

Report

Asia on the cusp of a new era

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Contents

At a glance	v
Introduction	7
World order: Navigating trade growth with new security priorities	11
Technology platforms: Moving beyond manufacturing to innovation	17
Demographic forces: Raising productivity to counteract aging	23
Resource and energy systems: Securing a lot more energy with less carbon	27
Capitalization: Mobilizing the largest capital base amid financial stress	33
New strategies for a new era	39
Acknowledgments	41



At a glance

- **Asia's economies were the great beneficiaries of a globalizing world.** Asia has capitalized on the defining trends of the past three decades: deepening global connections, rapid digital adoption, and broadening urbanization and capitalization. Asia has thrived because of its geographic and economic diversity, not despite it. Complementary comparative advantage in trade—rather than political affiliation—stitches its diverse economies together: 59 percent of Asian trade is with other Asian countries.
- **Asia is on the cusp of a more challenging era.** Now we transition to a new era with very different underlying forces from those that shaped the past 30 years. Asia, at the nexus of these forces, will experience a more concentrated, heightened version of the global challenges across five domains:
 - It is the world's **trade** crossroads but could find itself in the crosshairs of trade tensions.
 - The value created by **technology** is shifting beyond manufacturing, where Asia excels.
 - Asia has the people to fuel growth, but the headwinds of **aging** are fiercest in the higher-productivity economies of the Pacific Rim.
 - Its **net-zero transition** is simply bigger because it is the world's industrial base and has surging energy demands.
 - Asia's lower capital returns are not sustainable if the cost of capital and balance sheet stresses rise at a time when the region will demand the majority of **global capital** to continue growing.
- **Asia starts a new era in a position of strength as the world's new "majority."** Asia accounted for 57 percent of global GDP growth between 2015 and 2021, and for the bulk of trade and manufacturing value added. It is home to 56 percent of the world's middle-class households. In short, Asia begins from a very different place being, in many respects, at center stage as this next era unfolds.
- **Asia's business leaders are shaping new strategies for a new era.** Just as Asian economies adapted and thrived in the era of globalization, so they must now adapt and innovate to do well. A new Asia Business Council survey finds that 82 percent of respondents are optimistic about a new era, but a huge majority—74 percent—say that significant or transformative strategic shifts will be needed in multiple domains. Entry into a new era can open up multiple paths for the world, not all benign. But with vigilance and vision, the region can navigate this time of transition, embarking on a new path of progress.



Introduction

Today's cluster of disruptions, both economic and political, in many ways have Asia at the epicenter. We assert that these may be triggers for a new era in which Asia will play a leading role.

Today's challenging conditions are not unique. MGI's global research has identified other periods of disruption since 1945.¹ Each triggered the start of a prolonged new era that was relatively stable in the structures and norms that frame the global economy and international relations, but transformational change occurred within that stability.

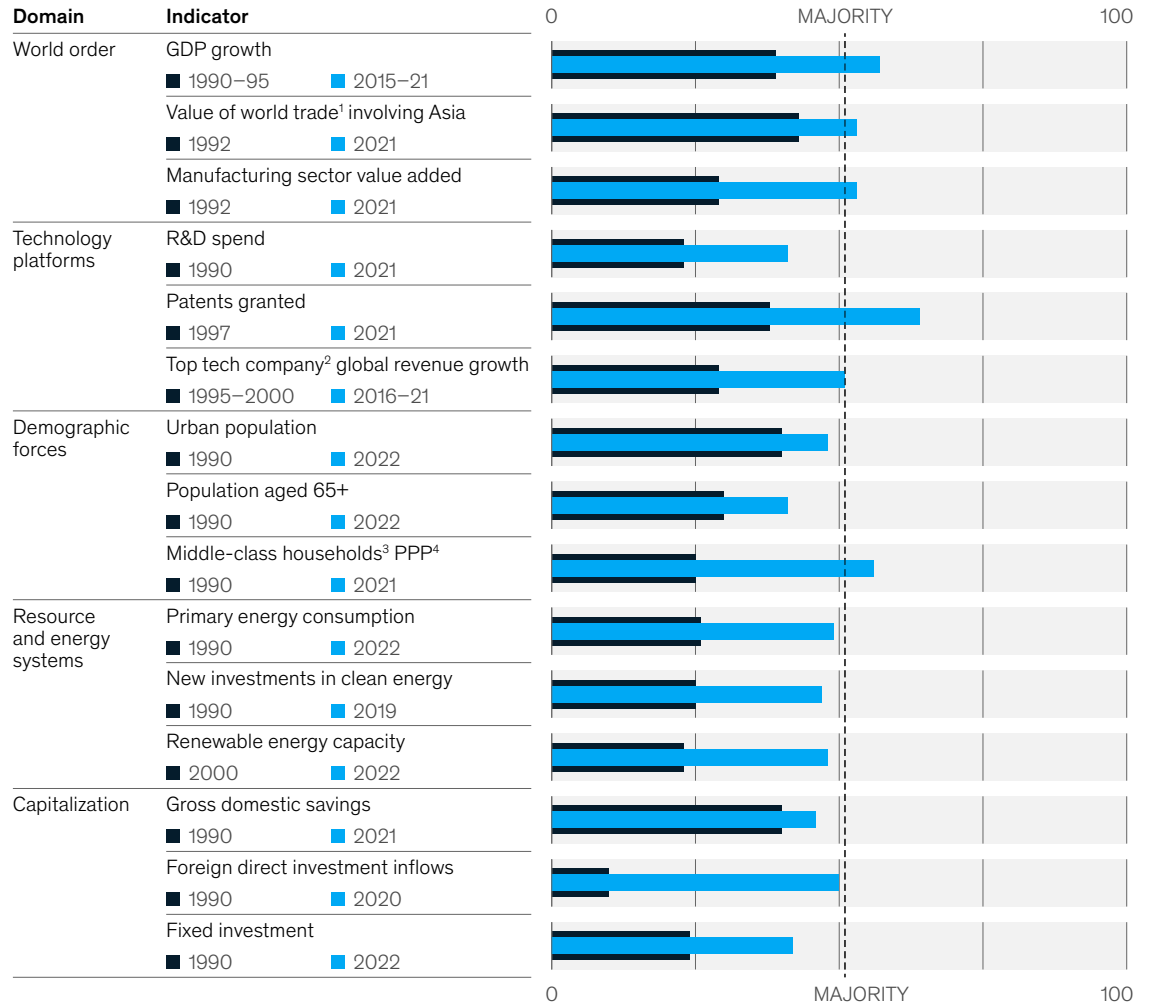
During the most recent era, which MGI has dubbed the Era of Markets (1989–2019), the region's economies collectively emerged as the world's new majority, accounting for more than half the global total of key metrics we use to measure the world economy. As such, Asia is now a prominent player in all five domains underlying our research: world order, technology platforms, demographic forces, resource and energy systems, and capitalization (Exhibit 1).

This majority position gives Asia an opportunity to influence and shape a new era not only for its own economies but for the world. But even if from a position of strength, by being at the nexus, it will face a heightened version of the world's new global challenges in the five domains—each of which we explore in this report.

- **World order.** Asia is the world's trade crossroads but could find itself in the crosshairs of trade tensions. *Can Asia retain its commercially pragmatic model, keeping the benefits of trade amid growing geopolitical tension, and continuing to make its complementarity a strength?*
- **Technology platforms.** The value created by tech is shifting beyond manufacturing, where Asia excels. *Can Asia reinvent itself as a technology creator rather than (mostly) a technology manufacturer and consumer in a world where key frontier technologies may be more contestable?*
- **Demographic forces.** Asia has the people to fuel growth, but the headwinds of aging are fiercest in the higher-productivity economies of the Pacific Rim. *Can Asia deal with the pressing challenges of rapid aging in its highest-productivity economies by shifting its value chains and boosting productivity everywhere?*
- **Resource and energy systems.** Asia's net-zero transition is simply bigger because it remains the world's industrial base and has surging energy demands. *Can Asia manage its dual challenge of securing rapidly growing energy needs and reducing the world's largest carbon emissions?*
- **Capitalization.** Asia's lower capital returns are not sustainable if the cost of capital and balance sheet stresses rise at a time when the region will demand the majority of global capital to continue growing. *Can Asia mobilize all the capital it needs to power growth, deepening its financial markets to improve capital allocation while shoring up resilience amid balance sheet stress?*

Asia is becoming the world's new 'majority.'

Asia's share of global total, %



¹Includes goods trade.

²Top tech companies are ~3,000 tech companies by largest market cap in 1995, then by largest market cap in 2022.

³Annual income of \$10,000-\$70,000.

⁴Purchasing power parity.

Source: World Bank; IMF; UN Comtrade; UNESCO; Statista; National Science Foundation; World Intellectual Property Organization; UN World Population Prospects; Energy Institute Statistical Review of World Energy; Bloomberg New Energy Finance; International Renewable Energy Agency; UNCTAD; Oxford Economics; McKinsey Global Institute analysis

Of course, to talk of Asia in the singular is naïve. Asia's countries encompass about 45 million square kilometers, almost five times the size of Europe.² They feature enormous cultural and linguistic diversity, with about 2,300 languages against Europe's 300, and significantly different political approaches.³ Economically, too, variations are huge, in both scale and composition. Take the per capita GDP of Nepal and Singapore: the latter's is 60 times the former's (see sidebar, "Five distinct, but complementary, Asias"). But we can refer to these countries in the collective because they constitute a complementary and interlinked ecosystem, largely through mutual trade interests. Collectively, Asia is at center stage in this unfolding new global drama.

Box 1

Five distinct, but complementary, Asias

There are at least five different Asias that will experience a new era differently, but all of which can potentially help shape it. In reality, an even more granular view will be needed. For example, China and India are such large economies that they can be as big as some regions.¹ We use United Nations (UN) groupings with some exceptions. The UN counts 83 countries as part of the Asia and Oceania region. We omit Iran and countries in the UN's Western Asia grouping, which includes Saudi Arabia and the rest of the Middle East, because these economies are dissimilar to the rest of Asia.

- **Advanced Asia.** Australia, Japan, New Zealand, Singapore, and South Korea all have high per capita GDP, urbanization, and connectivity. They are technology hubs, sources of capital, and high-end consumer markets for the rest of Asia, shaping the way the region integrates into global supply chains. In 2021, Advanced Asia accounted for 3 percent of the global population (213 million) and 9 percent of global GDP (\$9 trillion). Average per capita GDP in 2021 was more than \$42,300. These economies accounted for 7 percent of global GDP growth between 1991 and 2021.
- **China.** China is a distinct entity within Asia and its epicenter of trade and growth.² In 2021, it accounted for 18 percent of both the world's population (1.4 billion) and GDP (\$18 trillion). Average per capita GDP in 2021 was more than \$12,700, and China accounted for 25 percent of global GDP growth between 1991 and 2021.
- **Emerging Asia.** This group comprises most Southeast Asian economies, such as Cambodia, Indonesia, Malaysia, the Philippines, Thailand, and Vietnam. They are highly diverse, with strong connections within the region, and they have high potential to drive regional trade dynamics. Emerging Asia is home to 9 percent of the global population (702 million) and 3 percent of global GDP (\$3 trillion). Average per capita GDP in 2021 was over \$4,200. These economies accounted for 4 percent of global GDP growth between 1991 and 2021.
- **India.** India, like China, is a distinct entity within Asia. With the potential to account for Asia's largest workforce, India alone made up 18 percent of the global population in 2021 (1.4 billion) but represented just 3 percent of global GDP (\$3 trillion). Average per capita GDP in 2021 was \$2,230. India accounted for 4 percent of global GDP growth between 1991 and 2021.
- **Frontier Asia.** Economies such as Bangladesh, Kazakhstan, Pakistan, and Sri Lanka historically have had limited integration with the rest of Asia, but they have sizable young populations and tremendous potential for economic growth. In 2021, these economies accounted for 6 percent of the global population (464 million) and 1 percent of global GDP (\$870 million). Average per capita GDP in 2021 was \$1,890. These economies accounted for 1 percent of global GDP growth between 1991 and 2021.

¹ Yuval Atsmon, Ari Kertesz, and Ireena Vittal, "Is your emerging-market strategy local enough?" *McKinsey Quarterly*, April 2011; *Understanding India's economic geography*, McKinsey & Company, October 2014; and *Pixels of Progress: A granular look at human development around the world*, McKinsey Global Institute, December 2022.

² Justin Yifu Lin, *From flying geese to leading dragons: New opportunities and strategies for structural transformation in developing economies*, Policy Research Working Papers, World Bank, June 2013.



World order: Navigating trade growth with new security priorities

The world order constitutes the institutions, frameworks, and rules that shape international affairs. During the Era of Markets, Asia rode a wave of prosperity through expanding trade with the world and—leveraging complementary comparative advantage—within Asia. It integrated economically without needing a political alliance and formal governance. But in a new era, noneconomic factors may play a bigger role, raising the question of whether Asia will continue its pragmatic cooperation in a more contested, multipolar world.

A regionalized Asia at the hub of world trade

A prominent feature of the Era of Markets was a progressive deepening of global connections, notably through trade. Asia became the world's largest economic and trading region and, as such, center stage as the world order adjusts in a new era.

Not only a global economic power, but the world's trade hub

Asia's robust economic growth and its position as the world's manufacturing and trade hub give it a critical global role. Asia accounted for 57 percent of global GDP growth between 2015 and 2021. In 2021, Asia contributed 42 percent of world GDP (at purchasing power parity), more than any other region.⁴ It cemented its status as a major presence in world trade. In 2021, Asia accounted for 53 percent of global goods trade, and between 2001 and 2021, 59 percent of trade growth.⁵

Consider Asia's role in the world's 80 largest trade routes, accounting for more than 50 percent of the value of global trade (Exhibit 2). Forty-nine include Asia on at least one end, and 22 on both ends. Asia is home to 18 of the 20 fastest-growing corridors, and 13 of the 20 largest.

China's large role stands out. The majority—56 percent in 2021—of the value flowing through the 20 largest global trade corridors involves China. By far the world's largest bilateral trade corridor has run between China and the United States—\$723 billion in 2021. But US–China trade has been slowing. This corridor grew at a compound annual rate of 3 percent between 2016 and 2021 (the top 80 average was 8 percent). China is also diversifying and building extensive new routes with Latin America, the Middle East, and Eastern Europe.

At the same time, other fast-growing Asian economies, such as India and Vietnam, are becoming major trade partners to the world. For example, Emerging Asia and India are trading more with the United States with particular strength in electronics and textiles, which grew at a compound annual growth rate of 13 percent and 7 percent, respectively, between 2016 and 2021.

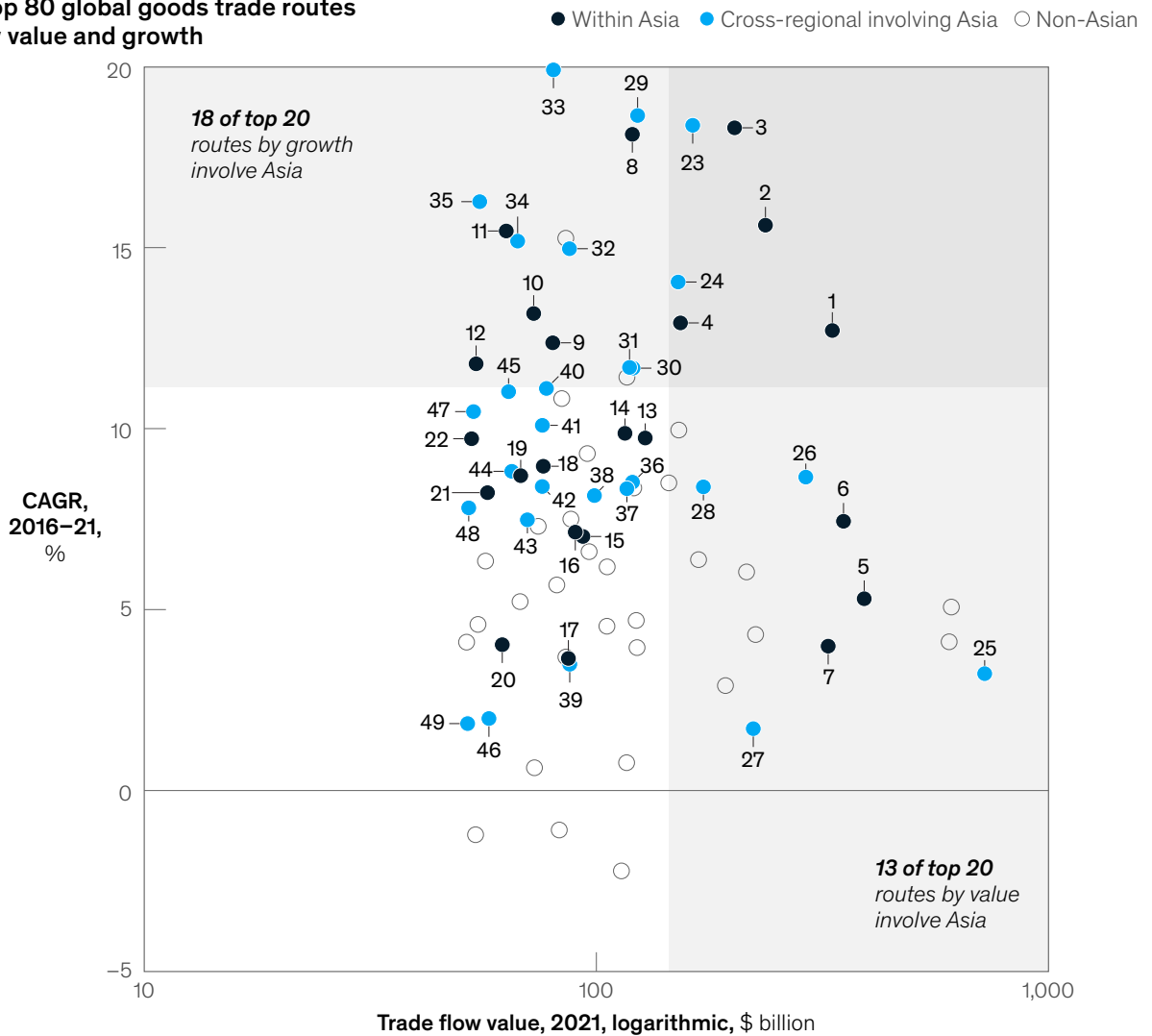
Another notable phenomenon is a new trade triangle between China, Emerging Asia, and the United States. China's share of US imports declined by about 6.0 percentage points between 2018 and 2022, while those of Emerging Asia, Frontier Asia, and India increased by 4.4 percentage points. At the same time, Asian countries' trade with China grew rapidly. Trade between China and Vietnam grew by 16 percent annually, and between China and Malaysia by 13 percent in the same period.

18/20

fastest-growing trade corridors are in Asia

Asian countries are part of 49 of the world's 80 largest trade routes.

Top 80 global goods trade routes by value and growth



● **Within Asia**

- | | | |
|--------------------------------|--------------------------------|-------------------------------|
| 1 Mainland China–Taiwan, China | 9 South Korea–Vietnam | 17 Japan–South Korea |
| 2 Australia–Mainland China | 10 Hong Kong SAR–Taiwan, China | 18 Malaysia–Singapore |
| 3 Mainland China–Vietnam | 11 Taiwan, China–Singapore | 19 Australia–Japan |
| 4 Mainland China–Malaysia | 12 Taiwan, China–South Korea | 20 Japan–Thailand |
| 5 Mainland China–Japan | 13 Mainland China–Thailand | 21 Hong Kong SAR–Singapore |
| 6 Mainland China–South Korea | 14 Mainland China–India | 22 Mainland China–Philippines |
| 7 Mainland China–Hong Kong SAR | 15 Mainland China–Singapore | |
| 8 Mainland China–Indonesia | 16 Japan–Taiwan, China | |

● **Cross-regional involving Asia**

- | | | |
|--------------------------------|--|--------------------------------|
| 23 Brazil–Mainland China | 33 Mainland China–United Arab Emirates | 43 Singapore–US |
| 24 Mainland China–Russia | 34 Chile–Mainland China | 44 Thailand–US |
| 25 Mainland China–US | 35 Mainland China–Poland | 45 India–United Arab Emirates |
| 26 Mainland China–Germany | 36 Mainland China–Mexico | 46 Mainland China–Switzerland |
| 27 Japan–US | 37 Mainland China–UK | 47 Mainland China–Spain |
| 28 South Korea–US | 38 Canada–Mainland China | 48 Mainland China–South Africa |
| 29 US–Vietnam | 39 Mainland China–France | 49 Germany–Japan |
| 30 Taiwan, China–US | 40 Mainland China–Netherlands | |
| 31 India–US | 41 Mainland China–Italy | |
| 32 Mainland China–Saudi Arabia | 42 Malaysia–US | |

Note: Top 80 routes represent >50% of global trade volume.
Source: UN Comtrade; McKinsey Global Institute analysis

Regionalization driven by complementarity

Asia is stitched together economically. Almost 60 percent of the value of Asia's 2021 trade originated within the region, second only to the European Union (EU). And that figure is increasing. Its within-region trade grew at a compound annual rate of more than 10 percent in 2016–21, about double the pace of non-Asia routes.

While the level of trade integration approaches that of the EU, the drivers are different. EU trade integration has been underpinned by treaty-based governance; Asia's has been propelled by trade cooperation. Asia does not behave as a single politically and institutionally aligned bloc. Take voting patterns in the UN General Assembly where Asian countries' voting complementarity with China or the United States reflects an issues-based approach rather than the strategic narrative of political alignment with either of these major powers (Exhibit 3).

The fact that Asia has little settled governance and mixed political systems makes its deep trade and economic integration that much more remarkable, indicating a distinctly pragmatic economic approach rooted in complementarity. Consider Australia and China. For China, a top three export is electronics—that's a top three import for Australia. For Australia, a top three export is iron ore, and that's in the top three of China's imports.

Exhibit 3

Asia's economies have integrated while being politically diverse.

Political alignment of countries in Asia across metrics

		Same UNGA ¹ vote on issue, %		Largest trade partner ²	Belt and Road Initiative	RCEP ³	US or China military base
		With China	With US				
Advanced Asia and China	Australia	28	72	China		☑	US
	China	–	15	ASEAN ⁴	☑	☑	–
	Japan	33	67	China		☑	US
	South Korea	32	55	China	☑	☑	US
Emerging Asia	Indonesia	72	21	China	☑	☑	None
	Malaysia	72	25	China	☑	☑	None
	Philippines	56	28	China	☑	☑	None
	Thailand	55	32	China	☑	☑	None
	Vietnam	77	16	China	☑	☑	None
India and Frontier Asia	India	71	18	US			None
	Pakistan	80	17	China	☑		None

¹United Nations General Assembly.

²2021 data; includes imports from and exports between the countries. China's single largest bilateral trading partner country is US; combined it is ASEAN.

³Regional Comprehensive Economic Partnership Agreement.

⁴Association of Southeast Asian Nations.

Source: UNGA voting records (2000–22); UN Comtrade; Belt and Road Portal (Yidaiyiliu); ASEAN Main Portal; US Department of Defense; McKinsey Global Institute analysis

Rivalry in a multipolar world is rising, and concentrated strategic flows are creating dependency

One of the key features of the Era of Markets was its unipolar structure, with one major power—the United States—at its center, with one widely accepted set of rules. This was the world in which Asia created its deep linkages and interdependencies. But that world is morphing into a more complex multipolar one in which politics and rivalry loom larger. The strategic importance of many trade flows, from chips to minerals to energy resources, is coming into focus.⁶ And where trade flows are concentrated—a country may be the only supplier to another—such dependency could create risk.

A more contested world for Asia to navigate?

Major Asian economies are now considerable new centers of economic power. China now is the world's second-largest economy, Japan the third, and India the fifth.⁷ This very success, however, ended the unipolar world. As new actors wield greater influence, international relationships may be more contested.

In the past, Asian economies traded with each other with clear guiding principles of comparative advantage leading to maximum efficiency and lowest cost. But a new factor has entered the frame: security. This will not switch globalization off—economies are highly interconnected and interdependent—but strategic considerations could reshape trade growth if there are tensions and restrictions both within and beyond Asia. In the international arena, the United States has used a range of economic and trade actions, including key technology restrictions on China, for technologies seen to have direct military application; tariffs, such as the Section 232 tariffs on steel and aluminum imports; and sanctions, including measures on Myanmar following its military coup and Chinese companies alleged to be supporting the Russian war effort in Ukraine.⁸

Several trade restrictions have occurred within Asia, too. To give just a few examples, since 2018 China has placed restrictive measures on Australian products, including coal, beef, and cotton, and Australia has banned Chinese telecom equipment makers from its 5G network.⁹ In 2019, Japan banned the export of key chip-making materials, such as hydrogen fluoride, to South Korea.¹⁰ In 2020, India urged the boycott of Malaysian palm oil, leading to an 85 percent decrease in shipments compared with the previous year, when India was Malaysia's largest buyer of palm oil.¹¹

Trade has long been disrupted by intermittent tensions, but in a multipolar world, they may become deeper and more frequent. This could drive long-run decisions about where to locate supply chains that could have profound effects.

Dealing with dependency

Complementary comparative advantage has driven the growth of trade routes and value chains within Asia. The region's trade is characterized by a handful of large trading corridors of products that are strategically important, complementary, and highly concentrated—the last leaving economies vulnerable to supply chain disruption. Take, for instance, the following four critical supply chains that cross Asia and then extend to the world:

- **Minerals and metals.** Asia is the world's trade crossroads for minerals and metals, such as rare earth elements, copper, bauxite (aluminum), nickel, tin, and zinc. As the world's refining hub, China plays a particularly significant role. In the case of **nickel ore**, which is crucial for batteries, Asia is the world's largest importer and producer. In 2021, more than 90 percent of world nickel ore imports flowed into Asia (90 percent going to China), and 50 percent of world mine production of nickel occurred in Indonesia and the Philippines.¹² A single route between China and the Philippines accounts for 59 percent of world nickel ore imports. Or consider **steelmaking**. Asia exports 55 percent of the global value of iron ore and metallurgical coal, and 85 percent of the value of global trade in those materials involves Asia. Within the region,

Asia accounts for

73%

of global exports
of electronics and
electric equipment

59 percent of iron ore and metallurgical coal trade flows from Australia to China, the latter accounting for 53 percent of global crude steel production in 2021.¹³ Similarly for aluminum ore and concentrates, most notably **bauxite**, China accounted for 68 percent of global imports, sourcing from Guinea (58 percent of Chinese imports), Australia (24 percent), and Indonesia (16 percent). China accounted for 58 percent of the world's aluminum production in 2021.¹⁴

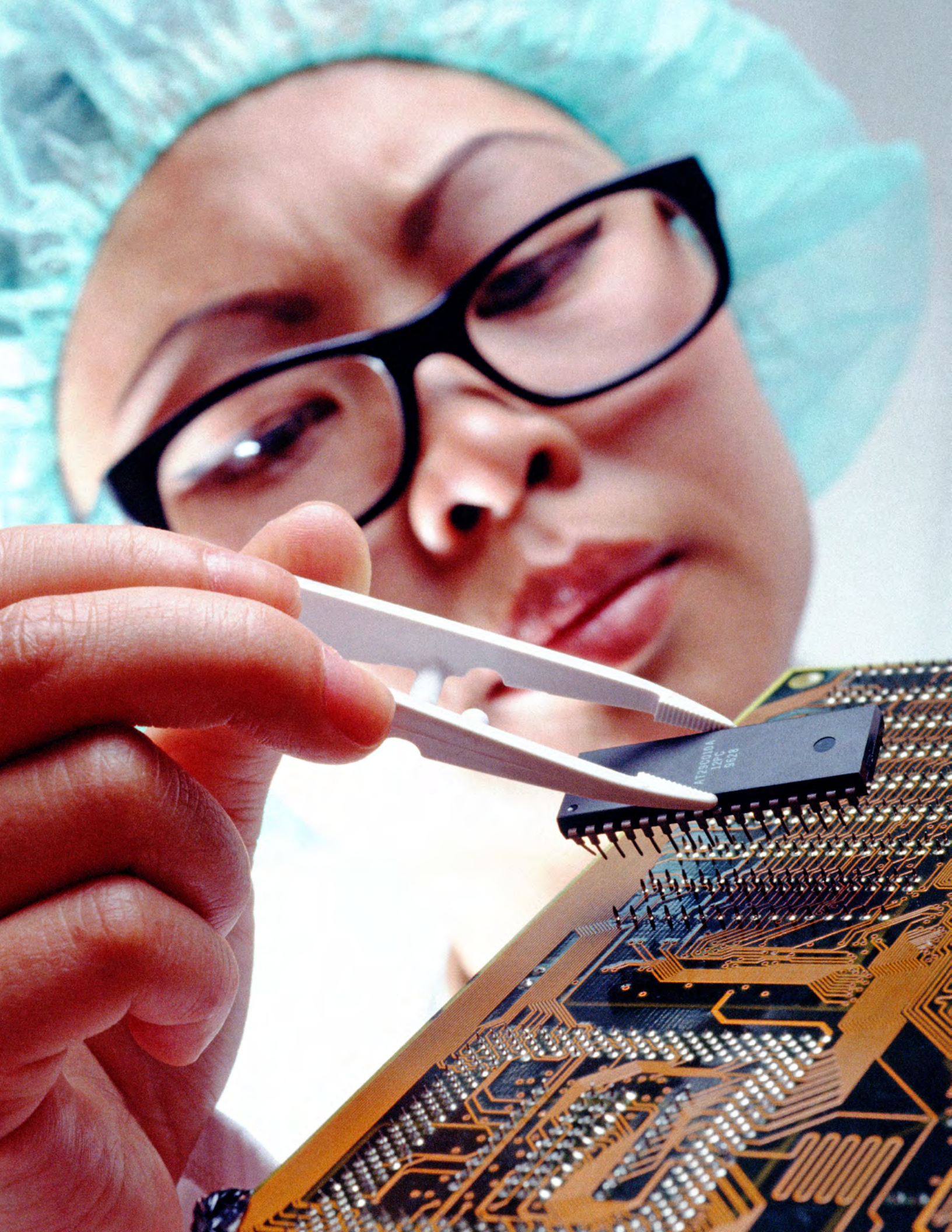
- **Electronics (chips).** Asia is the largest trader and manufacturer of chips (integrated circuits) in most electronic devices. More than 60 percent of the world's semiconductors are produced in Taiwan; 33 of the world's largest 40 chip corridors involve Asia only; and 83 percent of US imports of chips come from Asia. Ten of the top 40 chip corridors constitute imports to Mainland China, where the value of chip imports is more than that of oil and petroleum. Once the chips are assembled with other electronic parts, Asia accounts for 73 percent of global exports of electronics and electric equipment, such as mobile devices, computers, and broadcasting equipment.¹⁵
- **Energy.** Five countries—all in Asia—account for 70 percent of the world's liquefied natural gas (LNG) imports. Australia alone accounts for 24 percent of global exports, and Malaysia for 6 percent. In the case of oil, 78 percent of domestic consumption comes from imports, with China the world's largest importer. Japan and South Korea rely on imports for close to 100 percent of what they need. About half of Asia's oil imports come solely from the Middle East. But Asia is a net exporter of coal.¹⁶
- **Agriculture.** More than one-third of agriculture products in China rely on imports, for a self-sufficiency ratio of 66 percent.¹⁷ South Korea's self-sufficiency ratio is 44 percent and Japan's 38 percent in terms of calorie intake.¹⁸ About 60 percent of global rice trade comes from just three countries in Asia: India with 35 percent, Thailand with 15 percent, and Vietnam with 10 percent. More than 90 percent of rice imports to Bangladesh and Nepal come solely from India.¹⁹

Are such trade corridors now so concentrated that they are creating codependency in Asia? Concentration has arisen because of specialization, but it can leave economies vulnerable when there is disruption to value chains.²⁰

Can Asia navigate a more complex era of globalization?

It remains to be seen whether Asia's pragmatic model of integration holds up well in a changing world or comes under strain. Rivalry over strategic supply chains in the absence of more widespread formal regional arrangements may expose fragilities. Moreover, many of these pivotal drivers lie outside the control of any one actor, so there is a need not only to respond to, but also to shape, the landscape.

- Will Asia manage to balance security and economics in a multipolar world or will the growth of trade restrictions and the demands of strategic resilience drive Asia onto a different course? Will the region's past adherence to an economy-first model drive the course for Asia and the world?
- How will companies ensure their resilience amid the risk of rising tensions and potential disruptions due to concentration?



Technology platforms: Moving beyond manufacturing to innovation

Technology platforms and applied sciences enable development and innovation. Asian economies have had very different innovation curves, but overall the region has used its manufacturing strength as a powerful platform for excellence in technology assembly with strengths in niches like semiconductors. But it still imports many more of the critical enabling technologies than it exports. Can Asia continue to move up the innovation curve, especially in new transversal technologies?

Asia has been both a significant consumer of technology and the world's tech manufacturing hub

Asia enthusiastically embraced the digital revolution of the Era of Markets, and has high levels of digital adoption. Many Asian economies have developed world-leading presence in areas such as electronics, leveraging excellence in manufacturing and very large pools of science, technology, engineering, and math (STEM) graduates.

Good at the nuts and bolts

Asia has become the world's processing, manufacturing, and assembly hub. Its manufacturing sector value added increased from 29 percent to 53 percent of global total value added between 1992 and 2021.²¹ In China and Vietnam, 29 percent and 21 percent of the workforce, respectively, was employed in manufacturing in 2022—far higher than the global share of 14 percent.²²

Asia punches above its weight in global GDP in four areas: consumer electronics, industrial electronics, electric vehicles (EVs), and semiconductors (Exhibit 4). In these, it accounts for more than 40 percent of the world's 3,000 top technology-related companies' share of global revenue, R&D spending, and patents.²³ All four rely more on manufacturing than other sectors that rely more on digital, software services, or life sciences.

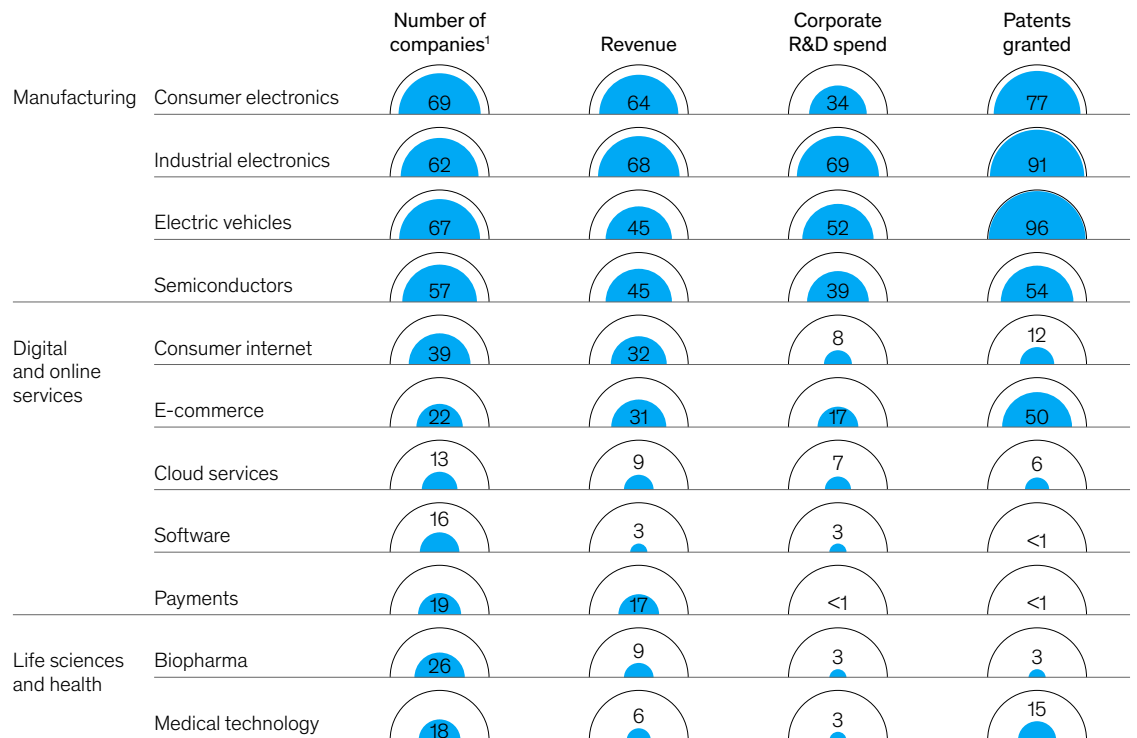
Gaps in high-barrier technologies

Today, half of all the internet users in the world are in Asia. Broadband penetration in several Asian economies is higher than in Europe (89 percent).²⁴ About 69 percent of all e-commerce transactions in Asia are executed using mobile payments, far higher than 29 percent in Europe and 32 percent in North America. Emerging Asian economies like Indonesia, Thailand, and Vietnam already have higher penetration of mobile payments than either the United States or Europe.²⁵

Feeding this system is the fact that Asia is the world leader in developing large numbers of STEM graduates. Between 2016 and 2018, Asia accounted for 76 percent of the world total, with Europe next at 8 percent.²⁶ North America contributed only 5 percent of the total, the same share as Latin America.

Asia is strong in four high-technology sectors that build on its depth in manufacturing.

Share of Asian companies in the top 3,000 global companies, 2020, %



¹Top 3,000 companies list is industry agnostic; companies are classified by sector according to their main business.
Source: CP Analytics; McKinsey Global Institute analysis

Yet for all this, Asia is not technologically self-sufficient; nor has it laid claim to leadership in critical foundational technologies. China and some parts of Advanced Asia are further ahead on technological inputs (scientific and technological articles, and R&D spending) and on adoption (for instance, of broadband) than Emerging Asia and Frontier Asia. But even these parts of Asia lag behind the United States and the EU in some areas. For instance, no Asian country has yet been able to manufacture wide-body aircraft, and China has only recently developed the ability to manufacture an aircraft carrier.²⁷ On semiconductors, while South Korea and Taiwan are global powerhouses in the production of advanced chips smaller than seven nanometers in size, Asia's strength in chips has traditionally been in manufacturing memory chips rather than designing them. The United States accounts for 46 percent of global revenue for chip design.²⁸ So Asia continues to rely on imports to make one of its most important technologies.

As the source of tech value shifts, Asia needs to navigate restrictions on tech flows and raise skills

The value of technology is shifting from hardware to software solutions. For example, software could grow from 10 percent of overall content of a passenger vehicle today to 30 percent by 2030.²⁹ Manufacturing is becoming increasingly commoditized, and Asia needs to move beyond tech manufacturing to capture global revenue and profits. But in a new era, geopolitical tensions and the shift to new transversal technologies could impede its efforts.

Import dependency amid tension

Asia heavily relies on imports of core knowledge. In 2022, China and India imported three times and nine times the value of intellectual property (IP), respectively, as they exported, for instance.³⁰ In an uncertain geopolitical environment, disruption in such flows could hinder the ability to move up the technology value chain. We highlight just a few examples here. In 2022, the United States announced export controls to restrict China's ability to obtain certain high-end semiconductor devices.³¹ In the same year, Vietnam implemented a cybersecurity law requiring tech companies to set up local offices and store data locally.³² In 2023, China imposed export controls and a licensing regime on critical raw materials used in manufacturing semiconductors, communication equipment, and solar panels.³³ And, in August of that year, the United States set restrictions on US investment in Chinese companies in three sectors, namely semiconductors and microelectronics, quantum information technologies, and certain artificial intelligence (AI) systems.³⁴

Transversal technologies—the new tech arena

Unlike the previous era when competitiveness in technology was largely achieved through specialization in individual sectors, technology is now permeating all sectors via transversal technologies, such as AI, quantum computing, and cloud.³⁵ A definitive leader has yet to be established. There is much to play for. Today, the advantage belongs to North America, and the United States in particular on cloud and edge computing as well as quantum technologies. In these two technologies, the United States accounts for 57 percent and 64 percent of world-class patents, respectively, and 78 percent and 60 percent of investment.³⁶

However, Asia is making progress (Exhibit 5). Combined venture capital and private equity assets under management have grown 2.5 times since 2018.³⁷ Of all new unicorns related to transversal technologies formed after 2016, 27 percent originate from Asia.³⁸ Asia is beginning to carve out a strong position in two transversal technologies. In clean energy, Asia accounts for 45 percent of global world-class patents and 49 percent of the world's new unicorns. In mobility, the region has 43 percent of all world-class patents and 48 percent of all unicorns. Asia is also showing promise in AI and machine learning; immersive reality tech; space tech; bioengineering; and Web3.

Capturing the next wave of transversal technologies will require enhancing the quality of talent, navigating a shift to new industry structures, improving the translation of local R&D into locally useful IP, and driving adoption and deployment at regional-level scale, supported by the right environment of standards and culture.

Asia is showing promise in AI and machine learning, immersive reality tech, space tech, bioengineering, and Web3.

Exhibit 5

Asia is starting to develop strength in intellectual property and software in some transversal technologies.

Transversal technologies by region,¹ %

■ Asia ■ North America ■ Europe 30 ■ Rest of world

	World-class patents, 2019 ²				New unicorns, 2016–23 ³			
Electrification and renewables, climate tech	45	29	22	4	49	39	12	
Future of mobility	43	32	21	4	48	33	9	9
Web3	42	38	16	4	12	61	18	9
Advanced connectivity	38	37	20	4	N/A			
Applied AI, generative AI, machine learning	35	41	20	4	31	59	8	3
Immersive-reality technologies	33	44	18	5	75	25		
Trust architectures and digital identity	30	47	19	5	17	59	17	7
Future of space tech	26	42	29	3	50	50		
Cloud and edge computing	24	57	14	6	9	74	9	7
Future of bioengineering	20	43	32	6	40	58	3	
Quantum technologies	16	64	18	2	N/A			

Note: Figures may not sum to 100% because of rounding.
¹Next-generation software development (eg, no-code software) is excluded due to lack of region-specific data availability for knowledge development and commercialization.
²Measured by number of countries in which a patent is actively held, the relevance of the technology, and the number of citations of the patents in other patent applications.
³First or second industry classification in PitchBook was used to map to technology.
 Source: CP Analytics; McKinsey Global Institute analysis



Can Asia move up the innovation curve in a new era?

As the technological frontier moves, can Asia move with it? The region needs to not only accelerate its rate of scientific progress—a process that will require higher-quality talent—but also tackle its dependence on imports of some key technologies.

- Can Asia scale native innovation to become a leader in software and solutions-driven innovation, especially in transversal technologies?
- How can CEOs rethink their technology road map to win in the future arena? How can they take advantage of Asia's scale and speed advantage to continue to innovate, and hire and retain high-quality talent?





Demographic forces: Raising productivity to counteract aging

“Demography is destiny,” the saying goes. The forces of demographics may move slowly, but they are all-powerful. In the past, Asia’s demographics supported a shift out of agriculture to industry based on young rural migrants. But now China and Advanced Asia are aging rapidly while lower-productivity Asian economies have growing pools of working-age people and nonfarm workers. Can Asia raise productivity to offset the impact of aging, taking advantage of its complementary demographics? And in aging Asia, can companies reskill their workforces to boost productivity through automation?

Demographics have worked in Asia’s favor, but the region is aging fast

Asia has lifted 1.1 billion people out of extreme poverty since 1990.³⁹ This achievement was underpinned by a favorable combination of a bulge in the working-age population, a move from the farm to the industrial and largely urban workforce, and a surge in productivity.

The world’s biggest-ever labor supply shock

In the Era of Markets, Asia was largely in a demographic sweet spot. Between 1990 and 2022, 55 percent of global growth in the working-age population was in Asia.⁴⁰ Moreover, the region’s working-age population grew faster than its overall population.⁴¹

Compounding favorable demographics, urbanization—and the associated shift off the farm—was a huge positive labor supply shock for the world’s industrial workforce. The share of Asia’s urban population rose from 40 percent in 1990 to 48 percent in 2022. The urban population tripled in China and grew 2.3 times in India.⁴² This move also restructured the workforce, with the farm share of employment declining from 49 to 22 percent in China, and from 48 to 28 percent overall for Asia between 1990 and 2022.⁴³

But across Asia, large shares of the population still work on farms, suggesting considerable scope for urbanization to continue. For instance, in India and China, 45 percent and 22 percent of workers, respectively, work in agriculture. That compares with less than 2 percent in the United States.⁴⁴ China’s urbanization rate is expected to hit 80 percent in 2050 from 62 percent today, and India’s 53 percent from 35 percent. By 2050, an additional 600 million or so people will live in cities in these two countries alone.⁴⁵ The effects of these offsetting forces—a smaller share of working-age population but a larger workforce share in nonfarm sectors—will be defining.

Not just more productive, but a lot more productive

Asia’s demographics were complemented by a productivity boom that amplified the economic power of its abundant pool of labor, particularly in China. China’s productivity rose more than 14 times, and India’s over four times, between 1990 and 2022.⁴⁶ A huge part of this is the role of workers moving off farms. Today in India, a farm worker is only one-quarter as productive as a nonfarm worker. In China, the move from the farm explains about 35 percent of the productivity growth since 2000, but the rest has come from exceptionally high productivity growth in industry underpinned by rapid capital deepening.

14x

rise in China’s productivity
from 1990 to 2022

2x

the rate of aging in
Advanced Asia and
China as in the United
States and the EU

Matching the work with where the workers will be

Beyond dealing with the first-order challenge of higher dependency ratios, aging requires Asia to move its work to where the workers will be. In turn, this requires another massive lift in productivity in new worker pools.

Dependency blues

Parts of Asia are aging rapidly. China, Japan, and South Korea already have, or will have by 2050, some of the world's most elderly populations. In Advanced Asia and China, 34 percent and 30 percent of the respective populations will be elderly—almost double the shares in Emerging Asia (16 percent) and India (13 percent). Across the region, the dependency ratio is seen increasing from 47 percent in 2022 to 58 percent in 2050. Advanced Asia and China are aging twice as fast as the United States and the EU. It took the United States and the United Kingdom more than 50 years for the median age to rise from 30 to 40. In South Korea, it took 15 years, in Japan 22 years, and it is expected to take 23 years in China. Overall, the population in the region aged 64 or above by 2050 will be larger than today's by an estimated 425 million—or the populations of France, the United Kingdom, and the United States combined.⁴⁷

Labor mismatches

By 2050, Advanced Asia and China—“aged Asia”—could have 250 million fewer working-age people. There will be new workers in other places, but these have far lower productivity (Exhibit 6).⁴⁸

When viewed as a whole, Asian labor pools have complementary demographic profiles. The loss in working-age population in China and Advanced Asia is almost offset by the addition of 200 million working-age people in Emerging Asia and India. But this still leaves a deficit of about 50 million.⁴⁹

Continued migration off the farm helps put the workforce back in positive territory. Even in already urban China, the farm share of labor could shift from 22 percent to 12 percent by 2050.⁵⁰ There will be 87 million fewer farm workers. This softens the blow of aging in the industrial sector but still leaves a reduction of 29 million in the industrial labor pool—all supporting a larger old-age population.⁵¹

But the big move is in India, where the share of workers on farms is expected to fall sharply, from 46 percent in 2022 to 29 percent in 2050. An additional 223 million people are expected to be employed in India's nonfarm sectors.⁵² This is of particular significance to India's women, 60 percent of whom work in subsistence agriculture.⁵³

An increase in cross-border labor flows or the relocation of value chains could also soften the impact of aging on labor markets. The first is less likely than the second. Few Asian countries have managed large-scale immigration. In 2020, the stock of migrants as a percentage of the total population was 0.1 percent in China, 2.2 percent in Japan, and 3.4 percent in South Korea. This compares with 30 percent each in Australia and New Zealand, 15 percent in the United States, and 20 percent in Canada.⁵⁴ Some efforts are under way to use policy to encourage and manage immigration. South Korea has announced a more open immigration policy, with one aim being to expand the scope and period of employment visas issued to foreigners and provide budgetary support for multicultural families.⁵⁵ But this may not fundamentally change the math.

More likely, at least in the short term, is that people will not move for work, but the work will move to the people. The so-called China Plus One strategy may facilitate this trend. Foreign direct investment to members of the Association of Southeast Asian Nations rose by about 80 percent, with inflows from China climbing by 50 percent, between 2015 and 2021.⁵⁶

Asia’s growing labor pools will be in less productive places.

Change in nonfarm employment and labor productivity by region

	Change in nonfarm employment, 2022–50, million people	Average nonfarm productivity, 2022, ¹ \$ per person (approximate)
Advanced Asia	-16	80,000
China	-29	26,000
Emerging Asia	69	15,000
India	223	10,000

Note: Advanced Asia includes Australia, Japan, New Zealand, Singapore, and South Korea. Emerging Asia includes Indonesia, Malaysia, Philippines, and Thailand.

¹Average for category, except China and India.

Source: UN population database; Oxford Economics; IHS Markit; McKinsey Global Institute analysis

The productivity imperative

The fact that labor pools are shrinking in the most productive places and growing in the least productive means that moving the work is not yet straightforward.

A large productivity gap separates Asia’s advanced and less advanced economies. For instance, the nonfarm productivity of Advanced Asia is about eight times that of India. India’s nonfarm productivity is expected to increase from about \$9,800 per worker to about \$22,000 in 2050, but that would still leave it well behind China’s current productivity of \$26,000.⁵⁷ But if India and Emerging Asia were to grow at the nonfarm productivity rate of China in the past era, Asia’s overall productivity would triple by 2050, reaching \$86,000. On the current course, nonfarm productivity is expected to nearly double, from \$25,000 today to \$46,000 by 2050.⁵⁸

Achieving higher productivity is vital to lifting more Asians out of poverty. In 2019, more than 185 million people in the region lived in extreme poverty (earning less than \$2.15 a day). At the higher international poverty line of \$3.65 a day, Asia’s poor population was 950 million.⁵⁹ The whole of Asia replicating China’s productivity miracle is the surest way to achieve rising incomes and deal with the challenge of higher dependency ratios, but this will require significant capital investment.⁶⁰

Can Asia solve its demographic challenges through productivity?

Asia finds itself at a critical juncture, where the intersection of demographics and productivity growth presents both challenges and opportunities.

- Can Asia boost workers’ productivity to take advantage of its complementary demographics?
- How should company leaders rethink work to drive productivity in a less labor-rich environment? How can companies adopt more digital solutions, raising skills and using innovative strategies to retain productive workers?



Resource and energy systems: Securing a lot more energy with less carbon

Resource and energy systems transport and convert energy and materials for use. Asia consumes more energy than any other region and will need much more. For the most part, Asia relies heavily on energy and critical minerals imports, some of the world's most strategic and contested products. But Asia's overall industry-heavy economy will make decarbonization hard. Can Asia fund, innovate, and manage strategic relationships to meet the dual mission of growing energy demand and the imperative to decarbonize?

Asia is the world's largest energy consumer and carbon emitter, and most reliant on imports

Over the past 40 years, Asia has been a large driver of global energy consumption and has become the world's biggest emitter of carbon. During the Era of Markets, Asia was able to get the considerable energy resources it needed to fuel growth through cheap integration with the global energy supply.

An 'under-energized' population

In 1980, Asia accounted for only 18 percent of the world's primary energy consumption. That share shot up to 49 percent in 2022. Asia's primary energy consumption accounted for 70 percent of the global increase during this time frame—despite the fact that the energy intensity of Asia's GDP has dropped.⁶¹

Yet Asia's per capita energy consumption is only about one-third that of the average of OECD economies, at 62 gigajoules per capita compared with 174 gigajoules (Exhibit 7). More than 90 percent of Asia's population consumes less than the OECD average.⁶²

The world's largest carbon emitter

Europe and North America together contributed 61 percent of global cumulative emissions between 1750 and 2000, against Asia's 18 percent.⁶³ But because of rapid industrialization, by 2021 Asia was the source of half of global emissions.⁶⁴ From 1991 to 2021, Asia accounted for a remarkable 97 percent of the global increase in CO₂ emissions.⁶⁵

Low energy self-sufficiency

Asia is highly dependent on imported energy, especially oil and gas. It is the world's largest net importer of fossil fuels, with \$775 billion in net imports in 2021 of which 70 percent came from outside Asia. Asia has energy exporters, such as Australia, Indonesia, and Malaysia, but overall its energy resources imports total \$1.1 trillion against exports of \$400 billion. The largest importers are China, India, Japan, and South Korea.⁶⁶

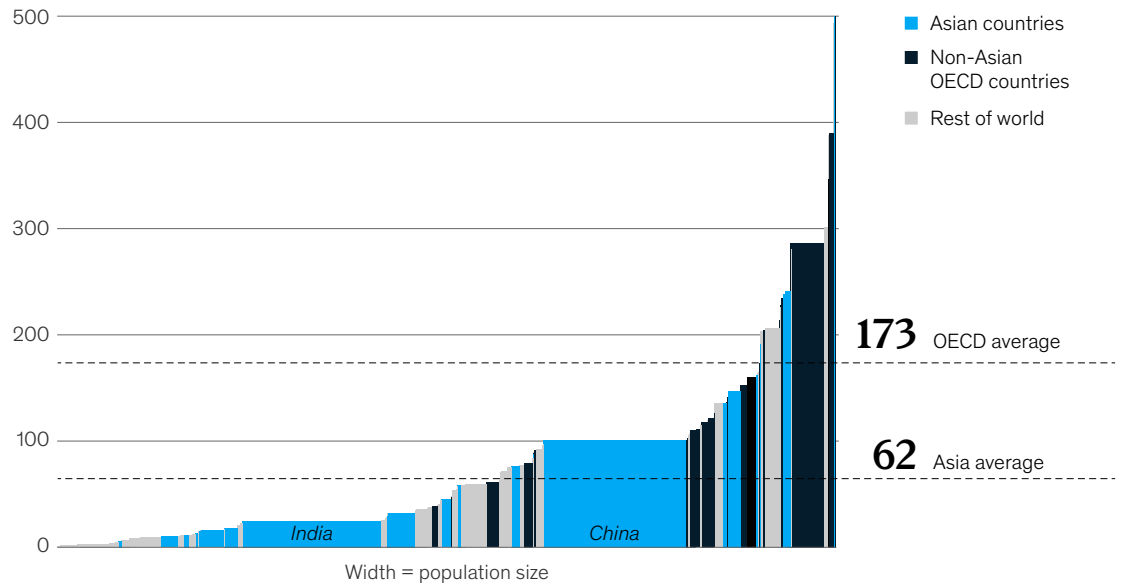
Asia's per capita energy consumption is only

1/3

that of OECD economies

Asian energy demand is seen remaining strong because residents are ‘under-energized.’

Energy consumption per capita, 2019, gigajoules



Note: Maximum set at 500.
Source: Our World in Data; McKinsey Global Institute Analysis

India, Japan, and South Korea import more than

84%

of the oil and gas they need

Asia’s reliance on imported energy is increasing. In 2001, Asia imported 2.5 times more oil from outside the region than from within it. By 2021, it was 3.7 times. In 2001, Asia imported 1.4 times more gas from within the region than from beyond it; by 2021, it was 1.6 times. Asia may need to work even harder to ensure that it has solid supply partners around the world.

India, Japan, and South Korea import more than 84 percent of the oil and gas they need. In 2021, 78 percent of Asia’s domestic consumption of oil relied on imports, 51 percent of which came from the Middle East. Asia also relies heavily on imported gas. Japan, the Philippines, Singapore, and South Korea meet close to 100 percent of their domestic gas consumption with imports.

Coal is largely an Asian story. Seventy-one percent of Asia’s coal imports—both thermal and metallurgical coal—come from within the region. China is almost self-sufficient in coal; imports account for only 2 percent of domestic consumption. India imports 28 percent of what it consumes. This at least partly explains why coal was the first fuel of choice for these economies as they went through industrialization.

Asia also relies on imports of key minerals and metals. The world depends on Argentina, Chile, and Peru for the copper it needs (copper is key to the energy transition as one of the foremost conductors used in wiring) and on China to refine it. Peru and Mexico supply roughly 80 percent and 60 percent, respectively, of silver ore imports to China and South Korea. In contrast, most supplies of nickel to Asian economies come from within the region.

Asia's challenge is increasing energy supplies while shrinking carbon emissions

Asia is the world's largest energy consumer, but it needs much more—in relative and absolute terms. With more than half the world's population by 2050 expected to be in Asia, the decisions Asia makes on energy will define the world's energy consumption and production patterns.

Still hungry for energy

Asia continues to industrialize and urbanize. Its consumers are becoming more affluent—not only in populous China and India, but also in emerging economies in South Asia and Southeast Asia. The region is expected to account for 91 percent of total final energy consumption growth between 2021 and 2050, a period when North America and Europe are projected to decrease their energy consumption.⁶⁷ Ongoing improvements in efficiency may reduce this multiple, but, in any scenario, significant growth will be needed.

Regional GDP is also expected to grow, fueling energy demand. From 2021 to 2040, Asia's GDP could grow at 3.6 percent per year, compared with Europe's at 1.3 percent and North America's at 1.7 percent.⁶⁸ China and India could grow even faster than the Asia average.⁶⁹

An uphill decarbonization battle

Asia is a critical link in the world's global energy transition. It is expected to account for 64 percent of the world's new renewable capacity between 2019 and 2040, taking its overall share to 56 percent by 2040, according to the International Energy Agency.⁷⁰ Asia is in a strong position to help the world reduce its emissions. China assembles 66 percent of all battery cells and manufactures 54 percent of the world's EVs.⁷¹ It also accounts for about 74 percent of the production capacity for EV battery components, and for more than 80 percent of global manufacturing at all key stages of solar panels.⁷²

Despite Asia's strength in renewables and low-emissions technology, the region has two broad challenges in decarbonizing. First, Asia still serves as the factory of the material world.⁷³ The weight of industry in Asia's final energy consumption is the highest of all its sectors at 47 percent, much higher than the weight of industry in the EU, with 26 percent, and North America, at 22 percent (Exhibit 8). Asia is by far the largest industrial user of final energy, with 57 percent of the global total.⁷⁴ The International Energy Agency notes that industry is one of the most challenging sectors to decarbonize and electrify, because it requires high-temperature heat and chemical reactions that cannot be achieved with today's electrification technologies.⁷⁵

Asia's second challenge is building renewable systems to generate electricity from the ground up. The region has not developed large grids like those in Europe and the United States where intermittent renewables could be added to plentiful existing backup fossil fuel baseloads.⁷⁶ Asia has had to build vast amounts of dispatchable power, and only now is it turning its incremental investment to intermittent renewables.⁷⁷ Demand for electricity will continue to surge, more backup will be needed, and weaning off thermal baseloads will take time. Some Asian economies source electricity from nuclear energy—in South Korea and Taiwan, respectively, 27 percent and 11 percent in 2021.⁷⁸ But overall, Asia powered only 6 percent of its electricity from nuclear in 2021.⁷⁹

It is unsurprising then that Asia generates only 8 percent of its electricity through solar and wind power, compared with 20 percent in the Europe 30. Over the past 20 years, coal has accounted for more than 70 percent of cumulative power generation in China and India, compared with 23 percent in Europe.⁸⁰ This is despite one of the biggest-ever surges in hydroelectric capacity

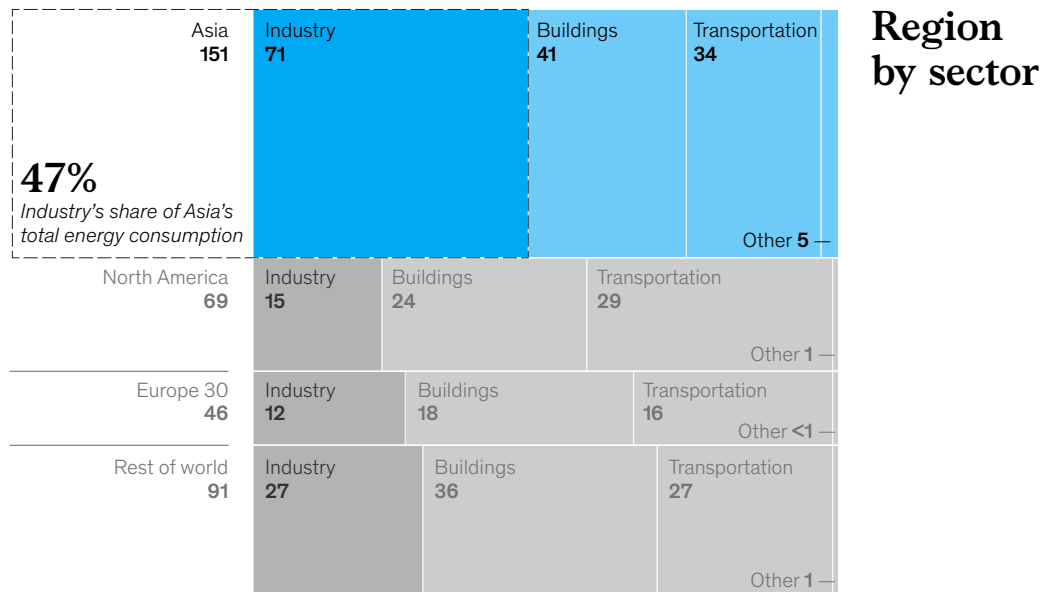
Between 2019 and 2040, Asia is expected to account for

64%

of the world's new renewable capacity

Asia is the world’s largest energy consumer and almost half of that consumption comes from industry.

Global total final energy consumption, 2021, million terajoules

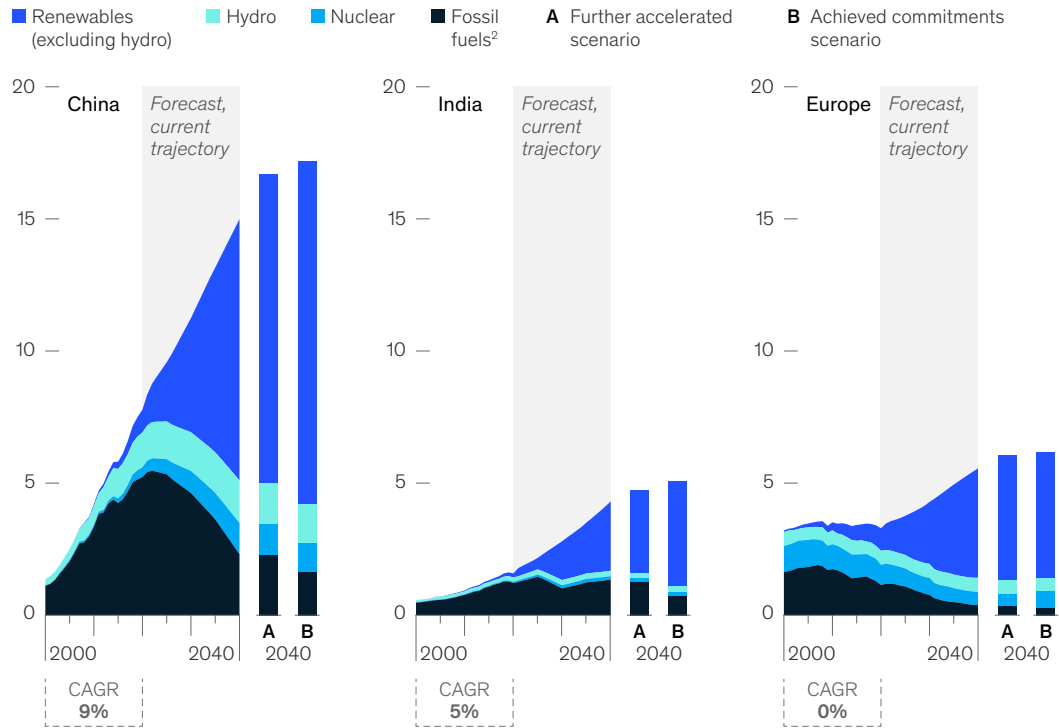


Note: Figures may not sum because of rounding.
Source: McKinsey Energy Insights; McKinsey Global Institute analysis

in history in China. Renewables are expected to play a greater role, but coal will remain an important part of the mix well into the energy transition. Several economies in Asia, including India, Indonesia, and Pakistan, are investing significant amounts in coal-fired power plants. Of the 57 nuclear plants currently being built, 21 are in China and eight are in India.⁸¹ In short, it appears that Asia is “all in” on all types of energy. (Exhibit 9).

Asia needs both fossil fuels and renewables to meet its power needs.

Power generation by source,¹ billion megawatt hours



Note: McKinsey Energy Solutions analyzed 5 scenarios based on the speed of energy transition (from slowest to fastest): fading momentum; current trajectory (where current trajectory of renewables cost decline continues, however currently active policies remain insufficient to close gap to ambition); further acceleration (further acceleration of transition driven by country-specific commitments, though financial and technological restraints remain); achieved commitments (net-zero commitments achieved by leading countries through purposeful policies, followers transition at slower pace); and 1.5° pathway.
¹Such as oil and gas and coal.

Source: Enerdata; McKinsey Energy Solutions

Politicized energy and resource trade

Addressing the twin challenges of accessing the very considerable energy resources that it needs and making headway in the energy transition may be difficult because Asia is not energy-independent and energy is one of the most politicized of resources. In Europe in 2022, Russia cut off or threatened to cut off gas supplies in retaliation for sanctions imposed following its invasion of Ukraine.⁸² China appeared to deepen its oil and gas trade with Russia at this juncture. In 2022, Russia provided 17 percent of China’s oil imports and 10 percent of its LNG imports.⁸³

Can Asia manage its dual energy challenge?

How Asia manages this dual-track approach matters not only for the region’s continued prosperity but also for the global goal of net zero.

- Can Asia fund, innovate, and manage strategic relationships to meet the dual mission of growing energy demand and the imperative to decarbonize?
- Where can CEOs identify and invest in clean energy innovations, with the potential to position their companies as pioneers in new, scalable solutions that can be exported globally?



Capitalization: Mobilizing the largest capital base amid financial stress

Capitalization constitutes the drivers of global supply and demand and the trajectories of finance and wealth. Asia has deepened capital faster than any other region despite lower returns than in Western economies. But now interest rates are rising, real estate prices are falling, capital markets are more volatile, growth is slowing, and many economies face balance sheet stress. In this new environment, can Asia improve the efficiency of its financial system and shore up financial resilience in order to deploy the largest amount of capital in the world?

Asia benefited from the biggest and fastest capital deepening of any region

As Asian economies enjoyed rapid growth and became major players in the world economy, the region as a whole achieved significant capital deepening. It benefited from large domestic savings as well as significant investment inflows—all against the background of a stable macroeconomic environment.

Large saver and investor

Between 2010 and 2020, Asia's fixed investment grew at 7 percent. Asia mobilized \$91 trillion between 2000 and 2020.⁸⁴ Overall, the region experienced much faster capital deepening than the rest of the world—although not enough to catch up (Exhibit 10). Capital intensity varies significantly across Asia. Real fixed capital stock per worker in Japan is about 21 times that of India and about four times that of China.⁸⁵

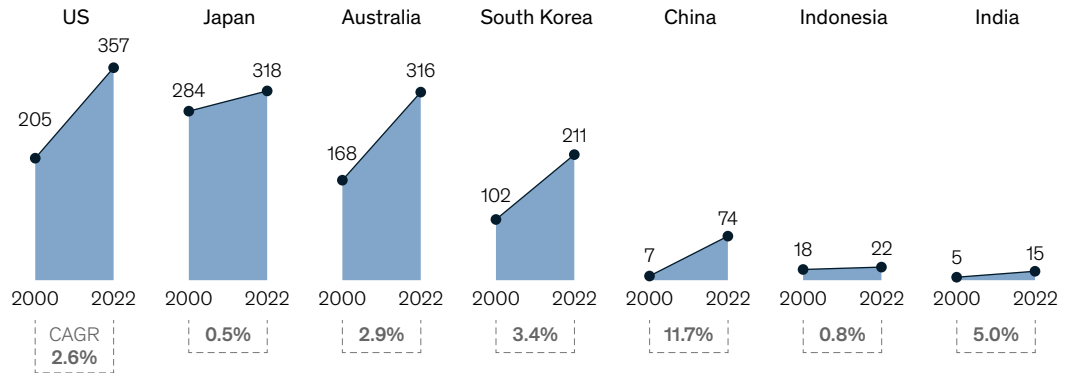
High savings backed these changes. In 2022, Asia's gross domestic savings share of GDP was about 40 percent, compared with 26 percent in the EU and 17 percent in the United States.⁸⁶ This dynamic capital deepening left an indelible mark on Asia, driving economic growth and innovation while lifting millions out of poverty.

40%

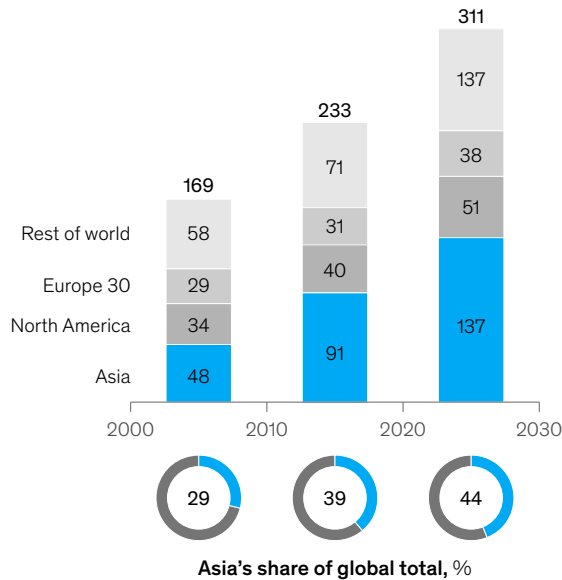
domestic savings
share of GDP in Asia
in 2022

Asia has, and will continue to have, the largest share of global investment.

Real fixed capital stock, \$ per worker



Incremental total fixed investment,¹ \$ trillion



¹Based on baseline projections from Oxford Economics.
 Source: McKinsey Global Growth Model; Oxford Economics; McKinsey Global Institute analysis

Favorable macroeconomics

The Era of Markets was largely a time of low inflation and interest rates, underpinned by the very long run of supply-side-driven growth in China. China's economy accounted for only 2 percent of global GDP in 1990 but 18 percent in 2022. The US Federal Reserve cut its official rates to near zero after the 2008 global financial crisis, and rates remained at historically low levels until 2022. Many Asian economies followed the Fed's lead, and interest rates remained low. The cheap capital powered a sustained global increase in wealth on paper. In the past two decades alone, asset price inflation added \$160 trillion to that wealth. Every dollar of investment generated \$1.90 of debt.⁸⁷

Asia is set to deploy the most capital, but returns are suboptimal and balance sheet stress is rising

Since the catch-up in capital depth is far from complete, a lot more capital is still needed. But the environment for doing so may be more challenging.

Driving returns in a new (potentially lower) growth gear

China has been a global growth engine for 40 years, with high productivity growth supported by urbanization and rapid capital deepening. As its economy matured and “catch-up growth” was banked, the upward trajectory of GDP was widely expected to decelerate. The recent slowdown and other factors have revealed stresses in the property sector and in rising youth unemployment, for example. We enter a new era with a marked gear change in the China growth engine. China’s GDP grew at a compound annual rate of about 10 percent between 1990 and 2000, 11 percent from 2000 to 2010, and 7 percent between 2010 and 2020. In the period to 2025, the consensus of projections is around 4 to 5 percent.⁸⁸

Yet Asia could potentially still mobilize more capital between now and 2030 than any other region in the world. Over the next decade, Asia’s fixed investment is still expected to total close to \$140 trillion—more than half again the total for the United States and the EU combined, about \$89 trillion.⁸⁹

Theoretically, the majority of Asia’s fixed investment requirement could be met by high domestic savings, which could be as much as an incremental \$155 trillion between 2022 and 2030 assuming current savings rates continue.⁹⁰ But those savings need to be mobilized into capital investment.

Asia needs a more dynamic and efficient financial system to improve its allocation of capital to productive uses and attract more foreign capital, which could make a sizable contribution to the region’s overall investment need. Returns on invested capital are much lower across Asia than in the United States, for instance. In 2015–19, North America generated 30 times more economic profit than Asia, previous MGI research showed. Over the past ten years, almost \$10 trillion of capital has been invested in China, and 80 percent of it went to sectors that earned less than their cost of capital, namely capital goods, domestic services, and energy and materials.⁹¹

Some parts of Asia, including Hong Kong and Singapore, have highly developed and efficient capital markets, but overall Western economies have 2.5 times the financial depth (value of equity and bonds as a percentage of GDP) of most Asian economies. They also have a more diverse and sophisticated investor base, including institutional investors, hedge funds, and private equity firms.⁹² Asia has a relatively larger banking system: Asia’s share of bank lending was 61 percent, double the US share of 31 percent.⁹³ Whatever the right balance is for Asia, mature, deep, and transparent capital markets will be key.

\$140 trillion

projected fixed investment in Asia over the next decade vs. \$89 trillion for the United States and the EU combined.

We enter a new era with a marked gear change in the China growth engine.

250%

debt-to-GDP ratio
in Japan

Balance sheet risk may be rising

By late 2022, uncertainty in the global economy and the world's balance sheet was evident. Signs of balance sheet stress are mounting in Asia's globalized economies (Exhibit 11).⁹⁴

- **Debt.** In some Asian economies, government, household, and corporate debt has risen by even more than the OECD average. Japan's government debt-to-GDP ratio is more than 250 percent. Nonfinancial corporate debt in China is 150 percent, and in Japan, South Korea, and Vietnam it is more than 120 percent. In 2021, South Korea's household debt was 106 percent of GDP and Australia's 119 percent, against an OECD average of 60 percent.⁹⁵ Carrying this amount of leverage will be costly if interest rates continue to rise.
- **Real estate.** There is a risk of a fall in asset prices, including real estate. Between 2015 and 2021, the average nominal housing price rose by 50 percent in China, 34 percent in Australia, and 17 percent in South Korea.⁹⁶ Price inflation in cities is even higher. For instance, in Seoul the price-to-rent ratio increased 2.5 times in this period.⁹⁷
- **Financial.** Many Asian countries accumulated substantial foreign exchange reserves after the Asian financial crisis of the late 1990s. In 2022, Asia accounted for 40 percent of global capital flows, four times the level in 2000. But there may be pockets of vulnerability to any sudden outflow of capital. In Indonesia and Vietnam, for instance, foreign direct investment accounts for 20 percent and 14 percent of total investment, respectively.⁹⁸

Exhibit 11

Asian economies are showing signs of balance sheet stress.

Balance sheet indicators

Stress level¹ ■ Low ■ Medium ■ High

	Advanced Asia			China	Emerging Asia				Frontier Asia	India
	Australia	Japan	South Korea	China	Indonesia	Malaysia	Thailand	Vietnam	Bangladesh	India
Debt										
Household debt to GDP, 2021, %	119	69	106	62	17	73	90	35	7	35
Nonfinancial corporate debt to GDP, 2021, %	65	118	114	150	23	78	90	126	31	51
Government debt to GDP, 2021, %	58	262	51	71	41	69	53	40	124	84
External debt to GDP, 2021, %	98	96	35	13	33	64	38	32	22	18
Real estate										
Nominal house price growth, ² 2015–21, %	34	15	17	50	15					33
Public finances										
FDI ³ inflows share of investment, 2022, %	17.8	4.3	3.3	2.4	5.5	19.9	8.6	14.1	1.1	8.4
Foreign exchange reserves, 2022, months of import cover	1.3	12.4	6.0	11.2	5.2	4.5	7.0	3.7	4.2	6.9
Consumer price index, CAGR, 2019–22, %	4	0.7	2.7	1.8	2.6	1.6	2.1	2.7	6.3	6.1
Nonperforming loans to total gross loans, 2021, ratio	0.9		0.2	1.7	2.6	1.7	3.1	1.6	8.0	6.5
Government balance share of GDP, ⁴ 2022, %	-0.7	-6.7	-3.0	-7.3	-2.3	-4.2	-2.6	-4.4	-4.5	-6.9

¹High stress = within global top 25%; medium stress = between 25% and 50% of world; low stress = below 50% of world.

²Benchmarked to OECD countries.

³Foreign direct investment.

⁴Includes the revenue and expenditure gap of the general public budget and the government fund budget.

Source: IHS Markit; Oxford Economics; World Bank; IMF, BIS; OECD; McKinsey Global Institute analysis

Can Asia mobilize the world's largest capital base despite challenges?

Volatility has entered the economic and financial arena, and Asia needs to continue to raise and mobilize large amounts of capital to meet the needs of its growing economies.

- Can Asia obtain the capital it needs both by mobilizing domestic savings and by attracting foreign capital with reforms to its financial system?
- Will Asia be able to manage its balance sheet risks?





New strategies for a new era

82%

of respondents express optimism about a new era for Asia

Clearly, new times call for new strategies. But how profound and urgent is this call to action in boardrooms? To find out, we conducted a survey in collaboration with the Asia Business Council to gauge opinions among Asia's business leaders.⁹⁹ In keeping with the enormous opportunities represented in the region, 82 percent of respondents express optimism about a new era for Asia. But this optimism is equaled by the imperative to change. Asia's leaders appear to believe that the period ahead will be qualitatively different from the past 30 years, and are preparing to recalibrate strategy accordingly. Three groups of companies emerge from the survey results:

- **About 10 percent of companies say they can take a “business as usual” approach.** This small minority of respondents said that trends in the five domains—world order, technology platforms, demographic forces, resource and energy systems, and capitalization—have relatively low strategic significance for their businesses. For them, watchful monitoring of trends is called for, deploying a test-and-learn approach and focusing on no-regret strategic moves.
- **About 16 percent of companies need to rethink strategy focused on one or two domains.** Zeroing in on trends in domains that they deem important, these executives can empower their organizations to revisit conventional wisdom, encourage experimentation, and scale up successful pilot initiatives. The most important domains here tend to be technology and energy.
- **The large remainder—74 percent—of companies say it is necessary to drive fundamental transformations from three or more domains.** These business leaders see that the new era has a profound across-the-board impact that demands a response at a more existential level.¹⁰⁰

The fact that a majority of Asia's business leaders say they believe that transformation is needed in multiple domains is testament to their appreciation that they are interconnected. If trade flows are disrupted by trade tensions related to the rise of a multipolar world order, Asia's ability to rise up the technological innovation curve and meet the needs of the energy transition could be compromised. Asia's performance on technology will determine the success of its energy transition and its ability to cope with the demographic headwinds of aging, for instance through automation. Boosting skills and productivity will be needed to recalibrate value chains to shore up resilience in a contested world order. Demographic shifts from lower to middle class will have a significant impact on energy consumption. Asia needs fully functioning, dynamic, and deep capital markets to finance both its continued growth and its energy transition.

Our hope is that looking through the lens of the five domains can be part of a conversation about the challenges ahead and about how to prioritize to maintain Asia's momentum in a potentially more complex world.



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