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## **Managing China's transition to a new phase of economic growth and development**

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### **Introduction**

The Chinese economy is undergoing fundamental changes leading towards a major transition to a new phase of economic growth and development. This transition is a result of the need to elevate the standard of living to a new level in a more sustained model of economic growth and of the rapidly changing environment that has increased the complexity of implementing new reform measures and policies.

The transition is guided by a Chinese Government vision to build a modern socialist country by 2035 through economic growth and social development, achieve a high level of openness and a strong modern economy towards the middle of the century and build a more affluent society. This vision was apparent from the Chinese Communist Party's recent twentieth national congress.

China's strategic goals include building an integrated domestic market system through supply-side reform; enhancing institution-building and entrepreneurship; building an innovation-based economy centred on digital transformation; achieving peak carbon by 2030 and carbon neutrality by 2060 through an energy transformation to the use of new and renewable energies; achieving more equitable development with an emphasis on common prosperity; enhancing global and regional economic reintegration by cementing China's position as a hub for global value and supply chains and implementing the dual-circulation strategy; accelerating the pace of financial opening with the goal of achieving full convertibility of the

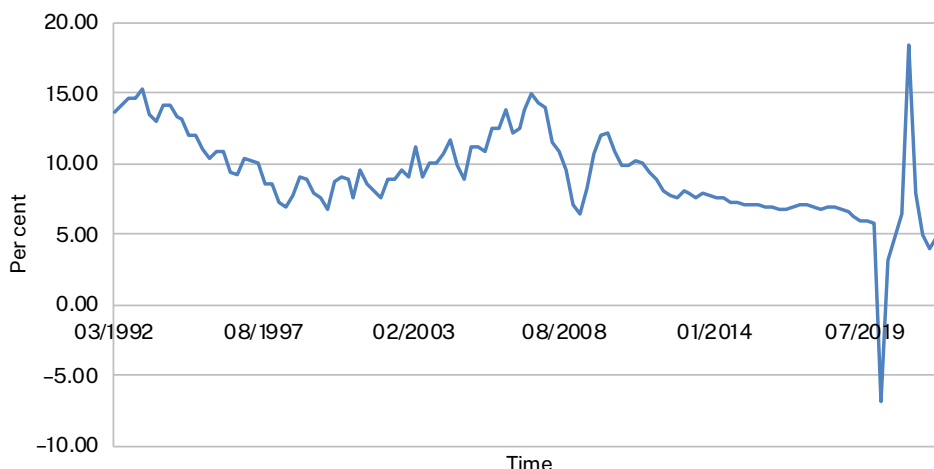
renminbi through capital account liberation and the consolidation of its domestic banking system; and building a modern economy centred on new patterns of industrialisation, urbanisation and digitisation.

China is facing some severe headwinds in achieving its goals, including: the unfavourable global macroeconomic environment and financial conditions since the Global Financial Crisis (GFC) and the Covid-19 pandemic; the increasing financial risks due to high leverages among households, firms and local governments; readjustment in real estate sector development; very low fertility rates that are accelerating the pace of population ageing; deglobalisation and rising protectionism; economic and technological decoupling, which has hampered efforts towards global and regional integration, exacerbated by the weakening of the multilateral trading system (for example, the World Trade Organization); the enormous adjustment costs of adopting a low-carbon development strategy; the rising geopolitical tensions that have fractured the global system of trade flows, financial integration, payments for international settlements, cross-border investment flows and technological transfers and further disrupted global supply chains; not to mention the worsening global food and energy crises that have hampered global efforts to achieve poverty reduction and more equitable and sustainable growth and development.

These headwinds are forcing China to make changes to its model of growth and adjust its policies and long-term strategies for external economic activities such as international trade, investment, balance of payments, resources and technology. Key lessons can be learned from the experience of reform and opening in the past and new opportunities will be created in confronting these challenges. Taking full advantage of these opportunities holds the key for success. Some of the crucial issues China must manage in the difficult transition to the new phase of growth and development are described below.

## **Fundamental changes in growth drivers: Necessity and significance**

In the past 10 years (2012–2022), China's annual GDP growth rate reached 6.6 per cent—the highest among the major world economies and higher than the global average of 2.6 per cent and the average for the developing world of 3.7 per cent over the same period. China's average contribution to global economic growth reached 38 per cent, surpassing the total contributions of the G7 countries during this period. In 2021, China's GDP accounted for 18.5 per cent of global GDP, rising from 11.3 per cent 10 years earlier. In the same year, China's total foreign trade value reached US\$6.9 trillion—an increase of 56.8 per cent compared with 10 years earlier. China remains the second-largest economy and the largest trading nation in the world.



**Figure 1.1 Quarterly real GDP growth rate of China, year on year, 1992Q1–2022Q2**

Source: Authors' construction using data from the CEIC Database.

However, China's economic growth has been trending down, especially since the GFC in 2008 (Figure 1.1). The Chinese Government set a growth target of 5.5 per cent for 2022, but strict Covid-19 restrictions (which will not have a long-term impact on growth), a prolonged property slump and global recession risks challenge its efforts to boost economic growth. Assisted by government measures to revive economic activities, including monetary and fiscal policies and policies for stabilising the housing markets, China's GDP rose 3.9 per cent in the July–September quarter year on year, increasing from the 0.4 per cent pace in the second quarter. While investments in infrastructure and manufacturing are increasing, consumption remains subdued. Exports are continuing to rise but the growth rate has been slowing.

With its labour force peaking in 2011 and an ageing society, China's labour costs, caring responsibilities and demand for healthcare resources will increase, adding to the costs of operating the economy.

The Covid-19 pandemic, the resulting disruptions to supply chains, the rising costs of energy and food due to geopolitical tensions and the increasing financial fragility of global financial markets all point to slow growth of the global economy in 2022 and beyond. The International Monetary Fund has made downward adjustments to its forecasts for the global economy, raising the prospect of a global economic recession in 2023. The World Trade Organization (WTO) forecast a further weakening in global trade in the second half of 2022 and the Organisation for Economic Co-operation and Development (OECD) also predicted substantial drops in growth in the European Union and the United States in 2023. Given the

contributions to global growth made by China in the past 10 years, maintaining its relatively high growth will be crucial not only for China, but also for the global economy.

This changing environment highlights the importance as well as the urgency of China accelerating the change in its drivers of growth. A key lesson from past development is to find effective ways of lifting productivity through efficient resource allocation and structural change. We explore this in detail along the four contributory factors of growth.

First, as growth theories have made clear that total factor productivity (TFP) growth is the ultimate driver of long-run economic growth, it is crucial to adjust policies and institutions to nurture TFP growth as the economic structure evolves, and to remove domestic factors and policy choices that contribute to the slowdown of TFP growth by deepening supply-side reform, focusing on state-owned enterprises (SOEs) and the process of 'creative destruction', the financial sector, factor markets and entrepreneurship. The government should continue to play a key role in leading the nation's drive to become more innovative, especially in those areas where uncertainties could prevent the private sector from investing.

Second, China's fertility rate has continued to fall in recent years. It now has an ageing society, as the share of the aged population (65 years and older) has surpassed 14 per cent of the total population. The rapid pace of ageing prompted the Chinese Government to adopt a series of policies, including the Two-Child Policy, hoping to raise fertility and increase the labour force in the long run. It is likely the government will remove its family planning policies altogether, returning families' right to reproduce in the hope that some kind of balance in the demographic structure will be restored in the long term. However, loosening birth-control policies alone may not be sufficient and other conditions will have to be changed to incentivise higher fertility, including financial subsidies to families that have more children. However, one concern about such incentives is that younger generations have shown a low propensity to reproduce despite such subsidies, as shown in the experiences of Japan and South Korea.

Third, although China has made significant achievements in enhancing education access and quality, there is still plenty of room to catch up with the education levels of advanced economies. Against the background of a falling labour force since 2012 (and of the total population from 2023), labour policies must focus more on quality than quantity. This will require increasing government expenditure on education and training and reform of the education system, including of curriculums for all levels of education, and boosting the development of vocational education. The first two will help improve the employability of graduates by resolving the mismatch

between what is learned at schools and universities and what is required in the workplace. The last will not only fill the gaps in educational provision, but also equip young people with the skills to make them more employable.

There are two important areas of education policy. One is that China has a large labour force—about 800 million people in total. Upgrading the skills of the existing labour force is critical for enhancing firms' productivity, ongoing digital transformation of the economy and green growth. Enterprises must shoulder more responsibility for contributing to training and will reap the benefits as the quality of labour improves. The other area is to address the urban–rural divide in educational provision and quality by allocating more funding for rural and inland regions. Reforming China's fiscal system holds the key to securing funding from local public finance. Private sector participation in education investment is also an option for filling the investment gaps in educational provision in China.

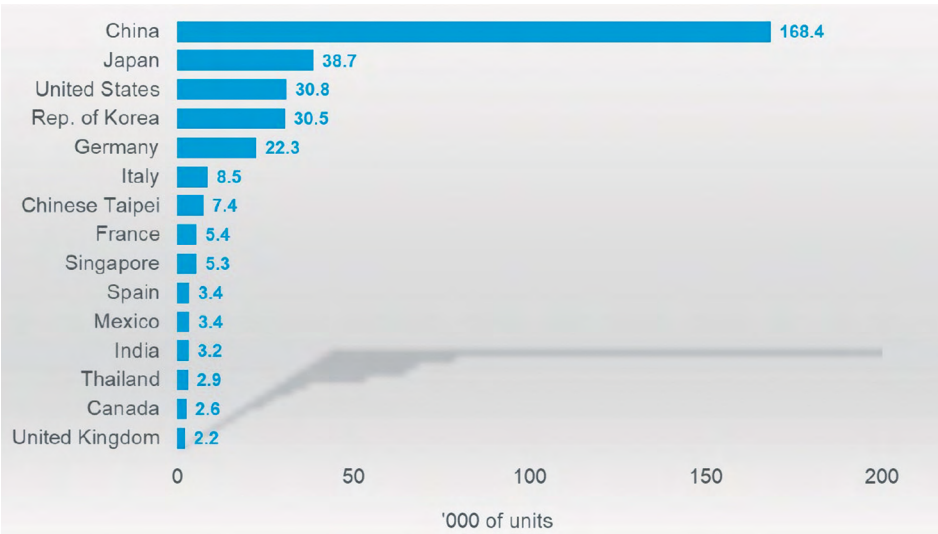
Fourth, since the GFC, the predominant driver of economic growth in China has been capital deepening, as seen in the contribution of capital intensity growth to real GDP growth in Figure 1.2. While capital deepening boosts labour productivity as well as technological progress, as there is new embodied technology in new investment, when TFP growth slows and labour force expansion is constrained, continued capital deepening will encounter diminishing returns and become less effective in sustaining and boosting economic growth.

Another major concern is whether resources are allocated to the most efficient use and generate the maximum return. In the Chinese context, the comparison of returns to investment in the state economy with those in the private economy is important. While the state economy undertakes important functions such as maintaining employment stability, lowering income inequality and investing in infrastructure and research and development (R&D) projects with strong positive spillover effects, the relative productivity of the state sector versus the private sector is also an important consideration for optimal resource allocation between both sectors. Therefore, to drive and sustain economic growth, capital deepening must go hand-in-hand with reforms that boost TFP growth and resource allocation efficiency—which will become especially necessary as savings decrease due to the continuing fall in the labour force and population ageing.

China has made significant progress in both innovation inputs (Figure 1.3) and innovation performance (Figure 1.4). There is still a significant gap between China and the advanced economies in key determinants of innovation performance. Closing these gaps will further propel innovation activities in China, raising TFP and economic growth in the long run. The areas for future efforts include the following. More basic research (research activities can be categorised into three types: basic, applied and experimental development) is needed to sustain innovation and technological progress as China moves towards the world technology frontier; more

efficient allocation of innovation funds is needed between SOEs and private firms, and between businesses, higher education institutions and research institutions. Further improvement in institutional quality through supply-side reforms is needed to nurture more R&D investment and innovation activities. Areas for improvement include strengthening intellectual property rights protection, the business environment and fair competition—all of which help enhance entrepreneurship and market-driven innovation. Last, improvement in the design of the national innovation system—for example, through incentives and wage increases for science and technology workers—will incentivise further innovation.

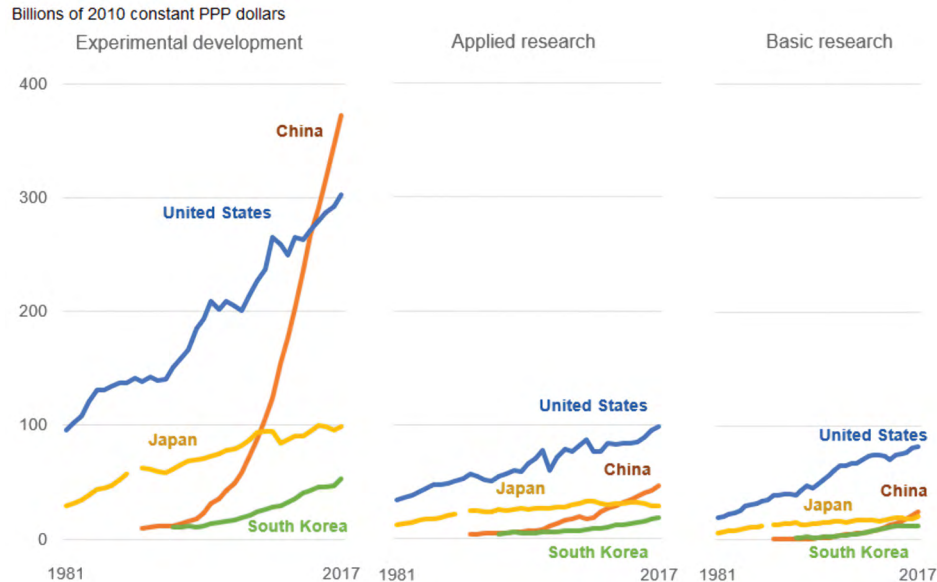
China's commitment to achieving peak carbon emissions by 2030 and carbon neutrality by 2060 requires a dramatic change in output structure, the energy mix, industrial location and production technologies. Moving towards decarbonisation represents the beginning of the decline of traditional industrialisation in China, which was powered by high investment, resource and energy intensities and high pollution. It also represents an opportunity for China to undertake a historic transformation of its economy towards more efficient and sustainable development. The combination of measures including structural reform, energy transformation, new technology and new patterns of international trade and wider cooperation offers hope for continued economic growth with greater environmental amenity and higher productivity (Song 2022).



**Figure 1.2 Annual installation of industrial robots, 15 largest markets, 2020**

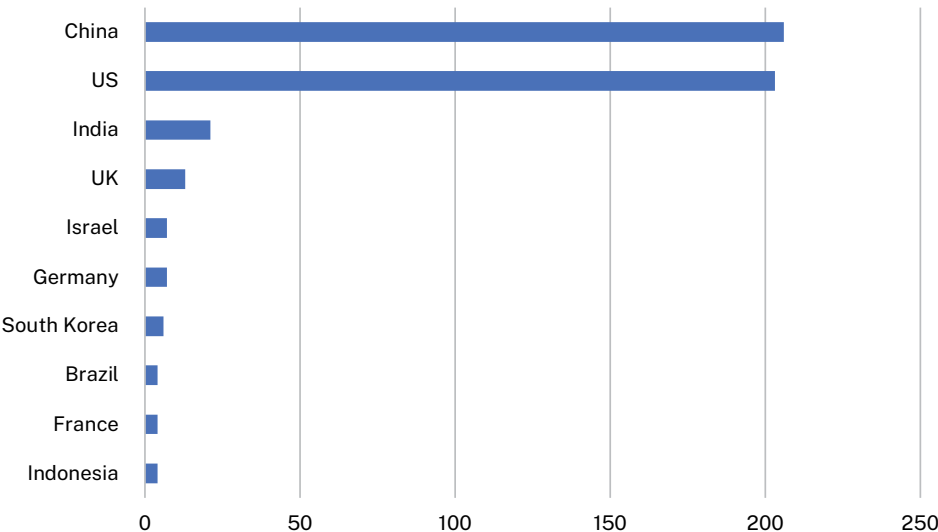
Source: International Federation of Robotics.

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**Figure 1.3 China leads the world in experimental development spending**

Source: US National Science Foundation based on OECD statistics (available from: [www.nsf.gov/statistics/2020/20304/overview.htm](http://www.nsf.gov/statistics/2020/20304/overview.htm)).



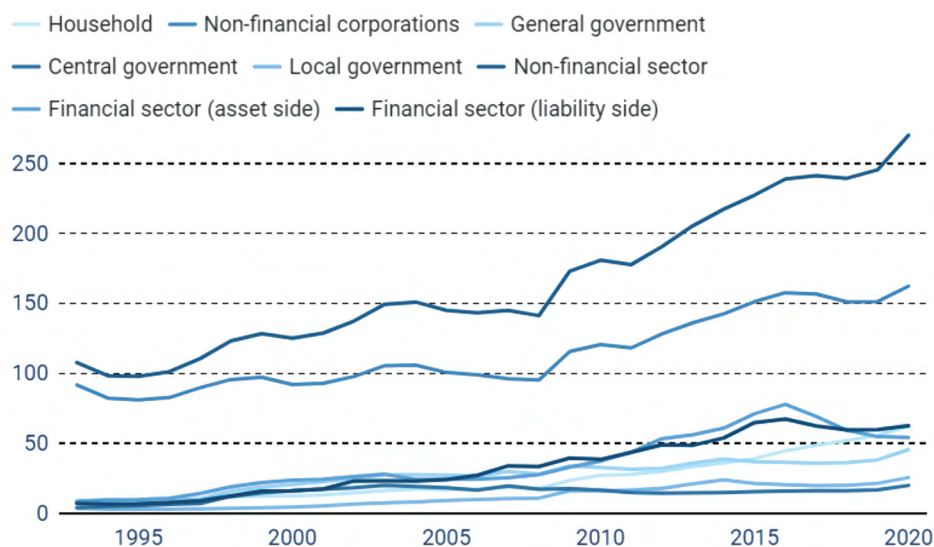
**Figure 1.4 Top 10 countries for number of unicorn firms, 2019**

Note: A 'unicorn' startup or company is a private company with a valuation of more than \$1 billion. As of August 2020, there were more than 400 unicorns around the world.

Source: Hurun Institute.

## Structural problems to be tackled in the next phase of growth

There are three structural problems that must be addressed to lower risks to growth: high debt and the associated financial risks, high income inequality and the deepening of integration with international markets. China's National Institution for Finance and Development (NIFD) estimated the country's overall debt to be 270.1 per cent of GDP at the end of 2020—up from 246.5 per cent at the end of 2019 (Figure 1.5). Although lower than the United States, China's debt-to-GDP ratio almost doubled in the decade after the GFC. Current deleveraging is focused on the non-financial corporate sector, where it is expected to fall by 6.5 percentage points, according to the NIFD. Reducing the stock debt is just the first step in creating a more sustainable debt model. Another important step is to remove implicit government guarantees for large institutions and allow creative destruction to reallocate resources from unproductive to more productive firms, thus enhancing the return on investment and economic growth and the ability to pay down the debt burden. This change could be seen in the Evergrande debt crisis that began in 2021.



**Figure 1.5 China's internal debt**

Source: Authors' construction based on data from the CEIC Database.

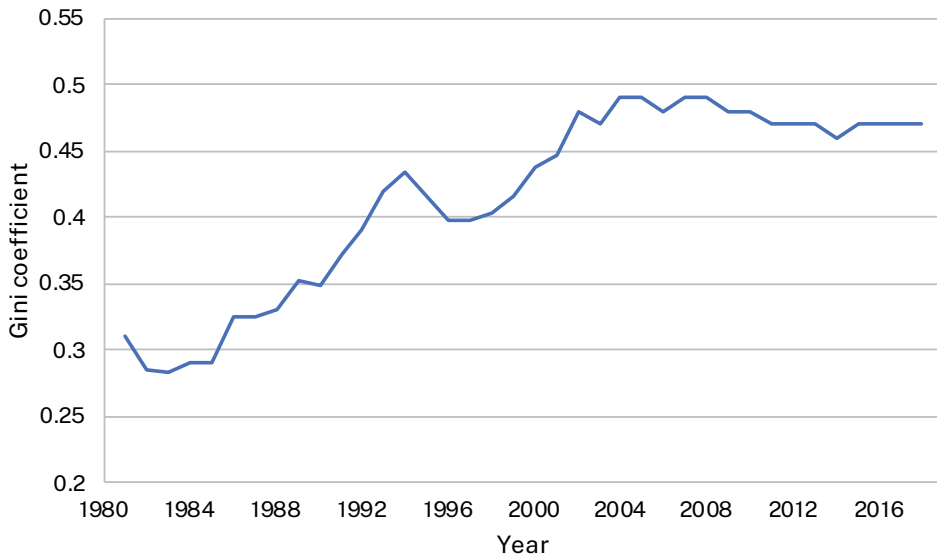
The second structural problem is high income inequality (Figure 1.6). Piketty et al. (2019) find that China's inequality level was less than Europe's in the late 1970s—close to the most egalitarian Nordic countries—while it is now approaching US levels. The rapid increase in income inequality has put China among the most unequal countries in Asia and indeed the world. China is now among the least equal



25 per cent of countries worldwide—a group to which very few Asian countries belong. With a Gini coefficient of 0.47, China's level of income inequality is like that of several high-inequality Latin American countries (Sicular 2013) and approaching that of the United States (Piketty et al. 2019). Income inequality is an economic, political and social problem for China.

Income inequality rises with the increase in per capita income and can fall once a country reaches a certain level of per capita income. This pattern is commonly referred to as the inverted Kuznets U-curve (Kuznets 1955). This implies a causal relationship running from economic or income growth to income inequality. However, potential causes of income inequality can be very complex, involving factors such as technological and structural change, political and economic institutions, social norms, culture and geography. It is even more complex for China as it is not only a developing economy but also a transitional economy. A transitional economy emphasises economic incentives but is still nurturing market means of allocating resources and the redistribution function of government policies.

As Piketty (2014: 85) quoted Charles Dunoyer (1845) as saying: 'Reduce everything to equality and you will bring everything to a standstill.' However, there is evidence that overemphasising income equality at the expense of incentives and efficiency can compromise growth. Therefore, finding the right balance between efficiency and equity is one of the most challenging tasks for China's economic reform and public policy.



**Figure 1.6 Gini coefficient in China, 1981–2018**

Source: Zhou and Song (2016). Gini coefficients for the years 1981–2001 are from Ravallion and Chen (2007); for 2002 from WIND; 2003–18 from the National Bureau of Statistics of China.

To develop sound policies to alleviate income inequality, it is important to identify the roles and evolution of its various drivers such as the urban–rural income gap, intra-urban and intra-rural income gaps, the income gap due to incomplete economic reforms such as that between workers employed in monopolistic industries and those in more competitive sectors, regional inequality attributed to different levels of trade liberalisation, fiscal decentralisation and marketisation in various regions in China and the income gap due to different skill and education levels.

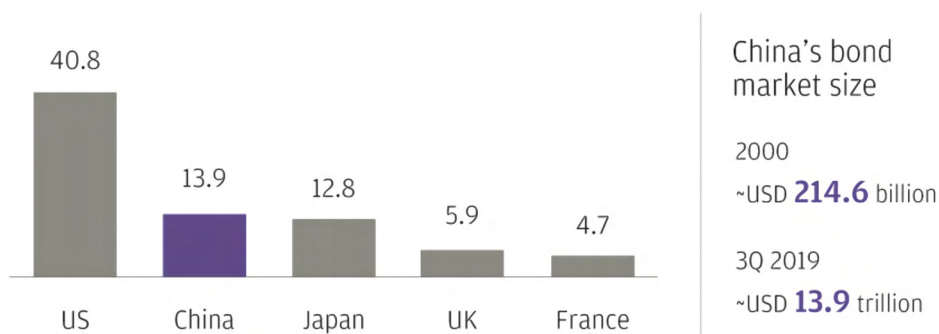
As well as rising income inequality, wealth concentration in China has sharply increased over the past decades. The share of wealth of the top 10 per cent of citizens rose from 40 per cent in 1995 to 67 per cent in 2015, while the wealth shares of the middle 40 per cent and bottom 50 per cent were much reduced. As a result, while wealth inequality was much lower in China than in the West in the mid-1990s, it is now between European and US levels. The wealth share of the top 10 per cent of Chinese (67 per cent in 2015) is approaching that of the United States (72 per cent) and is much higher than a country like France (50 per cent). The wealth share of the bottom 50 per cent is now barely higher than in rich countries, where it is usually around 0–5 per cent. According to Piketty et al. (2019), savings flows explain 50 to 60 per cent of the rise in the wealth–income ratio since 1978, while the increase in relative asset prices accounts for the remaining 40 to 50 per cent. That is, equity and housing prices have increased above and beyond the rise in consumer prices. These causes of rising inequality present a big challenge for China in pursuing its policy of ‘common prosperity’ to achieve more equal outcomes from growth and development.

The third structural problem is how China can integrate further with international markets. China has grown into a world manufacturing powerhouse, propelled by the lowering of institutional barriers to international trade and technological change that leads to declining transportation and communication costs and facilitates global value chains. In the future, China could move beyond being a manufacturing powerhouse to become a financial powerhouse as well. The economic fundamentals suggest this change would be beneficial for long-term growth in China, but the institutional challenges are significant.

Economic fundamentals favour a portfolio adjustment to China’s market. First, let us look at the economic fundamentals. As China’s exports to international markets become more uncertain due to trade conflicts resulting from rising protectionism, China must rely more on domestic investment and consumption to drive economic growth. However, this switch of GDP composition faces headwinds, including the ageing demographic structure. Population ageing has caused China’s domestic savings rate to decline continuously from its peak of 50 per cent in 2010 to 45 per cent in 2019. This decline contributed to the fall in the net exports to GDP ratio following the GFC as well as tighter availability of investment funds and declining rates of domestic investment. To counteract these downward forces on investment, one possibility is

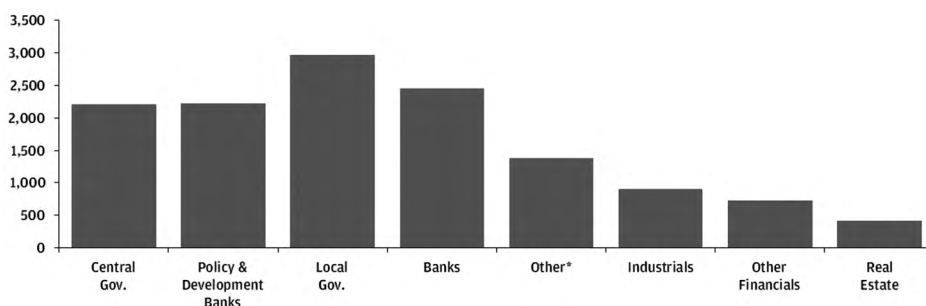
for China to undertake reforms to boost the efficiency of fund allocation and thus raise investment returns. These reforms would go beyond financial market reforms and involve enhancing competitive neutrality and balancing out market forces and government intervention in investment decisions. The other possibility is for further financial opening and integration with the world capital market, which could lead to global portfolios balancing towards the Chinese financial market and greater foreign capital inflows to fund investment in China.

It could be an opportune time for China to implement financial integration as a long-term growth strategy. Aided by the inclusion of Chinese bonds in global benchmark indices and China's Bond Connect program, which allows foreign fund managers to trade in the country's debt markets without an onshore trading entity, there has been a strong pickup in foreign buying of Chinese bonds and an increase in exposure to Chinese debt in recent months. Foreign investors accounted for about 12 per cent of all purchases of Chinese Government and policy bank bonds in 2020. China's onshore fixed-income market is the second largest in the world, with a total of US\$13.7 trillion in outstanding bonds as of December 2019, and the government is the major issuer of bonds (Figures 1.7 and 1.8).



**Figure 1.7 The world's top five bond markets (market size in US\$ trillion)**

Source: J.P.Morgan.



**Figure 1.8 The government is the largest issuer of onshore bonds in China**

Source: J.P.Morgan.

China's bond market is still developing and foreign investors face challenges. First, onshore bond market trading lacks market-makers to facilitate buying and selling and bonds are traded directly between parties on the interbank market. Although this could help preserve the lower volatility than traditional safe assets that is attracting foreign investors, it also means less liquidity compared with US Treasury Bonds and greater difficulty for investors to enter and exit the market quickly. Second, there is conjecture that the acceleration of financial opening is partly motivated by China's consideration to pre-empt possible US financial decoupling. With more integration into global financial markets, financial decoupling could be more difficult and the leverage of financial decoupling could decrease as well.

What does a financially integrated Chinese market mean for the global economy? Tyers and Zhou (2020) show that China's financial openness, as measured by cross-border flows and asset ownership, peaked during its growth surge in the 2000s, as did downward pressure on global interest rates and prices. Globally, China's growth surge raised asset prices, reduced yields and bolstered deflationary pressures, while improving aggregate economic welfare. Therefore, greater financial integration between China and the world will amplify the impacts on the global economy of China's economic growth and moderate the effects on China's domestic economy.

China's integration into the global financial system will require further financial reform and opening, including capital account liberalisation and full convertibility of the renminbi. At the same time, financial opening involves risks. China can reduce the potential risks by allowing more flexibility in renminbi exchange rates, building a more solid banking system with more stringent prudential regulations, reducing government debt at all levels through more stringent fiscal discipline and maintaining a balanced position in its international balance of payments. The last task could prove difficult given the falling domestic savings ratios due to population ageing. It could be too early to predict when China will become a net capital importer, but the prospect will have significant implications for China's long-term growth and development as well as global macroeconomic balances with respect to the relationship between savings and investments (and therefore the determination of global interest rates).

Finally, with China as the world's second largest economy and largest trading nation, it is in its fundamental interest and that of other countries to continue to champion regional and global economic reintegration in the post-Covid world, after the pandemic saw some countries pursue a strategy of self-sufficiency to safeguard supply security. Resisting the attempts of economic and technological decoupling will be crucial to help restore the global trading order in the process of economic recovery post pandemic (Song and Zhou 2020). China should actively participate in regional economic cooperation and global efforts to change the multilateral trading

system (such as the WTO) to minimise the damage brought about by deglobalisation and to maximise the chances for international trade to continue as an engine for global economic growth.

## Structure of the book

The *2022 China Update* examines the key characteristics of China's transition to a new phase of economic growth and development. It covers a range of diverse topics that reflect the complex and changing nature of the economy. It explores the critical questions of why China needs a new development paradigm and how best to achieve it. What are China's choices when faced with the restructuring of global industrial value chains? What roles will domestic consumption play in the next phase of China's development? What does digital transformation mean for the Chinese economy? What has been the impact of the Covid-19 pandemic on domestic income inequality and labour market outcomes? What pathways exist for China in its transition to carbon neutrality? How does China's emissions-trading market compare with that of Europe? What will be the impacts of China's carbon-neutrality strategy on the Australian economy? And what are the political factors influencing bilateral trade flows between China and its trading partners and what is at stake for China–US bilateral relations?

In Chapter 2, Justin Yifu Lin addresses the question of why China needs a new development paradigm—the dual-circulation strategy in which domestic circulation is the core element and domestic and international circulations promote each other. The fact is that 82.6 per cent of China's GDP in 2019 arose from domestic consumption, suggesting that internal circulation already dominates China's economy. Lin argues that the proportion of China's exports dropped from 35.4 per cent in 2006 to 17.4 per cent in 2019 because of the massive increase in its economic size and per capita income in the intervening years, as well as the rapid expansion of the service industry.

Even as China makes domestic circulation the core of development, it must simultaneously promote dual domestic and international circulation. This is because, from the perspective of the new structural economics, the products of industries with comparative advantages should not only circulate in the domestic market, but also enter the international market to realise economies of scale and accelerate economic growth and capital accumulation. This means that to reduce the cost of economic development, China should make greater use of all kinds of goods, including natural resources, capital and technology, which can be provided by the international market at a lower cost than domestic production.

On China's potential for future growth and development, the chapter argues that future development potential depends not on current income levels, but on the gap between China and developed countries such as the United States. Although China's population is beginning to age, its per capita GDP is only 22.6 per cent of that of the United States. Technological innovation and industrial upgrading can make use of the latecomer advantage and reallocate labour from low value-added to high value-added industries to improve labour productivity. The room for such adjustments is still very large. So, it is possible for China to achieve an average annual growth rate of about 6 per cent in the period 2021–35. The most important thing is for China to recognise its potential, do its own thing well and deepen both reform and opening.

In Chapter 3, Xiaojing Zhang and Cheng Li apply a national balance sheet approach to understanding China's economic development in terms of its aggregate sectors such as wealth accumulation, structural distribution and macro financial risks over the past decades. Their findings show that China has continued to make phenomenal progress in accumulating wealth and playing the role of net provider of savings to the rest of the world over the reform period. China's wealth expansion has generally outpaced GDP growth.

Their findings also show that China's strong propensity for saving and upward asset revaluation has contributed to the expansion of national wealth. On the one hand, the high savings rate corresponds to rapid fixed-capital formation, thereby leading to continuous incremental growth in non-financial assets. Apart from savings, the revaluation of assets, including land and housing, serves as another important driver of rapid growth in China's aggregate wealth.

The results from an international comparison show that, in 2018, China's GDP reached 65 per cent of that in the United States and its level of wealth reached 80 per cent of that in the United States. China's wealth exceeded that of Japan, Germany, France and the United Kingdom combined, while its GDP was only slightly smaller than the sum of these four countries. This indicates that China has made even greater strides in its economic catch-up from a stock perspective than a flow perspective. This suggests that China's overall national strength, as measured by wealth, ranks second in the world behind only the United States and the gap between the two countries has become even narrower than GDP figures would suggest.

However, as argued by the authors, China's wealth data become far less rosy than aggregate indicators would suggest due to problems including so-called zombie firms and implicit local government debt, wealth inequality and the efficiency of wealth accumulation. At the same time, China's wealth distribution is skewed in favour of the government sector. Their data show that there has been a slowing accumulation of household financial assets because of China's underdeveloped direct financing market and the decreasing share of stocks and equities held by the household sector

since 2013. The authors look at financial risks from the balance sheet perspective and conclude that, despite the successes in reducing financial risks, China's overall macroeconomic risks remain alarmingly high and tend to concentrate in government and other public institutions.

To reduce financial risks, the chapter argues that China should: create a well-functioning property system for the paid acquisition and use of natural resources; improve the exit mechanism for the state sector from the economy; optimise the associated layout of state-owned assets/capital in favour of market efficiency; and reform the distribution of aggregate wealth/income in favour of households, especially low and middle-income families, to improve the allocative efficiency of economic resources and the promotion of private consumption. The chapter concludes by noting that it is important to neutralise implicit government guarantees in favour of a 'sustainable' debt accumulation path featuring market-based risk pricing. This also requires a mix of policies aimed at restructuring bankrupt SOEs and hardening and enforcing the budgetary discipline of local governments.

China has been undergoing some fundamental changes in applying digital technology in the economy. In Chapter 4, Yiping Huang discusses the platform economy, which refers to the new economic model that relies on network infrastructure such as cloud computing, the internet and mobile technology and uses digital technology such as artificial intelligence, R&D, big-data analysis and blockchain to match transactions, transmit content and manage processes. The chapter shows that the development of China's platform economy is a product not only of digital technological progress, but also of market-oriented reforms, as all the top platforms are privately owned. Measured by the number of world-leading platforms in 2019, each with a market valuation of more than US\$10 billion, China's platform economy is now the second largest in the world, second only to the United States.

The chapter highlights the main factors in China's success in developing its platform economy, including, first, the development of good digital infrastructure, which provides the technological basis for digital platforms to connect with huge numbers of users anytime and anywhere. The second is the huge population, which makes some digital economic innovations more feasible and efficient. The third factor is relatively weak protection of individual rights. The downside of this weak protection is widespread illegal collection and analysis of personal data and violation of individuals' privacy. The fourth factor is segregation from the international market, which protects domestic platforms from international competition and provides space for them to innovate and grow. Of all these factors, the third is already changing and the fourth must change eventually. Therefore, maintaining the innovative capability of platform enterprises and ensuring sustainable growth of the platform economy in China are important challenges for both enterprises and the government.

The chapter argues that the platform enterprises have already brought about some fundamental changes to the Chinese economy, including their roles in supporting innovation, promoting growth, improving efficiency and providing jobs. At the same time, there are some new challenges for emerging platform enterprises, including unfair competition that harms consumers. Some platforms use their vast market power to crowd out competitors or stifle innovation by means of 'killer' mergers and acquisitions to eliminate competitors.

The chapter then reaches the following conclusions: first, China has developed a large platform economy within a relatively short period, but most domestic platforms do not enjoy technological advantages. Second, some key characteristics of the platform economy have mixed impacts on economic operations. Third, the original intention of China's 'strong regulation' was to achieve orderly and healthy development, but 'campaign-style' regulation and regulatory competition have already caused many problems. Fourth, within the broad governance structure, there should be some separation of economic regulation and antitrust policies, with the former maintaining efficient market functions and the latter repairing functions in that market. Finally, the chapter argues that China must establish a comprehensive governance system for the platform economy and suggests actively participating in the formulation of international rules, including digital tax and trade, to create conditions for Chinese platforms to compete internationally in the future.

In Chapter 5, Qiyan Xu raises two important challenges for China's role in global industrial chains: upgrading and security. Industrial chain upgrading must meet the requirements of China's present phase of development, while digital technology and the green economy provide it with roadmaps to the future. Industrial chain security is related more to the ongoing China-US trade conflict and Covid-19 pandemic-related shocks as well as digital technology and the imperative to create a green economy.

The chapter points out that traditional trade and production integration has evolved in the digital age, as globalisation has generated cross-border flows of information in addition to the traditional flows of commodity sales and capital. Massive cross-border flows of information have implications for national security, particularly in relation to dual-use technologies, while the mechanisms of global governance remain in the age of pre-digital globalisation. This is the context in which the chapter discusses China-US conflicts, which are uniquely complex because conflicts in the information sector directly impinge on matters of national security, and international competition to achieve technological primacy will become increasingly prominent and difficult to resolve.

The chapter then discusses the three basic trends in global industrial chain restructuring: diversification, digitisation and the low-carbon imperative. On diversification, the chapter argues that Covid-19 has affected the industrial



supply chains of different countries to varying degrees and global supply chains have encountered enormous uncertainty. Adjustments have been made to the structure of the supply chains for medicines, computer chips and other key industries, and the establishment of domestic emergency backup supply chains, the repatriation of key industries, a return to regionalisation as well as the shortening of supply chains have occurred. On digitisation, the chapter argues that China has a strong manufacturing capacity and a complete supporting network, which provide a good foundation for the application of digital technology in manufacturing. However, the digital development of China's industrial chain also faces challenges, including setting up the rules of governance for cybersecurity and cybergovernance systems. Tackling climate change has added constraints to the growth potential of developing economies and, in the context of the trend towards low carbon, carbon tariffs will make an export-oriented development model more difficult to replicate.

In this context, the chapter argues that China's industrial chains are both globally influential and vulnerable. While China possesses a significant export advantage in high-centrality intermediate goods, the chapter identifies several categories of intermediate goods that are the most vulnerable supply chains for China, including electrical machinery and audio and video equipment. China must therefore pay particular attention to this industry's supply chain security. The chapter then identifies a paradox in industrial supply chains: a country cannot have global influence and competitiveness in an industrial supply chain while simultaneously possessing complete autonomy and control over that chain. The chapter provides case studies of nine major economies that provide strong evidence of this paradox, suggesting that China must create positive political relationships with major nations to secure the competitiveness and efficiency of its industries in improving its industrial supply chain security. The chapter then discusses the new trends in China-US technological competition and China's industrial supply chain strategy on outward relocation versus inward relocation and international regional reorganisation.

China's new strategic priority is to effectively expand domestic demand in driving economic growth. In Chapter 6, Wang Wei argues that it is imperative to craft an integrated system for consumption-led domestic demand and to introduce a new growth mechanism for efficient alignment, strong stimulation, accelerated innovation and orderly transformation towards such a system.

The chapter argues that more robust reform measures are needed to unleash potential domestic demand and fuel growth in China in a more stable and sustained manner. Those measures include deepening supply-side structural reform to ensure effective market supply, accelerating the reform of income distribution and optimising social policies to enhance household affordability and consumption levels, improving policies for consumption growth to consolidate the institutional foundation for expanding domestic demand, transforming and upgrading the manufacturing industry to create a virtuous cycle between investment and consumption, scaling

up institutional opening of the service industry for mutual reinforcement between domestic and international circulation, fixing weak infrastructure links to better unleash potential domestic demand and enhancing the green consumption system to foster a green and healthy consumption culture.

Reform of the *hukou* ('household registration') system remains an unfinished task in China. In Chapter 7, Kunling Zhang uses the evolution of China's *hukou* system to illustrate institutional change and its interaction with economic dynamics. The chapter argues that the *hukou* system profoundly affects China's economic development and, in turn, the transformation of China's economy has been deeply shaped by the evolution of *hukou*.

The chapter establishes a theoretical framework of endogenous institutional change to analyse the evolution of the *hukou* system. This framework helps to improve the understanding of general institutional change and offers policymakers a better understanding of decision-making processes in dynamic contexts. Building further on the framework, the chapter applies the concept of adaptive efficiency to evaluate the evolution of China's *hukou* system. This provides an alternative approach to institutional efficiency evaluation and bridges the theories of endogenous institutional change and adaptive efficiency.

The chapter finds that the institutionalisation of the rigid *hukou* system was mainly an exogenous change process implemented from the top down, in which central government enforcement played a dominant role and the roles of individual and local governments were largely neglected; and the rigid *hukou* system eventually hindered economic transformation, thereby inducing its own reform. Reform has fundamentally been an endogenous change process, in which spontaneous market forces and the role of local governments have bounced back through a rebalancing of the powers of the state and market and between central and local governments.

The findings demonstrate that *hukou* reform clarified the property rights of the labour force and rural land, promoted the formation of a decentralised decision-making mechanism, strengthened the role of competition in both the labour and the product markets, reduced the transaction costs of labour mobility and maintained a degree of institutional flexibility that rewarded success and eliminated failures in the system.

The chapter concludes that to further reform the *hukou* system and promote its adaptive efficiency, decision-makers should respect the endogenous forces and logic of adaptation in institutional change. The transaction costs of population mobility must be reduced—not just of migration *per se*, but also of the availability of the 'welfare' attached to *hukou*. Fair competition is necessary to eliminate *hukou*-based discrimination in both the labour and the land markets.

The Covid-19 pandemic is having profound impacts on people's wellbeing. In Chapter 8, Li Shi and Zhan Peng assess the impact of the early Covid-19 outbreak on income distribution and poverty in rural China using mixed data sources. Their objectives are to provide a new method to study the impact of the pandemic in different segments of income distribution.

The main results show that the impact of Covid-19 in the first half of 2020 was expected to reduce the per capita disposable income of rural residents by about 7 per cent throughout the year (baseline model), with the lowest income group suffering the most. If the real income growth rate of rural residents in 2020 was like that in 2019, the pandemic could offset all real growth, leaving real income growth in 2020 at approximately 0 per cent. If the pandemic led to a significant drop in wage rates, its impact on rural incomes would be greatly exacerbated. The pandemic increased the incidence of rural income poverty by 0.38 percentage points.

The chapter also finds that the impact of the pandemic on agricultural production and operations was not obvious, but if it had not been controlled in time, more than 70 per cent of rural households would have been hit harder and the problem of returning to poverty could have been more serious. Timely control of the pandemic, an early emphasis on the farming sector in February 2020 and other measures guaranteed the basic living needs of rural families to a certain extent. The policy implications of the findings are that, to avoid expanding the impact of a future pandemic on residents' income and poverty, steps should be taken to prevent the impact lasting too long and increasing in depth. At the same time, restrictions on the normal operation of key economic activities should be reduced as much as possible to prevent the wage rates of vulnerable workers being significantly affected.

Continuing to look at the impact of the Covid-19 pandemic, Dandan Zhang in Chapter 9 investigates the labour market consequences of China's stringent lockdown policies using comprehensive employee tracking data for 2020. The main findings include the pace of resurgence of the Chinese labour market since March 2020. Among workers from 2019 who were surveyed and tracked in 2020, 61 per cent had resumed work in March 2020; by the end of November, the rate of work resumption had risen by almost 30 per cent to reach about 90 per cent. Second, the findings demonstrate that, even though China's lockdowns effectively controlled the spread of Covid-19, they had substantial impacts on the labour market by delaying the pace of work resumption and causing more job losses during the pandemic period.

Third, the research points out that the unemployment effects of lockdowns can be detected in only a relatively short period. At the end of November, the negative and significant effects of pandemic lockdowns on work resumption could no longer be found. Finally, consistent with the existing literature on the economic crisis and mental health, the chapter finds that the inadequate employment due to the

pandemic lockdown imposed negative effects on the mental health status of the labour force, especially those falling into unemployment. The chapter concludes by arguing that understanding the broader social and health impacts of different counter-Covid-19 policies is critical for optimal policy design.

China's carbon neutrality commitment provides a strategic opportunity for its new phase of development. Yongsheng Zhang and Xiang Yu in Chapter 10 argue that carbon neutrality not only poses a huge challenge but also provides a strategic opportunity for China to start a new journey of building a moderately prosperous society. The global consensus on and action towards carbon neutrality mark the end of the traditional industrial era and the beginning of a new era of green development. Carbon neutrality will bring transformative changes to China's economy and is expected to create miracles of high-quality development in the next 40 years. However, achieving this target depends on whether China can realise a fundamental shift in its development paradigm.

The chapter explains why China has proposed 'dual carbon' goals, reflecting the shift from being asked to act to wanting to act. This is mainly because, facing ever-increasing environmental problems, the Chinese Government has realised that the traditional development model is unsustainable and reducing carbon emissions is in its own interests. The authors argue that carbon neutrality can be understood as a profound shift in the development paradigm because it will completely reconstruct the economic system and spatial patterns of the traditional industrial era. As the content and mode of development change, the traditional economic system will be reshaped.

The chapter argues that carbon neutrality could facilitate an economic leap forward because a green transition will drive the economy towards a more competitive structure. However, the dual-carbon goals pose big challenges for China's manufacturing transformation, the biggest of which is how to simultaneously achieve peak carbon and carbon neutrality and maintain manufacturing's share in the economy. The dual-carbon goals are expected to bring about a substantial adjustment in relative prices. The green transition will mean a substantial adjustment in the economic structure: the share of the high-carbon economy will decrease and that of the low-carbon economy will increase.

The chapter suggests two major policy directions. The first is promoting the development of the low-carbon economy. The second is addressing transitional justice. Although green transformation represents a strategic opportunity in the long run, many industries will be severely impacted. Fossil fuel industries and dependent regions will be the first to bear the brunt of transition, including coal, oil and some heavy chemical industries, as well as specific employment groups. China must take strong measures to help with the transition and provide vocational training and financial transfers.

In Chapter 11, Haocheng Shang and Fang-Fang Tang examine the mechanisms and development of emissions-trading markets, comparing the European Union and China. After providing a brief history of global emissions-trading markets, the chapter explains how markets are categorised as either voluntary carbon markets or compliance carbon markets, which differ significantly in terms of regulations, market size and other factors.

In the case of the European Union, its emissions-trading scheme (ETS) is a 'cap and trade' scheme, which sets an absolute limit or 'cap' on the total amount of certain greenhouse gases (GHGs) that can be emitted each year by the entities covered by the scheme. This cap is reduced over time so that total emissions fall. Since the scheme's introduction in 2005, emissions have been cut by 42.8 per cent in the main sectors covered. Auctioning is the default method for distributing carbon allowances to companies participating in the EU ETS, which has very strict penalties for noncompliance—a distinct characteristic of emissions-trading markets compared with typical financial markets and consistent with the motivation of managing GHG emissions.

In the case of China, as in the European Union, the development of its carbon-trading market is a gradual process, although from 2000 to 2020, China made huge progress. On 16 July 2021, trading began in China's national emissions-trading market, the China ETS, into which existing regional pilot schemes are gradually transitioning. The China ETS started with 2,162 firms in the power generation sector—a sector that accounts for 4 billion tonnes of GHG emissions annually—meaning China's scheme surpassed the capacity of the EU ETS and became the world's largest. Carbon allowances are priced in renminbi (RMB). On opening day, trading began at RMB48 per tonne and closed at RMB52.80 per tonne, hitting the daily 10 per cent upper limit on price variation.

The chapter identifies two similarities between the EU ETS and that of China: both are large and unified markets and both have strong political motivation to develop. However, how to regulate a large ETS is a new subject for policymakers. The European Union has a strong desire to be a leader on climate change issues and China aims to be an 'ecological civilisation'. Political motivations push the progress of emissions-trading markets. Given the climate crisis, management of GHG emissions and corresponding trading schemes will be an increasingly important subject in international politics.

In Chapter 12, Xiujian Peng, Xunpeng Shi, Shenghao Feng and James Laurenceson examine the impacts on the Australian economy at the national and state levels and by industry of the transition to carbon neutrality in China using the Victoria University Regional Model (VURM) framework. The chapter highlights the importance of understanding the impacts on Australia's interests of climate action at home and abroad. First, the revenue from its world-leading role as a liquefied natural gas (LNG) and coal exporter is being challenged by the transition away from fossil

fuels to renewable energy in other parts of the world, especially in its major fossil fuel export markets: China, Japan and South Korea. Second, understanding the impacts can inform Australia's policies to achieve a just energy transition domestically. Under Australia's federal system, a just energy transition will involve supporting vulnerable regional communities that are affected negatively and disproportionately.

Their simulation results show that although China's imports of Australian fossil fuels will fall significantly, the impact of those changes on the national economy will be negligible. However, the mining sector and those states and territories that rely on fossil fuel production will suffer relatively larger effects. The substantial changes in China's energy mix imply significant changes to its fossil fuel imports. China's import demand for coal, crude oil and gas will fall sharply. By 2050, China's imports of coal will be nearly 60 per cent lower, gas will be more than 47 per cent lower and oil imports will be nearly 35 per cent lower than they were in the baseline scenario. By 2060, China's imports of coal and gas will be more than 60 per cent lower and its oil imports will be nearly 50 per cent lower. The results also show that the decreased demand for Australia's coal, LNG and iron ore caused by China's carbon-neutrality action will reduce Australia's terms of trade, leading to negative structural effects on capital, investment and real GDP.

The chapter concludes by noting the mixed effects of China's net-zero transition on Australian industries, with fossil fuel industries losing, while some other industries, especially export-oriented ones, gain. Regions with high coal and LNG industry concentrations, such as the Northern Territory and Queensland, will be disproportionately and negatively affected.

In Chapter 13, Vishesh Argawal, Jane Golley and Tunye Qiu take an analytical approach to examining the extent to which moderate shocks in political relations affected the exports to China's of four of its major trading partners—Australia, India, Japan and the United States—between 2001 and 2020. During this period, China experienced frequent episodes of both political cooperation and political conflict with each of these trading partners.

The chapter reviews literature that investigates the extent to which moderate shocks in political relations affect trade outcomes. The findings can be summarised as: trade strengthens when 'bonds of friendship' (or political cooperation) strengthen, in the short run only (suggesting accidental deviations from a Pareto optimal equilibrium in which there is no long-term relationship) or in both the short and the long runs (suggesting that politics has significant and lasting impacts on trade); trade weakens in times of conflict (in the short and/or the long runs); and there is no evidence of political relations impacting on trade in either of these two ways.

This chapter finds that government shocks had no significant short or long-run effects on any of the four countries' exports over this period. In contrast, evidence of small, positive short-term effects was found following a shock to the military—

political relations index for Australia and the United States, with Australian exports experiencing a long-term positive effect as well. For Japan and India, there were no significant short or long-term coefficients for either of the two political relations indices.

The key conclusion from the chapter is that trade is overwhelmingly undertaken by companies that are principally motivated by economic considerations, such as profit, cost and quality. These considerations reflect cross-country variation in production complementarities and purchasing power. These economic fundamentals create a separation between these actors and the strategists in country capitals preoccupied with geopolitical alignment and could also ensure that trading links are strengthened even as political relations decline.

The precarious US–China relationship is causing many uncertainties globally. In Chapter 14, Wing Thyee Woo discusses this important relationship by focusing on three areas of competition between the two countries: economic, geostrategic and technological.

In examining the bilateral relations, the chapter points out that the institutional arrangements that define the three types of competition could become the basis of US–China cooperation to coordinate the supply of global public goods to ensure common global prosperity in a harmonious world that achieves the United Nations' 17 Sustainable Development Goals and the 1.5°C target of the Paris climate treaty.

Realising these goals, according to this chapter, will require China and the United States to share a realistic definition of what constitutes national security in a multipolar world. It is also suggested that the construction of institutional arrangements between the United States and China will address their respective national security concerns without negatively impacting their economic interaction. Furthermore, those institutional arrangements can keep geostrategic and technological competition from causing a downward spiral in economic ties that could end globalisation.

The chapter accordingly makes an important suggestion to enhance EU-style deep regional economic integration, which could be called the Pacific Asia Union (PAU). Such a union would not only be difficult to manipulate to participate in a proxy war, but also would not accept a subservient relationship to any big power. The PAU would be big enough to be a persuasive voice in moderating US–China tensions and to work with multilateral institutions to help develop sensible rules for US–China engagement.

The chapter comes up with some concrete steps that could be taken moving forward. To reverse the downward spiral in US–China relations, Australia and the Association of Southeast Asian Nations (ASEAN) should encourage the Asian-Pacific community to merge the overlapping economic blocs of the Regional Comprehensive Economic

Partnership Agreement, the Comprehensive and Progressive Agreement for Trans-Pacific Partnership and the Indo-Pacific Economic Framework to form the PAU. The second step is for the PAU to work with the United Nations and its agencies to formulate guidelines for US–China relations that would segment their economic, technological and geostrategic competition.

## References

- Cai, F. 2018. 'How Has the Chinese Economy Capitalized on the Demographic Dividend during the Reform Period?' In R. Garnaut, L. Song and F. Cai (eds), *China's 40 Years of Reform and Development: 1978–2018*, pp. 235–56. Canberra: ANU Press. doi.org/10.22459/CYRD.07.2018.13.
- Kuznets, S. 1955. 'Economic Growth and Income Inequality.' *American Economic Review* 65(1): 1–28.
- Piketty, T. 2014. *Capital in the Twenty-First Century*. Cambridge, MA: Belknap Press of Harvard University Press.
- Piketty, T., L. Yang and G. Zucman. 2019. 'Capital Accumulation, Private Property, and Rising Inequality in China, 1978–2015.' *American Economic Review* 109(7): 2469–96. doi.org/10.1257/aer.20170973.
- Ravallion, M. and S. Chen. 2007. 'China's (Uneven) Progress against Poverty.' *Journal of Development Economics* 82(1): 1–42. doi.org/10.1016/j.jdeveco.2005.07.003.
- Sicular, T. 2013. 'The Challenge of High Inequality in China.' *Inequality in Focus* 2(2): 1–5. doi.org/10.1017/CBO9781139035057.003.
- Song, L. 2022. 'Decarbonizing China's Steel Industry.' In R. Garnaut (ed.), *The Superpower Transformation: Making Australia's Zero-Carbon Future*, pp. 219–39. Melbourne: La Trobe University Press.
- Song, L. and Y. Zhou. 2020. 'The COVID-19 Pandemic and Its Impact on the Global Economy: What Does It Take to Turn Crisis into Opportunity?' *China & World Economy* 28(4): 1–25. doi.org/10.1111/cwe.12349.
- Tyers, R. and Zhou, Y. 2020. 'US-China Trade Conflict: The Macro Policy Choices,' *The World Economy* 43(9): 2286–2314.
- United Nations (UN). 2015. *The Millennium Development Goals Report 2015*. New York, NY: UN.
- World Bank. 2009. *Innovative China: New Drivers of Growth*. Washington, DC: The World Bank. Available from: [openknowledge.worldbank.org/handle/10986/32351](https://openknowledge.worldbank.org/handle/10986/32351).
- Zhou, Y. and L. Song. 2016. 'Income Inequality in China: Causes and Policy Responses.' *China Economic Journal* 9(2): 186–208. doi.org/10.1080/17538963.2016.1168203.



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