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OVERVIEW

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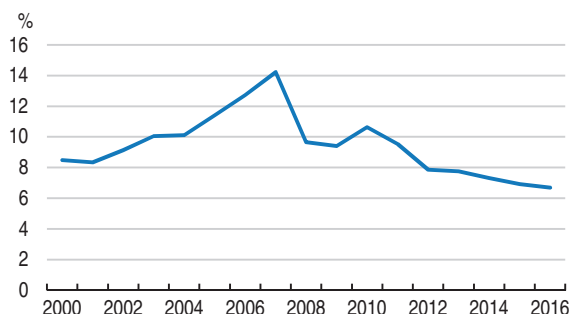
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Executive summary

- *Managing the gradual slowdown*
- *Boosting corporate dynamism and performance*
- *Ensuring inclusive growth by enhancing opportunities*

Managing the gradual slowdown

Growth is still high, but is gradually and appropriately moderating



Source: OECD Economic Projections 100 Database.

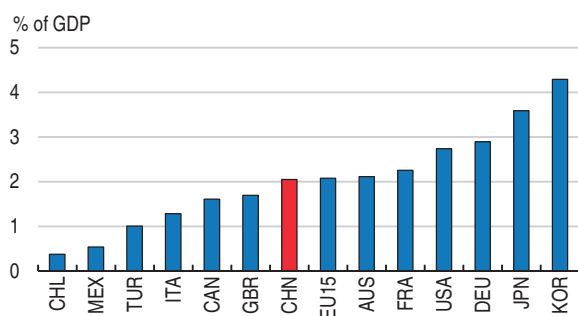
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Growth remains high but is gradually moderating as the population ages and the economy rebalances from investment to consumption, from external to internal demand and from manufacturing to services. Orderly rebalancing requires addressing corporate over-leveraging, overcapacity in real estate and heavy industries, and debt-financed over-investment in asset markets. Fostering innovation and moving to more efficient and less energy-intensive production is key to raising productivity as well as to improving the quality of growth and making it more sustainable. At the same time, growth needs to become more inclusive. To measure progress on those fronts, better and more timely data provision is crucial.

Boosting corporate dynamism and performance

R&D spending is higher than in a number of OECD countries

2014 or latest



Source: OECD MSTI database.

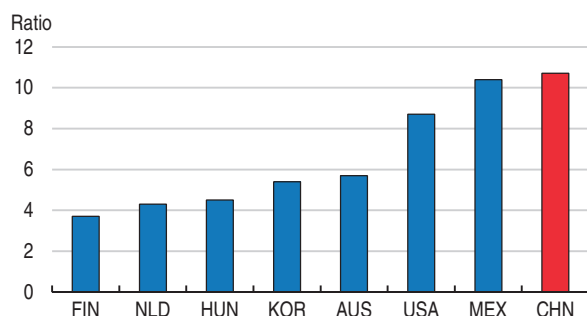
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Spending on research and development is far above countries with similar GDP per head, though it remains behind the United States and Japan. Patent numbers are soaring on the back of generous subsidies but the share of invention patents is small. Business creation has been made easier through the removal and unification of licenses, but too many firms are unviable. Corporate governance is being strengthened, including for state-owned enterprises, through enhanced external monitoring and internal control, though on-the-ground progress needs to accelerate. Stepped-up efforts to curb corruption will improve the quality and resilience of growth.

Ensuring inclusive growth by enhancing opportunities

Disposable income of the top 20% over that of the bottom 20% of the income distribution

2016 or latest available



Source: China National Bureau of Statistics, OECD Income Distribution Database.

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Income inequality has declined and poverty even more so. Nevertheless, the income gap between the richest and poorest remains large. Policy reforms can greatly enhance the redistributive impact of the tax-and-transfer system, strengthen education and skills and improve the labour market opportunities of marginalised groups. Improving the adequacy and accessibility of healthcare and pensions would reduce the high household saving rate and benefit both individual well-being and economic growth.

MAIN FINDINGS	KEY RECOMMENDATIONS
Monetary policy and prudential regulation	
The stance of monetary policy is broadly appropriate, but the use of targeted policy instruments is rising.	Rely less on targeted monetary policy instruments.
Consumer finance is expanding rapidly.	Enhance prudential regulation by requiring lenders to take into account borrowers' repayment ability when extending loans.
Slower growth makes investment more risky and is driving funds to real estate and securities markets.	Restrict leveraged investment in asset markets.
Public spending and fiscal data	
Fiscal stimulus, including through policy bank lending, raises short-term growth but may lead to poor investments.	Conduct a prudent fiscal policy. Increase public spending efficiency by channelling funds to where returns are high such as education, health and social security and avoid misallocation of capital by allowing banks to better price risk.
Incomplete or tardy general government data hamper fiscal policy assessment.	Improve the quality, coverage and timeliness of fiscal reporting.
Greening growth	
Environmental standards are not enforced effectively enough and green taxes make up a very small share of tax revenues.	Effectively implement the December 2016 Environmental Protection Tax Law, stepping up enforcement efforts and raising environmental taxes.
China accounts for 27% of world carbon emissions and has committed to curb them. However, increased renewable capacity does not always translate into greater use.	Allow independent renewable generators to sell surplus energy and link renewable capacity expansion with the extension of the local power grid.
Promoting innovation	
Innovation is flourishing though only strategically important projects and new- and high-tech industries benefit from support.	Broaden the number of sectors benefiting from government support for innovation.
Intellectual property right violations deter registration of patents.	Strengthen intellectual property right protection by more systematically prosecuting violators and raising fines.
Improving corporate governance and pushing ahead with SOE reform	
SOE managers are often civil servants. The board often has a limited role in appointing and evaluating management and independent directors are not truly independent. SOEs are often burdened with social functions.	Professionalise the management of SOEs to make a clear division between business and politics. Hire truly independent directors and give the board authority to appoint and evaluate management as well as to decide management salaries and promotion. Where possible carry out SOEs' social functions separately from commercial operations to boost the efficiency of the latter.
Controlling shareholders often expropriate minority shareholders through related-party transactions.	Require the regular publication of company accounts and enhance disclosure standards for all firms.
Top executives have been found to embezzle State assets.	Raise penalties for individuals committing fraud.
SOEs and other public entities enjoy implicit guarantees that inflate corporate debt.	Gradually remove implicit guarantees to SOEs and other public entities to reduce contingent liabilities.
SOEs have large market shares in many sectors.	Reduce state ownership in commercially oriented, non-strategic sectors. Let unviable SOEs go bankrupt, notably in sectors suffering from over-capacity.
Strengthening social inclusiveness	
The gap between the richest and poorest is wide. Taxes and transfers have little redistributive impact. The system of social security contributions is regressive.	Base social security contributions on actual income earned. Increase central and provincial government social assistance transfers to poorer areas. Broaden the personal income tax base and increase tax progressivity. Implement a broad-based nationwide recurrent tax on immovable property and consider an inheritance tax that would include some basic inheritance allowance.
The retirement age is low, especially for women.	Gradually increase and unify the pension age to 65 and then index it to life expectancy.
Pension benefits cannot be readily transferred between locations, disadvantaging migrant workers.	Improve administrative procedures to make it easier to draw a pension in a different location from where it is earned.
Enrolment rates in early childhood education are relatively low for rural children.	Increase public funding for childcare and introduce incentives to encourage the participation of rural children in early childhood education.

Assessment and recommendations

- *Moderating growth*
- *Monetary policy is juggling two objectives: supporting growth and containing risks*
- *Mounting risks in the financial sector*
- *Loosening fiscal policy, tax reforms and inter-governmental fiscal relations*
- *Rebalancing growth*
- *Boosting corporate performance and entrepreneurship*
- *Improving well-being and economic prospects by making growth more inclusive*
- *Greening growth*

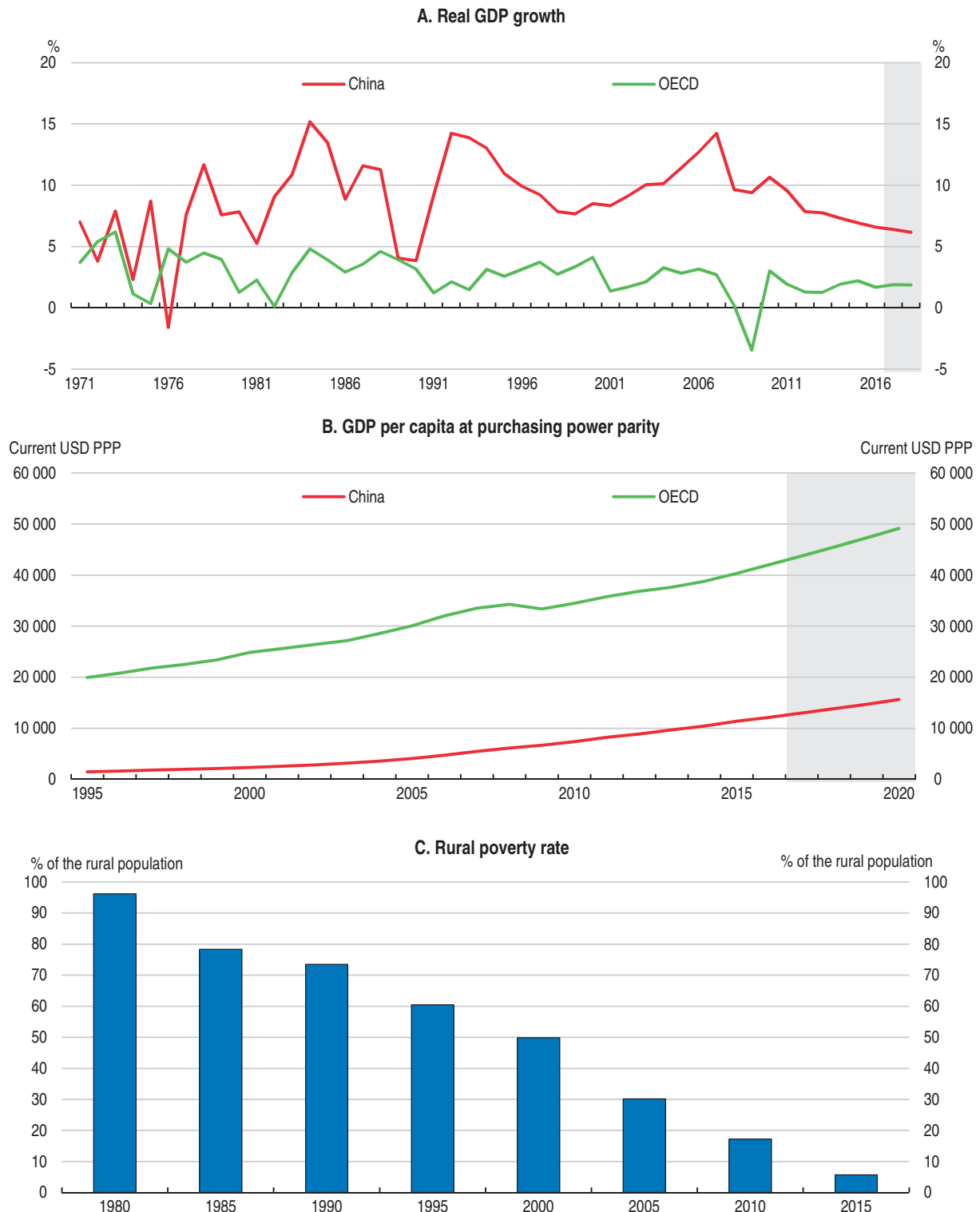
The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

As it enters the 13th Five-Year Plan period (2016-20), the Chinese economy continues to grow fast by international standards. While growth is slowing gradually, GDP per capita remains on course to almost double between 2010 and 2020 (Figure 1). As a result, the Chinese economy will remain the major driver of global growth for the foreseeable future. Notwithstanding the economy's impressive performance and unprecedented poverty reduction (Panel C), imbalances have built up. China's growth has long been driven by capital accumulation, supported by high savings. However, the growth model has led to misallocation of capital and falling investment efficiency, and to excess capacity in some manufacturing industries and in the real estate sector, which needs to be worked off. High enterprise investment was financed by debt, fuelled by interest subsidies and implicit guarantees for SOEs and other public entities. Effectively addressing sources of risk, such as excessive corporate leverage, real estate bubbles and leveraged investment in asset markets will help keep growth on a sustainable path. The authorities may need to forgo some growth in the short run to ensure greater stability over the longer run, with a wider spread of the benefits of growth across society and less stress on a highly polluted environment.

Against this backdrop, rebalancing of the economy towards consumption is key. It has made progress, with growth slowing only gradually. Consumption is supported by stable income growth, in particular in rural areas, which will help reduce the urban-rural divide and thus make growth more inclusive. Consumption-driven growth will also help rebalancing from manufacturing to services (Figure 2.A) and from external to internal demand.

Slowing growth implies lower profits for enterprises, and therefore greater pressure to improve efficiency. It also translates into slower growth of incomes and limits the fiscal resources available to make growth more inclusive. Improving corporate performance by boosting innovation activities and entrepreneurship, enhancing the standards of corporate governance and reforming state-owned enterprises (SOEs) by exposing them to market mechanisms would raise efficiency and boost household incomes, improve employment opportunities and raise people's overall well-being. Against this backdrop, the main messages of this *Economic Survey* are:

- Growth is still high, but is gradually and appropriately moderating as the population ages and the economy rebalances from investment to consumption. More widespread innovation and entrepreneurship, more effective corporate governance and state-owned enterprise reform are needed to improve the quality and resilience of growth.
- Financial risks are mounting on the back of high and rising enterprise debt, expanding non-bank activities and enormous over-capacity in some sectors. A burst of the housing bubble would hurt the real estate, construction and several manufacturing industries. However, household indebtedness remains moderate and prudential regulations for mortgage loans are stringent, so the financial sector could likely absorb the shock.
- Social safety net coverage has improved over the past decade, contributing to reduce poverty. Nevertheless, income inequality remains high. Social infrastructure needs to be further developed, especially for rural citizens, and the tax and transfer system made more progressive.

Figure 1. **Trend growth is moderating but convergence proceeds**

Note: The shaded areas indicate projections. Panel C is calculated based on China's 2010 rural poverty standard of CNY 2 300 annual per capita net income in 2010 prices.

Source: World Bank World Development Indicators database; OECD Economic Outlook 100 Database, OECD Long-term Baseline Projections 96, National Bureau of Statistics, China Statistical Yearbook 2016.


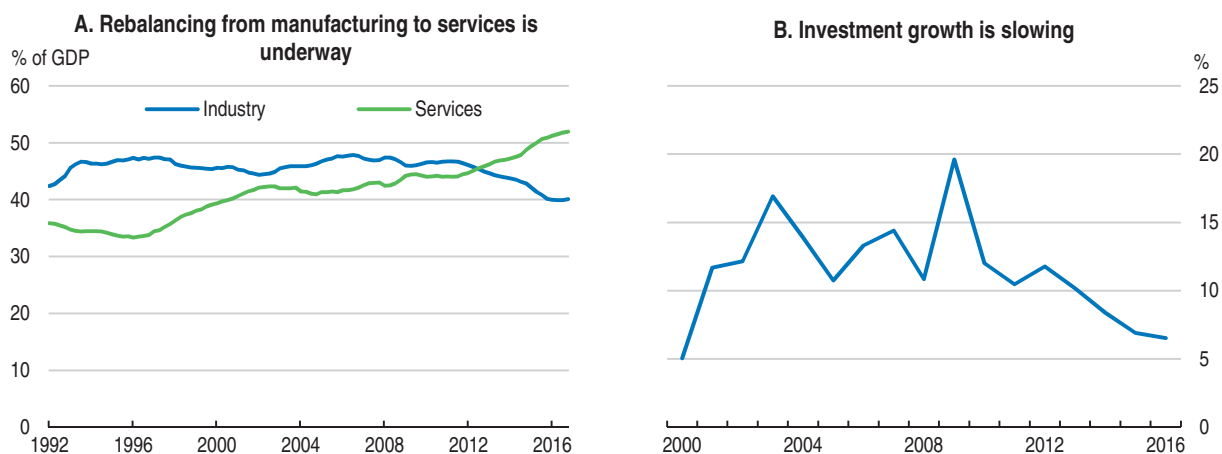
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Figure 2. **The economy is undergoing a number of transitions**

Note: In Panel A industry includes the mining, manufacturing and utilities sectors; services include construction. In Panel B investment is real gross fixed capital formation.

Source: OECD Economic Outlook 100 Database.

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Moderating growth

Growth is projected to inch down further (Table 1), as adjustment in manufacturing sectors plagued by excess capacity gathers momentum and investment slows (Figure 2.B). Patterns across the country vary, however: in some areas slowing investment has brought down growth, while in others, mainly less developed ones, both investment and GDP are growing at or close to double-digit rates (Figure 3). Cutting capacity is hard as it requires sub-national governments to find funds to relocate, compensate, re-train and re-employ redundant workers. Many, especially below the province level, cannot afford the costs.

Property investment has been supporting growth alongside infrastructure projects for most of 2016, but is now bottoming out as regional macro-prudential regulations are introduced to cool markets. Residential property prices have been rising since mid-2015, especially in “Tier 1” cities (Figure 4), worsening housing affordability in the largest urban metropolises. Price gains have been fuelled *inter alia* by monetary accommodation and the loosening of restrictions on property investment in 2015. In contrast, estimates suggest it could take over three years to work off housing inventories in China’s smallest cities even absent new residential construction (IMF, 2016a).

Restricted land supply has also propelled prices higher, notably in the “Tier 1” cities of Beijing, Shanghai, Shenzhen and Guangzhou. Local governments rely on land sales as a revenue source (OECD, 2015b), and therefore ration public land to keep prices up. Total land released for property development fell by 25% in 2014 and a further 21% in 2015, contributing to the existing lack of land for residential construction in many locations. In Shanghai, for example, the share of land available for residential property development is lower than in Tokyo and New York (Hong, 2016).

Table 1. **Macroeconomic indicators and projections**

	2010	2011	2012	2013	2014	2015	2016	2017	2018
	% change								
Real GDP	10.6	9.5	7.9	7.8	7.3	6.9	6.7	6.5	6.3
Exports of goods and services, volumes ¹	24.9	14.0	6.2	9.1	6.8	-2.0	2.3	3.4	3.3
Imports of goods and services, volumes ¹	18.1	16.0	7.1	11.0	9.3	3.9	8.6	7.7	6.0
GDP deflator	6.9	8.2	2.4	2.2	0.8	-0.5	0.7	2.0	2.5
Consumer price index	3.3	5.4	2.6	2.6	2.0	1.4	2.0	2.6	3.0
Terms of trade	-9.6	-3.7	2.6	1.0	2.8	12.8	0.0	-0.9	0.5
	% of GDP								
Fiscal balance									
Overall ²	-0.4	0.2	0.5	-0.3	-0.3	-1.5	-2.3	-2.5	-2.5
Headline ³	-2.2	-1.4	-1.1	-1.8	-1.7	-2.4	-2.9	-2.9	-3.0
Current account balance	3.9	1.8	2.5	1.5	2.7	3.0	1.9	1.2	0.9
Memorandum items:									
	Billion USD								
Foreign exchange reserves, end year	2 847	3 181	3 312	3 821	3 843	3 330	3 011		
	% change unless otherwise noted								
Housing prices deflated by the CPI ⁴	6.5	-1.3	-3.2	3.2	0.5	-5.3	4.4		
Total employment	0.4	0.4	0.4	0.4	0.4	0.3	0.2		
Urban employment	4.1	3.5	3.3	3.1	2.8	2.8	2.5		
Nationwide Gini coefficient for household disposable income (level)	48.1	47.7	47.4	47.3	46.9	46.2	46.5		

Note: 2017-18 projections are based on the OECD's March 2017 Interim Economic Outlook.

1. OECD estimates.

2. The overall fiscal balance encompasses the balances of all four budget accounts (general account, government managed funds, social security funds and the state-owned capital management account).

3. The headline fiscal balance is the official balance defined as the difference between the two items i) general budget revenue and ii) revenue from the stabilisation fund and carryovers on the revenue side and the two items iii) general budget spending and iv) replenishment of the central stabilisation fund on the spending side.

4. The housing prices are estimated using the property price index of 70 cities for 2008-10, then the simple average of the property price index of newly constructed residential housing for 2011-16.

Source: CEIC database; OECD March 2017 Interim Economic Outlook.

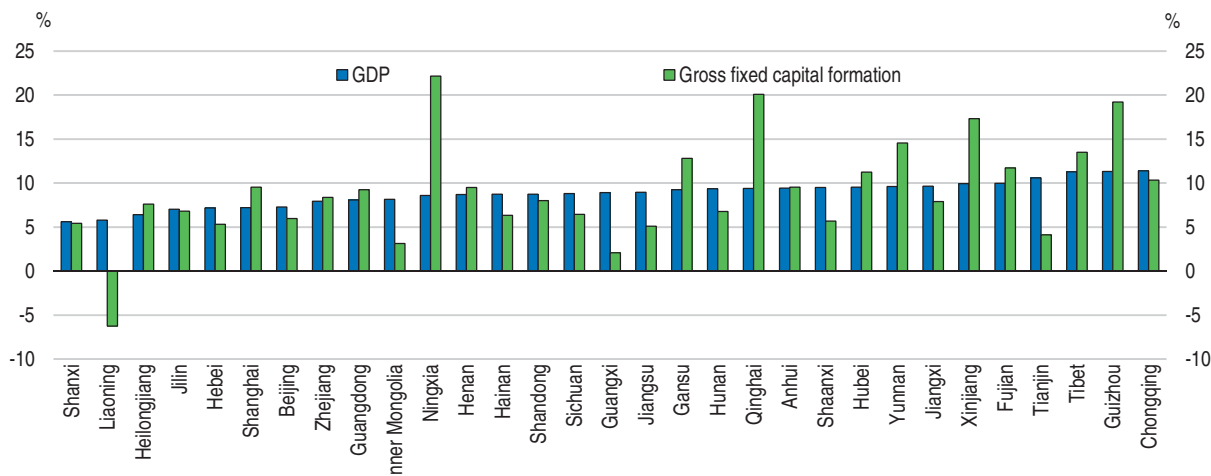
To temper the rapid increases in property prices in the largest cities, the authorities have tightened home purchase restrictions. In March 2016, mortgage down-payment ratios and restrictions on non-local buyers were raised in Shanghai and Shenzhen. Similar measures were subsequently introduced in Beijing and in Tier 2 cities such as Hefei, Xiamen, Suzhou, Wuhan and Chengdu.

Consumption has remained robust on the back of strong employment creation and steadily rising incomes, in particular in rural areas. E-commerce sales and tourism services imports have been very buoyant. Employment creation remains strong and (urban) unemployment low. Overall vacancy rates in dynamic big cities like Shanghai and Chongqing remain high, while in Shenyang, in the industrial rustbelt, labour demand continues to fall short of supply (Figure 5).

Trade has slowed (Figure 6, Panel A). Export sluggishness is related to the subdued global recovery, while the slowing of goods imports can be largely attributed to weak investment demand as capital goods make up a significant part of imports. The current account surplus remained relatively stable reflecting a sizeable and persistent surplus in

Figure 3. **The slowdown in growth and investment has been geographically uneven**

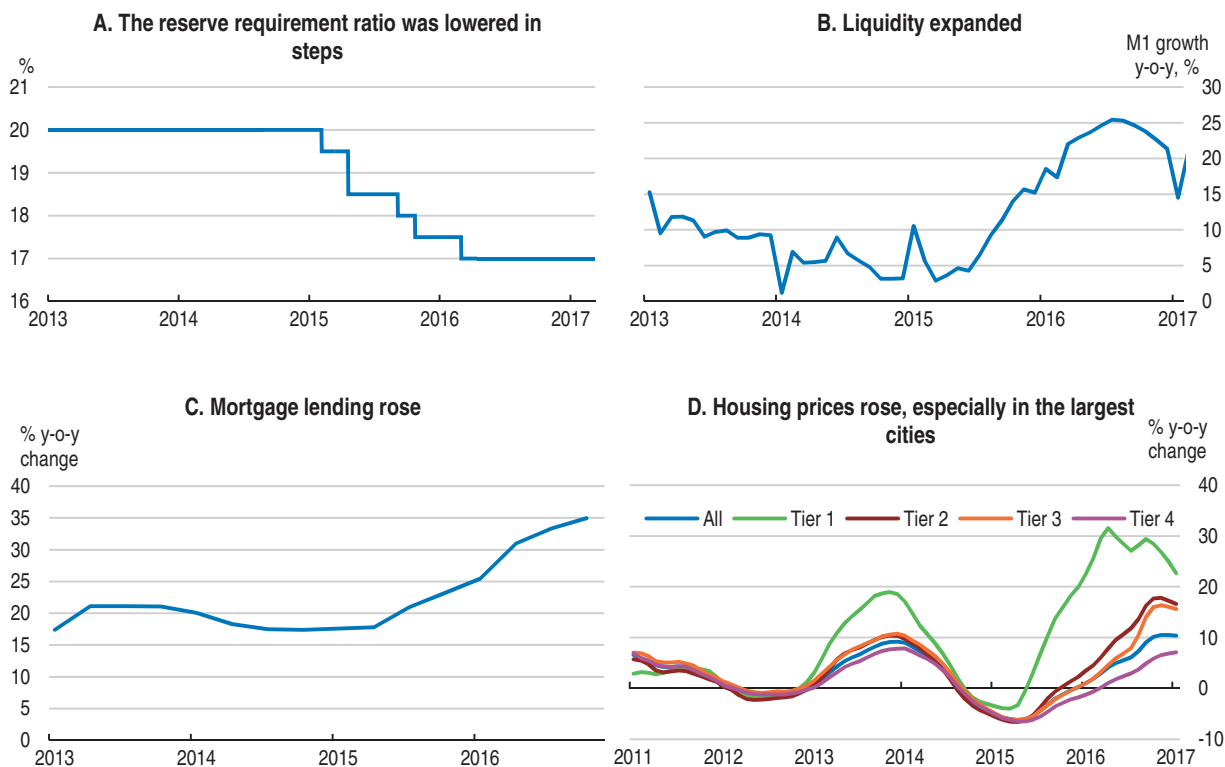
Compound average growth rate, 2012-15



Note: Both GDP and gross fixed capital formation are in real terms. The real gross fixed capital formation is calculated from the nominal figures using the province-specific fixed asset investment deflators. For Tibet, for which no deflator is available, the national average is used. Source: OECD calculations from data by the National Bureau of Statistics. Data for Liaoning are reportedly overstated.

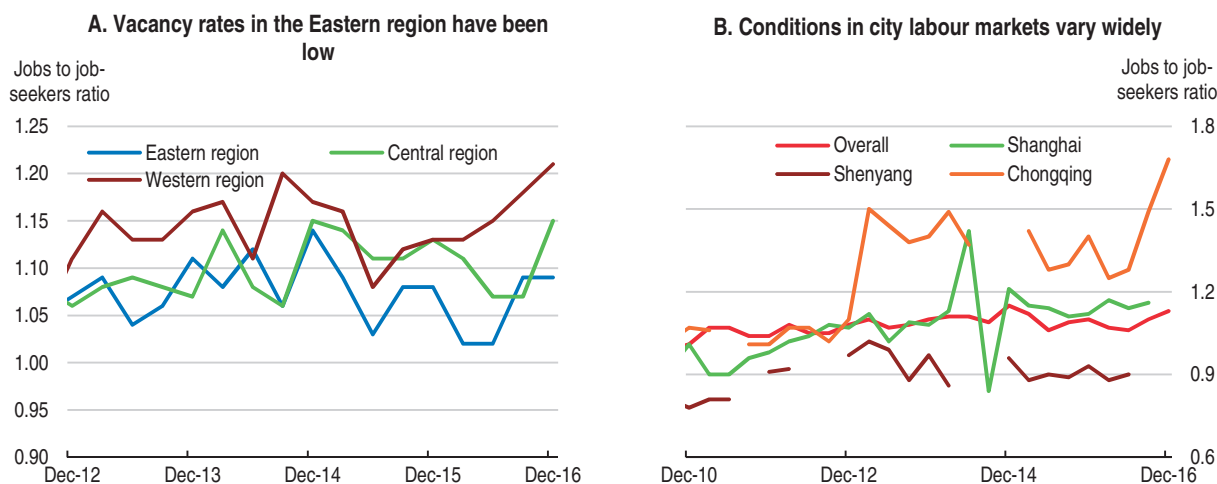
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Figure 4. **High liquidity has fuelled a housing boom**




Note: The reserve requirement ratio refers to large commercial banks; housing prices are calculated from the 70 cities residential property price index. Chinese cities are commonly classified into six tiers according to their economic and administrative importance. In Panel D, “Tier 1” comprises four cities (Beijing, Shanghai, Shenzhen and Guangzhou), “Tier 2” eight, “Tier 3” 11 and “Tier 4” 47. Source: CEIC database.

StatLink <http://dx.doi.org/10.1787/888933461741>

Figure 5. **Vacancy rates are high in some areas**

Note: Ratio above one means more jobs on offer than the number of job seekers in the respective category.

Source: China City Labour Force Survey, Ministry of Human Resources and Social Welfare.

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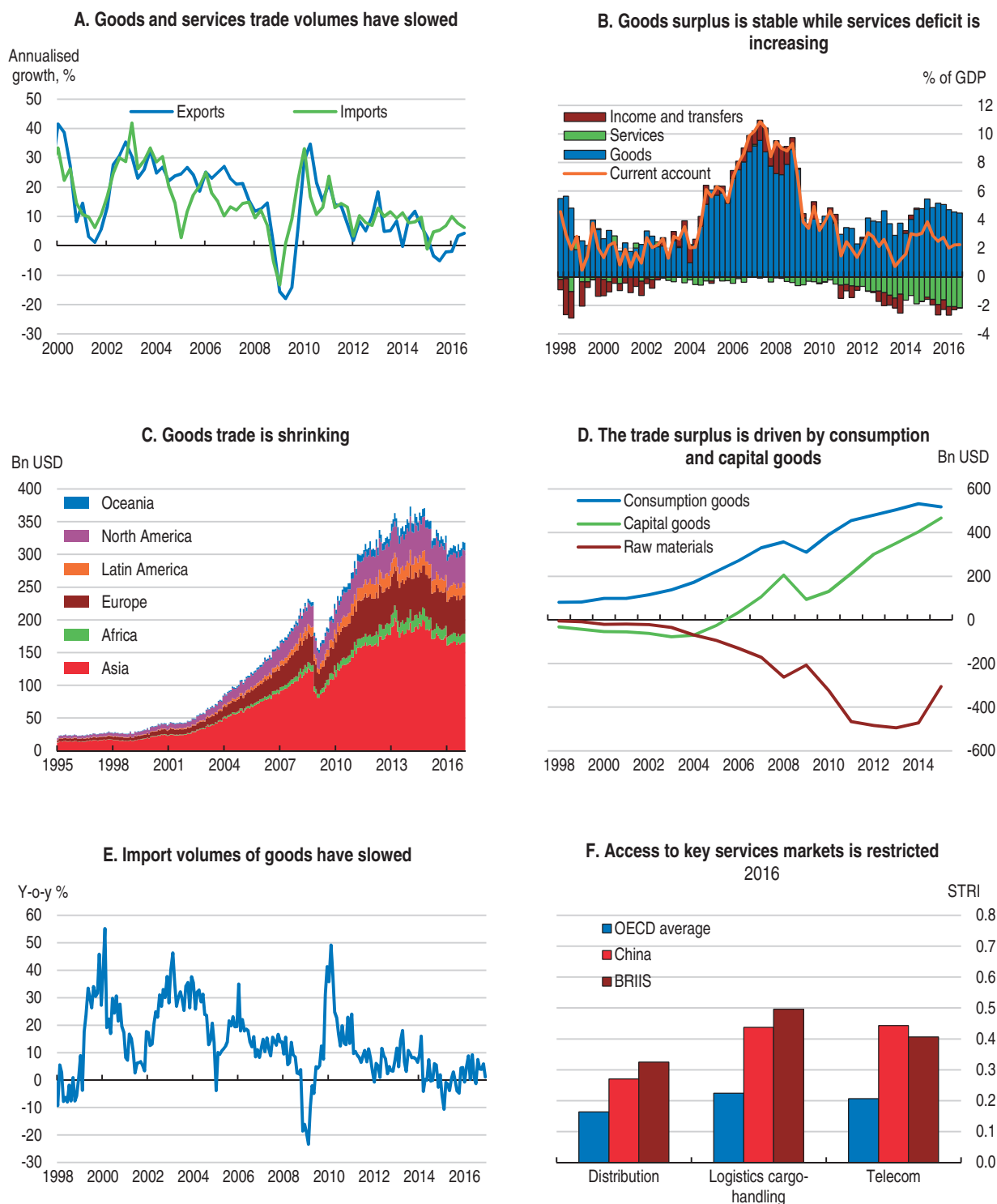
goods trade, even though overall goods trade is shrinking (Panel C). Capital goods have become an important contributor to the trade surplus (Panel D). In contrast to the large surplus in goods trade, the services deficit is soaring, due to a large increase in tourism imports (Panel B). Import volumes of goods have slowed (Panel E) as processing trade diminished and so have foreign global value chain (GVC) activities. As China is establishing its own GVCs, it will be even more important to provide the necessary services for that, in particular in the areas of distribution, logistics and telecom, where restrictions remain high (Panel F).

Producer prices have strongly accelerated (Figure 7), reflecting the combined and partly related effects of exchange rate depreciation, firming commodity prices and reduced excess capacity. Consumer price inflation, however, remains subdued.

Against this backdrop, growth will continue to slow gradually over 2017-18 (Table 1) but policy stimulus will help keep it above 6% (Table 1). Consumption will become a more prominent driver as investment slows, particularly in the private sector: i) on the back of adjustment in heavy industries; ii) amid declining returns on investment; and iii) due to still high entry barriers in the dynamic services sector. Consumption will be supported by stable employment and income growth. The fiscal deficit will widen somewhat as a result of stepped-up fiscal expansion. Inflationary pressures will rise somewhat due to higher raw material prices, but CPI inflation will remain relatively subdued.

Risks to the above projection are tilted to the downside. Soaring property prices in Tier 1 cities and leveraged investment in asset markets magnify vulnerabilities (Box 1) and the risk of disorderly defaults. Excessive leverage and mounting debt in the corporate sector compound financial stability problems even though a number of tax cuts are being implemented to reduce the burden on enterprises. Rapid adjustment in the real estate and industrial sectors would drag down growth, but is necessary to strengthen resilience. Supply-side policies, including deleveraging and working off excess capacity, are crucial to

Figure 6. Trade has slowed but the goods surplus has increased

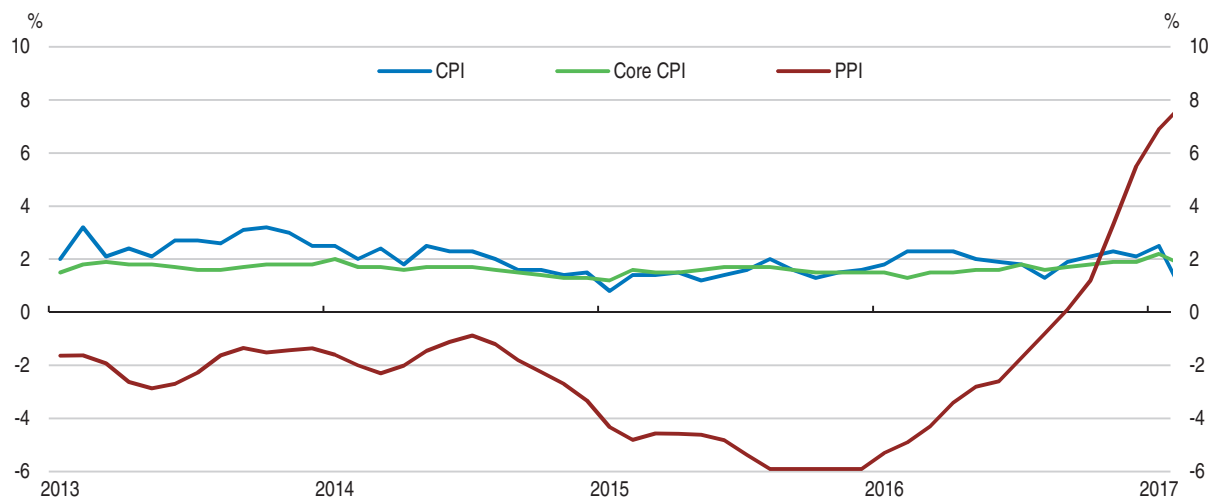


Note: Panel C shows the sum of goods exports and imports. In Panel F, BRIIS stands for Brazil, Russia, India, Indonesia and South Africa and STRI for the OECD Services Trade Restrictiveness Index.

Source: CEIC and OECD Services Trade Restrictiveness Index database.

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Figure 7. **Deflationary pressures are subsiding**
Per cent change over previous year



Note: Core CPI excludes food and energy.

Source: National Bureau of Statistics.

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Box 1. Key vulnerabilities

Vulnerability	Possible outcome
A sharp rise in trade protectionism	Protectionist measures by some trading partners would hurt Chinese exports, but would be mitigated over time by China seeking free trade agreements with others.
A steep fall in housing prices	A collapse in housing prices would hurt some sectors of the economy including real estate, construction, furnishing, home appliances and other related industries, but the impact of a steep fall in house prices would be mitigated by stringent prudential regulations governing household mortgage borrowing and the prohibition of withdrawing housing equity.
A significant increase in corporate defaults	Slowing growth and enterprise profits make it harder to service debt and can lead to further defaults, adversely affecting bank profitability and leading to liquidity problems. This, however, may be mitigated in the short term by the government's bailout of defaulters or persuasion of creditors not to exercise their right.

avoid a sharp slowdown. Greater-than-expected stimulus, in contrast, would result in stronger growth in the short term but larger imbalances later. On the upside, a stronger than foreseen global rebound would support Chinese exports and growth.

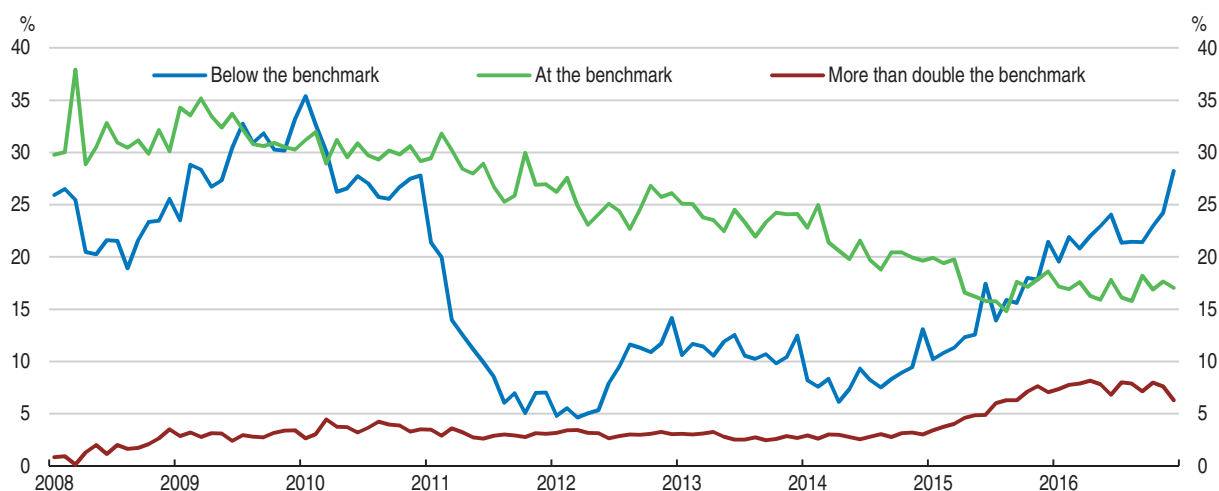
Monetary policy is juggling two objectives: supporting growth and containing risks

Monetary policy appropriately continued to ease in 2015-16 as activity slowed, stock prices fell and deflationary pressures persisted. The central bank continues to carefully manage liquidity conditions, which are particularly important for smaller banks, but recently concerns have risen over financial risks related to rising asset prices. The challenge will be to strike a balance between supporting demand and containing risk.

The monetary policy framework has become more market oriented, but at the same time recourse to targeted credit has been stepped up. The interest rate ceiling on deposits has been lifted – the last milestone in the interest rate liberalisation process (Box 2). Credit pricing seems to have improved as the share of loans at the benchmark rate has diminished while the share well above or well below has increased (Figure 8). However, the rising share of loans below the benchmark may be related to increased lending to SOEs and other public entities that carry implicit government guarantees. The PBoC has also introduced an interest rate corridor to guide key money market rates. However, at the same time, it has started to extend loans collateralised by qualified assets to banks for re-lending to SMEs and the agricultural sector. This measure, alongside other new tools such as the pledged supplementary lending and the medium-term lending facility, provides selective liquidity support (while also influencing lending rates). Reliance on such targeted instruments tends to hold back the move towards more market-based mechanisms.

Figure 8. The share of lending at the benchmark rate has fallen

Percentage of lending by interest rate relative to the benchmark interest rate

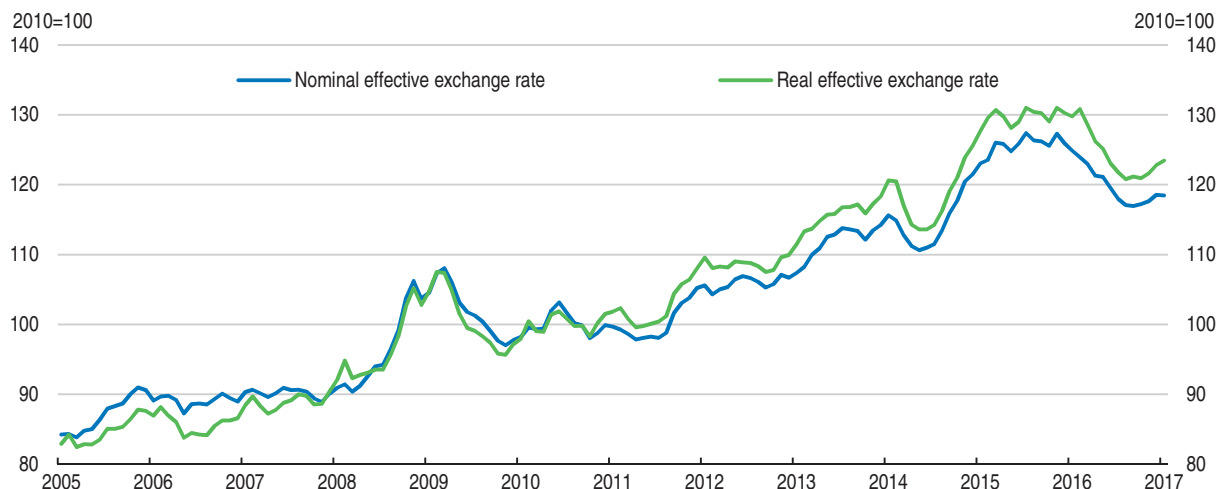


Source: CEIC database.


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Exchange rate flexibility was increased in August 2015, an important step towards an effectively floating exchange rate regime (IMF, 2016a). By mid-2016 the renminbi had retraced much of the gains it recorded over 2014-15 (Figure 9). Expectations of further renminbi depreciation triggered capital outflows and prompted the authorities to step in to defend the currency in the foreign exchange market, resulting in a sharp decline in foreign exchange reserves. The authorities also tightened restrictions on some types of capital outflows and took measures to encourage inflows. Capital outflows are also a result of portfolio reallocation between renminbi and foreign currency assets by the private sector, which is likely to continue in the foreseeable future. The inclusion of the currency in the IMF special drawing rights basket in October 2016, however, is likely to boost demand for renminbi-denominated assets in the medium term, thereby mitigating the impact of capital outflows, a slowing economy and falling returns (Prasad, 2016). Overall, further flexibility should come with greater market determination of the exchange rate, which can serve as a cushion to absorb shocks as the capital account opens up further, as emphasised in the 2015 *Economic Survey*.

Figure 9. Trend exchange rate appreciation has ceased
Nominal and real effective exchange rates (2010 = 100)

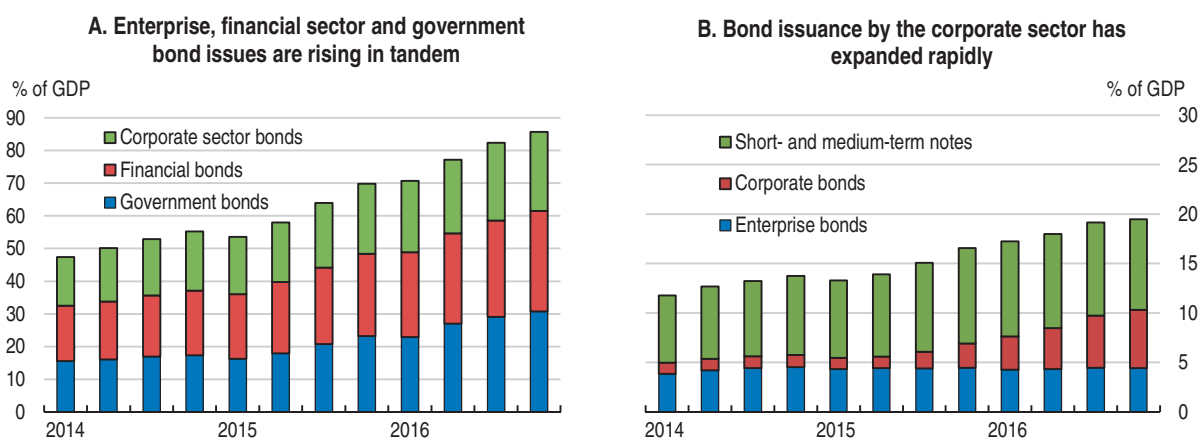


Source: Bank of International Settlements database.

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The kick-start of sub-national government bond issues in 2015 and more recently the surge in special bonds to support infrastructure projects, have expanded the bond market, which is now the third largest worldwide. As banks – the largest investors – tend to hold to maturity and other investors that tend to trade more such as insurance and securities companies play a limited role, the secondary market remains illiquid. The bond market is rather segmented by regulation (Ma and Yao, 2016). Banks are restricted to the interbank market. Although the three main issuer types (the government, financial institutions and the non-financial corporate sector) seem to account for similar shares of the bond market (Figure 10, Panel A), in fact most issuers are government related: policy banks are the largest

Figure 10. The domestic bond market has developed rapidly



Note: Bonds outstanding, quarterly data. In Panel B, issues by government-sponsored institutions such as the Central Huijin Corporation and China Railways and private placement notes are not included. For the various bond types, the English equivalents of the original Chinese names are used.

Source: Wind database.

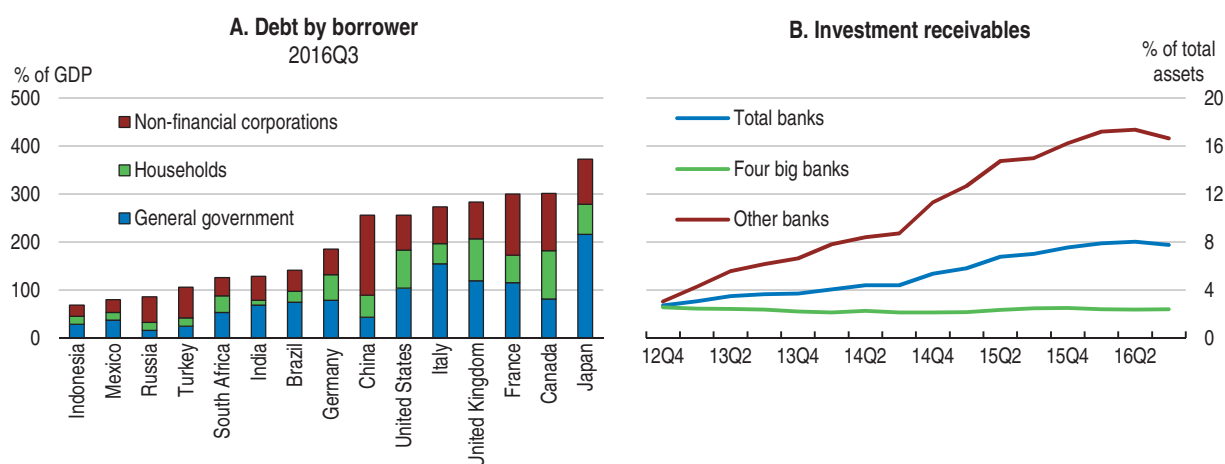
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issuers of financial bonds and SOEs alongside local government investment vehicles the largest non-financial corporate issuers. The issuance of enterprise bonds and short- and medium-term notes is supervised by different bodies (Panel B) and this paper is traded on different platforms with different investor mixes. Regulatory unification would increase liquidity, reduce regulatory arbitrage, save on supervisory costs and help develop a more efficient bond market. This would promote currency internationalisation and use of the renminbi as a reserve currency since reserve holders invest through high-grade bonds.

Mounting risks in the financial sector

Total private and public debt now exceeds 250% of GDP, up from 150% prior to the Global Financial Crisis. While both corporate and household debt have been rising rapidly, the outstanding stock of corporate debt is particularly high when compared with many OECD countries (Figure 11, Panel A) and other emerging economies.

Figure 11. **Corporate debt is particularly high**



Note: In Panel B, “Other banks” are 12 other A-share listed banks. Combined with the four big banks, these institutions account for around 60% of banking system assets. While investment receivables also include some government and corporate bond holdings, this line item mostly reflects the derivative products used by banks that are linked to NBFI lending such as trust beneficiary rights and directional asset management plans.

Source: Bank of International Settlements, WIND database, author calculations.

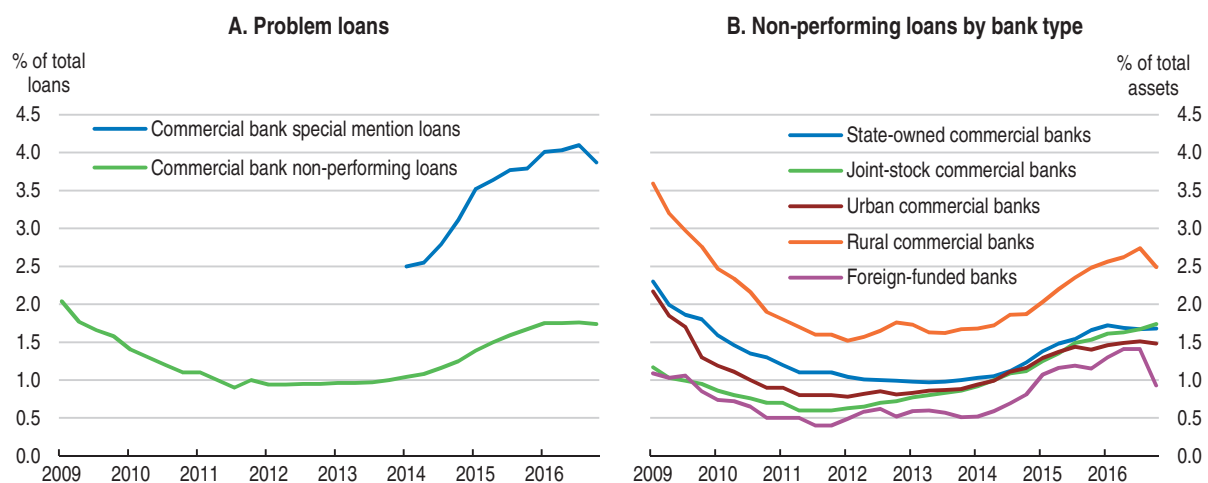
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Non-financial corporate debt rose from less than 100% of GDP at the end of 2008 to 170% by early 2016. This sharp pick-up was due in large part to increased leverage of SOEs. The rapid accumulation of corporate debt combined with a slowdown in economic activity and some of the practices of financial institutions have significantly heightened systemic risks. Banks continue to channel loans through non-bank financial institutions and then reduce capital requirements by holding the loan on their balance sheet as an “investment receivable” (OECD, 2015b). This activity has been particularly pronounced outside of China’s four largest banks (Figure 11, Panel B). In April 2016, the China Banking and Regulatory Commission (CBRC) issued Document 82, which outlined regulatory changes to the risk weighting and provisioning of some of the derivatives held by banks as investment receivables (CBRC, 2016). These regulations should be complemented by increased supervision of banks as they seek alternative channels to undertake regulatory arbitrage.

Issuance of wealth management products has continued. The funds from such securities have typically been used to extend corporate loans, but are now increasingly invested in other wealth management products. This may reflect banks' lower appetite to lend for investment in the real economy amid declining returns. Indeed, leveraged capital has increasingly been invested in asset markets, particularly the real estate, stock and bond markets. Cross-investment between wealth management products magnifies the risk of impairments being transmitted throughout the financial system. Such risks add to pre-existing vulnerabilities stemming from perceived implicit guarantees and maturity mismatches on these securities (Perry and Weltewitz, 2015; OECD, 2015b). Under the macroprudential framework announced in January 2016, banks are required to disclose wealth management product exposures on their balance sheet, which will benefit systemic stability. To further contain risks, more effective monitoring and control of leveraged investment in asset markets is required.

Non-performing loans (NPLs) have been on the rise since 2013 (Figure 12), partly reflecting overcapacity in some heavy industries. While the ratio of NPLs to total assets was less than 2% in mid-2016, this figure does not include those loans 90 days past due which bankers expect to recoup through selling collateral (PWC, 2015). Indeed, some estimates suggest that loan defaults are significantly higher than the aggregate NPL ratio suggests (IMF, 2016a). Special-mention loans – those perceived as problematic without being non-performing – have risen steeply in the past few years and there have been reports of banks “evergreening” loans to avoid reporting higher NPLs. In addition, defaults in China's corporate bond market have become more frequent, with some SOEs missing bond payments in 2016. This has resulted in a re-pricing of risk, with yields across various bond classes rising through mid-2016. A substantial increase in the scale of such defaults could trigger massive deleveraging and disorderly risk re-pricing in the bond market, exposing the banking sector to liquidity risk (as the banking sector is heavily exposed to corporate bonds via the sale of wealth management products).

Figure 12. **Problem loans are on the rise**



Source: Wind database.

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The authorities have initiated debt-to-equity swaps in heavily indebted enterprises and approved the issuance of credit default swaps that pay out if there is a default on the underlying loan. A debt-to-equity swap will be initiated for enterprises that cannot service their immediate debts but are considered to be financially sustainable in the medium to long term by the lender. Only a limited group of firms conform to both these conditions, restricting the potential scale of such measures. Indeed, few swaps have gone ahead so far as banks have been unwilling to take on the increased risk associated with becoming equity holders. The securitisation of NPLs has also been encouraged, which may be preferable to debt-to-equity swaps insofar as it reduces the exposure of banks to underperforming corporates and the NPLs are acquired by an entity with greater expertise in restructuring the company (Daniel et al., 2016). Nevertheless, China's securitisation market is relatively shallow at present, limiting the potential scale of such transactions. The government is also promoting business consolidation and debt restructuring in order to reduce financial risks. The Ministry of Finance and the State Administration of Taxation have recently announced preferential tax policies to this end. For example, value-added tax will not be levied on transfers of fixed assets and land-use rights.

Household debt rose from 30% of GDP at end 2012 to 40% by mid-2016, with strong growth in mortgages contributing to skyrocketing real estate prices in the largest cities (Figure 4). Nevertheless, the systemic risk of a sharp decline in property prices is partly mitigated by highly-regulated down-payment ratios and the inability of households to withdraw housing equity. Consumer finance has also grown rapidly, enabled by the expansion of online peer-to-peer lending platforms. Some of these new lenders are loosely regulated and do little to verify the repayment ability of borrowers. While financial institutions should be encouraged to lend only to people able to service their debt, improvements in household financial literacy are also needed. The planned development of a national strategy for financial education (Messy and Monticone, 2016) will benefit inclusiveness, but may also help alleviate risks in the financial sector.

Banks have financial buffers, but the aggregate loan-loss provision ratio has been declining since 2012. At mid-2016, it was highest for city commercial banks and lowest for China's large four banks. If 80% of reported NPLs and 40% of special-mention loans were to default (equivalent to 3.6% of GDP), the loan-loss provisions banks had set aside as of mid-2016 would be fully wiped out. Bank Tier 1 capital was around 11% of system risk-weighted assets in mid-2016, an increase from a year earlier but below the average Tier 1 capital ratio in OECD countries or in Brazil, Indonesia and South Africa.

Box 2. Past recommendations on monetary and financial policies and actions taken

OECD 2015 Survey recommendations	13th Five Year Plan and policies directly related to OECD recommendations
Enhance the role of the market and improve prudential regulation	
Phase out implicit government guarantees enjoyed by state-owned enterprises, so that all firms compete on a level playing field with regard to finance, regulation, taxation and public procurement.	The 13th FYP stipulates that the market should play a decisive role in the allocation of resources. The State Council issued the <i>Opinion to Establish Fair Competition Surveillance in the Market System</i> in June 2016 and the <i>Opinion on Adjustment and Reorganisation of Central Government-Owned Enterprises</i> in July to strengthen, reorganise or shut down central SOEs depending on their function. An increasing number of enterprises have entered bankruptcy procedures with the aim of re-organisation or liquidation amid rapidly increasing defaults, but bailouts still happen.
Continue to gradually liberalise deposit interest rates while enhancing financial stability through measures such as provisioning for actual bad loan exposures, including off-balance sheet loans.	Since October 2015, commercial banks and rural cooperative financial institutions are no longer subject to a deposit rate cap. The CBRC's April 2016 Document 82 introduced increased provisioning requirements by banks for exposures to off-balance sheet loans held as derivative products on their balance sheets.

Loosening fiscal policy, tax reforms and inter-governmental fiscal relations

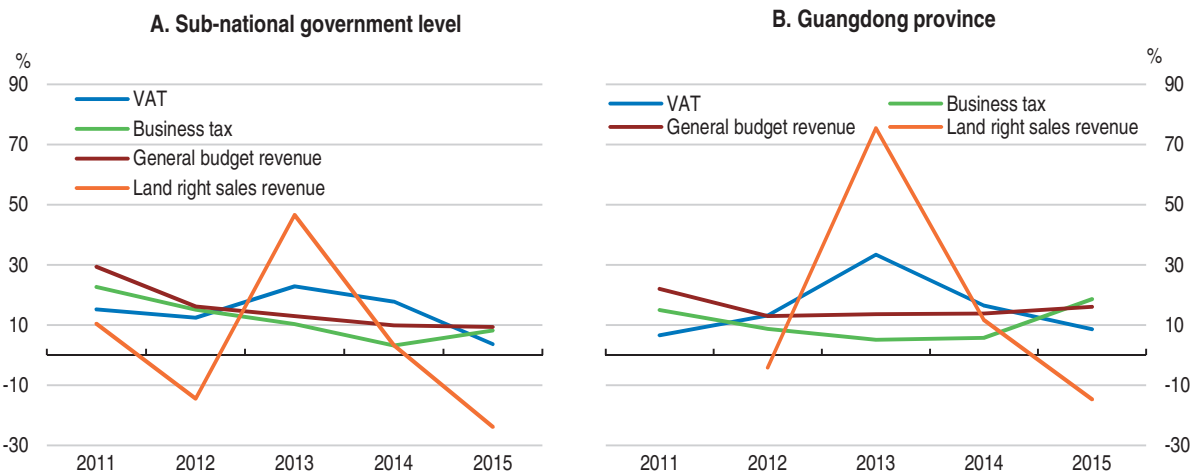
Fiscal policy is becoming increasingly expansionary to support growth. Even though there appears to be ample fiscal space as government debt is relatively low, future spending pressures related to ageing, the extension of the social safety net and the provision of public services call for more prudent fiscal policy. In addition to direct spending through the government budget, quasi-fiscal spending through policy banks, which have been recently re-capitalised, has also been rapidly rising. Interest subsidies make funding very cheap for selected government projects and entail risks of capital misallocation. Local government investment vehicles, which had transferred part of their debt to subnational governments, have been allowed to borrow again, which may lead to another round of government debt accumulation (Box 4).

Assessing the fiscal position is hampered by the poor quality, coverage and timeliness of fiscal data. Among the four budget accounts only the general budget account is published on a monthly basis; the fund budget, the social security fund and the state-owned capital management account are available annually and with a lag. Moreover, central stabilisation fund, sub-national budget adjustment and debt repayment data, which are needed to calculate the headline deficit, are also published with a lag. Furthermore, debt data at the sub-national level are not published regularly.

The transformation of the business tax levied on services into a value-added tax (VAT) was completed in May 2016 with finance, construction, real estate and personal services also moving to VAT. This move has significantly enhanced the neutrality of China's indirect tax system, in line with international standards. As the government pledged, the tax reform lightened the burden on firms, implying reduced budget revenues at the sub-national level as business tax revenues accrue to sub-national governments while the VAT is shared between central and sub-national authorities. Indeed, business tax revenues have been sliding as the tax is being phased out (Figure 13, Panel A). In 2013, sub-national governments resorted massively to land-right sale revenues to make up for the shortfall (Panel B). A fall in real estate prices would lower revenues from land-right sales and cause difficulties in provinces and municipalities such as Chongqing, Anhui or Zhejiang, where land-right sales revenues made up over 40% of revenues in 2014 (Figure 14). To make up for

Figure 13. The tax reform reduced sub-national revenues, prompting sub-national governments to draw on other sources

Changes in selected revenue types



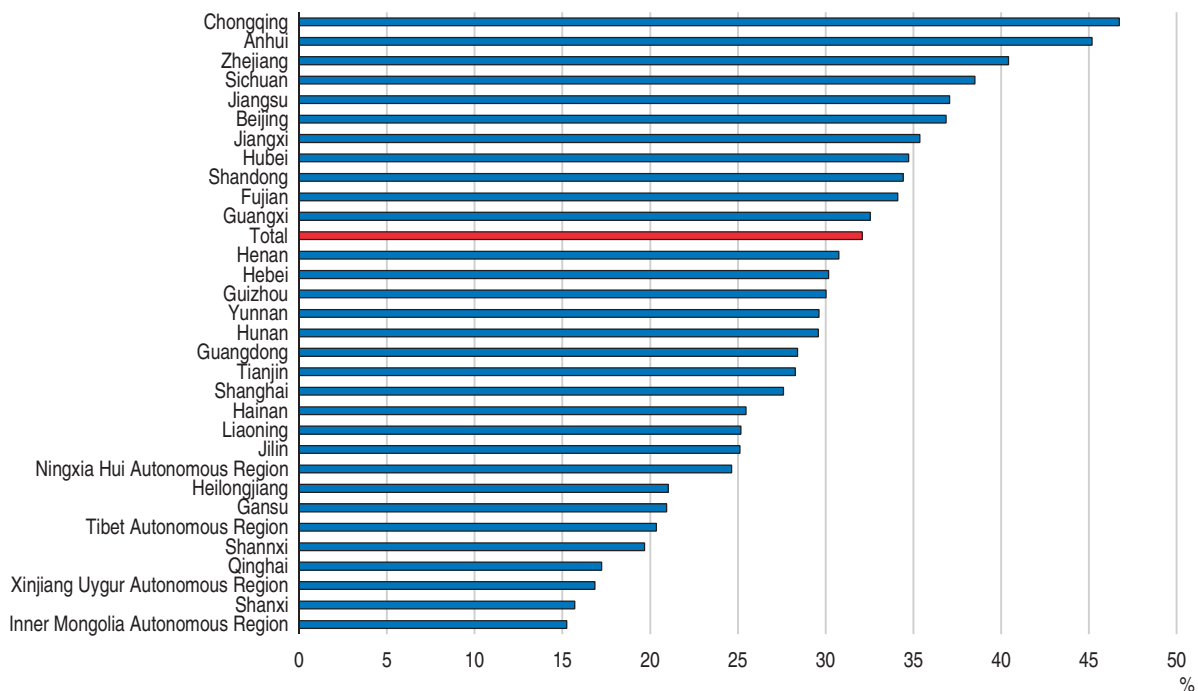
Note: The VAT and the business tax are recorded on the general budget account, the main among the four budget accounts, while land sales appear in the government fund budget account.

Source: Ministry of Finance and Guangdong Finance Bureau.

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Figure 14. Some sub-national governments rely heavily on land-related revenue

Share of land right sale revenue to total revenue in 2014



Note: Sub-national fiscal revenue is defined as the sum of general budget account revenue and fund account revenue.

Source: Sub-national Audit Offices and Finance Bureaus.

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the lost revenue so that long-term fiscal sustainability is not endangered, tax reforms in other areas need to continue. Potential sources of revenue include a more progressive personal income tax, and more comprehensive taxation of income beyond wages (including rent and other types of income) as well as a recurrent tax on immovable property and an inheritance tax. There is also ample room to raise environmental taxes. A fairer tax system would help reduce income and wealth inequalities and make growth more inclusive (see below).

Imbalances between revenues and spending mandates (Box 3) at the sub-national level (Figure 15) have persisted for decades (OECD, 2006). The higher degree of decentralisation of expenditure responsibilities relative to revenues has led to financing

Box 3. Revenue and spending assignments across government levels

The most recent major change in inter-governmental fiscal relations is the 1994 tax sharing reform, which achieved a higher central government revenue share. Since then, sharing rules have been modified for some taxes, but the system as a whole remained unchanged. The major tax revenues are subject to explicit sharing formulas between the central and provincial governments. The VAT is shared in a 50:50 proportion temporarily as the business-tax to VAT conversion deprived sub-national governments of a major revenue source (prior to the conversion 75% belonged to the central and 25% to sub-national governments). Income taxes are shared in a 60:40 proportion between the central and sub-national governments (corporate income taxes paid by financial institutions and the railway corporation and personal income taxes on interest income belong to the central government). Resource taxes belong to sub-national governments except offshore oil taxes, which are assigned to the central level. The central level has few tax sources exclusively assigned to it, though tariffs are. In contrast, several smaller taxes such as the contract tax and taxes on land use are assigned exclusively to the sub-national level. While these taxes are reported on the general budget account, some of the major revenue items for many sub-national governments, such as revenue from land right sales, are on the fund account.

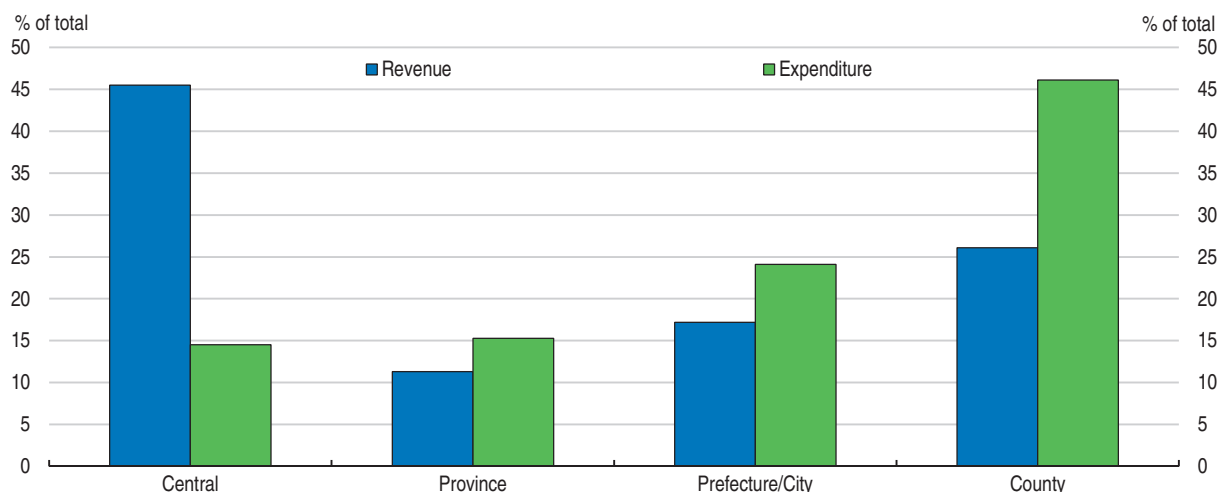
Spending is even more decentralised than revenues. The central government is in charge of national defence, armed police troops, diplomacy and external assistance and the national-level public security agency, procuratorial agency and court of justice. Sub-national governments are responsible for social-security-related spending, price subsidies, and sub-national public security and procuratorial agencies and courts of justice. Infrastructure investment is shared, with the central government being in charge of projects of national or interregional nature and sub-national governments of projects within their jurisdictions. Culture, education, science and public health are also shared according to similar principles. In general, however, assignments are not very clear and often overlap. The 2016 Guiding Opinion by the State Council aims at clarifying spending assignments between the central and sub-national levels. The details of the exact assignment of spending by item will be worked out by 2020. The Guiding Opinion designated some items, such as compulsory education as shared expenditure. In fact, the central government has already been supporting sub-national governments with financing the costs of several spending items that are assigned to the sub-national level such as compulsory education and poverty reduction.

Sharing of revenues and spending below the province level is determined at the discretion of the province.

Source: OECD (2006) and various State Council and Ministry of Finance documents.


Figure 15. **Fiscal revenue is mostly collected by the central government but mostly spent at county level**

2015



Note: Due to data availability, data are limited to the general public finance account and do not include the fund account, the social security funds account and the state-owned capital management account.

Source: Public Finance Yearbook 2016 and sub-national Finance Bureaus.

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gaps at the sub-national level, which are only partially filled by fiscal transfers. Unfunded mandates, in particular at the lowest government levels, have caused insufficient or low-quality public service provision and have contributed to persisting inequalities. Improving the alignment of revenues with spending mandates should also reduce disparities in the generosity of public social security systems between locations, lowering inequalities (see below). A better alignment between revenues and expenditures will entail a combination of changes in expenditure and revenue assignments along with reform of the fiscal transfer system. Centralisation of some spending assignments may be more effective in reducing inequalities in the provision of public goods and services than devolution of revenue-raising powers given that greater taxing powers would further aggravate already high income inequalities and necessitate higher transfers. Potential candidates for centralisation could include crucial public services such as education and health to ensure a minimum quality. Establishing a graduated system of tax sharing under which poorer provinces would receive a higher proportion of shared revenues than wealthier provinces, and making transfers to poorer provinces conditional on improvements in their tax collection could also be considered (OECD, 2006).

Box 4. Past recommendations for fiscal reform and actions taken

OECD 2015 Survey recommendations	13th Five Year Plan and policies directly related to OECD recommendations
Improve fiscal transparency and sustainability	
Increase fiscal transparency and sustainability including by permanently prohibiting local government investment vehicles from taking on new debt.	<p>Since 2015, the Ministry of Finance (MoF) has disclosed the final budget by economic classification and 103 public institutions disclosed their budget performance data. In 2015 the MoF converted CNY 3.2 trillion of local government debt into bonds and adopted debt cap management. The prohibition of local government investment vehicles from taking on new debt was short-lived, however, and now they are once again major participants in urban infrastructure construction and their debt issuance has even been simplified.</p> <p>The MoF now sets a debt issuance limit at the beginning of the year for each province, which also serves as a criterion to assess the performance of local officials.</p>

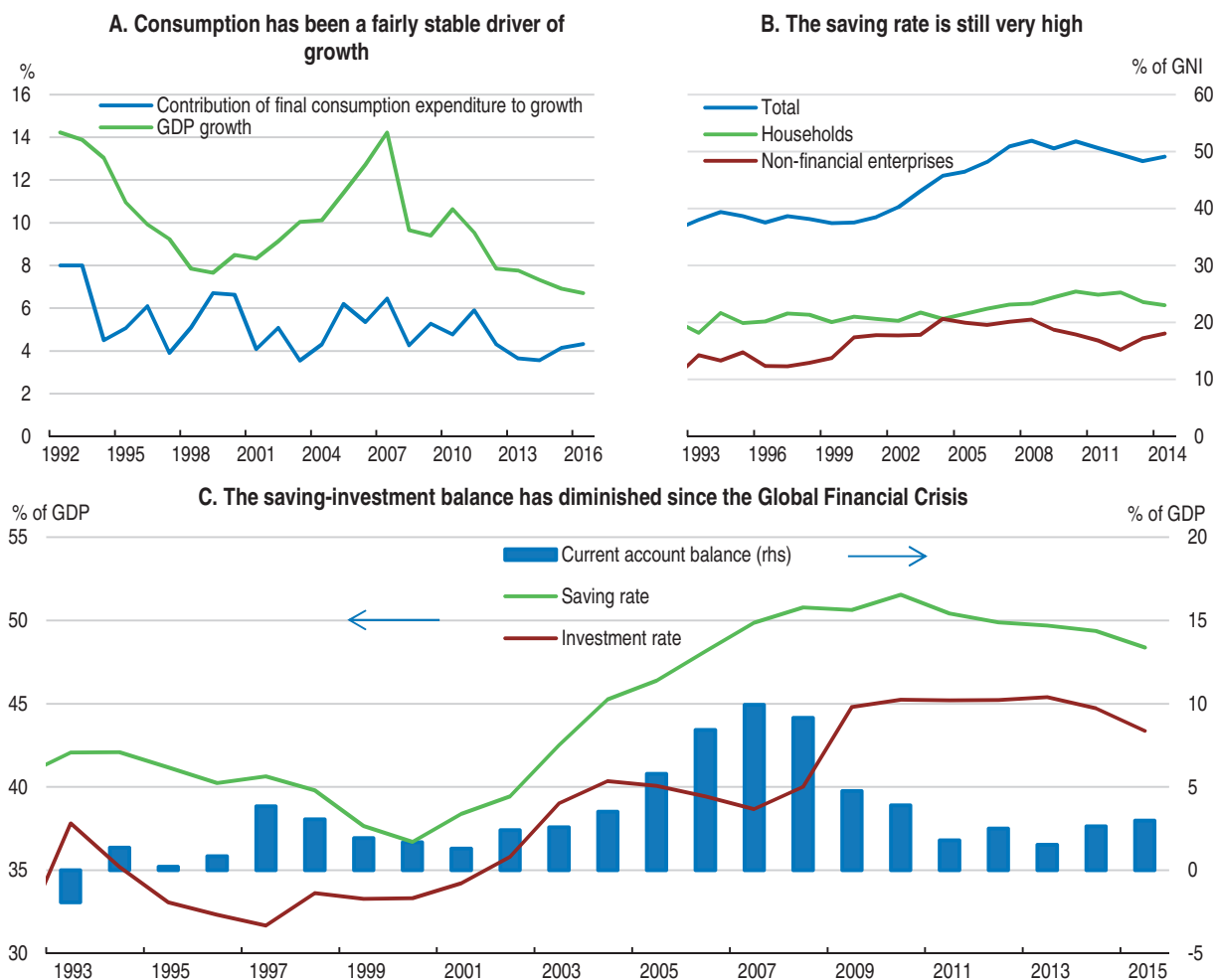
Rebalancing growth

As China converges towards the advanced economies, it is undergoing a number of transitions that will make for more sustainable and inclusive growth. Rebalancing from investment to consumption is under way, as investment slows. The declining return on investment has increased labour's share of income. Rebalancing from manufacturing to services is also advancing. Even so, as highlighted in the 2015 *Economic Survey*, there is ample room for services to grow faster. To that end, more relaxed entry regulations and a level playing field in areas such as taxation and access to government support are needed. The recent completion of the business-tax-to-VAT reform will facilitate that process by increasing demand for service outsourcing. Another transition is from external to domestic demand, with a sharp reduction in the current account surplus since the mid-2000s. Last but not least, China seeks to transition from a middle-income to a high-income or "moderately prosperous" society by 2020. This requires more equitable and greener growth and improvements in social infrastructure, which would reinforce the other transitions by boosting consumption and demand for services.

Urbanisation alone cannot reduce high saving rates: better social security and public services are needed

China's shift to a more consumption-led growth pattern has mainly been driven by the deceleration in investment rather than a surge in consumption as the contribution of consumption to growth has been relatively stable around 4 to 6 percentage points over the past two decades (Figure 16, Panel A). The household saving rate, however, remains very high (Panel B). Moreover, the saving-investment imbalance has come down since the Global Financial Crisis as a result of a jump in the investment rate, not of a fall in the saving rate (Panel C). Consumption can be substantially boosted only by reducing the need for people to save for old-age security, health and education, by providing access to similar-quality public services nationwide, and by ensuring employment opportunities for workers who become redundant as sectors suffering from overcapacity adjust.

The government plans on 100 million rural residents resettling in cities by 2020, and on extending the social coverage and other benefits of urban residence for another 100 million migrant workers who already reside in cities but are excluded from such benefits. This will raise consumption. Judging from a representative set of household micro-data (Molnar, Chaux and Ren, 2017), migrant workers spend 50% more than rural

Figure 16. **The saving rate is still very high**

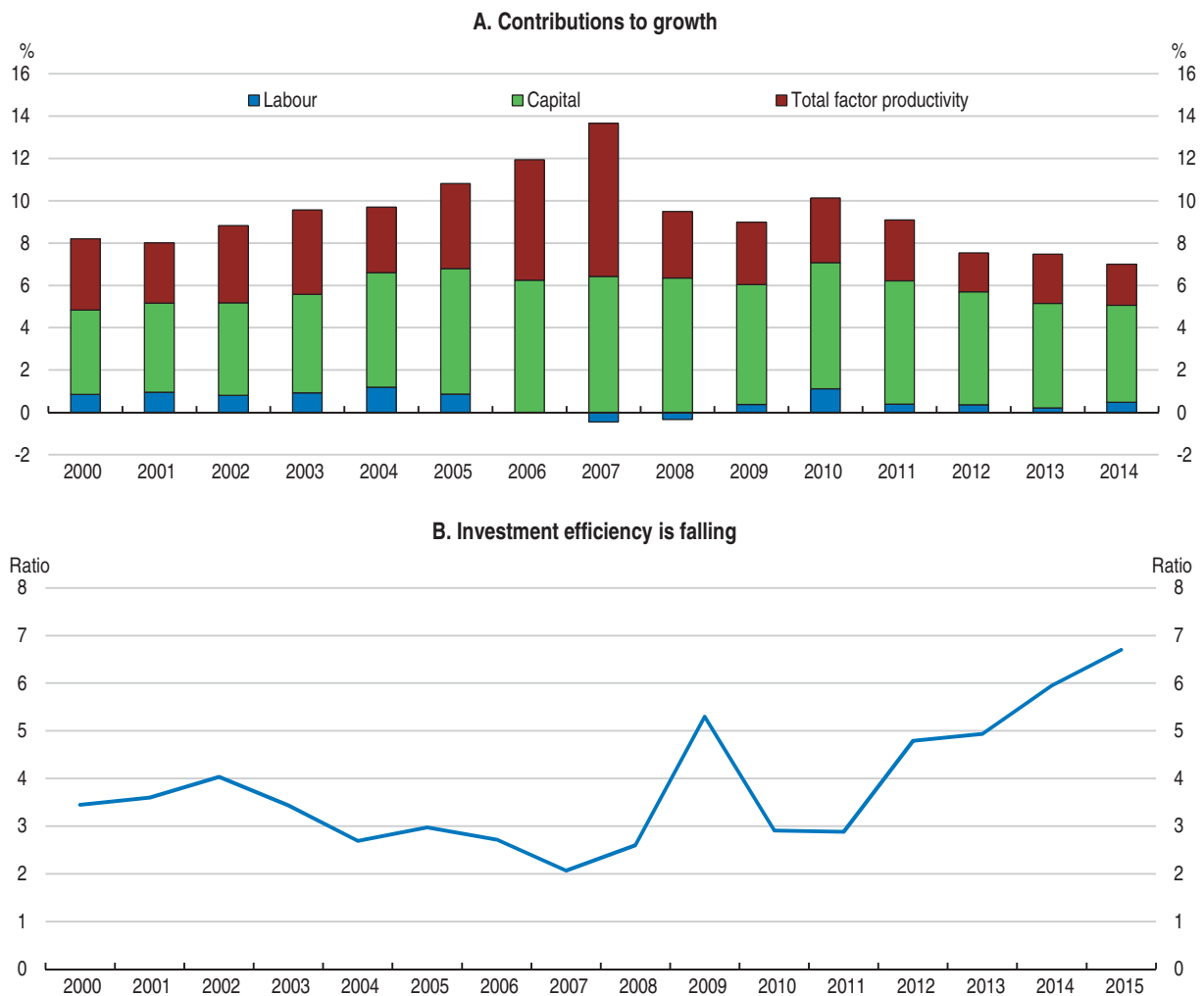
Note: Saving by sector from the flow of funds account until 2014 and projections for 2015.
Source: CEIC database.

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residents and urban residents 60% more than migrant workers. To boost overall consumption, inclusive growth policies that provide social security coverage and public services regardless of the location and residential status of individuals are needed.


Boosting productivity is essential to ensure sustainable growth

On the supply side, capital accumulation has long been and remains the major driver of growth, notwithstanding the slowdown in investment (Figure 17, Panel A). The contribution of total factor productivity to growth has decreased in recent years, as it has in many OECD countries (OECD, 2015d). This can partly be ascribed to the misallocation of capital resulting from the mega-stimuli through local government investment vehicles during the Global Financial Crisis (Bai et al., 2016). The ongoing digitalisation wave is expected to boost productivity. Even though China still needs to build capital in many areas where it lags behind (such as rural and agricultural infrastructure, urban underground structures and environmental facilities), the efficiency of its investment has fallen (Panel B). Many service sectors remain partly off limits to private and foreign investors,

Figure 17. **Capital accumulation still drives growth, though the efficiency of investment is falling**

Note: Investment efficiency is measured by the incremental capital-output ratio, i.e. the amount of capital needed per extra unit of output, expressed as a ratio. It is calculated as a ratio of the investment rate and the change in GDP.

Source: Authors' calculations based on the Asian Productivity Organisation's Productivity Database and OECD Economic Outlook 100 Database.

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holding back potential economy-wide productivity gains. Beyond their direct impact on the degree of competition in the restricted services sectors, a key risk is that low productivity in these sectors indirectly constrains productivity growth in downstream sectors. China would likely benefit from greater efforts to improve its FDI regime in this respect. Evidence suggests that open and efficient markets for services are fundamental to underpin participation in global value chains and hence to facilitate the diffusion of new technologies (OECD, 2015d). Besides, intensified anti-corruption efforts will likely contribute to a better allocation of capital and a more efficient use of public funds.

Productivity-enhancing reforms are needed all the more as the population is ageing rapidly and the labour force is shrinking both in absolute and relative terms. Even under a scenario of a gradual increase in the number of children to two by 2050, the population would peak in 2030 at 1.43 billion. Furthermore, while empirical research found that parents can improve their old-age support by having more children (Oliveira, 2016), survey

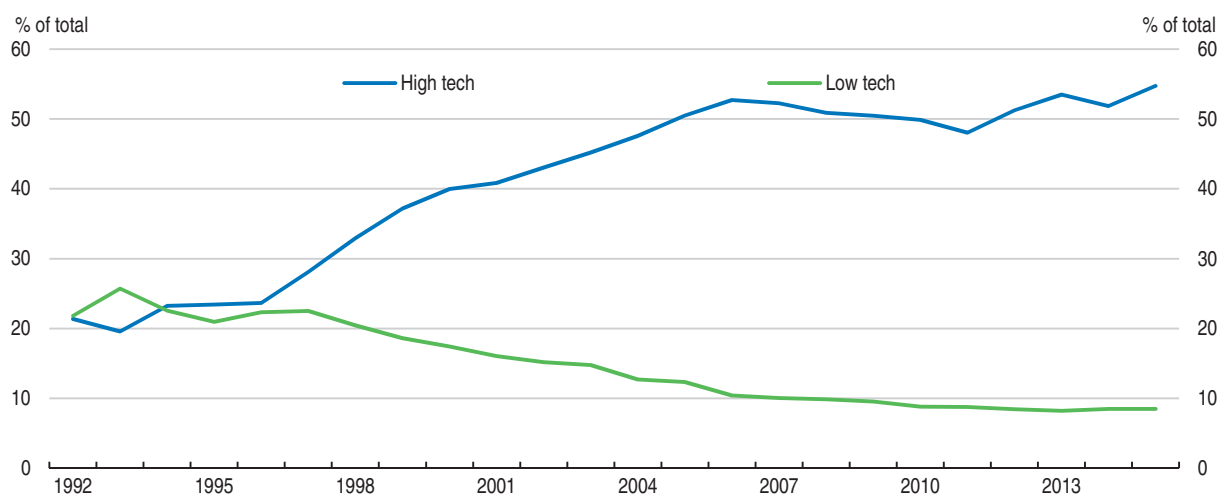
data show that the policy change will have a limited impact in the short term as many respondents worry about the cost of raising an additional child, feel too old to have one more child or women in cities prefer to pursue their career. In this context, improvements in public support for the elderly will be key (see below). Digitalisation and automation will at least partially make up for the shrinking labour force and help keep wage increases under control.

Informality in labour markets also hinders productivity growth. The lack of labour contract (60% of migrant workers had no contract in 2015) and social security contribution by employers of migrant workers encourages high turnover rates and therefore hampers the accumulation of skills (Li and Ning, 2016). Informality is also prevalent in the financial sector, where private lending eases the financing constraints of mainly private firms (Xu and Pan, 2016). Interest rates charged, however, are sometimes beyond the legal ceiling. Such usury lending imposes excessive costs on borrowers and pushes them to chase short-term returns instead of long-term productivity improvements.


Growth has become less dependent on external demand

China's growth has long been driven largely by external demand, with foreign companies setting up assembling plants for re-exports and exploiting labour cost advantage. The rapid expansion of production capacity led to extraordinary rates of trade growth and foreign direct investment was an important source of capital. This trend stalled in the mid-2000s, as the improvement of living standards and the rise in labour costs encouraged a growing number of foreign companies to consider China as a market rather than just the world's factory. Indeed, Chinese demand for foreign high-tech goods has increased considerably (Figure 18). Concomitantly, as Chinese firms move up the value chains, an increasing share of value added is produced domestically (Box 5). However, the Belt and Road initiative will likely facilitate new forms of international economic integration (Box 6).

Figure 18. **High-tech goods imports are rising fast**



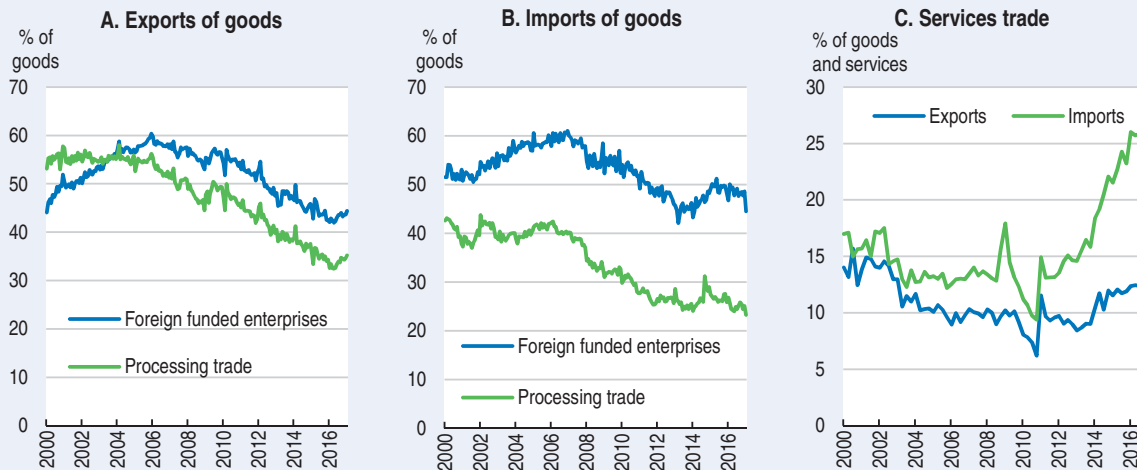
Note: The figure is based on the technology classification of Lall (2000). Medium tech goods have been excluded from the figure.
Source: UN Comtrade.

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Box 5. The evolution of China's foreign trade and FDI patterns

The share of processing trade has been falling since the mid-2000s. Accordingly, the share of foreign-funded enterprises in goods trade has diminished continuously (Figure 19, Panel A). The trend decline in their imports has reversed since 2013, however, reflecting the growing affluence of Chinese consumers (Panel B). Imports of services have been rising fast following the improvement of living standards (Panel C).

Figure 19. The evolution of the trade structure reflects rebalancing



Note: Panels A and B use customs trade series, Panel C balance of payments data.
Source: CEIC.

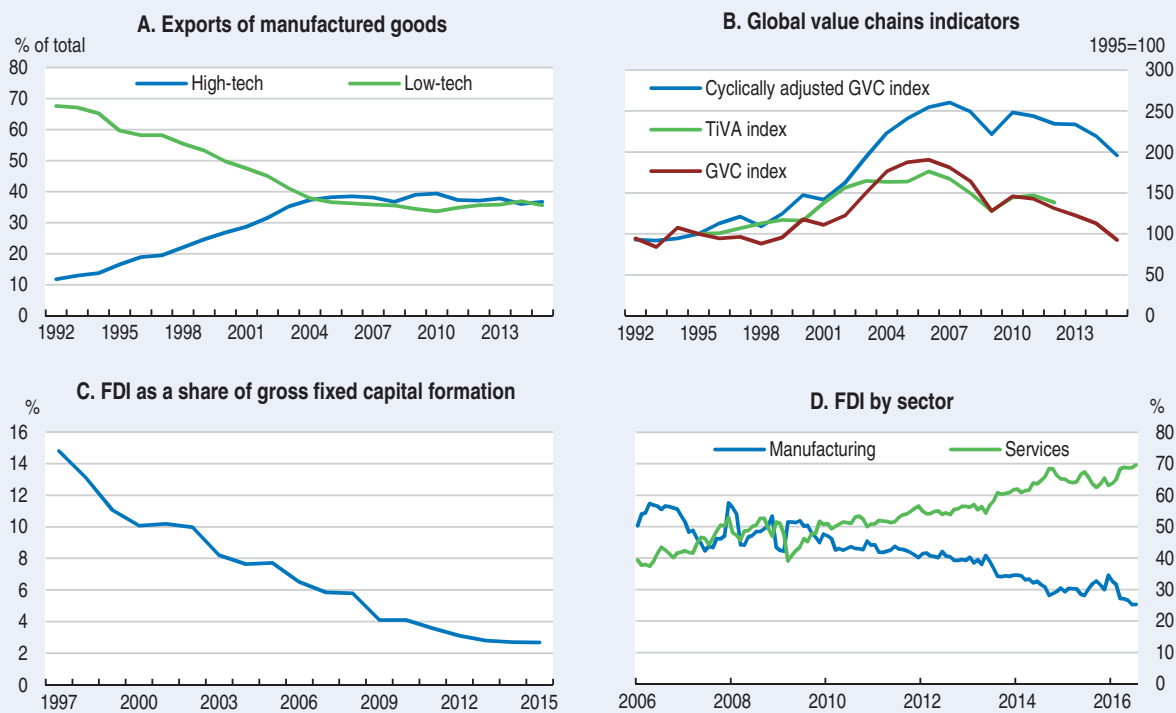
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The share of high-tech exports quadrupled between 1992 and 2005, to nearly 40%, but has remained stable thereafter. Concomitantly, the low-tech export share fell from around 70% to nearly 40% and also stabilised at that level (Figure 20, Panel A). Falling shares of processing or of foreign-funded company exports show that Chinese companies are more and more involved in the various steps of the production process, suggesting an increase of the domestically produced share of value added. This is confirmed by other studies (IMF, 2016b) and by recent estimates of the value-added embedded in global value chains (Panel B). The share of imported intermediate inputs in final domestic demand rose from 14% in 2000 to 23% in 2006 but then fell back to 11% by 2015.

The shift of FDI from export-processing manufacturing to services confirms that China is an increasingly attractive consumer market (Panel D). The share of FDI in overall investment has shrunk considerably over the past two decades, to only 2.7% in 2015 (Panel C). The recent FDI reform in October 2016 to move from an approval-based to a filing system will bring China's FDI regime closer to international levels of openness. As the OECD's FDI restrictiveness index indicates, China is one of the top reformers. Many service sectors, however, remain off-limits to foreign investors, which limits efficiency gains, inter alia by curtailing competition in those sectors.


Box 5. The evolution of China's foreign trade and FDI patterns (cont.)

Figure 20. **Technological upgrading and on-shoring are gaining momentum while FDI, especially in manufacturing, loses importance**



Note: Panel A is based on the technology classification of Lall (2000); manufactured goods are defined as all the non-primary or resource-based goods. In Panel B, the TiVA index, based on the analysis of input-output tables, refers to foreign value added embodied in final domestic demand. The GVC index, developed as a more timely proxy for the TiVA index, is the ratio of intermediate imports to final domestic demand in nominal terms. To control for the impact that commodity price fluctuations have on imports of intermediate goods, the cyclically-adjusted real GVC index has been computed based on the volumes of intermediate imports and final domestic demand and with cyclical fluctuations removed. In Panel D, services exclude utilities and construction.

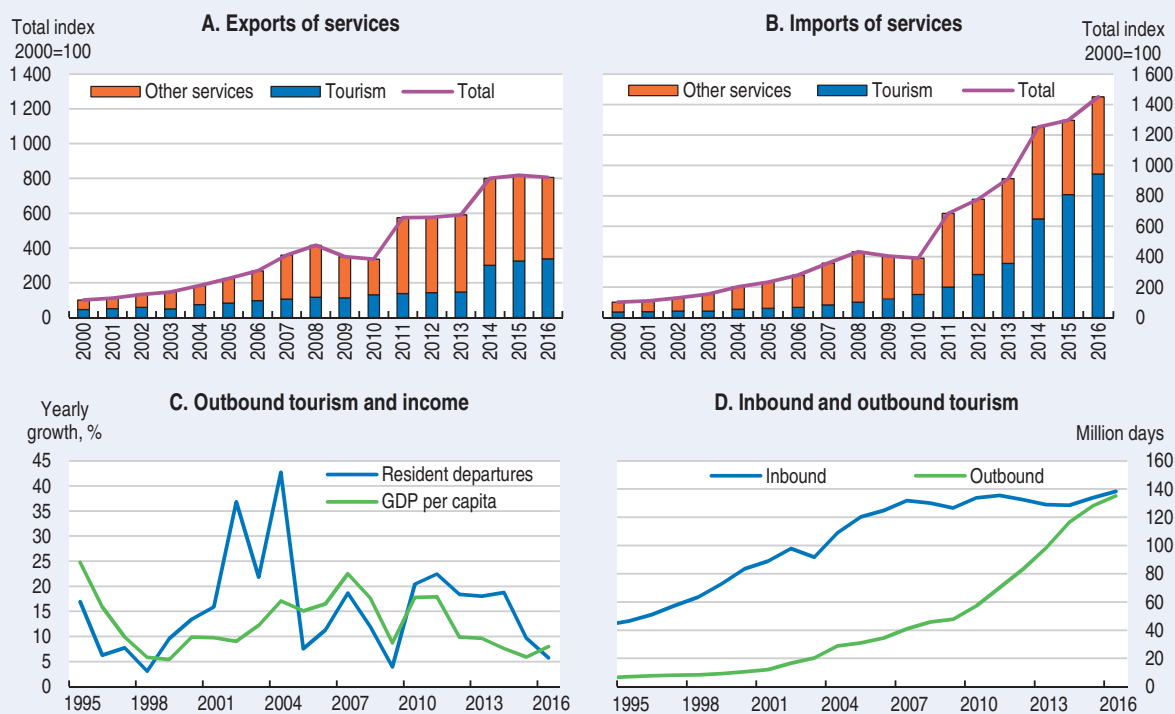
Source: UN Comtrade database, OECD Trade in Value Added Database, OECD STAN Bilateral Trade Database, CEIC database.

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Services imports have surged since the beginning of the 2010s, to more than a quarter of total imports by the first half of 2016. Higher incomes and easier visa requirements since the early 2000s boosted tourism, with almost 130 million days spent by the Chinese to travel abroad in 2015 (Figure 21, Panels C and D). Tourism also constitutes the biggest share in services exports, but it has been growing much less rapidly than imports (Panels A and B).

Box 5. The evolution of China's foreign trade and FDI patterns (cont.)

Figure 21. Services imports are growing rapidly



Source: CEIC.

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Boosting corporate performance and entrepreneurship

Labour productivity has increased very rapidly in China, in particular in manufacturing (Figure 22). With growth worldwide, and in China, having slowed and profitability being on a declining trend, corporate behaviour in China needs to change and focus more on efficiency and sustainability to ensure continued catch-up with the most advanced OECD countries. To this end, supportive policies are needed, fostering an environment that is more conducive to innovation and entrepreneurship, and facilitating resource reallocation through the exit of unviable firms. At the same time, corporate governance practices must improve and State assets need to be better managed.

Innovation and entrepreneurship will drive growth

China boasts remarkable scientific and technological achievements in a wide range of areas, including 3D printing, nanotechnology and robotics (OECD, 2017b). Looking ahead, it needs to fully harness science, technology and innovation as a source of growth. Innovation features among the five keywords of the current Five-Year Plan and was included in the G20 agenda on China's suggestion during its presidency. Gross expenditure on R&D slightly exceeded 2% of GDP in 2014, in line with that of the EU15 economies but still behind major innovators such as the United States and Japan. However, research personnel, as a share of the total employed, has not kept up with R&D outlays (Figure 23). Research money has mostly been spent on developmental rather than applied research and only 5% of the total was channelled to basic research (as against 18% in the United States and 12% in Japan).

Box 6. The Belt and Road Initiative

The Belt and Road Initiative (Table 2) is a large project aiming at improving regional cooperation through better connectivity among countries lying on the ancient Silk Road. It includes the Silk Road Economic Belt for the land part and the 21st Century Maritime Silk Road for the naval part. At the start, it involved 64 countries but its scope has since broadened to over 100.

The roadmap issued by the NDRC in March 2015 underlines the five priorities of the Initiative: policy coordination (promoting intergovernmental cooperation), facilities connectivity (improving road, energy and information infrastructure), unimpeded trade (removing trade and investment barriers), financial integration (deepening of financial cooperation, expansion of bilateral currency swaps and settlements, establishment of new financial institutions) and people-to-people bonds (promotion of cultural and educational exchanges, enhancing cooperation on tourism and epidemic information). The Initiative also includes strengthening environmental and energy cooperation.

A number of institutions will help fund the Initiative, including the recently-created Asian Infrastructure Investment Bank.

Table 2. Belt and Road in numbers

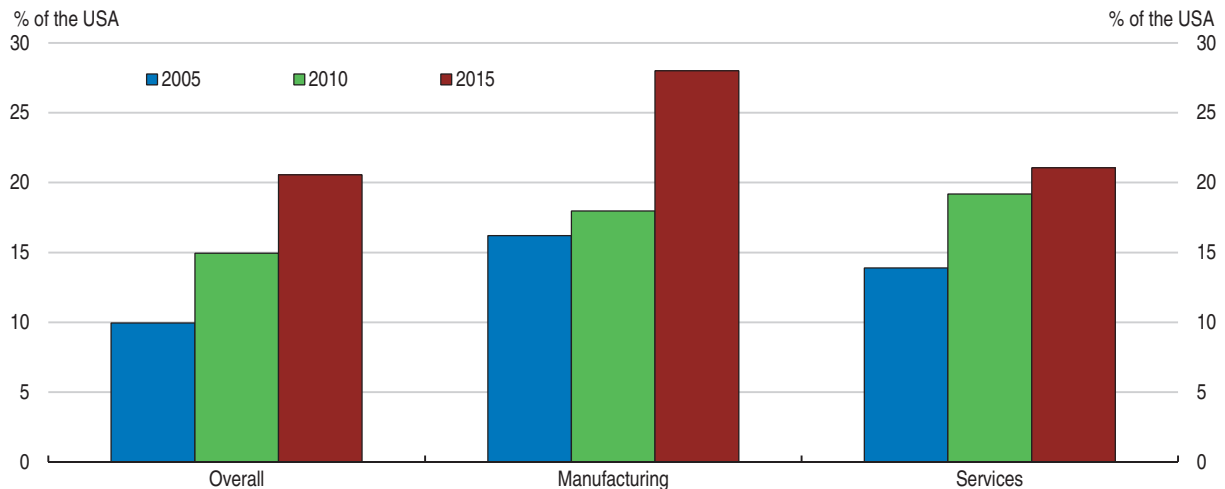
	General			Outward investment		Overcapacity			Energy		Infrastructure	
	Population	GDP	GDP growth	Annual	Cumulated	Iron and steel	Aluminium	Cement	Oil	Gas	Quality of port	Logistics performance
	2015, Mn	2015, Bn USD at current PPP	2010-15 annual average %	2015, Bn USD	2010-15, Bn USD	% of China exports			% of China imports		Index	
China	1 371	19 524	7.8								0.65	0.73
Southeast Asia	632	6 940	5.1	14.6	46.1	25.5	31.4	13.0	7.3	17.6	0.56	0.60
South Asia	1 712	9 799	6.4	1.1	4.4	8.1	5.4	3.0	0.2	0.0	0.46	0.48
Central Asia	200	2 462	2.4	-2.9	9.6	3.5	1.5	2.8	8.1	32.6	0.40	0.45
Middle-East and Africa	193	4 521	6.2	2.8	7.8	11.0	8.0	16.3	37.9	27.2	0.59	0.54
Central and Eastern Europe	322	6 925	1.4	3.2	8.1	1.9	2.5	3.1	11.7	0.4	0.55	0.58
64 countries initially included	3 058	30 648	3.8	18.9	76.0	50.0	48.7	38.2	65.3	77.9	0.51	0.53
Rest of the world	2 917	63 440	1.6	126.8	531.9	50.0	51.3	61.8	34.7	22.1	0.57	0.40
World	7 347	113 613	2.6	145.7	607.9	100	100	100	100	100	0.58	0.55

Note: This table draws on the non-exhaustive list of 64 countries originally included in the Belt and Road Initiative. The quality of port and logistics performance index averages are not weighted by country size. The quality of port index measures business executives' perception of their country's port facilities; the logistics performance index measures the logistics professionals' perception of a country's quality of trade and transport-related infrastructure; both indices are scaled from 0 to 1, 0 indicating the worst and 1 the best score.

Source: World Bank World Development Indicator database, IMF World Economic Outlook database, UN Comtrade database, CEIC, World Economic Forum Global Competitiveness Report, Turku School of Economics.


The number of patents has also soared, but their impact on productivity has declined, largely reflecting quality and relevance issues. Most Chinese patents fall in the categories of utility or design patents and only a small share are genuine inventions. Furthermore, only a fraction of Chinese patents are registered in the United States, the European Union and Japan and Chinese researchers are weakly linked to global networks. Intellectual property right (IPR) enforcement is perceived as a serious problem: two-thirds of firms think that patent rights cannot effectively prevent others from copying their inventions. In addition to IPR protection, most firms try to reap the first-mover advantage by quickly marketing their

Figure 22. **Labour productivity has caught up fast**
Labour productivity as percentage of the US level



Note: Labour productivity is expressed as a percentage of the US level by using 2010 prices and PPPs.

Source: Authors' calculation based on the Groningen Growth and Development Centre's World Input-Output Database.

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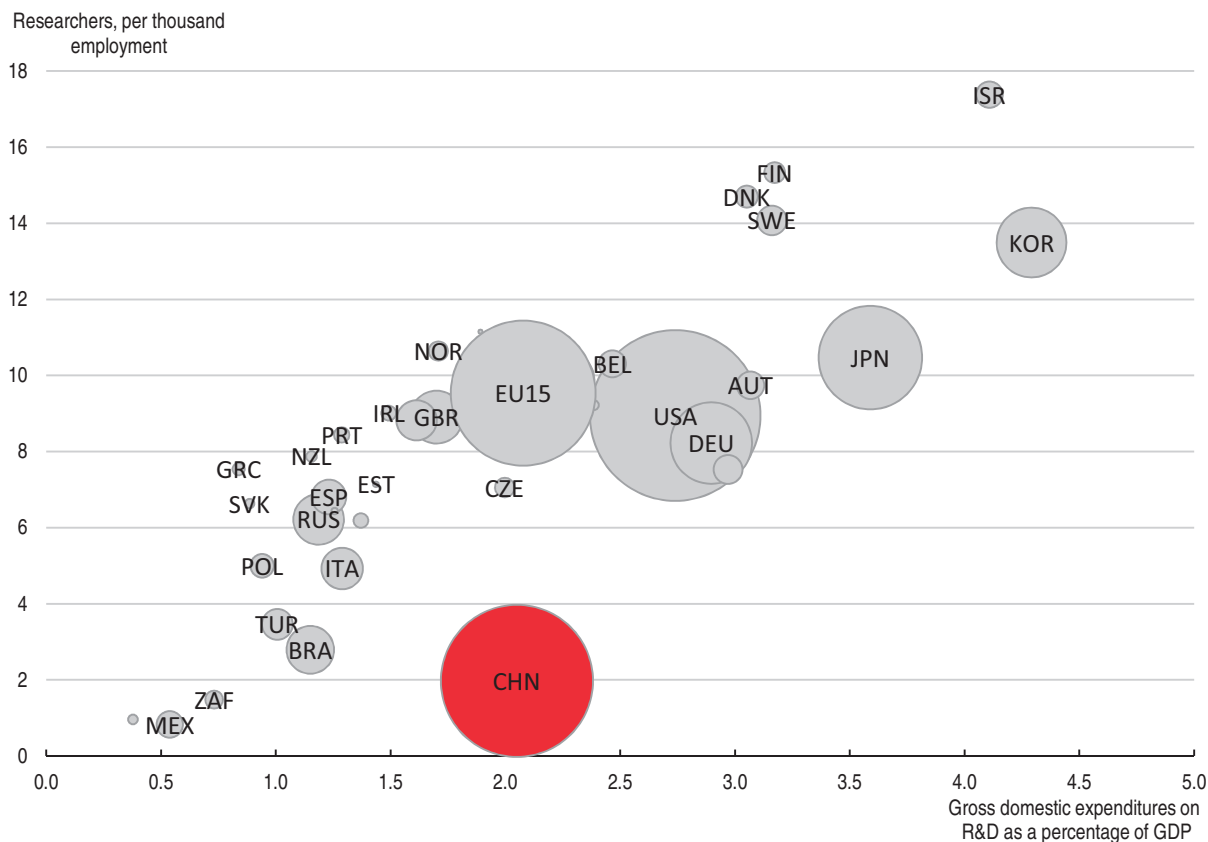
invention, signing confidentiality agreements with staff or changing products quickly so that competitors cannot catch up. Specialised intellectual property courts have been set up since 2014 in Beijing, Shanghai and Guangzhou. Together, they dealt with around 8% of all concluded IPR cases in 2015 (Supreme People's Court of the PRC, 2016).

The innovation system has traditionally favoured state-owned enterprises and new and high-tech industries (Zhao et al., 2011). Public funding has been geared to SOEs, public research institutions and frontier projects. In this spirit, subsidies have been extended to firms in high-tech industries. The designation as high and new-technology enterprise, however, is done in differing ways across the country, creating an uneven playing field. Moreover, the 2016 revision of the definition includes more stringent standards for IP ownership implying that foreign firms with global innovation activities may no longer be able to obtain this status. Since the late 1990s, sub-national governments provide exemptions from fees or offer prizes for successful patent filers and around 70% of individual filers have benefited in recent years. Since September 2016, they have been eligible for an exemption of up to 85% of fees related to the application, examination, maintenance and re-application of a patent. Streamlining patent subsidy policies could lead to higher quality and more relevant patents.

Another recent measure is to grant company shares to technology personnel in technology-oriented SOEs to reward good performance. The specific scheme, which is still to be released, should strike a balance between being sufficiently attractive to encourage better research performance and avoiding the leakage of state assets.

Business creation, which is an important source of innovation and productivity growth, has accelerated recently as over 350 administrative procedures were either abolished or delegated to the sub-national level. The easing of administrative burdens on start-ups and streamlining of procedures have reduced overall barriers to entrepreneurship (Figure 24). In 2016, 16.5 million new business entities were registered, making up nearly 19% of all registered business entities. Nevertheless, the business environment needs to be more entrepreneurship-friendly.

Figure 23. **China has become a major R&D power, but the share of researchers is low**
2014 or latest year available



Note: The size of the bubble indicates the size of spending in absolute terms measured in 2010 USD PPP prices.

Source: OECD.

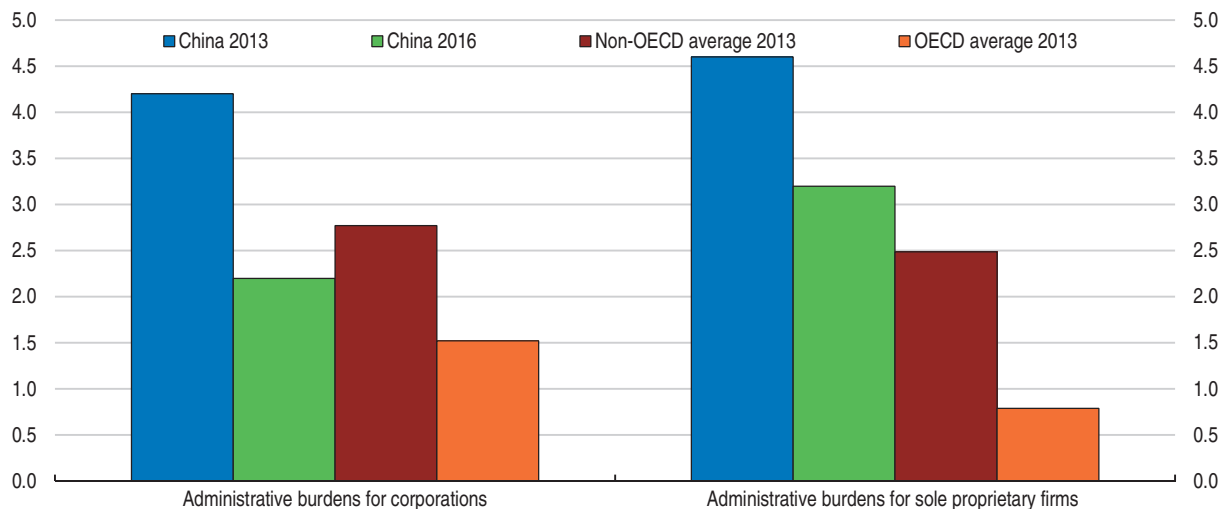
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Competition remains low in many sectors, particularly in network industries. Introducing competition into, for instance, the energy sector and shifting towards retail prices that reflect actual costs of generating, transmitting and distributing electricity and incorporate the environmental costs of carbon-generated energy are key ways to enhance efficiency. Moreover, oligopolistic market conditions in some sectors, such as internet services, hinder the formation of start-ups as the platforms which are the basis for applications are owned by a few large players. Mandatory sharing of internet platforms would facilitate the commercialisation of computer applications and thus boost start-ups where entry costs are otherwise relatively low. In contrast, companies in manufacturing industries and some services sectors, such as retail or land transportation, engage in cut-throat price competition. Many of those are private firms focusing on cutting costs, hardly investing in innovation and often endangering product quality and environmental safety. Establishing and enforcing standards while raising consumer awareness and enhancing consumer protection would help promote fair competition, provided such efforts do not unduly raise barriers to entry.

Steps taken to facilitate firm creation should be accompanied by measures to ensure that unviable firms exit the market. By 2013, around half of all steel mills and nearly half of all developers were making losses but could still obtain loans, or were unable to service


Figure 24. **Barriers to entrepreneurship are falling rapidly**

Barriers to entrepreneurship component of the OECD Product Market Regulation indicator, 2013 and 2016



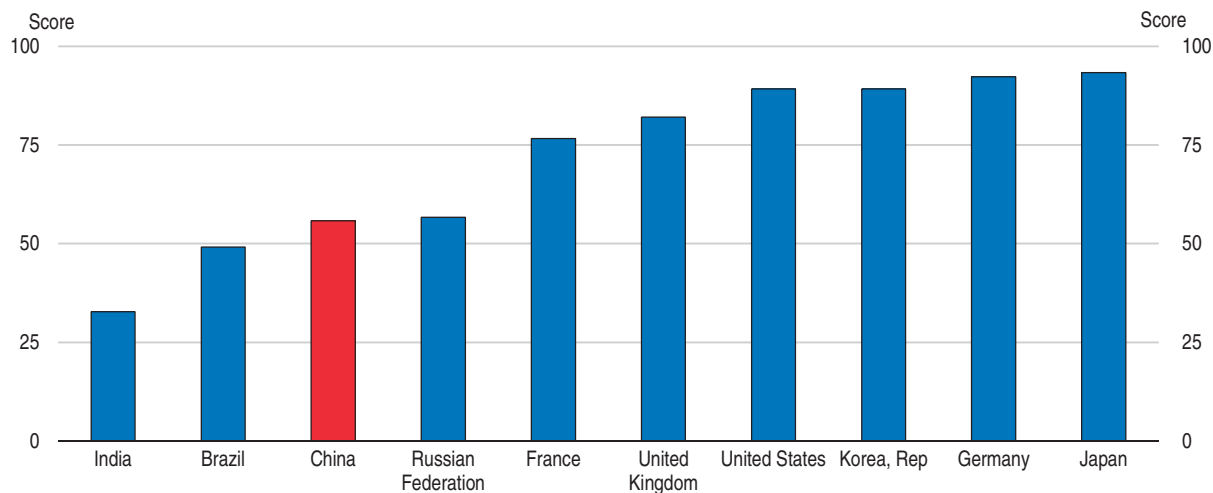
Note: The value of the indicator ranges from 0 to 6, with 6 being the most restrictive.

Source: OECD Product Market Regulation database and OECD updates for China for 2016.

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their interest payment obligations (National Academy of Development and Strategy of Renmin University, 2016). Zombie companies, mainly SOEs in sectors plagued by excess capacity, take up vast resources that could be allocated for more productive purposes. OECD research shows (Adelet McGowan et al., 2017) that zombie-firms aggravate capital misallocation and by preventing more efficient firms from expanding, also drag down productivity. Major impediments to bankruptcy initiation include the lack of a feasible and acceptable worker compensation plan and resistance at the local level. The length and high degree of uncertainty associated with the bankruptcy procedure (Figure 25) may also discourage firm managers to choose this form of exit. To overcome local opposition stemming from the stigma effect of bankruptcy, local officials' progress in eliminating excess capacity is now included among their performance evaluation indicators.

Although at the time of its enactment in 2006 the new Bankruptcy Law was considered progressive and well-suited to the increasingly market-based economy, China's economy has undergone significant changes since, with which the bankruptcy legislation needs to keep up, particularly as regards conditions for bankruptcy and law coverage. Compensation plans for workers should not be a condition for filing bankruptcy. Instead, workers should be compensated according to relevant laws. Financial institutions are still not covered by bankruptcy legislation and their insolvency process follows ad hoc rules. The legislation makes it possible to convert a liquidation case into a reorganisation one if creditors, who control the insolvency practitioner, wish to do so. Creditors may be demotivated by the fear of increased non-performing loans in case of liquidation of their client or by uncertainty related to the insolvency procedure. Uncertainty needs to be reduced by setting clear and reasonably short deadlines for each stage in the insolvency procedure. A major obstacle to getting rid of public zombie companies is the obstruction of the insolvency process by the insolvency manager for fear of state asset embezzlement. The ongoing reform aiming at specialisation of the industry by establishing bankruptcy divisions in intermediate courts in provincial capitals and No. 2 cities in provinces will likely increase the efficiency of case

Figure 25. **Insolvency procedures lag behind major OECD economies**

Note: The frontier is 100 and the score reflects the time, cost and outcome of insolvency proceedings involving domestic entities as well as the strength of the legal framework governing judicial liquidation and reorganisation.

Source: World Bank Doing Business 2017 database.

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handling. Shenzhen has been a pilot and by July 2016 15 provinces had introduced this new system. A simplified procedure for micro- or small enterprises would also work in the same direction.

Regulatory authorities are building a more robust corporate governance framework

Adequate and effective corporate governance nurtures confidence in capital markets and trust in business transactions. The China Securities Regulatory Commission (CSRC) is currently undertaking a systematic review of the system governing listed firms aiming at enhancing its ability to address corporate governance problems while ensuring consistency between relevant laws and regulations. The CSRC requires listed companies to include certain types of information in their articles of association, for instance the powers of independent directors. The Shanghai Stock Exchange also has corporate governance rules, including on the training of independent directors and the conduct of Board of Directors meetings. The exchange is then in charge of enforcing those rules, but the conduct leading to one of the four possible sanctions (oral warning, letter of oversight, criticism notices and public criticism) is not made public. While public naming and shaming may be effective, keeping the motive confidential diminishes its impact on prospective violators.

Corporate governance practices are being strengthened by enhancing both external monitoring and internal control. Sophisticated and active institutional investors are to play a greater role and the regulatory and supervisory framework is being upgraded with firmer enforcement and more qualified and independent auditors. Foreign institutional investors can have a positive impact on corporate governance to the extent that they are more likely to participate in arm's-length negotiation and monitoring (Huang and Zhu, 2015).

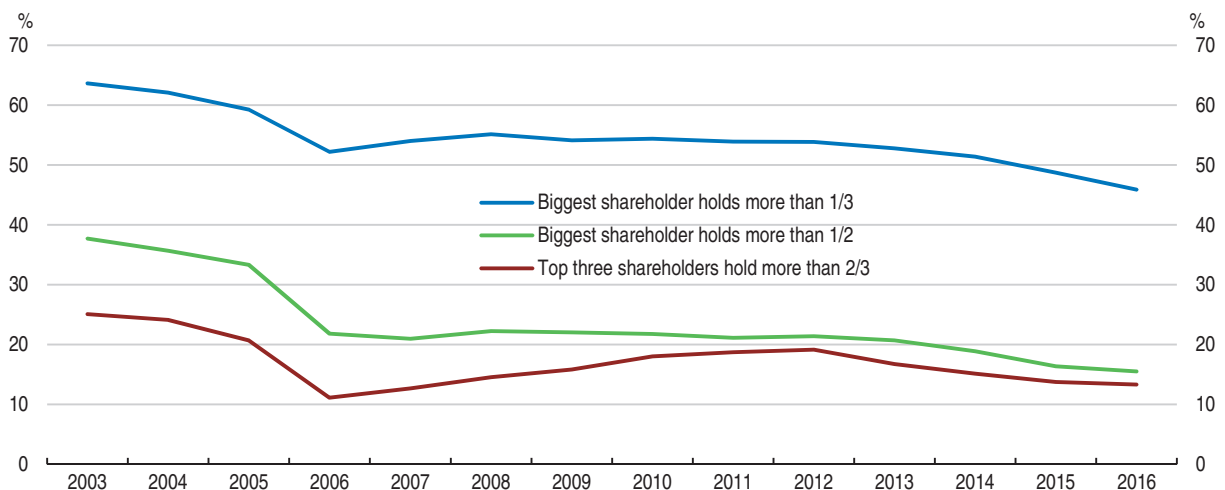
Improving internal control requires increasing board independence, protecting minority shareholders and strengthening incentive mechanisms. All listed firms need to have a board of directors and a board of supervisors, which is instrumental in protecting minority shareholders' interests. Recruiting competent and experienced board members is

a major challenge for listed firms in China as the history of corporate governance is relatively short even on paper and a fortiori on the ground. Almost all companies choose to have only the minimum number of independent directors required by law, and therefore forego the benefits of having additional external experts sitting on the board (OECD, 2013). Firm-level empirical analysis carried out for this *Economic Survey* based on data of listed non-financial enterprises shows that profitability improved when the requirement that at least one third of directors must be independent was introduced in 2002 (Molnar, Chen and Wang, 2017). Data on independent directors' votes show that they rarely vote against the board, indicating that they indeed do not have the time or courage to engage on behalf of all shareholders (Ye et al., 2011). In addition, whistle-blowers – be they independent directors or anyone inside the firm noticing unlawful practices – lack legal protection. Remedying this would help uncover more cases and serve as a disciplining device. Furthermore, independent directors tend to sit on too many boards, making effective monitoring and advising very difficult.

Protecting minority shareholders from expropriation is an acute problem given the highly concentrated ownership of listed firms. While ownership concentration has declined somewhat over the past decade, it remains high (Figure 26). The biggest shareholder owns at least a third of the shares in half of the listed firms and more than half in nearly a fifth. While large shareholders tend to monitor better and ownership concentration reduces the free-rider problem of many dispersed shareholders, concentration above a certain level may not improve performance (Shapiro et al., 2015). The Chinese Code of Corporate Governance requires disclosure of related-party transactions and fair pricing, but in practice violations are commonplace. Also, according to the Code, the major task of independent directors should be to monitor controlling shareholders. That is why they are barred from any position in the company and have to be independent from majority shareholders (OECD, 2015a). Accounting regulations pertaining to related-party transactions have been strengthened, but better disclosure and better enforcement is needed to effectively tackle this issue.

Figure 26. Ownership concentration has declined somewhat

Share of firms with top ownership exceeding certain thresholds



Source: OECD calculation from the CSMAR database.

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Strengthening incentive mechanisms calls for setting the right level of executive pay as well as for non-salary incentives such as distributing shares. Market-based mechanisms are meant to play a greater role, including to set executive pay. While high remuneration of executives may boost managerial and company performance, greater pay disparity between executives and other staff may alienate workers and thus lower productivity (Firth et al., 2015). While shareholding by executives increased sharply in the late 2000s in listed firms of different ownership types, as of 2015, around one-eighth of private firms' executives owned shares in the company they managed, as against less than 0.5% among listed SOEs.

A key challenge is taking state-owned enterprises to market

As documented in the 2015 *OECD Economic Survey of China*, SOEs are dominant not only in natural monopolies such as network sectors, but also have significant market share in many industries in which competition could flourish such as construction, retail and wholesale trade or hotels and restaurants (OECD, 2015b). There are about 155 000 SOEs. They belong to different government levels and their management is also split across the State Asset Supervisory Administrative Commission (SASAC) and the MoF and their local arms. SOE debt makes up over 70% of total corporate debt (Figure 27, Panel A). Firms in industries suffering from excess capacity display high leverage, in particular in real estate, building materials and metals (Panel B) and in competitive and monopoly industries (Panel C). SOEs controlled by central government agencies saw a very sharp increase in leverage during the Global Financial Crisis (Panel D).

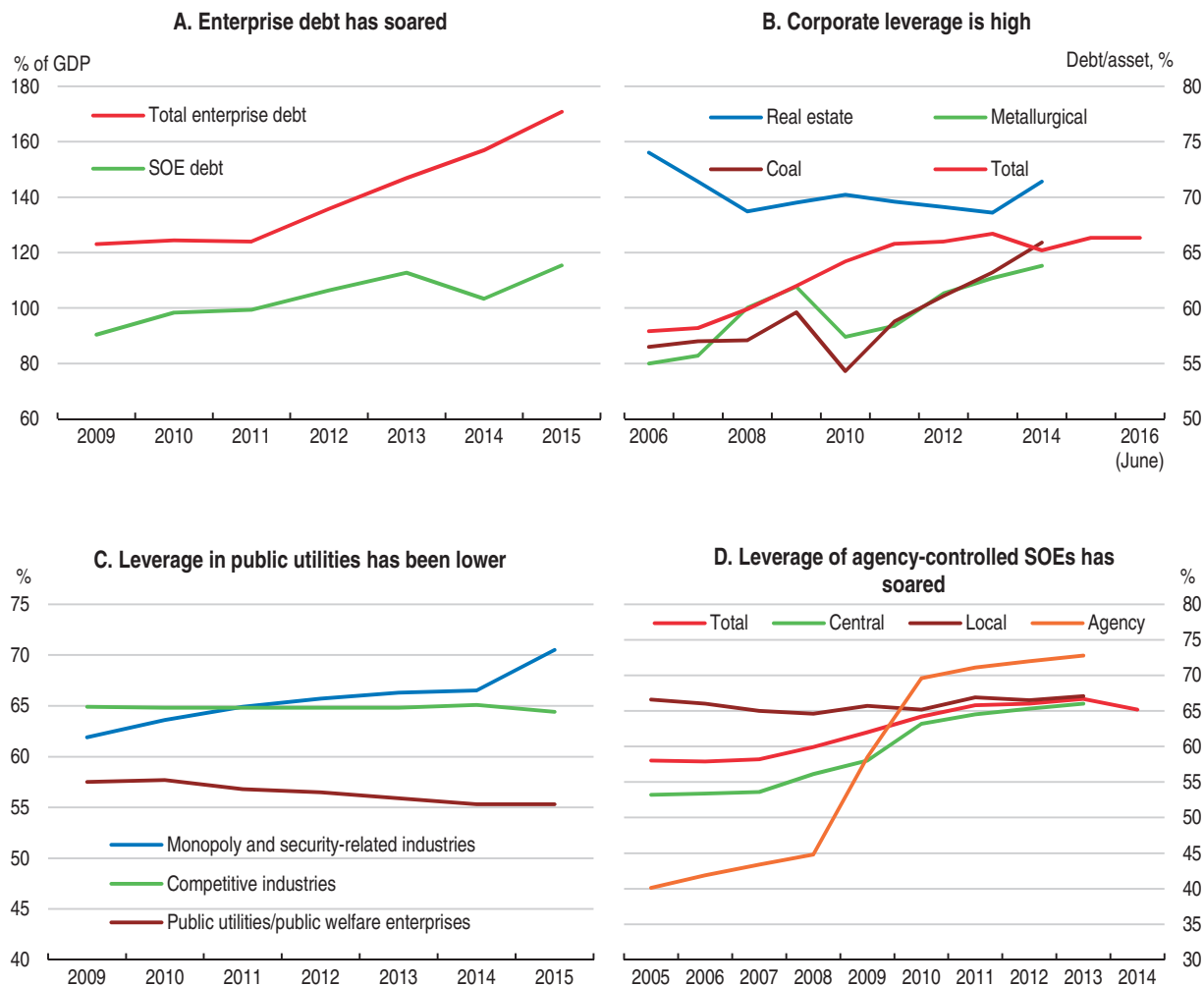
China's *Guidelines on Deepening SOE Reforms* released in September 2015 define six priority areas for reform: i) mixed ownership; ii) transitioning to a modern enterprise system; iii) professional management; iv) classifying firms according to their nature; v) strengthening supervision to avoid loss of state assets; and vi) better managing state assets with a focus on capital management. Mixed ownership reform has recorded impressive progress with 68% of SASAC – controlled central SOEs introducing non-State owners by end-2015 (Xiao, 2016). The major importance of mixed ownership reform lies in introducing additional checks and balances. A private shareholder may not be able to prevent the expropriation of minority shareholders' wealth, but transparency is enhanced.

The current Chinese notion of a modern enterprise system includes separation of business from politics, corporatisation, establishing a board of directors, managing executives by type and level of enterprise and choosing a remuneration system that fits the country's economic system (SASAC Research Centre, 2016). A major link between business and politics is the appointment system and the intertwined career paths in the public administration and the SOE system, where progress has so far been modest. In the area of corporatisation, in contrast, progress is tangible: over 80% of SOEs under SASAC have been corporatised and have set up or are in the process of setting up a board, though this is mainly happening at the lowest tiers of enterprise groups, not at the group level. The Chair of the Board, who de facto manages the company, is often a civil servant without extensive prior practical experience. Hiring professional managers is expected to mitigate this weakness and improve corporate performance. New regulations for senior executive compensation are being introduced and performance-based incentive plans will be put forward.


The results of a survey of central SOEs under SASAC carried out for the purposes of this *Economic Survey* indicate that some central SOEs link only a negligible part of the managers' salary to performance, while others link most of it. Moreover, the salary

Figure 27. **State-owned firms led debt accumulation and debt is high in some industries plagued by overcapacity**

Non-financial corporate debt



Note: Panel A shows corporate debt as a percentage of GDP and Panels B, C and D corporate leverage defined as debt-to-asset ratio. In Panel C, competitive industries include most sectors with competitive markets (*shangye yilei* or *jingzhengxing*), monopoly and security-related industries refer to industries with monopolistic or oligopolistic markets and industries related to national security (*shangye erlei* or *longduan*) and public utilities/public welfare enterprises primarily pursue public policy objectives (*gongyilei* or *gongyixing*). In Panel D, Central refers to SOEs under SASAC, local to those under local SASACs and agency to SOEs under other government agencies. Source: BIS database, Wind database and Ministry of Finance (2014, 2015).

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differences related to performance can be as high as three-fold. Tunnelling or transferring assets across firms is particularly acute as holding companies often control several hundreds of firms and managers in control can move assets across affiliated firms. Listing of holding companies can be a way of mitigating the tunnelling problem as higher disclosure requirements and monitoring would make it harder to shift assets across listed firms. Even before listing, however, SOEs could be subject to the same high quality accounting, disclosure, compliance and auditing standards as listed companies, as recommended by the *OECD Guidelines on Corporate Governance of SOEs* (OECD, 2015c).

SOEs are in the process of being classified into competitive, monopoly and security-related, and public utility/public welfare firms and their performance will be evaluated according to the category they belong to. For enterprises belonging to the competitive category, net profit or other profit-related variables will carry a bigger weight while for other types of enterprises safety indicators, public welfare and similar measures will be more relevant. Strengthening supervision to avoid loss of State assets is mainly done through fortifying the Party organisation within the company and by strengthening external and internal supervision. Past mechanisms, however, did not appear to function well, leading to series of arrests related to State fund embezzlement. Strengthening whistle-blower protection may encourage insiders to report unlawful conduct, but they would need to report to an independent investigator body to make such protection meaningful as supervisors and regulators may be subject to capture. People observing corruption in Australia, for instance, can turn to the Independent Commission Against Corruption. Shifting the focus to more active managing of assets and seeking return on capital (*ziben yunying guanli*) is considered as a promising way to ensure an increase in the value of State assets.

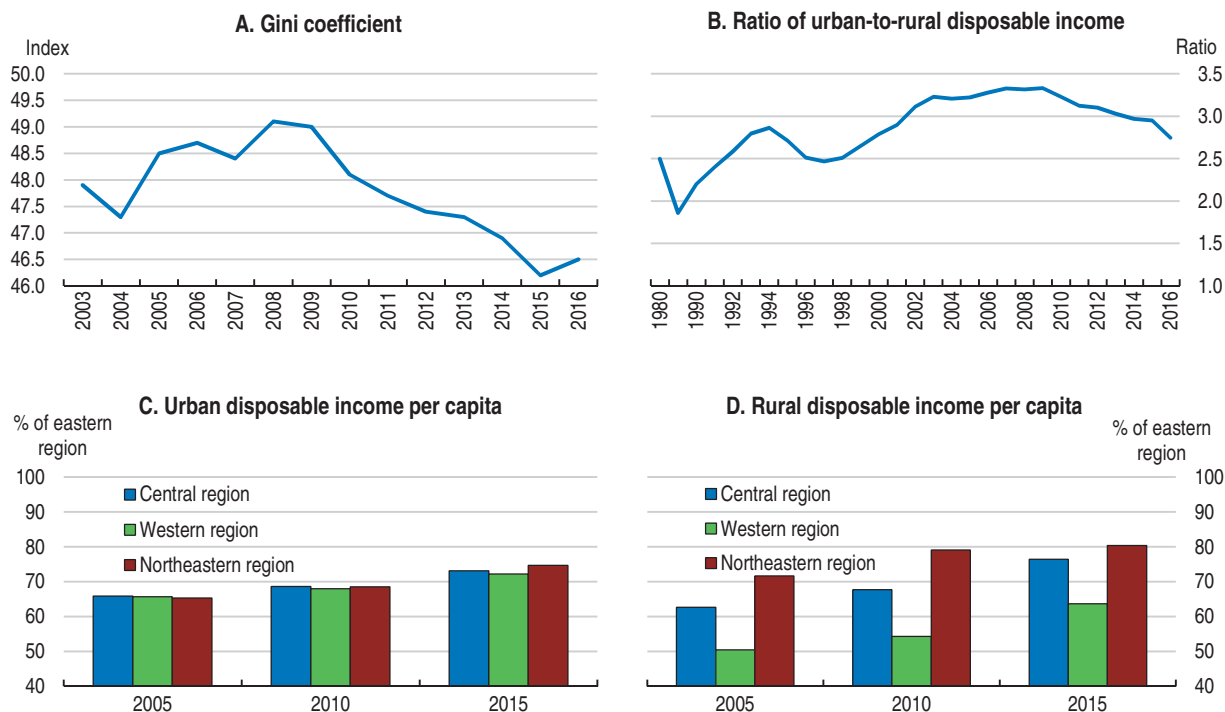
The State Council issued a *Guiding Opinion on Promoting Structural Adjustment and Restructuring of Central SOEs* in July 2016. It clarifies central SOEs' strategic position, ensuring their effective functioning, improving their overall structure, significantly boosting the allocative efficiency of state assets and forming a group of innovative and internationally competitive firms. Consolidation is expected by policymakers to drive efficiency gains, the major challenge being how to ensure that merging inefficient groups will actually result in higher efficiency. The effect of mergers on competition needs to be assessed by competition authorities prior to their approval. Asset disposal has made little progress between 2012 and 2015, with central SOEs controlled by SASAC shedding assets worth CNY 108 billion, equivalent to only 1.6% of the total. Stripping off assets is quite complicated as the suspicion of State asset embezzlement always looms large. The target of 345 zombie firms to be closed by SASAC in the coming three years appears rather modest given that it controls around 40 000 firms and that most zombies are SOEs. As SOEs expand internationally, destination countries place increased scrutiny on transactions involving SOEs to assess the potential anti-competitive effects in their markets. Enhanced corporate governance and better disclosure would facilitate SOEs' overseas operations.

Improving well-being and economic prospects by making growth more inclusive

The goal of the Chinese government to achieve a “moderately prosperous society in all respects” by 2020 involves a strong commitment to maximising aggregate social welfare. As well as improving the well-being of the community, a more equitable distribution of growth can support rebalancing to a more consumption-based growth model and help build popular support for necessary growth-enhancing reforms. Furthermore, with a rapidly ageing labour force, it is critical that growth is made more inclusive so that all members of China's society have the opportunity to fulfil their potential and make a productive contribution.


Income inequality, as measured by the Gini coefficient, has declined since 2008 (Figure 28, Panel A). This reflects some regional income convergence as the central, western and northeastern parts of the country have made progress catching up with the east (Panels C and D) and a narrowing of the urban-rural income gap (Panel B). Accordingly, the share of the rural population living below the poverty line fell from 30% in 2005 to 5.7% in 2015. The government aims to lift the remaining 43.3 million rural poor out of poverty by 2020, thereby achieving one of the United Nations Sustainable Development Goals ten years before the 2030 deadline.

Figure 28. **Income inequality has declined**



Note: The Gini coefficient presented here is based on income and has a range from zero (when everybody has identical incomes) to 100 (when all income goes to only one person). Increasing values of the Gini coefficient thus indicate higher inequality in the distribution of income.

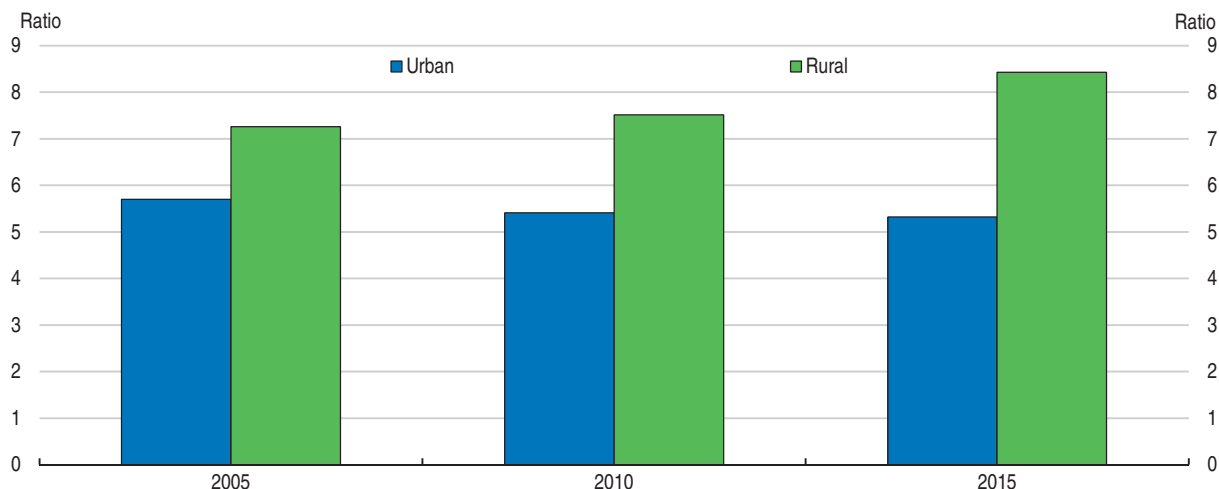
Source: China National Bureau of Statistics, CEIC, authors' calculations.

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Despite the reduction in aggregate income inequality, the disposable income gap between the richest and poorest urban individuals has barely narrowed. In rural areas, the gap has even risen (Figure 29). The marked reduction in poverty without the lowest income quintile gaining income share suggests that while many households have been lifted above a subsistence level, there has been less success in creating the necessary conditions to encourage further growth in the incomes of the lowest wage earners.

The share of wealth held by the top segment of the income distribution has been rising, according to recent research based on household data, and by 2012 the richest 1% held one third and the poorest 25% around 1% of all household assets (Xie and Jin, 2015). Among OECD countries for which comparable data are available, wealth inequalities are greater only in the United States with the richest 1% holding 37% of household wealth in 2010.

Figure 29. The income share of the poorest people has been falling in rural areas
 Disposable income of the top 20% over that of the bottom 20% of the income distribution



Source: China National Bureau of Statistics, CEIC.

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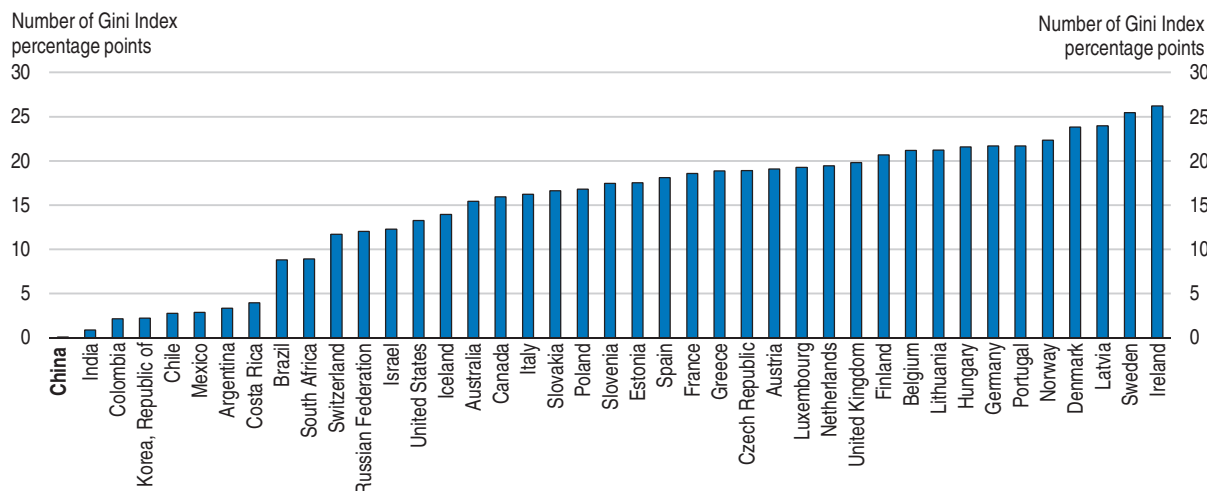
Redistribution through taxes and benefits is low

Overall, the tax-and-transfer system does not narrow the gap between the richest and poorest households (Figure 30). In part, this reflects the structure of the social security system, which has a minimum contribution that is calculated on an imputed value of earnings irrespective of the employee's actual income (equivalent to 60% of the previous year's local average wage) and a cap (at the payment required for an individual earning three times the local average wage). As a result, the many households in the lowest income quintile (who pay social security contributions) pay a much higher share of their income in contributions than those with higher incomes. The government should base the calculation of social security contributions on actual income earned. This may lower aggregate contributions, but can be funded through a broadening of the tax base which would also make the personal income tax system more progressive. For example, tax exemptions on interest from government bonds and savings accounts at Chinese banks could be abolished and the introduction of an inheritance tax considered.

The coverage and targeting of social assistance has improved in recent years, although there are significant disparities in benefits depending on the location of the recipient (Figure 31). The main social assistance scheme is the minimum living standard (or *dibao*) programme, which is administered at the local level. While the central and provincial governments make fiscal transfers to poorer regions to fund social assistance payments, benefit disparities endure that largely reflect the financing capacity of local governments.

The design of the *dibao* programme may also create a disincentive for social assistance recipients to take up work. This is because an increase in household wage income will result in a proportionate decrease in the *dibao* benefit received. As well as increasing central government transfers to fund social assistance payments in poorer areas, a portion of any increase in household salary should be excluded from assessable household income in calculating benefits.

Figure 30. **Redistribution by the tax-and-transfer system is very limited**
Reduction in market income inequality due to taxes and transfers

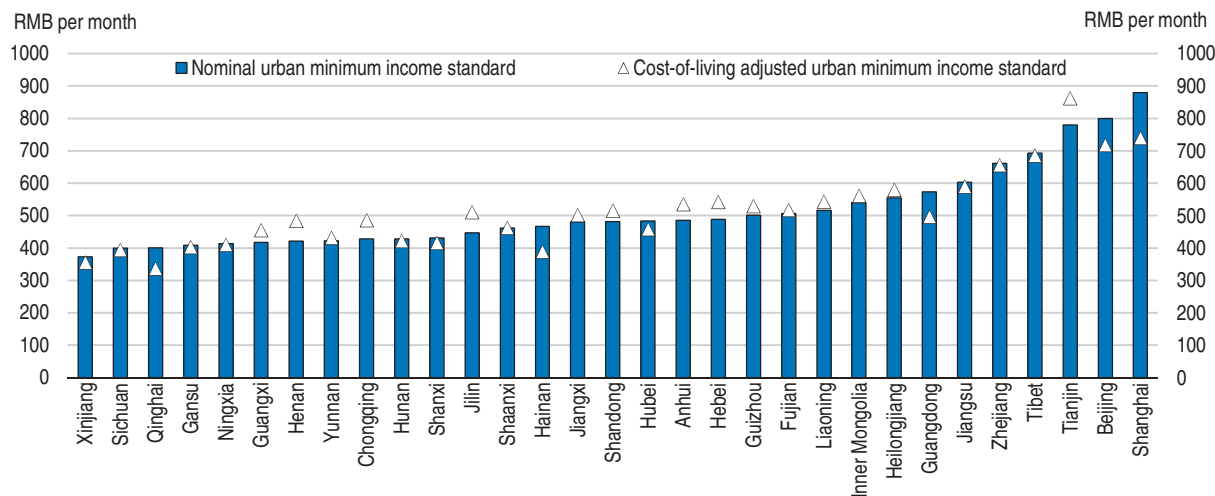


Note: Data for China are for 2013 and for other countries the latest available observation (2013 to 2015). The Gini coefficient ranges from zero (when everybody has identical incomes) to 100 (when all income goes to only one person). Increasing values of the Gini coefficient thus indicate higher inequality in the distribution of income. The metric presented here is calculated from data that are standardised to allow cross-country comparisons. Potential remaining comparability issues are detailed in Solt (2016).

Source: Standardised World Income Inequality Database (SWIID) Version 5.1.

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Figure 31. **The minimum living standard varies significantly across provinces**
Average provincial minimum living standard in urban areas, September 2016



Note: Separate spatial price deflators for rural and urban areas in each province are taken from Brandt and Holz (2006) and then extrapolated using the province-specific consumer price index. Li and Gibson (2013) outline potential limitations with such a methodology.

Source: China Ministry of Civil Affairs, CEIC, Brandt and Holz (2006), authors' calculations.

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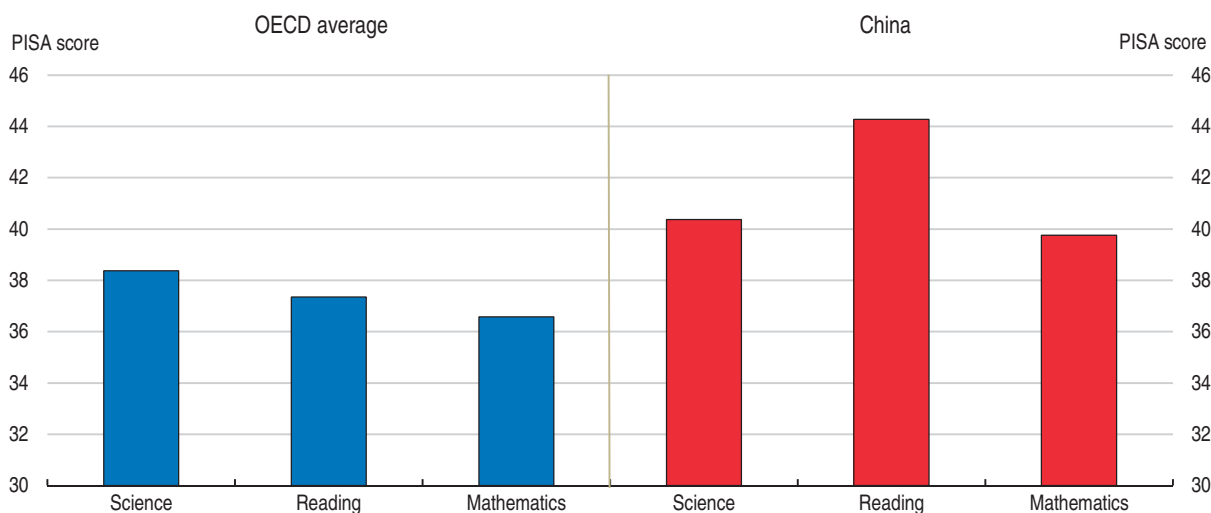
The unemployment insurance system suffers from low coverage and replacement rates. In 2015, just 43% of the urban employed contributed to unemployment insurance. The average unemployment insurance benefit was around 18% of the average urban wage in 2014, contrasting with an average net replacement rate above 60% in the OECD for an individual who previously earned 67% of the average wage. Low replacement rates may discourage long discretionary spells in unemployment. However, they may also result in workers from low-income families rushing to take a job regardless of the compatibility with their skills, reducing the efficiency of labour market matching and risking skills atrophy.

Various other government policies outside the tax-and-transfer system can narrow inequities within the population, such as those relating to public education, healthcare and the pension system (Solt, 2016). While data enabling the calculation of the aggregate effect of such policies on measures of inequality are not currently available on a cross-country basis, these policies warrant further discussion.

Work opportunities can be enhanced by more equality in education and the labour market

Educational opportunities shape people's destiny in the labour market, their productivity and their well-being. In 2015, Chinese students from Beijing, Shanghai, Jiangsu and Guangdong, who were tested for the Programme for International Student Assessment, outperformed the average OECD country cohort in science and mathematics and performed similarly in reading (OECD, 2016a). However, compared with OECD countries, socioeconomic factors explain a large part of the variation in China's PISA results (Figure 32). This reflects broader inequalities in educational opportunities, stemming primarily from the urban-rural divide. There are particularly large disparities in enrolment rates between urban and rural children in pre-primary education. This is

Figure 32. **Socioeconomic factors have a large influence on Chinese PISA scores**
Impact on PISA score of a one unit increase in the PISA index of economic, social and cultural status, 2015



Note: The PISA index of economic, social and cultural status is a composite indicator derived using Principal Component Analysis from several variables related to the family background of students. Parent education, parent occupations, various home possessions that proxy material wealth and the number of books and other educational resources available in the home are inputs to the index.

Source: OECD.

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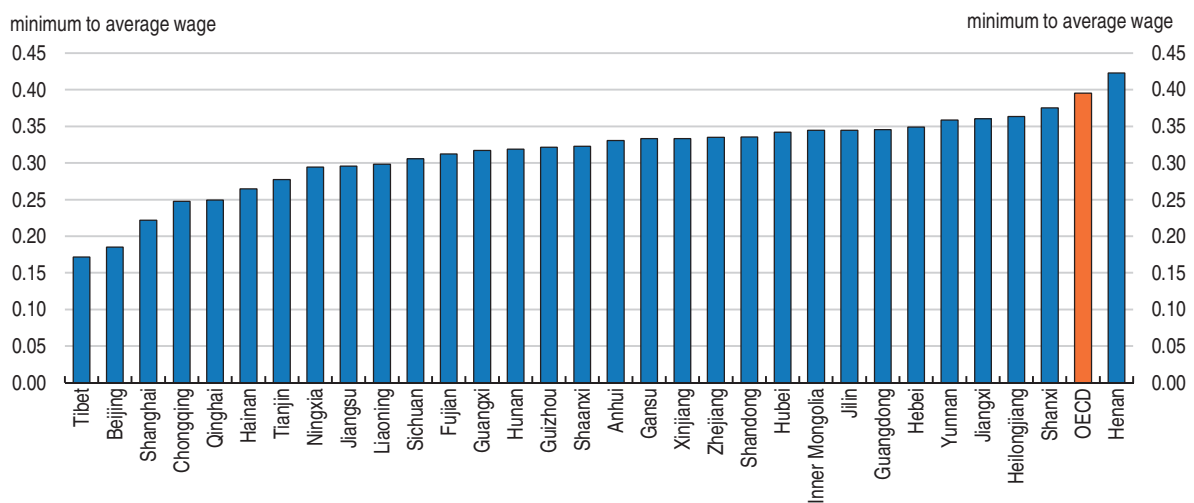
worrying given that research highlights positive effects of early childhood education on employment, income and health in later life (Campbell et al., 2014). The quality of education is also significantly lower in many parts of rural China, reflecting overcrowding in classrooms and significantly lower teacher salaries. Comparatively low educational attainment for women is also more common in rural areas (Zeng et al., 2013).

Along with providing all citizens the opportunity for a good general education, there needs to be more emphasis on retraining low-paid workers during their working lives. Workplace-based vocational training is one channel for such programmes. However, the system remains underdeveloped, and better co-ordination between employers, teachers, students and the government is needed. Online education has been growing rapidly and holds potential as a platform for lifelong learning. However, the quality of such courses varies greatly and improvements in the monitoring, evaluation and quality assurance of such programmes are needed.

China has had local minimum wages since the early 1990s to ensure work pays for low-income employees. Empirical evidence suggests that increases in the minimum wage have had beneficial effects on income distribution by reducing the gap between the median and bottom decile (Lin and Yun, 2015), even though the local minimum wages are low when compared with OECD countries (Figure 33). While, on average, there appears to be scope for an increase in minimum wages, the potential for negative employment effects in some locations should still be carefully considered. In early-2016, Guangdong Province imposed a two-year minimum wage freeze, reflecting such concerns.


Figure 33. **Minimum wages are low compared with OECD countries**

Ratio of minimum wage to average wage of the provincial capital, 2014



Note: The OECD bar is a simple average of the ratio of the minimum wage to average wage of full-time workers in 27 OECD countries in 2015.

Source: Ministry of Human Resources and Social Security, CEIC, OECD, authors' calculations.

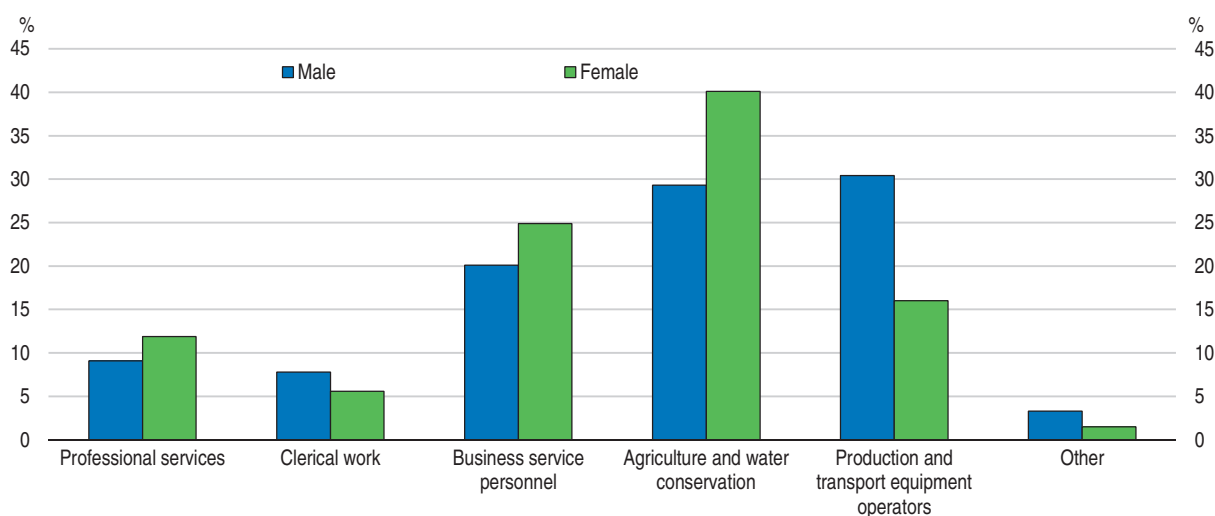
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Some groups face lower labour market opportunities, reducing their income-earning ability and overall well-being. Rural-to-urban migrant workers often take on low status, badly paid and sometimes dangerous jobs. In 2015, 60% of migrant workers did not have employment contracts. As a result, such workers were not legally entitled to the minimum wage nor covered by China's labour laws, increasing their vulnerability to cyclical


fluctuations and discriminatory practices by employers. The authorities have made progress in the past few years in severing the link between *hukou* status and welfare entitlements. However, the criteria for gaining residency in the most popular destination cities remain prohibitively strict for most migrant workers. There is also scope to improve job opportunities for women. Between 1990 and 2014, the labour force participation rate of 15-64 year old females declined by 9 percentage points, partly reflecting reductions in the public provision of childcare following SOE reforms in the late 1990s. Women in the labour market often face a wage gap with comparable male workers and a relatively high proportion are employed in the agricultural sector (Figure 34), farming their household farmland allocation while their husband temporarily migrates to an urban job.

Figure 34. **The employment share in agriculture is higher for women**

Occupation by gender, 2014



Source: China Labour Statistical Yearbook, 2015.

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Improvements to the health system will raise well-being and labour supply

A strong and equitable healthcare system that supports increasing healthy life expectancy is integral to well-being and the ability of the population to participate productively in the labour force. The health system has expanded in the past decade, with the number of beds in healthcare institutions rising from 2.83 per 1000 people in 2007 to 5.11 in 2015. However, there remains a shortage of quality healthcare personnel. Such shortages are particularly pronounced in rural areas, where child mortality rates are over double that of urban China.

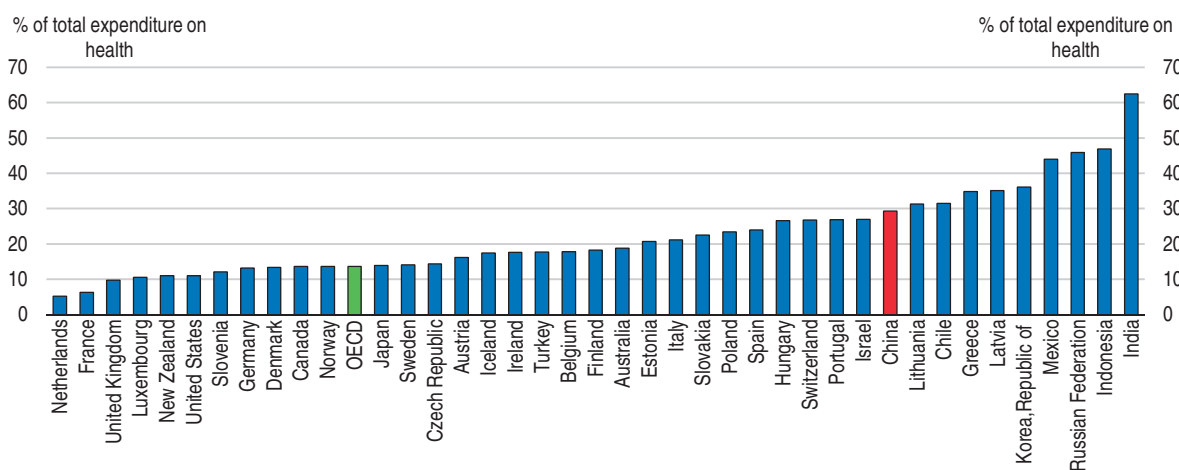
Access to healthcare has been improved by a dramatic expansion in health insurance coverage. Between 2004 and 2014, the coverage rate rose from around 200 million to over 1.3 billion people – the largest expansion of insurance coverage in human history. Many migrant workers continue to face impediments to health insurance access. In 2014, only 18% of migrant workers were covered by urban employee health insurance. Instead, many were required to return to their place of origin to claim health insurance benefits through the New Rural Cooperative Medical Scheme. In December 2016, the government announced that patients will be able to claim reimbursement in the location of the treatment regardless of which health insurance scheme they belong to or the province

from which they come. This reform should improve the utilisation of health services by migrant workers and reduce the time between when health costs are incurred and reimbursed.

Out-of-pocket payments for healthcare have declined in recent years owing to increases in government subsidies. However, by international standards, direct health outlays remain a high share of total healthcare spending (Figure 35). Indeed, new analysis based on the 2014 China Family Panel Studies survey suggests that those living in poverty spent a relatively high share of their income on medical expenses (Westmore, 2017).

Figure 35. Out-of-pocket health costs for the insured are high

As a percentage of total health expenditure (%), 2015 or latest available



Note: Data relate to 2015 for China and to 2014 for all other countries.

Source: World Health Organization Global Expenditure Database.

StatLink <http://dx.doi.org/10.1787/888933462058>

More can be done to extend working lives and improve care for the elderly in retirement

Active working lives are being cut short by China's low pension age, especially for women, as underlined in the 2010 OECD *Economic Survey of China* (OECD, 2010). The normal pension age in China is 60 years for men, 55 for women in white-collar jobs and 50 for women in blue-collar occupations. An increase and alignment of the pension age between men and women, as well as indexation to life expectancy, are advisable. However, this may be difficult due to concerns over pension fund sustainability that leave some workers unconvinced that an extra year of work will translate to a higher pension benefit. While an increase in the retirement age will, in itself, improve pension sustainability, complementary parametric adjustments or government spending measures may also be needed to safeguard pension incomes.

The government is aiming for universal pension coverage by 2020. At present, there are multiple pension schemes and administration is performed at the local level. This contributes to a high degree of fragmentation in the system that is reflected in disparities in pension benefits, stoking inequalities at older ages. Migrant worker coverage is low, as it can be difficult for a pension to be drawn in a different location from where it is earned. Nationwide administrative systems are needed for pensions to become portable across the country.

In addition to pension payments, there are also some in-kind benefits provided by the government including reimbursements for various care services provided in the home. However, there is no financial support for family caregivers who need to reduce their wage-earning hours to care for a family member. Such a measure is advisable given that, partly as a legacy of the One Child Policy, it is becoming more common that one child must look after two parents and four grandparents.

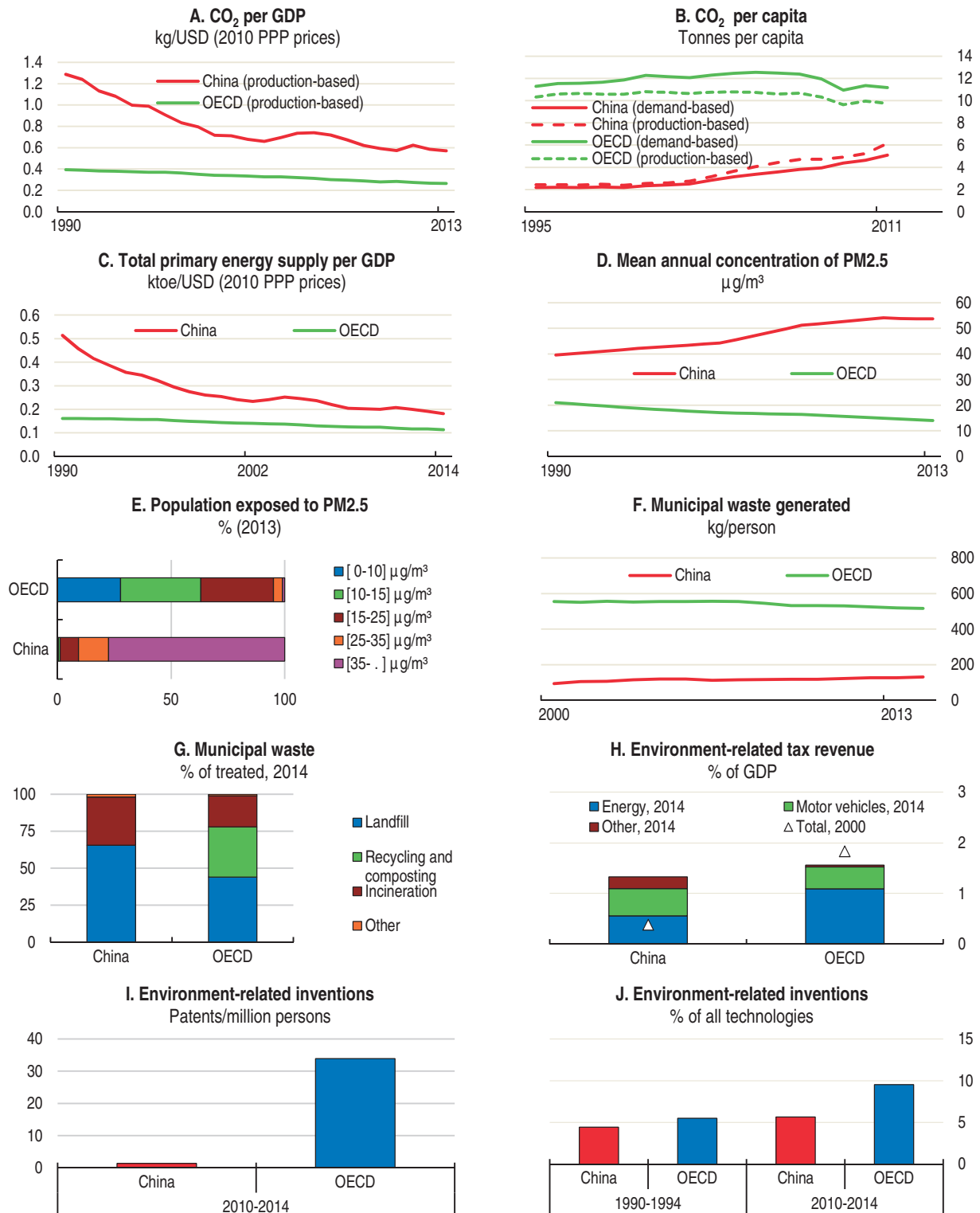
Greening growth

The targets set for environmental protection during the 13th Five Year Plan (2016-20) – including emission targets for coal-fired power plants, a target for absorbing and reusing rainfall and eliminating the problem of black and odorous water in urban areas – illustrate the importance the authorities attach to greening growth (Figure 36). China's high level of pollution has severely impacted health and well-being. There were an estimated 670 premature deaths per million people in China from exposure to particulate matter and ozone concentrations in 2010 (OECD, 2016b). Furthermore, if taking into account the emission of pollutants as negative by-product, environmental degradation has greatly reduced multi-factor productivity (Cárdenas Rodríguez et al., 2016).

China's bilateral agreement with the United States in late 2014 on curbing greenhouse gas emissions and its ratification at the G20 Hangzhou Summit in September 2016 was an important milestone, as China accounts for 27% of global carbon emissions and the United States 16% (as of 2015, according to BP, 2016). A national cap-and-trade carbon emissions system is to be a key tool to achieve the target (Box 7). However, the system, to be rolled out from 2017, can meaningfully reduce emissions only if enforcement is effective in raising the cost of polluting sufficiently for the polluter to cut output, switch to new technology or reduce emissions in other ways. The example of the pilot scheme in Guangdong province indicates that trading volume is relatively low owing to the generous allocation of quotas and the limiting of trading to selected large enterprises in a few industries. A carbon tax (either standalone or as part of environmental or resource charges) could usefully complement the cap-and-trade system, extending coverage to e.g. the transport sector. By 2030, the government plans that carbon emissions per unit of GDP will have been cut by 60-65% relative to 2005 levels, the share of non-fossil fuels in energy consumption will be about 20% and carbon emissions will have peaked. Meeting those commitments will be aided by slower growth, economic restructuring and rebalancing. Indeed, energy consumption in 2016 grew at about 1.4% – its slowest pace since 1998. Also, energy consumption per unit of GDP declined by 5%. In addition, there is ample room to make better use of environmental taxation. The issuance of green bonds, which finance carbon emission reduction and climate change impact mitigation initiatives, has soared in 2016, making China the largest issuer commanding a market share of over 40% in the first 11 months of the year.

Renewable energy use grew by 21% in 2015, reaching around 17% of the worldwide total, but China's share of renewables remains lower than its share of world energy consumption, which is nearly 23% (BP, 2016). The renewables mix has diversified over time from mainly hydro-energy into solar, wind and geothermal energy more recently. A series of economic and regulatory policies as well as fiscal incentives have been put in place to support renewable energy (OECD, 2017a). The current 13th Five Year Plan has set a target to at least triple the country's solar power capacity by 2020. However, increased renewables capacity does not always translate into increased consumption. The lack of connecting

Figure 36. Ample room for improvement in greening growth



Source: OECD (2016), Green Growth Indicators (database). For detailed metadata <http://stats.oecd.org/wbos/fileview2.aspx?IDFile=02a134e1-c3ec-4c5c-9a05-4ebb41a60539>.

StatLink <http://dx.doi.org/10.1787/888933462062>

grid, for instance, hinders the use of electricity generated by renewables and results in large amounts of idle capacity. Moreover, over the years, wind power development and local power grid planning were not sufficiently integrated (Zhao et al., 2016), leaving many wind power farms with connection problems. Renewable energy generation has also long been hindered by a lack of channels for independent generators to sell surplus energy. Policy has begun to tackle these difficulties. The pilot that started in 2013 to allow small-scale individual solar power generators to sell their surplus electricity to the grid has now been extended to the whole country. As a response to large amounts of idle capacity, in May 2016, the National Energy Agency and National Development and Reform Commission (NDRC) jointly set minimum guaranteed utilisation hours. Also, the construction of ultra-high voltage electricity transmission circuits by 2020 is expected to alleviate transmission bottlenecks. Even when there is grid connection, however, grid companies prefer thermal or hydropower-generated electricity as the on-grid tariff for wind power is higher than for thermal or hydropower.

Environmental management is expected to become more effective as a result of changes to the supervisory and monitoring system announced in September 2016 that will make it harder for local governments to manipulate the data before reporting it to the central government. More comprehensive monitoring and surveying would make pollution control more effective and raise public awareness.

Box 7. Past recommendations on greening growth and actions taken

OECD 2015 Survey recommendations	13th Five Year Plan and policies directly related to OECD recommendations
Make growth greener	
Continue to pursue stated emission targets, including by implementing a national carbon emission trading scheme, phasing out subsidies to carbon-intensive producers and boosting investment in renewables.	In 2015 the State Council published the Standardisation on Strengthening Energy Conservation Advice covering all the main energy-intensive industries. More than 80% of energy efficiency indicators should reach the level observed in advanced economies by 2020. In February 2016, the NDRC announced the launch of a national emissions trading system in 2017. The Energy Development Strategy Action Plan (2014-20) aims to install nuclear power capacity reaching 58GW by 2020, with an additional 30GW expected to be under construction in 2020. Installed capacity of hydro-, wind and solar power in 2020 is expected to reach 350GW, 200GW and 100GW, respectively. From the start of the first pilot in late 2013 to end-2016, carbon trading in the seven pilot provinces under the carbon emission trading scheme cumulatively reached 94 million tonnes of CO ₂ and CNY 2.2 billion.

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