia and the Pacific

FDI = foreign direct investment.

Notes: Estimates for panel (a) are sourced from the World Investment Report 2023 released by the United Nations Conference of Trade and Development. The FDI Regulatory Restrictiveness Index measures statutory restrictions on FDI in 22 sectors. The index examines restrictions in four main areas in FDI policy: foreign equity limitations, discriminatory screening or approval mechanisms, foreign employment restrictions in key positions, and other operation restrictions. Values range 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. FDI Regulatory Restrictiveness Index. https://stats.oecd.org/Index. aspx?datasetcode=FDIINDEX# (accessed September 2023); UNCTAD (2023); and methodology from Atlantic Council (2022); and International Monetary Fund (2023a).

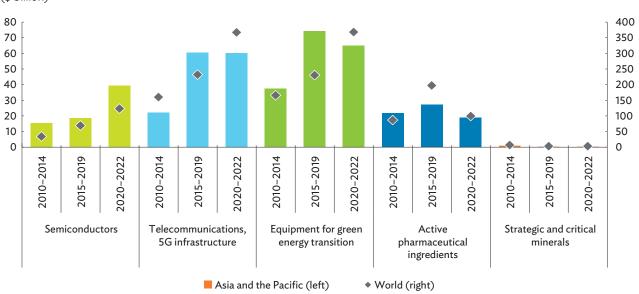


Figure 3.8: Average Foreign Investment in Strategic Sectors—Total Firm-Level Activity, Greenfield Investments and M&As (\$ billion)

M&A = merger and acquisition.

Sources: ADB calculations using data from Bureau van Dijk. Zephyr M&A Database; and Financial Times. fDi Markets (both accessed April 2023); and methodology from Atlantic Council (2022); and International Monetary Fund (2023a).

Multinationals Have Consolidated Their Investments in Asia's Strategic Sectors

Some economies in the region are driving the growth in strategic sector investments (Figure 3.8). In India, inward FDI in strategic sectors has been led by large projects in semiconductors in 2022, including the Hon Hai semiconductor and display complex in Gujarat (\$20 billion). Strategic inward FDI in the economies of the Association of Southeast Asian Nations (ASEAN) grew on average by 22% annually from 2003 to 2022, with technology firms, including Apple, Samsung, and Sony shifting portions of their supply chains to Viet Nam or Thailand. Overall, regional inflows to telecommunications (\$60 billion on average in 2020–2022), green energy (\$65 billion), and semiconductors (\$39 billion) remained high, with greenfield investment as the prevalent mode of entry.

Although the pandemic did have a hand in slowing investments to the region, the slowdown may also hint at an effort toward diversifying FDI destinations.

Investments to strategic sectors in East Asian economies dwindled in 2022, particularly in semiconductors, as well as in telecommunications and 5G infrastructure. Meanwhile, investments to telecommunications and green energy transition in Southeast Asian economies which stand to benefit from more diversified production bases—continued to increase in recent years (Figure 3.9). This is the case in economies like Viet Nam, Thailand, and Malaysia, which have become important recipients of FDI inflows in strategic sectors. Overall, while multinationals in strategic sectors have historically been more concentrated in East Asia—generally driven by the PRC—they show a more diversified landscape by destination.

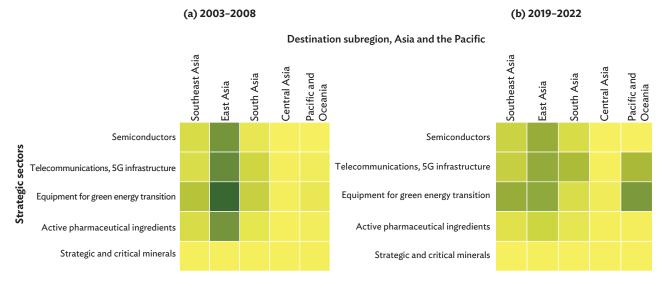


Figure 3.9: Total Firm Investment in Strategic Sectors—by Asian Subregion (\$ billion)

Total investment \$0 billion \$140 billion

Total investment \$0 billion \$90 billion

M&A = merger and acquisition.

Notes: Data used are total investment (greenfield plus M&As), by mode of entry. Color scale and intensity are set with respect to the minimum and maximum of the estimates for consistency.

Sources: ADB calculations using data from Bureau van Dijk. Zephyr M&A Database; and Financial Times. fDi Markets (both accessed April 2023); and methodology from Atlantic Council (2022); and International Monetary Fund (2023a).

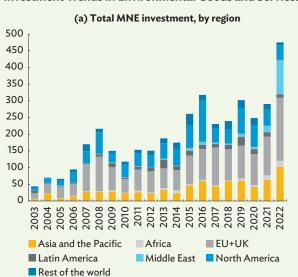
Box 3.2: Green Investment-Recent Trends in Asia and the Pacific

As climate change policies gain traction and governments and businesses redefine their investment strategies, foreign direct investment (FDI) in related sectors has grown, both globally and in Asia and the Pacific (box figure, panel a). In 2022, green FDI, measured as the global investment by multinationals in environmental goods and services (EGS), represented \$475 billion, about two-thirds higher than in 2021.

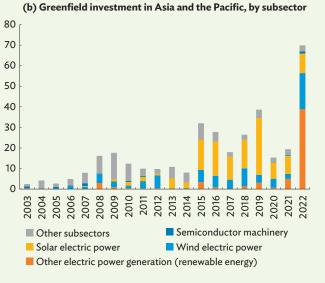
While receipts in EGS sectors accounted for only 4% of multinational investments in 2023, these sectors comprised nearly one-fifth of total investment in 2022. By region, most EGS investments were in the European Union plus the United Kingdom, with 40% of global investment, followed by Asia and the Middle East, which account for about one-fifth apiece. Similar to global trends, FDI in environmental goods and services in Asia has grown substantially in the past 2 decades, with inflows to the region growing by 60% in 2022, reaching \$102 billion. Most of these inflows came by way of greenfield projects, comprising 68% of the region's investment in these sectors.

By subsector, FDI in environmental goods and services in Asia has seen changes in composition. Investment in power generation has gradually focused on clean energy sources (box figure, panel b). Solar power has been the predominant subsector, while interest in other forms of renewable energy has recently increased. By business activity, much of greenfield investment in Asia's EGS sectors in 2022 are still in manufacturing, accounting for half of inflows. Electricity followed suit, with 45% of greenfield EGS investments under the said business activity. Apart from manufacturing and generation activities, research and development plays a key role in accelerating innovation in renewable energy. Despite its small share to total EGS inflows in Asia, investment in research and development in EGS sectors continued to grow in Asia, accelerating further by 8% in 2022.

While trends remain upbeat in investment in EGS sectors, there is much room for improvement, especially in targeting investment toward different needs in transitioning toward renewable energy sources. The bulk of EGS investment, particularly in Asia, remains in manufacturing and generation activities; however, more attention must be paid to other aspects of energy transition such as energy efficiency, infrastructure, and storage (UNCTAD 2023). While economies can start attending to these needs locally, foreign investment remains a key component for tackling climate issues and can catalyze the introduction of green technologies and business practices (ADB 2023b; UNCTAD 2023).



Investment Trends in Environmental Goods and Services, by Destination Region (\$ billion)



EU = European Union (27 members), M&A = merger and acquisition, MNE = multinational enterprise, UK = United Kingdom. Sources: ADB calculations using data from Bureau van Dijk. Zephyr M&A Database; and Financial Times. fDi Markets (both accessed April 2023).

Source: ADB, based on ADB (2023b) and UNCTAD (2023).

While investment toward strategic sectors is likely to continue, the region should consider risks stemming from increasing fragmentation. Recent fragmentation of commodity markets has intensified as a result of geopolitical tensions, which could generate higher prices of critical minerals for the energy transition and disrupt investment plans. Price hikes in copper, lithium, cobalt, nickel, and other key materials could negatively impact investment on renewable energy generation and electric vehicles, with global net investment in these industries at risk of being 20% lower as a result of mineral market fragmentation (IMF 2023b).

A Changing Landscape: From Efficiency to Market-Seeking

Efficiency-seeking FDI has been instrumental in Asia's insertion in global value chains, job creation, and technological upgrading. As part of the expansion of global production networks, multinationals have typically structured their investments to capitalize on differences in factor prices, in particular labor costs, to access resources and to diversify risk. Such investments, generally defined as efficiency-seeking (or vertical) FDI, have helped leverage Asia's position in global value chains. Efficiencyseeking FDI is also associated with economic growth through the adoption of technologies for the production of intermediate goods (Ramondo, Rappoport, and Ruhl 2016). These technologies can enhance managerial expertise, productivity, and efficiency in local industries.

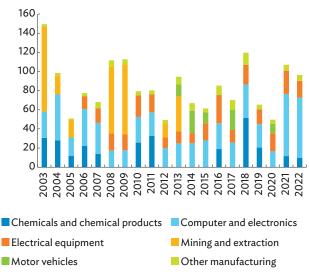
Steady growth in backward and forward linkages followed efficiency-seeking investments, prompting Asia's major role as an assembler in global value chains (GVCs).

To the extent that efficiency-seeking FDI generates linkages with domestic firms, improves quality of goods and services, enhances the "servicification" of exports, and favors technology transfer, it is useful to define a metric for this type of investment. To identify sectors that are more efficiency-seeking, an economy-level index based on the ratio of total foreign firm exports over gross output is employed (Box 3.3). Intuitively, sectors where multinational presence is more prominent and products are exported abroad should reflect efficiency-seeking behavior.¹⁹ Identifying efficiency-seeking FDI at the economy-level can also help improve policies to enhance this type of investment, which can include investment incentives (tax breaks, subsidies, or other financial incentives), infrastructure development, streamlined regulations, and technological and innovation support.

Efficiency-Seeking FDI in Asia Tends to Concentrate in Manufacturing

Based on these definitions, the main efficiencyseeking FDI sectors for selected Asian economies are generally concentrated in high-tech and mediumtech manufacturing, such as computer and electronic products, and chemicals (Figure 3.10). Economies in Southeast Asia have long been destinations for investment in medium-tech manufacturing to reduce





Sources: ADB calculations using data from Bureau van Dijk. Zephyr M&A Database; Financial Times. fDi Markets (both accessed April 2023); and classification based on Organisation for Economic Co-operation and Development. AMNE Database—Activity of Multinational Enterprises. https://www.oecd.org/sti/ind/amne.htm (accessed September 2023).

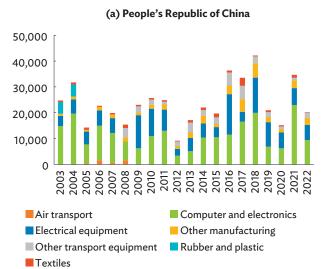
¹⁹ Other definitions of efficiency-seeking sectors can be considered, based, for example, on the share of intermediate inputs from domestic and foreign suppliers in a given economy.

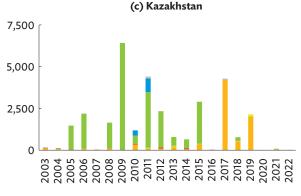
labor costs, while the PRC has concentrated investments in high-tech manufacturing. As economies like Malaysia, the Philippines, and Thailand become more competitive, they have attracted further investment in recent years.

The identification of efficiency-seeking sectors by economy also highlights the heterogeneity in production

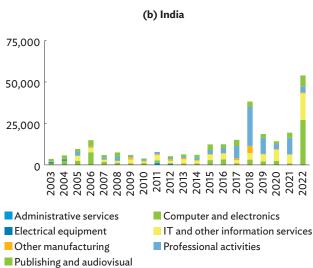
structure and the changing nature of efficiency-seeking investment in the region (Figure 3.11). These changes underscore a first phase of investment—broadly from 2000 to 2015—focused on resource and efficiency-seeking motives, and a second phase starting in 2016 and up to 2023—hinting at marketseeking and strategic-seeking motives.

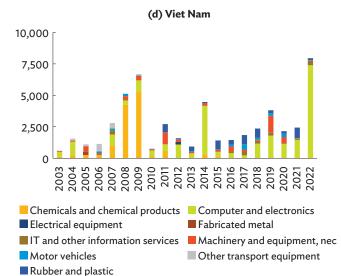






Chemicals and chemical products
Machinery and equipment, nec
Motor vehicles
Other transport equipment

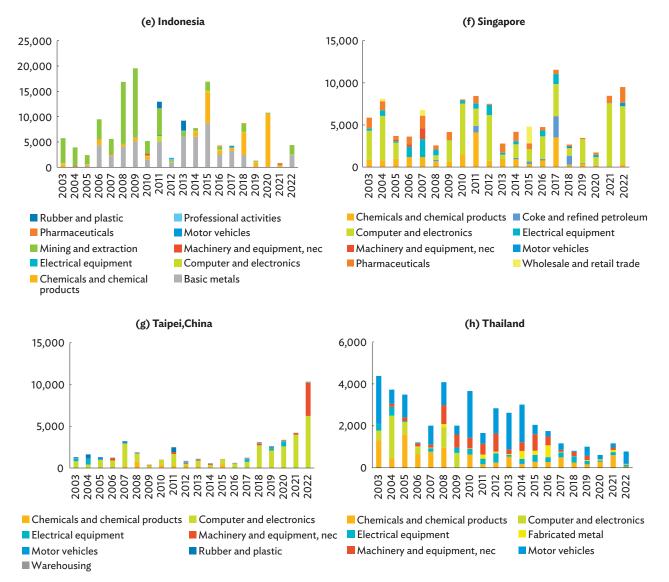




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Pharmaceuticals





nec = not elsewhere classified.

Sources: ADB calculations using data from Bureau van Dijk. Zephyr M&A Database; Financial Times. fDi Markets (both accessed April 2023); and classification based on Organisation for Economic Co-operation and Development. AMNE Database—Activity of Multinational Enterprises. https://www.oecd.org/sti/ind/amne.htm (accessed September 2023).

Efficiency-seeking FDI has been driven by different sectors across Asian economies.

Results at the economy-level also underline some differences in efficiency-seeking behavior by multinationals. Computer and electronics is the main sector targeted for efficiency-seeking purposes in East Asian economies and Singapore. In some economies, they represent about half of efficiency-seeking FDI investments and reflect important shifts in investments in the semiconductor industry, such as Viet Nam in 2022. For the PRC, efficiency-seeking investment mostly goes to high-tech manufacturing sectors (computer and electronics and electrical equipment). In India, information technology (IT) and information services have gained prominence in recent years, reflecting the economy's key role as an exporter of digital services. The increase in computer and electronics also reflect its ambition to expand its chip industry in 2022. Investments from Micron, Foxxcon, and AMD, among others, responded to government incentives to sustain FDI in these sectors since 2019 through its National Policy on Electronics. In Thailand, motor vehicles has been an important efficiency-seeking sector, although its importance has dwindled in recent years. While investments in primary sectors such as mining and extraction and metals were important in some Central Asian economies such as Kazakhstan, they have decelerated significantly in recent years. Market-seeking FDI has allowed multinational firms to serve Asia's domestic and neighboring markets and ensure the provision of final goods and services.

Market-seeking factors have gradually become a motive among foreign investors in Asia as they identify and exploit new markets for final products. Foreign investment through a commercial presence (Mode 3) for the provision of services has been a common feature of foreign multinationals and represents an important share of Asia's overall inward investment. Companies pursuing

Box 3.3: Identifying Efficiency-Seeking and Market-Seeking Investment in Asia and the Pacific

Information from the Analytical Multinational Enterprise (AMNE) database by the Organisation of Economic Cooperation and Development (OECD) was employed to determine which sectors are efficiency-seeking and which are market-seeking (box figure). The database presents detailed data on the activities of foreign affiliates in OECD economies (inward and outward activity of multinationals), including information on production, employment, value added, research and development, and exports. The database is based

			Economy 1			Economy 2				Economy				
				Se	ctor	1	Sect	tor 2	Sector 1 Sector 2		or 2	1's Final Demand	2's Final Demand	
Economy 1	Sect	or 1												
	Sect	or 2												
Economy 2	2 Sect	or 1												
	Sect	or 2												
Value-add	ed			П	Т									
Gross outp	out													
				\square	П								1	
				+	+		iomy 1				omy 2 Sector 2		Economy 1's Final	Economy 2's Final
					ctor	+	Sect		Sect					
	1	1	Dom	esti	c F	oreign	Domestic	Foreign	Domestic	Foreign	Domestic	Foreign	Demand	Demand
Economy 1	Sector 1	Domestic		♥		*								
		Foreign		1	1	1								
	Sector 2	Domestic												
		Foreign												
Economy 2	Sector 1	Domestic												
]	Foreign	[
	Sector 2	Domestic												
	1	Foreign												
Value-add	ed													
Gross outp	out													

Illustration of Intereconomy Input-Output Information by Firm Ownership

Source: Cadestin et al. (2018).

Box 3.3: continued

on annual surveys on activities of foreign-controlled enterprises and foreign affiliates abroad controlled by residents in OECD economies. The latest database covers the period 2000-2019 and includes a group of 76 economies, including 21 Asian economies and 41 industries. After determining the efficiency-seeking and market-seeking sectors, the database was merged with firm-level data from the fDi Markets database and Zephyr M&A Database at the industry level.

Based on the AMNE indicators, two indicators are developed for identifying efficiency-seeking and market-seeking FDI sectors:

- Proportion of exports from foreign firms over gross output (efficiency-seeking)
- Proportion of household final consumption expenditure from foreign firms over gross output (market-seeking)

A greater share of exports by foreign firms suggests that a specific sector in an economy is geared toward exports, a crucial feature of efficiency-seeking investment. Conversely, a higher percentage of household consumption from foreign firms signals robust demand for goods within a sector and economy, making it appealing for market-seeking investment.

To ensure the robustness of the findings, alternative definitions were explored, particularly on the identification of efficiency-seeking sectors. As an alternative approach, the analyis also involved the computation of the valueadded embodied in exports. This approach seeks to assess the extent to which intermediate inputs from a host economy were utilized by foreign firms in their export production. Although the results did not exhibit significant differences, the first method was favored to account for the fact that foreign firms might not rely only on domestically sourced inputs in a host economy but also would import other materials for assembly.

Sources: ADB, based on Organisation for Economic Co-operation and Development. AMNE Database-Activity of Multinational Enterprises. https://www.oecd.org/sti/ind/amne.htm (accessed November 2023) and Cadestin et al. (2018).

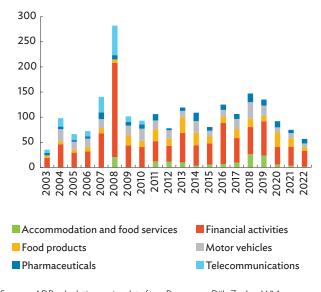
market-seeking FDI motives usually consider domestic factors such as market size, growth, and market potential and penetration when allocating their investments. As in the previous case, identifying market-seeking FDI can help economies design better investment policies, from investment promotion to tariff reduction or market entry procedures. To identify market-seeking sectors in Asia, an index based on the economy's proportion of final consumption expenditure from foreign firms can shed light on the investor's motive.

Market-Seeking FDI Inflows in Asia Remain Concentrated in Services

Following the above definition, the main market-seeking FDI sectors for Asia are telecommunications, food and beverages, financial services, and pharmaceuticals. Consistent with the literature, services sectors tend to attract large amounts of market-seeking investment (Figure 3.12). Asia's large and evolving consumer markets, along with the growing presence of digital consumption and e-commerce, present promising opportunities for market-seeking investments (Google, Temasek, and Bain & Company 2023). The ASEAN region alone is projected to add about 140 million new consumers by 2030, representing 16% of the world's consumers.

Market-seeking investments also show significant sectoral variation across Asian economies (Figure 3.13). Telecommunications remains a targeted sector for market entry in India, the world's second-largest market with a subscriber base of 1.1 billion as of August 2023 (Government of India, Invest India 2023). Food products capture most of market-seeking FDI in the PRC, Kazakhstan, and Singapore. FDI in financial services is also noticeable in Viet Nam; Taipei,China; and Thailand. Notably, financial and insurance activities garner significant investment in many Asian economies, a trend influenced by digital technologies, and governments support policies for financial inclusion.

Figure 3.12: Market-Seeking Investment in Asia and the Pacific—Total Firm-Level Investment (\$ billion)



Sources: ADB calculations using data from Bureau van Dijk. Zephyr M&A Database; Financial Times. fDi Markets (both accessed April 2023); and classification based on Organisation for Economic Co-operation and Development. AMNE Database—Activity of Multinational Enterprises. https://www.oecd.org/sti/ind/amne.htm (accessed September 2023).

For the PRC, the largest market-seeking investments remain in the motor vehicles sector. The PRC's large domestic vehicle market along with government incentives and subsidies to promote electric vehicles and eased foreign investment restrictions in commercial vehicle manufacturing, have aimed at making the economy an appealing destination for foreign firms (Financial Times 2021; Government of the US, International Trade Administration 2023). Recent policy adjustments, such as easing restrictions to new foreign entrants to access the PRC's passenger car market without mandatory partnerships with local brands, have further spurred foreign firms' interest in the economy. As a result, foreign car manufacturers still value their presence and ability to tap growing demand in the PRC and to establish regional hubs.

While the benefits from increased marketseeking FDI for host economies are less direct, economies in the region may aim at targeting this investment to meet their needs.

Economies might prioritize market-seeking FDI for several reasons. It can promote a more diversified industrial base. It often involves local operations which may create more employment than efficiency-seeking investment, typically more focused on technology and automated processes. It can also tailor technologies and management practices to market needs and promote long-term business relationships. For this purpose, identifying policies that create the conditions for attracting market-seeking FDI can be important. This involves, among other policies, expanding trade agreements and tariff reduction, enforcing consumer protection laws, regulations, and intellectual property protection, ensuring fair competition between domestic and foreign suppliers, and providing well-aligned sector incentives.

The allocation of foreign investment by motive underlines common strategies by foreign investors and regional differences in specialization and market potential.

Investment in primary production remains a purely efficiency-seeking activity in all regions, consistent with the notion that FDI in commodities and natural resource investments are mostly aimed at meeting foreign demand (Figure 3.14). This is also the case for high-tech manufacturing, which includes sectors such as semiconductors, pharmaceutical manufacturing, communications equipment, and aerospace. The picture for medium-tech manufacturing (e.g., plastic products, fabricated metals) and low-tech manufacturing (e.g., textiles, apparel, food) is more mixed, suggesting a combination of both efficiency-seeking and marketseeking motives in attracting investment. Services sectors are consistently more market-seeking in most regions, with some exceptions. In the EU, for example, sectors such as transport, telecommunications, and other market services tend to be exported rather than consumed domestically.

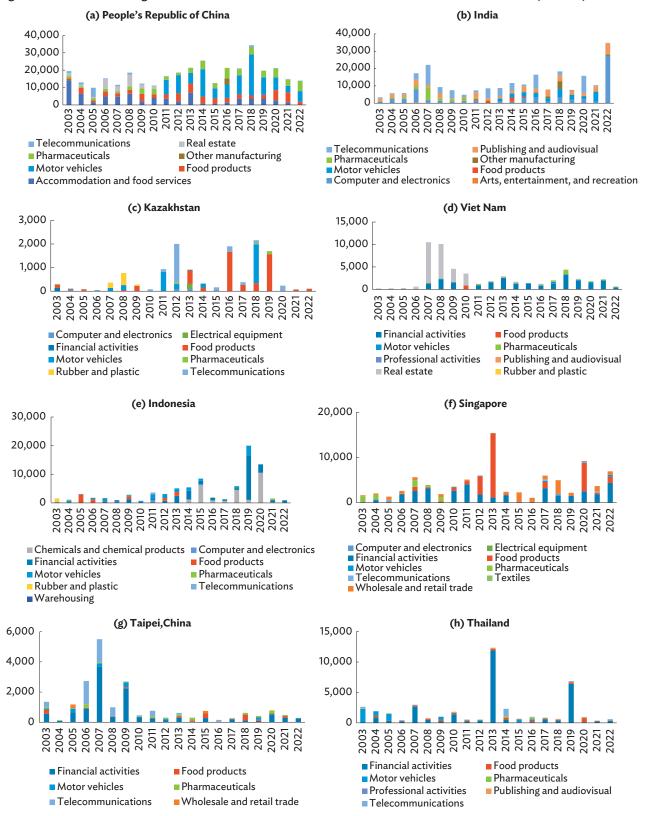


Figure 3.13: Market-Seeking Investment in Selected Asian Economies—Total Firm-Level Investment (\$ million)

Sources: ADB calculations using data from Bureau van Dijk. Zephyr M&A Database; Financial Times. fDi Markets (both accessed April 2023); and classification based on Organisation for Economic Co-operation and Development. AMNE Database—Activity of Multinational Enterprises. https://www.oecd.org/sti/ind/amne.htm (accessed September 2023).

By subregion, investors tap both high-tech and mediumtech industries for efficiency motives, in line with Asia's role as a manufacturing hub. Noticeably, while most of Asia's investment in services is market-seeking, the efficiency-seeking motive is common in some services (i.e., publishing and audiovisual activities, professional scientific, and technical activities) in Southeast Asia, South Asia, and Central Asia. This underscores the potential of services FDI in these economies to generate outcomes in employment or technological upgrading. Detailed results highlight the dominant sectors for efficiency-seeking investments in Asian subregions (Annex 3b.1). In East Asia and Southeast Asia, investments went to computer and electronics sectors, mainly in the PRC. Efficiency-seeking investment in South Asia is mostly focused in information and communication technology and professional activities, as the subregion is one of the largest exporters of IT and business process outsourcing services. In Central Asia and Oceania, the mining and extraction sector takes precedence, driven by their abundant mineral endowments. For market-seeking FDI, financial activities

Figure 3.14: Sectoral Concentration of Efficiency-Seeking and Market-Seeking FDI

		(a) By re	gion				
	Asia and the Pacific	EU+UK	Africa	Middle East	North America	Latin America	Rest of the World
Primary production							
Construction and software							
High-tech manufacturing							
Medium-tech manufacturing							
Low-tech manufacturing							
Transport, telecommunications, and financial intermediation							
Trade-related services							
Public services							
Personal and community services							
Other market services							

(b) by Asian subregion

	Southeast Asia	East Asia	South Asia	Central Asia	Oceania
Primary production					
Construction and software					
High-tech manufacturing					
Medium-tech manufacturing					
Low-tech manufacturing					
Transport, telecommunications, and financial intermediation					
Trade-related services					
Public services					
Personal and community services					
Other market services					

EU = European Union (27 members), FDI = foreign direct investment, UK = United Kingdom.

Notes: Blue color denotes predominantly efficiency-seeking sectors while green color denotes market-seeking sectors as defined in Box 3.3. Sectoral classification based on Annex 3a.

Sources: ADB calculations based on AMNE Database—Activity of Multinational Enterprises, Bureau van Dijk. Zephyr M&A Database; and Financial Times. fDi Markets.

is a major target in most subregions, especially in East Asia and Southeast Asia (Annex 3b.2). The rapid adoption of digital financial services by consumers, with digital payments now accounting over 50% of transactions in Southeast Asia, is one major factor of this expansion (Google, Temasek, and Bain & Company 2023). In South Asia, on the other hand, the large and fast-growing subscriber base has favored investment in telecommunications services. In Central Asia, the food industry receives a substantial amount of market-seeking investments.

Policy Recommendations

The current landscape brings uncertainty and poses challenges to policymakers for designing adequate policies to capitalize on the benefits of foreign

investment. The distinction between efficiency-seeking and market-seeking FDI is relevant today in the context of FDI fragmentation. So far, fragmentation has had more visible impact in efficiency-seeking sectors, notably in semiconductors, which are more prone to be the target of policies aiming at reshoring production. Hampering investment measures in strategic sectors beyond semiconductors could follow, in particular critical minerals essential for the energy transition, with different levels of exposure and potential impact for Asian economies.

Risks stemming from FDI fragmentation are not unique to Asia, but given the important role of efficiency-seeking FDI in the region and the high share of multinational operations in strategic sectors, they should be considered. Even more so as increasing fragmentation is expected to cause larger economic costs in small, developing economies (IMF 2023a).

Economies in the region can prepare for this scenario through several strategies:

First, governments should be poised to support regional and global integration initiatives that facilitate multilateral cooperation in trade and investment. This implies enhancing World Trade Organization rules on export tariffs, discriminatory subsidies, local-content requirements, and equivalent provisions in international investment agreements. Multilateral cooperation in key industries for the region, including semiconductors, environmental goods and services, and automotive can be important to understand and assess the economic implications of reshoring, nearshoring, and other forms of industrial policy. For economies aiming to attract more market-seeking FDI, participation in trade agreements can also be crucial.

Second, governments should incorporate long-term investment plans to consider exposure to possible shocks in strategic sectors. Vulnerabilities in strategic sectors (semiconductors, telecommunications, green energy, critical minerals) could take place through inward FDI, if economies are hosting these investments, or through imports, if economies depend on these inputs for domestic production, the energy transition, or other objectives. The case of critical minerals is relevant given the increasing risks of fragmentation in commodity markets and potential implications for high-tech manufacturing and the green energy transition. At the same time, FDI relocation has unlocked opportunities for some economies in the region to attract investment in new sectors. Investment policy frameworks should assess potential risks and opportunities at the industry level. As stressed in the Asian Economic Integration Report 2023, diversification of investment sources beyond a few dominant investors or industries should remain a priority for several ADB's developing member economies where inbound FDI is highly concentrated (ADB 2023b).

Third, governments need to assess the role of foreign investors in supporting industrial development and technological upgrading. Evidence has shown that medium- and high-tech manufacturing has been tightly linked to foreign investment in some economies, particularly in the PRC. Seizing economic benefits of FDI in these sectors through market-oriented and competition-based policies remains important. Supporting research and development initiatives, innovation hubs, and technology transfer is critical, as is enforcing investment protection regarding intellectual property. Also, it is important for developing member economies to identify and support foreign investment in sectors with high potential, particularly technologyrelated services such as software development, data processing, and computer systems design.

Fourth, while FDI policies should target efficiency-seeking investment given its benefits for economic growth, productivity and technological upgrading, maximizing the potential of marketseeking FDI in Asia should also continue. Marketseeking FDI can improve spillovers in host economies through employment creation, transferring management skills, and adapting technologies and production to local needs. As economies become increasingly reliant on services, and market-seeking FDI targets these sectors, designing policies that maximize their potential remains important. For example, with the services content of manufacturing exports in Asia increasing, policies enhancing linkages between manufacturing and services could be further strengthened. Equally important is to invest in a skilled workforce and support innovation in services industries to enhance productivity, further liberalize trade in services, and strengthen streamline regulations in services industries.

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Annex 3a: Analytical and Broad Sector Classification

Sector Code	Sector Label	Analytical Sector	Broad Sector
A01T03	Agriculture, forestry, and fishing	Primary production	Agriculture and natural resource extraction
305T09	Mining and extraction of energy producing products	Primary production	Agriculture and natural resource extraction
C10T12	Food products, beverages, and tobacco	Low-tech manufacturing	Manufacturing
C13T15	Textiles, wearing apparel, leather, and related products	Low-tech manufacturing	Manufacturing
216	Wood and products of wood and cork	Low-tech manufacturing	Manufacturing
C17T18	Paper products and printing	Low-tech manufacturing	Manufacturing
C19	Coke and refined petroleum products	Medium-tech manufacturing	Manufacturing
220	Chemicals and chemical products	Medium-tech manufacturing	Manufacturing
C21	Pharmaceuticals, medicinal chemical, and botanical products	Medium-tech manufacturing	Manufacturing
222	Rubber and plastic products	Medium-tech manufacturing	Manufacturing
C23	Other nonmetallic mineral products	Medium-tech manufacturing	Manufacturing
224	Basic metals	Medium-tech manufacturing	Manufacturing
C25	Fabricated metal products	Medium-tech manufacturing	Manufacturing
226	Computer, electronic and optical products	High-tech manufacturing	Manufacturing
227	Electrical equipment	High-tech manufacturing	Manufacturing
228	Machinery and equipment, nec	High-tech manufacturing	Manufacturing
229	Motor vehicles, trailers and semi-trailers	High-tech manufacturing	Manufacturing
C30	Other transport equipment	High-tech manufacturing	Manufacturing
C31T33	Other manufacturing; repair and installation of machinery and equipment	High-tech manufacturing	Manufacturing
D35_E36T39	Electricity, gas, water supply; sewerage, waste and remediation services	Construction and infrastructure	Construction and utilities
41T43	Construction	Construction and infrastructure	Construction and utilities
G45T47	Wholesale and retail trade; repair of motor vehicles	Trade-related services	Services
49	Land transport and transport via pipelines	Transport, telecommunications, and financial intermediation	Services
450	Water transport	Transport, telecommunications, and financial intermediation	Services
151	Air transport	Transport, telecommunications, and financial intermediation	Services
152	Warehousing and support activities for transportation	Transport, telecommunications, and financial intermediation	Services
153	Postal and courier activities	Transport, telecommunications, and financial intermediation	Services
55T56	Accommodation and food services	Other market services	Services
58T60	Publishing, audiovisual, and broadcasting activities	Other market services	Services
61	Telecommunications	Transport, telecommunications, and financial intermediation	Services
62T63	IT and other information services	Transport, telecommunications, and financial intermediation	Services

continued on next page

Annex 3a continued

Sector Code	Sector Label	Analytical Sector	Broad Sector
K64T66	Financial and insurance activities	Transport, telecommunications, and financial intermediation	Services
L68	Real estate activities	Other market services	Services
M69T75	Professional, scientific, and technical activities	Other market services	Services
N77T82	Administrative and support services	Other market services	Services
O84	Public administration and defense; compulsory social security	Public services	Services
P85	Education	Public services	Services
Q86T88	Human health and social work	Public services	Services
R90T93	Arts, entertainment, and recreation	Personal and community services	Services
S94T96	Other service activities	Personal and community services	Services
Т97Т98	Private households with employed persons	Personal and community services	Services

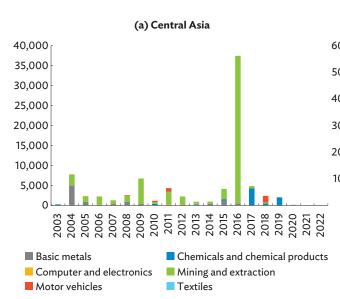
 IT = information technology, nec = not elsewhere classified.

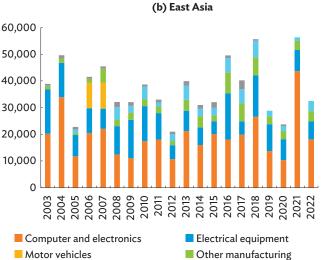
Note: Analytical and broad sector group classifications are based on Franco-Bedoya, Li, and Mercer-Blackman (2021).

Source: ADB compilation based on Franco-Bedoya, Li, and Mercer-Blackman (2021).

Annex 3b: Efficiency-Seeking and Market-Seeking Investment by Asian Subregion

(1) Efficiency-Seeking Investment by Asian Subregion—Total Firm-Level Investment (\$ million)





(c) South Asia 60,000 50,000 40,000 30,000 20,000 10,000 Λ 2018 2019 2020 2021 2021 2022 2015 2016 2017 2003 2008 2004 2009 2010 2013 2014 2005 2006 2011 2007 10 Computer and electronics Machinery and equipment, nec Other manufacturing

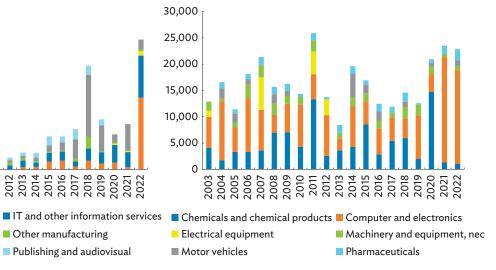
Professional activities

Publishing and audiovisual

(d) Southeast Asia

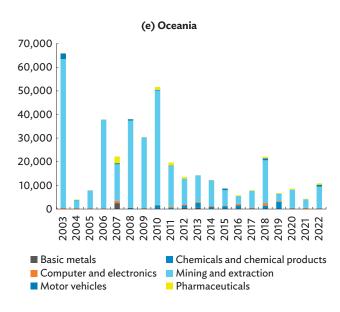
Textiles

Other transport equipment

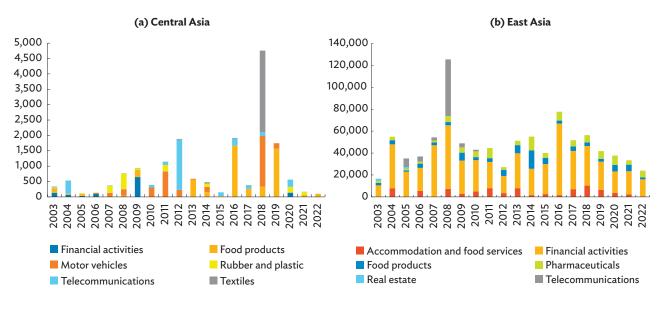


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Annex 3b continued

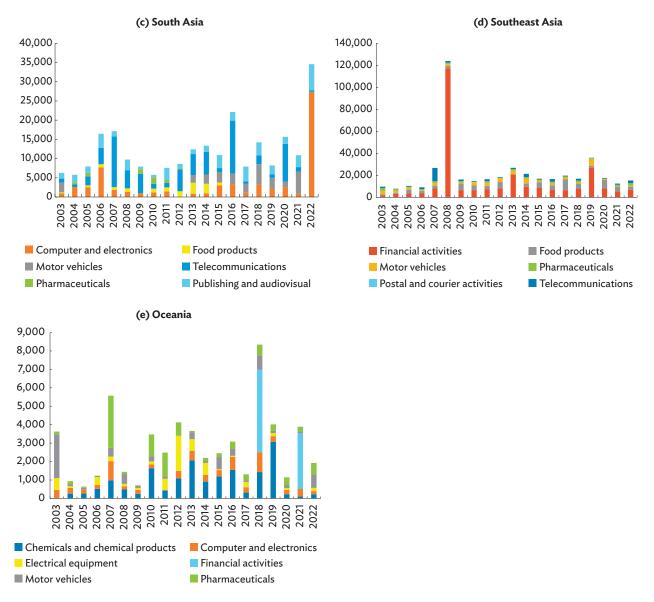


(2) Market-Seeking Investment by Asian Subregion—Total Firm-Level Investment (\$ million)



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Annex 3b continued



nec = not elsewhere classified.

Sources: ADB calculations using data from Bureau van Dijk. Zephyr M&A Database; Financial Times. fDi Markets (both accessed April 2023); and classification based on Organisation for Economic Co-operation and Development. AMNE Database—Activity of Multinational Enterprises. https://www.oecd.org/sti/ind/amne.htm (accessed September 2023).