

# What Makes China Grow?

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\*All opinions expressed herein are the author's own and do not necessarily reflect the views of any of the organisations with which the author is affiliated.

# Outline

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- ◆ Introduction
- ◆ The Chinese Economic Fundamentals
- ◆ The Sources of Chinese Economic Growth
- ◆ The “Wild Geese Flying Pattern”--The Further Advantage of China’s Size
- ◆ China as a Surplus Economy
- ◆ The Importance of Expectations
- ◆ The On-Going Economic Challenges
- ◆ Towards the “New Normal”
- ◆ The Long-Term Economic Outlook
- ◆ Concluding Remarks

# Introduction

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- ◆ China has made tremendous progress in its economic development since it began its economic reform and opened to the World in 1978. China is currently the fastest growing economy in the World—averaging 9.7% per annum over the past 37 years. It is historically unprecedented for an economy to grow at such a high rate over such a long period of time.
- ◆ Between 1978 and 2014, Chinese real GDP grew more than 28 times, from US\$369 billion to US\$10.4 trillion (in 2014 prices), to become the second largest economy in the World, after the U.S. By comparison, the U.S. GDP of approximately US\$17.4 trillion was a little less than 1.7 times Chinese GDP in 2014.

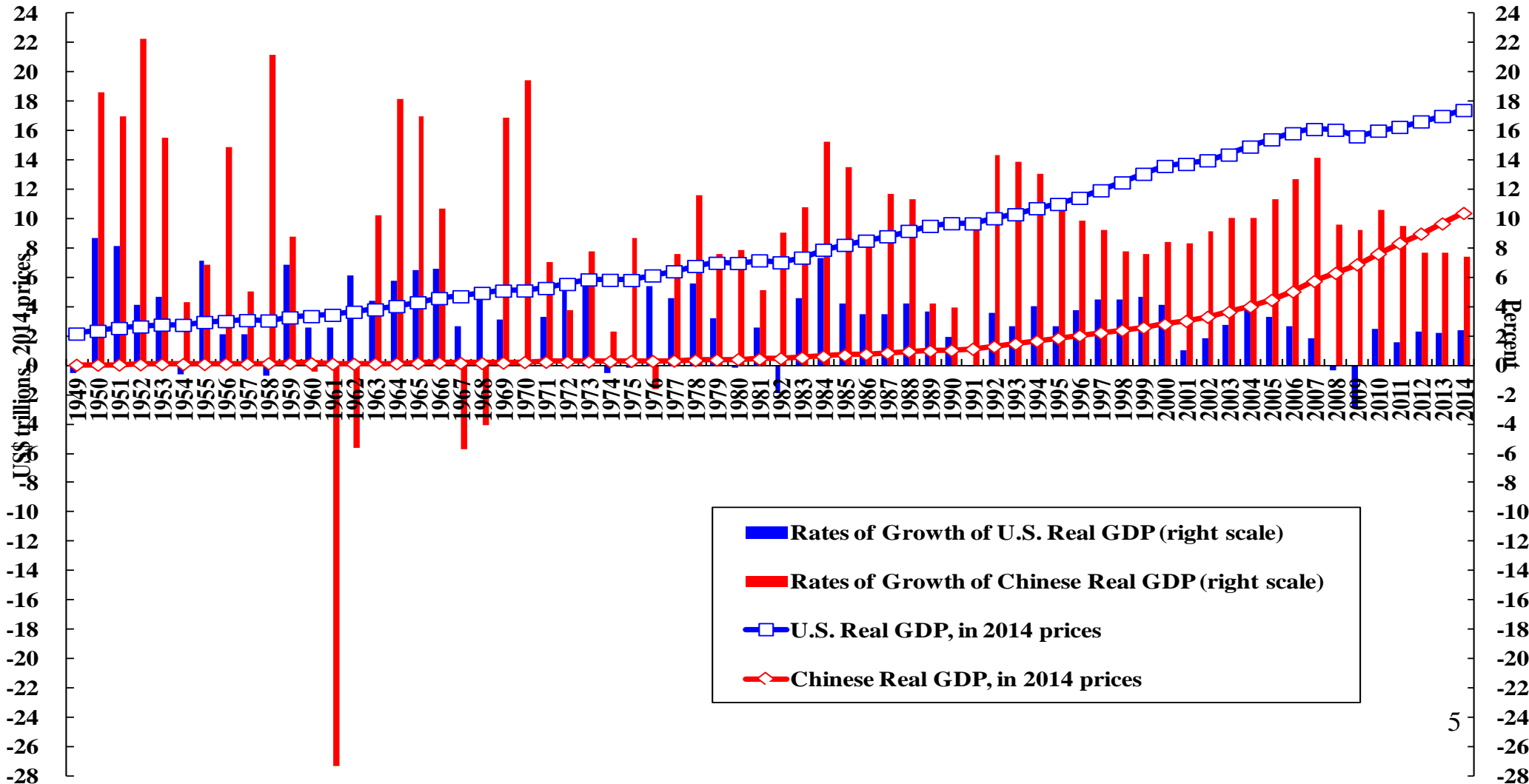
# Introduction

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- ◆ Researchers at the International Monetary Fund, have estimated, on the basis of “purchasing-power-parity (PPP)” calculations, that the Chinese economy is now larger in size than the U.S. economy, with a PPP GDP of US\$17.632 trillion in 2014 compared to US\$17.416 trillion for the U.S. (In 2013, Chinese PPP GDP was estimated by the IMF to be US\$16.149 trillion compared to US\$16.768 trillion for the U.S.)
- ◆ However, PPP comparisons of GDP between economies are not reliable because they are highly sensitive to the set of prices chosen to value the goods and services produced in the different economies, which may not reflect the local scarcities and preferences.

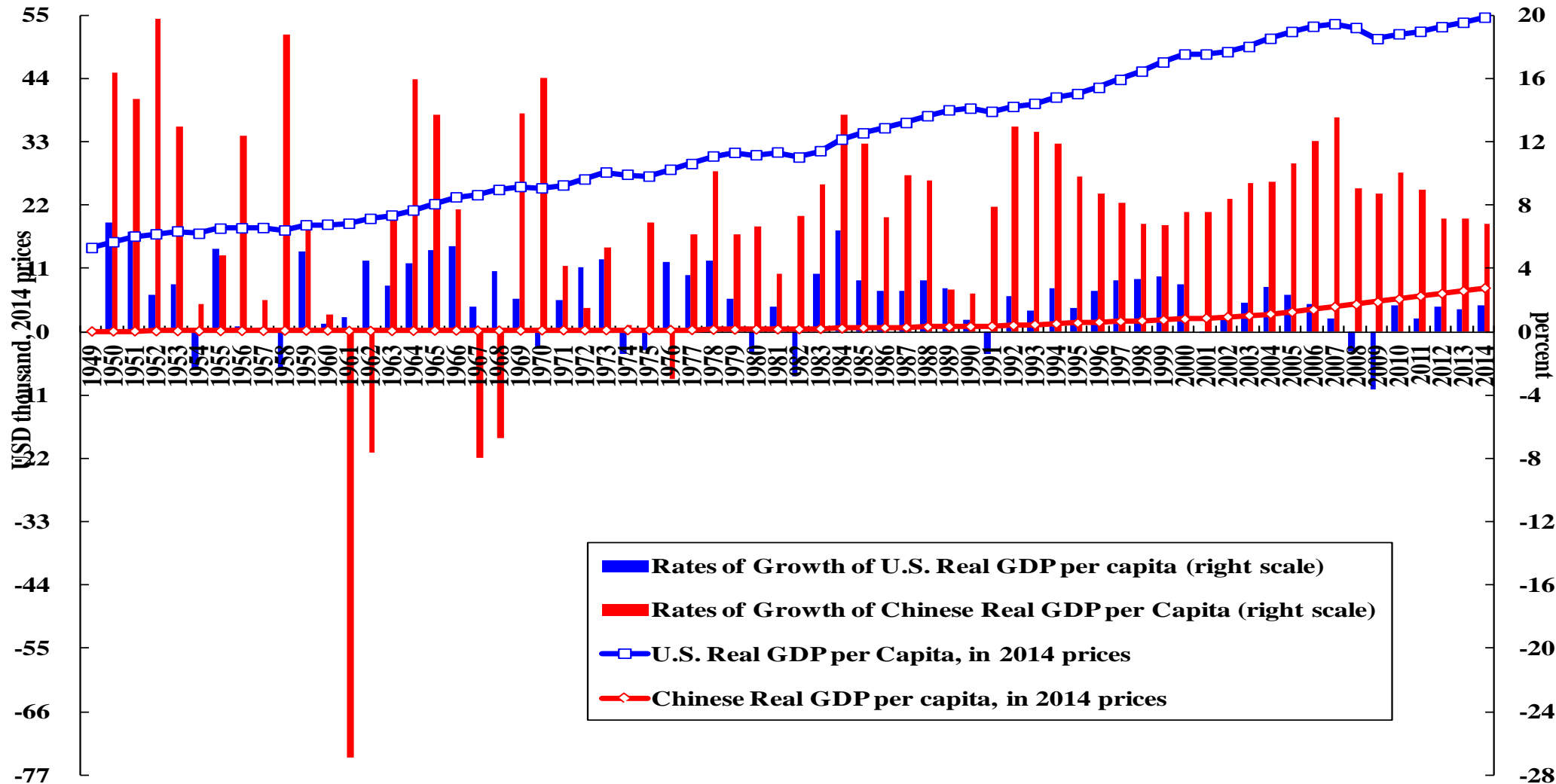
# Chinese and U.S. Real GDPs and Their Rates of Growth (2014 US\$) since 1949

Chinese and U.S. Real GDPs and Their Rates of Growth since 1949 (trillion 2014 US\$)



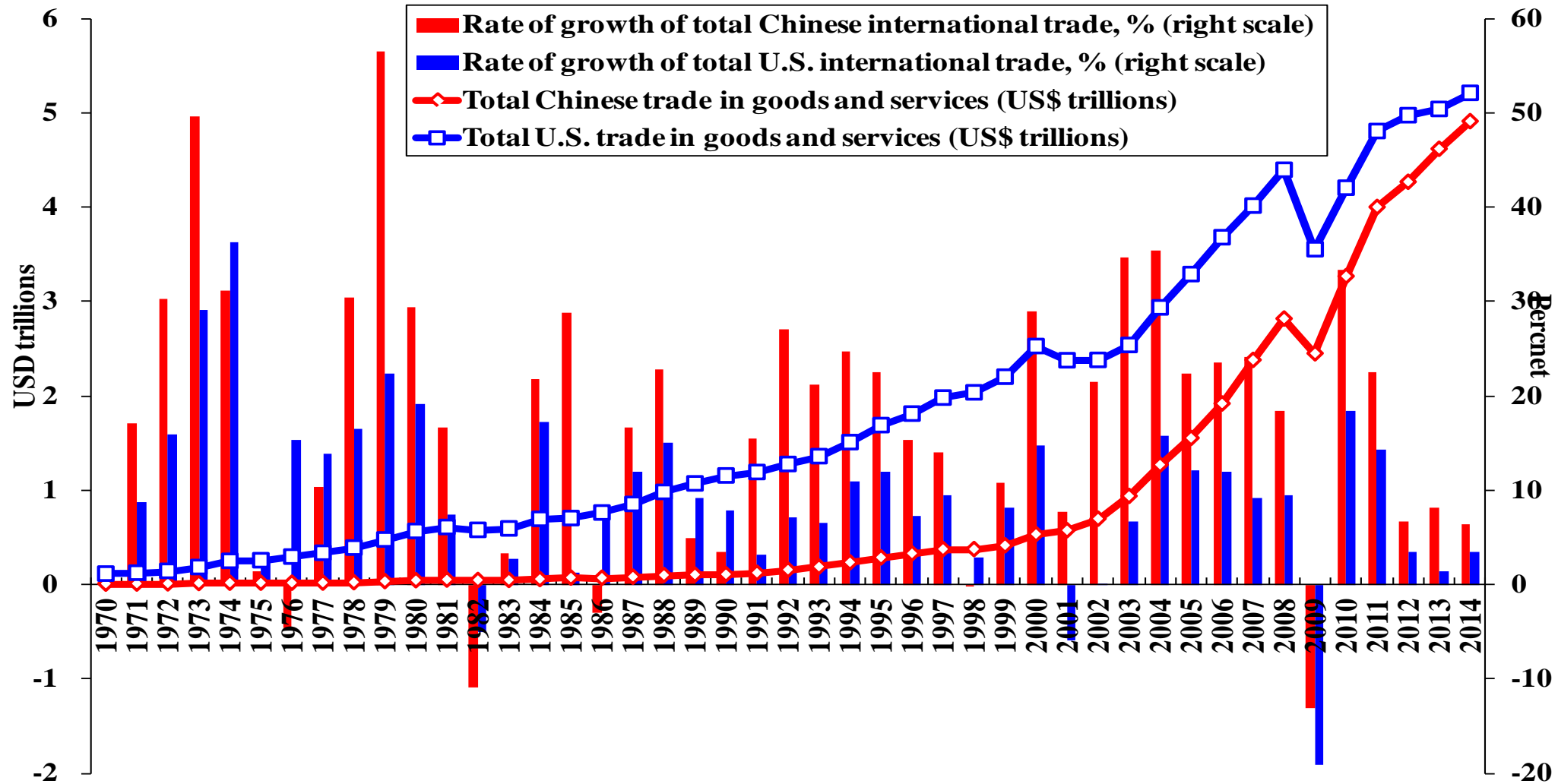
# Chinese and U.S. Real GDP per Capita and Their Rates of Growth (2014 US\$) since 49

Chinese and U.S. Real GDP per Capita and Their Rates of Growth since 1949  
(thousand, 2014 US\$)



# Chinese and U.S. International Trade and Their Rates of Growth (US\$) since 1970

Chinese and U.S. International Trade and Their Rates of Growth (US\$) since 1970



# The Ranks of China as Trading Partner of Asia-Pacific Countries/Regions and Vice Versa, 2013

<b>Country/Region</b>	<b>Chinese Rank as Trading Partner of Country/Region</b>	<b>Rank of Country/Region as Trading Partner of China</b>
<b>Australia</b>	<b>1</b>	<b>7</b>
<b>Brunei</b>	<b>3</b>	<b>104</b>
<b>Cambodia</b>	<b>1</b>	<b>78</b>
<b>Hong Kong</b>	<b>1</b>	<b>2</b>
<b>Indonesia</b>	<b>1</b>	<b>16</b>
<b>Japan</b>	<b>1</b>	<b>3</b>
<b>Korea</b>	<b>1</b>	<b>4</b>
<b>Laos</b>	<b>2</b>	<b>90</b>
<b>Macau</b>	<b>1</b>	<b>85</b>
<b>Malaysia</b>	<b>1</b>	<b>8</b>
<b>Myanmar</b>	<b>1</b>	<b>51</b>
<b>New Zealand</b>	<b>1</b>	<b>43</b>
<b>Philippines</b>	<b>2</b>	<b>27</b>
<b>Singapore</b>	<b>1</b>	<b>11</b>
<b>Taiwan</b>	<b>1</b>	<b>5</b>
<b>Thailand</b>	<b>1</b>	<b>13</b>
<b>United States</b>	<b>2</b>	<b>1</b>
<b>Vietnam</b>	<b>1</b>	<b>18</b>

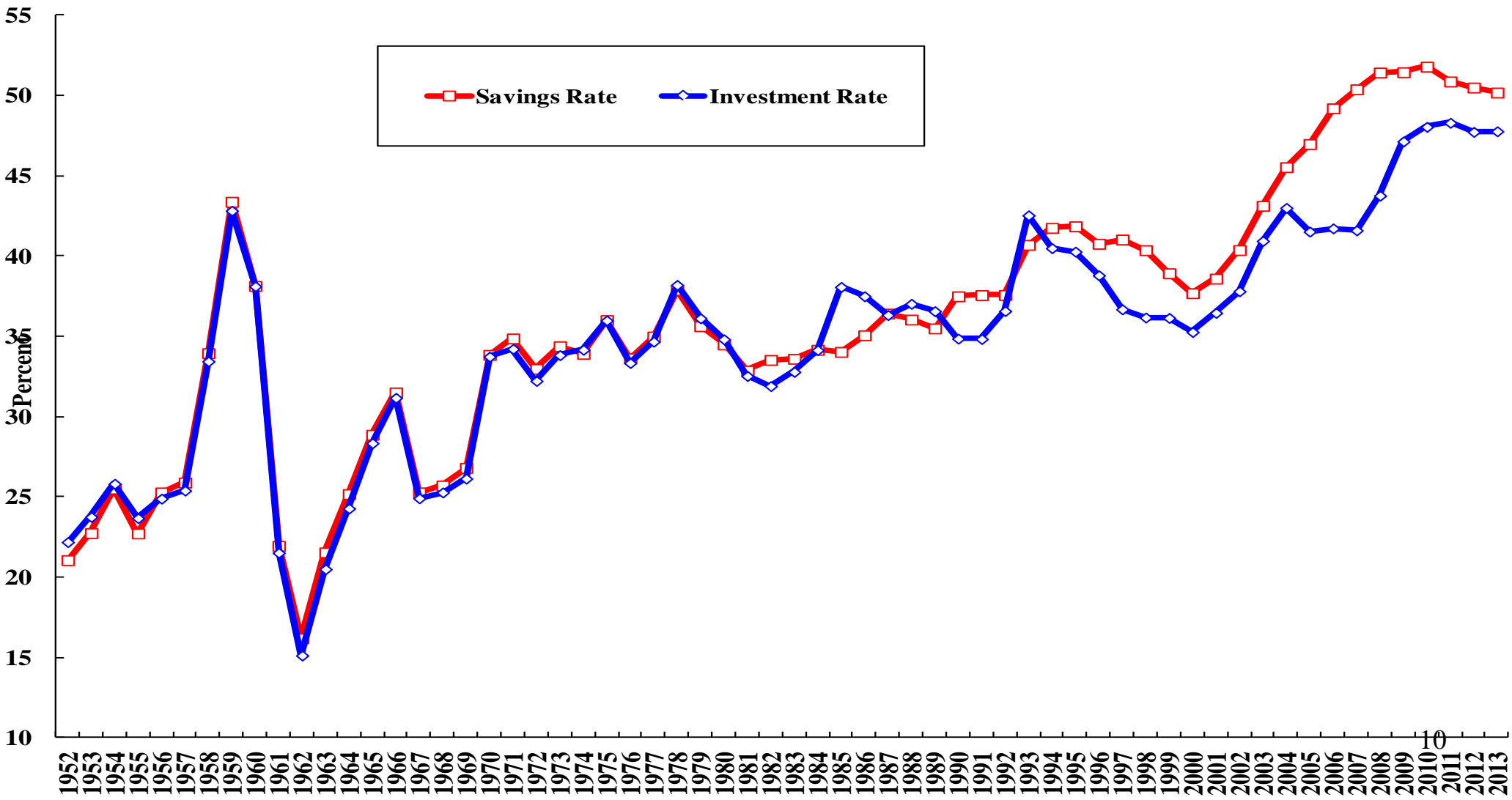


# The Chinese Economic Fundamentals

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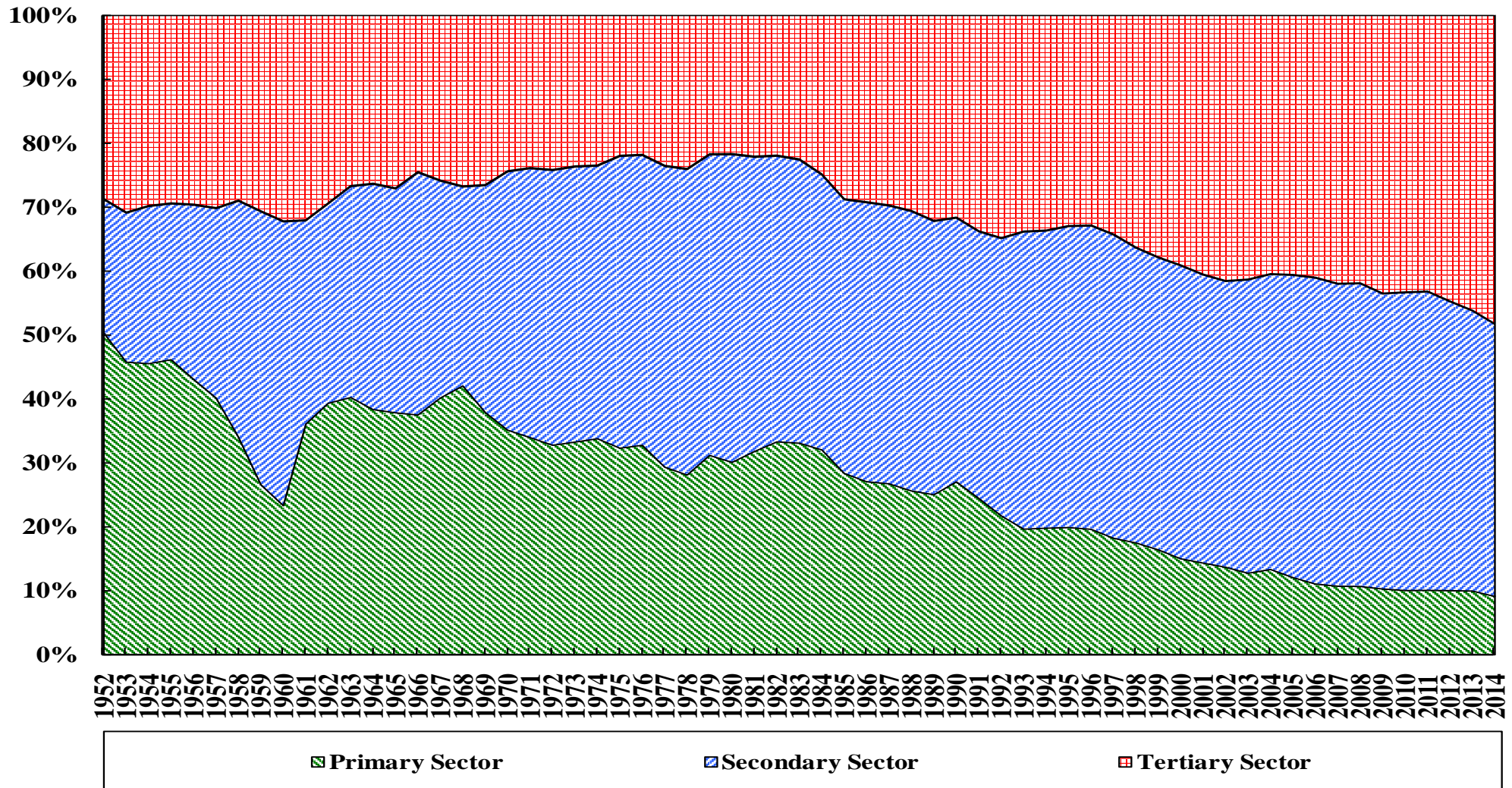
# Chinese National Saving and Gross Domestic Investment as Percents of GDP

Chinese National Savings and Gross Domestic Investment as a Percent of GDP since 1952



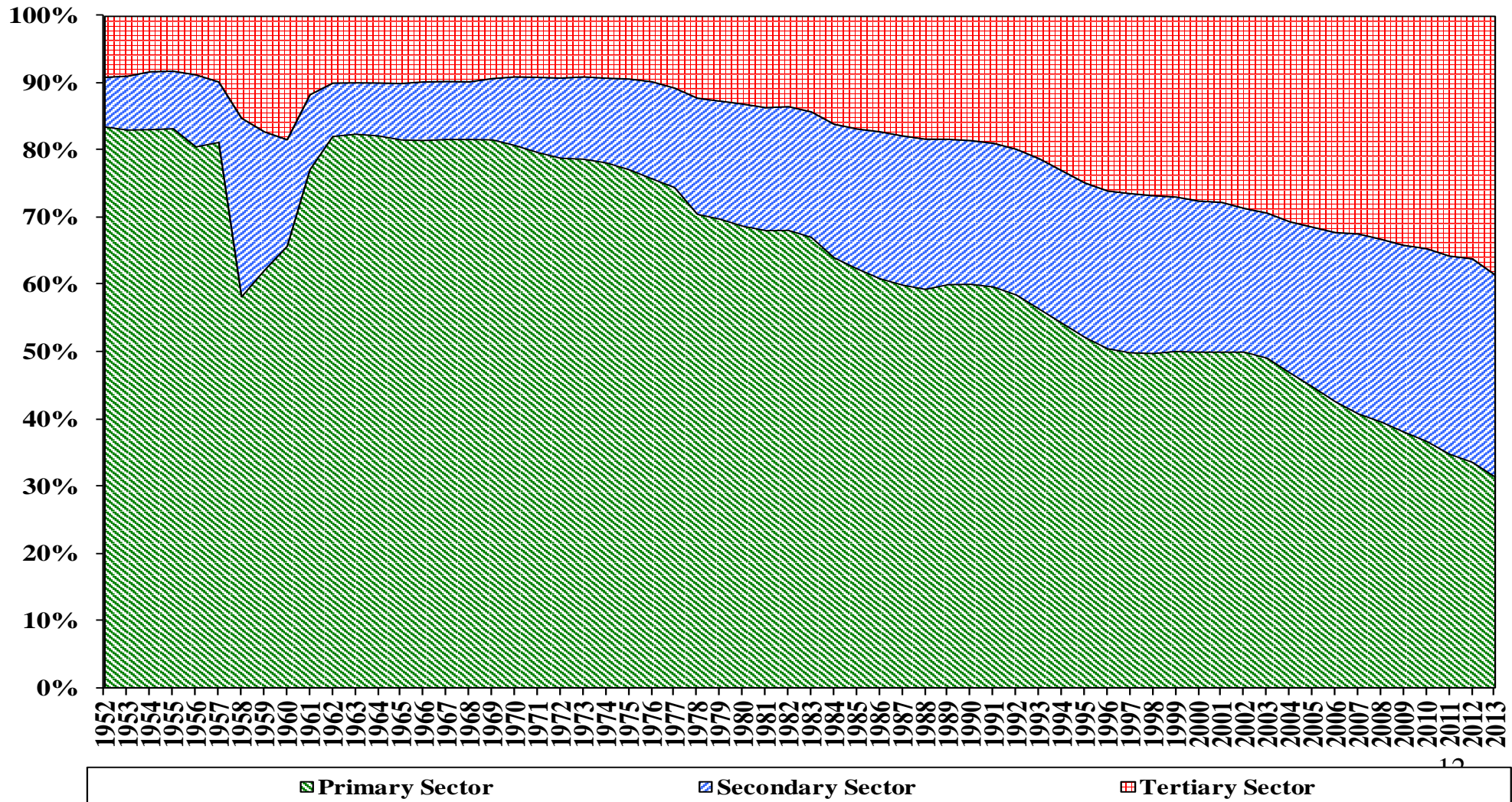
# The Distribution of Chinese GDP by Originating Sector since 1952

The Distribution of GDP by Sector



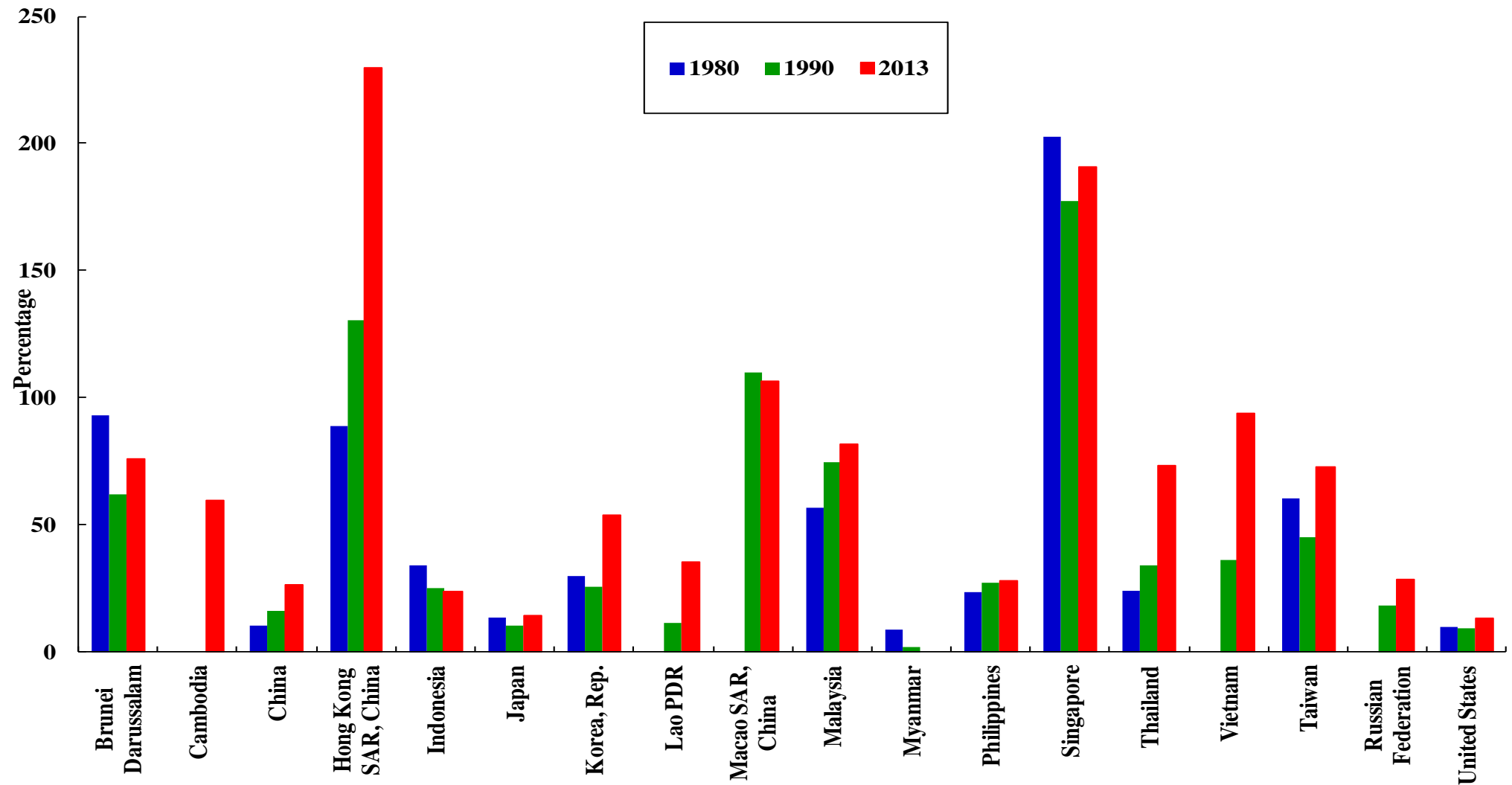
# The Distribution of Chinese Employment by Sector since 1952

The Distribution of Employment by Sector since 1952



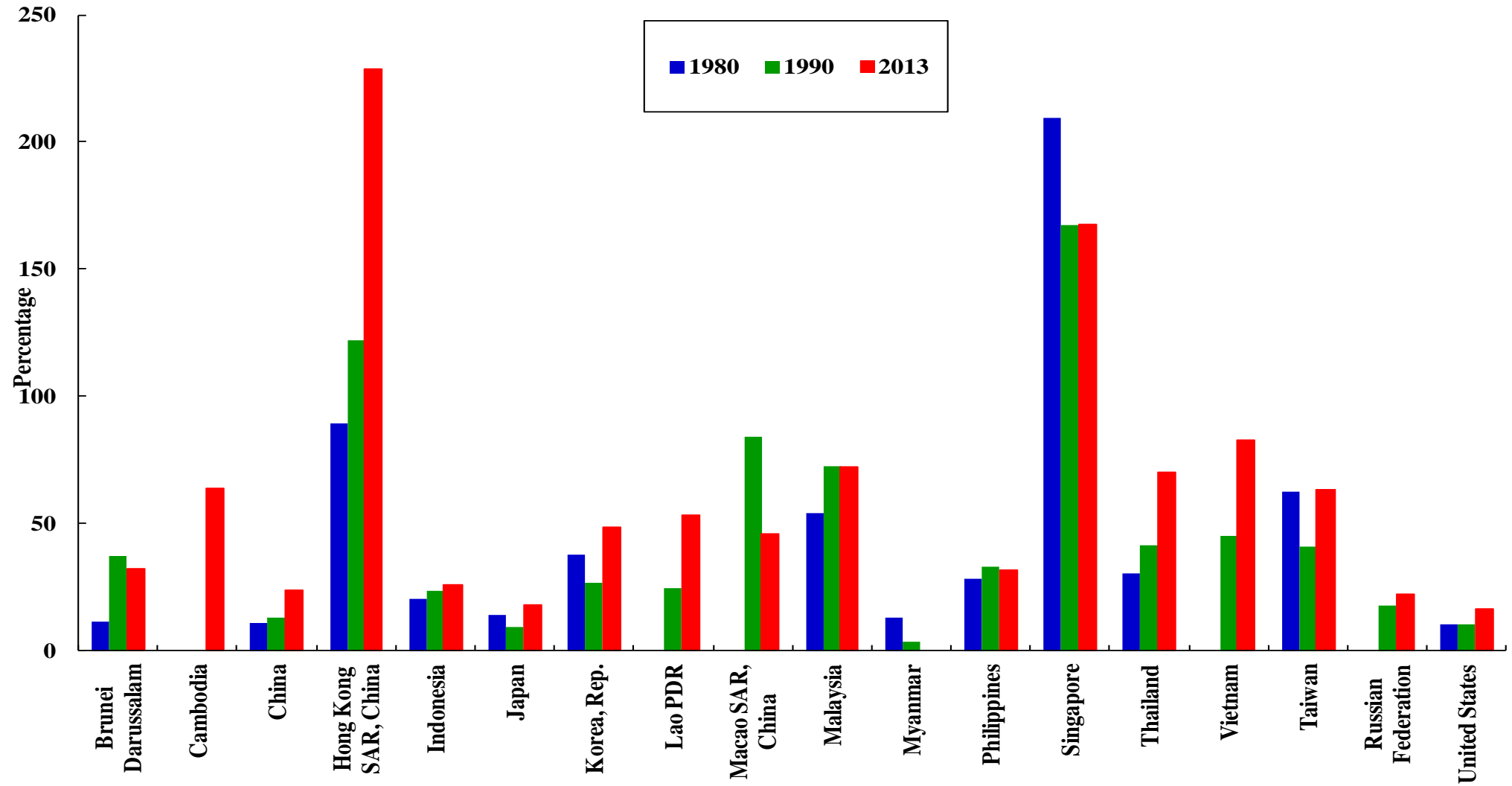
# Exports of Goods and Services as a Percent of GDP: Selected Economies

Exports as a share of GDP of East Asian Economies



# Imports of Goods and Services as a Percent of GDP: Selected Economies

Imports as a share of GDP of East Asian Economies



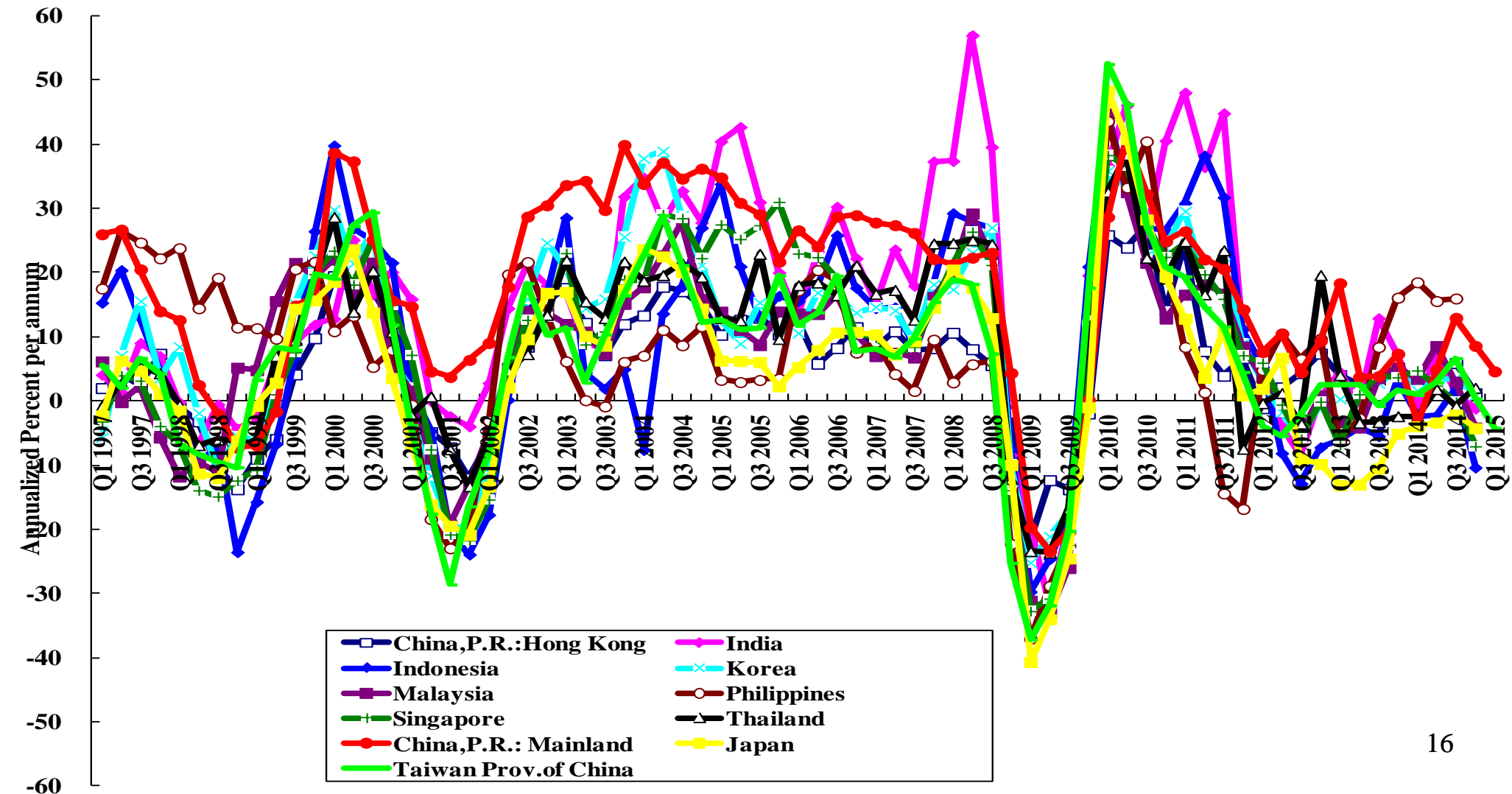
# The Sources of Chinese Economic Growth

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- ◆ What have been the sources of growth of the Chinese economy in the past?
- ◆ Growth of tangible inputs, capital and labour, and mostly tangible capital
- ◆ Realisation of latent potential output, through economic reform and opening to the World, from new autonomy and new incentives, both domestically and internationally
- ◆ Effects of the economies of scale derived from the expanding size of the Chinese economy

# Quarterly Rates of Growth of Exports of Goods: Selected Asian Economies

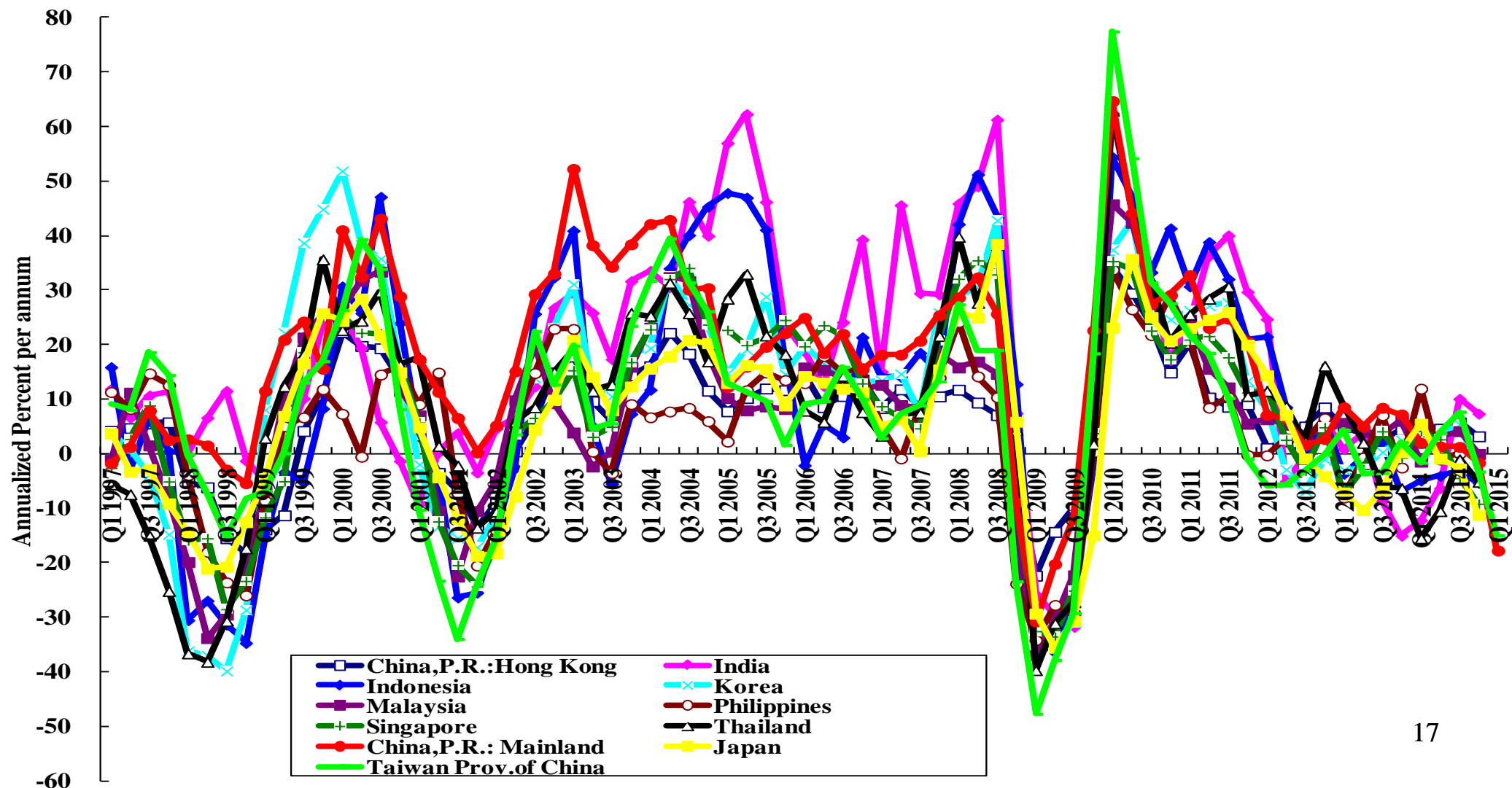
Quarterly Rates of Growth of Exports of Goods: Selected East Asian Economies





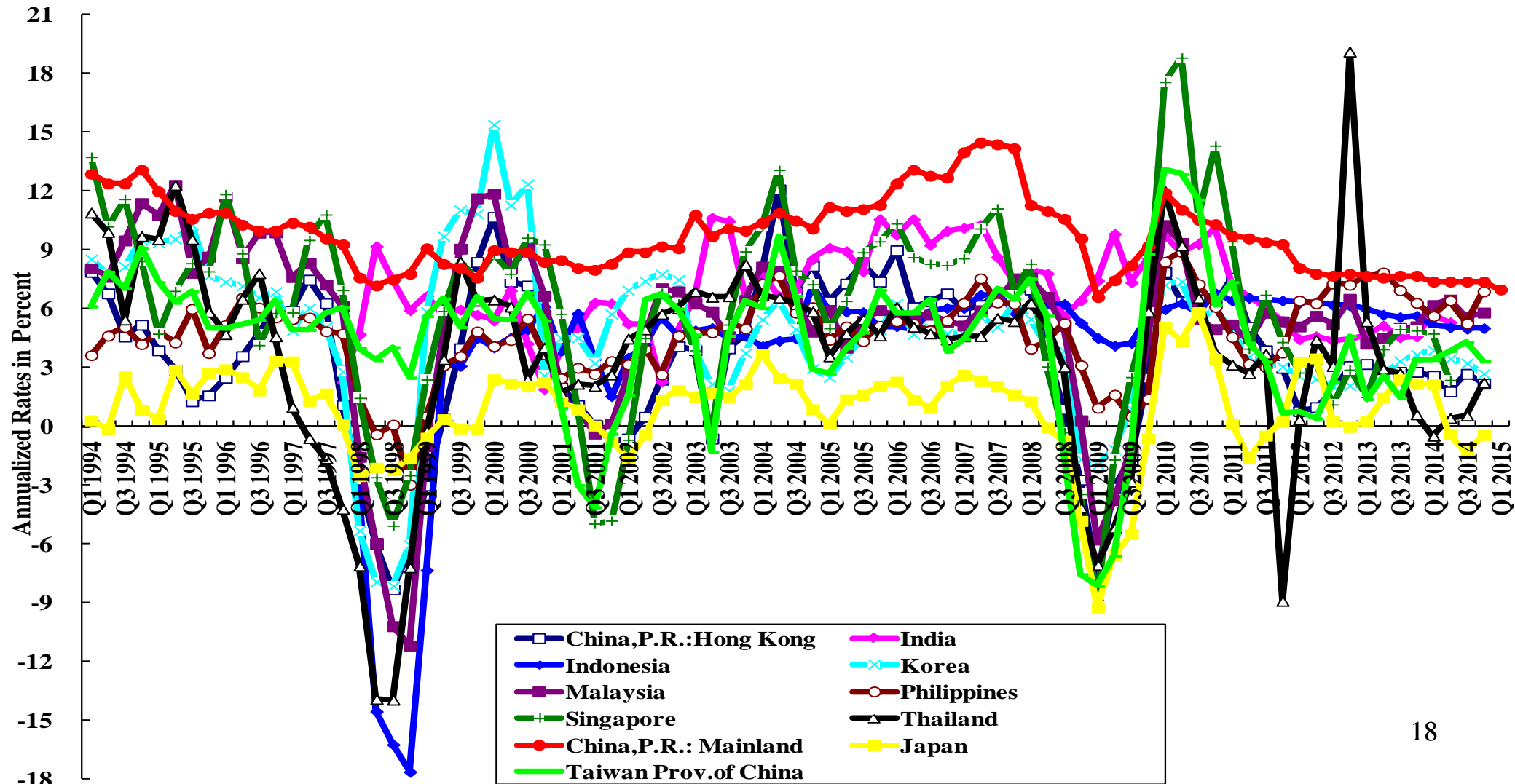
# Quarterly Rates of Growth of Imports of Goods: Selected Asian Economies

Quarterly Rates of Growth of Imports of Goods : Selected East Asian Economies



# Quarterly Rates of Growth of Real GDP, Y-o-Y: Selected Asian Economies

Quarterly Rates of Growth of Real GDP, Year-over-Year: Selected East Asian Economies



# The Sources of Chinese Economic Growth: The Effects of Economies of Scale

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- ◆ An economy with economies of scale will grow faster than an economy with constant returns to scale given the same rates of growth of the capital and labour inputs.
- ◆ The degree of returns to scale at the economy-wide level is not precisely known. The assumption used by Edward F. Denison for the degree of returns to scale for the U.S. is 1.1, that is, if all inputs are doubled, output will be increased by 1.1 times.
- ◆ This implies that Chinese economic growth will be 10 percent higher than a small economy with the same rates of growth of capital and labour inputs. Suppose the rates of growth are respectively 7.7% for China versus 7% for a small economy with the same initial level of GDP. Over a long period of time, the Chinese economy will be much larger. In 5 years, the Chinese GDP will be 1.6 times that of the small economy; in 10 years, 2.6 times; and in 20 years, 6.7 times. A difference of 70 basis points in the rate of growth can make a huge difference in a couple of decades.

The “Wild Geese Flying Pattern”--  
The Further Advantage of China’s  
Size

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# China as a Surplus Economy

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# China as a Surplus Economy

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- ◆ After the adoption of the economic reform and opening policies, the Chinese economy began to grow rapidly on the basis of a high investment rate, surplus labour and economies of scale on the supply side and the expansion of export demand, accelerated through its accession to the World Trade Organisation (WTO), basic infrastructural investments, and pent-up domestic household demand.
- ◆ With a high domestic saving rate that at times exceeded 50% of its GDP and an investment rate of approximately 45% of its GDP in recent years, China has begun to evolve into not only a surplus labour economy but also a surplus capital economy.
- ◆ The high domestic investment rate has resulted in massively excess manufacturing capacities almost everywhere. The average capacity utilisation rate of many manufacturing industries is around 70%. 22

# China as a Surplus Economy

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- ◆ Given the excess manufacturing capacities, Chinese real GDP is actually not supply-constrained but aggregate demand-determined. If there is aggregate demand, there will be sufficient supply forthcoming to meet the demand.
- ◆ The growth of exports and fixed investment in manufacturing and residential housing can no longer be the principal drivers of the growth of Chinese aggregate demand going forward.

# China as a Surplus Economy

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- ◆ How did the surplus economy come about? It came about because of massively excess fixed investment in manufacturing and in residential housing.
- ◆ Much of the fixed investment in manufacturing was undertaken by both state-owned and private enterprises without regard to its potential rate of return, often supported by local government officials.
- ◆ Fixed investment in residential housing was undertaken by developers at the local level, again with the support of local government officials, often without regard to demand.
- ◆ While the fixed investments themselves generated GDP and created employment locally, they are not economically viable<sup>24</sup>



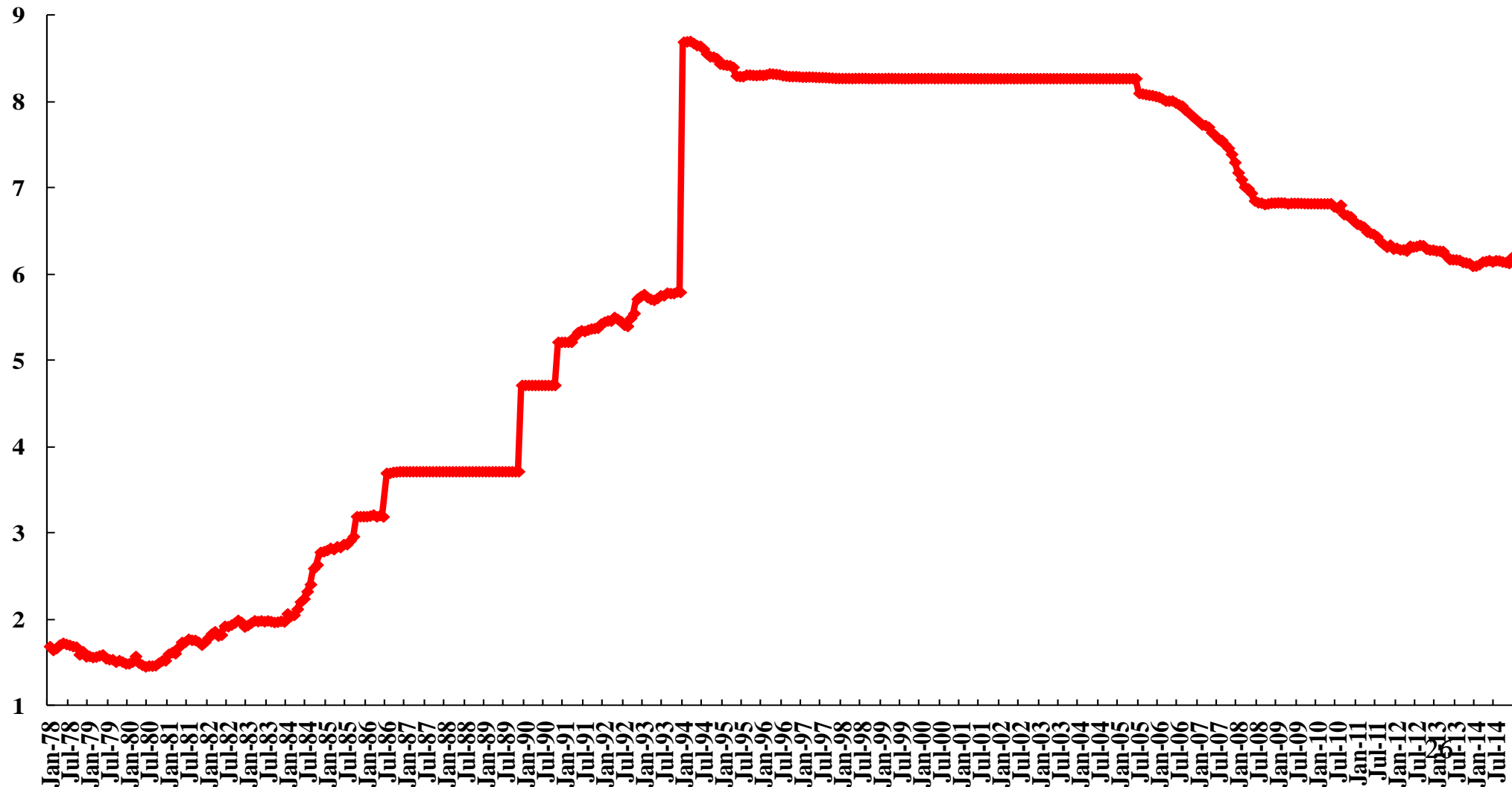
# China as a Surplus Economy:

## The Chronically Excess Demand for Credit

- ◆ Even with a national saving rate of almost 50%, there does not seem to be sufficient credit available in China. There seems to be a chronically excess demand for credit.
- ◆ One piece of evidence for the chronically excess demand for credit in China is the very high Renminbi rate of interest relative to the U.S.\$ rate of interest, even though the Renminbi has been appreciating in both nominal and real terms with respect to the U.S.\$ since 2005 (see the following charts).

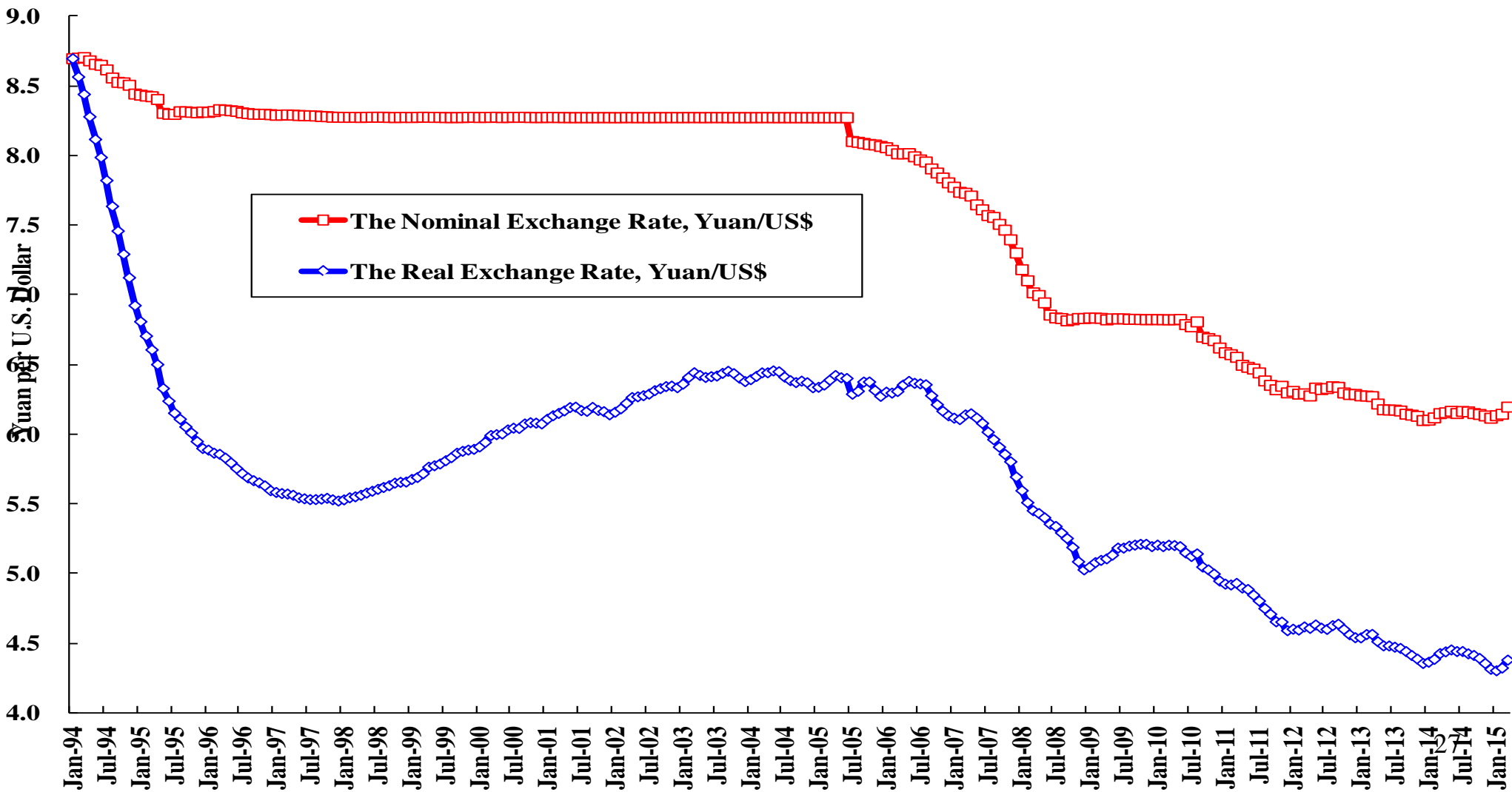
# Nominal Exchange Rate of the Renminbi, Yuan/US\$, 1978-present

Nominal Exchange Rate of the Renminbi, Yuan/US\$, 1978-present



# The Nominal and Real Yuan/US\$ Exchange Rates since 1994

The Nominal and Real Yuan/US\$ Exchange Rates (1994 prices)

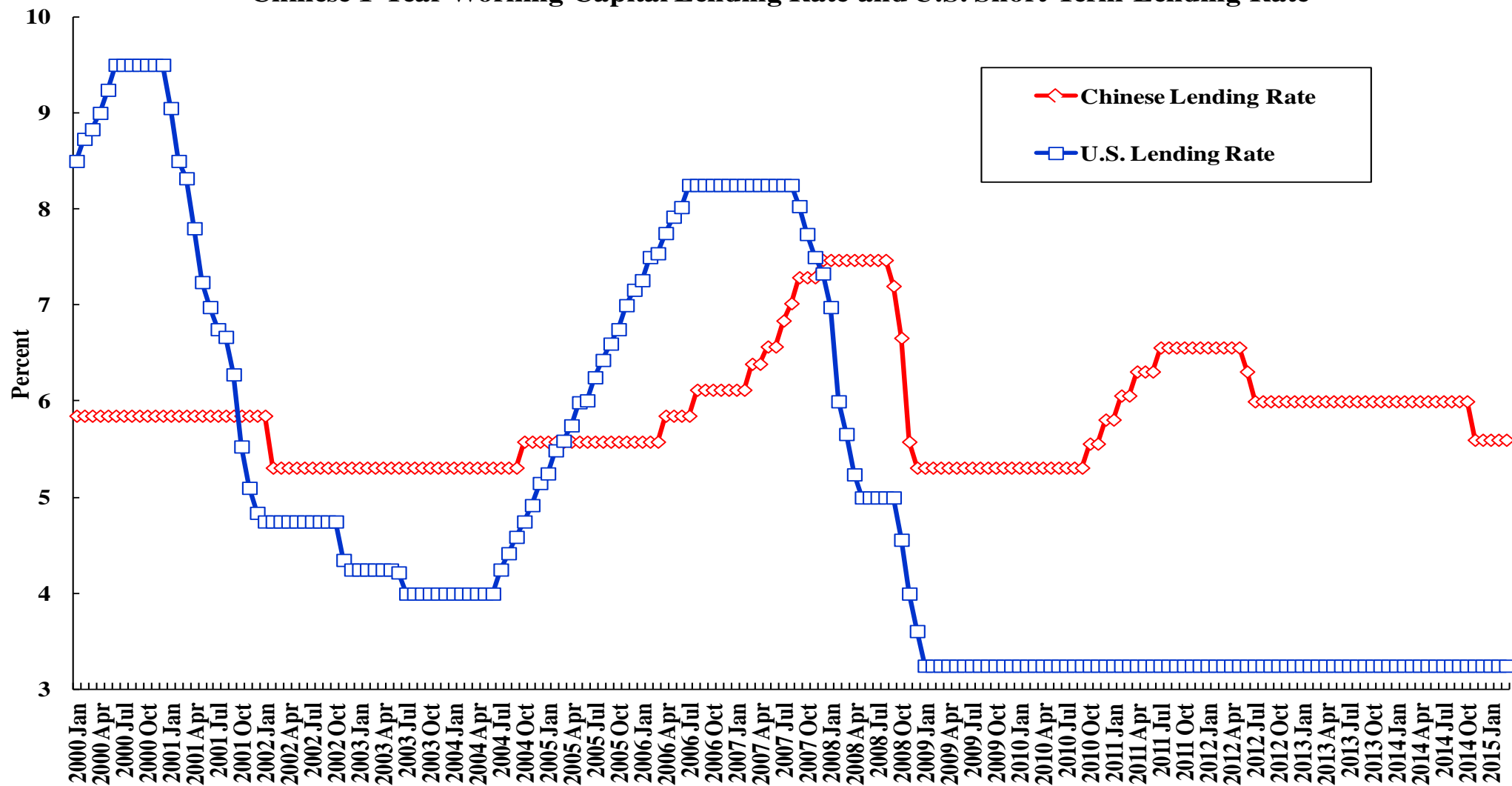


# China as a Surplus Economy: The Chronically Excess Demand for Credit

- ◆ This clearly contradicts the interest rate parity theory, which specifies that the rate of interest of the relatively appreciating currency should be lower than the rate of interest of the other currency by the percentage amount of the expected appreciation. (Granted that there exist capital control in China, but the control is at best leaky.) The Renminbi rate of interest has been much higher than the U.S.\$ rate of interest (see the following charts).

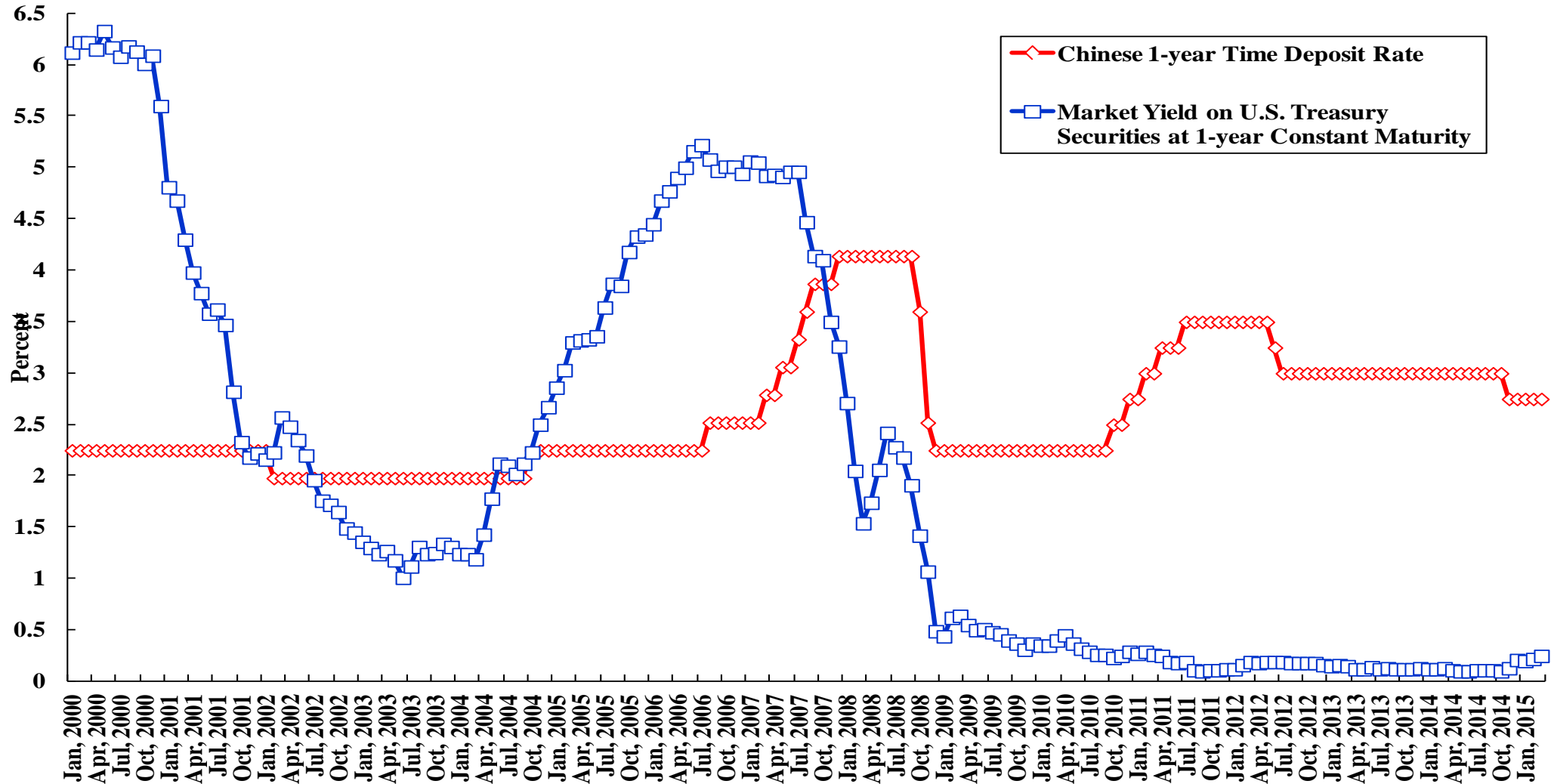
# The Chronically Excess Demand for Credit: China-U.S. Lending Interest Rate Differential

Chinese 1-Year Working Capital Lending Rate and U.S. Short-Term Lending Rate



# The Chronically Excess Demand for Credit: China-U.S. Deposit Interest Rate Differential

Chinese 1-Year Time Deposit Rate and Market Yield on U.S. Treasury Securities at 1-Year Constant Maturity



# China as a Surplus Economy:

## The Chronically Excess Demand for Credit

- ◆ The chronically excess demand for credit in China is caused by the fact that many borrowers or potential borrowers, including local governments, state-owned enterprises (SOEs) and private enterprises, do not plan to repay their loans if things do not work out as hoped. If borrowers do not plan to repay their loans when things turn sour, the level of the rate of interest does not matter very much to them. The result is a chronically excess demand for credit which in turn causes a chronically high rate of interest in China.

# China as a Surplus Economy: Huge Excess Capacities in Manufacturing Sectors

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- ◆ The fact that loans do not have to be repaid by the borrowers if things turn out badly leads to blind expansion of manufacturing capacities, resulting in huge excesses in industries such as steel, cement, glass, aluminum, ship-building, solar panels, residential housing, etc.
- ◆ It also means that a high interest rate alone is not an effective deterrent to borrowing and to investment—this explains why the Chinese central bank has had to resort to credit rationing.
- ◆ The chronically excess demand for credit is also in part responsible for the growth of “shadow banking” in Mainland China. Shadow banking has resulted in higher “effective” borrowing rates for those enterprises and individuals who are able to obtain credit because of the shift to making “shadow loans” rather than regular bank loans on the part of the commercial banks.



# China as a Surplus Economy: The Sources of Future Growth of Aggregate Demand

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- ◆ The growth of Chinese aggregate demand going forward will come principally from domestic demand. These can include:
- ◆ Public infrastructural investment such as high-speed railroads, urban mass-transit systems (China and the World cannot afford “a car in every garage”), facilities (e.g., wifi towers) for the support of universal free or low-cost internet access in urban areas, and affordable housing through urban slum clearance and renewal; in addition, one can also consider constructing sea water desalination plants as an alternative source of fresh water supply and storage facilities for a national strategic petroleum reserve.
- ◆ Public goods consumption (including necessary related investments) such as education, health care, care for the elderly, and environment control, preservation and restoration--securing cleaner air, water and soil.
- ◆ Urbanisation provides the unifying theme for expanding public infrastructural investment and public goods consumption. Many of the services such as education, health care and elderly care are best provided in an urban context.

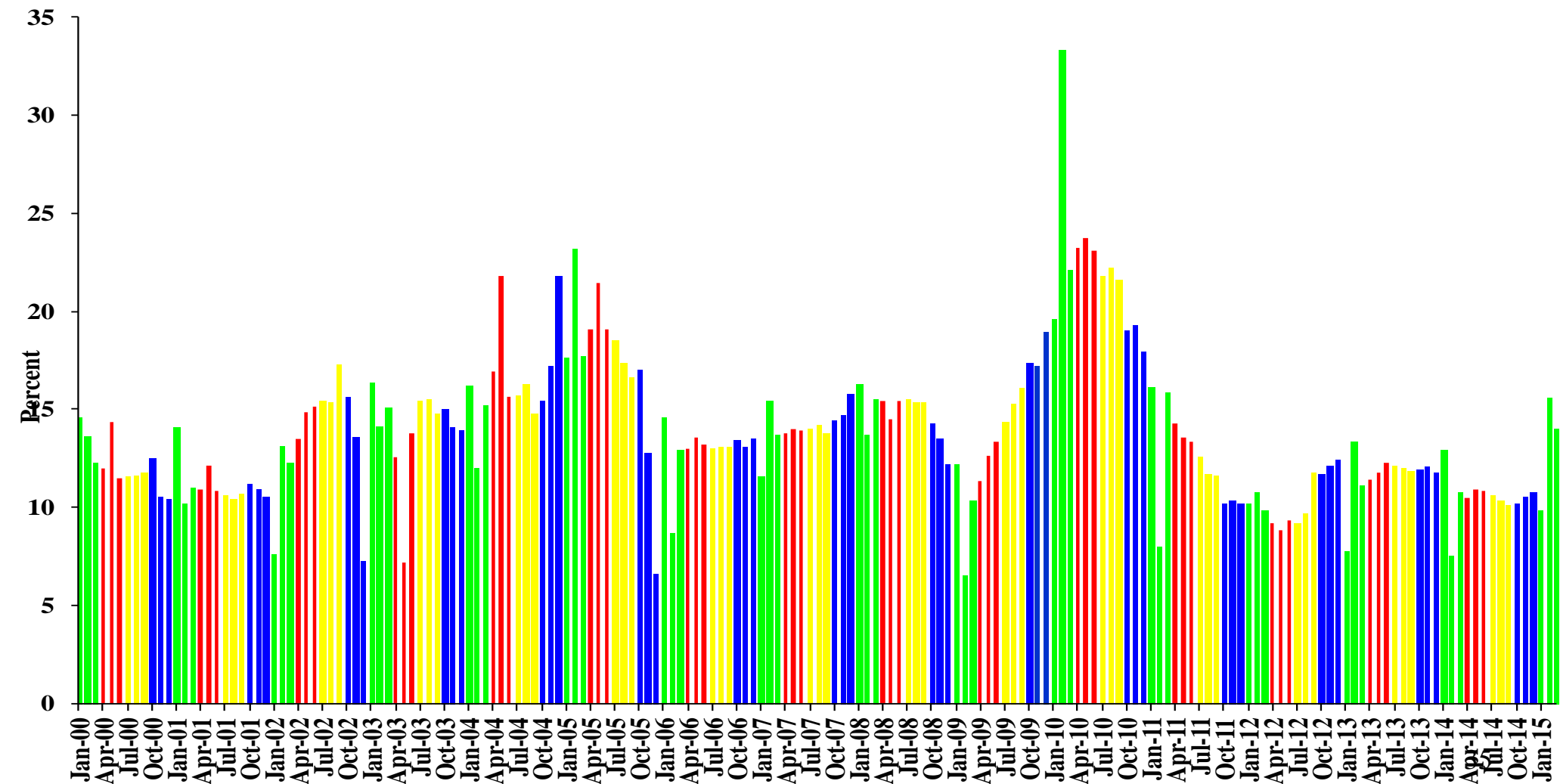
# China as a Surplus Economy: The Sources of Future Growth of Aggregate Demand

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- ◆ Household consumption, especially from the expanding and rising middle class, can also contribute to the growth of aggregate demand. Real retail sales have been growing at approximately one and a half times the rate of growth of real GDP.
- ◆ However, the disposable household income as a share of Chinese GDP may be estimated at approximately 43.2%. (This is not quite the same as the labour share because it includes the capital income of households but is after taxes and transfers.) The household share is very low compared to the developed economies. This puts a cap on the possible magnitude of Chinese household consumption.
- ◆ This estimate is based on survey data and may be subject to some bias, but it is broadly consistent with the well known fact that the share of labour in China is around 50%, compared to between 65% and 70% for developed economies.

# Monthly Rates of Growth of Chinese Real Retail Sales, Y-o-Y

Monthly Rates of Growth of Chinese Real Retail Sales since, Year-over-Year



# China as a Surplus Economy: The Sources of Future Growth of Aggregate Demand

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- ◆ The Chinese National Bureau of Statistics also estimated the final consumption expenditure to be 51.2% of GDP in 2014. However, this figure includes both household consumption and government consumption expenditure. The share of household consumption expenditure in total consumption expenditure may be estimated at 58.4%, which implies that household consumption expenditure was only 29.9% of GDP in 2014.
- ◆ The implied household saving rate from disposable income may be estimated to be 30.8%, which is not significantly different from the saving behaviour of ethnically Chinese households in Hong Kong and Taiwan.
- ◆ In order for household consumption to become a major driver of Chinese aggregate demand, the disposable household income as a share of GDP must rise significantly. This will take at least a couple of decades even with supportive government policies.

# China as a Surplus Economy: The Sources of Future Growth of Aggregate Demand

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- ◆ However, both public infrastructural investment and public goods consumption require the leadership and support of the central and local governments.
- ◆ While expenditures on public goods consumption, including the necessary related investments, will count as GDP, some of the benefits of these expenditures may not be pecuniary, for example, cleaner air, water and soil, better education, better national health, etc., and may not be fully reflected in the conventional measurement of GDP. However, the increase in general welfare as a result of these expenditures is definitely real.
- ◆ Moreover, increasing public goods consumption is an effective method of redistribution in kind. For example, since everyone breathes the same air, if the air is cleaner, both the wealthy and the poor benefit equally; and better access to health care may benefit the lower-income households more. Expansion of public goods consumption can thus reduce the real income disparity.

# The Importance of Expectations

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- ◆ Expectations of the future are important determinants of enterprise and household behaviour, which in turn determines whether an economy grows or stagnates. The Chinese central government has the proven credibility to change expectations through its plans and actions.
- ◆ In 1992, Mr. Deng Xiaoping undertook his famous southern tour, which changed expectations in the entire country overnight. Enterprises started investing and households started consuming. As a result, 1992, 1993 and 1994 were boom years.
- ◆ In 1997, Premier ZHU Rongji held the Renminbi/US\$ exchange rate steady amidst the chaos of the East Asian currency crisis, and thus managed to maintain the confidence of the investors and consumers about China's economic future, keeping the economy growing.
- ◆ In 2008, Premier WEN Jiabao launched the 4 trillion Yuan economic stimulus programme, barely six weeks after the collapse of Lehman Brothers, which once again helped to hold the confidence of Chinese enterprises and households in their economic future.

# The Importance of Expectations

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- ◆ In all of these cases, the Chinese government was able to turn around the very negative expectations about the future of the Chinese economy into positive ones, and in so doing greatly reduced the uncertainty pertaining to the future and increased general business confidence. These changes in turn fueled investment booms that resulted in the subsequent economic growth.
- ◆ If expectations can be credibly changed, they become an important instrument for economy-wide coordination, much like an indicative (non-mandatory) national economic development plan. They can more than make up for the failure of the market to provide coordination.
- ◆ Expectations often have the ability to be “self-fulfilling.” If everyone believes that the economy will do well and act accordingly, by investing and consuming, the economy will indeed turn out to do well, and vice versa.
- ◆ Expectations will continue to play an important role in the Chinese economy. A strong central government with the power to mobilise aggregate demand can credibly change expectations in a positive direction to keep the economy growing.

# The On-Going Economic Challenges

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- ◆ The Rapidly Aging Population
- ◆ The Anti-Corruption Campaign
- ◆ Shadow Banking
- ◆ Local Government Debt
- ◆ The Deficit in Human Capital
- ◆ The Innovation Gap
- ◆ The Income Disparity
- ◆ The Environmental Degradation
- ◆ The Excess Capacities in Manufacturing
- ◆ The Excess Supply of Residential Real Estate



# The On-Going Economic Challenges:

## The Rapidly Aging Population

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- ◆ The rapid aging of the Chinese population is a challenge from the point of view of adequate provision of retirement benefits and elderly care.
- ◆ However, there will not be a “real” labour shortage despite the decline of the “working-age population”—the existing retirement ages of 55 for women and 60 for men, first set in the early 1950s, are too low given the lengthened life expectancy of the Chinese population. One ready solution is to raise the retirement age to 65 or even 70 (possibly on a voluntary and phase-in basis).
- ◆ The “one-child policy” is already in the process of being modified. The decision of the Third Plenum of the Eighteenth Central Committee allows a couple with one spouse being a single child to have two children. However, its effects on the size of the “working-age population” is not likely to be felt for at least a couple of decades.

# The On-Going Economic Challenges:

## The Anti-Corruption Campaign

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- ◆ The anti-corruption campaign is absolutely important for China's future. It has been quite successful so far, hitting both “tigers and flies” as promised. It has proved to be extremely popular with the public.
- ◆ The “Anti-Corruption” campaign has had some effect in discouraging initiatives on the part of some government officials. It is “safer” to do nothing in the midst of the campaign so as not to attract attention to oneself. Part of the recent slowdown in the rate of economic growth may therefore be attributed to the inactivity of some government officials in response to the anti-corruption campaign (and the regulations against luxury consumption). But inaction is probably still preferable to “lawless action”.

# The On-Going Economic Challenges: The Anti-Corruption Campaign

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- ◆ However, since ultimately the most important objective of the campaign is to deter future corruption and not to try to catch every single government official who committed transgressions in the past, it is anticipated that at an appropriate time, after suitable safeguards against corruption have been put in place systematically, “mission accomplished” will be declared, with the new focus of the campaign on deterring and punishing continuing or new acts of corruption.
- ◆ Reduction of official discretion is clearly one way to reduce potential corruption but it may also lead to other potential problems. Full implementation of the rule of law must go hand-in-hand with the reduction of official discretion.

# The On-Going Economic Challenges: Shadow Banking

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- ◆ “Shadow banking” has become more common in Mainland China in the last few years. Shadow banking arises in response to various restrictions on bank lending and other requirements such as the total quota on the value of loans outstanding and its rate of increase, capital requirements, leverage ratios, and reserve requirements.
- ◆ The fundamental idea of “shadow banking” is to move both “deposits” and “loans” off the bank’s balance sheet and hence reduce the size of its total assets and liabilities through various arrangements and devices, circumventing all kinds of requirements and restrictions.

# The On-Going Economic Challenges: Shadow Banking

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- ◆ Shadow banking also appears to generate advantages for everyone except possibly for the shareholders of the bank and for the regulator. The net result, however, is a significantly lower actual capital ratio and a significantly higher actual leverage, increasing the risks to the bank and to the financial sector as a whole.
- ◆ Moreover, the borrowers wind up paying much higher actual rates of interest.

# The On-Going Economic Challenges: Shadow Banking

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- ◆ The proportion of financing in China accounted for by conventional bank loans was over 90 percent in 2002 but has since fallen to below 50%. Shadow banking probably accounts for 17-20 trillion Yuan worth of “loans”, approximately 30% of GDP, still considerably lower than the comparable percentages in other major developed economies. But the commercial banks are involved in 60% of the shadow banking activities in China, much more than the commercial banks in other countries and regions.

# The On-Going Economic Challenges: Shadow Banking

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- ◆ This means that the implicit hidden liabilities of the commercial banks and hence their leverage ratios are much higher than are represented on their balance sheets, posing significant risks to the financial system because of the potential of over-leveraging. Moreover, there is unlikely to be sufficient provision against non-performing “shadow loans”.
- ◆ The Chinese regulators are aware of these problems and have been taking steps to control and restrict shadow banking.

# The On-Going Economic Challenges:

## Local Government Debt

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- ◆ Total Chinese central government public debt may be estimated at 9.8 trillion Yuan as of mid-2013, with another 2.5 trillion Yuan of contingent liabilities of various kinds, including those of the China Railway Corporation.
- ◆ According to China's National Audit Office, total local government debt may be estimated at 10.9 trillion Yuan as of mid-2013, with another 7 trillion Yuan of contingent liabilities of various kinds. Total local government debt has increased significantly especially since 2008Q4. Almost 40% of that debt came from special-purpose local financing entities.
- ◆ Private household debt may be estimated at 16 trillion Yuan and enterprise debt at around 70 trillion Yuan.
- ◆ To put all of these figures into perspective, the Chinese GDP in 2013 was 57 trillion Yuan. Total central and local government debt (including contingent liabilities) as a percentage of GDP may therefore be approximately estimated as 53%.



# The On-Going Economic Challenges: Local Government Debt

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- ◆ However, it is unlikely that all of the local government debt would become non-performing. Even if half of the local government debt eventually becomes non-performing, in which case it is likely that part of the losses would be assumed by the central government, which will still have a relatively low public debt to GDP ratio of less than 40% compared to 150% for the U.S. and 250% for Japan.
- ◆ In addition, China has a high national saving rate in the mid forties. Its public debt is almost exclusively denominated in Renminbi and held mostly by Chinese nationals. The Government deficit is low and the rate of growth of government revenue has been higher than the rate of growth of GDP. All of this suggests that the public debt problem should be manageable.

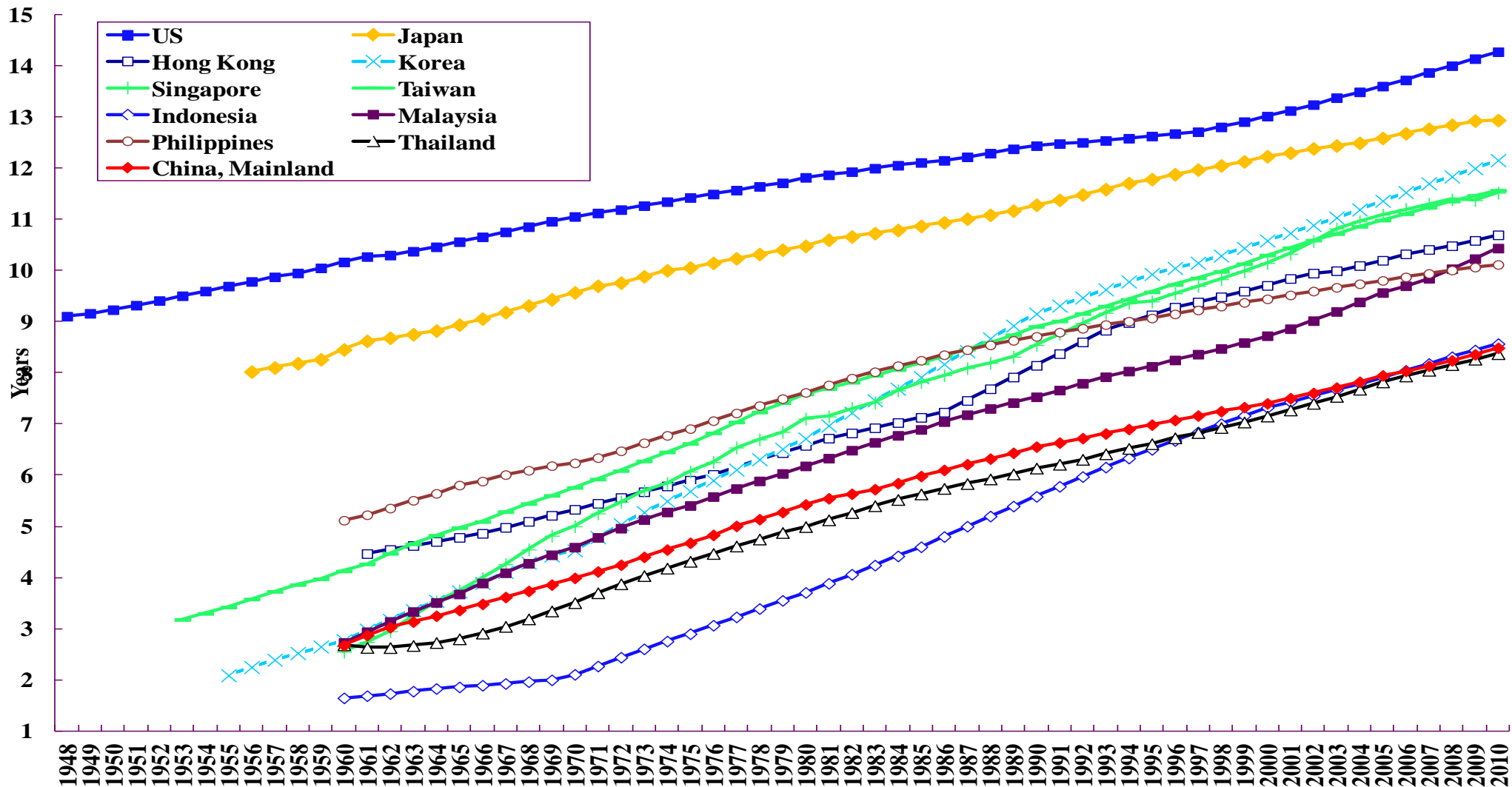
# The On-Going Economic Challenges: The Deficit in Human Capital

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- ◆ One indicator of the level of human capital in an economy is the average number of years of schooling per person in the working-age population. In the following chart, the average number of years of schooling is compared across selected economies.
- ◆ By this measure, the United States and Japan are the clear global leaders. South Korea has been catching up fast. Most of the other East Asian economies also have quite rapidly increasing levels of human capital but it will take a while before they can catch up with the levels of human capital in the developed economies. China, Indonesia and Thailand have lagged behind in terms of investment in human capital.

# Average Number of Years of Schooling of Selected Economies (1945-present)

Average Number of Years of Schooling of Selected Economies (1945-present)



# The On-Going Economic Challenges:

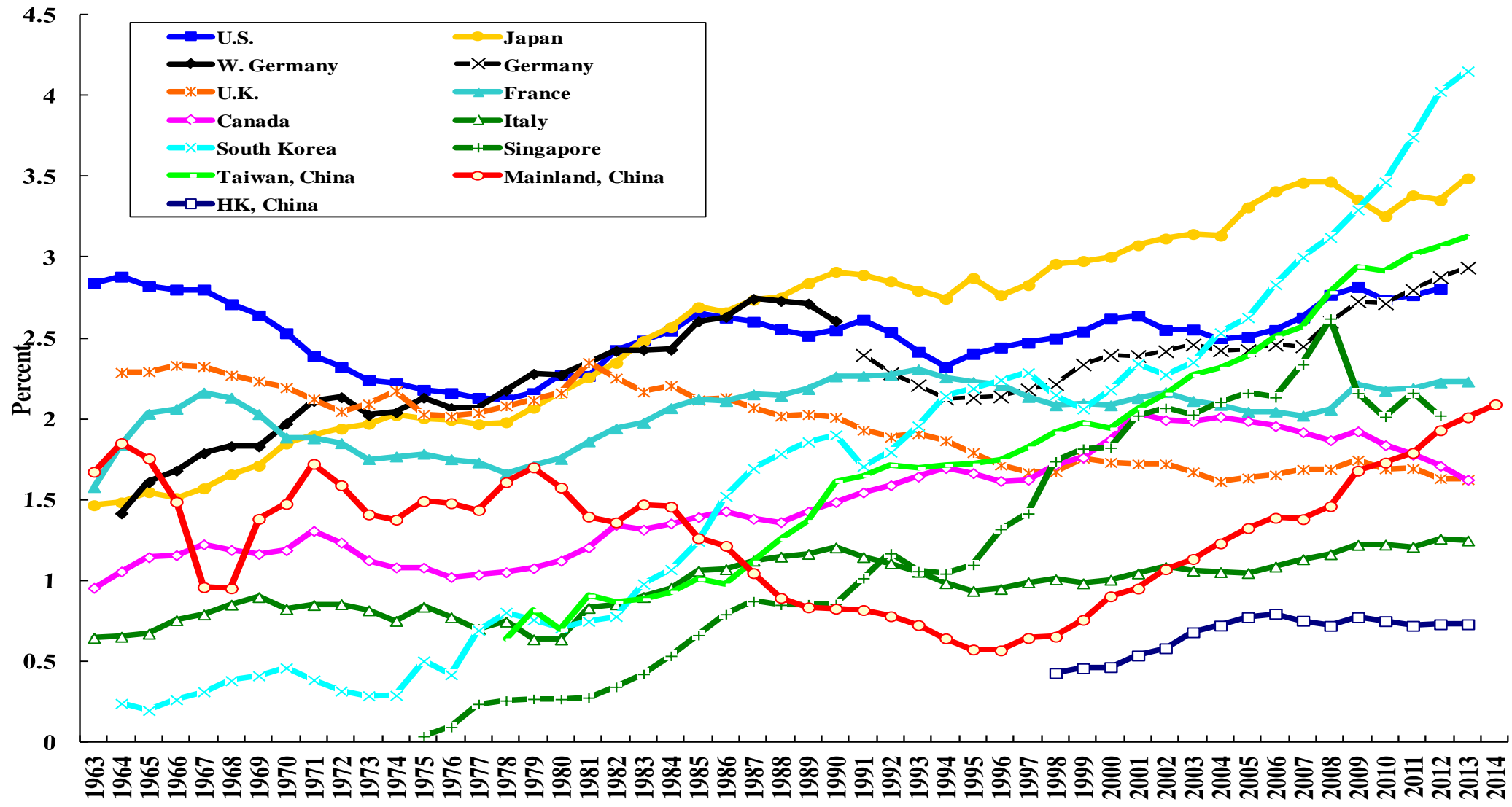
## The Innovation Gap

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- ◆ Investment in R&D capital is also important for promoting innovation (technical progress or equivalently growth in total factor productivity).
- ◆ China has also begun to invest more heavily in R&D in recent years—its R&D expenditure has been rising rapidly, both in absolute value, and as a percentage of GDP; but it still lags behind the developed economies as well as the newly industrialised economies of East Asia. (The Chinese R&D Expenditure/GDP ratio is targeted to reach 2.2% in 2015, still below the historical average of 2.5% for the U.S.)
- ◆ The Republic of Korea currently leads the World with the percentage of its GDP expended on R&D exceeding 4% (4.15% in 2013) followed by Japan, with an average ratio of 3% (3.49% in 2013) over the past quarter of a century.

# R&D Expenditures as a Ratio of GDP: G-7 Countries, 4 East Asian NIES & China

R&D Expenditures as a Percentage of GDP: G-7 Countries, 4 East Asian NIEs and China



# The On-Going Economic Challenges:

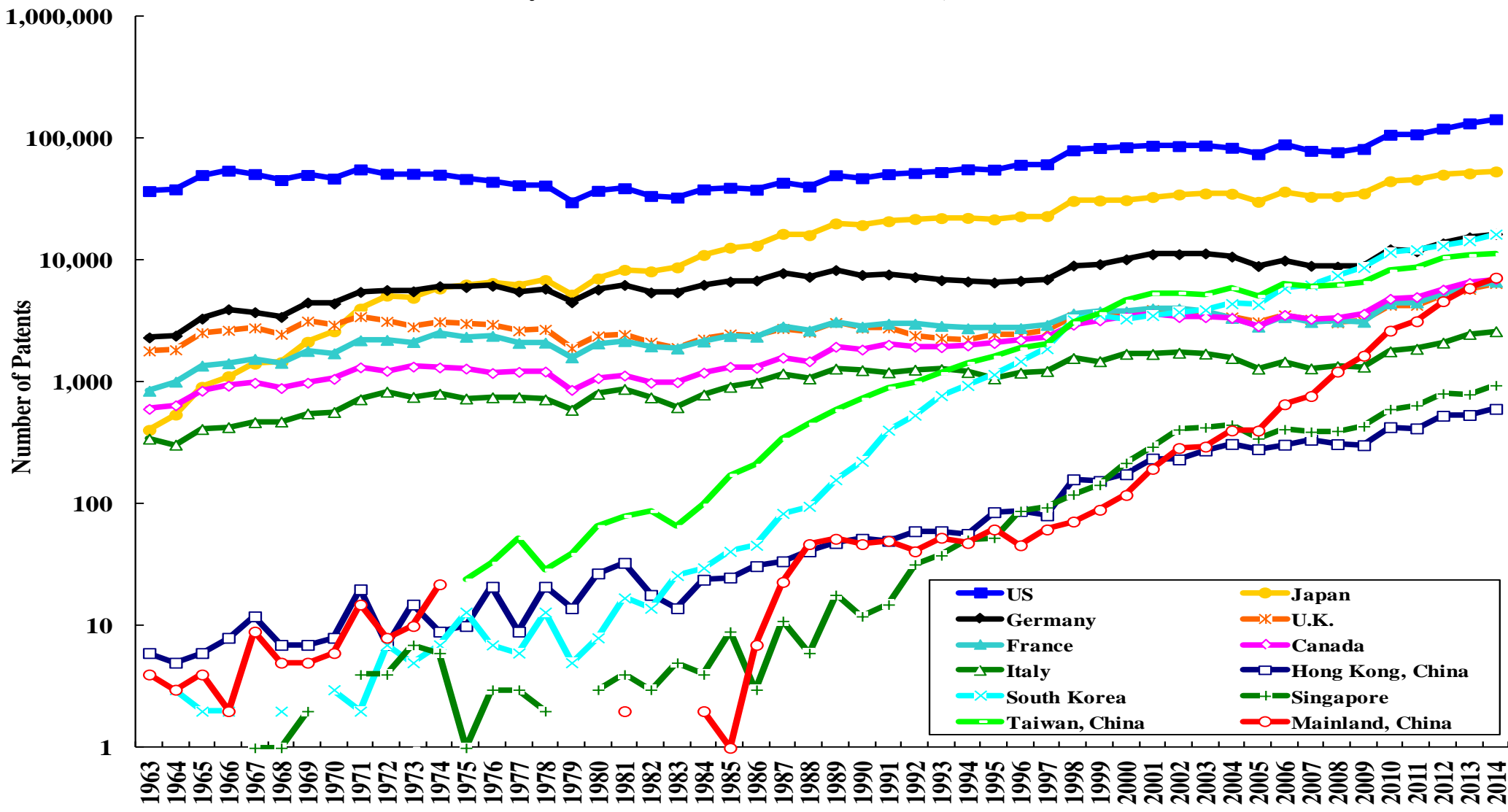
## The Innovation Gap

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- ◆ One indicator of the potential for innovation (national innovative capacity) is the number of patents created each year. In the following chart, the number of patents granted in the United States each year to the nationals of different countries, including the U.S. itself, over time is presented.
- ◆ The U.S. is the undisputed champion over the past forty years, with 144,621 patents granted in 2014, followed by Japan, with 53,849. (Since these are patents granted in the U.S., the U.S. may have a home advantage; however, for all the other countries and regions, the comparison across them should be fair.)

# Patents Granted in the United States: G-7 Countries, 4 East Asian NIEs & China

Patents Granted Annually in the United States: G7 Countries, 4 East Asian NIEs and China



# The On-Going Economic Challenges:

## The Innovation Gap

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- ◆ The number of patents granted to Chinese applicants in the United States each year has increased from the single-digit levels prior to the mid-1980s to 7,236 in 2014.
- ◆ The economies of South Korea and Taiwan, granted 16,469 and 11,332 U.S. patents respectively in 2014, are still far ahead of Mainland China—they have been averaging more than 10,000 patents a year each.
- ◆ The number of invention patents granted in China reached 233,228 in 2014, an extremely large number. However, it is not clear whether these patents are comparable in quality to those approved in the U.S.
- ◆ China aims to increase the stock of Chinese patents in force held by Chinese nationals from 4 per 10,000 inhabitants in 2013 to 14 per 10,000 inhabitants by 2020.



# The On-Going Economic Challenges:

## The Innovation Gap

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- ◆ However, successful innovation also depends on the existence of competition and free entry to markets. Monopolies are generally not very good in innovation and not very good in making full use of their own discoveries and inventions. China must create and maintain a competitive market environment with free entry and exit so as to encourage innovation in addition to investing in human capital and R&D capital.
- ◆ Moreover, in order to encourage innovation, China also needs to protect intellectual property rights vigorously, a direction in which it has been moving gradually.

# The On-Going Economic Challenges:

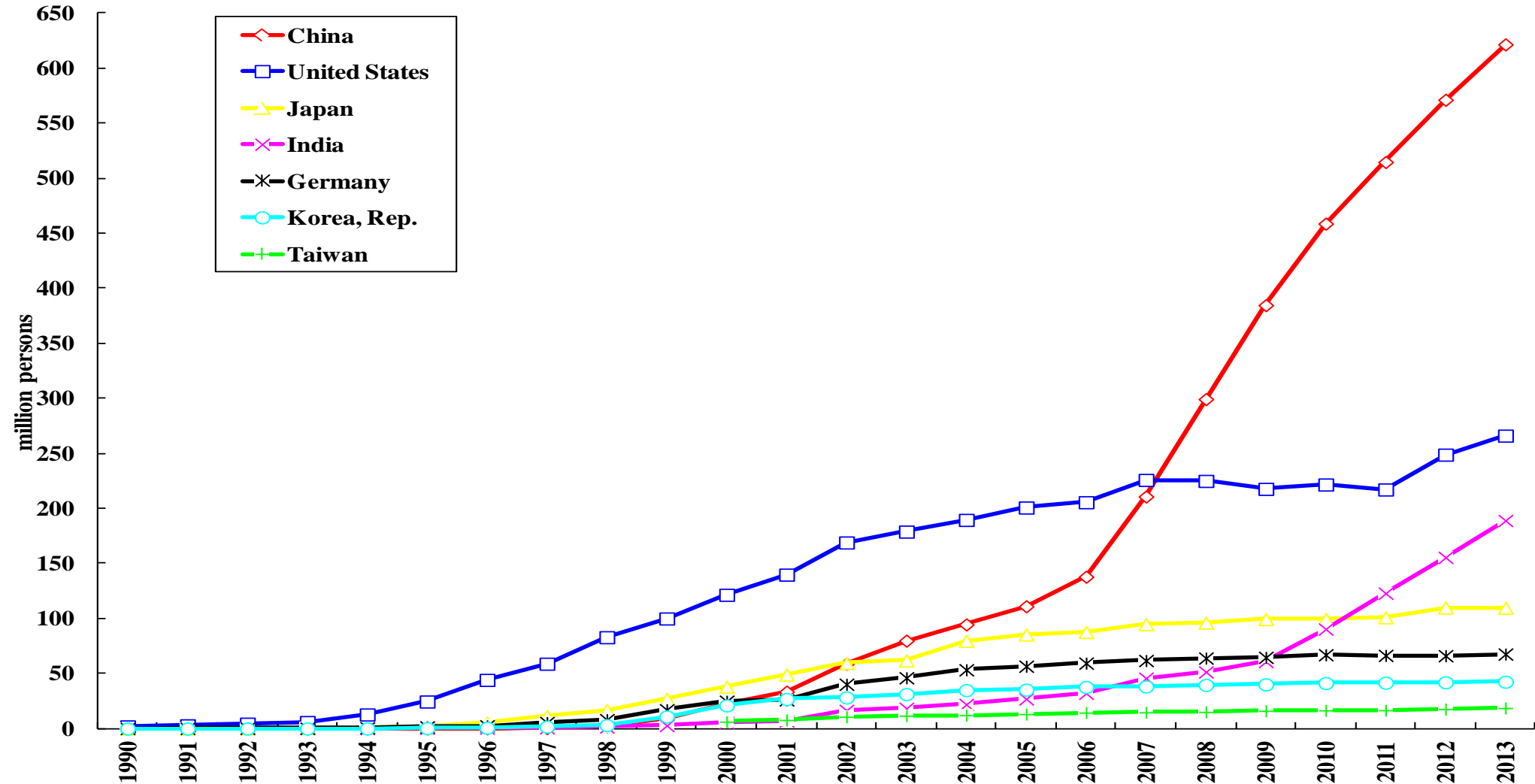
## The Innovation Gap

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- ◆ The internet is potentially a useful social infrastructure for the improvement of economic efficiency and productivity. The use of the internet has been greatly facilitated by the introduction of smart phones and other devices such as the i-phone and tablets, and 4G (4th generation) telecommunication services.
- ◆ In the following charts we present the number of internet users in selected economies over time, in terms of both absolute values and as percentages of the total population.
- ◆ China at the present time has the largest number of users, followed by the U.S. and India.
- ◆ However, in terms of the proportion of the population who are internet users, China at approximately 50% and India at approximately 20% still lag far behind the developed economies of the U.S. and Germany and of the newly industrialised economies of South Korea and Taiwan, where the usage rates are around 80%. Thus, there is still room for China to improve in the future.

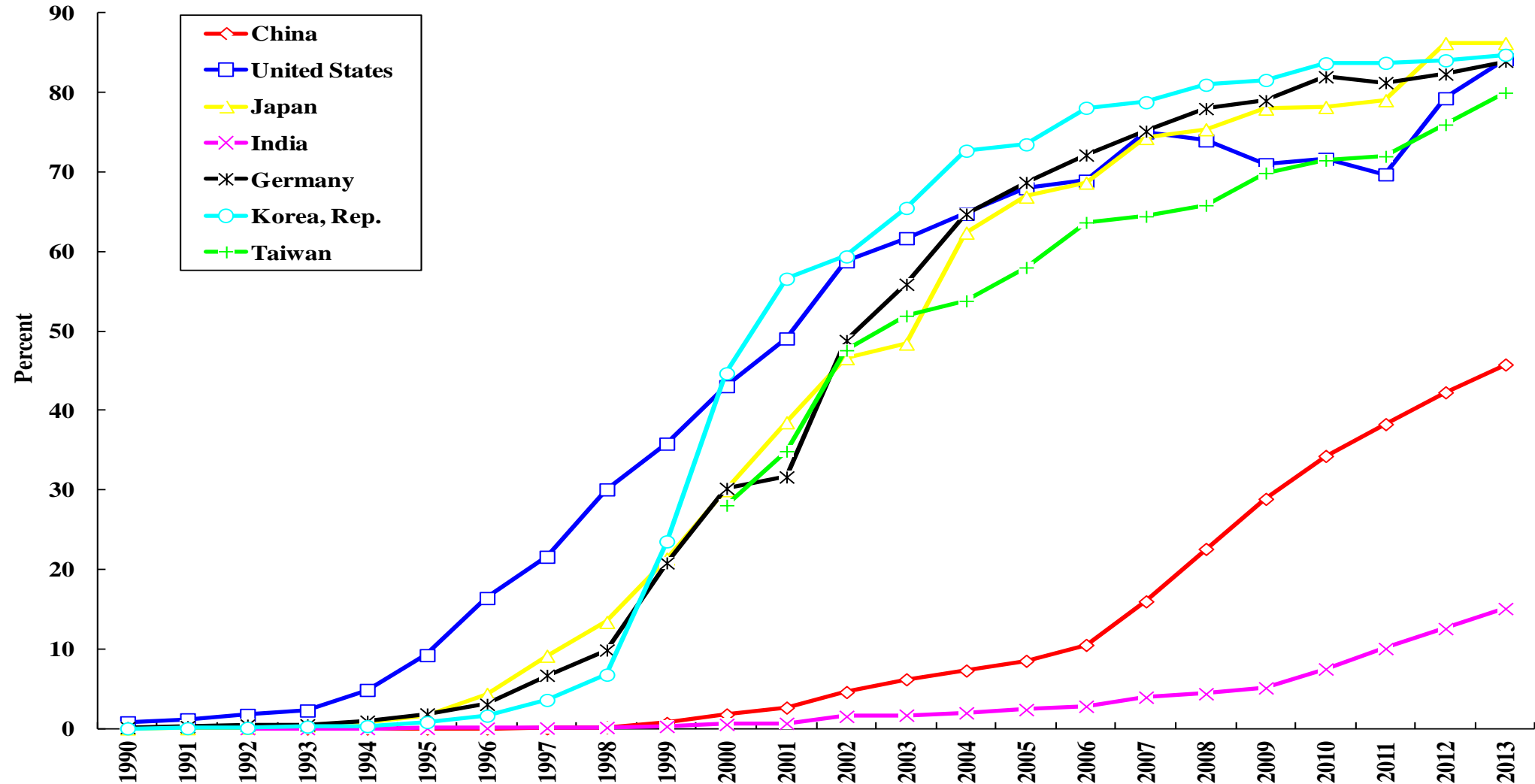
# The Number of Internet Users in Selected Economies

The Number of Internet Users in Selected Economies, million persons



# The Number of Internet Users as a Percent of the Population in Selected Economies

The Number of Internet Users as a Percent of the Population in Selected Economies



# The Income Disparity

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- ◆ At the start of the Chinese economic reform and opening in 1978, China has a relatively egalitarian distribution of income in both the urban and the rural areas (although there was a significant disparity between urban and rural incomes).
- ◆ Since then the income distribution has become more and more unequal even though approximately 500 million Chinese people have been lifted up from abject poverty.
- ◆ The Gini Coefficient of disposable income in China was 0.4 in 2014, a touch lower than that of the U.S. (0.41), but significantly higher than the 0.25 of Sweden. I believe the distribution of income can be improved through appropriate tax and transfer policies.
- ◆ The provision of public goods, such as a clean environment, education, and health care is also a form of redistribution of income in kind and can significantly improve the relative well-being of the low-income groups.

# The Environmental Degradation

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- ◆ The air, water and soil in China have all been polluted after thirty-seven years of economic development at break-neck speeds. Both the Chinese Government and the Chinese people want to clean up the environment now. They have both the will and the resources to do so. I believe environmental control, protection, preservation and restoration will receive a major emphasis in the 13th Five-Year Plan.
- ◆ It should be noted that China has become environmentally conscious at a much earlier developmental stage compared to the U.S. and Japan. Current Chinese per capita GDP is approximately US\$7,600 (2014 prices). The U.S. only began to clean up its environment in the early 1970s, when its per capita GDP was already in excess of US\$25,000 (2014 prices). Similarly, Japan began to clean up in the late 1970s, when its per capita GDP exceeded US\$20,000.

# The Excess Capacities in Manufacturing

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- ◆ There is excess fixed investment in almost all manufacturing sectors, frequently financed by bank loans with the support of the local governments. This results in huge excess capacities in industries such as steel, cement, glass, aluminium, ship-building, solar panels, you name it. The average capacity utilisation rate in many of these manufacturing industries is around 70%.
- ◆ The eventual solution probably lies in industry-wide consolidation through mergers and acquisitions. This has the advantage of internalising the two critical problems: What to do with the redundant workers? And What to do with the bank loans? If these two problems are not well handled, social unrest or a banking crisis might ensue. With consolidation, the industries may begin to make a profit that can be used to repay part of the bank loans and provide transitional support for the redundant workers.

# The On-Going Economic Challenges: The Excess Supply of Residential Real Estate

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- ◆ There is an excess supply of residential housing in almost all cities in China. The situation is the worst in third- and fourth-tier cities. But even Beijing and Shanghai are not spared.
- ◆ Fortunately, the overall debt to equity ratio is approximately 20% for residential housing, so that even when the housing price bubble bursts, the impact will not be too severe.



# The On-Going Economic Challenges: The Excess Supply of Residential Real Estate

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- ◆ The housing price bubble is driven in part by the lack of good investment instruments and the repressed rate of interest on bank deposits, and in part by local government officials trying to increase local GDP and employment (which are their key performance indicators) through developing the land resources under their control. Thus, raising the rate of interest on bank deposits and introducing more financial instruments for investment can help to reduce the price level of residential real estate.
- ◆ If the housing price bubble bursts, its negative impact may be reduced by refinancing the owner-occupied residential housing loans with long-term fixed rate mortgage loans provided by a government policy bank.

# The On-Going Economic Challenges: The Excess Supply of Residential Real Estate

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- ◆ The introduction of a property tax to be collected and used by the local governments should relieve some pressure on the local government officials to develop land under their control as a source of revenue.
- ◆ A change in the set of “key performance indicators” for the local government officials is necessary to change the emphasis from the growth of real GDP to the production and supply of public goods such as education, health care, and environmental control, preservation and restoration.

# Towards the “New Normal”

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# Towards the “New Normal”

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- ◆ The Chinese economy grew 9.2% in 2009, 10.4% in 2010, 9.3 % in 2011, 7.7% in 2012 and 2013 and 7.4% in 2014 even as the European economies remained in recession and the U.S. economy just began to have a more robust recovery. However, the slowdown is unmistakable but should be considered to be a positive development.
- ◆ In 2013Q3 and 2013Q4, the rates of growth of real GDP were 7.8% and 7.7%, Y-o-Y, respectively. In 2014 Q1, 2014Q2, 2014 Q3 and 2014Q4, the rates of growth were 7.4%, 7.5%, 7.3% and 7.3%, Y-o-Y, respectively.
- ◆ The official target average growth rate for the Twelfth Five-Year Plan (2011-2015) period is a relatively modest 7%. Given the realised rates of growth for 2011-2014, an average real rate of growth of 7% per annum is definitely achievable for Twelfth Five-Year Plan (2011-2015) period.
- ◆ The rate of inflation in 2014, as measured by the consumer price index, is a subdued 2% per annum.

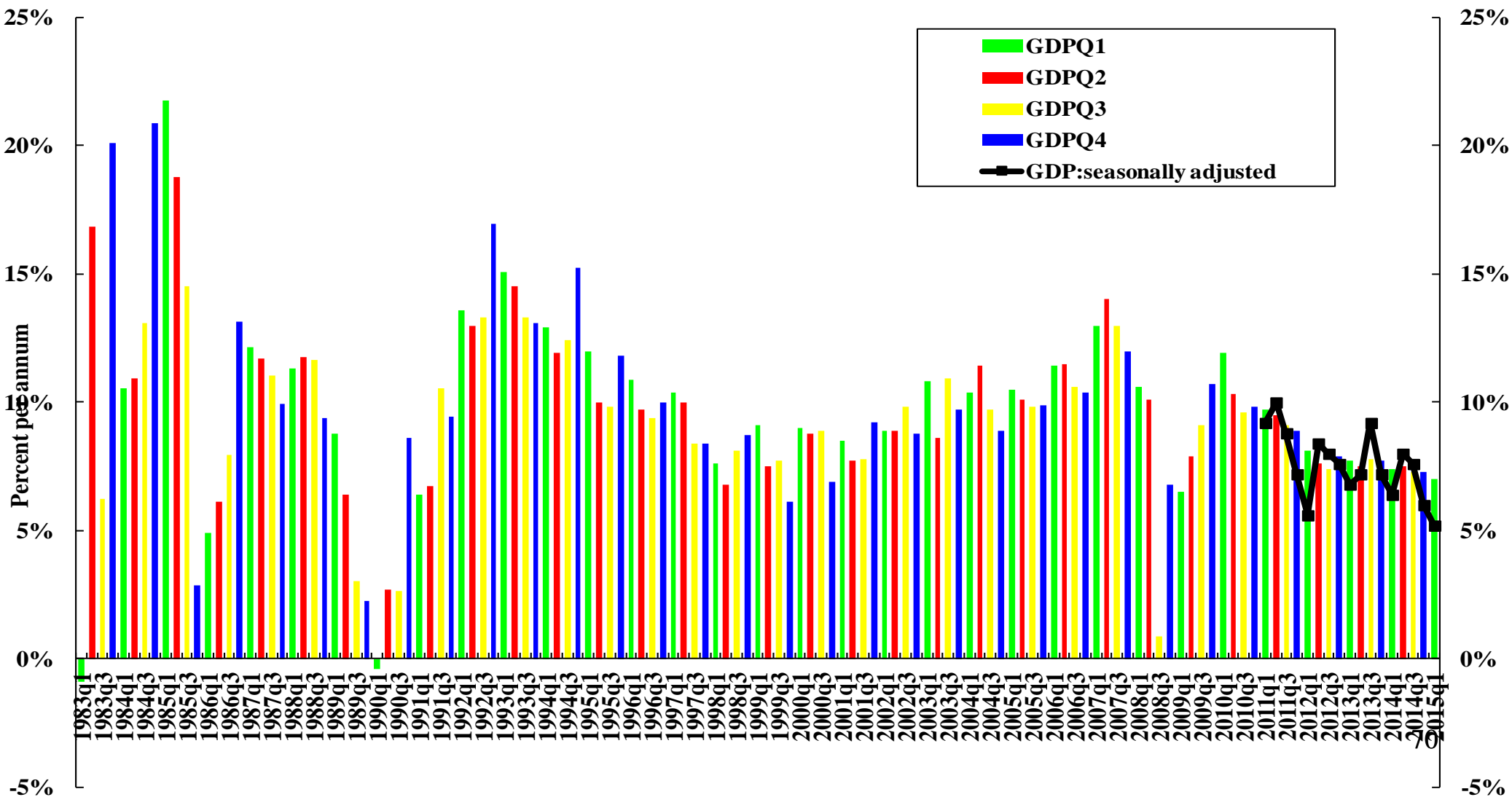
# Towards the “New Normal”

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- ◆ In 2015Q1, the rate of growth was 7.0%, Y-o-Y, compared to 7.3% of 2014Q4. All the short-term economic indicators suggest that the Chinese rate of growth has begun to stabilise around 7%. The target growth rate of the Chinese economy for 2015 is around 7%.
- ◆ The rate of inflation, as measured by the consumer price index, was 1.4% in March 2015, Y-o-Y.
- ◆ The industrial sector and the service sector grew 6.4% and 7.9% Y-o-Y respectively in 2015Q1, continuing a gradual shift of the leading role from the industrial to the service sector, which has become the largest in the economy.

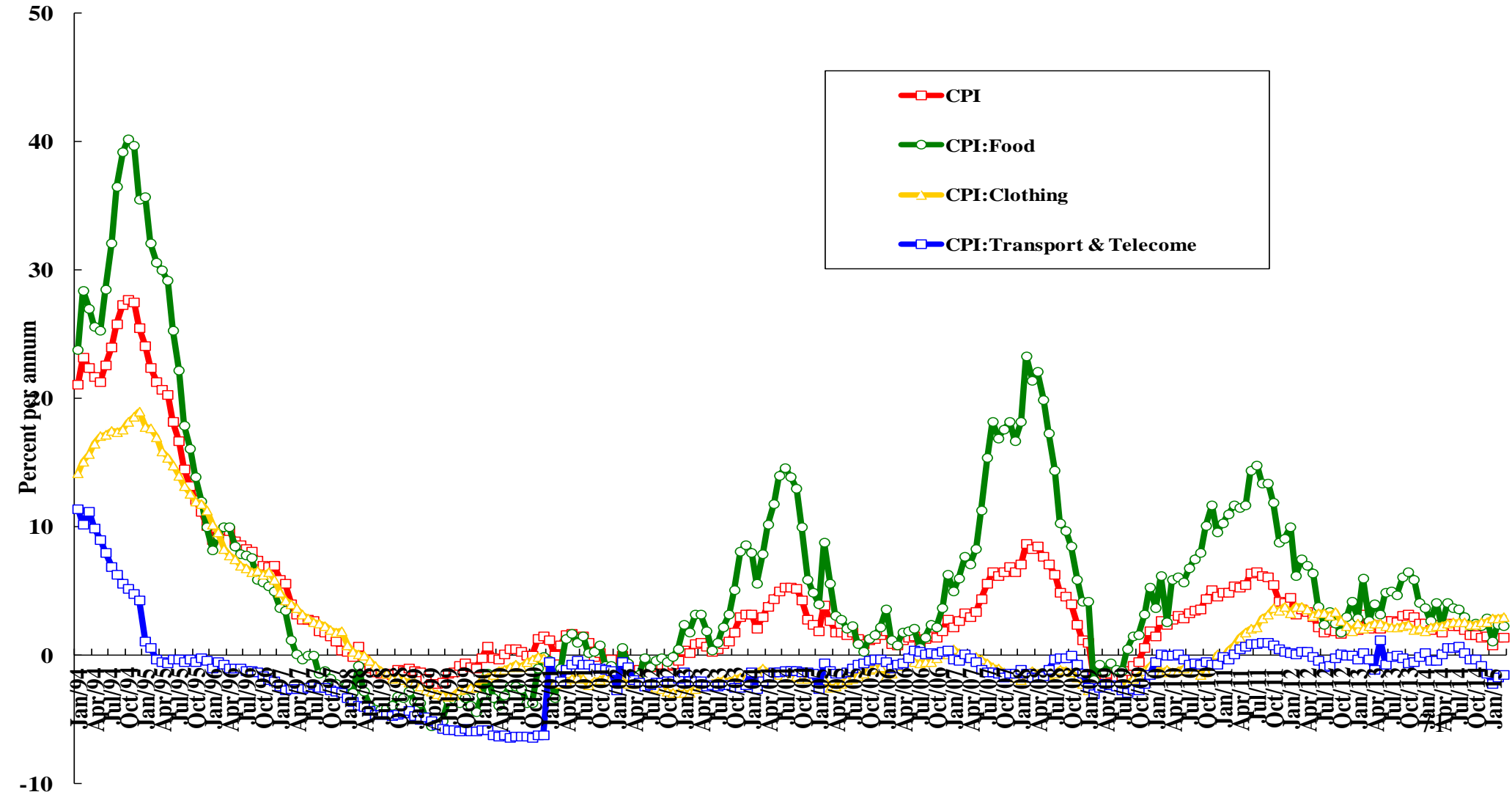
# Quarterly Rates of Growth of Chinese Real GDP, Y-o-Y and Seasonally Adjusted

Quarterly Rates of Growth of Chinese Real GDP, Y-o-Y and Seasonally Adjusted



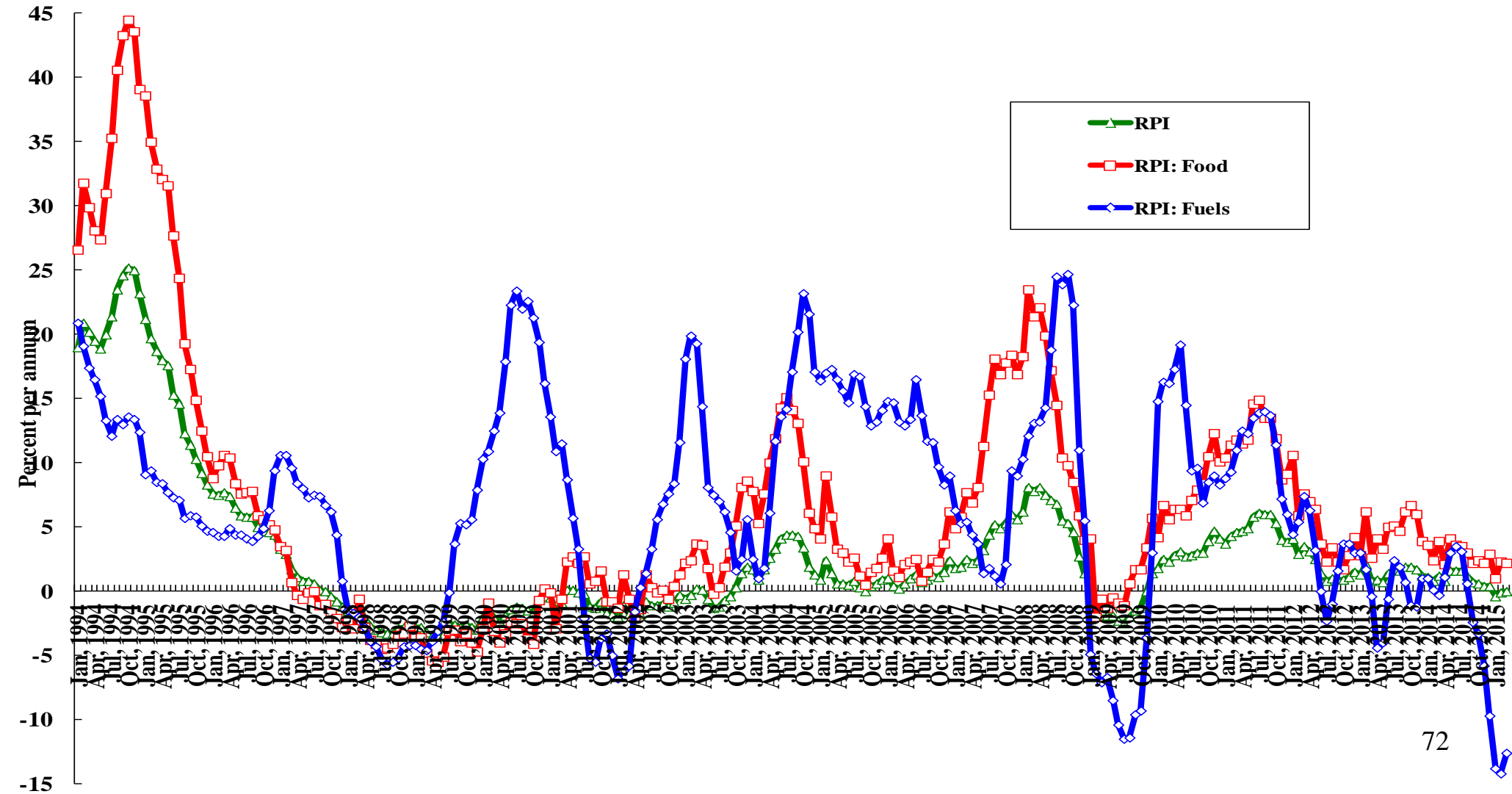
# Monthly Rates of Change of Consumer Price Index and Its Components since 1994, Y-o-Y

Monthly Rates of Change of Consumer Price Index and Its Components since 1994, Y-o-Y



# Monthly Rates of Change of Retail Price Index and Its Components Since 1994, Y-o-Y

Monthly Rates of Change of Retail Price Index and Its Components Since 1994, Y-o-Y





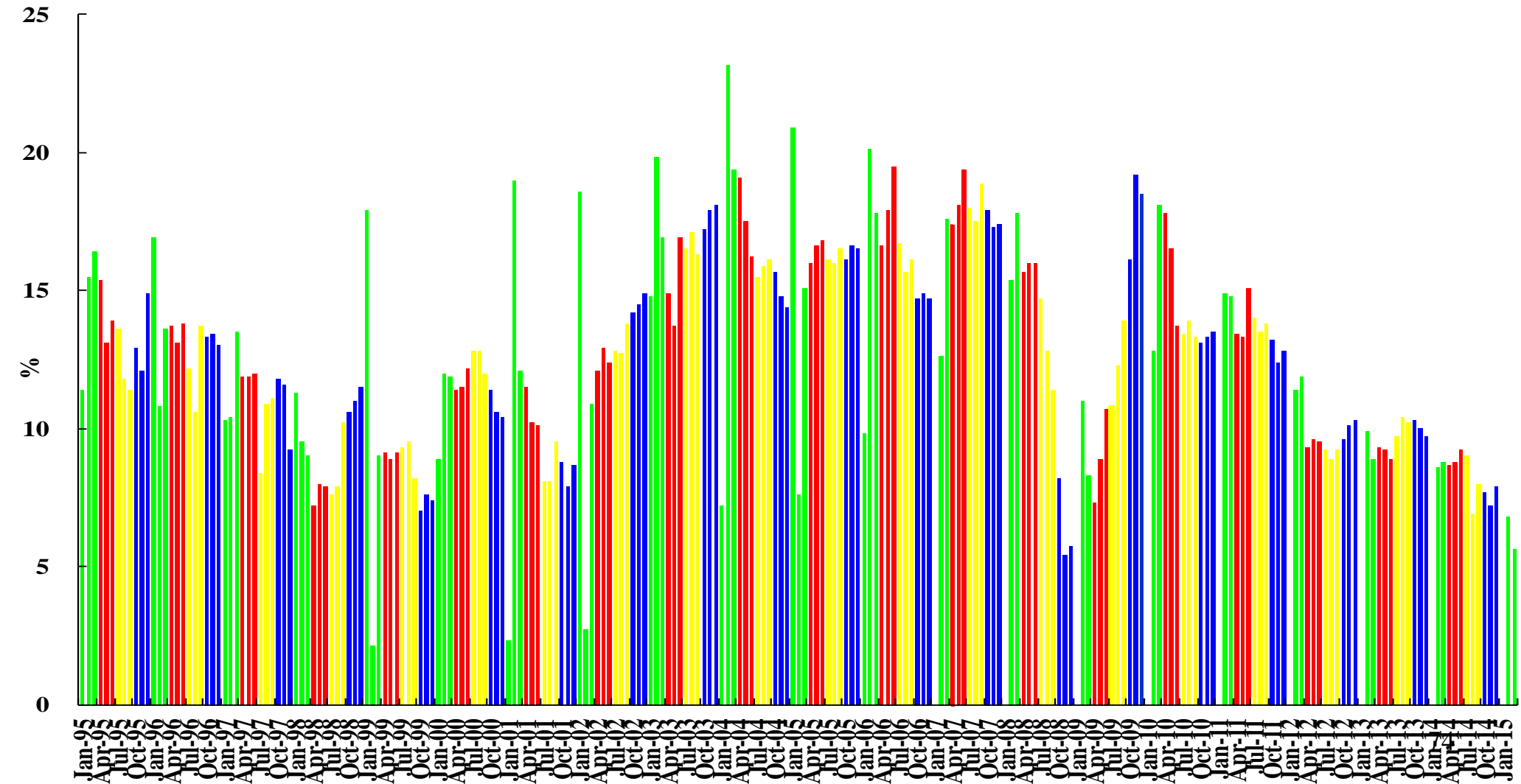
# Towards the “New Normal”

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- ◆ The Chinese economy is in the process of transitioning to a “New Normal”. The transition will take some time to complete. However, there is unlikely to be a “hard landing”.
- ◆ The principal challenge facing the Chinese economic policy makers is not so much the growth of real GDP but employment.
- ◆ In 2014, 13.22 million new jobs were created, an increase from 13 million in 2013. In 2015, the target for new jobs is over 10 million, which should be achievable as the service sector (48.2% by GDP in 2014 and 38.5% by employment in 2013) is now larger and growing faster than the manufacturing, mining and construction (MM&C) sector (42.6% by GDP in 2014 and 30.1% by employment in 2013) in both GDP and employment. Moreover, an expansion of service-sector GDP creates 30% more employment than an expansion of the MM&C-sector GDP and requires much less fixed investment, energy and natural resources.

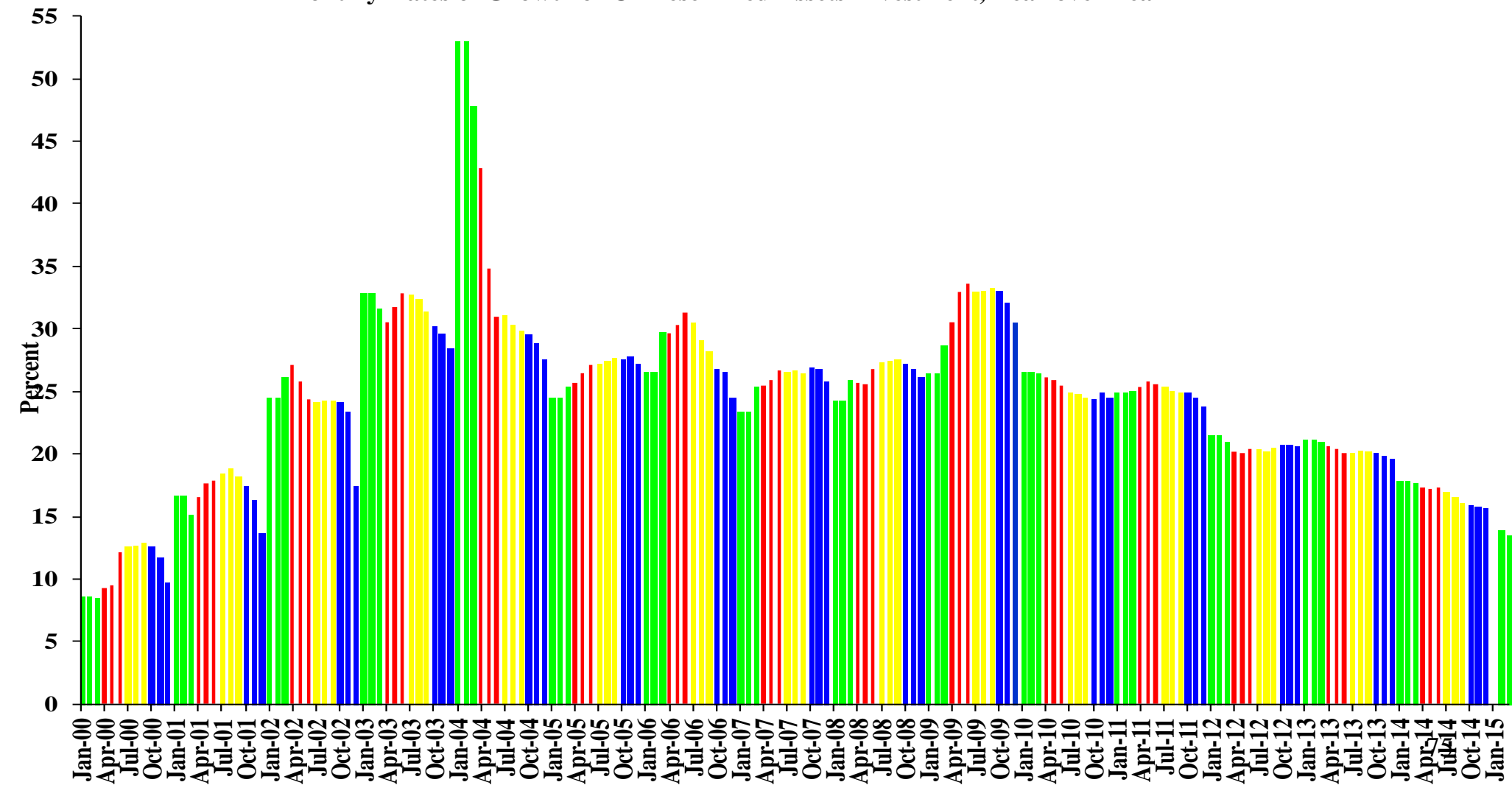
# Monthly Rates of Growth of Real Value-Added of the Chinese Industry, Y-o-Y

Monthly Rates of Growth of Real Value-Added of the Chinese Industry, Year-over-Year



# Monthly Rates of Growth of Chinese Fixed Assets Investment, Y-o-Y

Monthly Rates of Growth of Chinese Fixed Assets Investment, Year-over-Year



# Towards the “New Normal”

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- ◆ What will the “New Normal” entail?
- ◆ First, it will imply a lower average annual rate of economic growth, from an average almost 10% per annum since 1978 to around 7% per annum for the next five to ten years. The expectation is that that the 13th Five-Year Plan, which will be launched in 2016, will feature an indicative average annual rate of growth of between 6.5% and 7%. The target rate of inflation will also likely be lower than the current 3% for 2015. At an average annual rate of growth of 7%, the Chinese economy will almost double in 10 years.

# Towards the “New Normal”

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- ◆ The slowdown in the rate of growth is actually good for the Chinese economy at this juncture and should be viewed positively. We have to bear in mind that in terms of absolute value, a 7% growth today is equivalent to a 14% growth of 10 years ago.
- ◆ Moreover, the value-added in the real estate sector is frequently over-stated because of the valuation difficulties of separating the true value-added from the pure appreciation of the land. It is possible that past rates of growth during periods of rapid expansion of the real estate sector may be over-stated.

# Towards the “New Normal”

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- ◆ Second, the emphasis in the 13th Five-Year Plan will be on the quality of growth rather than the quantity of growth. More efforts will be devoted to environmental protection, preservation and restoration. Cleaner air, water and soil, and food and drug safety, will be the areas of focus. Some of these concerns may find their way into the key performance indicators for government officials.

# Towards the “New Normal”

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- ◆ Third, there will be a change in the model of economic growth. On the demand side, exports, fixed investment in manufacturing and in residential real estate will no longer be the driving force, certainly not within the next three to five years. Instead, as pointed out previously, the sources of growth of aggregate demand will include, in addition to the usual public infrastructural investment, the provision of public goods and household consumption of not only goods but also services.
- ◆ Public goods can range from mass transit systems to wifi towers to cleaner air, water and soil. Their provision will normally require government leadership, especially local government leadership.
- ◆ The growth of the service sector will also be spurred by the continually increasing degree of urbanisation (54.77% in 2014) of China.

# Towards the “New Normal”

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- ◆ On the supply side, innovation (technical progress) will be increasingly important as a key driver. Expansion of the service sector, which includes education, health care and elderly care, will be another one. While the working-age population, as currently defined, will begin to decline in a year or two, the decline can be arrested by extending the age of mandatory retirement from 55 for women and 60 for men to 65 for both, perhaps initially on an optional basis. This should keep the labour force growing until the effects of the relaxation of the “one-child” policy can begin to kick in in a couple of decades.



# Towards the “New Normal”

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- ◆ The provision of public infrastructure will play an important role in facilitating private investment in the service sector and raising its rate of return. New private enterprises will also be encouraged through de-regulation and the reduction of red tape.
- ◆ The tertiary (service) sector will continue to grow faster than the primary or the secondary sectors--it is already the largest sector in terms of both GDP originating and employment. Expansion of the service sector is basically domestic demand-oriented and requires less tangible capital, less energy, less natural resources and generates less pollution.

# Towards the “New Normal”

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- ◆ Fourth, the urbanisation of China will continue. The residential rights of migrant labourers will be regularised so that they and their families can access public services such as education and health care where they work. New cities and towns (and their basic infrastructure) will continue to be built and developed but in a manner that ensures that these new communities are viable economically, demographically and environmentally.
- ◆ Fifth, the distribution of income will be gradually improved with increases in the levels of wage rates, especially at the lower end. The stage of development in which some people are allowed to get rich first is over; the time for sharing the fruits of economic reform and opening more widely has arrived. The Gini Coefficient of disposable income in China was 0.4 in 2014, a touch lower than that of the U.S., but significantly higher than the 0.25 of Sweden. The Chinese Government has already announced a substantial across-the-board increase in the base salaries for Chinese civil servants of approximately 60 percent.

# Towards the “New Normal”

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- ◆ Sixth, internationally China will assume its share of obligations and responsibilities as a major economic power. It will aim at balanced international trade in goods and services combined—it will no longer be only the World’s Factory, but will also be the World’s Market.
- ◆ The Renminbi will be gradually internationalised—it will become capital account convertible no later than 2020. However, while China would like to see the Renminbi used more frequently as an invoicing and settlement currency in international transactions, it is not certain that it will want the Renminbi to become a major international reserve currency.

# Towards the “New Normal”

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- ◆ China will also contribute to the prevention of climate change by implementing its commitment of capping its carbon emission by 2030. It will also play an appropriate role in refining and reforming the current international trade and investment systems.
- ◆ China also fully realises the importance of the availability of public infrastructural capital to complement fixed investment in manufacturing in developing economies, based on its own past experience. By putting its surplus saving to work in the "One Belt, One Road“, the BRICS Development Bank and the Asian Infrastructural Investment Bank (AIIB) projects, China hopes to promote public infrastructural investment in the developing economies so as to spur their economic development and growth. In so doing, it is also trying to help fill an obvious crying need that is not being adequately served by existing multilateral financial institutions.

# Towards the “New Normal”

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- ◆ The “One Belt, One Road” project will be a multi-decade project. One key component is the 2000-mile long “China-Pakistan Economic Corridor” between the port of Gwadar and Northwest China, with roads, railways and pipelines crossing Pakistan. The planned investment in the infrastructure has been estimated at US\$46 billion.
- ◆ This economic corridor will transform Western China, giving it direct access to trade routes without having to go through Eastern Chinese ports. It is indeed a revival of the old Silk Road.

# Towards the “New Normal”

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- ◆ Seventh, the anti-corruption campaign has so far netted two “tigers”: ZHOU Yongkang, a former Member of the Standing Committee of the Politburo, and XU Caihou, a former Vice-Chairman of the Central Military Commission, and numerous other ministerial and vice-ministerial level officials. It is likely to continue through this year.
- ◆ During this phase of the campaign, the objective is to make sure that no one “dares” to be corrupt any more, neither now nor in the future. In the next phase, the objective is to make sure that no one “is able” to be corrupt because of the reform of the economic decision-making system, streamlining of the approval process, reduction of non-essential official discretion and greater reliance on the market itself.

# Towards the “New Normal”

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- ◆ Eighth, the market is expected to play a more decisive role in the allocation of resources, subject to the rule of law, replacing the discretion of the government officials. This has the advantage of greatly reducing the opportunities for corruption. However, one should also expect that China will begin to play a much more active role in the areas of anti-trust and anti-monopoly, at both the domestic and international levels, so as to ensure that markets remain competitive.

# Near-Term Forecasts of Annual Rates of Growth of Chinese Real GDP

<b>Forecasts of Annual Rates of Growth of Chinese Real GDP</b>			
<b>Forecasting Organisation</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>
<b>Asian Development Bank</b>	<b>7.20%</b>	<b>7.00%</b>	
<b>The International Monetary Fund</b>	<b>6.80%</b>	<b>6.30%</b>	
<b>The Organisation for Economic Cooperation and Development</b>	<b>7.00%</b>	<b>6.90%</b>	
<b>The World Bank</b>	<b>7.10%</b>	<b>7.00%</b>	<b>6.90%</b>
<b>The Conference Board (U.S.)</b>	<b>6.30%</b>	<b>5.40%</b>	
<b>Fitch Ratings</b>	<b>6.80%</b>	<b>6.50%</b>	88

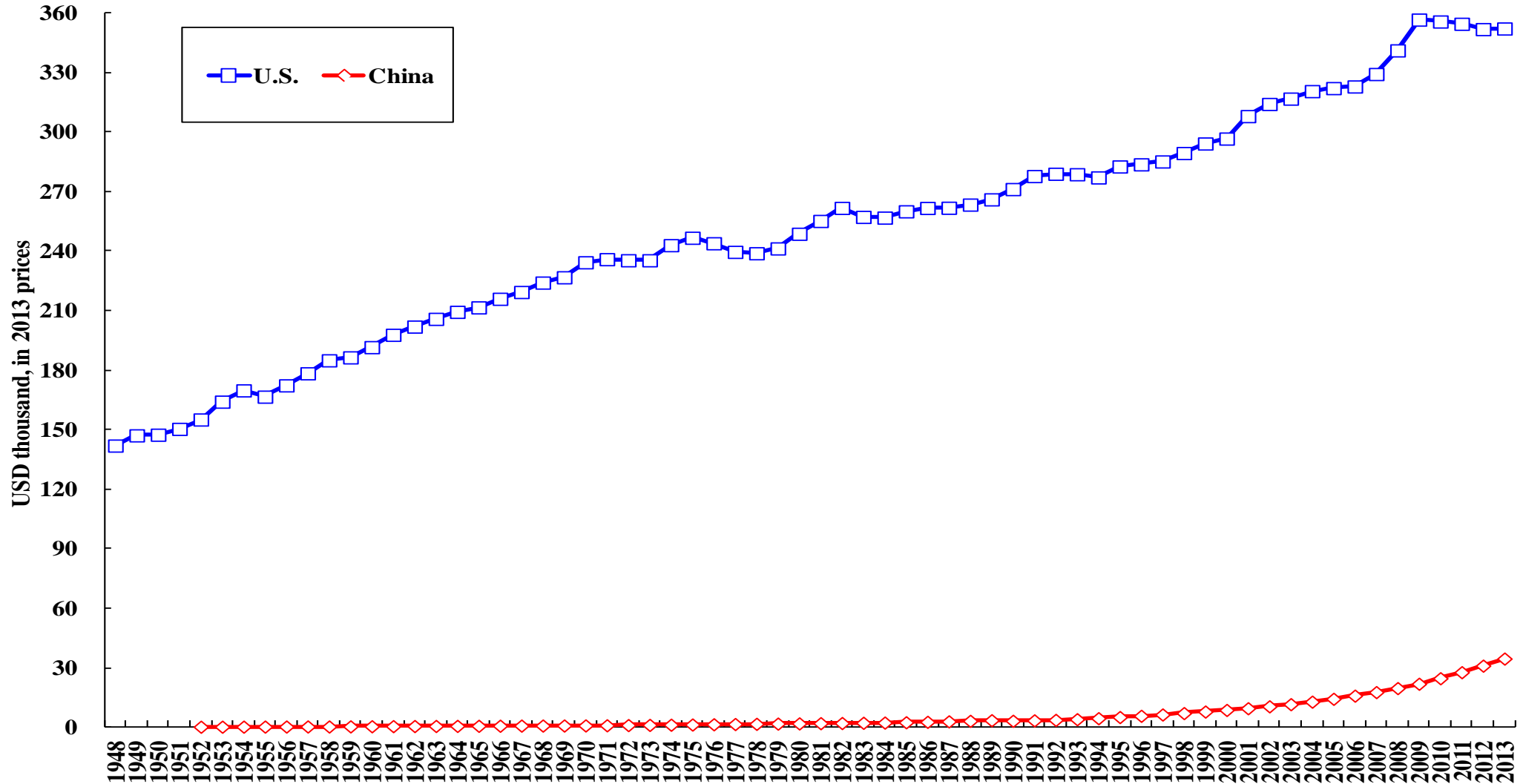


# The Long-Term Economic Outlook

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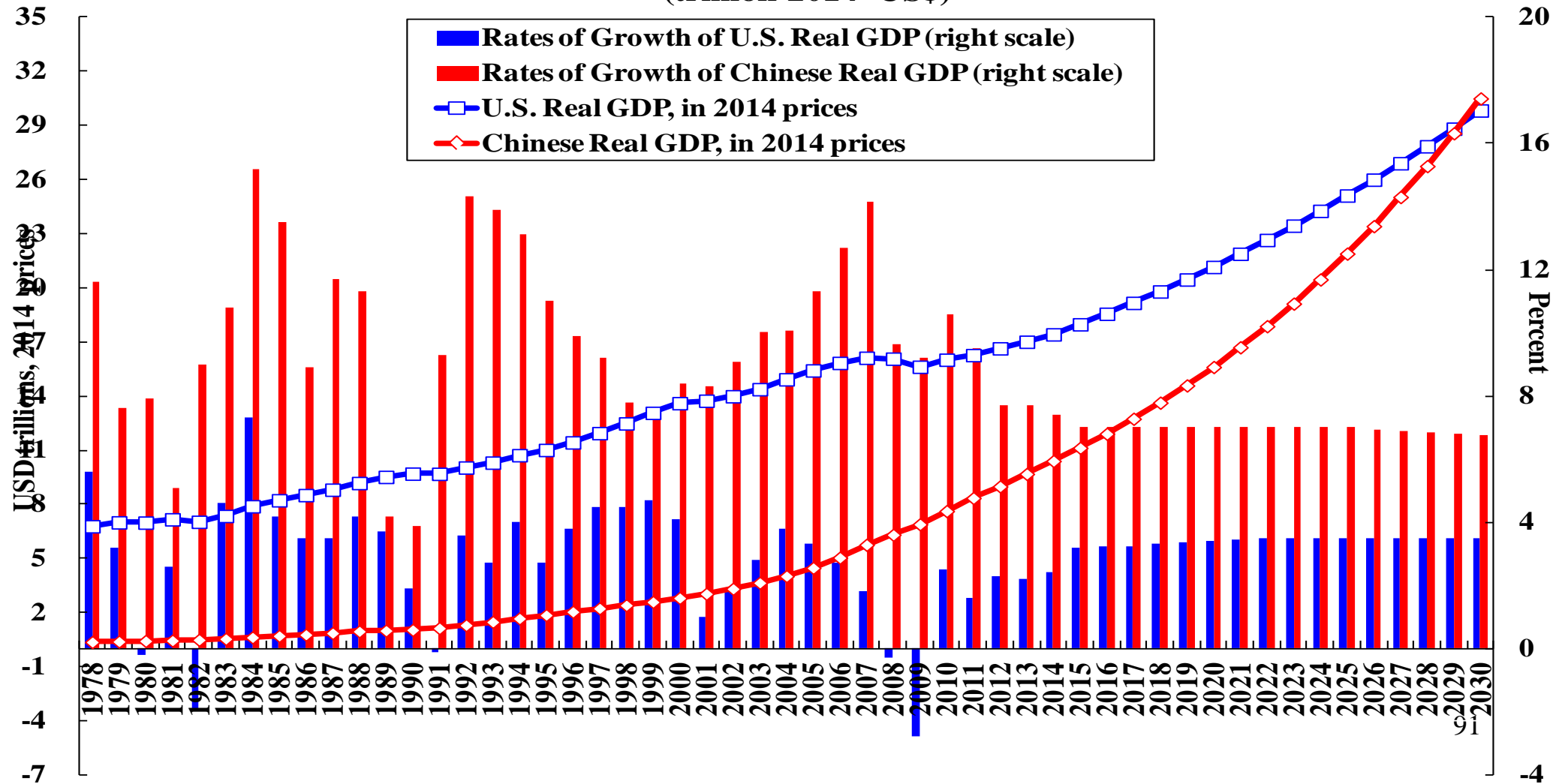
# Tangible Capital per Unit Labour, 2013US\$, China and the U.S.

Tangible Capital per unit Labor of China and the U.S., in 2013 prices



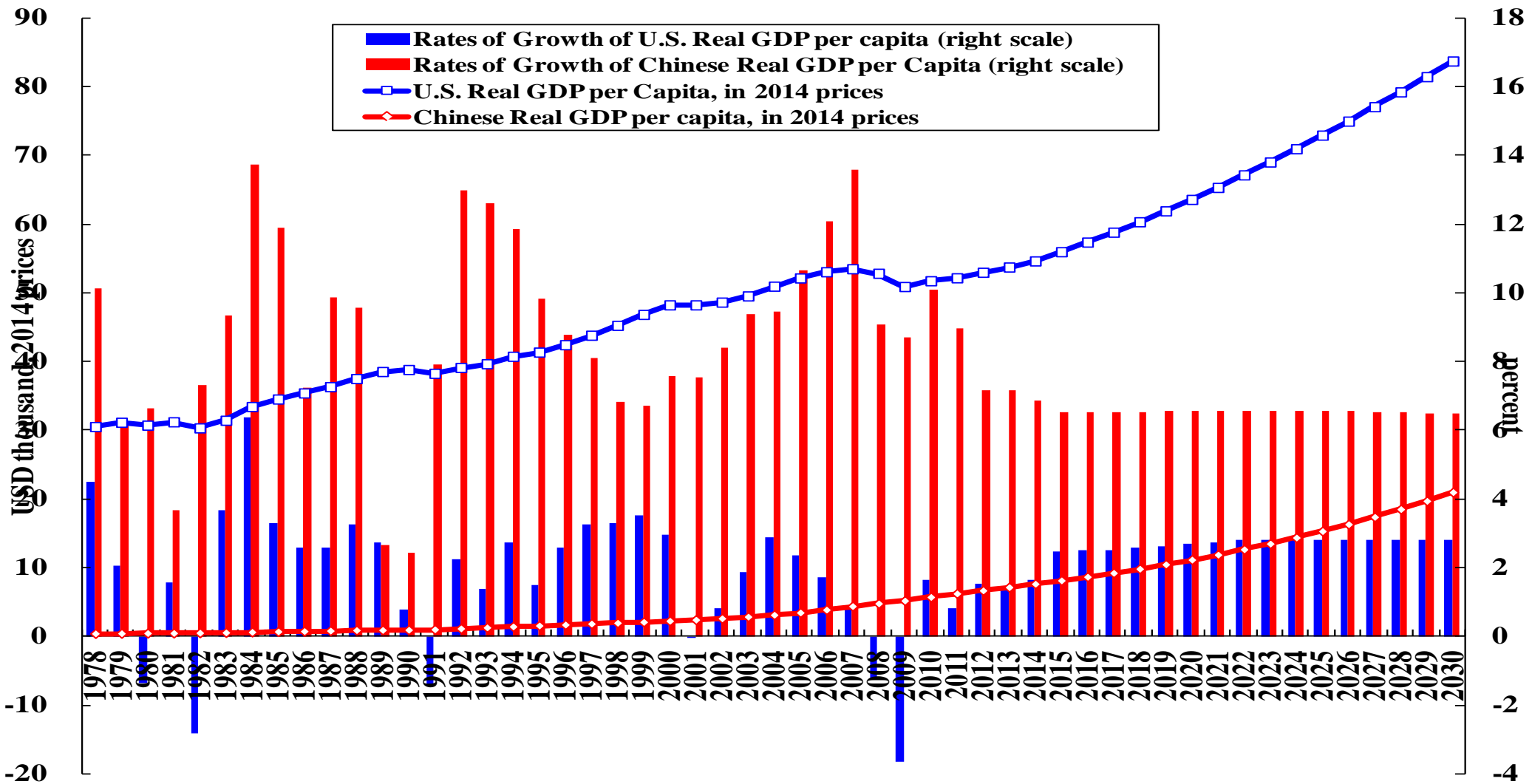
# Actual and Projected Chinese and U.S. Real GDPs and Their Rates of Growth

Actual and Projected Chinese and U.S. Real GDPs and Their Rates of Growth  
(trillion 2014 US\$)



# Actual and Projected Chinese and U.S. Real GDP per Capita's and Rates of Growth

Actual and Projected Chinese and U.S. Real GDP per Capita and Their Rates of Growth  
(thousand, 2014 US\$)



# Concluding Remarks

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