

China in the Global Economy

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Outline

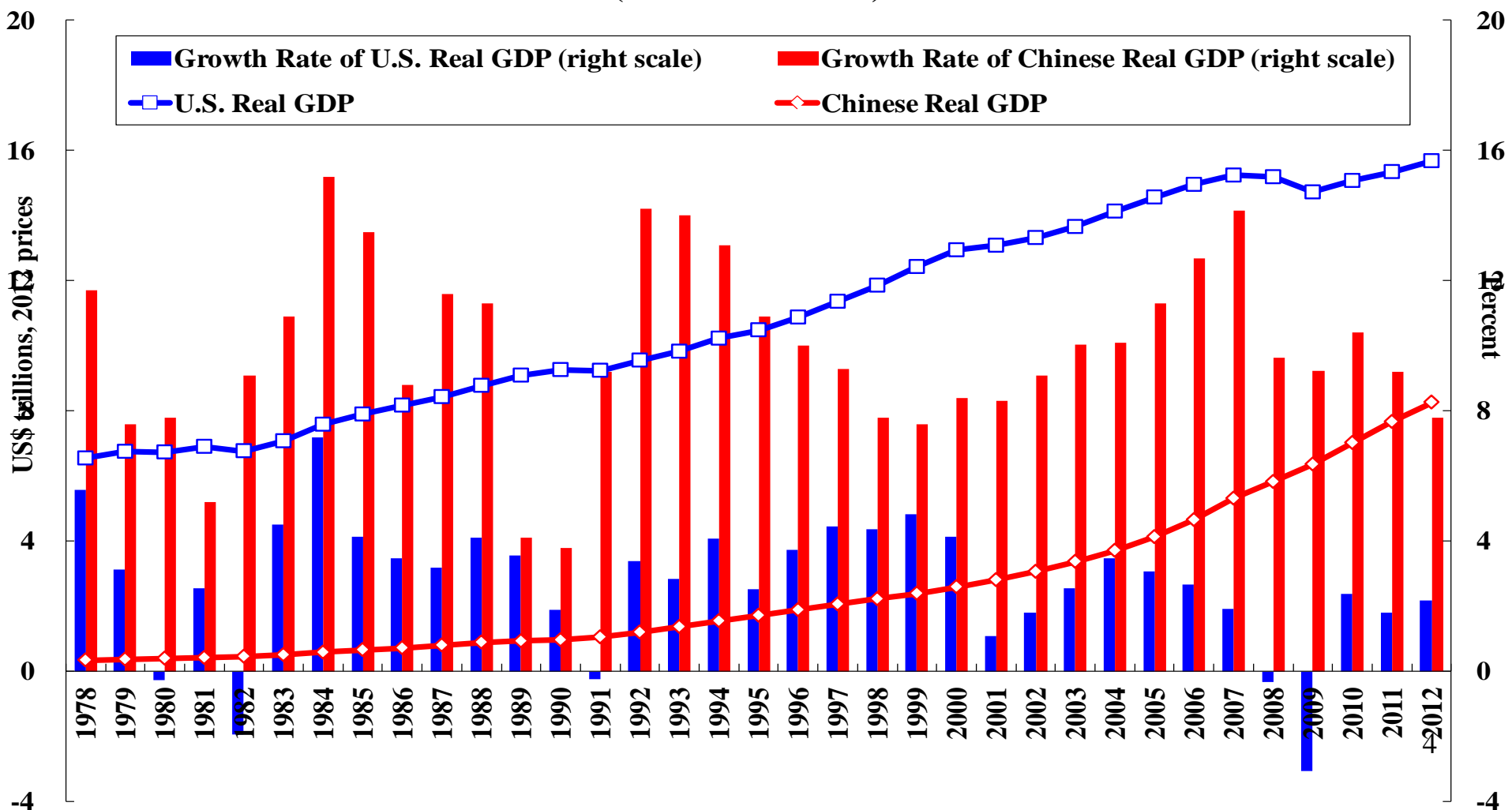
- ◆ Introduction
- ◆ China in the Global Economy—GDP
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- ◆ China in the Global Economy—International Trade
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- ◆ The Rising Importance of Intangible Capital
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Introduction

- ◆ 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 36 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 2013, Chinese real GDP grew more than 26 times, from US\$356 billion to US\$9.28 trillion (in 2013 prices), to become the second largest economy in the World, after the U.S.
- ◆ By comparison, the U.S. GDP (approx. US\$16.2 trillion) was less than 2 times Chinese GDP in 2013.

Actual Real GDPs and their Annual Rates of Growth: China & the U.S.

The Real GDP and Its Annual Rates of Growth of China and the U.S.
(trillion 2012 US\$)



Introduction

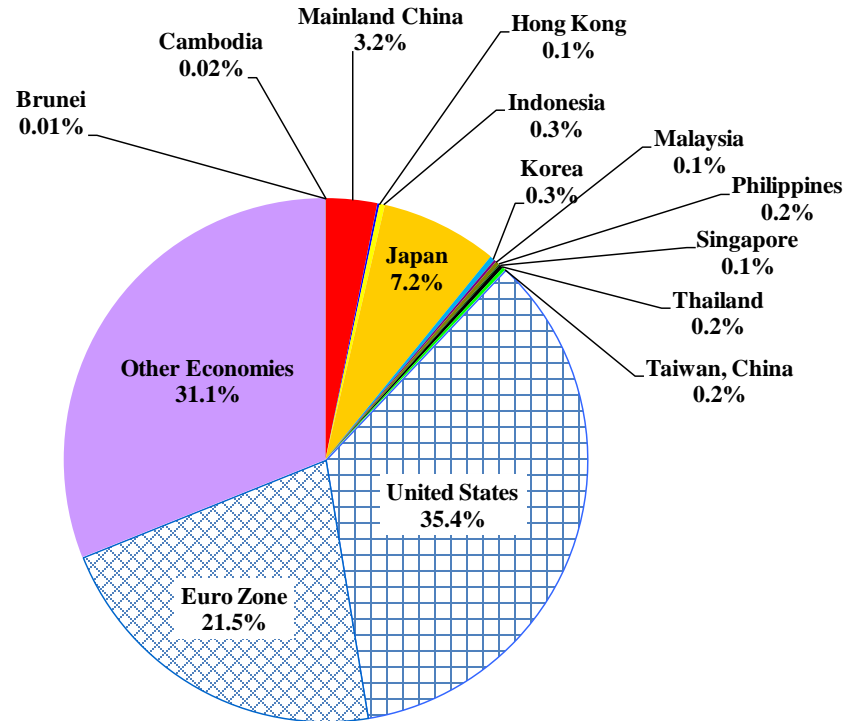
- ◆ Despite its rapid growth, in terms of its real GDP per capita, China is still a developing economy.
- ◆ Between 1978 and 2012, Chinese real GDP per capita grew 16 times, from US\$354 to US\$6,101.9 (in 2012 prices).
- ◆ By comparison, the U.S. GDP per capita of approximately US\$49,879, was 8.2 times Chinese GDP per capita in 2012.

China in the Global Economy—GDP

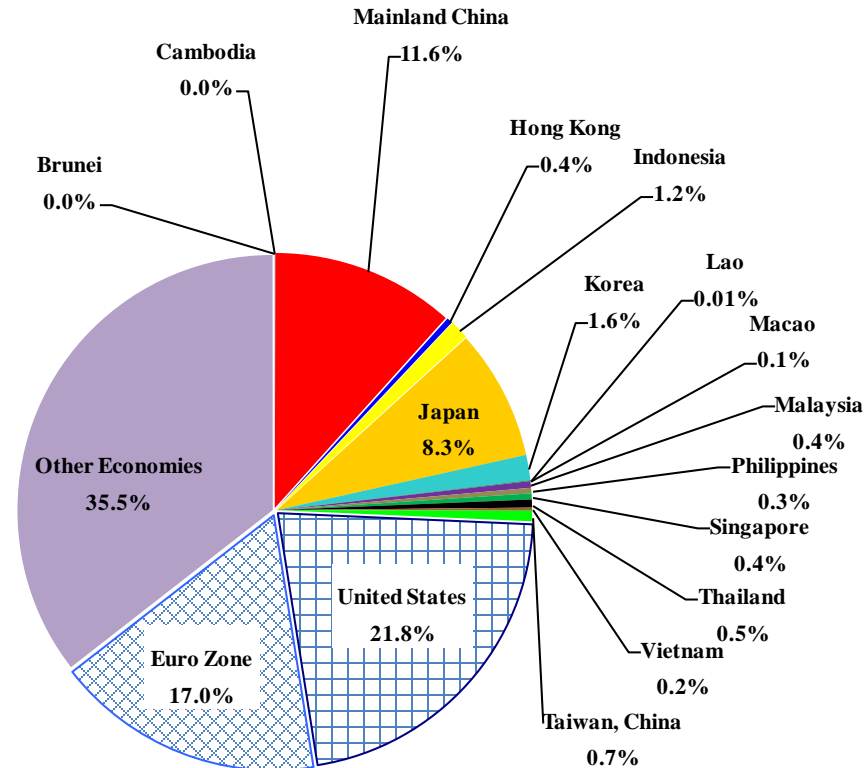
- ◆ In 1970, the United States and Western Europe together accounted for over 60% of World GDP. By comparison, East Asia accounted for just above 10% of World GDP.
- ◆ By 2012, the share of United States and Western Europe in World GDP has declined to approximately 45% whereas the share of East Asia has risen to approximately 25%.
- ◆ The Japanese share of World GDP declined from a peak of 18% in the mid-1990s to 8% in 2012 while the Mainland Chinese share of World GDP rose from 3% in 1970 to over 11% in 2012.

The Distribution of World GDP, 1970 and 2012, US\$

The Distribution of World GDP in 1970

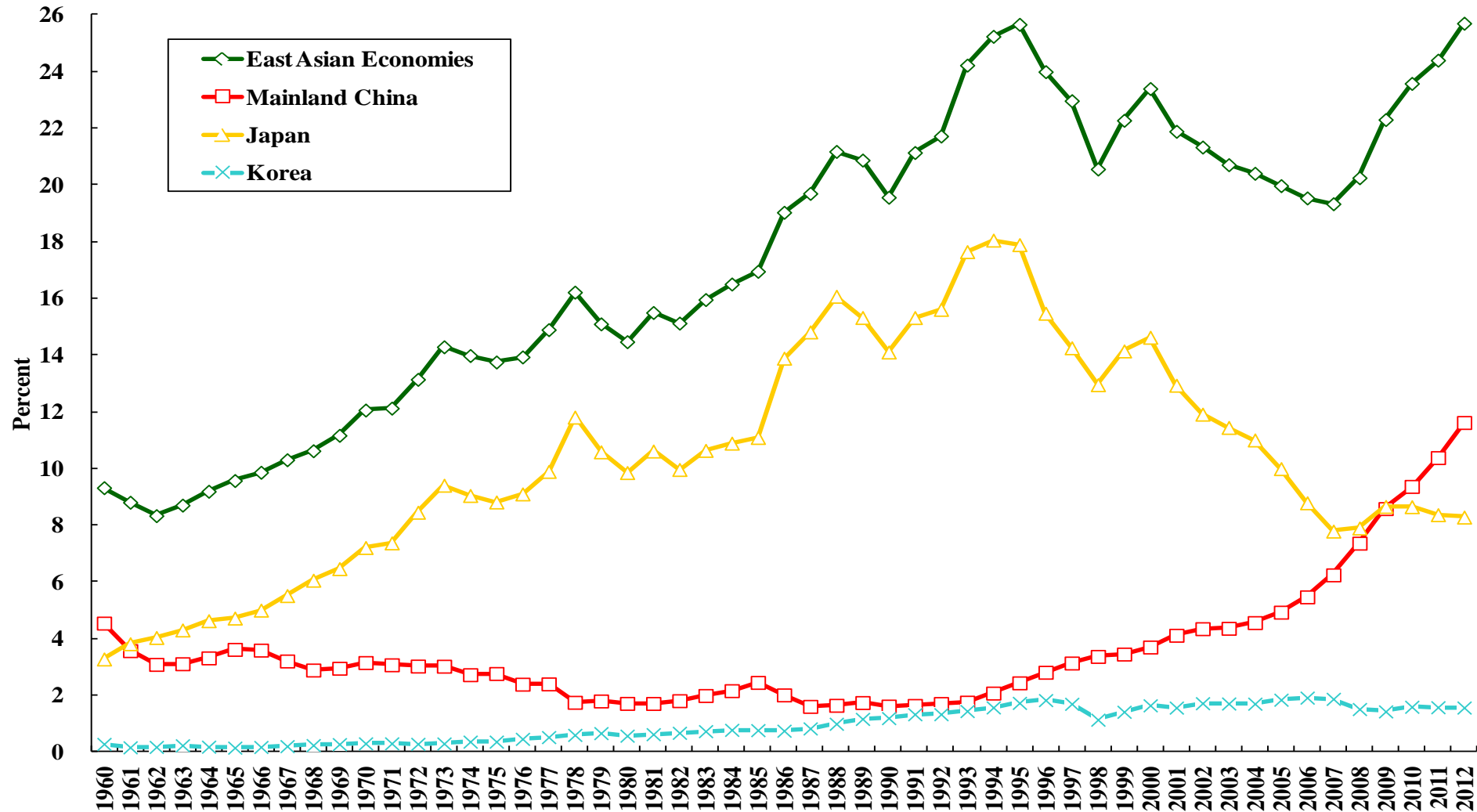


The Distribution of World GDP in 2012



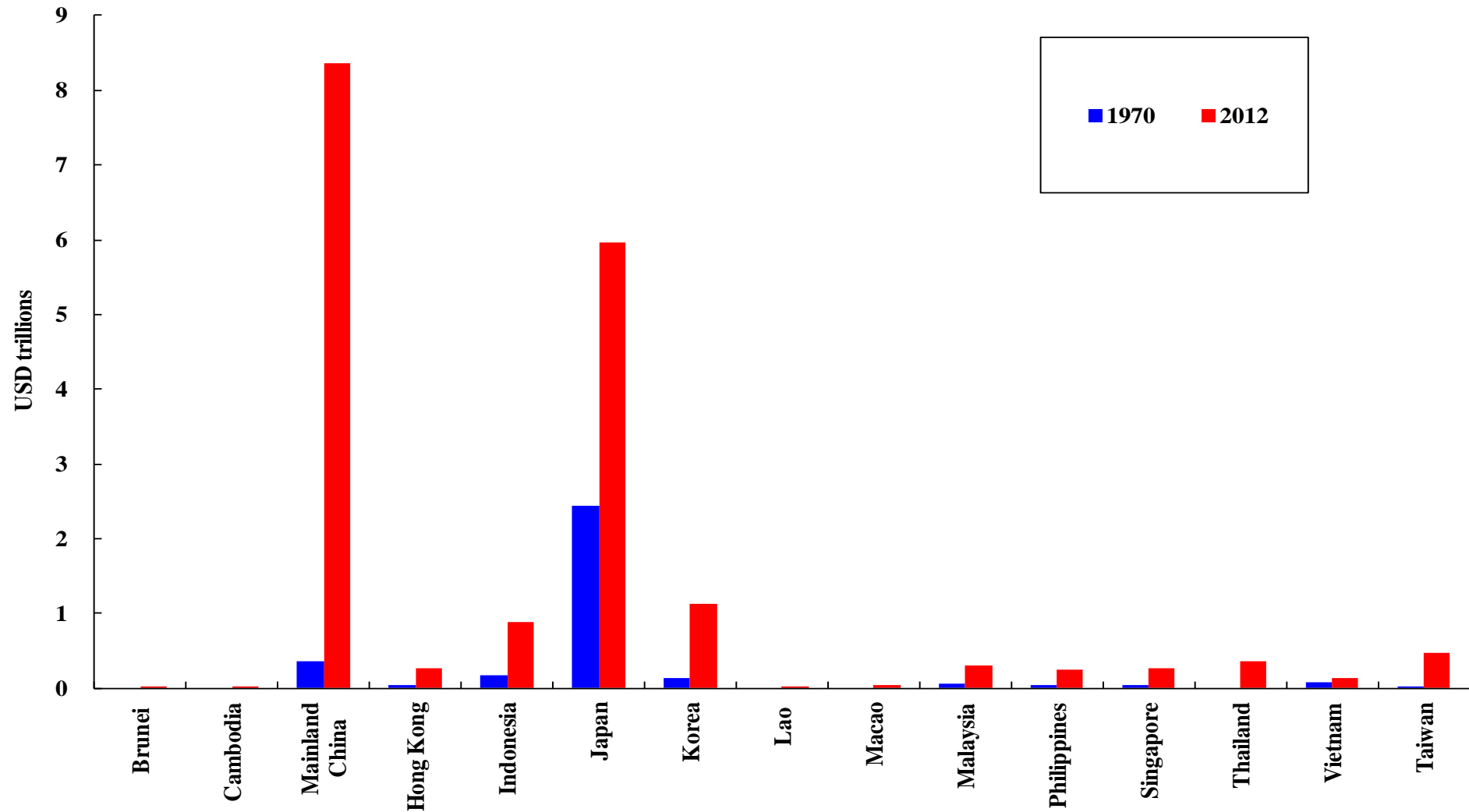
The Shares of East Asia, China, Japan and South Korea in World GDP, 1960-present

The Shares of East Asia, China, Japan and South Korea in World GDP, 1960-present



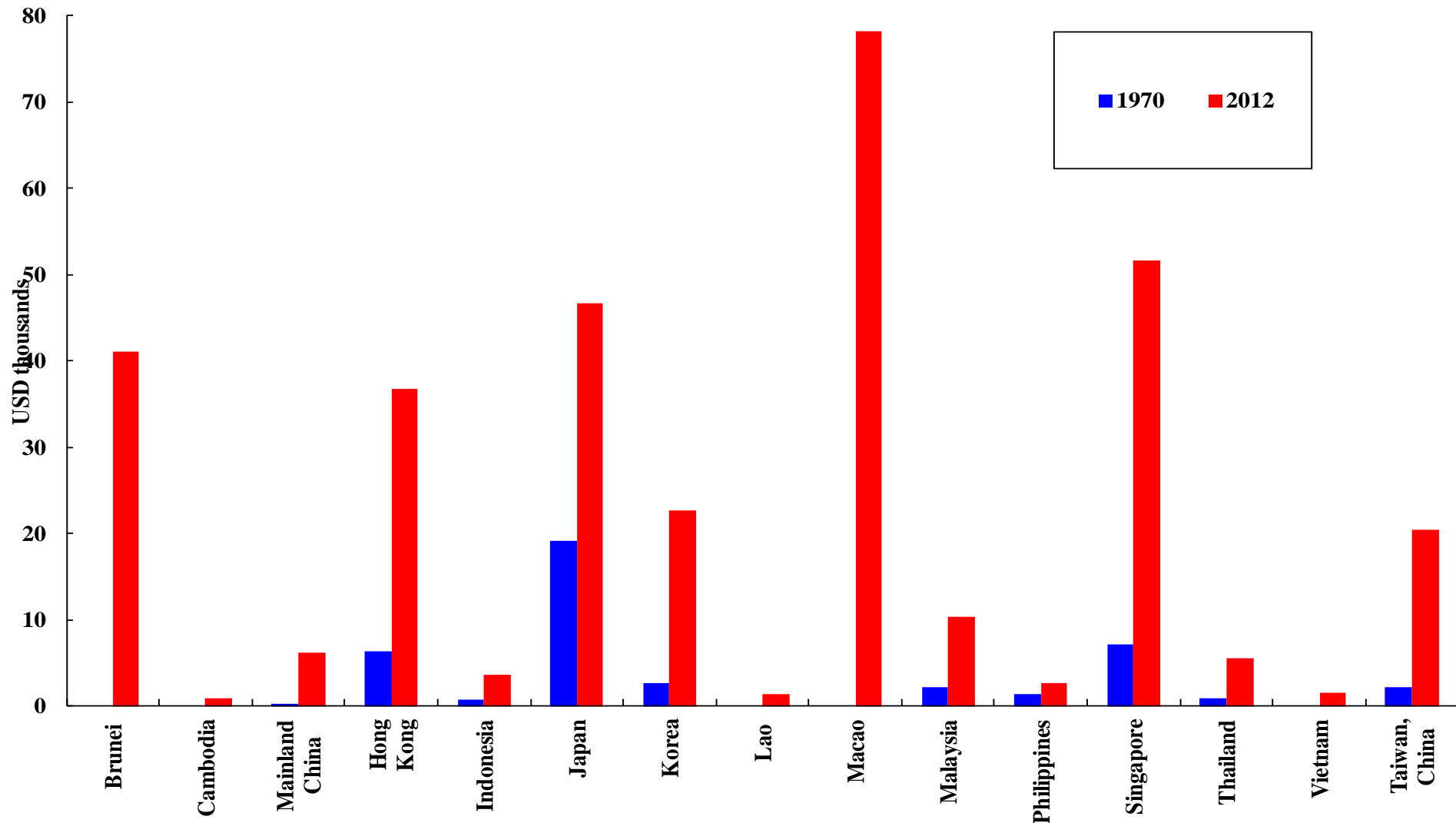
The Growth of Real GDP in East Asian Economies, 1970-2012

Real GDP of East Asian Economies in 1970 and 2012, in 2012 USD trillions



The Growth of Real GDP per Capita in East Asian Economies, 1970-2012

Real GDP per Capita of East Asian Economies in 1970 and 2012, in 2012 USD thousands

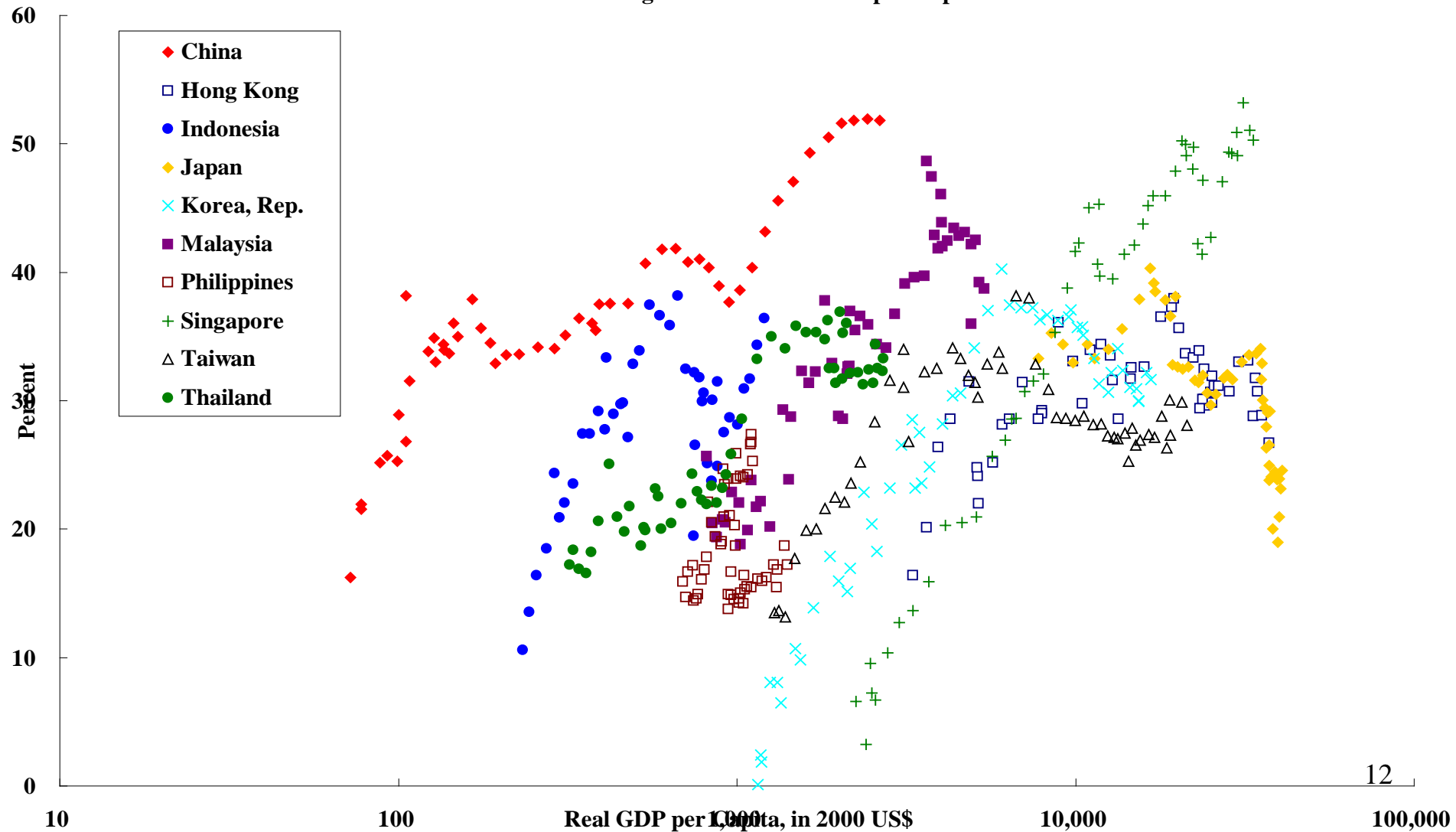


The High Domestic Savings Rate

- ◆ Chinese economic growth since 1978 has been underpinned by a high domestic savings rate, on the order of 30% and above, except for a brief start-up period in the early 1950s, enabling a consistently high domestic investment rate. The saving rate has stayed around 40% since the early 1990s and has at times approached or even exceeded 50% in more recent years.
- ◆ This means, among other things, that the Chinese economy can finance all of its domestic investment needs from its own domestic savings alone, thus assuring a high rate of growth of the tangible capital stock without having to depend on the more fickle foreign capital inflows (including foreign portfolio investment, foreign direct investment or foreign loans). The national saving rate in China will remain high even though it is expected to decline gradually.

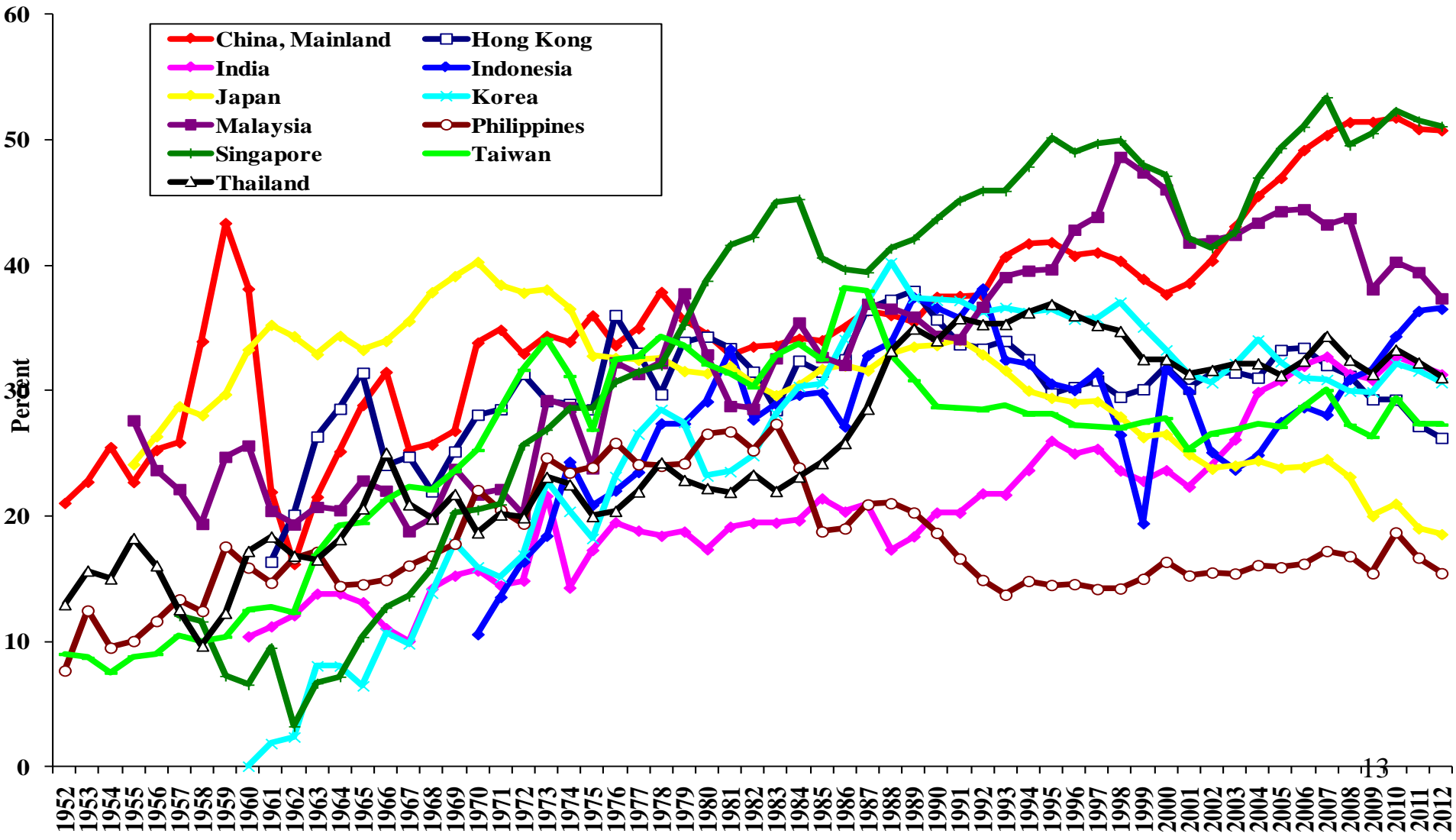
The Saving Rate and Real GDP per Capita: East Asian Economies

National Savings Rate and Real GDP per Capita



Saving Rates of Selected Asian Economies (1952-present)

Savings Rates of Selected East Asian Economies

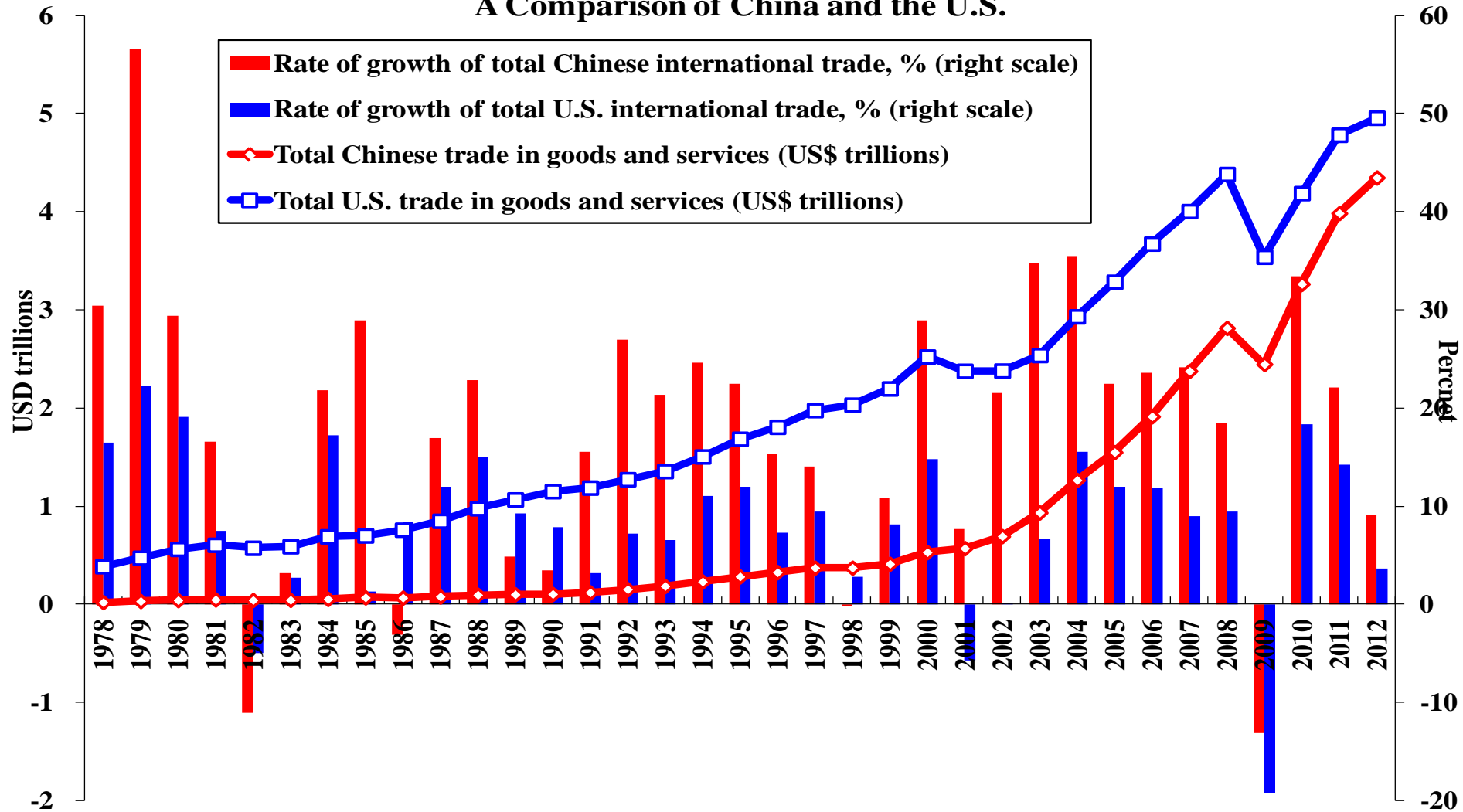


China in the Global Economy— International Trade

- ◆ China has also grown into the second largest trading nation in the World in terms of the total value of international trade in goods and services, after the U.S.
- ◆ While China is the largest exporting nation in terms of goods and services, followed by the U.S., the U.S. is the largest importing nation in terms of goods and services, followed by China. China is also the largest exporting nation in terms of goods alone, followed by the U.S. The U.S. is the largest exporting as well as importing nation in terms of services, followed by respectively the United Kingdom and Germany.

International Trade & Its Rate of Growth: A Comparison of China and the U.S.

The Value of International Trade and Its Rate of Growth:
A Comparison of China and the U.S.

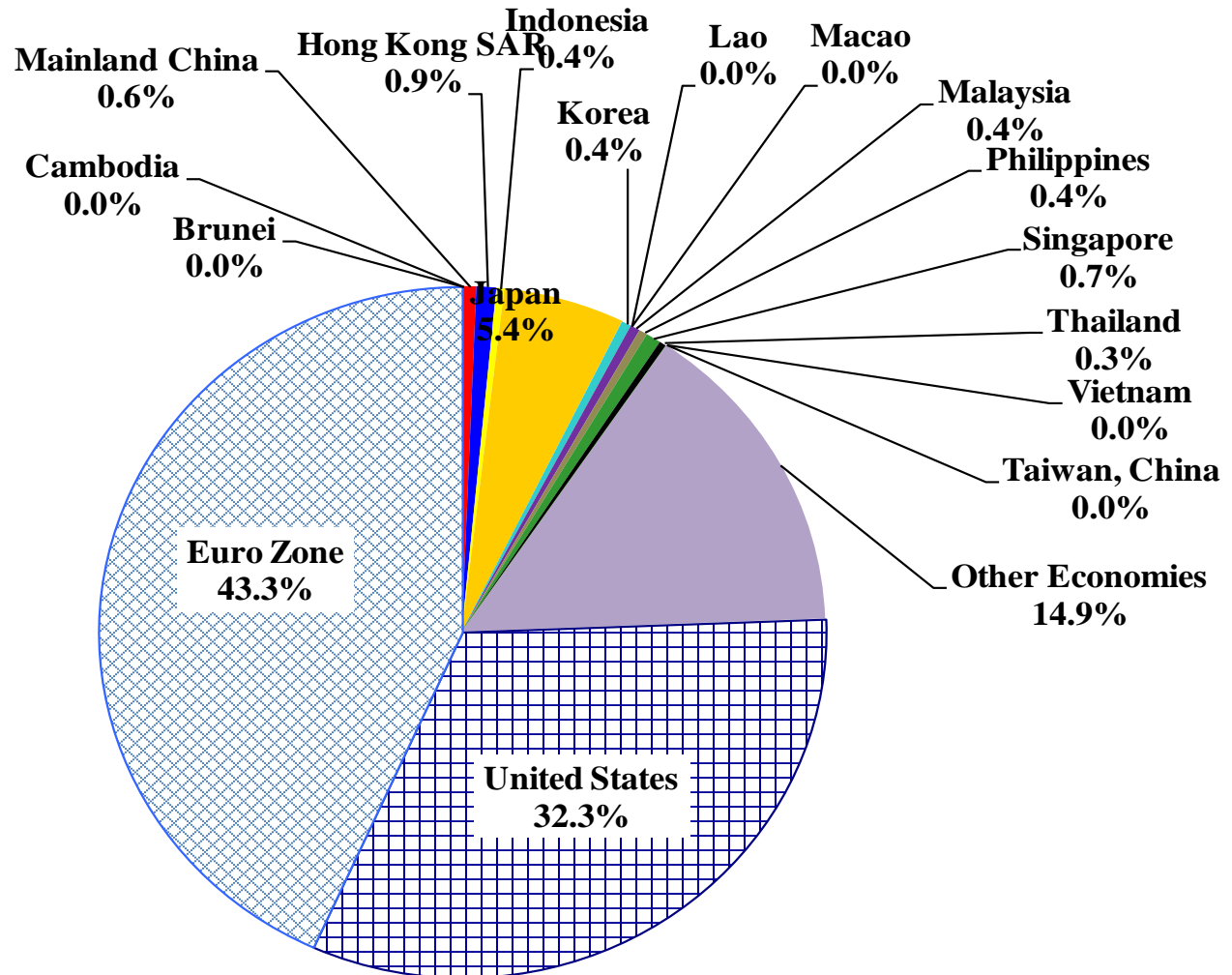


China in the Global Economy— International Trade

- ◆ In 1970, the United States and Western Europe together accounted for over 60% of World trade. By comparison, East Asia and South Asia combined accounted for less than 10% of World trade.
- ◆ By 2011, the share of United States and Western Europe in World trade has declined to below 45% whereas the share of East Asia and South Asia has risen to 30%.

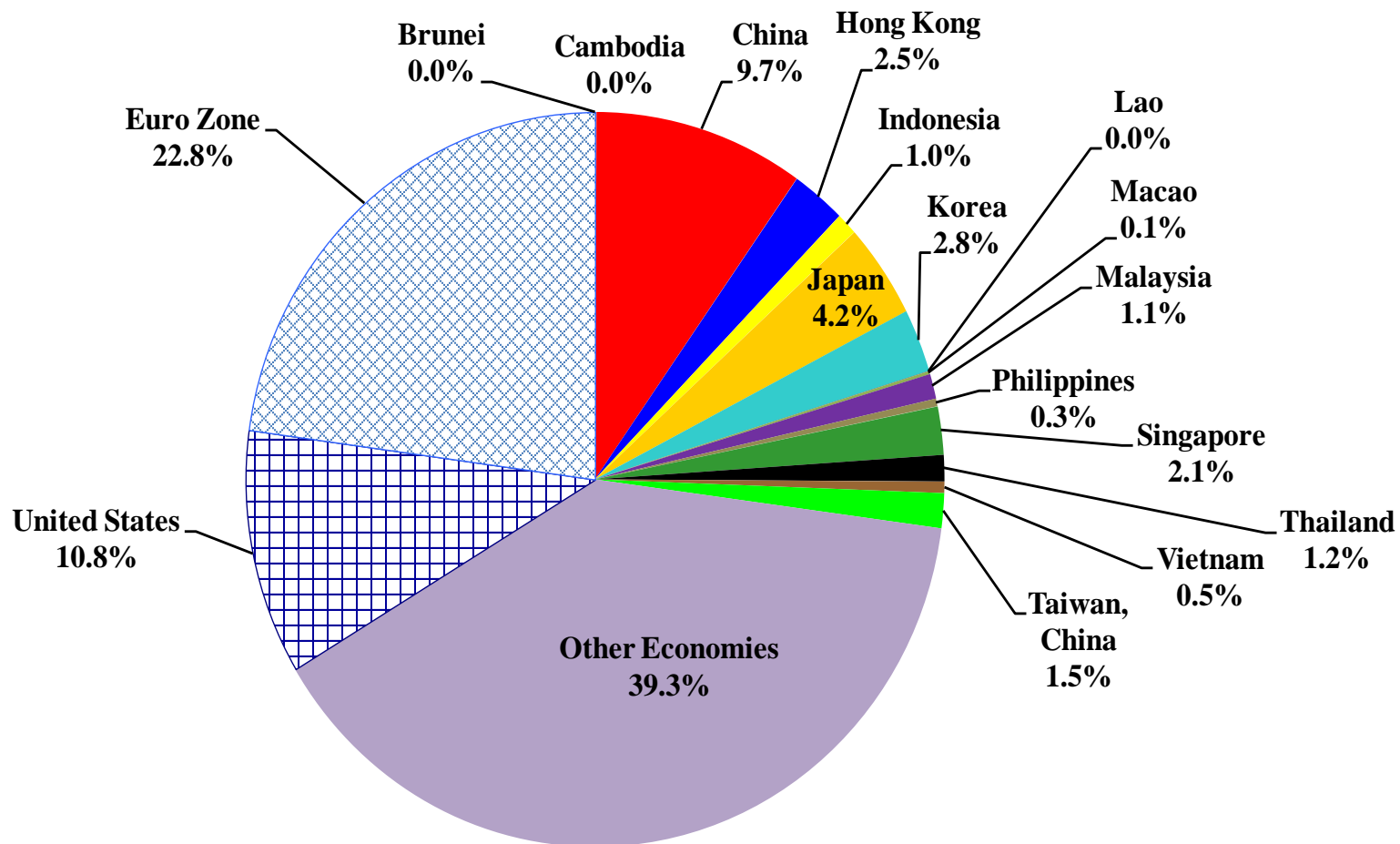
The Distribution of Total International Trade in Goods and Services, 1970

The Distribution of Total International Trade in Goods and Services in 1970



The Distribution of Total International Trade in Goods and Services, 2011

The Distribution of Total International Trade in Goods and Services in 2011

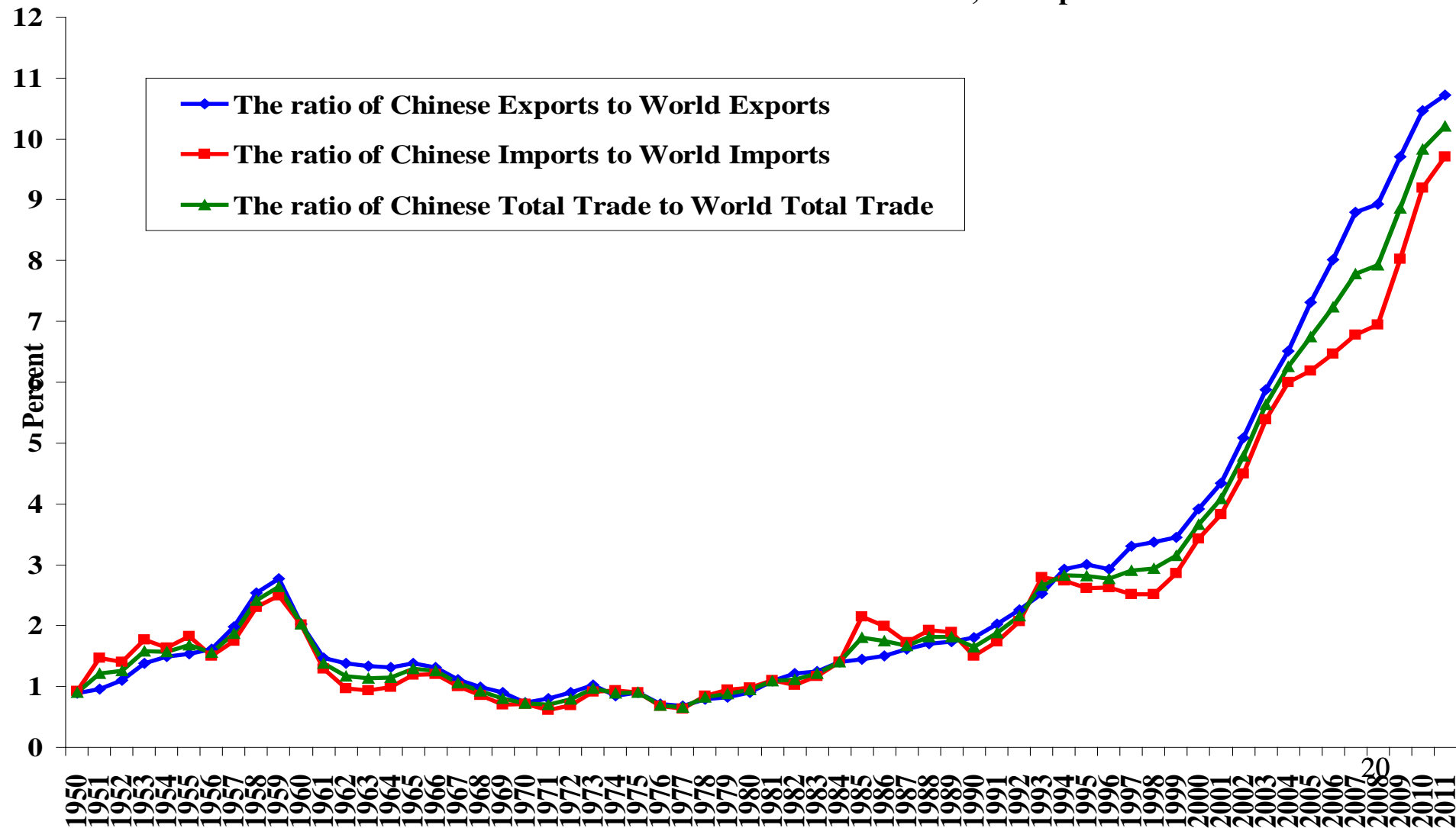


China in the Global Economy— International Trade

- ◆ The East Asian share of World trade rose from 10% in 1970 to just below 25% in 2011.
- ◆ The Chinese share of World trade rose from 1% in 1970 to 10% in 2011.
- ◆ Chinese international trade accounted for more than 40% of East Asian international trade in 2011.

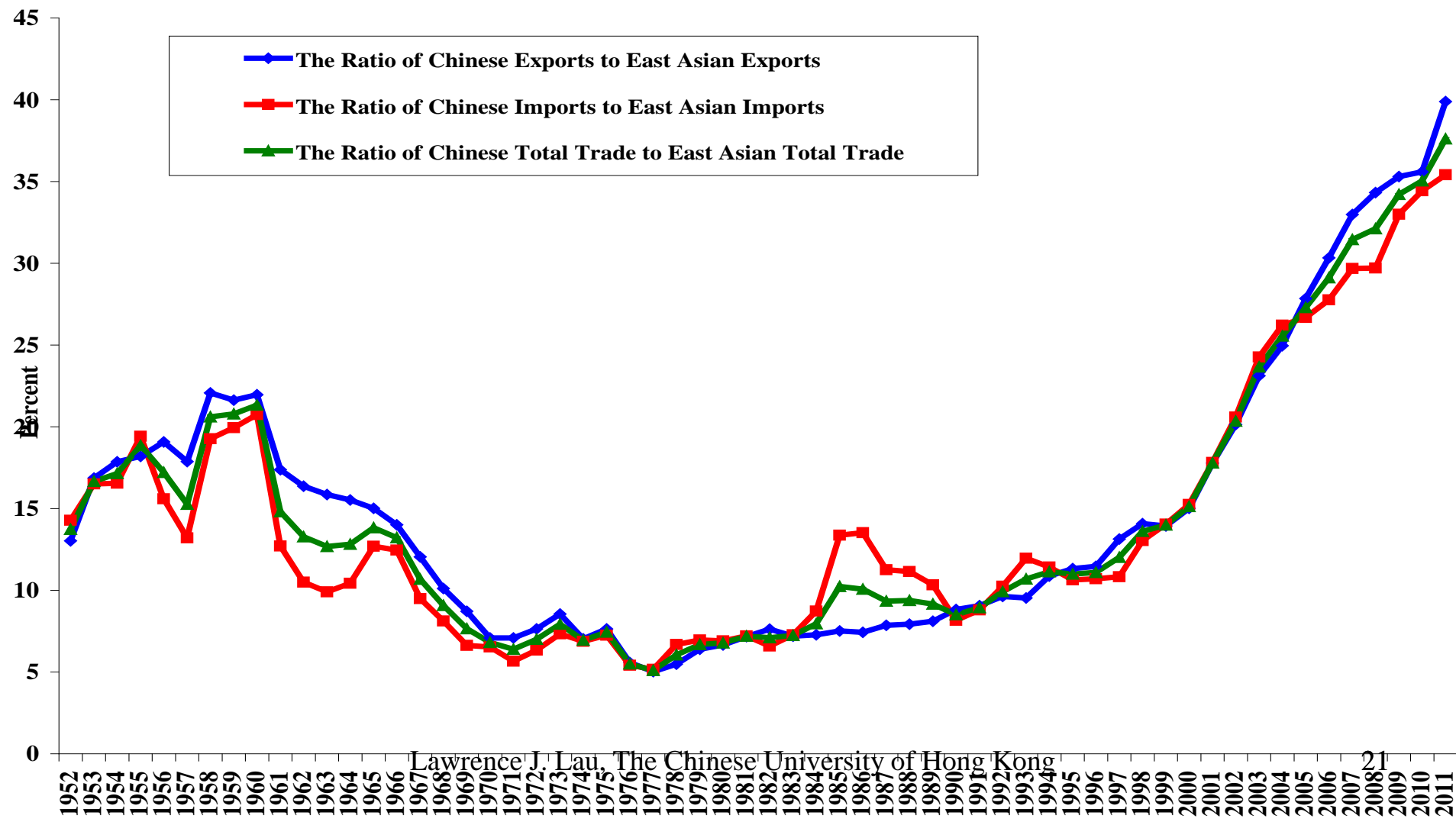
The Share of China in Total World Trade, 1950-present

The Share of Chinese Trade in Total World Trade, 1950-present



The Share of China in Total East Asian Trade, 1952-present

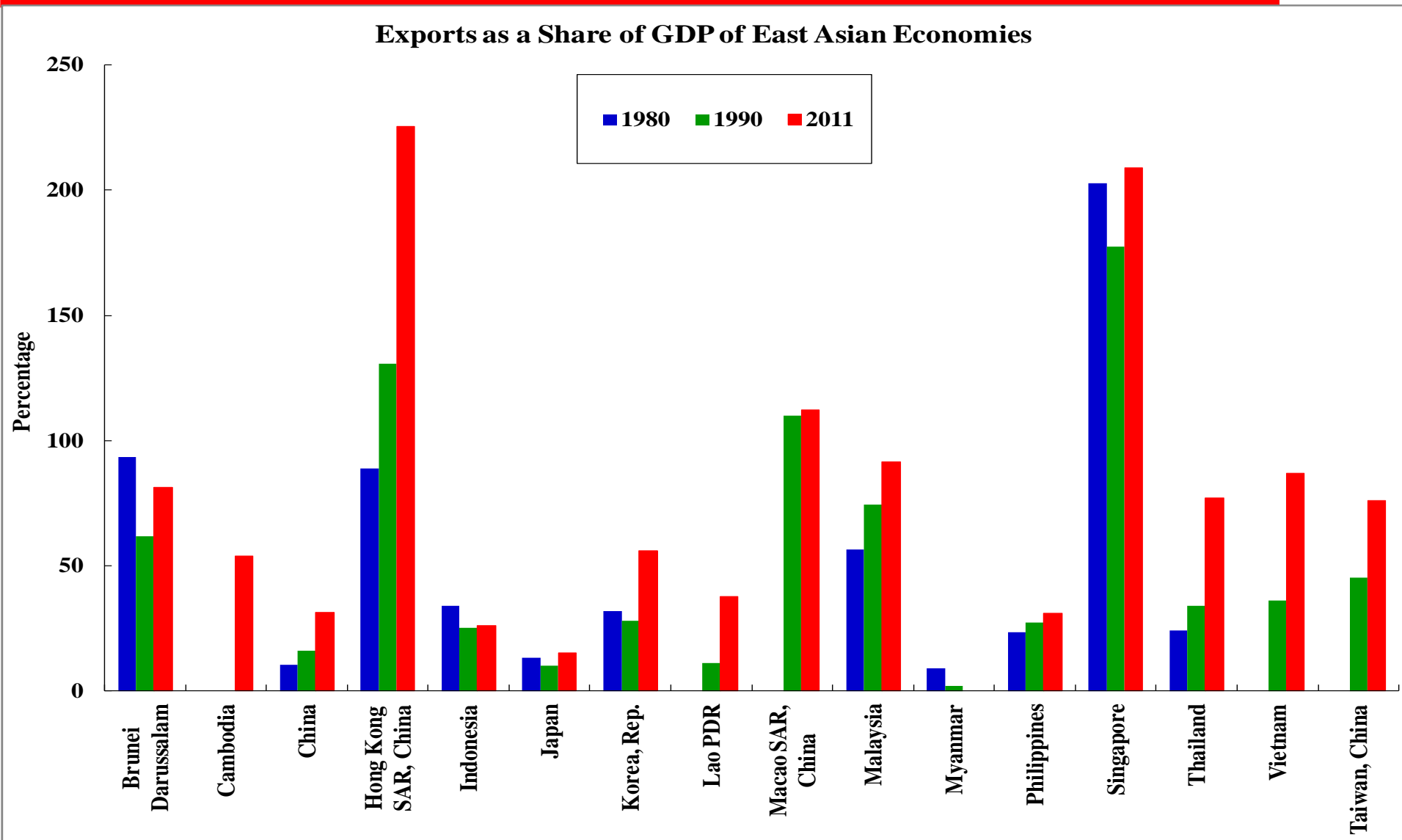
The Share of Chinese Trade in Total East Asian Trade, 1952-present



China in the Global Economy— International Trade

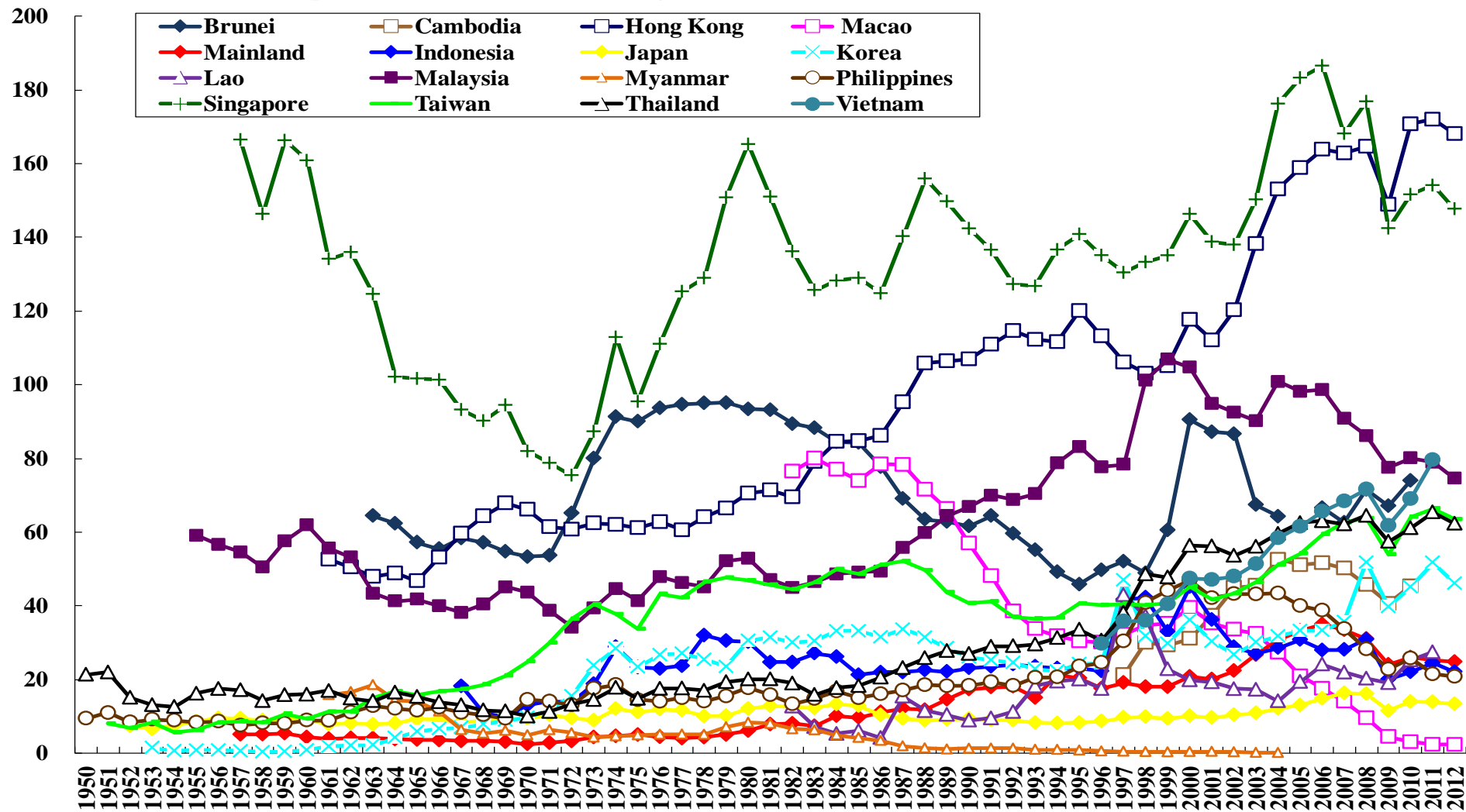
- ◆ Contrary to the public impression, the ratio of exports to GDP is actually relatively low compared to other East Asian economies (see the next charts). This is really a reflection of the fact that China is a large economy. Most large economies, such as the U.S. and Japan, have relatively low exports to GDP ratios.

Exports of Goods and Services as a Share of GDP in East Asian Economies



Exports of Goods as a Percent of GDP: East Asian Economies

Exports of Goods as a Percentage of GDP of Selected East Asian Economies

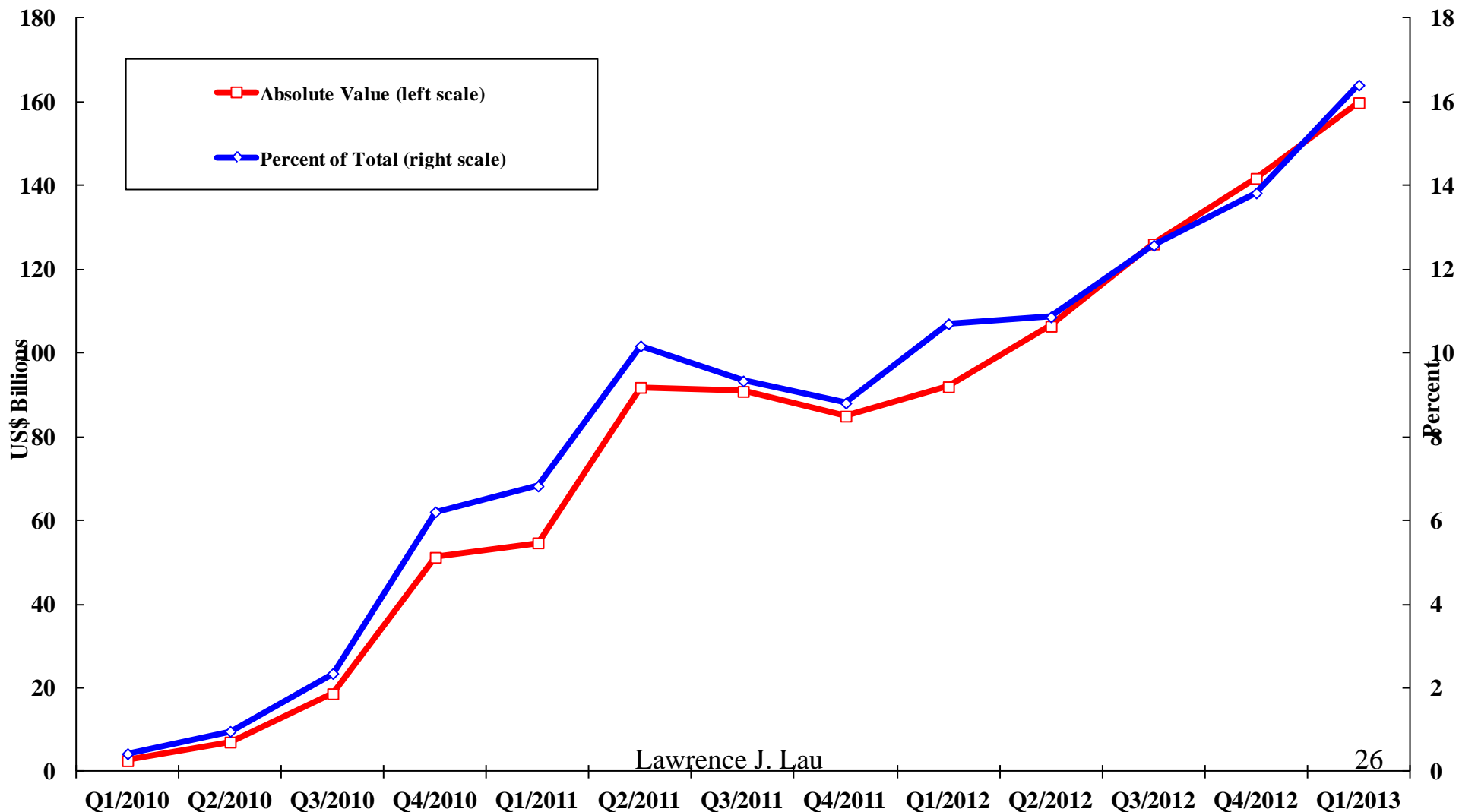


The Internationalisation of the Renminbi

- ◆ The Renminbi is increasingly used as an invoicing and settlement currency for cross-border transactions, especially those involving Chinese enterprises as transacting parties.
- ◆ The proportion of Mainland Chinese international trade settled in Renminbi has grown rapidly, from almost nothing in 2010Q1 to US\$160 billion in 2013Q1 or 16.4% of the total value of trade in goods and services. In absolute value, some US\$640 billion of Chinese international trade is now settled in Renminbi annually.
- ◆ The central banks and monetary authorities of many countries and regions have entered into swap agreements with the People's Bank of China, the central bank of China.

Renminbi Settlement of Cross-Border Trade, Billion US\$ and Percent

Renminbi Settlement of Cross-Border Trade



The Internationalisation of the Renminbi

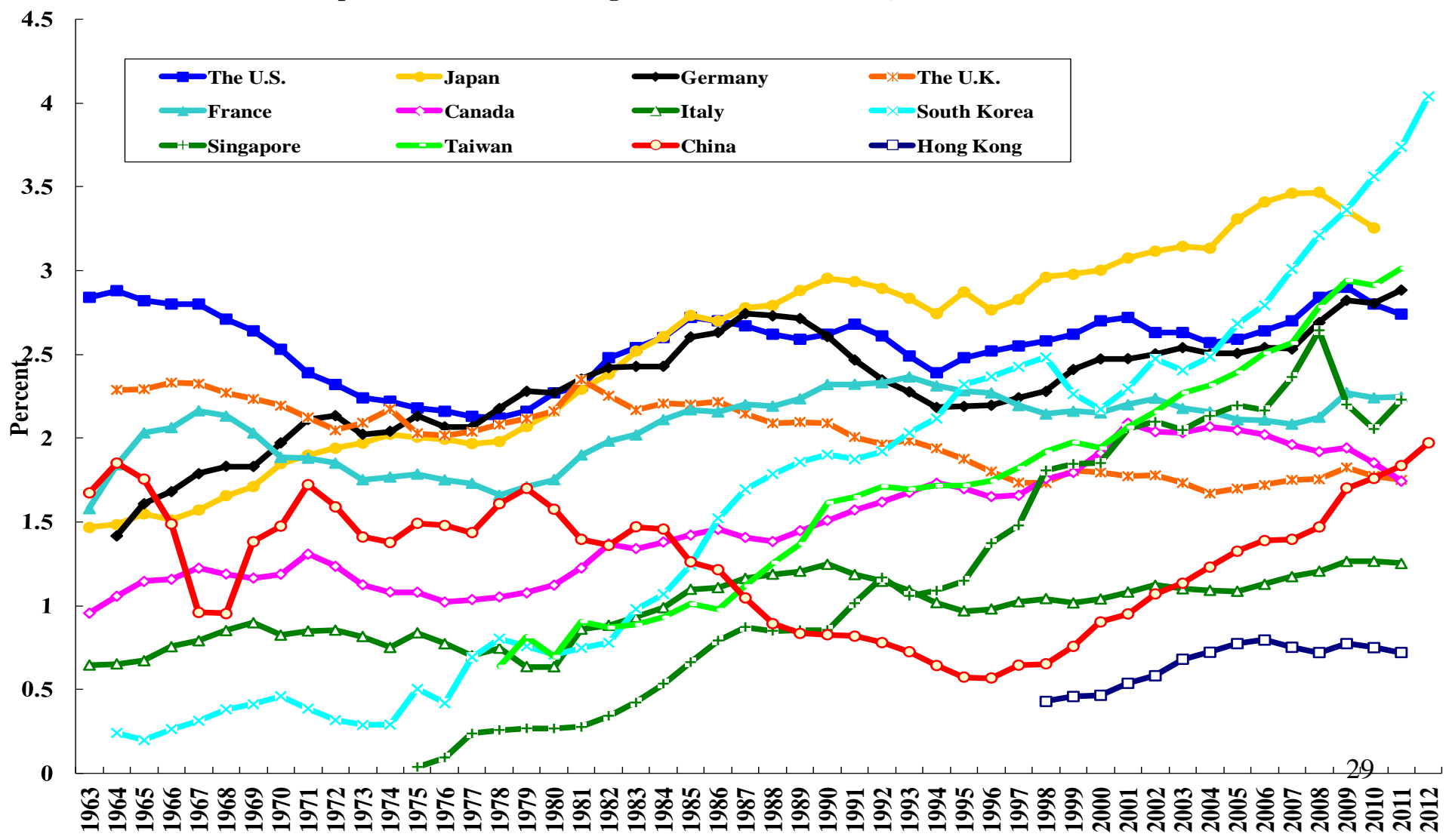
- ◆ The exchange rate of the Renminbi relative to U.S. Dollar is likely to hold steady or appreciate modestly over the next few years. This should facilitate the further internationalisation of the Renminbi.
- ◆ Capital account convertibility is expected to be achieved before 2020. It can occur sooner if short-term capital flows, both outbound and inbound, can be appropriately “discouraged”.

The Rising Importance of Intangible Capital

- ◆ The principal sources of Chinese economic growth will gradually evolve from the growth of tangible inputs such as tangible capital and labour, to the growth of intangible inputs such as human capital, R&D capital, and reputational capital (branding and goodwill).
- ◆ Sustained investment in human capital and research and development (R&D) is essential for the occurrence of technical progress or growth in total factor productivity in an economy.
- ◆ China has also begun to invest 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.)

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

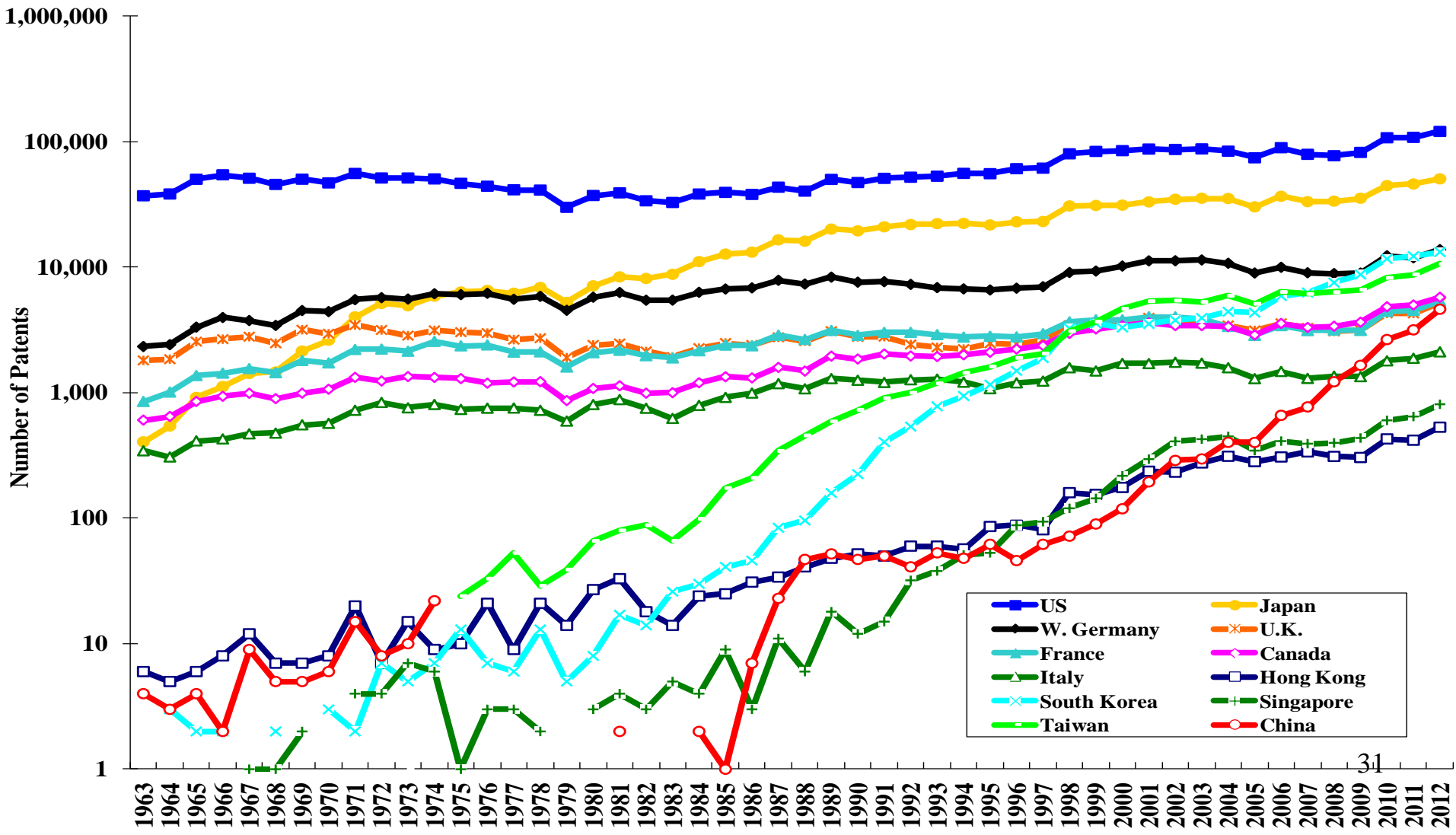


The Rising Importance of Intangible Capital

- ◆ One indicator of the potential for technical progress (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 121,026 patents granted in 2012, followed by Japan, with 50,677. (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

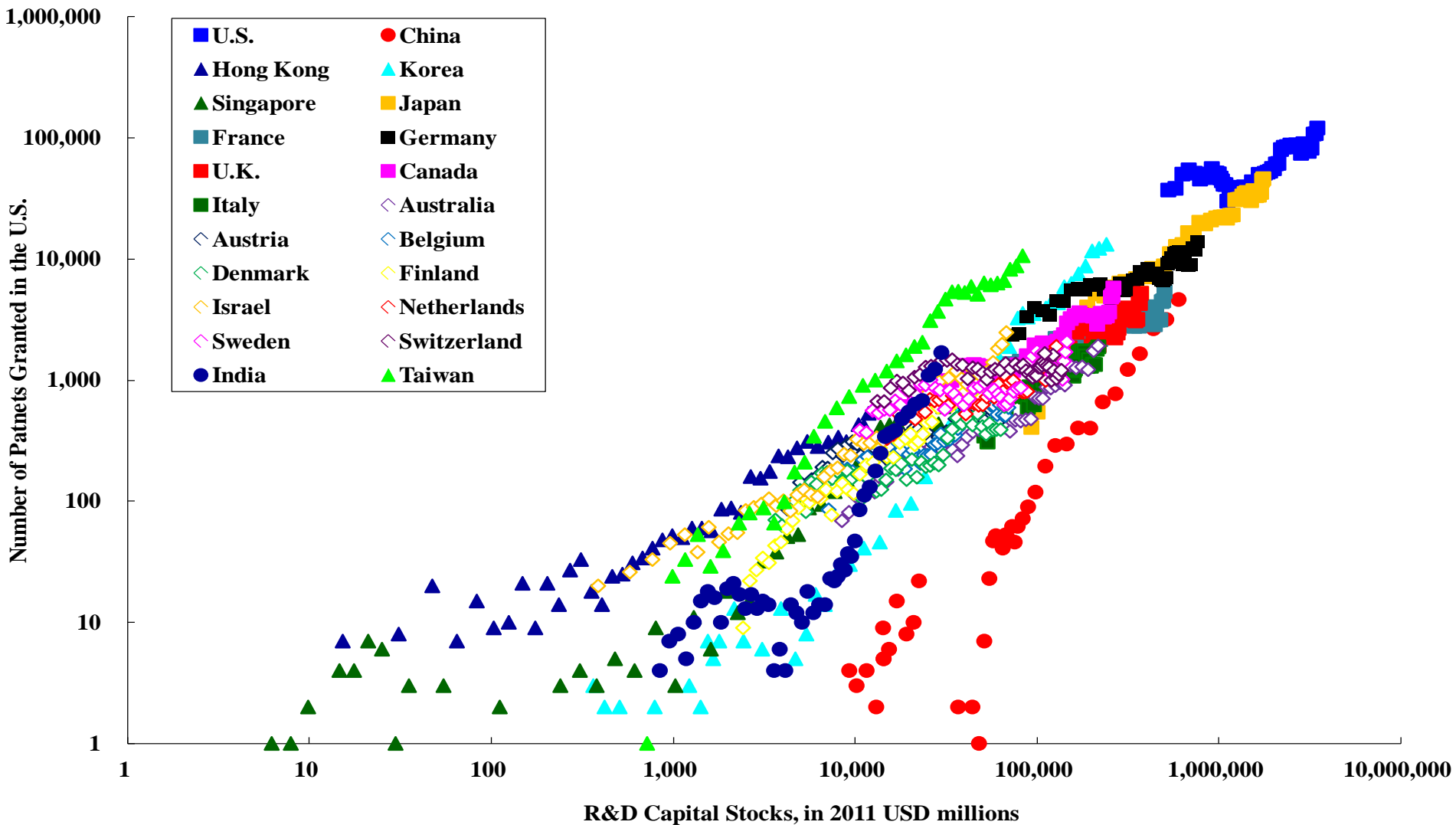


The Rising Importance of Intangible Capital

- ◆ The stock of R&D capital, defined as the cumulative past real expenditure on R&D less depreciation of 10% per year, can be shown to have a direct causal relationship to the number of patents granted (see the following chart, in which the annual number of U.S. patents granted is plotted against the R&D capital stock of that year for each country).
- ◆ The chart shows clearly that the higher the stock of R&D capital of an economy, the higher is the number of patents granted to it by the U.S.
- ◆ Because China has had both a much lower R&D expenditure to GDP ratio and a much lower GDP than the United States and other developed economies in the past, it will take more than a couple of decades before the Chinese R&D capital stock can catch up to the level of U.S. R&D capital stock (and hence to the number of U.S. patents granted each year).

Patents Granted in the United States and R&D Capital Stocks, Selected Economies

Patents and R&D Capital Stocks of Selected Economies

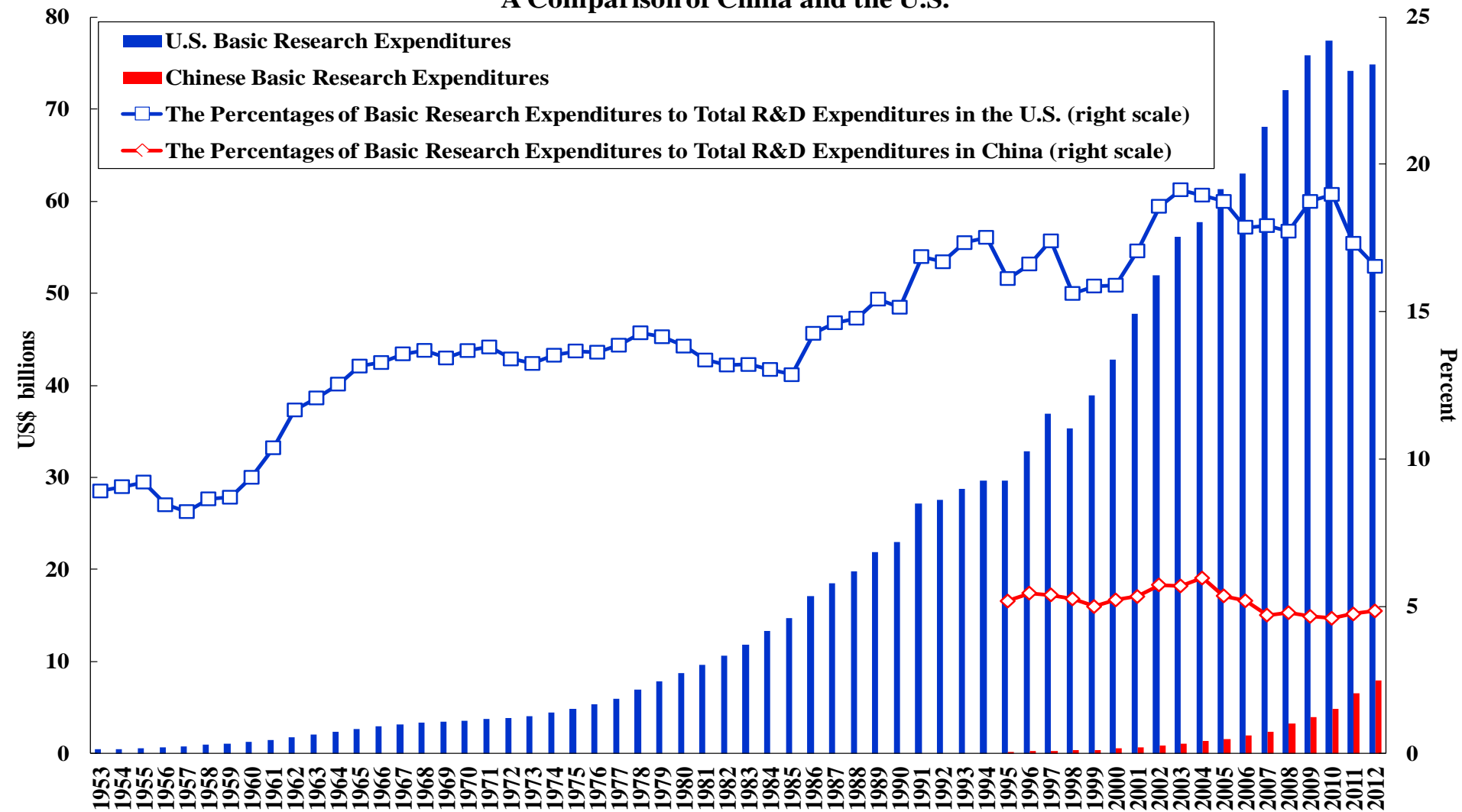


The Rising Importance of Intangible Capital

- ◆ However, innovation also depends on the existence of competition. Monopolies are generally not very good in innovation and not very good in making full use of their innovation. China must create and maintain a competitive market environment with free entry and exit so as to encourage innovation.
- ◆ In addition, in order to encourage innovation, China also needs to protect intellectual property rights vigorously. The resolutions of the Third Plenum of the Central Committee of the Chinese Communist Party held in November 2013 called for the study of the establishment of a national intellectual property court, which is an important step towards better protection of intellectual property rights, both Chinese and foreign.
- ◆ Finally, in order that “break-through” innovation can occur in China, the Chinese Government must commit a much greater share of its R&D expenditure to the support of basic research₃₄

Basic Research Expenditure and Its Share in Total R&D Expenditure: China & U.S.

Basic Research Expenditure and its Share in Total R&D Expenditure:
A Comparison of China and the U.S.



The Partial De-Coupling Hypothesis

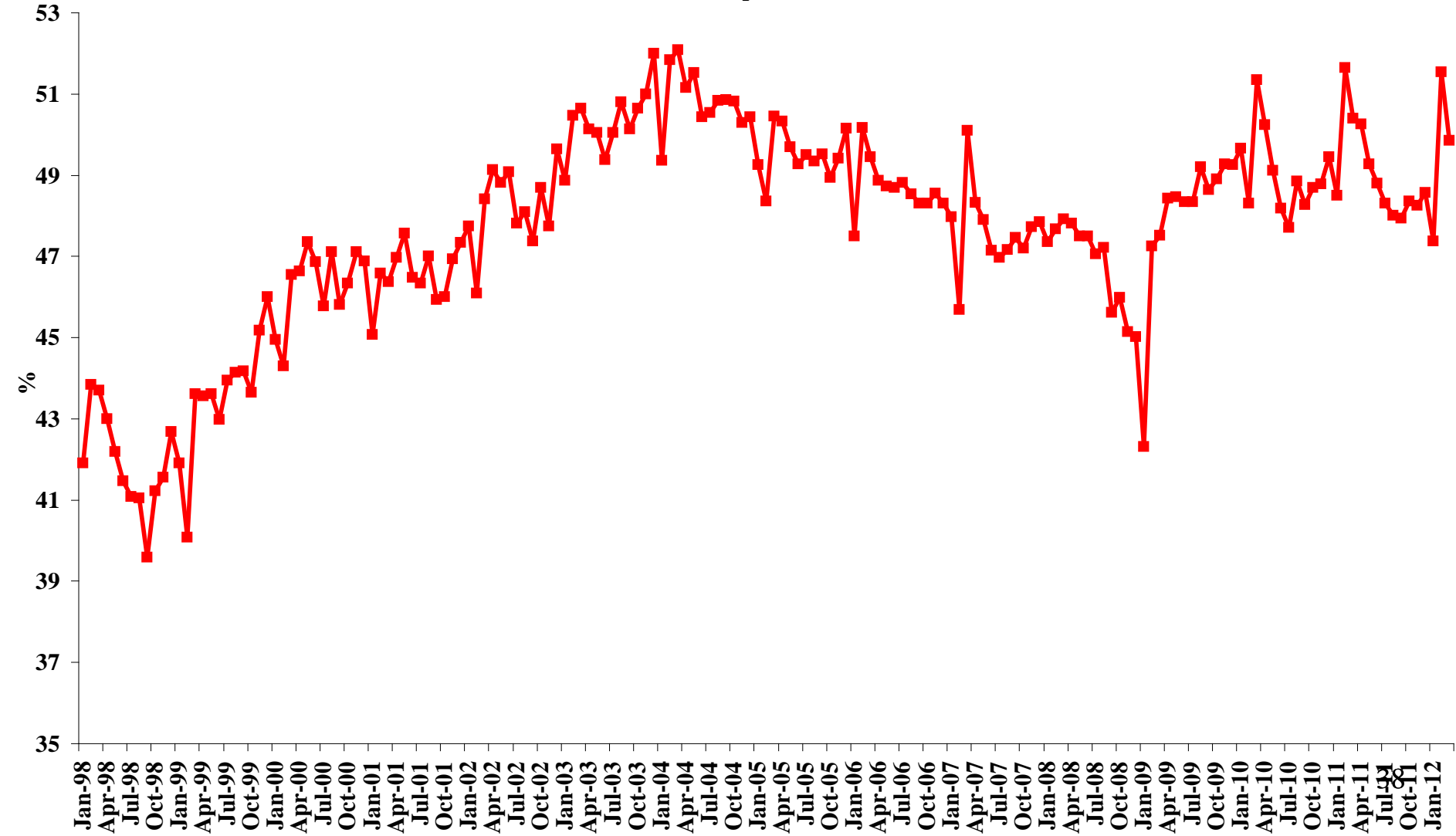
- ◆ Throughout the 2007-2009 global financial crisis, as well as the subsequent European sovereign debt crisis, the East Asian economies and the economies of the BRICS countries (Brazil, Russia, India, China and South Africa) continued to do reasonably well. China, in particular, has been able to maintain its real rate of growth above 7.5% since 2007, lending credence to the “Partial De-Coupling Hypothesis”, that is, the Chinese and East Asian economies can continue to grow, albeit at lower rates, even as the U.S. and European economies go into economic recession.
- ◆ This partial de-coupling can occur because of the gradual shift of the economic centre of gravity of the World from the United States and Western Europe to Asia (including both East Asia and South Asia) over the past three decades.

The Partial De-Coupling Hypothesis

- ◆ A particularly interesting development is the rise in intra-East Asian international trade. The share of East Asian trade destined for East Asia has risen to over 50% in the past decade. This is a sea-change compared to 30 years ago when most of the East Asian exports was destined for either the United States or Western Europe.
- ◆ Similarly, the share of East Asian imports originated from East Asia has remained above 45%.

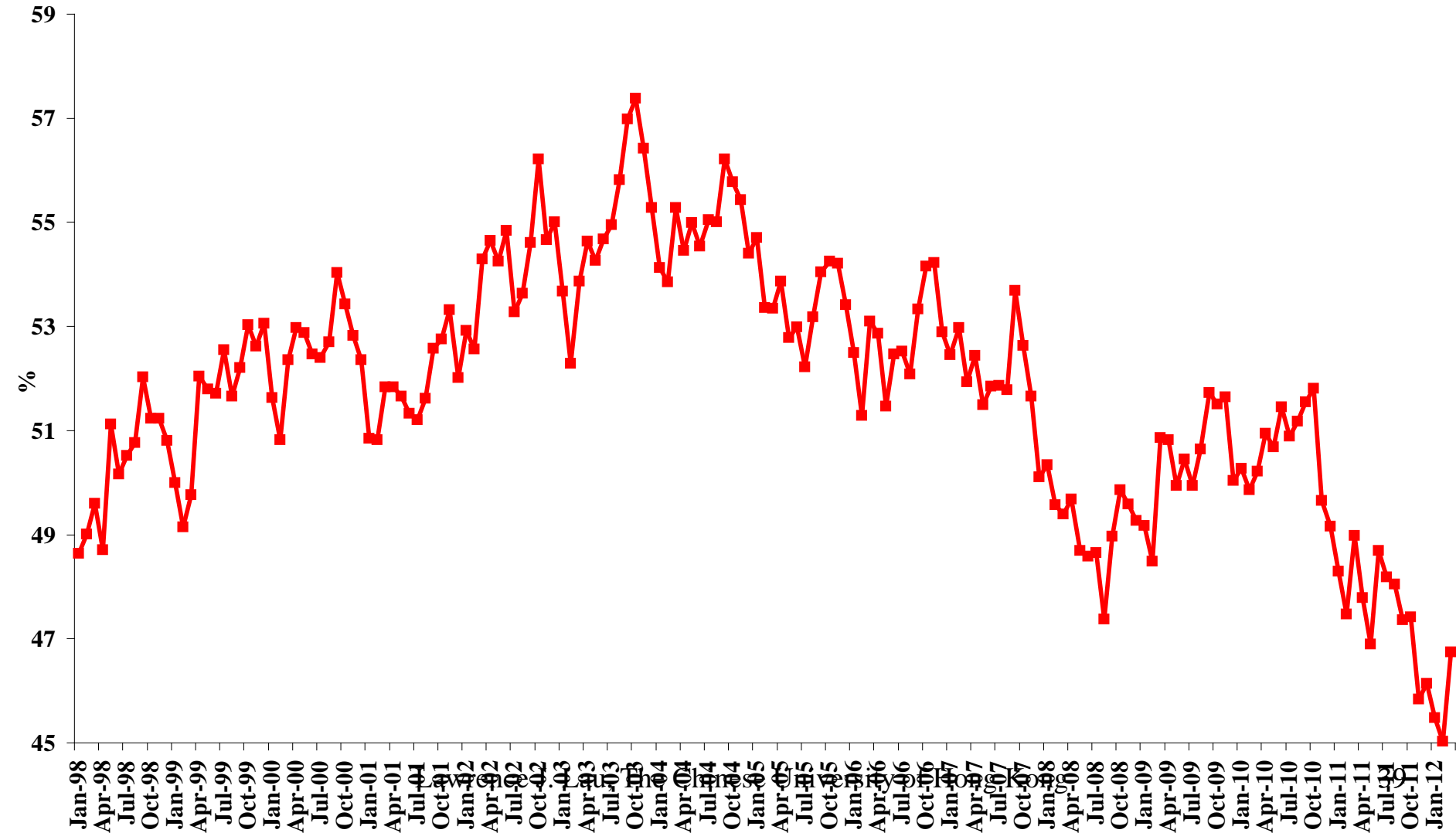
The Share of East Asian Exports Destined for East Asia

The Share of East Asian Exports Destined for East Asia



The Share of East Asian Imports Originated from East Asia

The Share of East Asian Imports Originated from East Asia

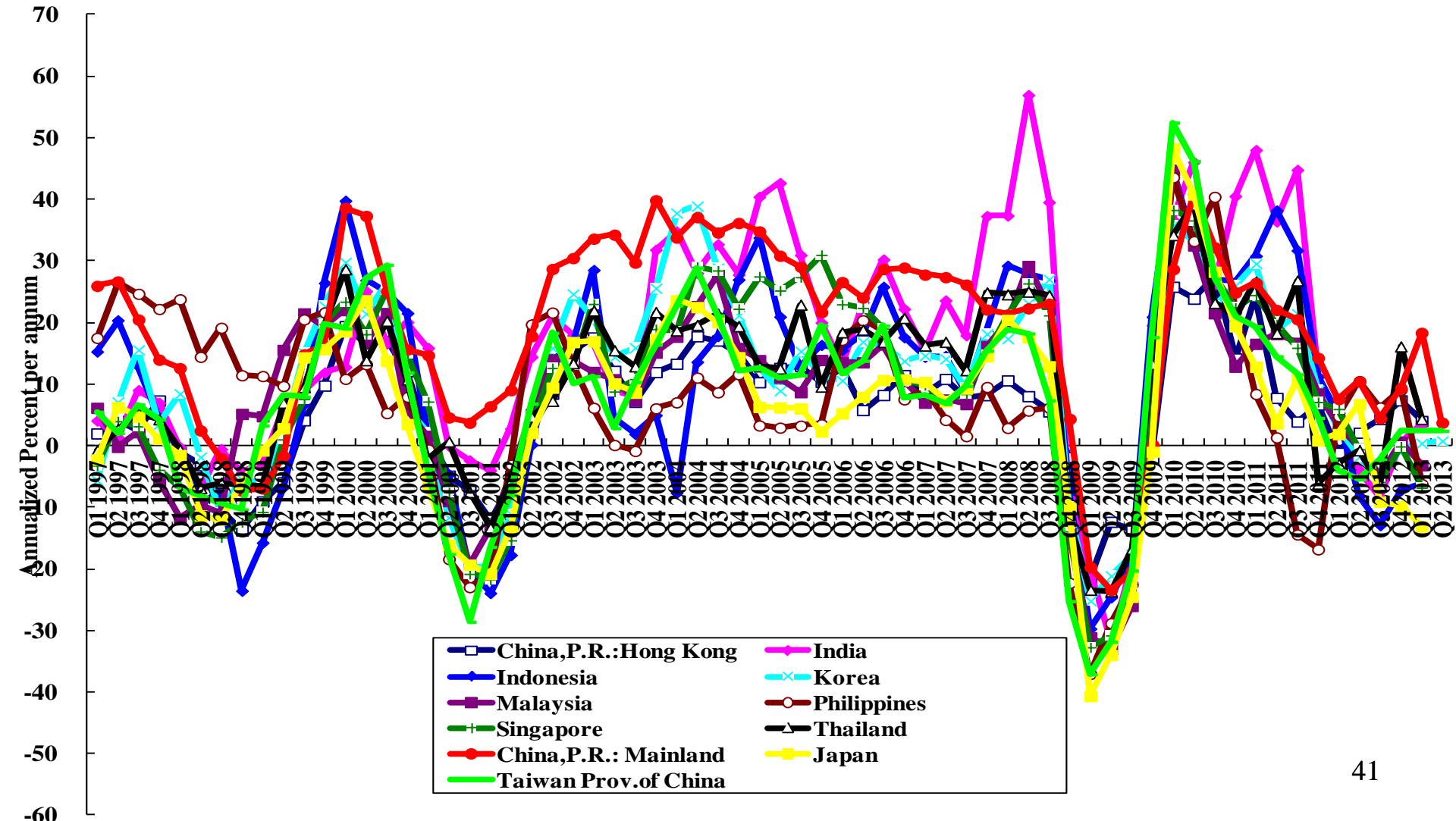


The Partial De-Coupling Hypothesis

- ◆ The fact that the Chinese economy has continued to grow at an average rate of almost 10% per annum since the beginning of the global financial crisis in 2007 is further proof that the Chinese economy has been at least partially de-coupled from the rest of the World economy, and in particular, from the United States and Europe, both of which have been mired in economic recession and recovering very slowly.
- ◆ Any doubt that the Chinese economy can be partially de-coupled from the World economy should be resolved by an examination of the following three charts on the rates of growth of exports, imports and real GDP of East Asian economies. Even though Chinese exports and imports fluctuate like those of all the other East Asian economies, the rate of growth of real GDP of the Chinese economy has been relatively stable compared to those of the other East Asian economies.

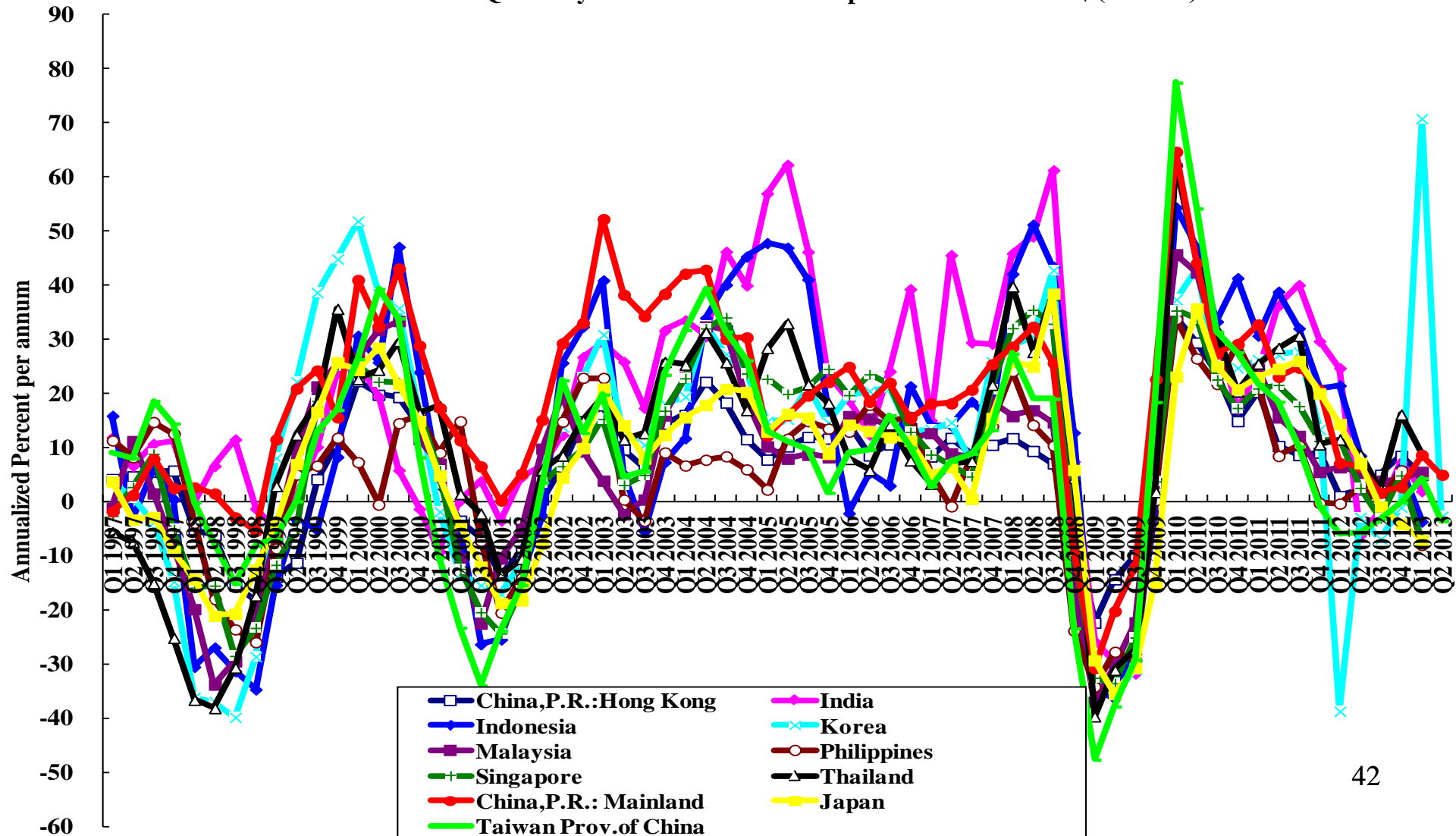
Quarterly Rates of Growth of Exports of Goods: Selected East Asian Economies

Year-over-Year Quarterly Rates of Growth of Exports of Goods in US\$ (Percent)



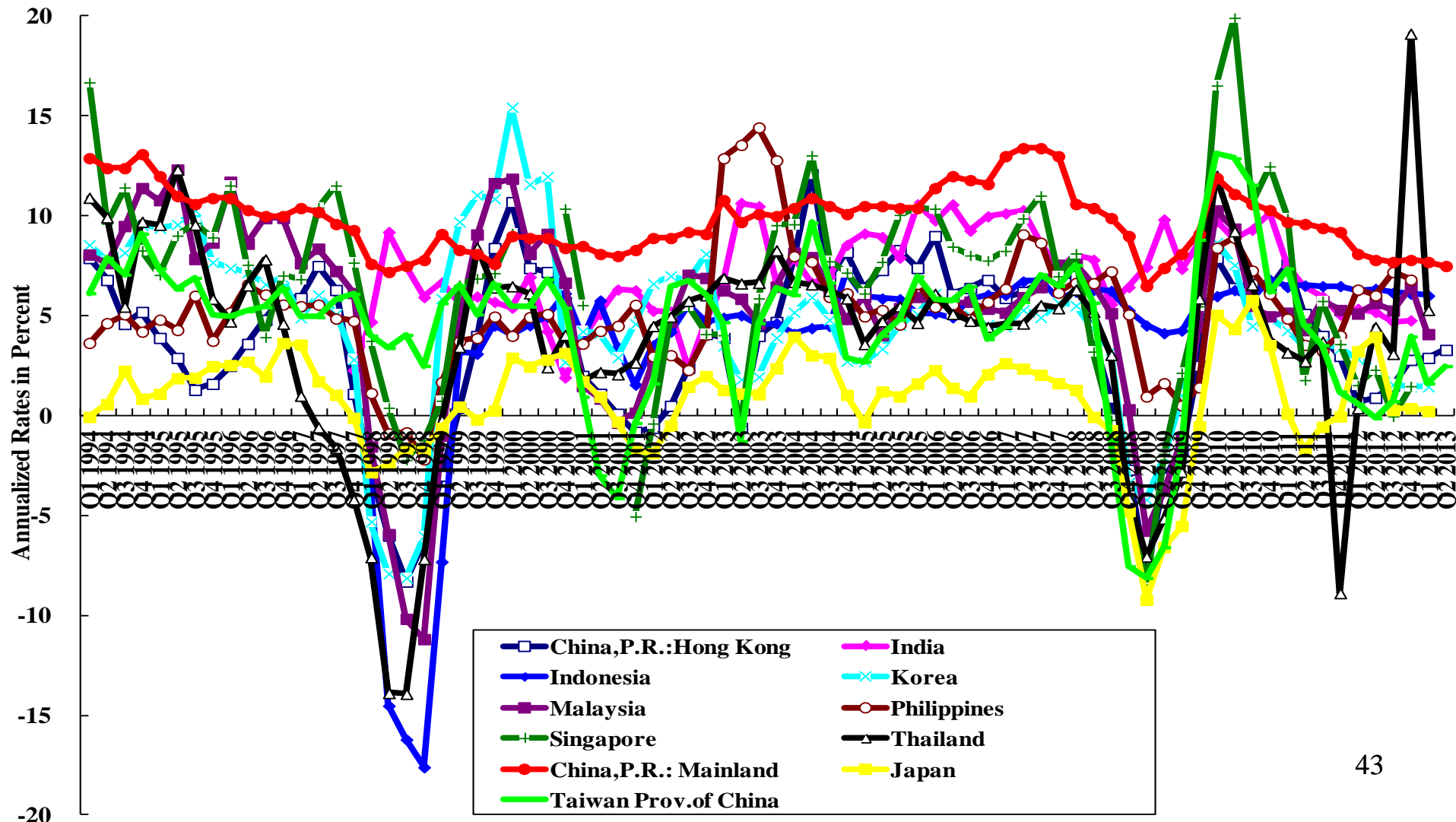
Quarterly Rates of Growth of Imports of Goods: Selected East Asian Economies

Year-over-Year Quarterly Rates of Growth of Imports of Goods in US\$ (Percent)



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

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

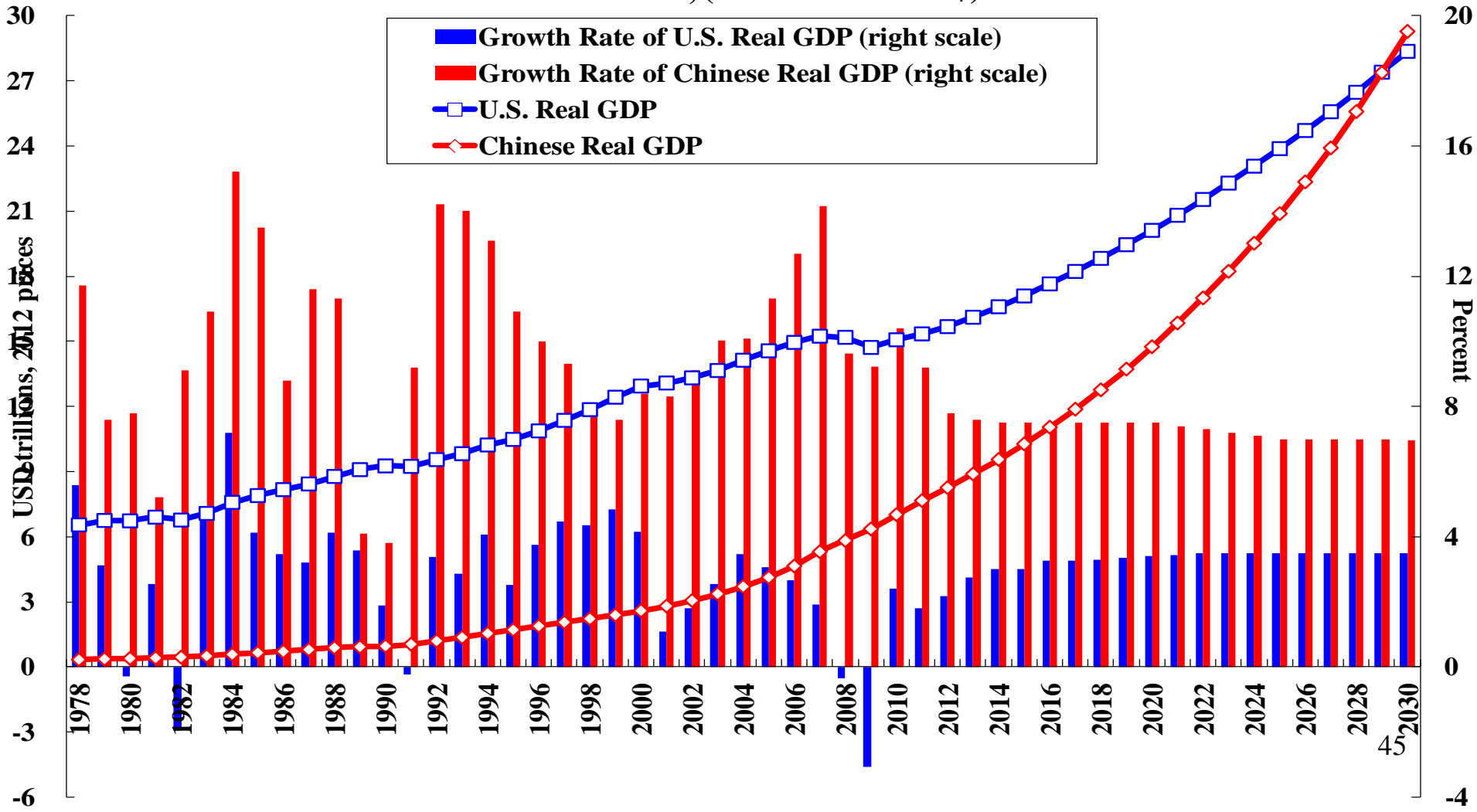


Projections of the Future

- ◆ It is projected that the Chinese and the U.S. economies will grow at average annual real rates of approximately 7.3% and 3.3% respectively between 2012 and 2030. Chinese real GDP is projected to catch up to U.S. real GDP in approximately 15 years' time--around 2029, at which time both Chinese and U.S. real GDP will exceed US\$27 trillion (in 2012 prices), more than three times the Chinese GDP and not quite two times the U.S. GDP in 2012. By that time, China and the U.S. will each account for approximately 15% of World GDP.

Actual and Projected Real GDPs and their Annual Rates of Growth: China & the U.S.

Actual and Projected Real GDPs and their Annual Rates of Growth of China and the U.S., (trillion 2012 US\$)

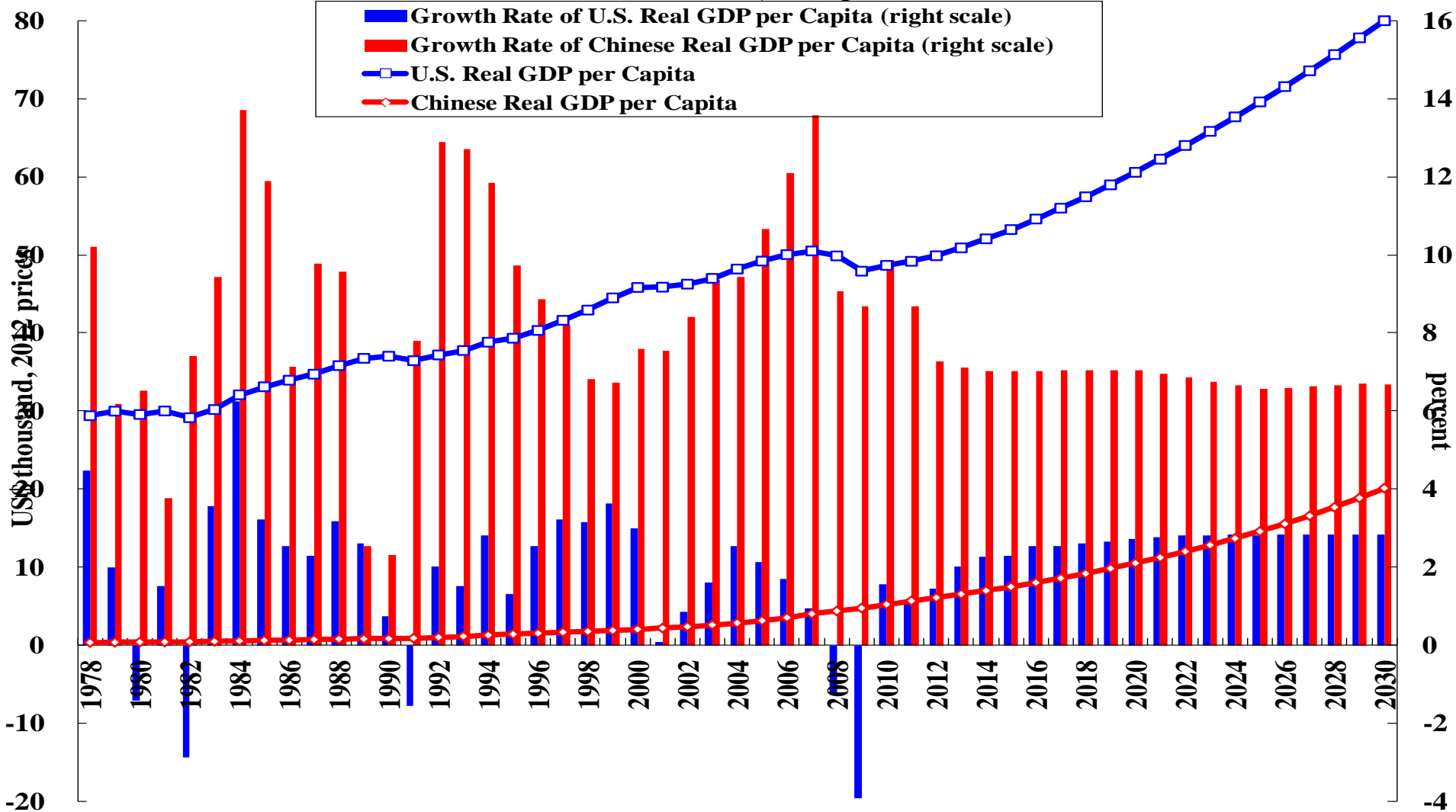


Projections of the Future

- ◆ By 2030, the Chinese real GDP per capita is projected to exceed US\$20,100 (in 2012 prices), which would still be just a quarter of the projected then U.S. per capita real GDP of US\$80,000. It will take around 45 years, almost till 2060, for China to catch up to the United States in terms of real GDP per capita.

Actual and Projected Real GDP per Capita's and their Annual Rates of Growth

Actual and Projected Real GDP per Capita of China and the U.S.,
US\$ thousands, 2012 prices



Concluding Remarks

- ◆ The centre of gravity of the World economy has been gradually shifting to East and South Asia. The centre of gravity of the East Asian economy has been gradually shifting to China.
- ◆ The Chinese and East Asian economies have been partially decoupled from the United States and Europe.
- ◆ The growth of tangible capital, supported by a high domestic saving rate, has been the principal source of past Chinese economic growth.
- ◆ The growth of intangible capital (human capital and R&D capital) will have to become a much more important source of Chinese economic growth as it has already become in the more developed East Asian economies such as Japan, South Korea, Singapore and Taiwan.
- ◆ The Chinese economy will catch up to the U.S. economy in terms of aggregate GDP some time around 2030. However, it will be past the middle of this century before the Chinese economy can catch up to the U.S. economy in terms of per capita GDP.