

China Economic Update

June 2014

Special Topic: Changing Food Consumption Patterns in China: Implications for Domestic Supply and International Trade



The World Bank economic update provides an update on recent economic and social developments and policies in China, and presents findings from ongoing World Bank work on China. The update was produced by a World Bank team consisting of Karlis Smits (Senior Economist), Bingjie Hu (Economist), Binglie Luo (Research Assistant), Tony Ollero (Economist), and Ekaterine Vashakmadze (Senior Economist) with support from the China country team, and under the overall guidance of Klaus Rohland (Country Director), Sudhir Shetty (Sector Director), Bert Hoftman (Regional Chief Economist), and Chorching Goh (Lead Economist). A box on regional development was prepared by Jingyi Jiang (World Bank consultant). A special topic on food security was drafted by a team led by Ulrich Schmitt (Senior Economist) and is based on a recently published study *Urban China*. Extensive comments are gratefully acknowledged from Nikola Spatafora and Philip Schellekens. The team would also like to thank Tianshu Chen, Li Li, Yan Wang, and Lin Yang for support in the production and dissemination of this report. The finding, interpretations, and conclusions expressed in this report do not necessarily reflect the views of the Executive Directors of the World Bank or governments they represent. This report takes into account information available up to end of May 2014. Questions and feedback can be addressed to Li Li (lli2@worldbank.org).

Contents

Overview	1
1. Recent Economic Developments.....	2
Economic growth is gradually slowing as a structural transformation of the economy continues	2
In a highly leveraged economy, monetary policy is kept accommodative as credit growth is reined in.....	5
Fiscal policy is still accommodative but has been considerably scaled down compared with earlier years	7
The labor market is strong despite decelerating growth	9
The external position temporarily weakened in early 2014.....	11
2. Economic Prospects.....	14
Improving global activity should provide a tailwind to China	14
China's growth is likely to ease moderately; downside risks remain	15
The overall macroeconomic stance is seen staying accommodative	17
Reforms in the financial sector and fiscal policy are needed to address financial stability risks in the medium run	21
3. Special topic: Changing Food Consumption Patterns in China: Implications for domestic supply and international trade	23
Higher incomes have changed food consumption patterns.....	23
Supply constraints could undermine China's food self-sufficiency	25
Projecting gaps in food demand and supply	26
Policy implications: Fine-tuning China's food security objectives.....	29
References	31
Notes.....	31

Overview

China's economic growth is gradually slowing as the structural transformation of the economy continues. Output grew by 7.7 percent in 2013, matching its 2012 growth rate and exceeding the government's 7.5 percent indicative target. Stable growth partly reflected the effects of mid-2013 growth support measures. Nevertheless, recent growth rates have been significantly below the levels observed over the past decade as drivers of economic growth continued to shift from manufacturing to services on the supply side, and from investment to consumption on the demand side, and as measures to rein in the rapid accumulation of credit came into force. The impact of decelerating growth on labor markets has been so far relatively small due to the structural shifts of economic activity toward labor-intensive service sectors.

The rebalancing is not smooth, and quarterly growth is volatile. In part this volatility reflects tensions between structural trends and near-term demand management measures taken by the government. Growth slowdown in the first quarter reflected a combination of dissipating effects of earlier growth-support measures, subdued external environment, and tighter credit, especially for real estate activities. In recent months economic activity, including industrial production, started to show signs of acceleration. The recent acceleration, expected to continue into the next two quarters of this year, is partly reflecting the effect of new growth-supporting measures, robust consumption, and a recovery of external demand.

China's growth will continue to moderate over the medium term, and the structural shifts will become more evident. Growth in China is expected to decrease marginally to 7.6 percent in 2014 and 7.5 percent in 2015, from 7.7 percent in 2013. A planned decline in investment growth will be largely offset by a gradual increase in consumption growth, the latter supported by an increase in household incomes. The fundamental drivers of the global recovery remain intact and should provide a favorable tailwind to China's net export growth. However, headwinds from a gradual deceleration of credit growth can be expected to weigh on domestic economic activity.

Risks to orderly and gradual adjustment remain. The main channels of a possible disorderly unwinding are related to local government financing, which in case of a disorderly deleveraging could trigger a sharp slowdown in investment growth, and to prospects of select sectors, particularly real estate, which in case of an abrupt change in the cost of capital could significantly reduce economic activity. Additional risk is related to the expected recovery of net exports, which may not materialize if the recovery in advanced countries weakens. China has considerable buffers needed to address these risks, and the adjustments should be orderly, and structural adjustment gradual—though an abrupt unwinding of accumulated imbalances cannot be completely ruled out.

Fiscal and financial sector reforms are needed to address financial stability risks in the medium run. The first task involves effectively managing the process of rapid credit growth, including less well-regulated shadow banking system. The second: gradual and orderly deleveraging of large stock of local government debt accumulated through off-budget and quasi-fiscal platforms. A sustainable resolution of these issues would require reforms in the financial sector and in fiscal policy. Both of these reforms could potentially be disruptive to growth in the short run. Therefore, reforms likely to support growth in the short term, such as promoting competition, eliminating entry barriers in select sectors, and reducing administrative burden on businesses, should be implemented in parallel.

1. Recent Economic Developments

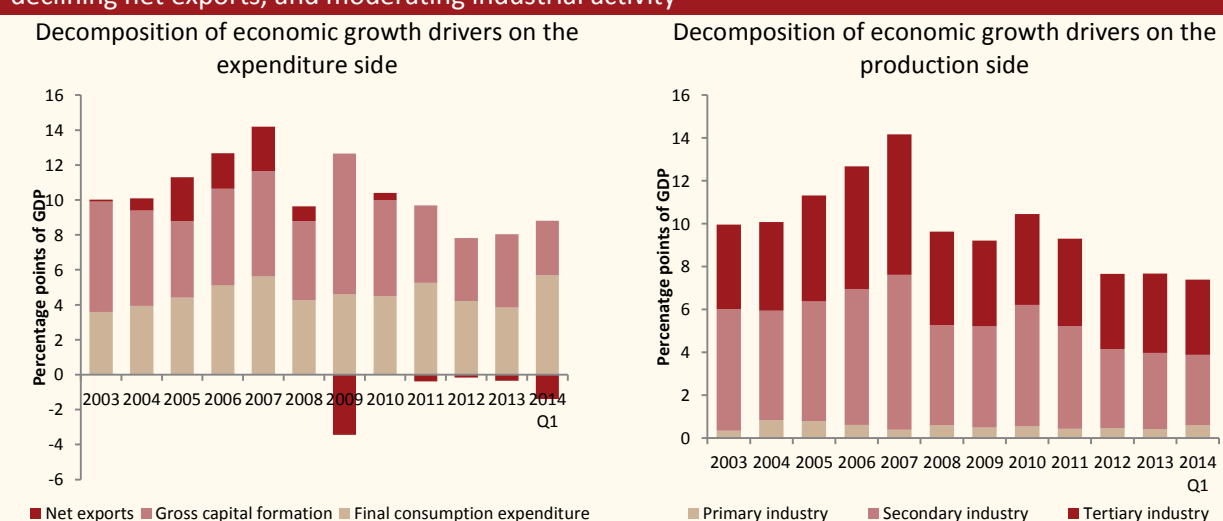
Economic growth is gradually slowing as a structural transformation of the economy continues

China's annual economic growth remained robust in 2013, but growth continues to gradually slow. Growth was stable at 7.7 percent for the year, matching 2012's rate and exceeding the government's indicative target of 7.5 percent. Moderation of growth rates from a decade of average annual growth of about 10 percent reflects a structural transformation of the country's growth model. A rebalancing of growth from investment to consumption and from industry to services continues, but there are challenges and rebalancing is slow. Investment returned as the main growth driver, helped by an uptick in investment in infrastructure and real estate in 2013.

Quarterly economic growth has become more volatile indicating that rebalancing is not progressing smoothly. The first half of 2013 marked a deceleration of economic activity, largely related to a weakening of domestic demand, though an economic support program centered on boosting public infrastructure expenditures and tax incentives for small and medium enterprises (SMEs) lifted growth in the second half. The growth momentum has since started to slip again as accommodative fiscal and monetary policy impulses are fading. Growth in the first quarter of 2014 decelerated to 7.4 percent (year on year) or 1.4 percent (quarter on quarter) from 7.7 percent or 1.7 percent (quarter on quarter) in the last quarter of 2013. Recent monthly indicators suggest that growth has stabilized and growth momentum is expected to accelerate in the second quarter of 2014.

The slower momentum in the first quarter of 2014 was mainly due to decelerating investment growth, and a worsening external balance. On the demand side, net exports remained a drag on growth, subtracting 1.4 percentage points from growth in the first quarter. Gross capital formation continued to weaken, contributing only 3.1 percentage points to growth in the first quarter of 2014 against 4.2 percentage points in the whole of 2013 (figure 1.1). As a result of weaknesses in demand growth in manufacturing and services slowed in the quarter, but agriculture saw a slight improvement.

Figure 1.1: A slowdown in growth momentum is led primarily by decelerating investment growth, declining net exports, and moderating industrial activity



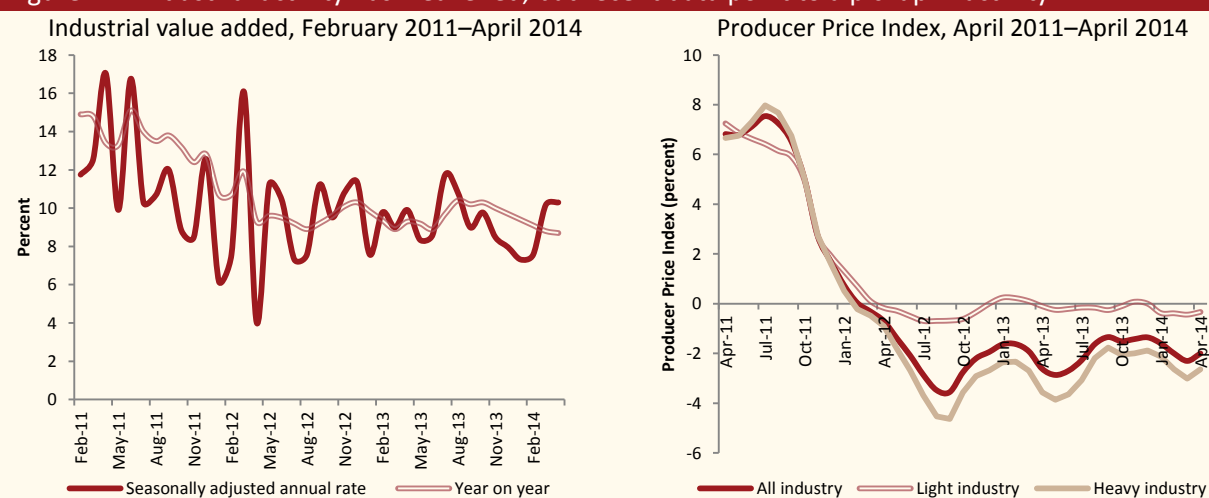
Note: Industry refers to secondary industry, which covers manufacturing and construction; services refers to tertiary industry.

Source: World Bank staff calculations based on CEIC data.

On the supply side, China's economic growth structure continues to evolve from a manufacturing- to services-based economy. In 2013 the services sector overtook industry as the key growth driver both in share in GDP and contribution to GDP growth. In 2013, services' contribution to growth is estimated at 3.7 percentage points of GDP, that for industry 3.6 percentage points. This trend is expected to persist as China's economic growth structure continues to evolve from a manufacturing- to services-based economy. Agriculture and mining continued to strengthen, aided by productivity increases in agriculture (linked to mechanization), but agriculture's contribution to overall growth is low (see the special topic "Changing Food Consumption Patterns in China" in this update on the changing nature of agriculture production).

This shift is broad-based, as reflected in a slowdown of industrial activity across all major sectors: mining, manufacturing, and production of electricity, gas, and water. Industrial production growth moderated to 8.8 percent the first quarter of 2014 from 10 percent year on year in the previous quarter, still led by state-owned enterprises. In March, such enterprises registered only a 4.5 percent increase in value added, versus 11.7 percent from private enterprises. A Producer Price Index going deeper into negative territory (from 1.4 percent in the last quarter of 2013 to 2.0 percent in the first quarter of 2014) points to a further weakening in industrial activity, especially in heavy industry, where producer-price deflationary pressures remain strongest (figure 1.2). The Producer Price Index has been negative for 26 months, suggesting that the real economy continues to face deflationary pressures due to weak demand and excess supply. High-frequency data indicate a slight uptick in industrial production which, at a seasonally adjusted annualized rate, increased by 10.3 percent in April, a notable pickup from February's 7.6 percent.

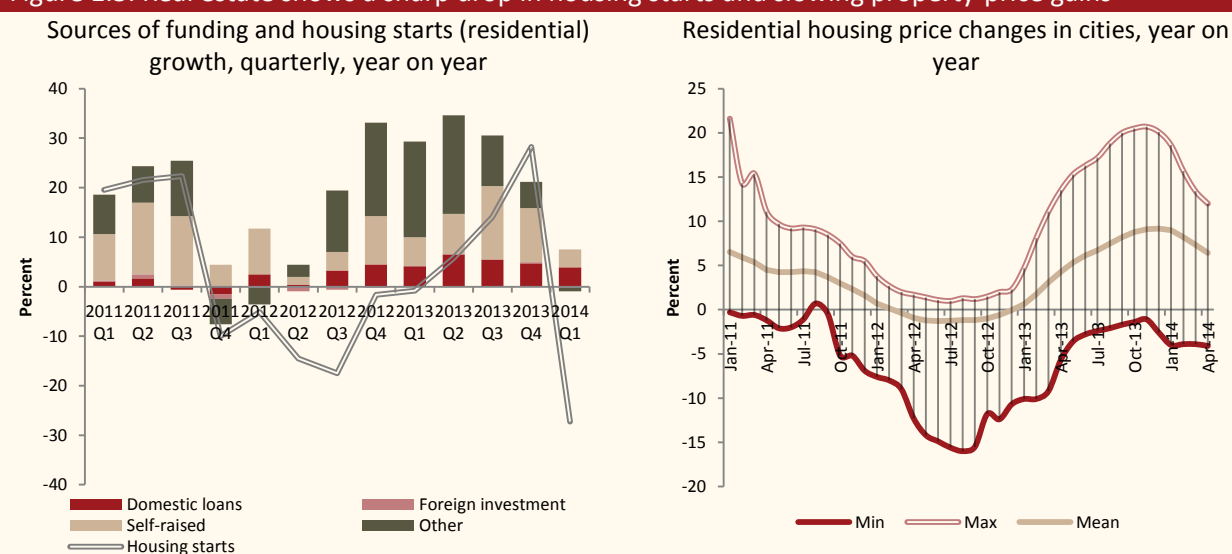
Figure 1.2: Industrial activity has weakened, but recent data point to a pickup in activity



Source: World Bank staff calculations based on CEIC data.

In addition to the structural shift from the industry to services sector, administrative tightening and a reduction of investment translated to a marked slow-down of activities associated with real estate in the first quarter, slowing construction activity. Tighter credit, especially for real estate activities, prompted a sharp drop in housing starts in the first quarter—down 27 percent year on year—though that came after a 28 percent surge in the fourth quarter of 2013 (figure 1.3). This drop pulled back investment growth in real estate. Monthly data suggest that the softening in residential housing prices stems mainly from weaknesses in secondary cities in the western and central parts of the country.

Figure 1.3: Real estate shows a sharp drop in housing starts and slowing property-price gains



Source: World Bank staff calculations based on CEIC data.

On the demand side, domestic rebalancing is still very gradual. China is slowly rebalancing the sources of growth in domestic demand, and increasing consumption, which maintained robust growth in 2013: retail sales rose 13.1 percent (14.5 percent in 2012) and car sales climbed 15.7 percent (6.9 percent). Having become the world's largest car market in 2009, China drew further ahead from the United States in 2012 with 18 million units sold versus 15.6 million in the former global leader. Wholesale goods and real estate-linked retail items, including household electrical appliances and furniture, expanded. Yet final consumption contributed less than gross capital formation to GDP growth in 2013, a reversal from 2011 and 2012 (see figure 1.1).

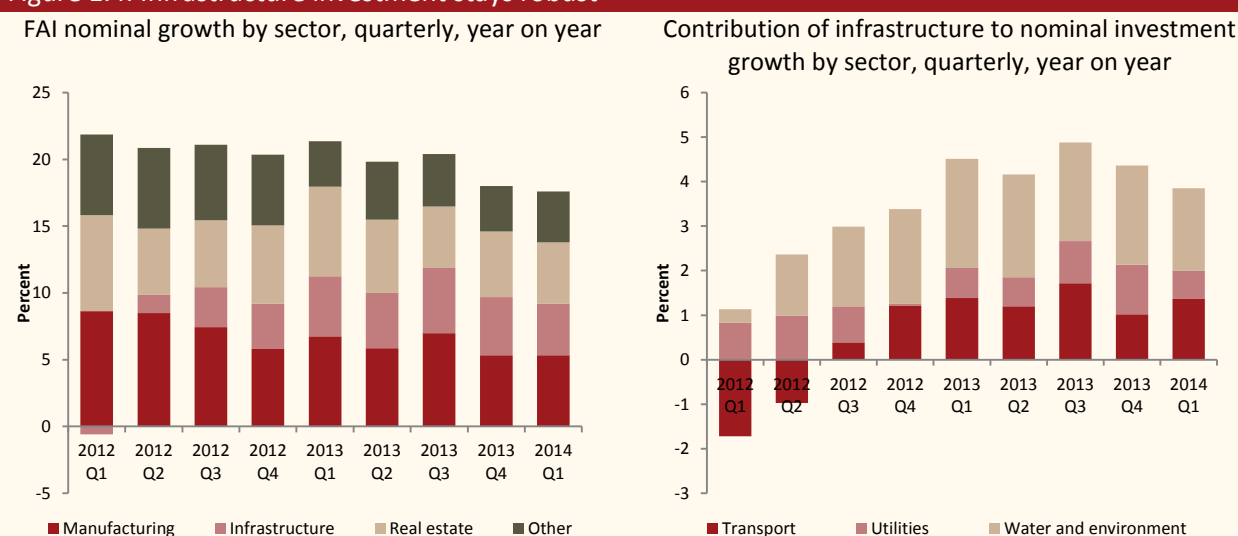
Consumption growth stayed robust. Consumption contributed 5.7 percentage points to growth in the first quarter. Urban consumption expenditures picked up from 9.5 percent (year on year) in the fourth quarter of 2013 to 9.9 percent in the following quarter. Monthly data suggest that consumption has stayed robust. In April retail sales growth picked up by 10.9 percent (year on year) in real terms. Internet commerce is becoming more important—the National Bureau of Statistics for the first time released data on large-scale online retail sales, which stood at RMB 81.5 billion in Q1, up by 51.7 percent from Q1 2013.

An economic support program in mid-2013 that centered on boosting government expenditures helped stabilize growth, but also slowed economic rebalancing, as investment reemerged as the main growth driver. China's headline measure of investment, fixed asset investment (FAI)—a broad measure that also includes land sales and purchases of used capital—grew by 19.6 percent in 2013, down slightly from 20.6 percent in 2012 (figure 1.4). Much of the slowdown came from slower investment in manufacturing, at 18.5 percent versus 22.0 percent in 2012. Infrastructure investment climbed, however, to 16.9 percent from 12.9 percent the previous year, as additional spending on high-speed railways offset the decline in capital spending elsewhere. Real estate investment also picked up in 2013, to 19.8 percent from the year-earlier 16.2 percent.

In the first quarter of 2014 investment growth decelerated as accommodative fiscal policy impulses faded. FAI grew by 17.6 percent (nominal) in the first quarter of 2014, in a gradual deceleration from 20.4 percent in the third quarter of 2013 when growth-supporting measures were implemented. The contribution of infrastructure investment decelerated from 1 percentage point in the same time period.

Tightening credit conditions weighed on real estate investments, which increased by only 15.2 percent (year on year) in the first quarter of 2014.

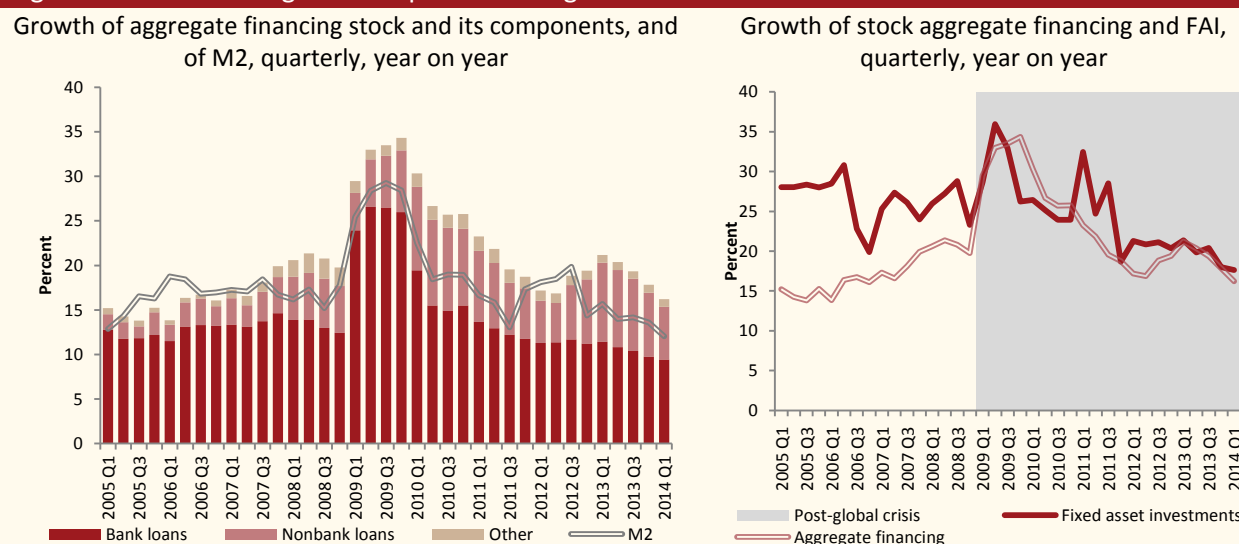
Figure 1.4: Infrastructure investment stays robust



Source: World Bank staff calculations based on CEIC data.

In a highly leveraged economy, monetary policy is kept accommodative as credit growth is reined in

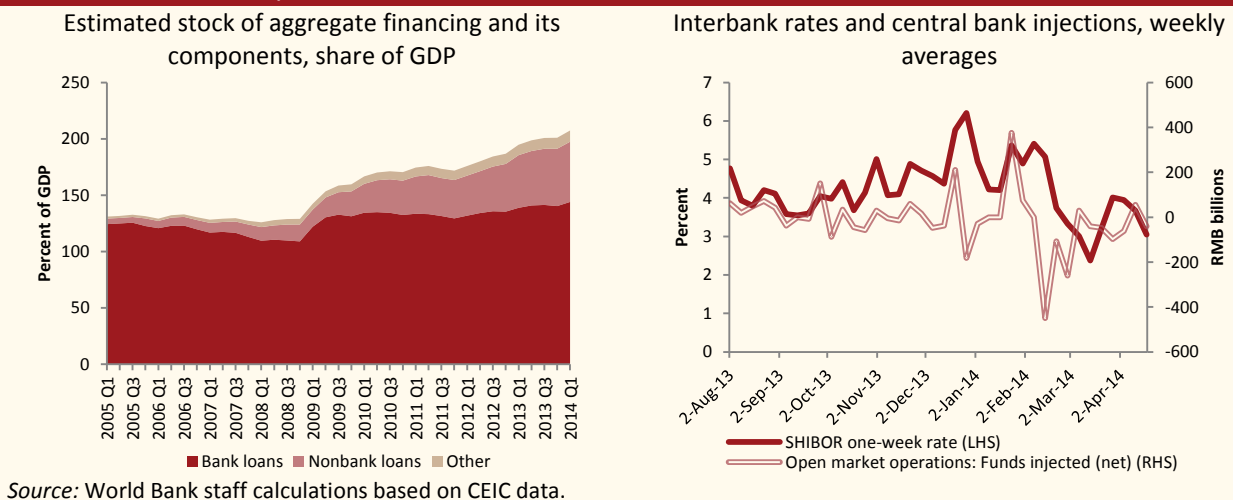
Monetary policy stayed accommodative, but the credit impulse is fading as administrative regulations rein in credit growth. Broad money (M2) growth remains robust, and the authorities have introduced measures easing liquidity conditions. In April M2 growth increased to 13.2 percent (year on year) from 12.1 percent in March. The growth of aggregate financing (stock)—formerly called total social financing—decelerated from 19.4 percent (year on year) in 2012 to 17.8 percent in 2013. Bank loan growth (in RMB and foreign currencies) edged down to 13.5 percent from 14.1 percent in 2012. But credit products associated with China's shadow banking system continued to surge (figure 1.5), by 31 percent in 2013. Barely available a decade ago, shadow banking credit now accounts for a fourth of aggregate financing. In the first quarter of this year, the growth of aggregate financing (estimated stock) decelerated further to 16.2 percent (year on year), with bank loan growth coming off further to 13.2 percent (year on year). Shadow banking growth also decelerated, to 24.8 percent (year on year), as the authorities introduced additional administrative regulations to limit nonbank credit growth. A weakening of the credit impulse is a drag on investment. Since the global economic crisis, China's FAI growth has become increasingly dependent on growth in aggregate financing, a trend not seen before 2008 (see figure 1.5).

Figure 1.5: A weakening credit impulse is a drag on investment

Even though aggregate credit growth has started to decelerate, the economy is still highly leveraged. Outstanding bank loans reached 135 percent of GDP in 2013, up from 105 percent in 2007. The debt run-up is even starker using China's broadest credit measure—the total stock of aggregate financing—which topped 200 percent of GDP in 2013, up from 124 percent in 2007. Corporate debt to GDP is now at about 125 percent among the highest in Asia. Household debt is still relatively small at a little more than 20 percent of GDP. Despite the authorities' intentions, it has been hard to curb credit growth in the last few years, leading to some financial imbalances.

This tradeoff between keeping a highly leveraged economy stable and limiting excessive credit growth has made liquidity management challenging. Central bank efforts to restrain risky lending and credit-product creation caused interbank rates to spike in June and December 2013 and again in January and February 2014 (figure 1.6). In January 2014 the central bank addressed anxieties in the interbank market by making timely liquidity injections and communicating its policy intentions. In March and April interbank rates were relatively stable.

Figure 1.6: China's economy is still highly leveraged, but central bank interventions have helped calm interbank rate volatility



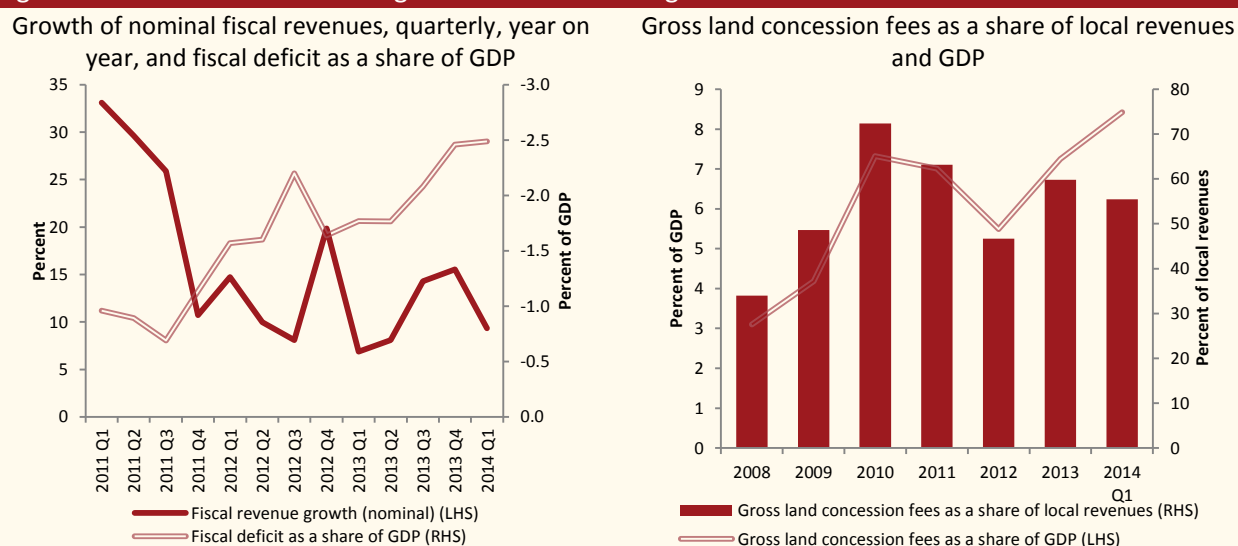
Despite an increase in the monetary base, inflation stabilized in 2013 and inflationary pressures are subdued. Annual consumer price index (CPI) inflation eased marginally from 2.7 percent in 2012 to 2.6 percent in 2013, largely due to moderating price increases of food products. CPI inflation declined to 2.3 percent (year on year) in the first quarter of 2014 due to a moderation of food prices. In April CPI inflation decelerated further to 1.8 percent, in part due to seasonality.

Fiscal policy is still accommodative but has been considerably scaled down compared with earlier years

Fiscal policy, including quasi-fiscal activities, remains accommodative. Preferential tax policies were introduced in April to support SMEs—value-added tax (VAT) and business tax thresholds for small and micro business were raised—benefiting more than 6 million businesses. In addition, a pilot project to replace business tax with VAT in the transport and other service industries was rolled out nationwide, cutting their tax burden by more than RMB 140 billion in 2013. Moves to abolish central and local government administrative fees continued, reducing the administrative burden for the private sector.

Moderating economic activity in the first half of 2013 translated into slower revenue growth, but that growth accelerated in the third and fourth quarters. Fiscal outcomes for 2013 were broadly in line with the budget outlined in March, 2013: the fiscal deficit widened from 1.2 percent of GDP in 2012 to 2.1 percent in 2013, largely due to increased expenditures—central and local spending went up by 0.7 percentage points of GDP. Revenues remained broadly stable, though revenue growth lagged GDP growth. Against the budget, collection of VAT was 2.0 percent lower and domestic excise tax collection 3.7 percent lower, shortfalls mainly due to weaker imports and price changes on selected commodities—VAT and excise tax revenues on imports were 11.8 percent lower than budgeted, and customs duties came in less than expected. However, corporate income tax revenues were 10.1 percent higher than budgeted, partly due to collection of overdue taxes from previous years and other one-off factors. Land concession fees still account for more than half of local government revenues. Gross land-lease revenues maintained their upward trajectory, exceeding 8 percent of GDP in the first quarter of 2014 (figure 1.7). However, in some municipalities, a decline in real estate activity has started to put pressure on land-lease revenues, which still average more than half of local government revenues.

Figure 1.7: Central fiscal revenue growth shows a slowing trend



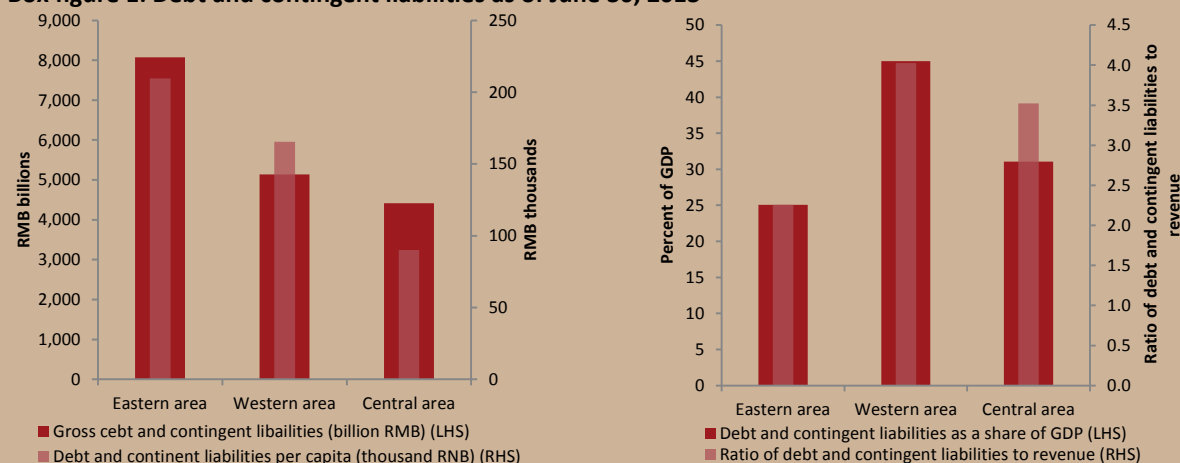
Source: World Bank staff calculations based on CEIC data.

To stabilize decelerating economic growth, the government has announced additional revenue and expenditure measures. On April 2, 2014, the State Council announced three measures: first, relaxing the eligibility criteria for SMEs to qualify for corporate income tax cuts; second, accelerating urban redevelopment by building modern social housing units—the China Development Bank will set up a special agency to issue home-financing bonds; and third, accelerating expansion of the national rail system—about RMB 150 billion-worth of bonds will be sold this year to build railways in the less-developed central and western regions. The plan will also see the creation of a railway fund that will receive RMB 200 billion–300 billion annually. These growth-stabilizing expenditure measures are significantly larger in size than ones implemented in 2013.

Activity among local governments that is off-budget (or linked to financing vehicles) is supporting demand, but is lifting local government debt and highlighting vulnerabilities. The government appears to have a firmer measure—if not yet better control—of local government debt. The National Audit Office (NAO) reported that local government debt and contingent liabilities topped RMB 17.9 trillion (USD 2.9 trillion, or 31.3 percent of 2013 GDP) in mid-2013, up by 2.7 percent of GDP in just six months. Less than three years ago, the NAO put local government debt and contingent liabilities at RMB 10.7 trillion (USD 1.7 trillion or 28.6 percent of 2010 GDP) at end-2010.¹ While the debt stock is manageable, the growth of local government debt at a yearly rate of around 20 percent in 2010–13 is a major concern, and some subnational governments may be overdebted. Short maturities of local government debt, due to the paucity of long-term financing instruments, further exacerbate local governments' debt risk. In fact, a financial mismatch is inherent from the prevalent use by local government units (through local government financing vehicles) of bank and shadow bank debt, which are short term, to fund infrastructure projects, which are long term and whose assets will not generate revenue until well into the future. In short, local government debt is manageable—though varying across provinces—but its rapid buildup has raised fiscal vulnerabilities (see box 1.1).

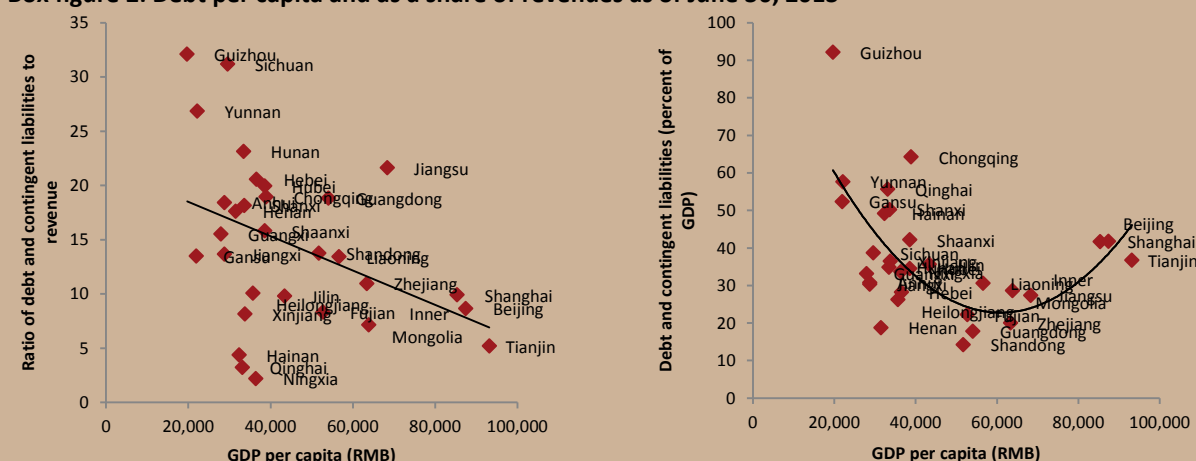
Box 1.1: Local government debt—indebted east, burdened west

In late January 2014 local governments published separate audit reports detailing their combined public debt and contingent liabilities. These reports were based on an extensive review undertaken by the NAO in 2013, a summary of which was released in December 2013. The audits show that the wealthiest eastern provinces are the most indebted, but repayment burdens are higher in poorer, western provinces (box figure 1).

Box figure 1: Debt and contingent liabilities as of June 30, 2013

Source: World Bank staff calculations based on audit reports.

In particular, while Jiangsu, Guangdong and Sichuan are the most indebted in absolute terms (these eastern provinces account for almost a third of all local government debt liabilities), as a share of provincial GDP, Guizhou, Chongqing, and Yunnan have higher debt burdens (box figure 2). Provincial government debt ratios are negatively correlated with their per-capita income levels.

Box figure 2: Debt per capita and as a share of revenues as of June 30, 2013

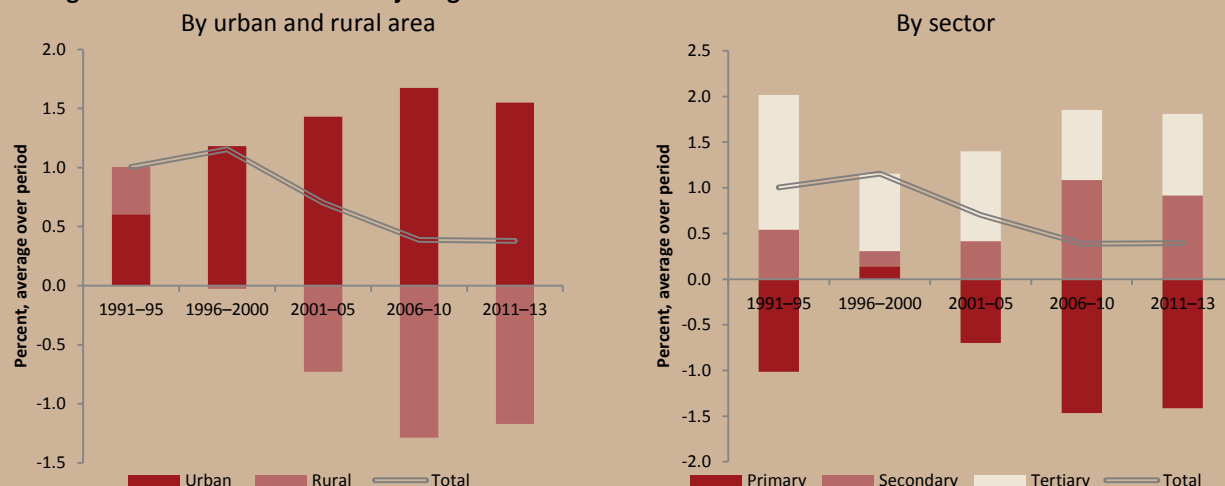
Source: World Bank staff calculations based on audit reports.

The labor market is strong despite decelerating growth

A dynamic labor market has helped maintain growth in jobs and income. In 2013, 13 million new urban jobs were created, slightly more than in 2012. In the first quarter of 2014, urban employment increased by 3.44 million, on track to achieve this year's government's indicative target of 10 million new urban jobs. Increased urban employment is associated with continued structural transformation of the labor market (box 1.2). Annual migrant inflows to urban areas slowed in 2013 to 6.3 million (for a stock of 268.9 million) from 12.5 million in 2010, as migrant wage rises decelerated (figure 1.8).

Box 1.2: Structural transformation of the labor market

The transformation is marked in two ways: a decline in rural and primary sector jobs is offset by an increase in new jobs in urban sectors; and growth in tertiary sector jobs shows a secular trend of making a greater contribution to total jobs growth than growth in the secondary sector (box figure 1).

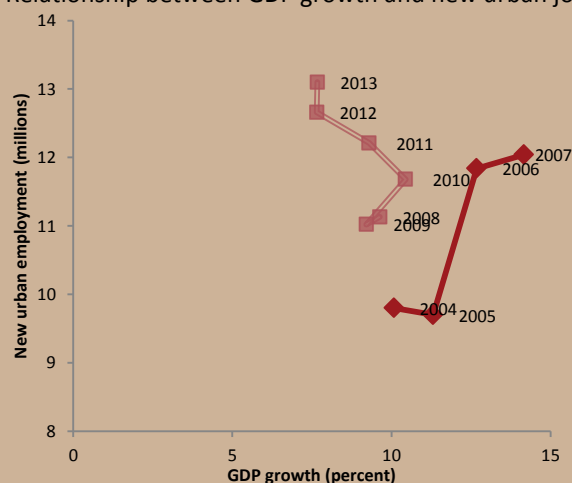
Box figure 1: Contributions to total jobs growth

Source: World Bank staff calculations based on CEIC data.

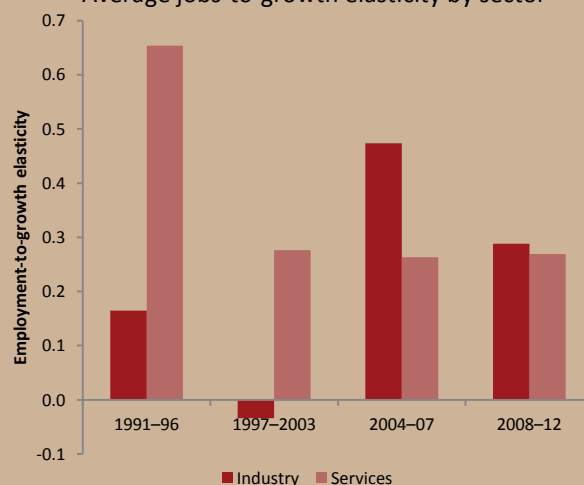
The transformation has also changed the relationship between economic growth and jobs. First, jobs-to-growth elasticity has declined over the last few decades as economic growth is increasingly driven by rising capital intensity rather than employment. Second, as rebalancing from manufacturing to services proceeds job creation is likely to become more buoyant as the services sector is more labor intensive. Therefore a moderation of economic growth is not necessarily associated with a decline in employment growth. A gradual decline in economic growth after 2008 did not lead to a rapid decline in growth of new urban jobs (box figure 2).

Box figure 2: Moderating economic growth has not brought down urban employment growth

Relationship between GDP growth and new urban jobs

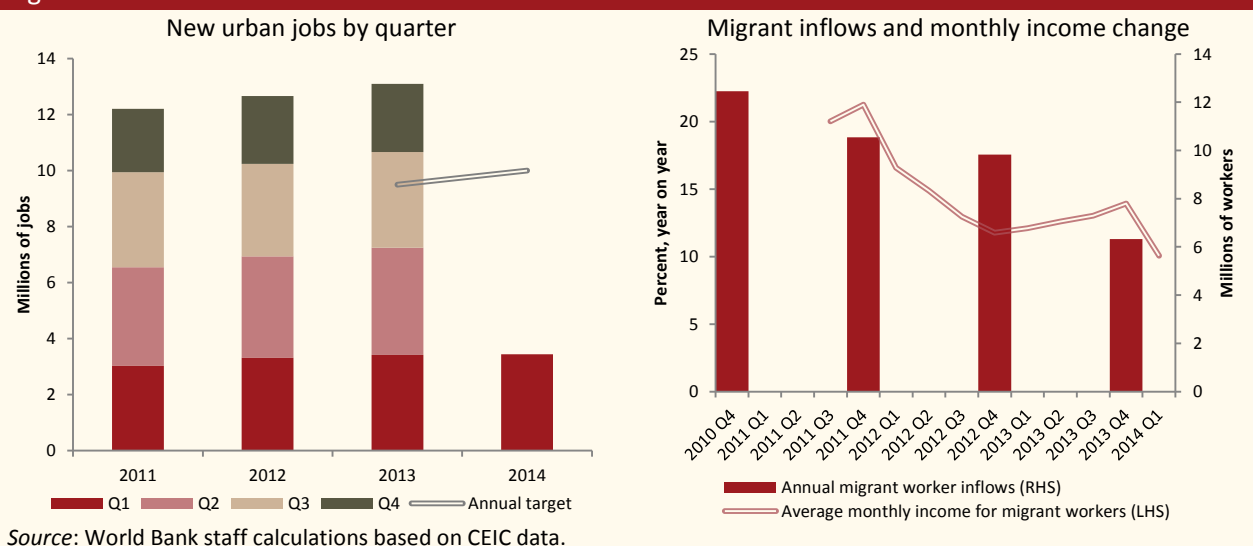


Average jobs-to-growth elasticity by sector



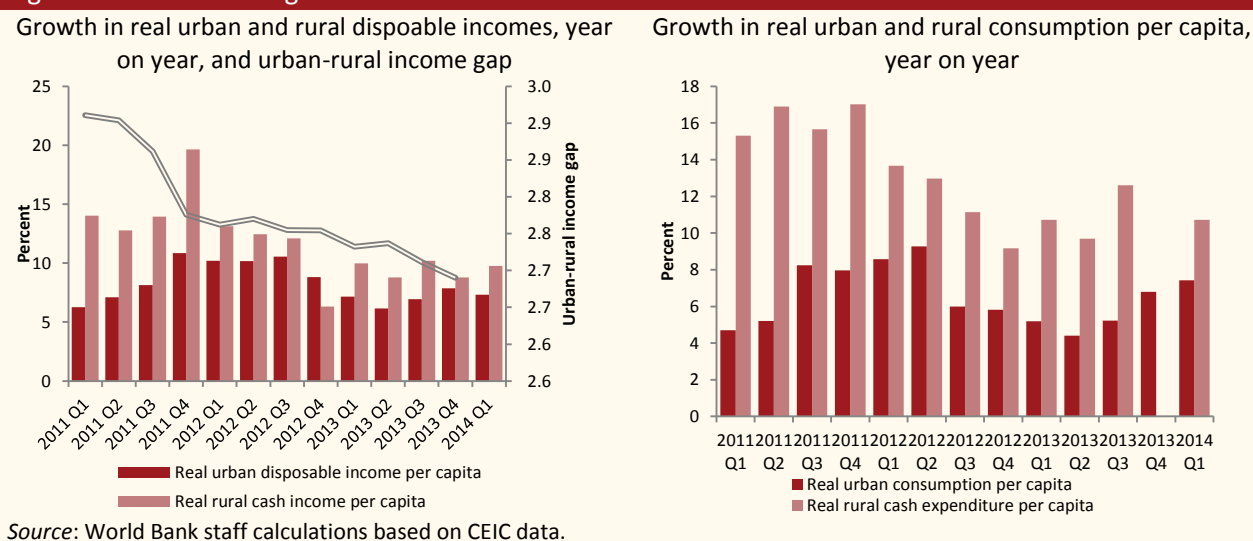
Source: World Bank staff calculations based on CEIC data.

Figure 1.8: Labor market robustness still in evidence



Healthy labor market dynamics have translated into a decline in urban–rural income and consumption gaps. Growth of incomes and consumption in rural areas is faster than in urban areas, and the urban–rural income gap declined from about 2.7 in the first quarter of 2011 to below 2.5 in the first quarter of 2014. Although the urban–rural income gap narrow in 2009 and the consumption gap began to shrink as early as 2004, convergence in income levels has been slow (figure 1.9), in part due to rigidities in geographic labor mobility arising from the household registration system (*hukou*).

Figure 1.9: Slow convergence in urban–rural incomes

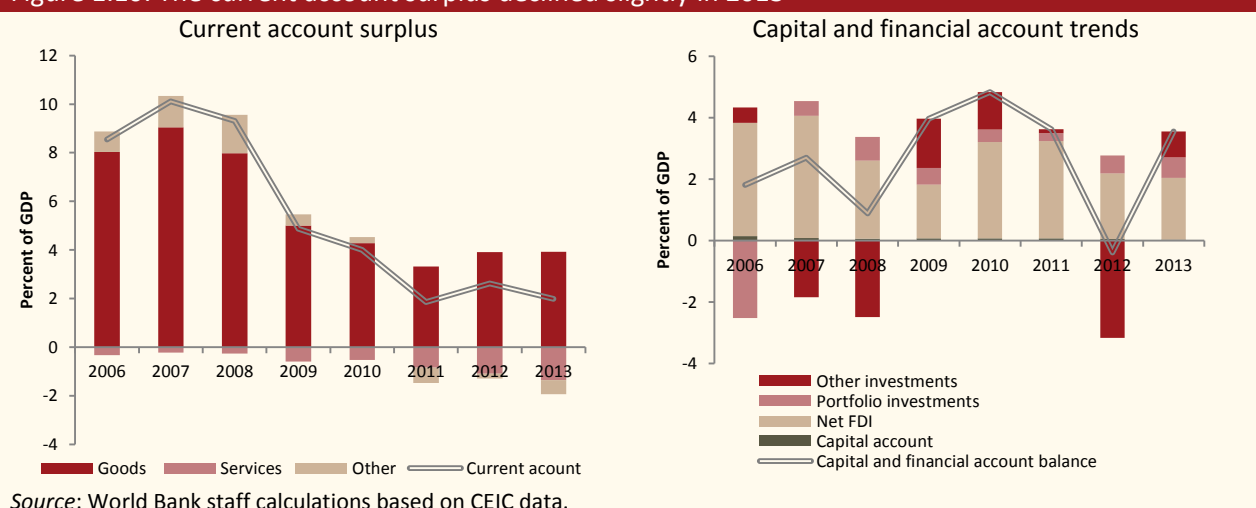


The external position temporarily weakened in early 2014

The current account surplus declined slightly to 2.1 percent of GDP in 2013 from 2.3 percent in 2012. In the third and fourth quarters of 2013 this metric went below 2 percent as investment strengthened and imports climbed. The surplus had progressively shrunk from a peak of 10.1 percent of GDP in 2007 to 1.9 percent in 2011 as China's investment-led stimulus response to the global financial crisis fueled imports (figure 1.10). But the merchandise trade balance continued rising, reaching 3.9 percent of GDP in 2013. Exports grew by 7.9 percent and imports by 7.3 percent that year. While the goods trade

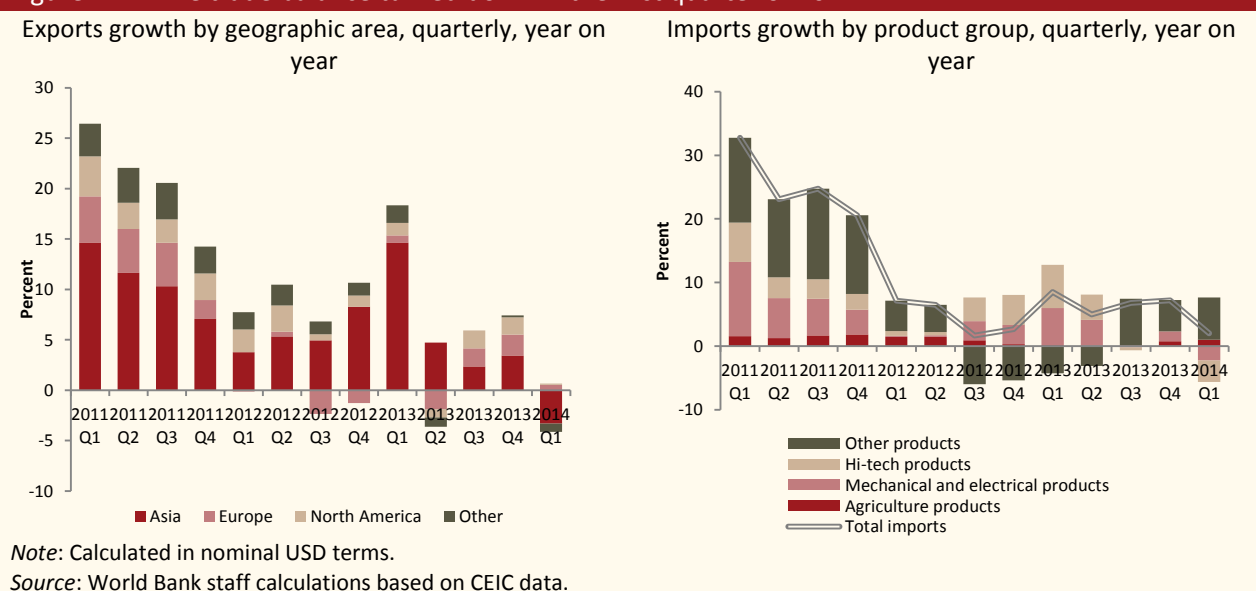
balance stayed positive, the services balance deteriorated further, to register a deficit of 1.3 percent of GDP for the year. In the first quarter of 2014, the current account surplus shrunk to about 0.3 percent of GDP, mainly due to weakening of the goods trade balance.

Figure 1.10: The current account surplus declined slightly in 2013



The trade balance deteriorated in the first quarter of 2014 (figure 1.11). In February exports declined by 1.8 percent, after a 10.5 percent increase in January, giving China a rare trade deficit of USD 23.0 billion. The decline was also affected by trade data distortions related to overinvoicing in 2013 and by poor external demand from the United States, mainly due to bad winter weather. Data for April indicate a robust recovery in export growth. Exports rose by 0.9 percent (year on year) helped by solid increases in exports to the United States (12 percent) and to the European Union (15.1 percent). Imports rose by 0.8 percent (year on year) after contracting by 11.3 percent in March. The structure of China's imports also continues to improve as China's role in the regional industrial supply chains deepens.

Figure 1.11: The trade balance turned down in the first quarter of 2014

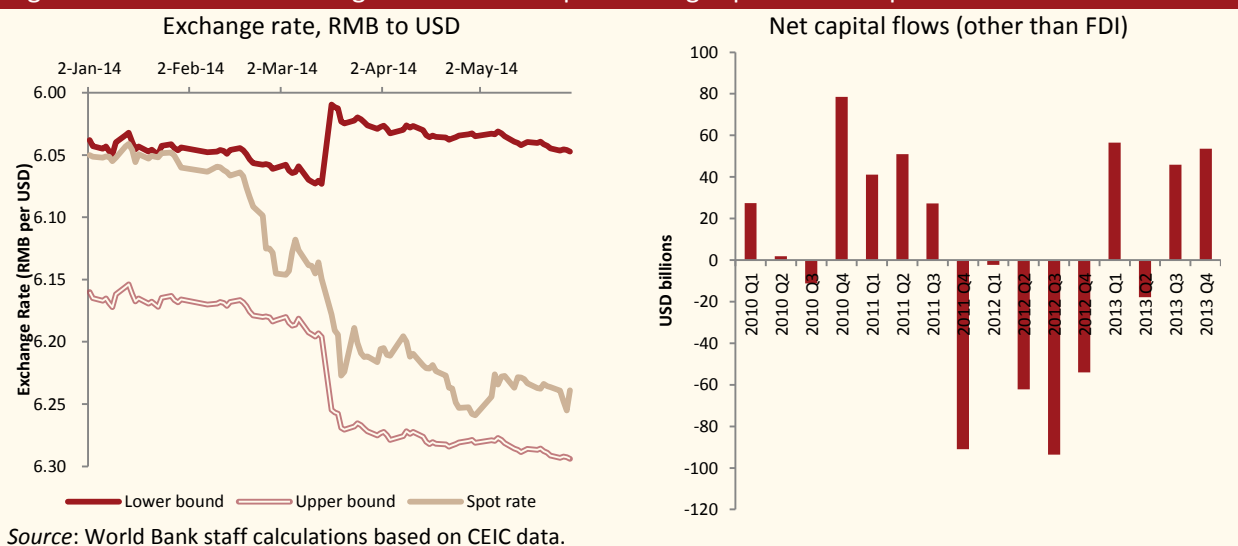


Foreign direct investment (FDI) inflows are relatively stable, unlike non-FDI capital flows. In 2013 China attracted FDI of USD 258.2 billion, USD 17 billion more than in 2012. Net FDI inflows fell to USD 170.8 billion from USD 190.1 billion over the period. Non-FDI flows remained volatile in 2013, due in part to global developments related to monetary policy moves of advanced countries and in part to changing sentiment on China's economic outlook (figure 1.12).

Foreign exchange reserves kept climbing, reflecting China's twin current and capital-account surpluses. The central bank accumulated foreign exchange reserves of USD 432.7 billion in 2013, up from USD 98.7 billion the previous year. As of end-2013, it held USD 3.82 trillion.

The recent widening of the exchange rate trading band is consistent with broader financial sector reforms and will grant market forces a greater role in allocating resources. The authorities widened the onshore trading band for the RMB from 1 percent to 2 percent in mid-March 2014. The decision, which the central bank announced as a move to let market forces determine the value of the currency, followed a period of increased currency volatility. The RMB broke a long-running appreciation trend with a 1.5 percent fall to RMB 6.1 to dollar in mid- to late February (see figure 1.12), the largest two-week decline since China shifted from a tight peg to a crawl-like arrangement in 2005.

Figure 1.12: The wider trading band should help discourage speculative capital inflows



2. Economic Prospects

Improving global activity should provide a tailwind to China

The fundamental drivers of the global recovery remain intact. Despite a bumpy start to 2014, global growth should gather pace as activity firms in high-income economies. Global risks have declined and financial markets have recovered from the turbulence of late January, but prospects remain sensitive to volatility and eventual tightening in financial markets as monetary policy in high-income countries continues to normalize. Improving external demand should provide a tailwind to China's exports. At the same time, the impact of eventual tightening in global financial markets on China will be limited as it has relied mainly on its domestic savings.

Global growth is projected to accelerate gradually from 2.4 percent in 2013 to 3.5 percent by 2016, with the bulk of the acceleration in high-income countries (notably the United States and the Euro Area) (World Bank 2014). A reduced drag on growth from fiscal consolidation, improving labor market conditions, and a steady release of pent-up demand in these countries are projected to overcome first quarter softness and lift high-income GDP growth from 1.3 percent in 2013 to 1.9 percent in 2014 and to about 2.5 percent in 2016. The U.S. economy is projected to show growth, after 1.9 percent in 2013, of 2.1 percent in 2014 and 3.0 percent in 2015 and 2016. The weak first quarter of this year will weigh on its annual growth in 2014, even as quarterly growth accelerates to close to 3 percent, responding to less drag from fiscal consolidation, better labor market conditions, and an upturn in investment spending. In the Euro Area, reduced fiscal drag is also projected to support an acceleration in activity from -0.4 percent last year to 1.1 percent in 2014 (the first annual increase in three years) and firm to 1.7 percent in 2015. The recovery will be supported by positive reform momentum (including the recent formation of a banking union), and the gradual establishment of a virtuous circle of rising confidence, asset values, employment, and private demand. Japan is expected to slow this year (to 1.3 percent vs 1.5 percent in 2013), partly due to the fading growth impetus from earlier monetary policy and partly due to a fiscal drag from the April sales tax hike. Growth is expected to recover to about 1.5 percent in 2016, supported by structural reforms.

Despite firming activity in high-income economies, challenges remain. For example, the United States has made little progress in bringing fiscal policy back to a sustainable medium-term path, and although unemployment is down, long-term unemployment is at a record high, raising concerns that workers may suffer from deskilling and permanent labor-market scarring. The Euro Area is still in the early phases of recovery and a return to full employment will require continued (and possibly more) monetary support. Persistently low Euro Area inflation is a concern, complicating the task of dealing with high public debt burdens and still high levels of private sector indebtedness in some peripheral economies. Increasingly, there is speculation that the European Central Bank will move to loosen policy even further, possibly introducing some form of quantitative easing of its own. In Japan the extremely strong acceleration of output growth in Q1 (to 5.9 percent annualized) reflected a one-off front-loading of demand by consumers before the April sales tax hike, and extremely strong business spending. Fiscal drag from the April tax increase will slow growth, although the effects of this will likely be partially offset by further fiscal and monetary stimulus. The medium-term growth outlook will depend on the effective implementation of structural reforms.

Global financial conditions will tighten in the medium term. The recent resurgence in capital flows, coupled with expectations of a further easing of monetary policy in Europe have relaxed financial conditions and unwound about half the tightening that occurred during the summer of 2013. These conditions should support developing country demand in the short-run, but are likely to tighten over

the longer-term. The United States is already bringing its quantitative easing programs to a close, and has indicated that a gradual tightening of traditional monetary policy could begin as early as mid-2015. If the Euro Area recovery firms as expected, policy there is also likely to begin normalizing, if toward the end of the projection period. In Japan monetary policy is likely to remain loose, reflecting the need to proceed on fiscal consolidation. To what extent financial conditions will tighten is still unclear. As U.S. long rates rise, there is likely to be additional adjustment of global asset portfolios and tightening of financial conditions. China, which has relied mainly on domestic savings, is likely to be less affected by the tightening of global financial conditions.

Geopolitical risks remain elevated, with rising tensions in Ukraine since the start of the year eclipsing older risks stemming from the conflict in the Syrian Arab Republic. A further sustained escalation in tensions in Ukraine—either militarily or in the form of tit-for-tat sanctions—could have significant impacts on global economic confidence, especially if it increases uncertainty to the point that investors and consumers hold back spending. The physical disruptions of energy and grain supplies would take a further toll on the already weak economies of the Russian Federation and Ukraine, and set back a nascent recovery in the Euro Area (a major buyer of Russian energy), though heavy mutual interdependence in energy markets reduces the likelihood of such disruptions.

China's growth is likely to ease moderately; downside risks remain

Growth in China is expected to decrease marginally to 7.6 percent in 2014 and 7.5 percent in 2015, from 7.7 percent in 2012 and 2013. In March the authorities announced an indicative growth target for 2014 of about 7.5 percent, identical to one announced for 2013, and exceeding the growth target of 7.0 percent identified in the 12th five-year plan. This target is likely to be met. A planned decline in investment growth will be offset by a gradual increase in consumption growth, the latter supported by an increase in household incomes and a gradual narrowing of the urban–rural income gap. The contribution of net exports is seen increasing gradually as external demand in advanced countries continues to improve. Industrial production is expected to gain momentum in the rest of the year, supported by recently taken growth-supporting measures (see section 1). Growth is forecast at 7.5 percent in 2015 and 7.4 percent in 2016, assuming a robust but slightly moderating growth path (table 2.1).

Table 2.1: Main economic indicators for China

	2013	2014 ^f	2015 ^f	2016 ^f
Output, employment, and prices				
Real GDP (% change yoy)	7.7	7.6	7.5	7.4
Domestic demand (% change yoy)	8.3	7.8	7.5	7.5
Industrial production index ^a (% change yoy)	9.7	9.0	9.0	9.0
Unemployment (%) ^b	4.1	4.1	4.1	4.1
Real wages (% change yoy)	9.0	9.0	9.0	9.0
Consumer price index (% change yoy)	2.6	3.0	3.0	3.0
Public sector				
Government revenues (% of GDP)	22.7	21.8	21.5	20.9
Government expenditures (% of GDP)	24.6	23.9	23.5	22.9
Government balance (% of GDP)	-2.1	-2.1	-2.0	-2.0
Domestic public sector debt (% of GDP) ^c	15.3	15.9	16.4	16.8
Foreign trade, balance of payments, and external debt				
Trade balance (USD billions)	259.2	375.7	418.2	440.0
Exports of goods (USD billions)	2,219.0	2,392.0	2,587.2	2,768.7
Imports of goods (USD billions)	1,859.0	2,016.3	2,169.0	2,328.7
Current account balance (USD billions)	188.6	238.9	304.5	346.0
(% of GDP)	2.1	2.3	2.6	2.7
Foreign exchange reserves, gross (USD billions)	3,866.3	4,122.3	4,407.9	4,705.0
Financial markets				
Exchange rate (RMB/USD, end of period)	6.1	6.0	6.0	5.9
Memo: Nominal GDP (USD billions)	9,185.0	10,492.6	11,707.4	13,056.7
a. Annual data are not comparable with quarterly and monthly data. Annual data cover all industrial enterprises while quarterly and monthly data refer only to enterprises with sales above RMB 5.0 million.				
b. Official urban unemployment only, excluding laid-off workers.				
c. Includes treasury bonds, policy financial bonds, and other financial bonds (end-period outstanding).				
Source: World Bank staff estimates and projections.				

On the demand side, growth drivers will continue rebalancing in 2014:

- Sustained growth in incomes and increased social spending will help push up domestic consumption growth. Aggregate consumption is expected to contribute 3.9 percentage points of GDP.
- Investment growth will gradually decelerate due to credit tightening. Decelerating property price gains across China's cities are likely to keep depressing investment in the real estate sector in the next few quarters. A decline in manufacturing and real estate investment will partly be offset by accelerated rail and social housing development (see section 1). Gross capital formation is expected to contribute 3.6 percentage points of GDP.
- External demand will continue to improve and net exports are expected to contribute positively to growth. Export growth will be led by recovery in advanced countries. Net exports are set to contribute to 0.1 percentage points of GDP.

On the supply side, industrial activity is expected to pick up in the second and third quarters of 2014, buttressed by external demand and acceleration of public infrastructure investment. However, certain sectors with excess capacity will continue to experience headwinds as credit conditions tighten further and environmental costs of pollution become internalized. Services are expected to strengthen, supported by stronger domestic demand.

Inflation will stay contained. Inflation is expected to be 3.0 percent in 2014, slightly higher than in 2013 but below the government's target of 3.5 percent. However, there is a risk that food prices might

increase more than expected due to the tensions in Ukraine and El Niño phenomenon, which appears increasingly likely this year and could cause considerable damage on crop yields. The adverse weather conditions and the associated uptick in global food prices at the start of the year have been linked to the El Niño phenomenon. Yields during El Niño years could suffer considerably, leading to production declines at a global level. World yields for rice, which typically grow at 1.7 percent a year in normal years, grew only 0.7 percent during the five strong El Niño years. Further upside price risks also stem from tensions in Ukraine. Between 2010 and 2013 Russia and Ukraine accounted for 11 percent and 5 percent of global wheat exports, and Ukraine accounted for more than 14 percent of global maize exports. While the risks of disruption are low, any shortfall in supplies that occurs in tandem with the El Niño phenomenon could lead to significantly higher prices.

The labor market is set to remain robust. Decelerating economic growth could, though, pressure inflation, as labor demand in urban areas has already started to soften.

There are downside risks to the 2014 projection. Three risks stand out. First, those related to local government financing and rapid credit growth may bring further uncertainties to growth. In particular, a disorderly deleveraging could trigger a sharp slowdown in investment growth. Second, a sharp slowdown in growth in some sectors, particularly real estate, or abrupt changes in the cost of capital could generate debt-service difficulties for local governments and the corporate sector, triggering an increase in nonperforming loans that would limit banks' lending capacity. The buildup of financial risks is reflected in the aggregate increase in corporate and local government debt, and in the buildup of excess capacity (see section 1). Third, the expected net export recovery may not materialize if the recovery in advanced countries weakens.

The overall macroeconomic stance is seen staying accommodative

The overall macroeconomic stance is seen staying accommodative in 2014. The government's indicative growth number for this year, which is higher than the one in the five-year plan, signals the priority the authorities put on growth and employment. Monetary policy will likely remain neutral, but measures in shadow banking to strengthen regulation and promote transparency are likely to be introduced gradually. Government plans indicate a target of M2 growth of 13 percent in 2014, identical to 2013's target (table 2.2). Fiscal policy is expected to remain supportive to growth, especially using public investments as a policy lever to maintain a stable growth trajectory. But the government could introduce steps that limit quasi-fiscal activities of local governments.

Table 2.2: Key official targets

	<i>2013 target</i>	<i>2013 actual</i>	<i>2014 target</i>
GDP growth (%)	7.5	7.7	7.5
Change in CPI (%)	3.5	2.6	3.5
M2 growth (%)	13.0	13.6	13.0
Fiscal deficit (% of GDP)	2.0	2.1	2.1
Fixed asset investment growth (%)	18.0	19.6	17.5
Retail sales growth (%)	14.5	13.1	14.5
New urban employment (million)	9.0	13.1	10.0

Source: World Bank staff calculations based on official government documents.

Policy coordination in the financial sector will require work, as despite recent calm, interbank market volatility might return. Further regulatory moves, including introduction of financial sector reforms (including steps to liberalize interest rates), could lift liquidity and credit volatility in 2014. An increase in the exchange rate volatility may help discourage one-way bets on the RMB's appreciation that contributed to speculative inflows in 2013. Although the central bank has yet to abandon its practice of

fixing the value of the currency every day, the band's widening may be a prelude to more substantial currency reform—that is, toward a more market-based exchange rate system.

Additional measures to slow credit growth will translate into weakening investment growth. While the impact on investment of any cutback in credit will depend on its exact form—making estimates difficult—back-of-the-envelope calculations from past episodes suggest that a slowdown in credit growth by 10 percentage points could lead to a drop in investment growth by about 5.5 percentage points.

The use of administrative regulations to reorient credit to more dynamic parts of the economy has been very slow, and may not succeed without market reforms. The central bank has urged banks to adjust their lending practices and to give more support to SMEs, labor-intensive industries, and consumer goods and services; and to strictly control credit to sectors that suffer from over-indebtedness and excess capacity. Similarly the authorities are taking steps to reduce reserve requirements for banks which lend to the agricultural sector and small enterprises. However, absent more fundamental reforms such as the removal of implicit government guarantees, banks may keep extending credit to inefficient sectors, depriving the more dynamic sectors.

Financial system weaknesses in allocating capital efficiently have undermined its ability to boost economic growth. Credit intensity—the additional output generated by one additional credit unit—is declining, partly because some credit has gone into excess capacity, financed operating losses or been used for interest payments. In recent years aggregate financing grew about three times faster than nominal GDP (figure 2.1). A rise in China's incremental capital-output ratio—from 3.6 in 1991–2011 to 4.7 in 2009–11—indicates a declining return on invested capital (table 2.2). A rise in this ratio was especially pronounced after local governments introduced stimulus measures in 2009 and 2010.

Figure 2.1: Credit intensity of China's growth

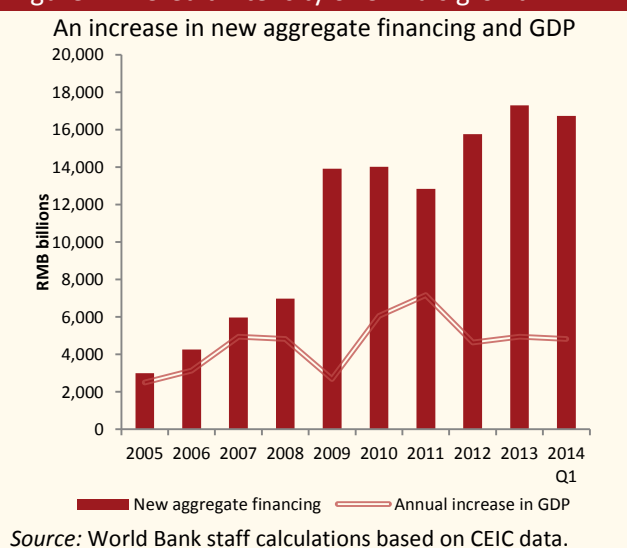


Table 2.2: Incremental capital-output ratio in China, various periods

	Gross fixed capital formation (% of GDP)	Average annual GDP growth	Incremental capital-output ratio
1991–2011	36.7	10.4	3.6
2009–11	45.4	9.6	4.7
2012	46.1	7.8	5.4

Source: World Bank staff calculations based on CEIC data.

Budget plans announced in March indicate that the fiscal position in 2014 will remain broadly unchanged, with the fiscal deficit estimated again at 2.1 percent of GDP (table 2.3). While the budget outlines no substantial changes in aggregate revenues and expenditures in 2014, it points to notable changes in their composition. On the revenue side, the move to replace business tax with VAT will continue as VAT for telecommunications services comes in. On the expenditure side, the shift to

increasing the share of social expenditures will progress, including a broadening of social assistance and protection.

Table 2.3: Main fiscal aggregates 2011–14

	RMB billions				As % of GDP			
	2011	2012	2013	2014 (budgeted)	2011	2012	2013	2014 (budgeted)
Revenues	10,537,443	11,995,352	13,029,264	14,053,000	22.3	23.1	22.9	22.2
Central government	5,132,732	5,617,523	6,017,377	6,438,000	10.8	10.8	10.6	10.2
Contribution to Stabilization Fund	150,000	270,000	100,000	100,000	0.3	0.5	0.2	0.2
Local government (excludes transfers from central budget)	5,254,711	6,107,829	6,911,887	7,515,000	11.1	11.8	12.2	11.9
Expenditures	11,213,979	12,620,189	14,229,264	15,403,000	23.7	24.3	25.0	24.3
Central government	1,651,411	1,876,463	2,047,175	2,250,600	3.5	3.6	3.6	3.6
Expenditures (excludes transfers to local governments)								
Payments to replenish Stabilization Fund	289,200	24,892	116,438	50,000	0.6	0.0	0.2	0.1
Local government expenditures (includes transfers from central budget)	9,273,368	10,718,834	12,065,651	13,102,400	19.6	20.6	21.2	20.7
Fiscal balance	(676,536)	(624,837)	(1,200,000)	(1,350,000)	-1.4	-1.2	-2.1	-2.1
Transfers from central to local government	3,992,121	4,536,168	4,803,764	5,187,400.00	8.4	8.7	8.4	8.2
Land-lease revenues (gross)	3,317,300	2,851,782	4,124,952	..	7.0	5.5	7.3	..
.. is not available.								
Source: World Bank staff estimates based on CEIC data and report of the Ministry of Finance to the National People's congress March 2014.								

The prospect of 2014's growth falling below the government target (7.5 percent) will likely be met with accommodative fiscal and monetary policies, for which China has room. In April China announced fiscal policy measures to support weakening growth in the first quarter of 2014. These measures should help the authorities to reach the indicative growth target of around 7.5 percent in 2014, but will likely add to current imbalances and vulnerabilities. Most of these new investments will be debt financed. Borrowing will be mainly by state-level institutions using transparent financial instruments (corporate bonds). More accommodative policies—particularly for investment—will, though, bolster growth in credit and local government debt. In addition, while public investment has been a successful policy tool to maintain economic growth and lower regional disparities in it, it has also increased economic inefficiency (box 2.1). More important, a policy focus on meeting growth targets could distract from pushing through the structural reforms intended to put long-term growth on a more stable footing.

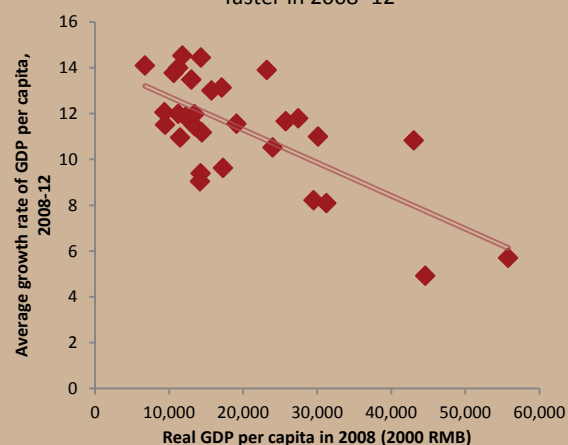
Box 2.1: Economic equality at the cost of efficiency

Since the 10th five-year plan the central government has made its policy priority closing the gap in regional economic development. The following decade saw it making major endeavors, including the Western Development Plan, the Rise of Central China Plan, and the Northeast Revitalization Plan. Local governments were given incentives to drive growth through taking a direct part in economic activity.

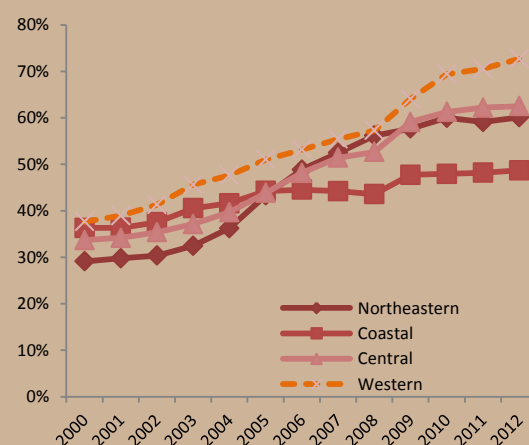
These policy efforts have yielded short-term benefits—notably, the dispersion of GDP per capita across provinces has narrowed over the past decade. Both GDP per capita and physical capital stock have grown faster in poorer than richer provinces. Such convergence has become even more pronounced since 2008, when fiscal stimulus was adopted due to the global financial crisis. The convergence is largely explained by a higher investment-output ratio in underdeveloped regions (box figure 1).

Box figure 1: Convergence of per capita GDP and physical capital stock has become more pronounced since 2008

Provinces with lower GDP per capita in 2008 on average grew faster in 2008–12



Real gross fixed capital formation as a share of real GDP

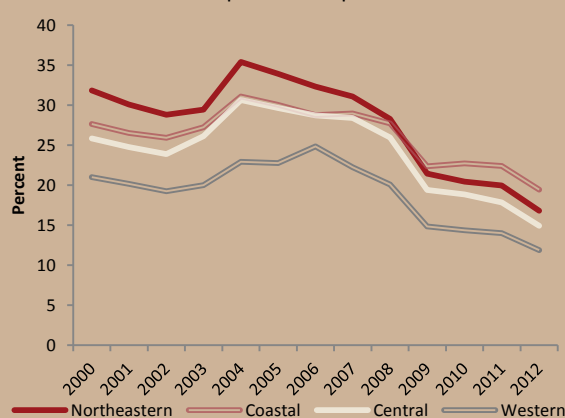


Source: World Bank staff estimates based on CEIC dataset.

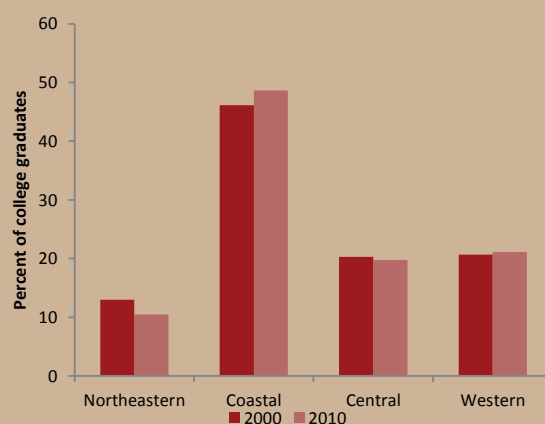
However, this convergence has come at the great cost of economic efficiency. Returns to capital at the provincial level exhibit growing *dispersion*, which signals a greater degree of factor misallocation. The returns to investment are declining more steeply in western and central regions than in the coastal region because labor and human capital are moving from western and central China, where physical capital is accumulating fastest (box figure 2). This misalignment of factor flows indicates greater efficiency loss.

Box figure 2: Returns to capital have fallen faster in western and central regions

Returns to physical capital measured as marginal product of capital less depreciation



Distribution of college graduates



Source: World Bank staff estimates based on the 2000 and 2010 population census.

As underdeveloped regions become less attractive for private investment, local governments will find it harder to sustain GDP growth through high public investment. In the past, many of them boosted short-term growth by directly investing in infrastructure and real estate (at the cost of raising debt and weakening their balance sheets—see Section 1). In the future, rapid declining investment returns will require even higher investment to drive GDP growth in underdeveloped regions, and local governments will soon find themselves too financially constrained to rely on public investment as the engine of economic growth.

Regional economic balancing can, however, be both efficient and sustainable when central and local governments switch focus from sustaining economic growth to providing efficient social services for all residents. Local governments should minimize heterogeneity in social benefits and access to medical care and education for all residents across regions, which can mitigate inefficiencies stemming from production-factor mismatches by ensuring that labor and human capital move to seek higher returns to work as opposed to better public services. For local governments to change their roles, the central government must change the existing governance structure to provide them with appropriate incentives to reach social objectives.

Reforms in the financial sector and fiscal policy are needed to address financial stability risks in the medium run

The government unveiled an ambitious and comprehensive reform agenda in November 2013 that provides a roadmap for structural reforms. The package covers 16 areas and 60 individual items. The main idea is to reduce government interventions in the market economy and state-introduced distortions in China's markets. An important step to deepen economic reforms will be redefining the relationship between the government and the market overall. If executed well, the reforms will have a profound impact on China's land, labor, and capital markets, and enhance the long-term sustainability of economic growth. All these reforms require significant changes in China's fiscal system so that expenditure responsibilities are matched by fiscal powers and that the interests of central and local governments are balanced. The authorities are also trying to address other areas such as education and health services, social security, the one-child policy, institutional governance, and further opening of the economy. Notably they have pledged to promote reforms to enhance the social safety net and reduce income disparities. The plan is to give priority to low-income groups and expand the size of the middle class. Measures include increasing labor compensation and property-related income for rural households. Income redistribution through taxes, transfer payments, and redistribution of profits from state-owned enterprises will also be considered.

The weakening trend in growth may put more pressure on the government to conduct more and stronger growth-supportive fiscal and monetary policies. One prevalent concern is that macroeconomic policies may remain growth-oriented and that China may fail to push through the reforms required for a more sustainable development path. The prospect of growth falling below the government target will likely trigger accommodative fiscal and monetary policies. The government should have sufficient room for those policies, but they may perpetuate China's traditional growth model that relies on government-led investment fueled by credit expansion.

The favorable external environment provides an opportunity to go ahead with structural reforms. Some reforms are likely to support growth in the short term. For instance, removing entry barriers and reducing regulatory and administrative burdens will enhance incentives for private investment. Likewise, consolidating the business tax with the VAT will lower the tax burden and promote investment, particularly in transportation and financial services. Making more land available for commercial activities will also improve the prospects for services sector growth. However, the reform process is likely to be gradual, with more detailed follow-up implementation plans expected as the year goes on.

To move forward with its comprehensive structural reform program, China should consider addressing two near-term risks to financial stability. The first is the rapid growth of credit in the economy, including credit from less well-regulated shadow banking. The second is the rapid accumulation of debt by local governments, operating through off-budget, quasi-fiscal platforms. This will require implementing comprehensive reforms in the financial sector and in fiscal policy. China has the deep buffers needed to address these growing risks, and the adjustments are likely to be orderly and to progress steadily, though an abrupt and disorderly transition cannot be ruled out.

Fiscal policy and financial sector reforms remain the immediate priority. Fiscal and tax reforms will underpin overall reform, including making fiscal policy a better fit to a changing growth model. There should be four key fiscal reforms: improving local governments' revenue base, improving the intergovernmental grant system, establishing an explicit framework for local government borrowing, and tightening financial discipline among local governments. The government has outlined priorities for 2014, which focus on optimizing the structure of government expenditures, tightening fiscal discipline,

making the budget more transparent, and strengthening local government debt management. In the financial sector reforms should include:

- Getting prices and incentives right. This includes interest rate liberalization and the removal of “soft budget constraints” and implicit guarantees.
- Improving the effectiveness of regulation and supervision as the financial system evolves while operating under less government control. This entails development of safety-net arrangements and a failure-resolution framework.
- Strengthening the commercial orientation of state banks to promote efficient resource allocation and to broaden access to finance for SMEs and households.
- Diversifying the financial system by promoting development of well-regulated nonbank financial institutions and proper classification, regulation, and supervision of shadow banking activities.
- Promoting equity and bond markets to broaden financing sources for the corporate sector and to enhance competition.

Delays in implementing coherent reforms could perpetuate resource misallocation, undermine the health of the banking system, threaten the debt sustainability of local governments, and increase the fiscal costs of reforms. Managing the reforms will not be easy. Banks and borrowers still operate under distorted prices and incentives that need to be corrected in a way that does not trigger a disorderly adjustment. Thus reforms need to be carefully prioritized and sequenced.

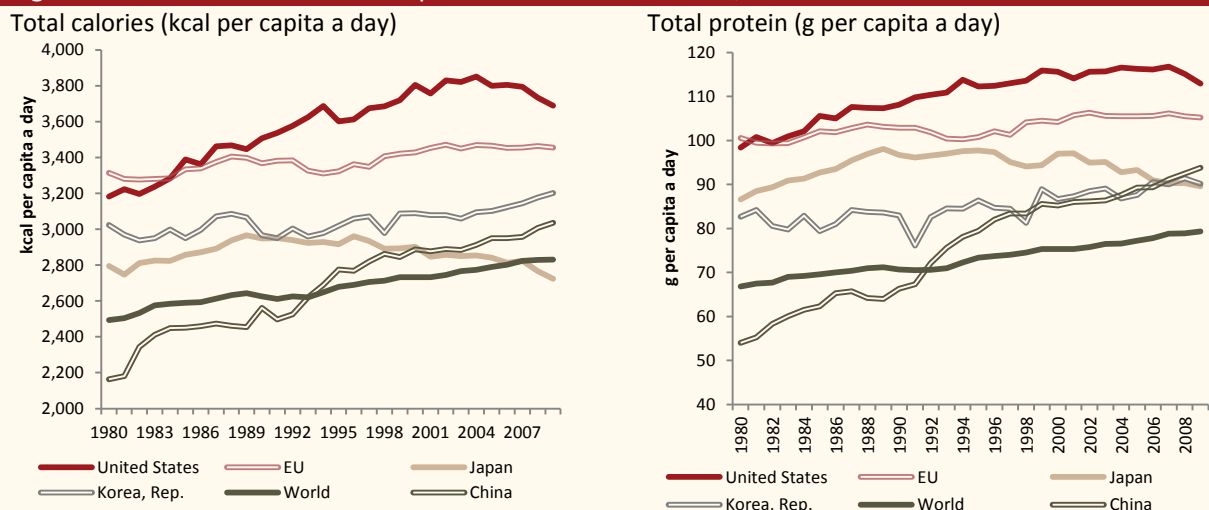
3. Special topic: Changing Food Consumption Patterns in China: Implications for domestic supply and international trade

Rapid economic growth has changed Chinese diets—amount, quality, and composition—and will continue to change them for a while yet, as many more consumers shift their diets from crop- to livestock-based products and away from basic staples. Such a shift to a more “affluent” diet is adding strains to agriculture because production of livestock-based food requires far greater resources and causes more environmental damage than that of vegetable-based food. These factors will start to constrain the country’s food-output capacity and availability over the coming decades unless tackled now—hence the need to understand how China’s domestic demand for and supply of food will evolve, as a basis for formulating policy.

Higher incomes have changed food consumption patterns

China’s rapid economic growth since the market-oriented reforms launched in 1978 has vastly improved diets. Total calorie intake per capita a day has climbed by nearly half, from 2,163 kcal in 1980 to 3,036 in 2009. This is much faster than the world average, which grew from 2,490 kcal to 2,831 over the period (figure 3.1 left panel). Calorie consumption is now roughly the same as in Japan and the Republic of Korea, but still lower than in the United States and the European Union. Protein intake, too, climbed sharply, nearly doubling from 54 g per capita in 1980 to 94 in 2009 (figure 3.1 right panel), with about three-fourths of this growth coming from livestock-based products. Fat intake nearly tripled from 34 g per capita to 96 over the period, again largely based on greater consumption of livestock products (about two-thirds). Calorie intake among some high-income countries, notably the United States and Japan, has declined somewhat over the last decade or so.

Figure 3.1: Growth in calories and protein in the Chinese diet, 1980–2009



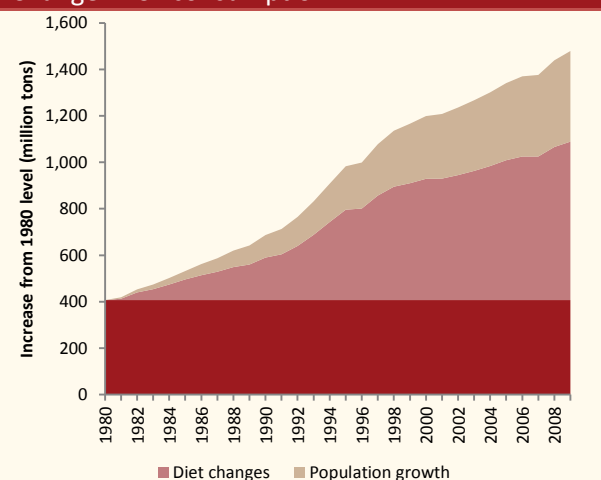
Source: Food and Agriculture Organization of the United Nations, Statistics Division.

The majority of the increase in calories sourced from crop and livestock products in China, as with protein and fat, has come from livestock products. The calorie intake from crops has been relatively steady at around 2,300 kcal since the early 1990s. Calorie intake seems unlikely to rise dramatically but dietary patterns are likely to adjust further as consumers increasingly source their calories from livestock products that require far more resources per kilogram of food consumed. This continuing shift will raise further the resources required to meet China’s food demand for an extended period, adding pressure to world food

production, as upgrading diets based heavily on livestock products requires much larger increases in agricultural resource use measured in cereal equivalent (CE) (Rask and Rask 2011).

China's CE consumption² expanded nearly three times over 1980–2009, from 407 million tons to 1,479 million tons (figure 3.2), at a time when the population rose from 1.0 billion to 1.4 billion. Of this CE consumption growth, a third is attributable to population growth and two-thirds to diet change. And as China's population growth is slowing and is projected to peak in around 2025 (at about 3 percent higher than in 2013), the primary driver of food consumption in the near future is likely to be growth in per capita consumption.

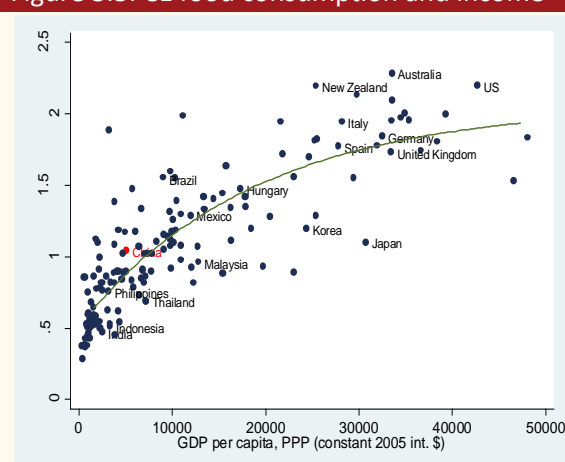
**Figure 3.2: Population growth vs diet change:
Change in CE consumption**



Source: Fukase and Martin 2013.

China's per capita consumption levels for calories and CE have been consistent with global trends. Although there is broad variation in the relationship between food consumption in CE and real income, China's food consumption is likely to increase substantially for some time as incomes continue rising, given that CE food consumption is closely related to income (figure 3.3). Consumption of calories tends to level off much earlier (figure 3.4).

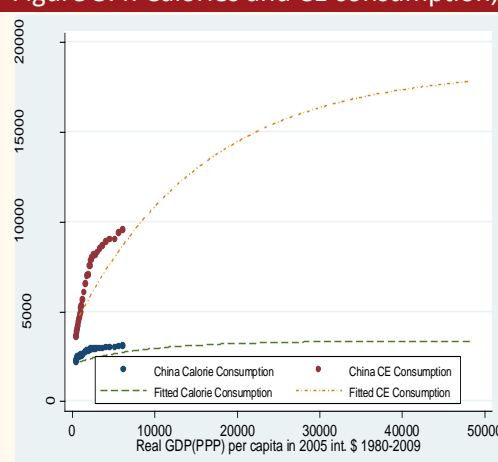
Figure 3.3: CE food consumption and income



Note: Data are based on 2005–09 averages.

Source: World Bank staff calculations.

Figure 3.4: Calories and CE consumption, 1980–2009



Source: World Bank staff calculations.

Growth rates of consumption and of output are likely to be broadly comparable as incomes grow to around USD 20,000 in purchasing power parity terms. After that, it seems likely that consumption growth will slow relative to production and the gap between supply and demand will begin to close. This is, however, a tentative scenario. If, for instance, China slowed its investment in agricultural productivity, or climate change cut productivity, the gap between supply and demand might increase.

China is also in a very different situation from some neighboring economies, such as Japan or Korea, whose much smaller land endowments per person suggest that continuing large net imports are likely. International comparisons reveal striking differences between countries in the extent to which food imports as a share of total consumption have evolved. For rice, wheat, corn (maize), and soybean—together “grain”—most lower income countries have maintained close to 100 percent self-sufficiency, but this ratio has declined sharply in higher-income East Asian economies (Japan, Korea, and Taiwan, China) (figure 3.5). China, given its larger per capita land endowment, seems unlikely to follow their path, no doubt retaining much higher aggregate self-sufficiency in grain.

Figure 3.5: Self-sufficiency rates for grain, selected Asian economies

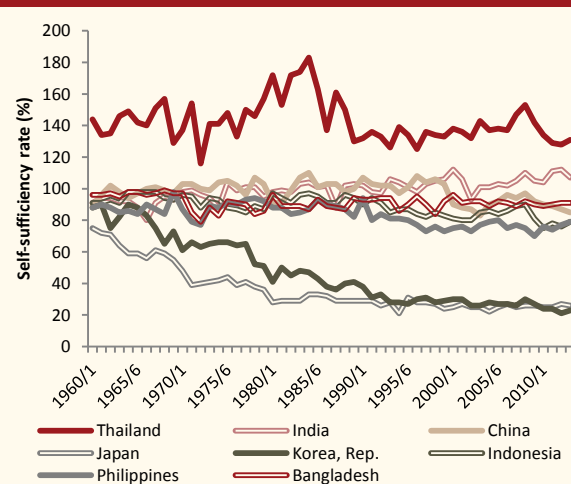
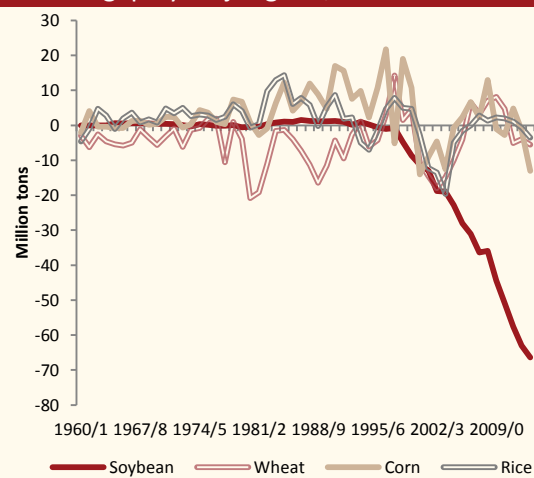


Figure 3.6: Contribution to meeting supply-demand gap by major grain, China



Note: The figures reflect the differences between production and consumption, which are the sum of net imports and the changes in stock (Production – Consumption = Exports – Imports + Changes in stock).

Source: Production, supply, and distribution data from U.S. Department of Agriculture.

Supply constraints could undermine China's food self-sufficiency

Strong growth in demand and increasing supply constraints potentially pose challenges for China's future self-sufficiency in food. The food self-sufficiency rate fell below 98 percent in 2010, while that for grain alone fell to 92 percent in 2010 and to 88 percent in 2012. While domestic self-sufficiency in rice and wheat—the most important food grains—remained at nearly 100 percent, soybean imports reached 58.3 million tons in 2012. China has also shifted from being a net exporter of corn in the early 2000s to an importer in 2010, with a net import of 5.2 million tons in 2012 (figure 3.6). The driving factors behind increasing demand (and domestic supply shortfalls) for soybean and corn are the growing demand for animal products and the development of China's livestock industries. Imports of sugar, edible oil, dairy products, pork, beef, and mutton have grown to 3.7 million tons, 9.6 million tons, 6.2 million tons (fresh milk), and 0.7 million tons (pork, beef, and mutton), respectively, in 2012.

Concerns about constraints to sustainable food production due to urbanization are increasing. Domestic production patterns have already shifted from naturally rainfed irrigated coastal areas to irrigated areas on the North China Plain and in the Northeast as farmland has been converted to urban use in the

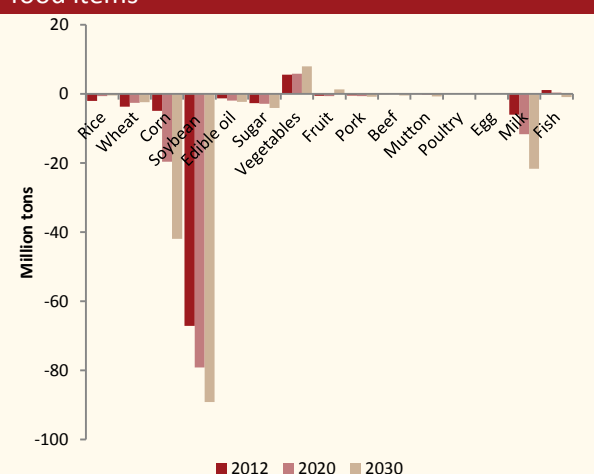
central and southern coastal provinces. Urbanization is likely to further increase the amount of water needed for domestic and industrial uses, raising intersectoral competition for water and reducing China's total irrigation area and crop yield (Du and others 2005; Wen and Ding 2011; Wang and others 2008).

Continued farmland conversion to nonagriculture uses may be of the likely scenarios. China's agricultural production may decrease with the continuing reduction in farmland area (Chen Zhigang and others 2010; Huang, Chen, and Zhang 2011; Chen Feng-gui and others 2010) and grain production potential may be threatened (Shu and Chen 2012) but urbanization may also intensify land use and thus counteract the decrease in farmland through more efficient land use for housing, in both rural and urban areas (Huang and others 2005). The comparative advantage of labor-intensive farming of grains has greatly diminished. Increasing labor constraints and rising input prices (including labor, fuel, pesticides, and farming tools) have lifted the cost of food production. Land-transfer costs and farm overheads are also climbing quickly. With urbanization, rural labor will continue to move to the cities, and migration will further drive up labor and production cost in agriculture (Li and Li 2012; Mu and others 2013; Hu and Ni 2010). How these shifts will affect China's domestic food production capacity requires careful analysis.

Projecting gaps in food demand and supply

China's food consumption and production are projected to stabilize after 2030. In 2030 food self-sufficiency will still be above 90 percent. Over the next two decades per capita food consumption will continue to grow rapidly, with somewhat faster growth during the coming decade, driven by income growth. Per capita consumption of food grains such as rice and wheat will continue to decline, while consumption of edible oils, sugar, vegetables, fruits, and animal and aquaculture products will rise markedly as incomes continue going up. Growing demand for higher value meat, eggs, and dairy products present challenges to the domestic supply of animal feed, in particular feed grains, rising demand for which will pressure China's overall food demand and supply balance. Domestic production shortfalls of soybean, corn, edible oils, sugar, and dairy products will widen further due to demand growth and resource constraints in the next 20 years (figure 3.7).

Figure 3.7: Projected supply shortfalls, selected food items



Source: Huang, Jun, and Rozelle 2014.

Grains

China's demand for grain is expected to grow far faster than domestic production. Total demand for grain is projected to increase from 600 million tons currently to 670 million tons in 2020 and 700 million tons in 2030. Grain production will grow far more slowly, reaching 568 million tons by 2020 and 563 million tons by 2030. Per capita grain consumption is projected to grow from 445 kg in 2012 to 479 kg in 2020 and 491 kg in 2030.

China will maintain high domestic self-sufficiency rates for rice and wheat but not feed grains. Through 2030, self-sufficiency is predicted to stay above 99 percent for rice and above 97 percent for wheat. By contrast, that for corn is projected to decrease to 85 percent by 2030 from 98 percent in 2012. Production is forecast to reach 220 million tons by 2020 and 243 million tons by 2030, while demand will increase to 240 million tons and 285 million tons those years, widening the demand–supply gap. The domestic supply gap in soybean (including soybean oil) is set to widen even further: imports are projected to reach 80 million tons in 2020 and 90 million tons in 2030, for self-sufficiency of only 14 percent.

Livestock and fishery products

China will balance domestic demand and supply of pork—the most important animal product—and it will also stay self-sufficient in poultry and eggs. Yet self-sufficiency rates for beef, mutton, and dairy products will drop sharply. Dairy imports will see quick growth, and self-sufficiency will fall to 76 percent by 2030. But as consumption increases, livestock production will also pick up (table 3.1).

China's demand for fishery and aquaculture products is expected to surge, but will be largely met by increasing domestic production. Per capita consumption of aquaculture products, including fish, shrimp, crab, and shellfish, will grow from 22 kg in 2012 to 29 kg by 2020 and 35 kg by 2030. Domestic production will rise from 33.2 million tons in 2012 to 43.8 million tons in 2020 and 51.6 million tons in 2030. Since demand for aquaculture products will grow slightly faster than production, export growth for them will remain small, with imports continuing to grow. Low-price fish meal accounts for a significant share of fishery imports, such that while imports and exports of fish and aquaculture products are similar by volume, exports have a much higher value.

Vegetables and fruits

China has a comparative advantage in vegetable and fruit production, which has grown steadily over the past decade. Its output will meet its demand for both, and even increase exports. While rising labor costs will reduce its advantage, the country is likely to satisfy its rising domestic demand for vegetables and fruits by further adjusting and expanding domestic production. Vegetable production is projected to grow from 308 million tons in 2012 to 349 million tons in 2020 and 372 million tons in 2030. Vegetable consumption will also be upward, increasing from 236 million tons in 2012 to 277 million tons in 2020 and 298 million tons in 2030. China will remain a major exporter of vegetables with exports projected to increase from 6.1 million tons in 2012 to 8.5 million tons in 2030.

China's production and consumption of fruits will also grow sharply, and imports and exports will increase. Production is forecast to climb from 162 million tons in 2012 to 193 million tons by 2020 and to 219 million tons by 2030. Fruit consumption will rise from 163 million tons in 2012 to 194 million tons by 2020 and to 218 million tons by 2030. China's imports of fruit—mainly tropical—are expected to grow from 4.0 million tons in 2012 to 4.3 million tons in 2020, and then decrease to 3.7 million tons by 2030. Fruit exports, mainly temperate fruits (apples, pears, and citrus fruits) are projected to grow from 3.4 million tons in 2012 to 3.5 million tons in 2020 and 5.0 million tons in 2030. After 2020, fruit

consumption growth will slow, while production will maintain rapid growth, giving China net exports of 1.3 million tons by 2030.

Table 3.1: China's supply and demand of livestock and fishery products, 2012, 2020, and 2030 (thousand tons, unless otherwise stated)

	Pork	Beef	Mutton	Poultry	Egg	Dairy products	Fishery products
2012							
Production	46,159	5,296	3,409	17,319	19,998	38,680	33,178
Imports	522	49	119	49	0	6,181	2,208
Exports	66	12	0	181	61	105	3,253
Net imports	456	37	119	-131	-61	6,076	-1,045
Total consumption	46,615	5,333	3,528	17,187	19,937	44,756	32,132
Food consumption	44,046	4,919	3,295	16,294	19,136	44,008	29,761
Per capita food consumption (kg per person)	32.6	3.6	2.4	12.1	14.2	32.6	22.0
Self-sufficiency rate (%)	99.0	99.3	96.6	100.8	100.3	86.4	103.3
2020							
Production	56,194	7,272	4,384	22,379	23,462	56,906	43,808
Imports	728	165	328	67	0	11,725	2,975
Exports	65	4	0	180	47	51	3,298
Net imports	664	161	328	-113	-47	11,674	-323
Total consumption	56,858	7,433	4,711	22,266	23,416	68,580	43,485
Food consumption	54,289	7,019	4,479	21,373	22,615	67,832	41,113
Per capita food consumption (kg per person)	38.6	5.0	3.2	15.2	16.1	48.2	29.2
Self-sufficiency rate (%)	98.8	97.8	93.1	100.5	100.2	83.0	100.7
2030							
Production	61,794	9,046	5,133	25,477	24,803	68,889	51,618
Imports	897	520	801	87	0	21,734	3,648
Exports	52	1	0	139	38	25	2,705
Net imports	845	518	801	-52	-38	21,709	942
Total consumption	62,638	9,564	5,934	25,425	24,765	90,598	52,560
Food consumption	60,070	9,150	5,702	24,532	23,964	89,850	50,188
Per capita food consumption (kg per person)	42.1	6.4	4.0	17.2	16.8	63.0	35.2
Self-sufficiency rate (%)	98.7	94.6	86.5	100.2	100.2	76.0	98.2

Source: CAPSiM simulation results.

Sugar

China's sugar production is expected to grow slowly against a rapid consumption increase, resulting in a bigger supply shortfall. Production is projected to climb from 16 million tons in 2012 to 17 million tons in 2020 and to 19 million tons in 2030. Per capita sugar consumption is projected to increase significantly, resulting in a total demand of 20 million tons by 2020 and 23 million tons by 2030, up from 16 million tons in 2012. Imports of sugar are expected to rise from 2.8 million tons (2012) to 2.9 million tons 2020 and 4.3 million tons in 2030. By 2030, China is projected to meet 82 percent of its sugar demand domestically.

Oil crops

The production and demand of oil crops (other than soybeans) are expected to grow in parallel, though China will face some domestic supply shortfall that will need to be met by imports. Total production of oil crops is expected to rise from 8.7 million tons in 2012 to 10.2 million tons in 2020 and 10.8 million tons in 2030. Domestic demand will continue to increase from 10.4 million tons in 2012 to 12.2 million tons in 2020 and 13.1 million tons in 2030. Imports are predicted to increase from 1.4 million tons in 2012 to 2.0 million tons in 2020 and 2.4 million tons in 2030. China's self-sufficiency rate in oil crops will decline from 86 percent in 2012 to 82 percent in 2030.

Cotton

China's cotton demand has been growing much faster than its production, with much of the demand for production of exported clothing, and supply continues to fall short of demand. Demand for cotton will continue to grow. Total demand is expected to increase from 8 million tons in 2012 to 10 million tons in 2020 and to nearly 13 million tons in 2030. Domestic cotton production and imports in 2020 are both expected to be smaller than in 2012, mainly because of government purchasing and stockpiling of cotton in 2012, which contributed to higher prices, higher domestic production, and strong import growth. These impacts are expected to dissipate.

Policy implications: Fine-tuning China's food security objectives

China's past objective of maintaining overall food self-sufficiency warrants rethinking in view of the past structural changes in production and consumption, and of the likely impacts of urbanization over the next two decades. The objective of food security does not need to focus narrowly on achieving domestic food self-sufficiency. To the extent that China's policymakers focus on it, they may want to prioritize basic food staples, particularly rice and wheat.

China might also consider departing from the objective of domestic self-sufficiency in corn and cotton and allow imports to play a greater role. Such a realignment would help China preserve land and save water, and reduce the share of resources devoted to nonfood crops. The present focus on feed crop security should be rounded out with a stronger emphasis on improving the environmental sustainability of China's domestic livestock sector through improved protection and management of China's vast pastureland, and more widely, through reform of rural land markets and investment in managing agricultural water resources.

China has scope to boost domestic grain production capacity. But to do so, it should prioritize continuous productivity growth in agriculture. Unlike many other countries, China has large potential for increasing labor and land productivity. The potential of productivity growth can be captured through promotion of economies of scale in agriculture, primarily by increasing the scale of farming operations, and through continued investment in research and development. Steady productivity growth in grain production requires continuing technological advancements in agriculture, which in turn need increased public spending on agricultural research and development, integrated programs to promote advanced yield-enhancement technologies, mechanization in grain production, capacity building of farm producers, adoption of modern biotechnology, and expedited breeding of new crop varieties. Investments will also be needed for transforming low- and medium-yield farmland into land of higher productivity and for expanding or rehabilitating irrigation infrastructure, and for developing water users' associations that can help improve water-use efficiency in irrigation areas. Investments in improving efficiency of on-farm water use through better technology are needed, and should be combined with better water-pricing policies.

China's emphasis on food grain security should be matched by an equal focus on food safety to meet consumer demand for safe food. Food safety is an integral part of food and nutrition security; food security requires that citizens have access to sufficient quantities of safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life. ("Safe food" is defined as food free of hazardous biological, chemical, and physical agents.) Most developed countries have systems to ensure production of safe food, but China has yet to establish them. Once in place, they would help increase domestic food production, make it easier for vulnerable groups to access safe food, boost sales of domestic food products in the international market, and contribute to the security of the national and global food supply. Simply producing more food without meeting minimal quality and safety requirements would undermine China's response to the global food and nutrition security challenge.

Food safety is becoming a more important factor in agro-food competitiveness, domestically and internationally. Rising incomes and awareness of food safety will affect the competitiveness of China's domestic producers and processors. World trade in food continues to grow—with China as a global driver—but countries' concerns about food safety have to be assuaged. Food quality and safety are critical for global market access and for including small producers in high-value markets. In nearly every country, consumers' access to safe and affordable food will increasingly depend on that economy's capacity to produce safe food that satisfies its own needs as well as its moves to open its market to food imports.

China could consider the opportunities and challenges in international trade negotiations. It could take more active part in negotiating global and regional policy portfolios of agricultural trade liberalization, aiming at securing the sustainable increase of global agricultural trade and reducing trade risks under the framework of fair global trade. China could make itself a leading partner in global agricultural development efforts and investments; cooperate internationally with countries endowed with rich agricultural resources in agricultural technology development and transfer; and help promote agricultural productivity worldwide. It is in a position to support agricultural development globally through investments that enhance productivity in countries with the potential to increase their own supply of agricultural products.

References

- Chen Feng-gui, Zhang Hong-ou, Wu Qi-tao, and others. 2010. "A Study on Coordinate Development between Population Urbanization and Land Urbanization in China." *Human Geography* 25 (5): 53–58.
- Chen Zhi-gang, Qu Fu-tian, Han Li, and others. 2010. "The Rural Land Issues in the Process of the Industrialization and the Urbanization: Features, Incentives, and Resolution Path." *Reform of Economic System* 5: 93–98.
- Du Ying, Yang Gaihe, Xu Liping, and Zhang Xiao-pei. 2005. « Analysis of Ecological Effects in Urbanization Process." *Journal of Northwest A&F University (Social Science Edition)* 5 (2): 97–101.
- Fukase, Emiko, and Will Martin. 2013. "Who Will Feed China in the 21st Century? Income Growth and the Demand and Supply for Food in China." Draft report, Montesquieu University–Bordeaux IV, Bordeaux, France.
- Hu Mu and Ni Hejin. 2010. "Research on Relationship between Urbanization and the New Rural Construction Based on Dynamic Perspective." *Chinese Agricultural Science Bulletin* 26 (7): 364–369.
- Huang, Jikun, Jun Yang, and Scott Rozelle. 2014. "Urbanization and Food Security in China." A project report submitted to World Bank and Development Research Center of the State Council. Center for Chinese Agricultural Policy, Beijing.
- Huang Jikun, Zhu Lifan, Deng Xiangzheng, and Scott Rozelle. 2005. "Cultivated Land Changes in China: The Impacts of Urbanization and Industrialization." *Society of Photo-Optical Instrumentation Engineer* 5884: 135–149.
- Huang Ming-hua, Chen Mo, and Zhang Jing-wen. 2011. "The Linkage Plan of Urban-Rural Construction Land-Use Necessity and Must of Urbanization and Farmland Protection." *Urban Planning and Design* 1: 61–65.
- Li Suqin and Li Hengyi. 2012. "Resource Endowment Advantage Reversion and Countermeasures in the Construction of Henan Grain Core Area." *Chinese Journal of Agricultural Resources and Regional Planning* 33 (3): 39–44.
- Mu Guangzong, Mao Changbao, Wu Jinjing, and others. 2013. "Study on the Population Vulnerability and Optimization in Rural China." *Journal of China Agricultural University (Social Sciences Edition)* 30 (3).
- NSBC (National Statistical Bureau of China). Various issues, 1981–2013. *China Statistical Yearbook*. Beijing: China Statistical Press.
- Rask, Kolleen J., and Norman Rask. 2011. "Economic Development and Food Production—Consumption Balance: Growing Global Challenge." *Food Policy* 36 (2): 186–196.
- Shu Jian-ling and Chen Quan. 2012. "Dynamic Relationship between China's Urbanization and the Food Security." *Journal of Xi'an University of Finance and Economics* 25 (3): 11–15.
- Wang Xiahui, Zhang Huiyuan, Wangbo, and others. 2008. "Research on Environmental Safety in Rapid Urbanization Process." *Urban Problems* 5 (3): 11–15.
- Wen Qi and Ding Jin-mei. 2011. "Optimal Path and Strategy of Regional Industrial Structure under Water Resources Intimidation: A Case Study of Yulin." *Research of Agricultural Modernization* 32 (1): 91–96.
- World Bank. 2014. *Global Economic Prospects, Volume 9 June 2014*. Washington, DC.

Notes

¹ The coverage of local government debt in the 2013 audit was broader than that in 2010. The later audit covered 62,215 governments departments, 7,170 local government financing vehicles, 68,621 budget-supported public units, 2,235 public utility firms, and 14,219 other entities at all five tiers of government. It was the first time that debt of the central government (including the Ministry of Railway) and township-level governments as well as debt from fiscal commitments on build, transfer, and payment arrears was brought into coverage.

² To assess food consumption, production, and self-sufficiency issues for China, different food types are converted into CE, taking into account the higher costs of producing livestock products relative to producing an equivalent weight of cereal products (Rask and Rask 2011). The coefficients used in this report reflect the high costs of producing livestock products relative to cereals, and the sharp differences between different animal products. Coefficients used: beef: 19.8; bovine meat: 19.8; mutton and goat meat 19.8; offal 12.8; other meat 12.0; pig meat 8.5; poultry meat 4.7; fish, seafood 3.3; other aquatic products: 0.1; eggs 3.8; milk: 1.2; butter: 21.0; cream: 10.0; and other animal fat: 12.0.