

Balancing China's current account surplus: policy choices and impacts

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Abstract:

The gap between the high saving and relatively low investment in China has translated into a persistent current account surplus. Overall, China has two broad policy pathways to maintain its current account balance within international norms: lowering the saving rate by boosting domestic consumption, or absorbing saving through higher domestic investment by improving the attractiveness of investing in China—both requiring sustained policy actions. We examine the long-term economic implications of these policy options for the Chinese economy, using a six-region global macro model. We also conduct sensitivity analyses to examine, holding saving rate given, what the impacts of rising desirability of investing in China have. We find that in such circumstances, sustaining relatively high investment rates require the drawing on foreign savings to make up the shortfall of domestic saving over domestic investment. Based on the findings, the longer-run perspective of this paper is more supportive of policies that bolster the structural resilience of the Chinese economy in the longer run over policies directed at temporary short term activity stimulus measures such as subsidies to current consumption.

Keywords: China, current account, savings, investment, long-term growth

JEL Codes: F43, F4, E2, E6

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1. Introduction

China has long maintained one of the highest domestic saving rates globally. In 2024, the national saving rate reached 43.4 percent of GDP, while the consumption share of GDP—the reverse side of the saving rate—remained around 20 percentage points below the global average. In recent years, China’s domestic investment share of GDP experienced a downward trend, falling from a peak of 46.3 percent in 2011 to 41 percent in 2024. The gap between saving and investment has translated into external surpluses, reflected in both the trade balance and the current account balance. The net export share of GDP stood at 8.5 per cent in 2007, declining steadily to 0.9 per cent by 2018, before rising to 2.8 per cent in 2024 (Figure 1).

By running persistent current account deficits, a country could be exposed to the risk of financial crises and the sudden reversal of its current account deficit and disorderly currency depreciation (BIS, 2011; Obstfeld and Rogoff, 2009). While persistent current account surpluses do not face the same economic constraints as persistent deficits, empirical evidence shows that among the G20 economies which represent the world’s major and systematically important economies, have experienced current account balances falling within the band of 5 percent above and below zero over the 1990–2020 period, except for Germany (Gretton, 2025). This suggests persistent factors that have constrained the current account balance of major economies. In today’s international context, geopolitical tensions that are tied to global imbalances could reflect these persistent factors. Facing these factors, if the Chinese economy is to achieve a reasonably low and stable level in China’s current account surplus, two broad policy pathways are available. The first is to stimulate domestic consumption, thereby lowering aggregate savings. The second is to increase domestic investment, which can help absorb China’s high savings, consistent with the Feldstein–Horioka (1980) hypothesis. In this study, we assess the economic implications of these policy options using a dynamic global computable general equilibrium (CGE) model, specifically the GDyn-FS model (Gretton, 2021a, 2025). In line with these two policy pathways, we construct and evaluate two core policy scenarios for China: (1) expanding domestic consumption by reducing the national savings rate; and (2) increasing domestic investment. Both are aimed at maintaining the current account surplus as a share of GDP within a low and stable range consistent with international norms. Concerted policy agendas would be needed to realise either path.

The remainder of the paper is organised as follows. Section 2 provides a historical overview of current account surplus dynamics in major economies. Section 3 examines the drivers of savings and investment in China, alongside a discussion of policy options to stimulate consumption or investment. Section 4 outlines the modelling framework and presents the policy scenarios. Section 5 reports the key results, discusses their economic implications and considers the implications of alternative policy scenarios. Section 6 concludes and offers policy recommendations for the Chinese economy.

2. The current account surplus and economic growth

A review of the current account surpluses of major countries in history and their cycles provides some useful insights into the possible progression of such imbalances. During periods of rapid growth, value adding output has increased ahead of domestic consumption for some economies so that saving of national households as a proportion of their output has risen substantially. This was so for Japan during its growth spurt during the 1960s and 1970s and for China particularly after its accession to the WTO in 2001 (Figure 2). Where the additional saving has not been fully absorbed into domestic investment, export led growth has been realized as balance of payments surpluses and foreign investment. As a result, in Japan's case the ratio of current-account surplus to GDP expanded rapidly in the first half of the 1980s, reaching 4.4 percent in 1986. It then declined to 1.3 percent in 1990, reflecting the appreciation of the yen after the Plaza Accord and the expansion of domestic demand (BoJ, 1996).

This period saw significant trade friction, especially in sectors such as automobiles and semiconductors. The yen was widely perceived as undervalued, prompting Japan to take a series of measures: implementing voluntary export restraints, liberalizing imports, allowing the yen to appreciate (through agreements such as the Plaza Accord), and offering preferential loans and aid to developing nations. A key strategic shift was Japan's move from exporting to investing overseas. In the automotive sector, for example, Japanese manufacturers rapidly transitioned from exporting vehicles to establishing production facilities in North America, particularly in response to rising trade barriers. After 1985, Japanese car exports to the U.S. declined sharply, while domestic production in the U.S. increased. This shift altered Japan's balance of payments, transitioning the primary source of current account surplus from merchandise trade surplus to income from overseas investments. Unlike trade surpluses, which can appear zero-sum, investment income is more often perceived as mutually beneficial as it creates jobs and technological progress in host countries, while helping to ease the trade tensions such as Japan faced.

The United Kingdom began running a current account surplus in the mid-19th century. The substantial overseas wealth generated by this surplus was largely invested abroad, including United States, Africa, Asia, and Latin America, flowing into sectors such as transportation, public utilities, agriculture, mining, and manufacturing (Ferguson *et al.* 2003).

Following World War II, the United States faced a sharp decline in demand for military supplies, resulting in significant excess production capacity. This surplus output was absorbed primarily through exports, enabling the U.S. to maintain a large current account surplus in the immediate post-war years. In 1948, the U.S. Congress approved \$13 billion for the Marshall Plan, allocating nearly \$13 billion in foreign aid over a four-year period (Hinnershitz, 2022). Once the Marshall Plan was implemented, the U.S. current account surplus diminished rapidly (Williams, 1952). The Marshall Plan played a pivotal role in facilitating Europe's post-war recovery and had substantial geopolitical ramifications (Hinnershitz, 2022; DeLong and Eichengreen, 1991).

Over the past two decades, Germany has been the only major economy to maintain a consistently large current account surplus relative to GDP. Since 2004, Germany's surplus

has remained above 4% of GDP, peaking at nearly 9% in 2016, and was 5.8% in 2024 according to the latest statistic of the World Bank. This surplus was largely offset by the deficits of other Eurozone countries, keeping the current account balance within acceptable bounds. After 2011, nevertheless, the Eurozone experienced a substantial rise in its current account balances. This increase was driven primarily by former deficit countries that adjusted their current account balances in response to the euro debt crisis, shifting from large deficits to surpluses. Even with these changes, the Eurozone's aggregate surplus has remained around 2% of GDP—generally considered within acceptable bounds (IMF, 2025).

In summary, the historical experiences of countries showing current account surpluses (Table 1) highlight several potential strategies for adjustment, including increasing foreign investment, expanding foreign aid, and stimulating domestic demand to absorb the surplus. Over time, the saving rates in economies have tended to remain around or gradually converge toward global averages (Figure 2). In contrast, recent estimates indicate that China's saving rate remains substantially above both the historical level and the levels observed in other major economies. As a result, China now faces a critical juncture at which policy decisions on how to maintain its current account within a stable range consistent with international norms, whether through reducing savings or through boosting domestic investment, could play an important role in shaping its future growth trajectory.

3. Persistently high national savings rate in China, its structural causes, and impediments to investment growth

China's growth trajectory since the late 20th century has been shaped by extraordinary capital accumulation and external demand (Lin, 2011). However, concerns over declining returns on investment, overcapacity, and external trade volatility have increasingly prompted policymakers to promote consumption as a source of future growth. The “dual circulation” strategy, introduced in 2020, underscores this shift by aiming to reduce dependence on external markets through the expansion of domestic demand, with household consumption intended to play a central role. In recent years, China's government has introduced a series of policies aimed at stimulating domestic demand. These measures have included issuing consumption vouchers, expanding tax incentives, and promoting large-scale sales events, such as “Double 11” shopping festivals, to boost short-term retail activity (Feng and Tang, 2024; Ding et al., 2024).

3.1 Household consumption

In early 2025, China's retail sales rose by more than 5 per cent year-on-year in the first quarter, signalling renewed consumer activity supported by government-issued consumption vouchers and other stimulus measures. Although retail figures in 2025 point to a short-term increase, longer-term trends suggest a structural deceleration in household consumption growth. Guo and Wang (2024) report that the average annual real growth rate of per capita consumption fell from 11.4 per cent in the mid-2000s to 2.8 per cent during 2020–2022. Empirical analyses, including those by Yang *et al.* (2024), indicate that while household consumption has increased in absolute terms, it continues to account for a relatively low

share of GDP compared to other upper-middle-income countries, remaining below 40 per cent since 2005. This persistently low ratio of household consumption to GDP suggests that the rebalancing towards consumption-led growth remains more aspirational than realised. Several key impediments to realizing such a rebalance exist, including persistent income inequality, elevated precautionary savings, and mounting demographic pressures.

China has experienced a marked rise in income inequality since the beginning of its economic reforms in 1978, with the top 10 per cent of earners capturing over 40 per cent of national income, while the share held by the bottom 50 per cent declined to just 15 per cent by 2015 (Piketty et al., 2019). Although recent years have seen slight rebalancing, the overall level of inequality remains among the highest in Asia (Zhou and Song, 2016; Zhang, 2021). This widening income gap has important implications for China's consumption dynamics. As Aguiar and Bils (2015) show, when income becomes increasingly concentrated among higher-income households—who tend to have a lower marginal propensity to consume—overall consumption growth becomes decoupled from income growth. In China's case, Zhang (2021) further argues that growing income inequality is eroding consumer confidence and intergenerational mobility, both of which are critical for achieving higher levels of domestic private consumption demand. These findings suggest that rising inequality not only raises concerns about social equity but also acts as a structural constraint on aggregate consumption growth, thereby posing a major impediment to China's goal of transitioning to a consumption-led growth model.

Despite strong income growth over the past two decades, household saving rates in China remain exceptionally high by international standards. In 2024, China's national savings rate stood at 43.4 per cent of GDP, compared to 25.3 per cent in Japan, 17.1 per cent in the United States, and 26.4 per cent in Australia¹. According to Stratford and Cowling (2016), these elevated savings are partly a response to weak social safety nets and persistent concerns about future expenses related to healthcare, education and retirement. These precautionary motives are further compounded by income inequality and regional disparities, and exacerbated by institutional constraints such as the *hukou* system. Yu *et al.* (2021) document the varying degrees of consumption upgrading across regions, noting that while some western provinces show encouraging trends, the north eastern region and urban poor are experiencing stagnation or even a decline in their level of consumption, largely due to elevated precautionary savings resulting from the underdevelopment of China's welfare system. Individual savings behaviour may also be influenced by past events. Chen and De la Rupelle (2016) showed that the Great Famine that struck China in late 1950's may have altered Chinese households' thrift preferences and constitute one important determinant of their high saving propensity. In China's institutional and cultural context, Wei and Zhang (2011), Li et al. (2022), and Tani et al. (2023) provided evidence that there is a new competitive saving motive in China. The preference for sons and the consequent high male to female sex ratio caused Chinese parents

¹ The statistics are values for the variable “Gross domestic savings (% of GDP)” downloaded from the World Bank Database (<https://data.worldbank.org/indicator/NY.GDS.TOTL.ZS>).

with a son to raise their savings in a competitive manner in order to improve their son's relative attractiveness for marriage. This pressure on savings spills over to other households.

Demographic change adds further complexity to China's path towards consumption-led growth. The country is shifting from a demographic dividend driven by a large and growing working-age population to one focused on raising the quality of the labour force, supported by improvements in education and health. Although this transition has enhanced the capabilities of the labour force, the overall share of working-age individuals in the population is declining. Guo and Wang (2024) note that while this transition may benefit long-term growth, it poses several short-term constraints. Influenced by traditional Chinese culture, the working-age population tends to have a higher level of consumption compared to the elderly and to children, so that rising old-age dependency ratio may lead to a higher savings rate than otherwise. Nonetheless, an ageing society could also create new areas of consumption, particularly in healthcare and aged care services. The extent to which these opportunities are realised will depend on the adequacy of household incomes and the social safety net and the restoration of consumer confidence.

Taken together, these factors illustrate that while government policies have prioritised stimulating domestic consumption, deeply rooted structural conditions and social expectations continue to sustain high household saving rates. As a result, shifting toward a consumption-led growth model remains an aspirational goal rather than a necessarily achieved transformation.

3.2 Corporate and government saving

Besides household saving, the other two components of national saving are corporate saving and government saving. Corporate saving, defined as retained earnings after labour compensation, taxes, and transfers, represents another major component of China's national saving. Both state-owned enterprises (SOEs) and private firms contribute to this large pool, though their motivations and institutional conditions differ substantially. Zhou (2009) argued that China's high aggregate saving rate is partly the result of its distinctive income distribution pattern, in which a large share of national income accrues to the corporate and government sectors. Between 1992 and 2007, household saving held steady at about 20 per cent of GDP, while corporate saving grew from around 12 per cent to 23 per cent of GDP. This sharp increase reflected a period of strong profitability among Chinese firms, especially SOEs, which benefited from both productivity gains and policy-induced advantages.

After the Global Financial Crisis, the pace of corporate saving began to moderate. Export growth slowed, the labour market tightened, and land and production costs increased, all of which squeezed corporate profit margins (Cai and Lu, 2013). Nonetheless, the corporate sector continues to account for a significant share of national saving, supported by the enduring profitability and low dividend payout of SOEs (Bayoumi *et al.*, 2010; Wan, 2022).

In the 2010s, government saving faced further downward pressure. Slower economic growth curtailed revenue growth, while spending commitments increased due to expansion in social welfare programs, healthcare, and poverty alleviation. Moreover, local governments relied heavily on land sales and off-balance-sheet financing vehicles to sustain infrastructure

investment, leading to mounting debt burdens and fiscal fragility (World Bank, 2025a). Despite these influences, government saving has remained positive in aggregate due to steady tax revenues and SOE dividends, but its relative contribution to national saving has diminished over time.

In summary, China's persistently high national saving reflects the interplay of household, corporate, and public saving—each shaped by distinct structural and institutional dynamics. While recent policy shifts aim to foster greater household consumption and more efficient investment, overcoming the deeply rooted determinants of high saving will require comprehensive reforms in social welfare, financial intermediation, income distribution, and corporate governance.

3.3 Efficient investment

In the context of our question that is to maintain current account surplus at a reasonably low and stable level, besides raising consumption and hence reducing savings, the alternative policy choice is to foster an economic environment conducive to higher domestic investment that would better match domestic saving. Domestic investment as a share of GDP in China has been trending down since the peak of 46 percent in 2011 to the current level of 41 percent for several reasons². While China's abundant savings provide ample financing for investment, declines in the productivity of capital due to overcapacity in some sectors, fragility in the real estate sector, high local government debt, and capital misallocation make simple investment expansion both risky and potentially inefficient. Enhancing financial market efficiency, investment quality, and matching savings to its most productive use are more pressing than scaling up total investment. The potential for the further development of financial markets is witnessed by the IMF Financial Market Index (IMF, 2016). This index provides an indicates how developed financial markets of countries and country groups are in terms of depth (stock market capitalization, stocks traded and outstanding debt), access (stock market capitalization outside of the top ten firms) and efficiency (stock market turnover). The index indicates that there has been a substantial development of China's financial market since the early 1990s, but further development would be needed to reach a scale of development matching other systemically important economies (Figure 3).

Another perspective on the financial markets and business environment in China is provided by the World Bank "Ease of Doing Business" rankings which show an economy's absolute position relative to best-practice regulatory performance when measured against indicators of: starting a business, dealing with construction permits, getting electricity, registering

² Despite the decline since 2011, China's investment as share of GDP of 41 percent in 2024 was one of the highest globally, according to World Bank statistics. In 2024, the world average was 26 percent. At the country and regions level, observed rates included 24 percent for Australia, 21 percent for the Euro Area, 26 percent for Japan, and 22 percent for the United States. There remains however a substantial gap in per capita capital between China and other systemically important economies. For example, in 2020, as measured by the "Domestic comprehensive wealth per capita index (real chained 2019 USD)" by the World Bank the index for China is only 9.2 percent of the value of Australia, 11 percent of that of the United States, 16.5 percent that of Japan, 14 percent that of Germany, 20 percent of that in the United Kingdom, and 30 percent of that of the Republic of Korea. This suggests that there is still room for capital deepening in China to converge to the level in developed and comparator economies. Investment would still be important in driving capital accumulation and enabling the rise in long-term living standards in China.

property, getting credit, protecting minority interests, paying taxes, trading across borders, enforcing contracts and resolving insolvency (World Bank, 2020). According to this methodology, China is ranked 31st out of 190 countries (Figure 4). While recognising that the scores and rankings are judgemental, the scores and broad positioning provide an indication of the scope for improvement in the business regulatory and operating environment.³ The ranking of China with a score of 77.9 out of a possible 100, just behind the OECD average of 78.4 and below Singapore, the Republic of Korea and the United States, Australia, Thailand and Japan, suggests that while China is high in the field, there is scope for improvement both absolutely and relative to other countries.

In terms of investment in particular sectors, historically, the real estate sector has accounted for roughly one-quarter of China's fixed asset investment. However, since 2019, regulatory tightening and debt crises among developers have precipitated a steep fall in investment in this sector. New housing starts and land sales contracted by 39.8 percent and 53.4 percent respectively in 2022 (Wright, 2024). At the same time, local government land revenues fell sharply, while debts accrued via local financing vehicles surged—both of which constrained new infrastructure projects (World Bank, 2025a).

Both the World Bank (2025a) and García-Herrero (2025) argue that diminishing marginal returns and industrial overcapacity are now impeding investment efficiency. Early rounds of capital accumulation in infrastructure and housing have led to excess supply in several sectors, resulting in “zombie firms” that persist only under artificially low interest rates (Bowman, 2022). Furthermore, China's financial system primarily channels credit through SOEs and local governments via state-owned banks. Prasad (2023) revealed that high household savings in these institutions are thereby deployed inefficiently, undermining overall capital productivity. Much of the savings is intermediated via low-yield bank lending to state-owned enterprises (SOEs) and local governments. García-Herrero and Xu (2025) and the Boullenois *et al.* (2025) similarly noted that the dominance of SOEs in credit markets constrained private investment, particularly in innovative or high-growth and high-productivity sectors.

China's investment model is also constrained by rising local government debt. According to the World Bank (2025a), heavy reliance on infrastructure spending has inflated debt levels via local financing platforms, posing risks to financial stability and limiting future investment capacity.

Simply raising investment to absorb excess saving could exacerbate capital misallocation and public debt risks. As the World Bank (2025a) cautions, expanding infrastructure and real estate may yield diminishing returns and lead to unsustainable liabilities. Prasad (2023) suggest that broadly based and effective financial market reform is key to directing funds toward productive firms. With global constraints on the level of a country's current account balance (CAB) to its GDP as shown in Gretton (2025), developments in the desirability of

³ In 2021, the World Bank announced the decision to discontinue the Doing Business report (World Bank, 2021). A new program of reporting under the banner Business Ready (B-READY) is being pursued (see e.g. World Bank, 2025b)

investing in China cannot be decoupled from the evaluation of possibilities for the longer-run evolution of national saving rates. This matter is considered using a scenario approach in the following section.

3.4 Longer-run policy scenarios

There is considerable doubt as to how the saving rate in China may evolve. Against the recent history of relatively high saving rates by national and global standards, Kraay (2000) estimated that between 1965 and 1977 the saving rate in China lay around 27 percent of gross national product (GNP). He observed that this was supported by policies that profits were concentrated in state-owned enterprises which were then directed towards state investment priorities. Urban households were supported by lifecycle benefits through employment in state-owned enterprises. The transition to a market economy has provided incentives and institutions that have enabled higher levels of income to be realized as higher saving rates. Kraay (2000) found that China's saving rate is unusually high and not easily explained by factors applying to a 'typical' country. The saving rate for China remains at above average levels and uncertainly remains as to how the rate may evolve into the foreseeable future and the broader implications of alternative, plausible outcomes.

To assess the implications of alternative saving rate assumptions, three scenarios based on contemporary history are considered: (i) a 'Lower' case aligned with the baseline assumption based on convergence of the China saving rate to the neighbourhood of other regions and consistent with the rate applying over the period 1965 to 1977 (Kraay, 2000); (ii) a 'Medium' case based on the rate that applied in the early 1980s as recorded in World Development Indicators (WDI) and before the substantial rise in the gross saving rate for China associated with rapid export-led growth; and (iii) a 'Higher' case based on the average of rates over the 1980 to 2019 period and in the neighbourhood of current rates of saving in China (Table 3).

The longer-run scenarios also include the assumption that the current account balance to GDP ratio will remain around the historical average over the period 1980 to 2019 of around 2 percent of GDP. Such a rate would lie within the commonly accepted bound of 5 percent for systemically important economies (Gretton, 2025). With the saving rate and CAB share in GDP determined by assumption, this alignment is implemented by adjusting the target gross investment rate in the respective policy simulations to be equal to the target gross saving less two percentage points (Table 3). The baseline investment rate is determined by model theory and by coincidence aligns closely with that implied by the 'Lower' saving scenario.

The rate of gross saving to GDP is targeted by varying the allocation of net income between saving (net of depreciation) and consumption (household and government combined). The rate of gross investment to GDP is targeted by varying the long-run rate of return on capital required by forward-looking investors (modelled as the 'target' rate).

4. Modelling framework

4.1 Overview of simulation model

To simulate the longer run policy scenarios and trace out prospective adjustment paths, this study uses a multi-sector, multi-region recursive dynamic computable general equilibrium

(CGE) model of the world economy – the GDyn-FS model (Gretton 2021a, 2025).⁴ GDyn-FS provides a number of features which make it suitable for this study. It projects a stable, longer-run baseline, includes a rate of return rule for the allocation of saving between regions and relaxes the assumption of fixed shares in the saving-consumption choice. The GDyn-FS model has been used in a variety of relevant applications.⁵

The model combines the economies of individual regions through multilateral trade, associated transport services and the capital-finance flows. In the variant adopted in this study, China is included with 5 other systemically important regions — Australia, Japan, the United States of America, Europe-28 and the Rest-of-the-World (ROW) — and 13 industry sectors — two agricultural sectors, one mining sector, four manufacturing sectors, five service sectors plus ownership of dwellings (see appendix A). Five primary factor inputs are modelled — land, natural resources, skilled labour, unskilled labour and (produced) physical capital.

GDyn extends the comparative static version of GTAP (Hertel and Tsigas, 1997, Corong et al., 2017) by the inclusion of imperfect mobility of capital finance between regions, endogenous capital accumulation and an adaptive expectations theory of investment (Ianchovichina and McDougall, 2012). The GDyn-FS model used as the foundation for this study develops GDyn to provide for model stability over the long run and enhance its usefulness as a tool for the analysis of structural change, policy and other economic developments affecting the real economy at levels of sectoral and regional detail selected by the analyst (Gretton, 2018, 2019, 2021a, 2021b, 2025).⁶

In the core of the model, producers in each region are divided into industries that are assumed to minimize costs subject to a constant return to scale production technology. In the GDyn-FS model, capital and labour are treated as being imperfectly mobile between industries in any one year while agricultural land and natural resources are assumed to be only used by rural and extractive industries, respectively. Industries are treated as having flexibility in the use of intermediate and value adding inputs. In GDyn-FS, producers in each region are assumed to be forward looking, undertaking investment in any one year to gradually draw returns actually received and those expected in the immediate term, towards longer-run reference (or target) rates.⁷

The representative regional household receives income generated from labour services and the ownership of local and foreign-located capital, land and natural resources. Income from product and factor taxes also accrues to the regional household. With this income, regional households maximise utility through private consumption, government consumption and savings. Total household consumption is distributed across products in accordance with

⁴ All GDyn-FS model results are obtained using GEMPACK modelling software (see Horridge et al. 2024).

⁵ For example, Gretton (2021a), Kuik et al. (2022), Gretton (2023a), Gretton (2023b) and Gupta et al. (2024)

⁶ Further details on how Gdyn-FS extends Gdyn are provided in Appendix B.

⁷ The condition for long-run stability in investment requires the convergence of the model rates of return towards a longer-run target rate so that $RORGROSS = RORGEXP = RORGTARG$ and $rorg = rorge = rorgt = 0$ by region in the longer run, where $RORGROSS$ is the gross rate of return, $RORGEXP$ is the inter-period expected rate of return and $RORGTARG$ is the target (long-run risk adjusted) required rate of return. $rorg$, $rorge$, and $rorgt$ are the percentage changes in the respective coefficients (Gretton, 2021a).

product price and aggregate consumption expenditure while government consumption is distributed across products in fixed proportions. Regional household savings are distributed back to investment at home and abroad via foreign investment in a ‘global trust’ which acts as a notional clearing house for foreign investment across regions.

Products used as intermediate input, consumption and investment are sourced domestically and from imports (by product and region). The demand for international transport services is attached to international trade flows with supply by region being pooled in constant proportions. Cost minimizing regional firms’ source finance for investment from the regional household and from global saving (via the ‘global trust’) in accordance with the Feldstein–Horioka (1980) hypothesis.

As a real-economy model, GDyn-FS does not include money or bond markets and assumes that all real changes are accommodated by broader monetary policies. While the model separately delineates government consumption and taxes on products and primary factors of production, it does not model the net fiscal position of governments and associated impacts on bond markets.

4.2 Modelling baseline

The modelling baseline provides the reference case against which the impact of policy scenarios is evaluated. The baseline is defined by an initial database and assumptions that govern the evolution of the Chinese economy and of other regional economies over time.

The baseline for this study begins at the reference year 2011. This initial database is updated year-by-year in historical simulations to 2022 using estimates of GDP and investment growth, and population and skilled and unskilled labour growth drawn from World Bank World Development Indicators (WDI) and International Labour Organization (ILO) labour market data, respectively. Over that period, estimates of exports, imports and gross saving to GDP (in USD) based on WDI data are incorporated in the projections. Fixed capital stocks by region are then modelled as accumulating year-by-year in a perpetual inventory system, given initial values as recorded in the model database. The trade and current account balances on a System of National Accounts basis by region, are derived as residuals. Over the COVID19 period of 2020-2021, the utilization of capital is modeled as declining with changes between sector output and demand for capital services relative to installed capital.⁸

Over the forward period, projections are drawn from IMF World Economic Outlook (to 2027) (IMF, 2022) together with long-run projections that follow the medium growth scenario of Shared Socioeconomic Pathway projections (SSP2) (Dellink *et al.*, 2017)⁹ and spliced as required for this study with the ILO labour market data. The SSP2 growth scenario adopted assumes medium growth across the global total factor productivity (TFP) frontier, gradual convergence of economies toward that frontier, transition to openness, population, labour force,

⁸ The alternative in the GDyn-FS modelling environment would be to assume that the decline in demand for capital services with the temporary decline in output is accommodated by a capital adjustment cost and permanent decline in capital stocks. This alternative approach is not adopted in this study.

⁹ The SSP2 projections were annualized by van der Mensbrugge (2013) and aggregated according to Aguiar (2019).

human capital and fossil fuel resource use and prices. Country-specific gross saving rates are projected to converge gradually to country-specific rates based on historical data, cross country comparisons and theory (Gretton, 2021a, 2021b). Specifically, the gross saving rate for China in the baseline is projected to converge to around 27 percent — a level in the neighborhood of rates for other systemically important regions. Gross investment is not projected to absorb all domestic saving, so that the current account balance as a proportion of GDP is projected to remain in surplus at around 2 percent of GDP. That is, roughly equivalent to the historical average of 2.2 percent over the 1980 to 2019 period.

Under the SSP2 growth assumptions, global population is projected to reach 8.3 billion in 2030 and 9.3 billion in 2050, broadly in line with UNDESA projections of 8.5 and 9.7 billion at 2030 and 2050, respectively (UNDESA, 2022). Population and population growth to 2050 (and beyond) is projected to be concentrated in ROW region. By contrast, the population of China is projected to decline from around 1.4 billion in 2030 to around 1.3 and 1.1 billion in 2050 and 2070, respectively (Figure 5.a).

With a simultaneous decline in the population aged 15 to 65 years, total employment is projected to decline to from around 730 million in 2030 to 425 million in 2070 (Figure 5.b). This decline in employment, nevertheless, is projected to be more gradual than the decline in that age cohort with employment from an increasing number of persons in the over 65 age group. With higher levels of educational achievement, employment in the ‘skilled’ occupations (including managerial and professional workers) is projected to rise from around 168 million in 2030 to around 226 million in 2070. Reflecting the decline in total employment and rise in the skilled workforce, employment in the ‘unskilled’ group (including process, trades and personal service workers) is projected to decline from around 570 million in 2030 to 200 million in 2070 (Figure 5.b). The population and employment declines are reflected a tapering of growth in GDP and new investment and fixed capital across the period (Table 2 and Figures 5.c and 5.d). With new investment projected to taper more rapidly than fixed capital, the investment to capital (I/K) ratio is projected to decline (Table 2 and Figure 5.d).

There is considerable uncertainty about likely trends in trading relations between countries into the immediate and longer-term future. How contemporary tensions play out will provide the backdrop for the evolution of trade and current account balances as a proportion of GDP. To provide a baseline for the assessment of alternative saving options and flow on effects to current account balances for China, this study considers the impact on the intensity of trade between regions from a status quo benchmark, that is, regional trade is assumed to increase broadly in line with output as is broadly the case in the post GFC period (Gretton, 2025). Under this approach, exports from China are projected to stabilize at around 20 percent of GDP and close to current levels by 2070, the longer-run time horizon adopted in this study. Imports are projected to stabilize at around 14 percent of GDP and slightly lower than current levels of around 17 percent, as global supplies are drawn away from slower growing China to faster growing regions across the globe (represented by the ROW region in this study). The trade balance for China would then be just above 5 percent of GDP in 2070 (Figure 5.e). This would be higher than the average of 2.1 percent for the 40 years 1980 to 2019 and the average of around 3.4 percent over the 19 years 2001 to 2019.

The baseline so constructed should provide a meaningful basis upon which to model the impacts of alternative national saving regimes in China and the impact of these regimes on national and sectoral activity, external balances and incomes.

4.3 Simulation environment and model enhancements

Simulations begin with an observed database for the initial period. It would only be by coincidence that this database is representative of future periods. Baselines are therefore simulated in order to provide a reference case against which the impacts of policy or other economic changes may be assessed.

To support analysis of evolving saving and trade intensities within the baseline (and in a policy simulation if desired), the GDyn-FS model incorporates a flexible lagged adjustment processes to: (i) target the gross saving rate and trade intensities over the historical period; and (ii) gradually adjust to longer-run target measures based on historical trends and theory (Gretton, 2021a, 2021b, 2025). The model incorporates a flexible lagged adjustment process to target the gross investment rate and thereby the CAB as a proportion of GDP. To facilitate the targeting of gross saving on a System of National Accounts basis, savings are adjusted from a GTAP basis (Hertel and Tsigas, 1997:53, McDougall et al., 2012, Corong et al., 2017:8) to a System of National Accounts basis consistent with benchmark estimates of the CAB to GDP provided in World Development Indicators (Gretton, 2025).

5. Modelling Results

5.1 Longer-run national effects

The longer-run results are evaluated as deviations from the modelling baseline with the deviation dependent on the scale of the policy shocks and the broader modelling environment. The deviations are intended to provide a meaningful indication of the scale of effect of the respective policy scenarios, relative to what otherwise may prevail. In this study, the policies are assumed to be implemented in 2028 and the longer-run effects evaluated in 2070, a little over 40 years.¹⁰

The lower saving/investment scenario involves a slight upward re-calibration of investment as a share of GDP to provide a CAB to GDP of 2 percent, holding the target saving rate at baseline levels. In this scenario, investment spending is projected to increase by 0.8 percent over baseline levels raising the level of capital stocks by 0.7 percent in the longer run (Table 4). With greater productive capacity, GDP and consumption spending are projected to increase by 0.3 percent over baseline levels.

Higher domestic saving affords the possibility of higher domestic investment, output and income. Rates equivalent to the modern historical average in the higher saving/investment scenario are projected to lead to an increase in installed capital capacity of around 50 percent above baseline levels after about 40 years (Table 4). With higher capital stocks, labour fixed at baseline levels and with prevailing technologies, national output as measured by GDP is

¹⁰ This time horizon allows the economy to move close to full adjustment to the policy change and provide a meaningful indicator of longer-run effects of a policy.

projected to rise by around 19 percent. Higher output raises the demand for labour above levels that may otherwise apply, and with this, real wages are projected to rise by around 20 percent for unskilled workers and 10 percent for skilled labour (Table 4). The divergence between projected wage-rate increases follows from the increased demand for workers in capital building activities (particularly heavy industry and construction). Real national income is then projected to be around 15 percent above baseline levels characterised by lower saving and investment. With population assumed unchanged from baseline levels, per capita GDP and real nation income growth is equal to the projected changes in those aggregates.

The saving and investment led growth is reflected in investment being projected to be close to 70 percent above baseline levels while real consumption (private and government combined) is projected to be close to 1 percent higher than baseline levels. With a more capital-intensive and competitive economy, export volumes are projected to be close to 25 percent above baseline levels, while increased demand for capital and productive inputs is associated with a projected increase in import volumes of close to 19 percent. After account is taken of terms of trade and foreign income effects, the balance of trade and current account balance as a share of GDP are projected to remain at around baseline levels (Table 4).

In a more capital-intensive economy, foreign liabilities of firms are projected to rise by 31 percent above baseline levels. However, with the more attractive investment environment needed to stabilize the current account balance as a share of GDP (that is avoid capital flight from higher saving levels), required returns on capital are projected to decline. With this, capital income remittances abroad are projected to decline from baseline levels. Higher investment abroad is projected as local investors' investment capability rise (Table 4).

By assumption, projected results from the lower saving case (with saving assumed to converge towards 27 percent of GDP) lie close to the base line with only small deviations projected. These reflect slightly higher investment required to sustain a balance on current account at around designated levels over time. The medium saving case (with saving assumed to converge to 33 percent of GDP) leads to a more capital-intensive economy and affords some increase in real consumption over baseline levels over the longer-run time horizon adopted (Table 4). By contrast, the pursuit of a higher saving strategy, while maintaining a current account balance constraint, sees some crowding out of domestic consumption activity over the time horizon of the analysis.

The projected results highlight the policy trade-offs between alternative saving regimes. Maintenance of saving rates at around modern average levels (the higher saving case in this analysis) has the potential to afford higher output and income growth. However, the benefits of this growth are likely to be reflected in higher investment and capital accumulation than might be achieved, in a lower saving (and baseline) regime. That is high investment is not projected to deliver proportionately higher consumption. Moreover, the achievement of the higher investment growth path is contingent on an environment that makes investing locally increasingly more attractive. Without such an environment, offshore investment (capital flight) would absorb savings.

Reversion to historical saving rates (the medium saving case in this analysis) is projected to afford lower investment/trade driven growth, but a slightly higher level of consumption than is afforded either by the lower or higher saving cases. Nonetheless, the scenario is still substantially investment/trade driven and as with the higher saving case, to be realizable, would require ongoing improvements in the attractiveness of China as an investment destination. Without such an improvement, higher savings are again likely to flow offshore and accrue as higher current account balances as a proportion of GDP.

With the rental price of the variable factor capital projected to decline relative to the price of other factors and the substitution parameter between labour and capital greater than one, the share of capital in value added is projected to rise relative baseline levels over the longer run (Table 5). The proportional increase is projected to increase across the scenarios as the scale of domestic investment enabled by higher saving rises and the cost of capital employed in industry declines. With higher investment balancing higher saving, as noted, the current account balance is maintained (by assumption) at around 2 percent of GDP across the scenarios. There are commensurate declines in the labour share of value added. Of the primary factors of land and natural resources (which are fixed at baseline levels by assumption and complementary to labour and capital in land and resource using sectors), the additional demand for resources with higher activity levels is associated with higher resource prices (Table 5) and an increase in the value-added share of resources (Table 5). This is not projected to be the case for land for which the share in value adding is projected to decline.

After depreciation of capital, production income available for consumption and saving will also be affected by receipts accruing on local ownership of foreign capital ($yqht$) and on foreign ownership of capital income accruing abroad on foreign ownership of local capital ($yqtf$) as well as other receipts and remittances from and to abroad (such as labour income, grants and other transfers). Focusing on capital remittances abroad, the change in income accruing abroad reflects both a level effect and a sourcing affect defined by $yqtf = yq_f + wqtf - wqf$ where yq_f is the percentage change in capital income (5.4 percent for the higher case, Table 4) while $wqtf - wq_f$ represents a net sourcing effect of close to -16 percent, where $wqtf$ is the percentage change in foreign investment in local capital (31.2 percent, Table 4) and wq_f is the percentage change in local capital (47.7 percent, Table 4). This direct calculation of income gives an implicit net effect of -11.1 percent.¹¹ The negative sourcing effect reflects an increase in local firms' use of local relative to now higher cost foreign finance. The positive level effect being outweighed by the negative sourcing effect contributes to the lower projected share of offshore remittances as a proportion of GDP (of 0.603 percentage points for the higher case, Table 6, col. 3). This balance is observed for each scenario.

The GDP share of capital income received from abroad is projected to decrease fractionally (by 0.199 percentage points in the higher case, Table 6 col. 2). In this case, the projected rise in foreign investment earnings from abroad is less than the increase in the value of local output. The change in the value of investment accruing from offshore ($yqht$) reflects a global investment income level effect and an investment effect defined as $yqht = yqt + wqht -$

wqt where yqt is income on capital intermediated through global markets (0.641 percent for the higher scenario, Table 4), while $wqht - wqt$ the net investment effect, where $wqht$ is the percentage change in investment in capital abroad by locals (4.668 percent, Table 4) and wqt represents the percentage change in capital holding through international capital markets (3.808 percent, Table 4).

In a more capital-intensive economy, the proportion of GDP (by value) absorbed by depreciation of capital would rise from levels that may otherwise be experienced (Table 6). Income (net of depreciation) is then projected to decline as a share of GDP for each scenario. Net income accruing to the regional household is allocated between consumption (private and government) and saving (net of depreciation). In the medium and higher cases, the more saving and investment-oriented outcomes is reflected rises of (net) saving as shares of GDP and declines in consumption. For the lower case (which is close to the baseline), the twist between consumption and saving is not distinct.¹²

Higher saving and investment are projected to flow through to a higher share of investment in final demand for each of the scenarios (Table 7). This follows from the projected increases in real investment spending and moderated by lower prices on investment goods and services (Table 4).

Higher real income is projected to flow through to higher private consumption in each scenario (Table 4). However, under the constant value share assumption, the lower priced private consumption bundle is projected to rise in real terms relative to the more labour-intensive (and relatively higher priced) government bundle.

With a more capital-intensive domestic economy, exports are projected to expand in real terms while higher domestic demand gives rise to higher projected imports (Table 4). With increased trade activity, exports and imports are projected to rise (in absolute terms) relative to GDP in each scenario (Table 7). Over time, local firms are projected to source slightly less of their higher level of financial requirements from offshore (Table 8). That is, relying to a greater extent on local, now cheaper saving to meet their financing needs.

Because the domestic capital base is projected to rise relative to the global base, the share of local wealth held abroad declines (Table 9).

5.2 Transition paths

Over the time horizon of the analysis extending to 2070, the saving to GDP scenarios are modelled at evolving gradually (Figure 6). In the policy scenarios, the higher saving rate scenario essentially holds that rate at around prevailing levels. By contrast, the lower saving rate scenario projects the rate to converge to around 27 percent of GDP. The medium case lies between the higher and lower paths. With the CAB to GDP assumed to settle around the historical average of close to 2 percent of GDP, the share of investment to GDP is projected to evolve along a path lying below the saving rate by that wedge. Some oscillation is evident, following capital depreciation cycles and the indirect influence of changing conditions in the

global economy. While the paths of exports, imports and with these the balance of trade to GDP are not directly targeted in the policy scenarios, the projections suggest a steady progression at prevailing rates, with a balance of trade surplus tending to around 5 percent of GDP. This is slightly higher than the historical average and reflects, in part, a slight increase in the demand for exports from China to meet growing demand in the ROW region (roughly the non-OECD economies) and slight lowering of the share of imports in GDP, as global supplies are increasingly absorbed by non-OECD economies.

Output, trade and income

With higher saving and investment as a share of GDP, GDP is projected to progressively rise above baseline levels over the time horizon of the analysis (Figure 7.a). Achievement of higher investment however, would not flow automatically from just higher savings. Investors would require the incentive to invest available funds in China over investing offshore. This incentive is modelled as a reduction in country risk (providing an increase in the desirability of investing in China over other locations). The projections suggest that to fully absorb domestic saving at the higher rate (while maintaining the CAB as a share of GDP at around 2 percent), the required returns would need to decline by nearly 2 percentage points for the high saving case and nearly 1 percentage point for the medium case (Figure 7.b). For the lower case, which lies close to the baseline projection, the required rate of return is projected to remain around prevailing levels.

The installed capital stock and investment rise relative to baseline levels, according to the incentive to invest and accumulate capital in China. As reported in the longer-term point estimates, the increase could be substantial with higher domestic saving and a (substantially) improved local investment environment.

As indicated above, the balance trade is projected to remain around baseline level over the projection period (Figure 8.b). And while the export and import shares in GDP are projected to remain around baseline levels, the scale of both exports and imports is projected to rise roughly in proportion to GDP. This is to suggest that to maintain a balanced trade account, China needs to provide the (growing) global economy with increasing supplies of what other countries need and to absorb an increasing supply of foreign exports for local use in the Chinese economy. With the achievement of this balance, both the terms of trade and the balance of trade would remain stable over the longer run (Figures 8a and 8b). Finding this balance, however, is likely to be more demanding in the higher saving case than the medium or lower cases.

Higher levels of economic activity engendered by the medium and higher saving cases raise local incomes above levels that would be otherwise achievable, with the level increasing over time to a longer-run growth path (Figure 9). The real wages are projected to increase gradually for both unskilled and skilled worker groups with, as noted above, the gains for the unskilled group rising above the gains for the skilled group. The projected path of real consumption spending, however, is not projected to follow the path of output growth or to show the same level of growth in the longer run as national output and income. This reflects the focus of national productive effort under the higher (and medium) saving cases in particular on investment spending and foreign trade (Figures 8). Indeed, potentially in the early years of the projection period, real personal consumption could decline fractionally from levels that may

otherwise apply, before eventually recovering and growing to levels above those projected in the baseline.

5.4 Sectoral implications

With the projected increase in investment with the higher saving/investment scenarios, the activities most involved on supplying investment goods and services, particularly light and heavy manufacturing and construction, receive the greatest boost, relative to baseline levels (Figure 10). Other sectors projected to be positively affected are those providing services to investment activity, including transport and communication and finance and business services. The sectors most tied to population growth including agriculture and dwelling services are projected to expand less than the capital-goods and trade exposed sectors, and more in line with growth in real national income.

5.5 Sensitivity of results to alternative policy scenarios and some implications

Recognising that there is considerable uncertainty as to longer-run saving and investment rates that may be realized in China, two sensitivity tests were undertaken to assess the sensitivity of results to alternative policy scenarios. The first is based on scenario 1 – the lower saving/investment case. The test examines the potential longer-run impact of China becoming a more attractive destination for investment, while the saving rate simultaneously moves to a level comparable with other countries, as represented by scenario 1 (that is 27 percent of GDP). The attractiveness to invest in China is calibrated to a 1 percentage point (100 basis points) reduction in the required returns on capital. The second test is based on scenario 3 – the higher saving and investment case. This test examines the potential longer-run impact of China transitioning to a lower saving rate given a higher desirability of investing in China and associated investment rate, calibrated to the investment rate in the higher scenario (that is, 36 percent of GDP). The sensitivity tests apply from the first year of the policy period, 2028 with results reported at 2070, the longer-run time horizon adopted in this paper.

The sensitivity test on the increase in the desirability of investing in China represents the case in which domestic financial market reform and improvements in the ease of doing business in China make it more attractive to invest in China relative to other investment destinations. The domestic market reform is not linked to a particular level of domestic saving. Under this scenario, a 1 percentage point decline in the required rate of return on capital is projected lead to a 22 percent increase in capital after 40 years (Table 10). With higher capital, labour fixed at baseline levels and no additional increase in productivity, national output as measured by GDP is projected to rise by around 11 percent. This is materially higher than the lower case scenario characterised by the same saving rate. The difference arises from the assumption that China becomes a more desirable investment destination combined a relaxation of the constraint on the current account balance as a share of GDP. With that constraint lifted a (small) net capital inflow is projected. That inflow enables higher investment activity and the accumulation of capital. Higher national activity and income flow through to higher private

and government consumption. Real consumption rises above real income as the domestic credit constraint is relaxed with additional funding becoming available from offshore.¹³

The second sensitivity test considers the case in which a high saving and investment rate is anticipated (the higher scenario) but for reasons of policy or community preference, it eventuates that the saving rate declines. This is represented by a projected decline in the saving rate from the high to the medium case (that is, from 38 to 33 percent of GDP) while policies are introduced to maintain anticipated investment at the higher level (that is, 36 percent).¹⁴ Such an eventuality would afford substantial additional economic benefits with GDP projected to rise above base-line levels by 29 percent as compared to scenario 3 in which GDP is projected to increase by 19 percent (Table 11). The higher output growth is associated greater build-up of capital (66 percent compared to 52 percent above baseline levels). The achievement of such an outcome would be dependent on substantial progressive improvements in the desirability of investing in China. In scenario 3, this improvement is represented by a projected 1.9 percentage points (190-basis points) reduction in the risk adjusted the required rate of return of capital with the reduction being slightly larger for scenario 3 (Table 11). With investment remaining high and saving declining, a current account deficit is projected. At 2.7 percent of GDP (Table 11), this projected deficit is within the norms for a systemically important economy although not characteristic of China's modern experience. A policy preparedness to transition from a net surplus economy to a net deficit economy would therefore be required. With higher domestic absorption in the sensitivity test as compared to scenario 3, exports are projected to be lower and imports higher (Table 11). After accounting for terms of trade effects, the balance of trade as a proportion of GDP moves towards balance (that is, from 5.6 percent to close to zero, Table 11)

The sensitivity tests indicate that for a given saving rate, there would be merit in the pursuit of domestic financial market reform and improvement in the business environment that raises in the desirability of investing in China. In such circumstances, a decline in the saving rate towards international norms, would not necessarily be associated with a proportionate decline in investment. Sustaining relatively high investment rates, however, may require the drawing on foreign savings to make up the shortfall of domestics saving over domestic investment. In the context of attracting the inflow of foreign savings, the convertibility of the Renminbi and the further liberalization of the capital account could be important in facilitating foreign investment in China and in making Renminbi an international reserve currency (Eichengreen *et al.*, 2023). The results in the sensitivity analyses are consistent with Mendoza *et al.* (2009) who argues that financially advanced countries end up borrowing and running deficits because their markets provide superior insurance and investment opportunities that attract global capital.

6. Discussion and policy implications

¹³ As indicated by the identity $Y = C + CAB + I$, where $CAB + I = S$.

¹⁴ Over the 40-year period of the analysis, the projections do not fully converge to the reference rates (that is the saving rate reaches 34.6 percent of GDP compared to reference rate of 33 percent for scenario 2).

China has available to it two policy pathways for maintaining its current account balance as a proportion of GDP within the norms for a systemically important economy. On one hand, it may increase domestic consumption as a proportion of GDP by lowering the national saving rate. Alternatively, it may increase domestic investment as a proportion to GDP to absorb available saving by improving the desirability of investing in China. The successful achievement of either strategy would require concerted policy action. Noting that contemporary policies to stimulate consumption have not witnessed material shifts in favour of consumption, a more successful approach may be to pursue policies that see a moderation of the prevailing preference higher saving. Noting that saving rates in the pre-transition period were closely aligned with the lower-band value in this study and that that rate was supported by a social welfare system that provided lifetime security for participants in the industrial economy, the most fruitful policy path may be to institute a modern equivalent to that earlier system. This may be supported by widening the availability of education, health and welfare services to support the progressive expansion of human capital. Such a strategy would raise consumption of those services and may be expected to lower households' preference for holding progressively higher saving balances as income rises and economic restricting occurs. The realization of such a strategy could see the saving rate gradually transition towards international norms while maintaining the current account balance as a share of GDP within the bounds of international norms.

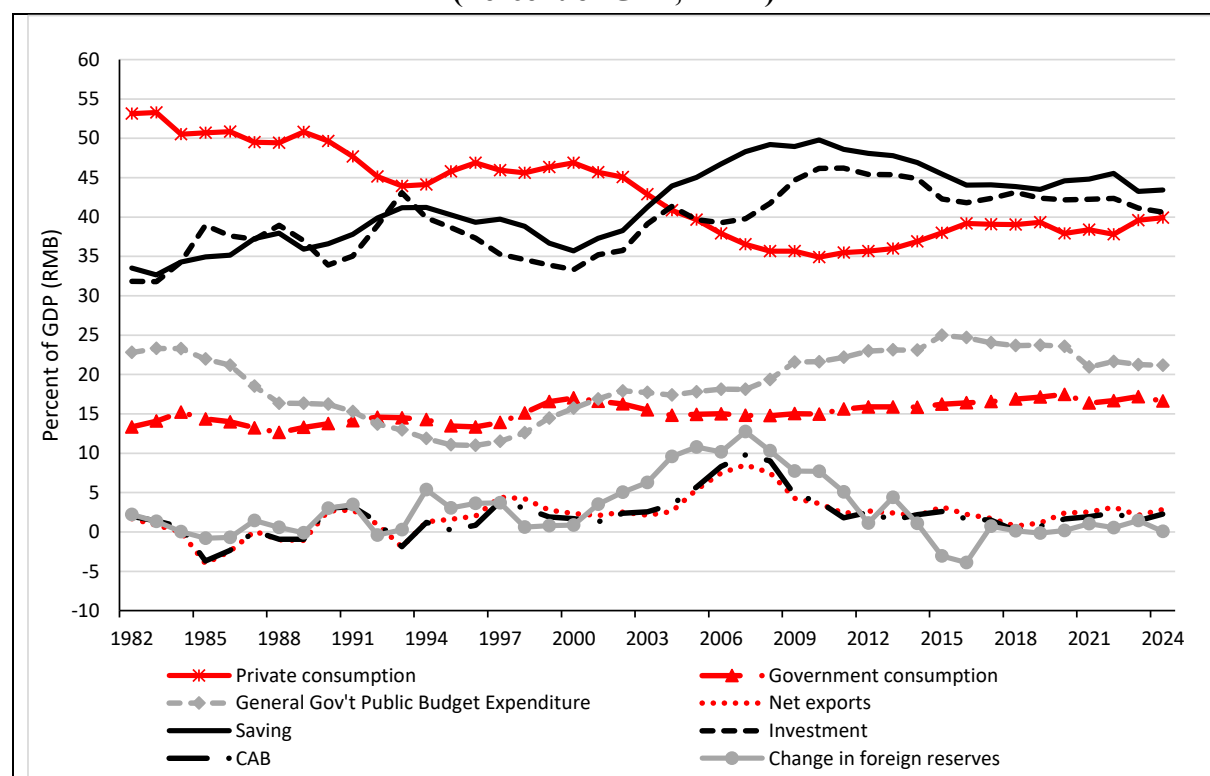
Recent experience suggests however, that even with such a strategy in place, the preference for households to favouring higher saving balances may not be realized. This provides a different policy dimension and one in which the achievement of a current account balance to GDP over the longer run and within international norms would require higher domestic investment and a higher concentration of economic activity in investment-good producing industries. For this higher-saving path to be realized, China would need to become an even more attractive investment destination relative to the prevailing situation. The gaps that exist between financial market and ease of doing business indexes between China and leading global economies suggest that this would be possible with the progression of time. Failure to realize such improvement could, however, be associated with the outflow of domestic saving (capital flight) and the build-up of current account surpluses that extend beyond international norms for a systemically important economy such as China.

The simulations reported in this study suggest that either a lower or higher saving path may be realized along orderly but distinct longer-run paths. The sensitivity tests also indicate that the evolution of saving with distinct national preferences contrary to the policy options may also be realized with stable current account balances and with potential benefits. On one hand, if an increase in the proportion of income absorbed in consumption coincided with improved the desirability of investing in China additional economic benefits could accrue while maintaining a current account balance as a proportion of GDP within conventional norms. On the other hand, if the financial market reform were successful in making China a more desirable investment destination, but the preference for higher saving were to moderate, investment could still rise and higher growth realized supported by capital inflows. The

current account balance as a proportion of GDP could decline to make up the saving gap from levels that may otherwise prevail, but remain within conventional policy bounds.

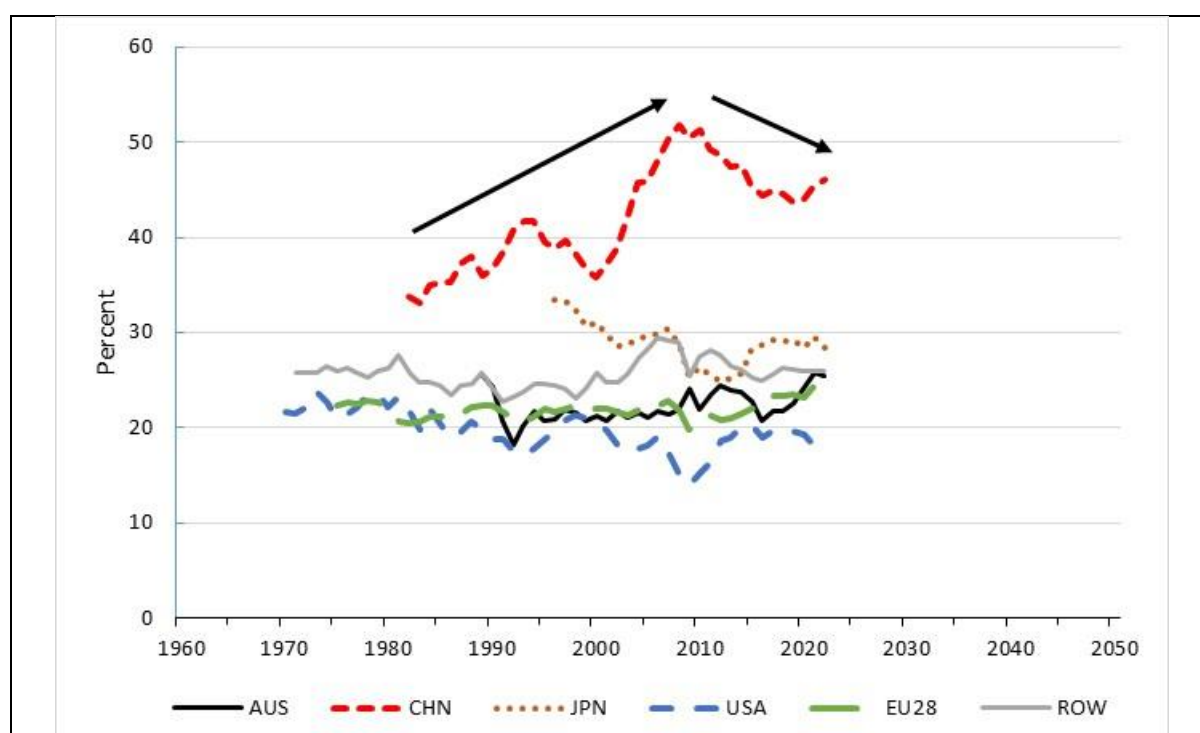
Overall, the analysis indicates that broadly based policies supportive of alternative saving trajectories could afford economic benefits. The sensitivity tests also indicate that broadly based policies supportive of either can complement alternative saving paths. Specifically, financial market reform and an increase in the desirability of investing in China would not be precluded under a lower saving path, and similarly lower saving outcomes would not be precluded from financial market reform and an increase in the desirability of investing in China. In both cases, the current account would remain within a low and stable range as a share of GDP. The longer-run perspective of this paper is also more supportive of policies that bolster the structural resilience of the Chinese economy in the longer run over policies directed at temporary short term activity stimulus measures (such as subsidies to current consumption).

**Figure 1: Components of expenditure and balance of payments of China, 1982-2024
(Percent of GDP, RMB)**



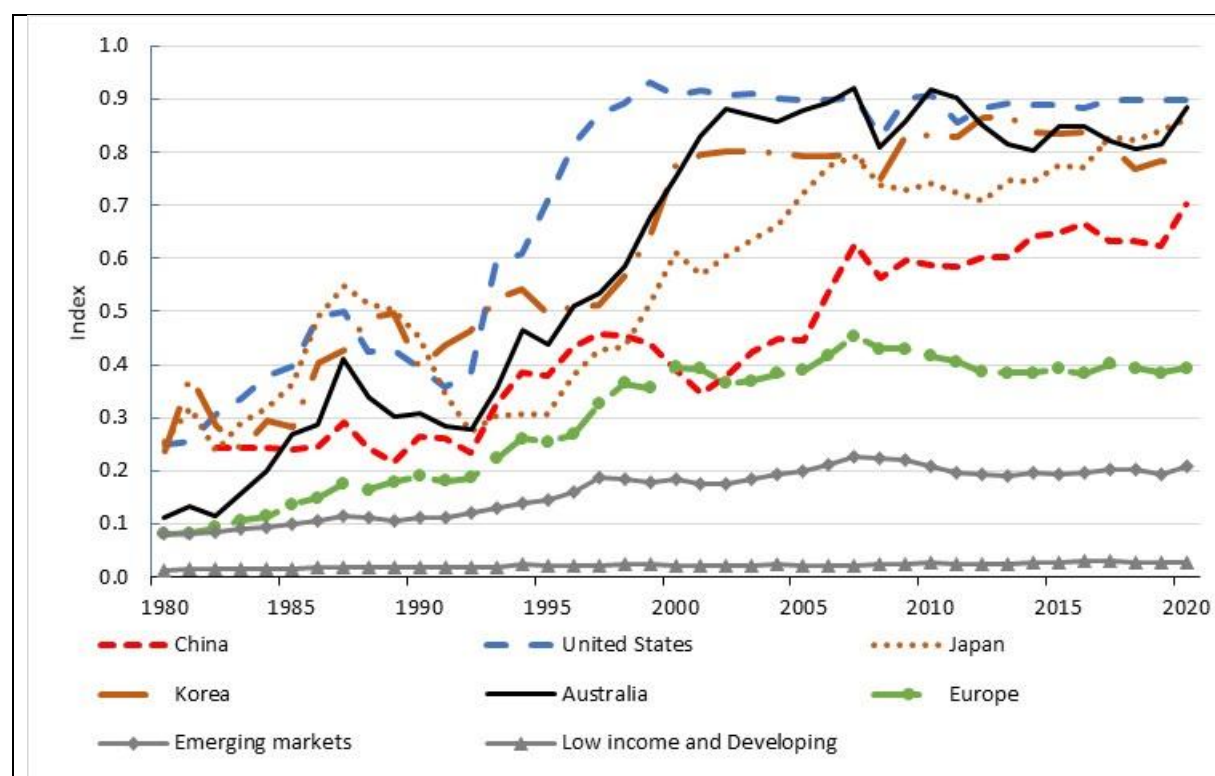
Source: Authors' construction using data from the CEIC Database, the World Bank and the State Administration of Foreign Exchange of China.

Figure 2: Gross saving to Gross Domestic Product by region



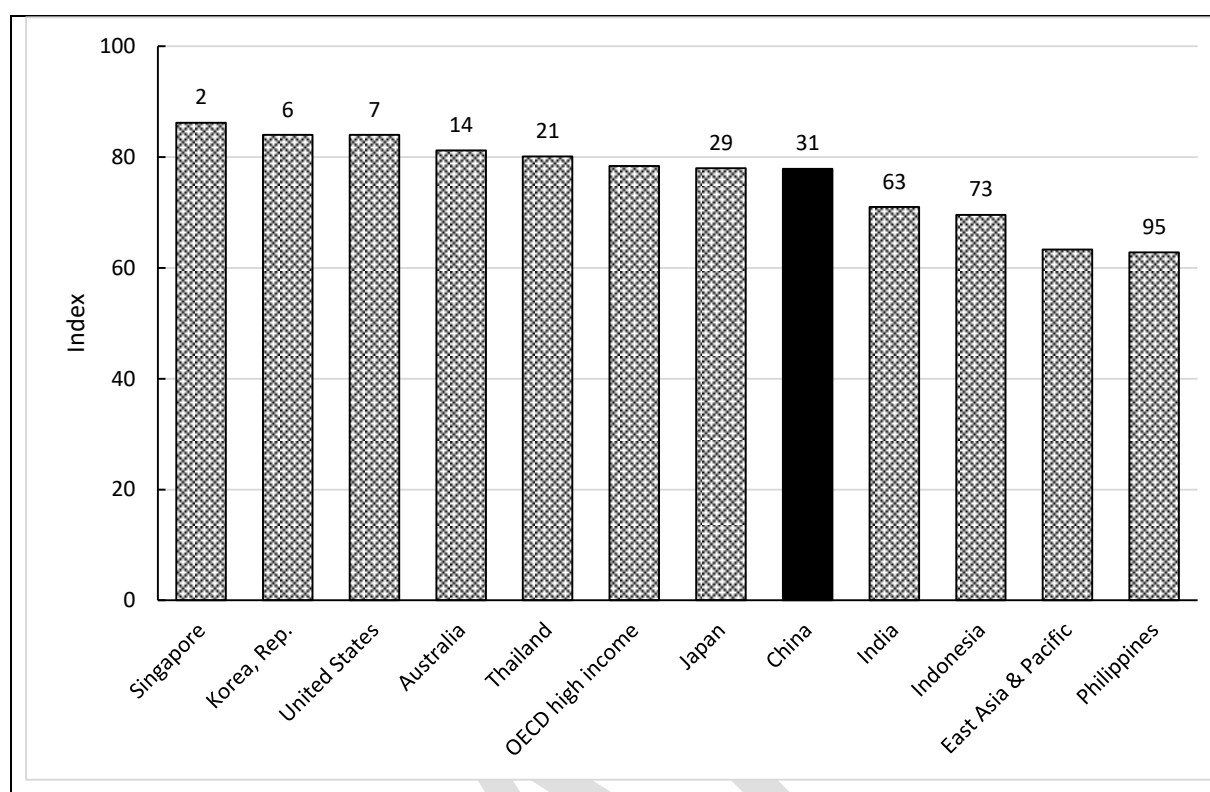
Source: World Development Indicators, accessed July 2022, July 2024. Authors' estimates.

Figure 3: Financial Market Index of Selected Economies, 1980-2020



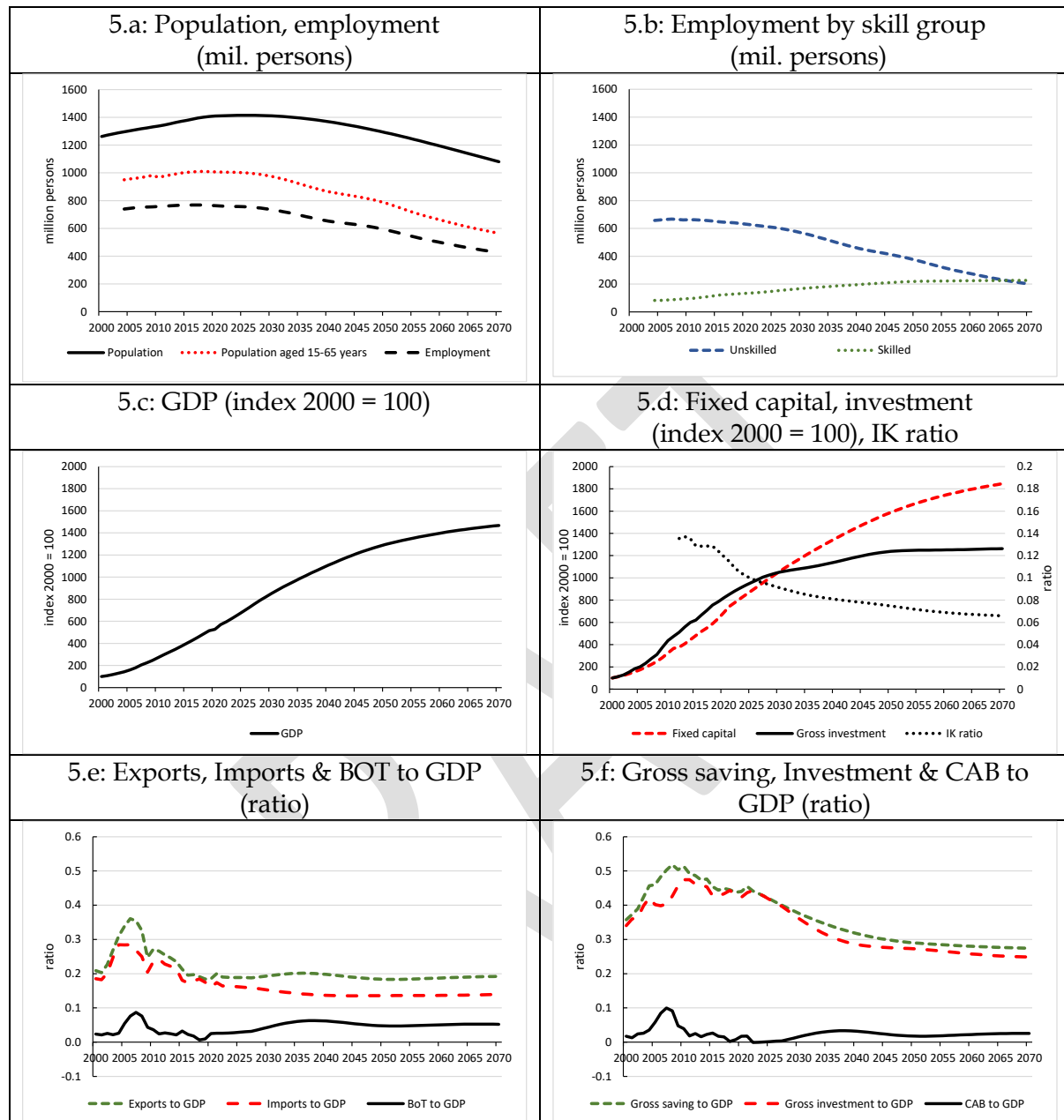
Source: Authors' construction using data from the International Monetary Fund (IMF), accessed 12 January 2026.

Figure 4. Ease of doing business country scores and ranking (out of 190 countries), 2020



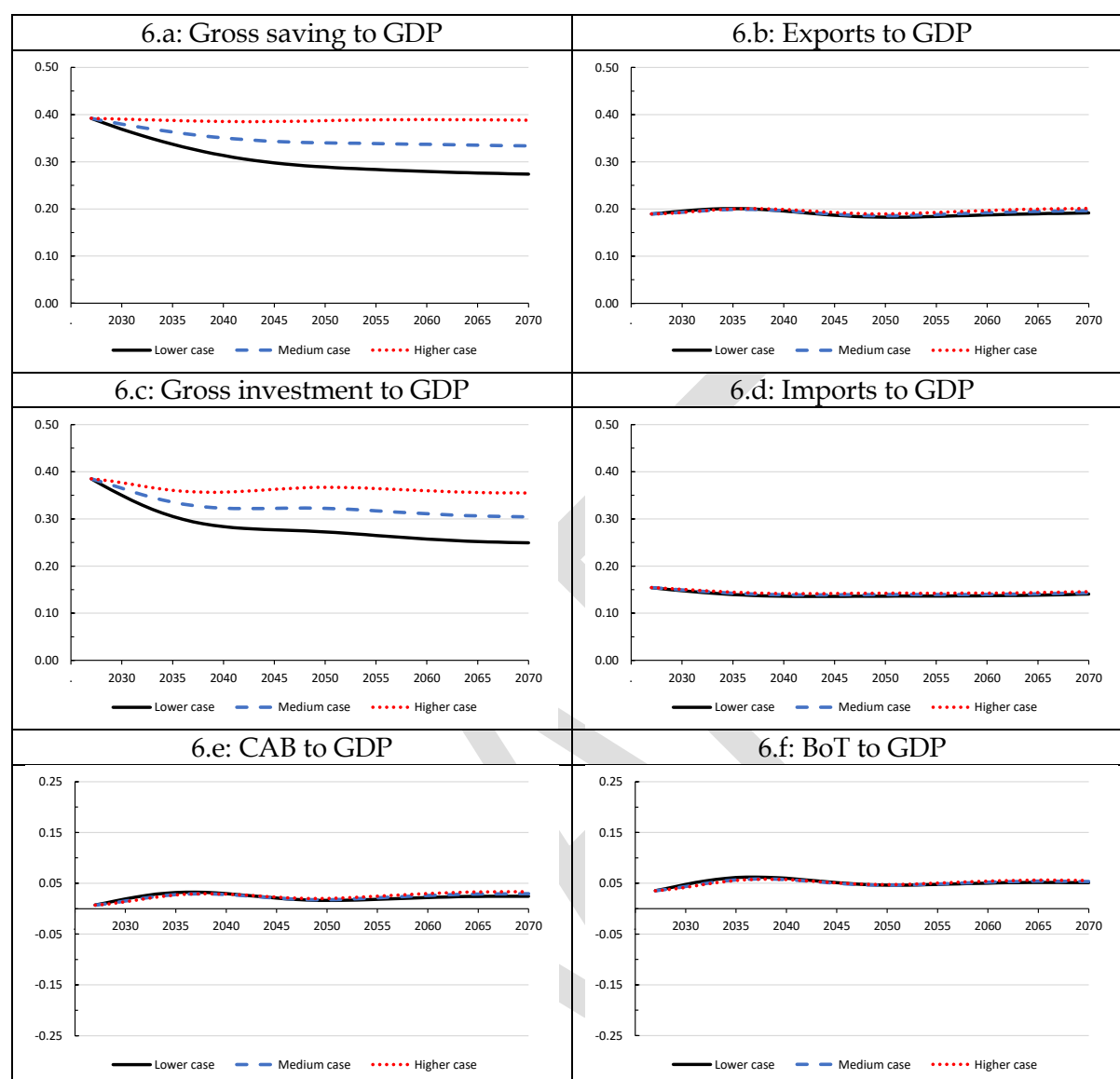
Source: World Bank, Ease of Doing Business, accessed 20 November 2025.

Figure 5: Historic and baseline projections of key economic, demographic and labour market indicators, 2001 to 2070, China (index, persons, ratio)



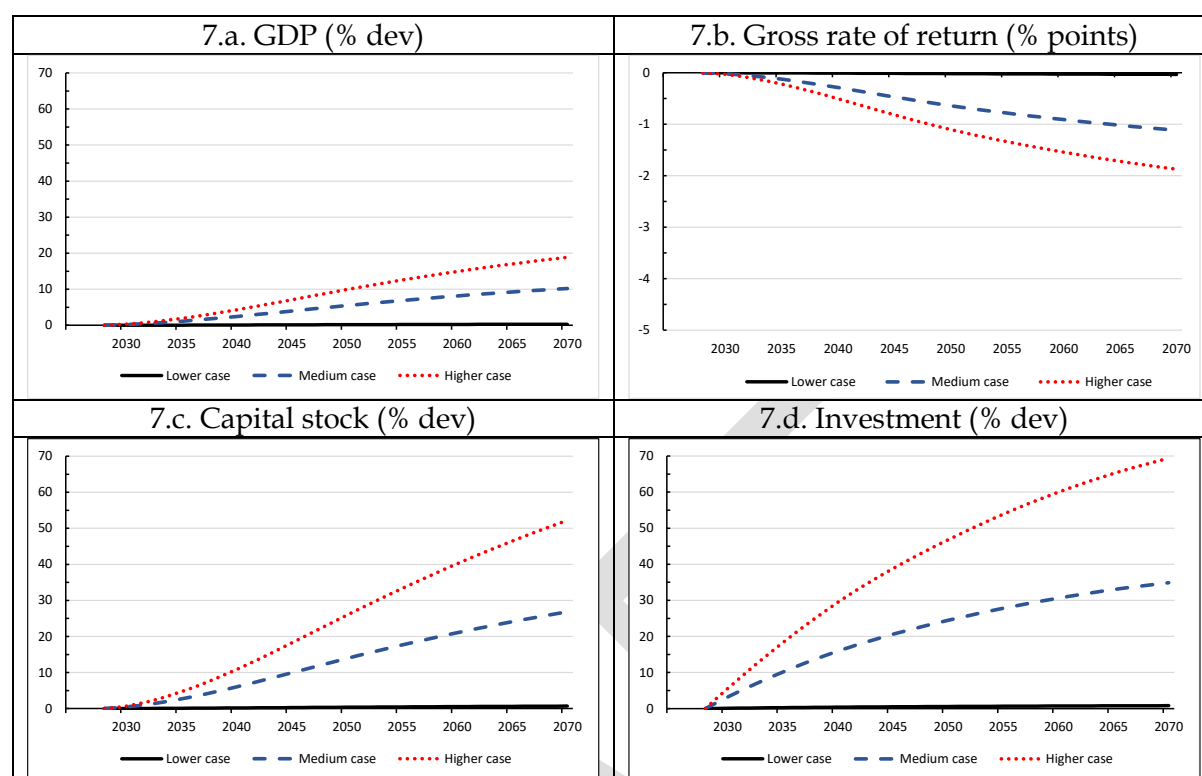
Source: Historical estimates based on WDI, ILO and PWT data; forward projections based on IMF, ILO, and OECD SSP2 estimates and GDyn-FS projections.

Figure 6: Projected gross saving, gross investment and CAB and trade to GDP under alternative policy scenarios, China (ratio)



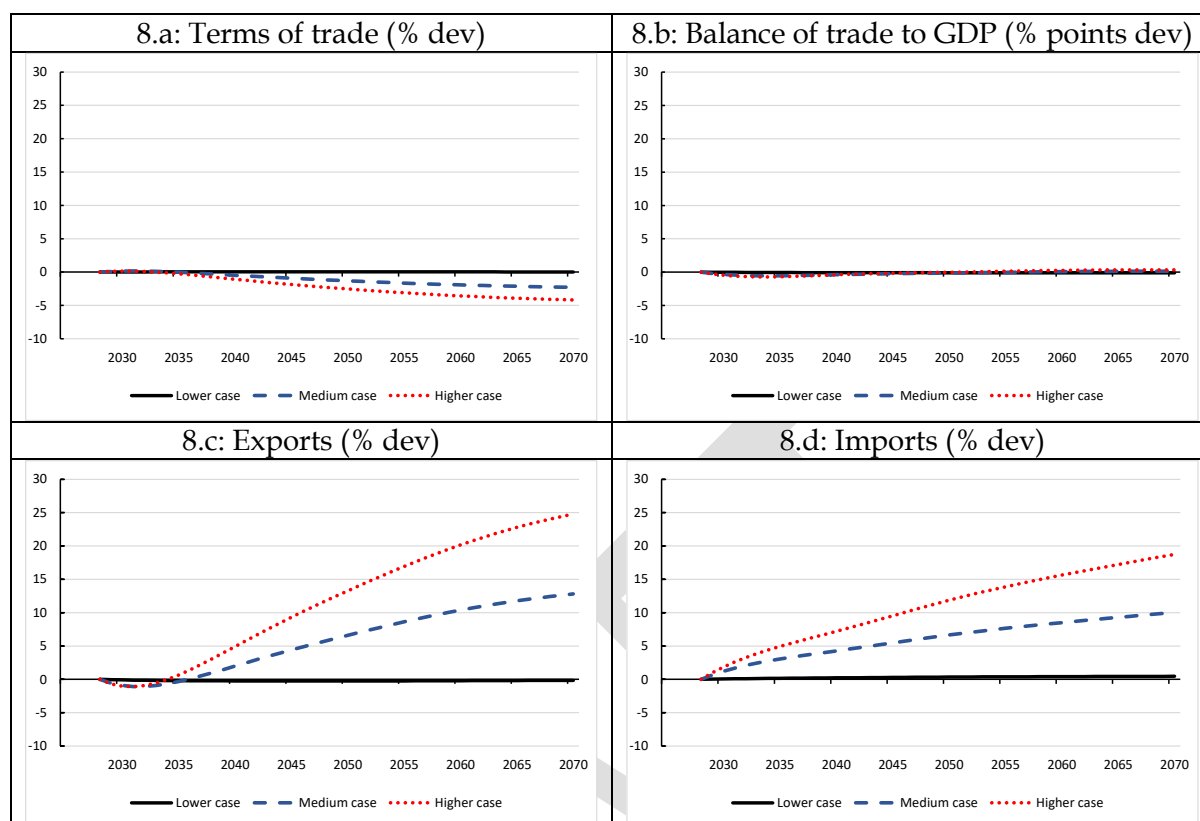
Source: GDyn-FS projections.

Figure 7: Projected GDP, investment and capital under alternative policy scenarios, China (deviation from baseline)



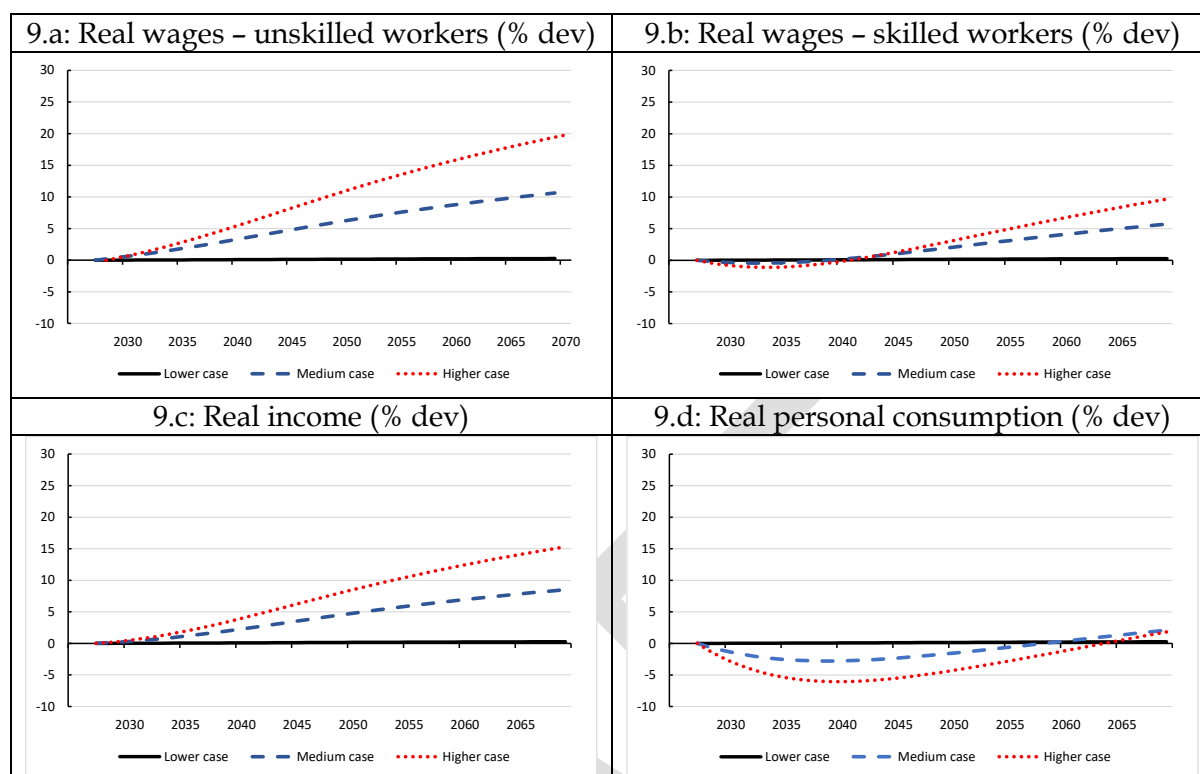
Source: GDyn-FS projections.

Figure 8: Projected terms of trade and trade under alternative policy scenarios, China (deviation from baseline)



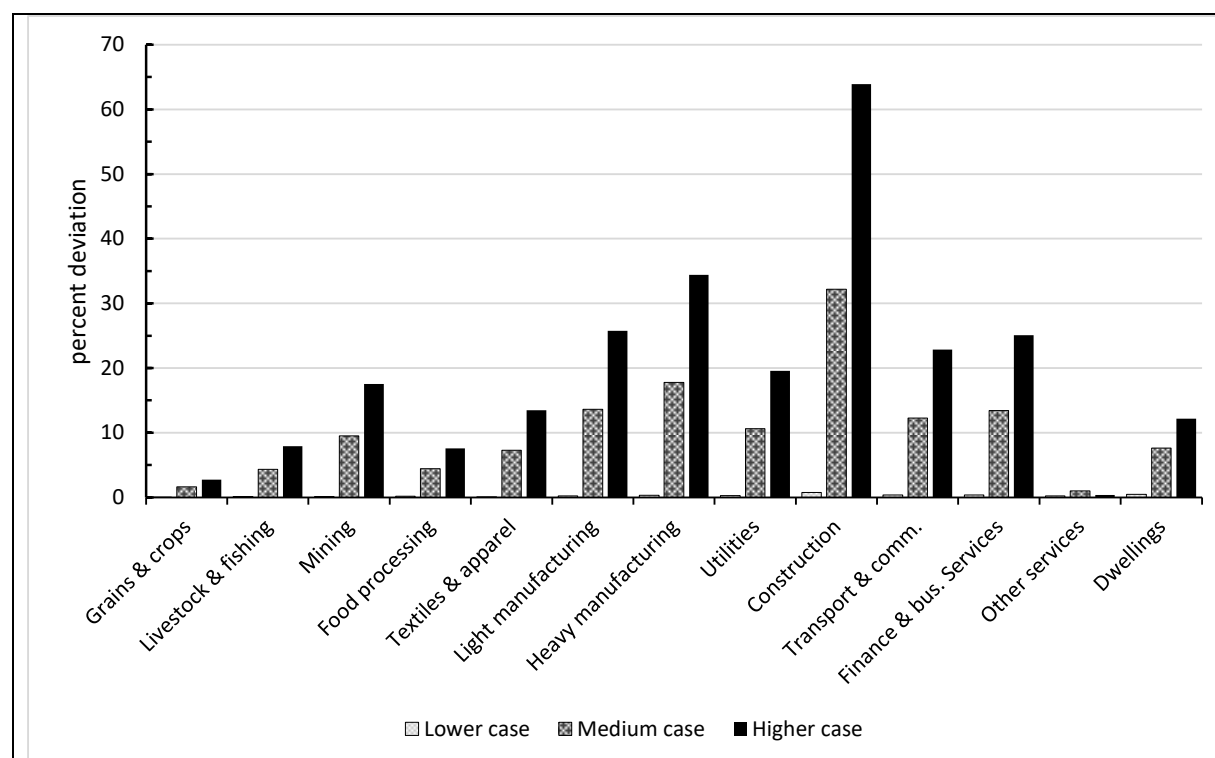
Source: GDyn-FS projections.

Figure 9: Projected income and consumption under alternative policy scenarios, China (deviation from baseline)



Source: GDyn-FS projections.

Figure 10: Illustrative projections of sectoral effects of alternative national saving and investment strategies at 2070, China (deviation from baseline, percent)



Source: GDyn-FS projections.

Table 1: Historical peaks of current account surpluses of major countries (percent)

Country	Year	Current account surplus as a share of GDP	The economy's GDP as share of global GDP	Current account surplus as a share of global GDP
		%	%	%
Britain	1913	10	8	0.9
US	1947	4	40	1.5
Japan	1986	4	14	0.5
Germany	2016	9	5	0.4
China	2007	10	6	0.6
	2022	2	18	0.4

Source: World Bank Open Data and Maddison (2009).

Table 2: Average annual growth in key demographic and economic variable by decade, 2001 to 2070, China (percent)

		2001 - 2010	2011 - 2020	2021 - 2030	2031 - 2040	2041 - 2050	2051 - 2060	2061 - 2070
Demographic and labour market variables								
Population	%	0.58	0.54	0.44	0.01	-0.59	-0.82	-0.96
Employment	%	0.39	0.09	-0.38	-1.18	-0.99	-1.73	-1.52
Unskilled	%	-0.12	-0.54	-1.17	-2.23	-2.12	-3.22	-3.26
Skilled	%	3.18	3.67	2.64	1.57	1.09	0.24	0.11
Economic variables								
Real GDP	%	10.57	6.84	4.93	2.65	1.57	0.79	0.46
Fixed capital	%	11.67	7.26	4.41	2.50	1.62	0.95	0.56
Investment	%	15.91	6.53	1.63	1.26	0.84	0.12	0.13

Source: Historical estimates based on WDI, ILO and PWT data; forward projections based on IMF, ILO, and OECD SSP2 estimates and GDyn-FS projections.

Table 3: Longer-run Gross saving and Gross investment to GDP scenarios, China

Gross saving to GDP				Gross investment to GDP			
	Policy scenario				Policy scenario		
Baseline	1 Lower	2 Medium	3 Higher	Baseline ^a	1 Lower	2 Medium	3 Higher
%	%	%	%	%	%	%	%
27.0	27.0	33.0	38.0	24.9	25.0	31.0	36.0

a. Model projection given baseline growth assumptions and model theory.

Source: Gretton (2021b); Author conjectures.

Table 4: Illustrative projections of economy-wide adjustments to alternate saving and investment scenarios, China, deviation from baseline, ratio

			After 40 years (at 2070)		
	Label		Lower	Medium	Higher
Summary indicators					
GDP	qgdp	%	0.300	10.199	18.854
Capital	qk	%	0.684	26.818	52.191
Real gross rate of return - target	rorgt	% pts	-0.031	-1.087	-1.819
Real gross rate of return -expected	rorge	% pts	-0.031	-1.107	-1.851
Real gross rate of return - actual	rorga	% pts	-0.031e	-1.116	-1.873
Rental price of capital services	rental	%	-0.270	-12.066	-20.201
Real net national income	yreal	%	0.267	8.512	15.313
Real income – unskilled labour	pfactreal	%	0.267	10.617	19.797
Real income – skilled labour	pfactreal	%	0.272	5.716	9.675
Real capital rentals	pfactreal	%	-0.292	-9.687	-16.279
Real land rentals	pfactreal	%	0.208	8.039	14.172
Real natural resource rentals	pfactreal	%	0.415	33.440	64.377
Terms of trade	tot	%	0.022	-2.274	-4.170
BoT to GDP	DTBALRG	% pts	-0.001	0.001	0.003
CAB to GDP	DCABRG	% pts	-0.001	0.004	0.008
Final demand quantum					
Real consumption	qcons		0.285	1.489	0.833
Real private consumption	qpriv	%	0.313	2.094	1.822
Real government consumption	qgov	%	0.209	-0.120	-1.780
Real investment	qcgds	%	0.797	34.869	69.374
Volume of exports	qxwreg	%	-0.158	12.801	24.791
Volume of imports	qiwreg	%	0.458	10.051	18.746
Final demand prices					
Consumption	pcons		0.050	-2.054	-3.749
Private consumption	ppriv	%	0.022	-2.634	-4.684
Government consumption	pgov	%	0.126	-0.477	-1.189
Investment	pcgds	%	0.027	-1.646	-2.940
Price of exports	psw	%	0.016	-2.017	-3.582
Price of imports	pdw	%	-0.006	0.263	0.613
GDP deflator	pgdp	%	0.048	-1.746	-3.137
Factor prices					
Unskilled labour	pm	%	0.289	7.703	14.186
Skilled labour	pm	%	0.294	2.932	4.538
Capital	pm	%	-0.270	-12.066	-20.201
Land	pm	%	0.230	5.193	8.824
Natural resources	pm	%	0.437	29.925	56.677
Income and outlay					
Net national income	y	%	0.288	5.654	9.911
Consumption	yc	%	0.335	-0.596	-2.948
Saving	ys	%	0.031	40.208	81.010
Consumption price	pcons	%	0.050	-2.054	-3.749
Saving price	psave	%	0.026	-1.537	-2.758
Local capital income & holdings					
Capital income of firms	yq_f	%	0.229	3.428	5.369
Capital income from abroad	yqht	%	0.011	0.806	1.512
Capital income accruing abroad	yqtf	%	0.058	-3.191	-6.388
Local firms capital holdings	wq_f	%	0.711	24.731	47.717
Outward investment holdings	wqht	%	0.051	2.472	4.668
Inward investment holdings	wqtf	%	0.540	16.749	31.234

			After 40 years (at 2070)		
Label			Lower	Medium	Higher
Global trust capital income and holdings					
Rate of return (actual)	rorga_r	%	-0.029	-1.196	-2.187
Price of holdings	pqtrust	%	-0.007	-0.068	-0.035
Capital income	yqt	%	-0.002	0.311	0.641
Holdings	wqt	%	0.038	1.988	3.808

Source: GDyn-FS model projections.

Table 5: Percentage point change in value adding factor shares after 40 years by component, China, deviation from baseline

		Land	Unskilled labour	Skilled labour	Capital	Natural resources
Lower case	% pts	0.000	-0.018	-0.012	0.029	0.000
Medium case	% pts	-0.006	-0.218	-1.182	1.240	0.166
Higher case	% pts	-0.012	-0.353	-2.201	2.267	0.299

Source: Based on GDyn-FS model projections.

Table 6: Percentage point change of source and use of income as a share of GDP after 40 years, China, deviation from baseline

		Depn of fixed capital	Capital income received from abroad	Capital income remittances abroad	Other receipts from abroad	Other remittances abroad	Income (net of depn)	Consumption	Saving
		<i>minus^a</i>	<i>plus</i>	<i>minus^a</i>	<i>plus</i>	<i>minus^a</i>			
Lower case	% pts	-0.031	0.014	0.028	0.041	-0.014	-0.063	-0.017	-0.046
Medium case	% pts	-2.244	-0.116	0.342	-0.004	0.024	-1.999	-5.728	3.729
Higher case	% pts	-4.180	-0.199	0.603	-0.007	0.044	-3.740	-10.976	7.236

a. A negative change indicates a smaller percentage points deduction in the share of GDP in the derivation of income, that is, the item is proportionately smaller relative to (nominal) GDP in the projection relative to the base case; a positive change indicates a larger percentage points deduction, that is, the item is proportionately larger relative to GDP in the projection relative to the base case.

Source: Based on GDyn-FS model projections.

Table 7. Percentage point changes in final demand shares after 40 years by component, China, deviation from baseline

		Private consumption	Government consumption	Investment	Exports (fob)	less Imports (cife)
Lower case	% pts	0.033	-0.050	0.142	0.540	-0.367
Medium case	% pts	-4.176	-1.552	5.595	1.059	-0.628
Higher case	% pts	-8.002	-2.975	10.637	1.526	-0.889

Source: Based on GDyn-FS model projections.

Table 8: Percentage point changes in share of firm capital-finance sourced from abroad after 40 years, China, deviation from baseline

Low case	% pts	-0.024
Central case	% pts	-0.902
Higher case	% pts	-1.539

Source: GDyn-FS projections.

Table 9. Percentage point changes share of local wealth held abroad, China, deviation from baseline

Low case	% pts	-0.083
Central case	% pts	-1.177
Higher case	% pts	-1.931

Source: GDyn-FS projections.

Table 10: Sensitivity of the Lower saving-investment assumption scenario to alternative assumptions about the desirability of investing in China

	Label		Scenario 1 Lower saving and investment	Increased desirability of investing in China, given lower bound saving constant
GDP	qgdp	%	0.300	10.644
Capital	qk	%	0.684	21.949
Investment	qcgds	%	0.797	21.595
Gross rate of return	DRORG	% points	-0.031	-0.766
Real national income	yreal	%	0.267	9.285
Real consumption	qcons	%	0.285	11.000
Private consumption	qpriv	%	0.313	11.933
Government consumption	qgov	%	0.209	8.530
Trade				
Export volumes	qxwreg	%	-0.158	-2.696
Import volumes	qiwreg	%	0.458	14.399
Terms of trade	tot	%	0.022	-0.039
Structural ratios				
Balance of trade to GDP	TBTOGDP	ratio	0.05	0.02
Gross Saving to GDP	RSAVEG	ratio	0.28	0.27
Gross Investment to GDP	RINVG	ratio	0.26	0.29
CAB to GDP	CABTOGDP	ratio	0.01	-0.01

Source: GDyn-FS projections.

Table 11: Sensitivity of the Higher saving-investment scenario to alternative assumptions about the rate of saving in China, 2070

	Label		Scenario 3 Higher saving and investment	Lowering rate of saving in China while maintaining investment
GDP	qgdp	%	18.854	29.218
Capital	qk	%	52.191	66.513
Investment	qcgds	%	69.374	84.705
Gross rate of return	DROR	% points	-1.873	-1.909
Real national income	yreal	%	15.313	23.968
Real consumption	qcons	%	0.833	16.506
Private consumption	qpriv	%	1.822	18.376
Government consumption	qgov	%	-1.780	11.623
Trade				
Exports	qxwreg	%	24.791	7.547
Imports	qiwreg	%	18.746	37.305
Term of trade	tot	%	-4.170	0.661
Structural ratios				
Balance of trade to GDP	TBTOGDP	ratio	0.056	0.002
Gross Saving to GDP	RSAVEG	ratio	0.388	0.346
Gross Investment to GDP	RINVG	ratio	0.355	0.372
CAB to GDP	CABTOGDP	ratio	0.033	-0.027

Source: GDyn-FS projections.

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Appendix A: GTAP industries and industry sectoring adopted

No.	GTAP code	Industries	No.	Industry sectors adopted
1	pdr	Paddy rice	1	Grains, Crops, Forestry
2	wht	Wheat	1	Grains, Crops, Forestry
3	gro	Cereal grains nec	1	Grains, Crops, Forestry
4	v_f	Vegetables, fruit, nuts	1	Grains, Crops, Forestry
5	osd	Oil seeds	1	Grains, Crops, Forestry
6	c_b	Sugar cane, sugar beet	1	Grains, Crops, Forestry
7	pfb	Plant-based fibres	1	Grains, Crops, Forestry
8	ocr	Crops nec	1	Grains, Crops, Forestry
9	ctl	Cattle, sheep, goats, horses	2	Livestock, fishing
10	oap	Animal products nec	2	Livestock, fishing
11	rmk	Raw milk	2	Livestock, fishing
12	wol	Wool, silk-worm cocoons	2	Livestock, fishing
13	frs	Forestry	1	Grains, Crops, Forestry
14	fsh	Fishing	2	Livestock, fishing
15	coa	Coal	3	Mining
16	oil	Oil	3	Mining
17	gas	Gas	3	Mining
18	omn	Minerals nec	3	Mining
19	cmt	Meat: cattle, sheep, goats, horse	4	Processed food
20	omt	Meat products nec	4	Processed food
21	vol	Vegetable oils and fats	4	Processed food
22	mil	Dairy products	4	Processed food
23	pcr	Processed rice	4	Processed food
24	sgr	Sugar	4	Processed food
25	ofd	Food products nec	4	Processed food
26	b_t	Beverages and tobacco products	4	Processed food
27	tex	Textiles	5	Textiles and clothing
28	wap	Wearing apparel	5	Textiles and clothing
29	lea	Leather products	6	Light manufacturing
30	lum	Wood products	6	Light manufacturing
31	ppp	Paper products, publishing	6	Light manufacturing
32	p_c	Petroleum, coal products	7	Heavy manufacturing

No.	GTAP code	Industries	No.	Industry sectors adopted
33	crp	Chemical, rubber, plastic products	7	Heavy manufacturing
34	nmm	Mineral products nec	7	Heavy manufacturing
35	i_s	Ferrous metals	7	Heavy manufacturing
36	nfm	Metals nec	7	Heavy manufacturing
37	fmp	Metal products	7	Heavy manufacturing
38	mvh	Motor vehicles and parts	7	Heavy manufacturing
39	otn	Transport equipment nec	7	Heavy manufacturing
40	ele	Electronic equipment	7	Heavy manufacturing
41	ome	Machinery and equipment nec	7	Heavy manufacturing
42	omf	Manufactures nec	6	Light manufacturing
43	ely	Electricity	8	Utilities
44	gdt	Gas manufacture, distribution	8	Utilities
45	wtr	Water	8	Utilities
46	cns	Construction	9	Construction
47	trd	Trade	10	Transport and communication
48	otp	Transport nec	10	Transport and communication
49	wtp	Sea transport	10	Transport and communication
50	atp	Air transport	10	Transport and communication
51	cmn	Communication	10	Transport and communication
52	ofi	Financial services nec	11	Financial services nec
53	isr	Insurance	11	Financial services nec
54	obs	Business services nec	11	Financial services nec
55	ros	Recreation and other services	12	Other services
56	osg	Public administration, defence, education, health	12	Other services
57	dwe	Dwellings	13	Dwellings

Source: Author's GTAP version 9a data base aggregation.

Appendix B: Supplementary note on the GDyn-FS model

The GDyn-FS model used as the foundation for this study develops GDyn to: (i) include a capability to project a stable long-run base line with non-convex adjustment costs; (ii) introduce a rate-of-return rule for the allocation of saving between regions (capital-finance flows); (iii) relax the assumption of fixed shares (the Cobb-Douglas assumption) in the consumption-saving decisions of national households; (iv) allow for the trade in second-hand assets between sectors through imperfect mobility of capital across activities within regions; (v) relax the Leontief technology assumption in intermediate input use; (vi) include exogenous national consumption-saving choices and trade intensities; (vii) include explicit modelling of the balance of payments trade and current account balances; and (viii) provide for the rebalancing of capital ownership between regions to allow for changes in portfolio preferences, other structural changes and policy interventions not explicitly modelled.

Following Gretton (2021a), the model adopts the trade and production technology parameters provided in the standard GDyn database with two modification: (i) the Leontief fixed real input technology assumption is relaxed to allow input substitution in response to relative price changes and gradual change in input shares over time with an elasticity value of 1.2 across sectors; and (ii) labour and capital are treated as immobile between sectors (that is, sluggish) between years in place of the assumption of perfect mobility with a constant-elasticity-of transformation (CET) elasticity value of -20 for labour and -10 for capital. The settings afford stickiness in the short run and gradual change towards full adjustment after about 20 years. Foreign-domestic investment parameters have been set to reflect a home-country bias associated with the Felstein-Horioka (1980) hypothesis and consumption-saving constant-elasticity-of-substitution (CES) elasticities relax the fixed share assumption of the original model to allow a limited degree of substitution between consumption now and in the future via saving. The fixed share assumption is maintained between private and government consumption.

The adjustment parameters on the trade, saving, investment and the CAB as shares of GDP determine the rate at which the respective shares converge toward the relevant target rates by region. Following Gretton (2021b), partial adjustment parameter values of 0.075 are adopted. This parameter value affords a half-life of 7 years with adjustment approaching completion after 50 years.