

# The China-U.S. Trade War and Future Economic Relations

---

Lawrence J. Lau

Ralph and Claire Landau Professor of Economics, The Chinese Univ. of Hong Kong  
and

Kwoh-Ting Li Professor in Economic Development, Emeritus, Stanford University

The Southern University of Science and Technology  
Shenzhen, 20 September 2019

Tel: +852 3943 1611; Fax: +852 2603 5230

Email: [lawrence@lawrencejlau.hk](mailto:lawrence@lawrencejlau.hk); WebPages: [www.igef.cuhk.edu.hk/ljl](http://www.igef.cuhk.edu.hk/ljl)

\*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

---

- ◆ Introduction
- ◆ The Chronology of the Mutual Tariffs
- ◆ The Different Measurements of the Bilateral Trade Balance
- ◆ The Relative Benefits from the Bilateral Trade
- ◆ The Immediate Impacts of the China-U.S. Trade War
- ◆ The Real Impacts of the Mutual Tariffs on the Two Economies
- ◆ Economic and Technological Competition
- ◆ Economic Complementarities between China and the U.S.
- ◆ Coordinated Expansion of Trade
- ◆ Bilateral Economic Issues
- ◆ Enhancing Mutual Economic Interdependence
- ◆ Chinese Economic Policy Options
- ◆ Concluding Remarks

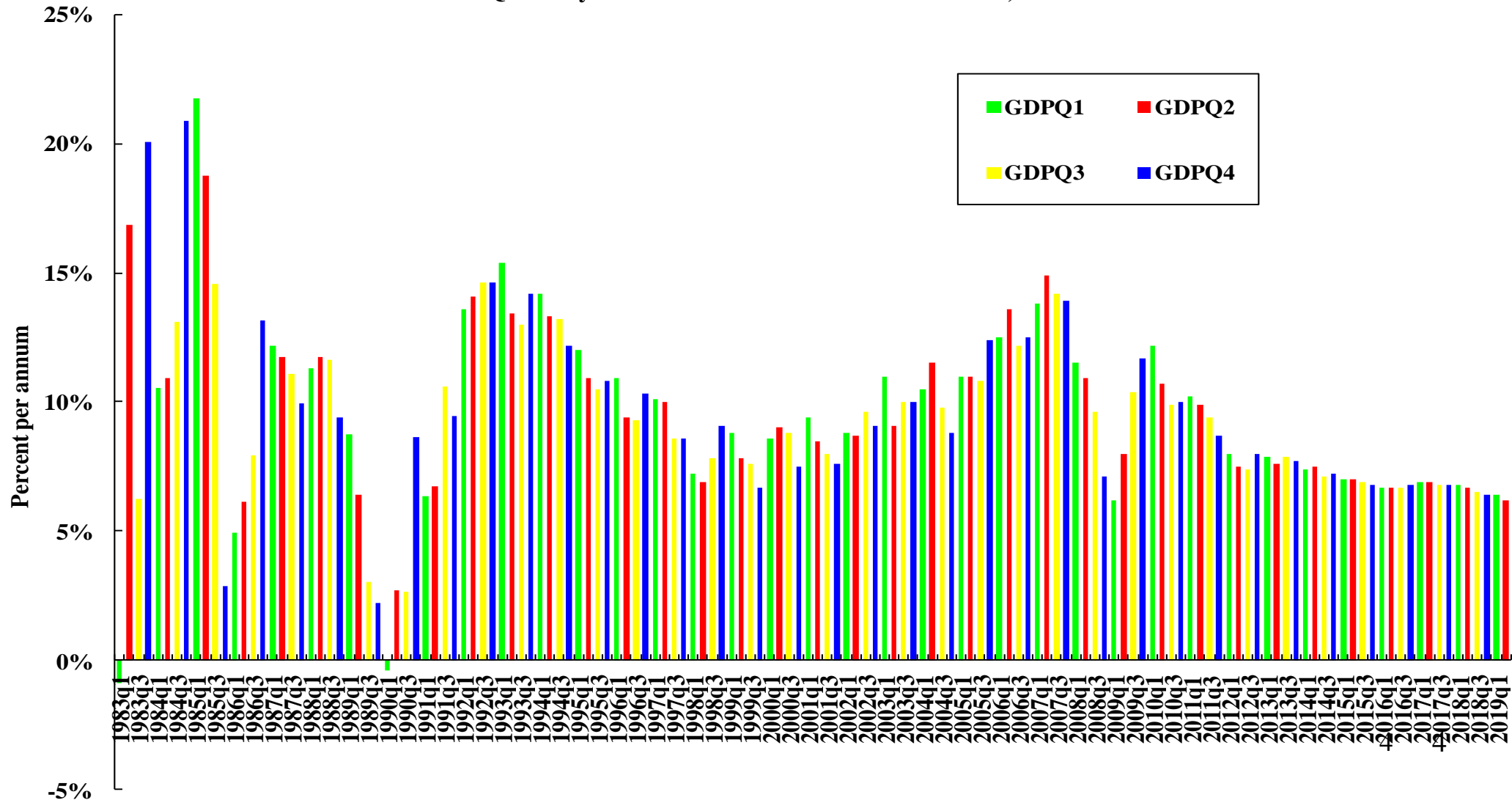
# Introduction

---

- ◆ The China-U.S. trade war actually started in January 2018, even though the first tariffs did not actually take effect until mid-2018. Thus far, the trade war does not seem to have done too much noticeable damage to the Chinese economy.
- ◆ In 2017, the Chinese economy grew 6.8%. In 2018, the Chinese economy grew 6.6%, exceeding the Plan target of 6.5%. For 2019H1, the Chinese economy grew an annualised 6.3%, a decline of 0.5% from 2017.
- ◆ In the following chart, the quarterly rates of growth of Chinese real GDP, year-on-year, are presented in colour-coded columns (light green for first quarter, red for second quarter, yellow for third quarter and blue for fourth quarter). The six quarterly year-on-year rates of growth were, from 2018Q1 through 2019Q2, respectively: **6.8%, 6.7%, 6.5%, 6.4%, 6.4% and 6.2%**. It is clear from the chart that the rate of growth of Chinese real GDP has stabilised--an L-shaped soft landing. The decline in the rate of growth over the six quarters was 0.6%.
- ◆ Overall, there was a decline of between 0.5% and 0.6% in the rate of growth of real GDP. The results also reflected the impacts of the expectation of a trade war since January 2018 and the uncertainty and unpredictability that it created, as well as a full year of U.S. tariffs on Chinese exports of goods to the U.S., in addition to the rise of rates of interest globally until recently.

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

Quarterly Rates of Growth of Chinese Real GDP, Y-o-Y



# Introduction

---

- ◆ However, the 6.3% rate of growth in 2019H1 might have also reflected the (positive) effects of accelerated shipments of Chinese exports of goods to the U.S. in an attempt to beat the imposition and increases of tariffs. The 6.2% rate of growth in 2019Q2 was the lowest rate of growth of Chinese real GDP since 2009Q1, when it also grew 6.2%.
- ◆ The uncertainty and unpredictability created by the trade war have affected both investment, including fixed investment, and consumption negatively, with major decisions being put on hold, especially in the Chinese economy, awaiting a resolution of the trade war.
- ◆ However, this magnitude of the decline in the rate of Chinese economic growth is well within the expected range of the potential negative impact caused by the U.S. tariffs on Chinese exports of goods to the U.S. I predicted that the maximum negative impact to the Chinese economy, assuming that half of Chinese exports to the U.S. are halted, would be 0.45% of GDP in the first instance, and eventually cumulatively 1.2% of GDP if all the indirect effects are included. If all of Chinese exports of goods to the U.S. are halted, the eventual total damage would be 2.4% of GDP.
- ◆ While the impacts on the Chinese economy of the U.S. tariffs have certainly been negative and significant, they are still relatively small in real terms and quite manageable for China. There is no need to panic. The sky is not falling!

# Introduction

---

- ◆ The U.S. economy grew 2.9% in 2018, close to its long-run average of 3%. It grew 3.1% and 2.1% in 2019Q1 and 2019Q2 respectively. The latest forecast made by the U.S. Federal Reserve Board for the rate of growth in 2019 is 2.3%, a decline of 0.6%.
- ◆ the maximum negative impact to the U.S. economy, assuming that half of U.S. exports to China are halted, would be 0.145% of GDP in the first instance, and eventually cumulatively 0.26% of U.S. GDP if all the indirect effects are included. If all of U.S. exports of goods to China are halted, the eventual total damage would be 0.51% of U.S. GDP.
- ◆ However, these estimates do not include U.S. losses of royalties and license fees through the restrictions on Chinese high-technology enterprises from such as Huawei from using U.S. products such as the Android operating system of Google.

# Introduction

---

- ◆ The Chinese economy is sufficiently flexible and resilient that it will be able to adopt appropriate measures, survive the negative impacts, and maintain significant positive economic growth. For example, it can increase domestic aggregate demand by mandating the enhanced provision of public goods such as environmental preservation, protection and restoration, education, health care and elderly care.
- ◆ Chinese enterprises such as Huawei have also developed alternatives to U.S. technology products. For example, Huawei has launched the Harmony (Hongmeng) operating system to replace the Android operating system in its cellphones.
- ◆ But even if the trade war, or at least the mutual tariffs, end, hopefully soon, economic and technological competition between China and the U.S. is likely to continue for a long time. It will become the “new normal”. Moreover, the trade war itself may do damage to the longer-term relations between the two countries.
- ◆ It is also a reflection of the rise of populism, isolationism, nationalism and protectionism almost everywhere in the world, including in the U.S.

# Introduction

---

- ◆ The chronically large China-U.S. bilateral trade surplus is the proximate cause of the current China-U.S. trade war, but there are other underlying economic, technological and geo-political causes as well.
- ◆ We begin by summarizing the chronology of the China-U.S. trade war.
- ◆ However, the two countries do not even agree on the size of the bilateral trade surplus. We shall show that the China-U.S. trade surplus, correctly measured, is not as large as it is made out to be, but is nevertheless still a large number.
- ◆ We then show that the gross value of the bilateral trade surplus does not reflect the relative benefits of the bilateral trade to the two trading-partner countries. Instead, we should look at the value-added (GDP) and employment generated directly and indirectly by the bilateral exports.
- ◆ In terms of both direct, indirect and total value-added generated by the exports of goods to each other, the China-U.S. bilateral gap is much smaller than that measured in terms of gross value of exports, and it appears feasible to close the gap with coordinated expansion of trade between the two economies.



# Introduction

---

- ◆ We then analyse the real impacts of the mutual tariffs on the two economies. When two countries trade, they both benefit in the aggregate because their choice sets are enlarged. Thus, economic welfare must rise in both countries. A country always loses when it restricts its own choice set. Its aggregate welfare will decline. But their trading-partner country will also lose.
- ◆ However, it is also inevitable that there will be economic, technological and geo-political competition between China and the U.S., the two largest economies in the world.
- ◆ We identify the economic complementarities between China and the U.S. The potential benefits from bilateral trade are higher when the two economies are more different.
- ◆ We then discuss the possibility of coordinated expansion of trade that can be win-win for both countries and consider how mutual economic interdependence can and should be enhanced.
- ◆ Finally, we discuss some Chinese economic policy options in the light of the trade war.
- ◆ Brief concluding remarks are made at the end.

# The Chronology of the Trade War

---

- ◆ The trade war began in March 2018 with a Section 301 investigation of China by the U.S. Government, which resulted in a 25% tariff on US\$50 billion worth of Chinese exports of goods to the U.S.
- ◆ China retaliated with a tariff on US\$50 billion of U.S. exports to China in June 2018.
- ◆ In September 2018, the U.S. imposed 10% tariff on US\$200 billion of Chinese exports of goods to the U.S. and China announced a 5%-10% tariff on US\$60 billion of U.S. exports to China.
- ◆ On 10 May 2019, the 10% tariff rate on the US\$200 billion of Chinese exports was raised to 25%. However, the marginal effect of this increase in the tariff rate from 10% to 25% is not likely to be large because the 10% tariff rate is already high enough to be almost prohibitive for most Chinese exports to the U.S. There simply is not that kind of profit margin for such exports to for the tariffs to be absorbed by the Chinese manufacturers and exporters.

# The Chronology of the Trade War

---

- ◆ Tariffs at a rate of 10% on the remaining approximately US\$300 billion of Chinese exports of goods to the U.S. were ordered by President Donald Trump to take effect on 1 September 2019.
- ◆ This last batch of Chinese exports to the U.S. consist of products such as the Apple iPhones (around US\$50 billion), personal computers, garments and shoes and packaged re-exports of semi-conductors. The incidence of the tariffs will be mostly borne by U.S. enterprises and households including Apple Inc. (One incidental and unintended beneficiary will be Samsung of South Korea whose Galaxy cellphones compete with the Apple iPhones and they are not subject to the new tariffs on U.S. imports from China.)

# The Chronology of the Trade War

---

- ◆ However, on 13 August, U.S. President Donald Trump announced that the tariff will be delayed until 15 December on goods such as cellphones, laptop computers, shoes and toys, amounting to approximately US\$160 billion, so as not to affect the Christmas shopping season. The tariff was dropped altogether on 25 types of products “based on health, safety, national security and other factors”.
- ◆ On 23 August 2019, it was announced that the 10% and 25% tariff rates would be raised by 5% to 15% and 30% respectively on 1 October 2019.
- ◆ However, as a gesture of goodwill, the U.S. has postponed the 5% increase in the tariff rates to 15 October 2019.

# The Chronology of the Trade War

---

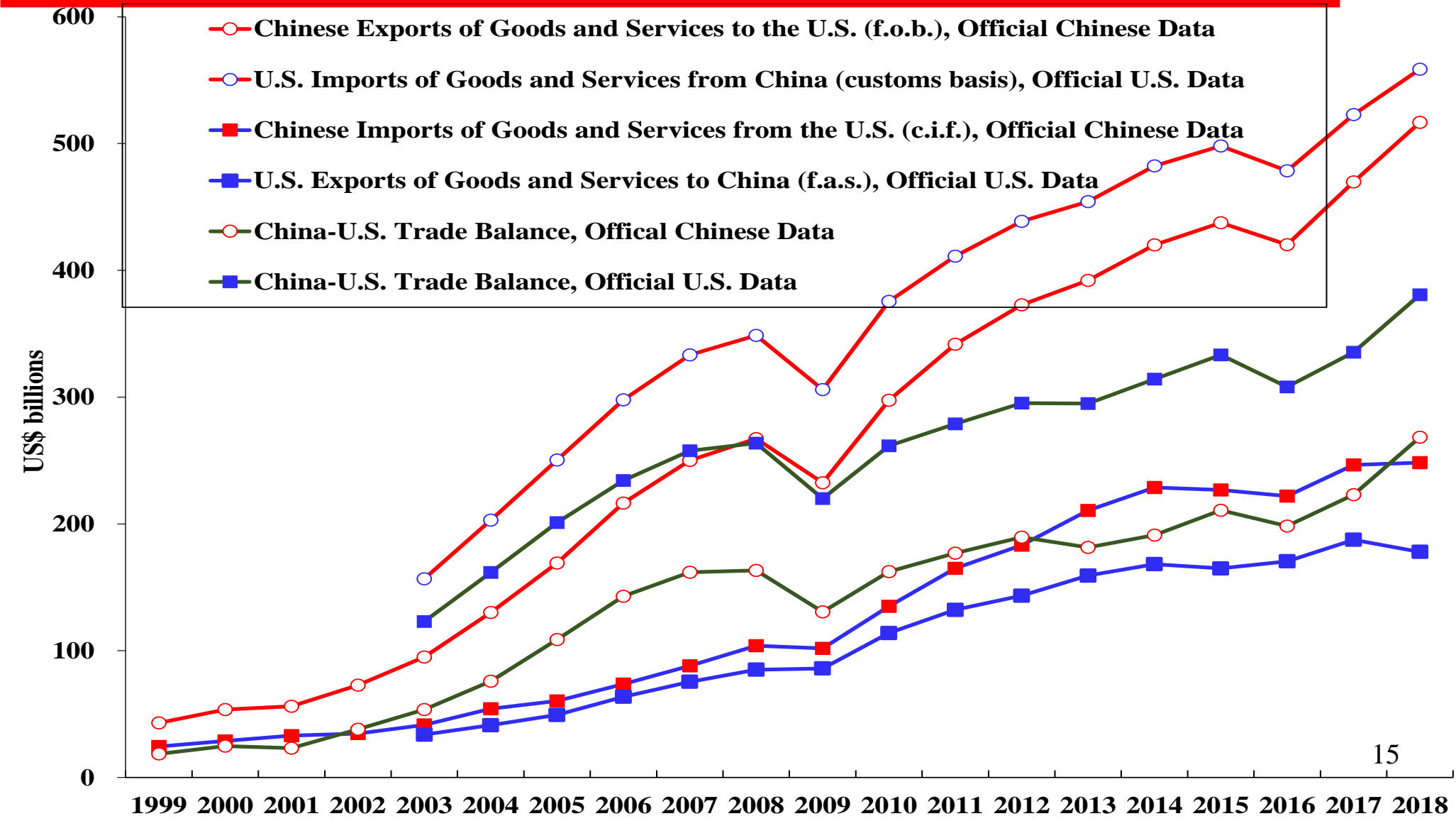
- ◆ Chinese tariffs, with rates up to 25%, have also been imposed on US\$110 billion of U.S. exports of goods, with \$75 billion of which subject to increased tariffs on 1 October.
- ◆ However, on 11 September, the Chinese Government announced an exemption of Chinese tariffs on 16 types of U.S. goods including cancer drugs, lubricant oils and some specialty chemicals, for one year beginning on 17 September.
- ◆ Moreover, on 13 September the Chinese Government announced an exemption from tariffs for pork, soybeans and other agricultural imports from the U.S. and signalled that Chinese enterprises would be making large purchases of both pork and soybeans from U.S. suppliers. Subsequently there have been reports that actual purchases have been made by Chinese enterprises.
- ◆ The Chinese and U.S. teams are scheduled to resume their negotiations in Washington, D.C. in early October. Lower-level teams have already started their negotiations.

# The Different Measurements of the Bilateral Trade Balance

---

- ◆ In 2018, despite the trade war and the slight devaluation of the Renminbi, Chinese exports of goods to the U.S. actually increased by 11.3% to US\$478 billion, in part because of the acceleration of exports in anticipation of the imposition and increases of tariffs. U.S. exports to China actually declined by 7.3% to US\$121 billion, reflecting the Chinese tariffs on U.S. agricultural commodities as well as U.S. restrictions on high-technology exports.
- ◆ The official U.S. estimate of the U.S.-China trade deficit in goods only in 2018 is US\$419.6 billion, an increase from US\$375.8 billion in 2017. The official Chinese estimate of the bilateral trade surplus is US\$323.3 billion, an increase from US\$275.8 billion. There is a difference between the Chinese and U.S. estimates of almost US\$100 billion.
- ◆ However, these numbers suffer from a number of imperfections and are not directly comparable.

# The Different Measurements of the Bilateral Trade Balance



# The Different Measurements of the Bilateral Trade Balance

---

- ◆ First, exports of goods are measured by the exporting country as either f.o.b. (free on board) or f.a.s. (free alongside ship), and imports of goods as c.i.f. (cost, insurance and freight) or customs basis, so that the measured imports of the importing country is always larger than the measured exports of the exporting country. Even if the exports of both countries to each other are exactly the same, they will both show a bilateral trade deficit. There is therefore **a built-in bias** for a bilateral deficit with the conventional measurements of exports and imports.
- ◆ Moreover, insurance and freight are frequently provided by firms of third countries and should not be attributed to the exporting country.
- ◆ It is therefore more accurate to measure the bilateral trade surplus using only bilateral data on exports, f.o.b.
- ◆ If the bilateral trade deficit is calculated based on bilateral exports data only, f.o.b., the China-U.S. bilateral trade surplus in 2018 would be **US\$356.4 billion**, smaller than the official U.S. estimate of US\$419.6 billion and larger than the official Chinese estimate of US\$323.3 billion.



# The Different Measurements of the Bilateral Trade Balance

---

- ◆ Second, the official trade data do not necessarily include re-exports via third countries and customs territories such as Hong Kong. This applies to both re-exports of Chinese goods to the U.S. and re-exports of U.S. goods to China through Hong Kong and other non-Chinese and non-U.S. ports.
- ◆ The U.S. trade statistics classify re-exports of Chinese goods through third countries and regions as imports from China, quite properly so. However, they do not include re-exports of U.S. goods to China through third countries and regions as U.S. exports to China. Similarly, the Chinese trade statistics do not include re-exports of Chinese goods to the U.S. through third countries or regions but appear to include re-exports of U.S. goods to China.

# The Different Measurements of the Bilateral Trade Balance

---

- ◆ We estimate the extent of re-exports by comparing the imports data of each country with the exports data of the other, taking into account the value of insurance and freight. We find that in recent years, the measured imports of a country, minus an allowance for insurance and freight, almost always exceed the corresponding measured exports from the other country. Their difference provides an estimate of the gross value of re-exports. (The re-exports thus estimated may be under-estimated as there may be an incentive for importers to under-invoice imports in order to avoid or reduce tariffs.) These estimates are compared to re-exports data of Hong Kong and are broadly consistent in recent years.
- ◆ If the estimated bilateral re-exports of goods are added to the exports on an f.o.b. basis, the bilateral trade deficit may be estimated to be **US\$350.9 billion** compared with US\$356.4 billion not including the re-exports. Re-exports are no longer an important factor in China-U.S. bilateral trade as they were at one time.

# The Different Measurements of the Bilateral Trade Balance

---

- ◆ Third, the bilateral trade data often do not include trade in services, in which the U.S. has a significant surplus estimated to be **US\$38.8 billion** in 2018 by the U.S. and **US\$54 billion** by China for 2017 (Chinese data for 2018 apparently have not been released). U.S. exports of educational services alone was US\$44.7 billion in 2018. In fact, some U.S. higher educational institutions have purchased insurance against a decline in tuition revenue from students from China (Financial Times, 11 September 2019, p. 4).
- ◆ If the bilateral trade deficit is calculated for goods and services combined, the official U.S estimate of the China-U.S. bilateral trade surplus is US\$380.8 billion, smaller than the official U.S. estimate of US\$419.6 billion for goods only; the “official” Chinese estimate of the China-U.S. bilateral trade surplus is US\$268.4 billion and smaller than the official Chinese estimate of US\$323.3 billion for goods only. (The Chinese bilateral service trade figures for 2018 are estimated by the author. They are assumed to have grown at the same rate as the official U.S. bilateral data.)
- ◆ However, there exist large differences between the official Chinese and U.S. estimates of the exports of services to and imports of services from each other.

# The Different Measurements of the Bilateral Trade Balance

---

- ◆ We make two alternative calculations involving trade in services, using different assumptions. First, we use official U.S. estimates of the bilateral trade flows in services. The resulting estimate of the U.S.-China overall trade deficit in goods, including re-exports, and services combined in 2018 may be estimated as US\$312.1 billion.
- ◆ Second, we use the reported service imports data of the importing country, on the grounds that they are more reliable than the service exports data. The resulting estimate of the U.S.-China overall trade deficit may be estimated as US\$276.0 billion.
- ◆ These are still large numbers, but smaller than the often-mentioned U.S. official estimate of the bilateral trade deficit in goods only of US\$419.6 billion by between one-quarter and one-third, and even smaller than the Chinese official estimate of US\$323.3 billion for goods only.

# The Different Measurements of the Bilateral Trade Balance: A Summary

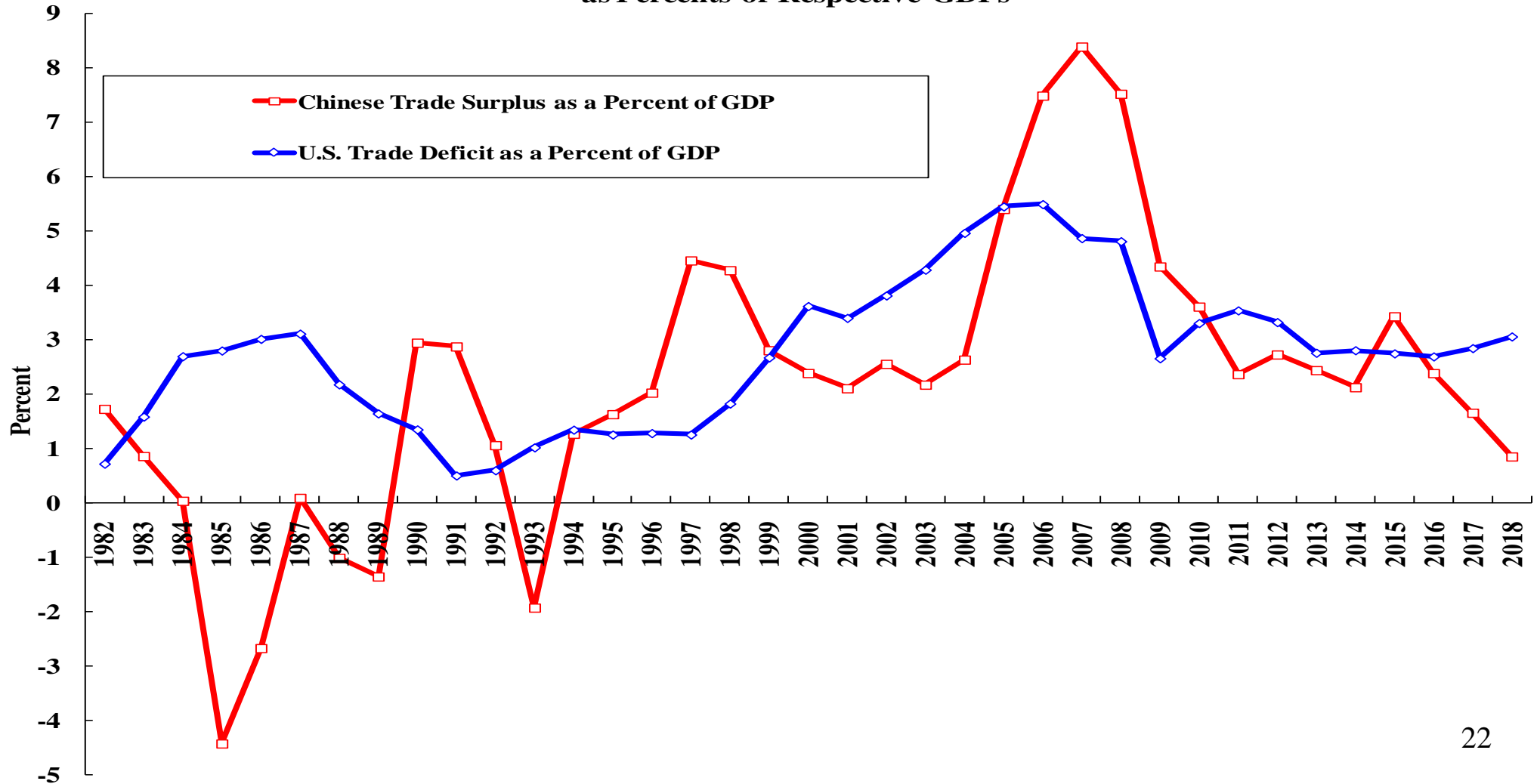
---

## Summary of Different Measurements of the China-U.S. Trade Balance

<b>Measurement</b>	<b>Official Chinese Estimates</b>	<b>Our Estimates</b>	<b>Official U.S. Estimates</b>
<b>Goods Only (FOB-CIF)</b>	<b>323.3</b>		<b>419.6</b>
<b>Goods Only FOB</b>		<b>356.4</b>	
<b>Goods and Services</b>	<b>268.4</b>		<b>380.8</b>
<b>Goods, including Re-Exports, FOB</b>		<b>350.9</b>	
<b>Goods, including Re-Exports, FOB, and Services (U.S. Data)</b>		<b>312.1</b>	
<b>Goods, including Re-Exports, FOB, and Services (Imports)</b>		<b>276.0</b>	21

# Chinese Trade Surplus and U.S. Trade Deficit in Goods and Services as Percents of Respective GDPs

Annual Chinese Trade Surplus and U.S. Trade Deficit in Goods and Services as Percents of Respective GDPs



# The Relative Benefits from the Bilateral Trade

---

- ◆ However, the gross value of exports does not reflect accurately the real benefits of exports to the exporting country. What really matters is the GDP created by the exports, that is, the domestic value-added created by the exports, directly and indirectly. (The employment and GNP generated by the exports are also important.)
- ◆ As an example, consider the Apple iPhone, an export of China since it is finally assembled by Foxconn (Hon Hai Precision Industry Co., Ltd. of Taiwan) in China. The value of an iPhone is at least US\$600 whereas the Chinese domestic value-added is less than US\$20, with a direct value-added content of at most 3.3%. (The GNP generated is even lower since Foxconn is not a Chinese company.)

# The Relative Benefits from the Bilateral Trade

---

- ◆ The average direct domestic value-added content of Chinese exports of goods to the U.S. is 24.8%, so that US\$100 billion worth of Chinese exports to the U.S., f.o.b., generates directly no more than US\$24.8 billion of Chinese GDP.
- ◆ However, the reduction of exports leads to a reduction in the demands for domestic inputs used in their production and the demands for consumption goods by the workers in the exporting industry, which in turn lead to a second-round reduction in the demands for domestic inputs used in the production of the domestic inputs and demands for domestic final consumption.
- ◆ With the indirect, that is, second-, third-, fourth- and higher-round effects of the reduction of Chinese exports kicking in, the total domestic value-added affected will eventually increase to 66% cumulatively, with the indirect value-added content being 41%.



# The Relative Benefits from the Bilateral Trade

---

- ◆ The average direct domestic value-added content of U.S. exports of goods to China may be estimated to be 50.8%. Including all the indirect, that is, second-, third-, fourth- and higher-round effects of the reduction of U.S. exports of goods, the total domestic value-added affected increases to 88.7% cumulatively, with the indirect value-added content being 37.9%.
- ◆ Using these estimates of the domestic value-added contents of Chinese and U.S. exports of goods to each other, the U.S.-China trade deficit in goods and services combined in terms of total value-added may be estimated as US\$161 billion in 2018, less than 40 percent of the often-mentioned U.S.-China trade deficit in goods only of US\$419.6 billion. (The value-added content of exports of services is taken to be 100%.)
- ◆ This value-added deficit can be closed with an increase in U.S. exports of goods to China of a gross value of US\$181 billion (based on an average total value-added content of 88.7%), which is feasible within a few years as discussed below.
- ◆ We also note that this figure is based on the official U.S. estimate of its exports of services to China of US\$57.2 billion in 2018. An estimate of U.S. exports of services to China based on past Chinese trade data is approximately US\$93 billion in 2018, which would reduce the value-added gap to approximately US\$125 billion.

# The Relative Benefits from the Bilateral Trade in Terms of Value-Added: A Summary

---

## Summary of Comparisons of Relative Benefits

Measurement	China	The U.S.	Difference
Direct Value-Add	159.8	128.6	31.2
Indirect Value-Added	240.2	110.5	129.8
Total Value-Added	400.0	239.1	161.0

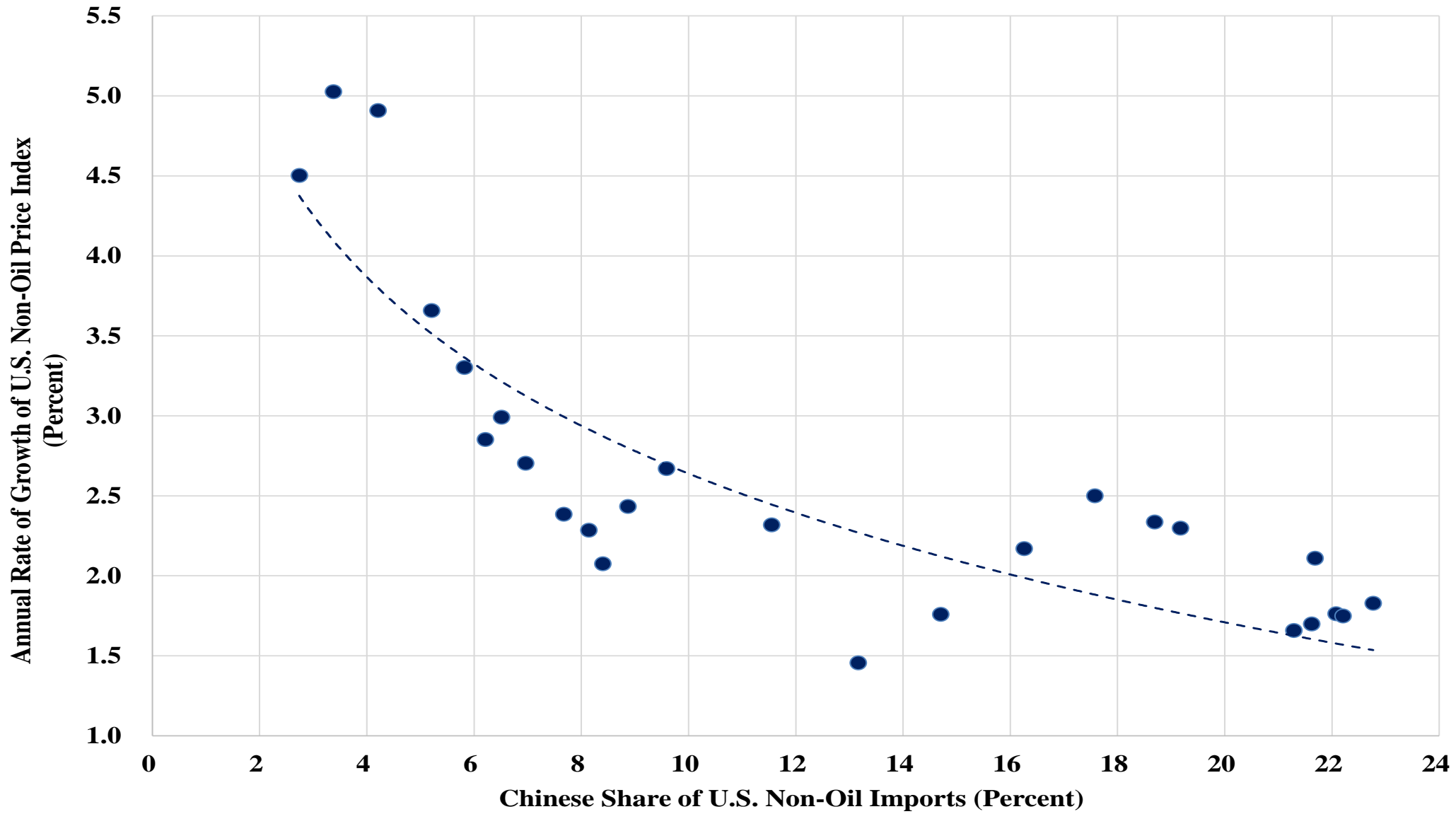
# The Relative Benefits from the Bilateral Trade

---

- ◆ It is difficult to assess which country has benefitted more from their economic relations. China has been able to lift 740 million of its citizens out of poverty, initially through the vast expansion of export-oriented jobs in China that resulted from China's opening up to international trade and direct investment and accession to the World Trade Organisation (WTO) in 2001.
- ◆ However, the U.S. consumers have benefitted from two decades of low prices for their consumer goods. Had U.S. imports from China stayed at 1994 levels, the U.S. Consumer Price Index would have been 27 percent higher in 2017, or approximately 1 percentage point higher annually (see the following chart).
- ◆ Additional benefits for the U.S. include the profits of U.S. corporations earned by their operations within China, such as General Motors, Walmart and Starbucks, as well as the sales of Apple i-phones, which, since they are finally assembled within China, are not considered U.S. exports to China.
- ◆ Also not included as income earned by U.S. nationals from China are Chinese royalty and license fee payments to subsidiaries of U.S. high-technology firms such as Apple Inc. and Qualcomm in third-country tax havens such as Ireland and the Netherlands.
- ◆ This also does not include the benefits that the U.S. has derived from seigneurage, that is, from being the monopolist provider of the international medium of exchange for Chinese international transactions. China is among the largest foreign holders of U.S. government bonds and agency securities.

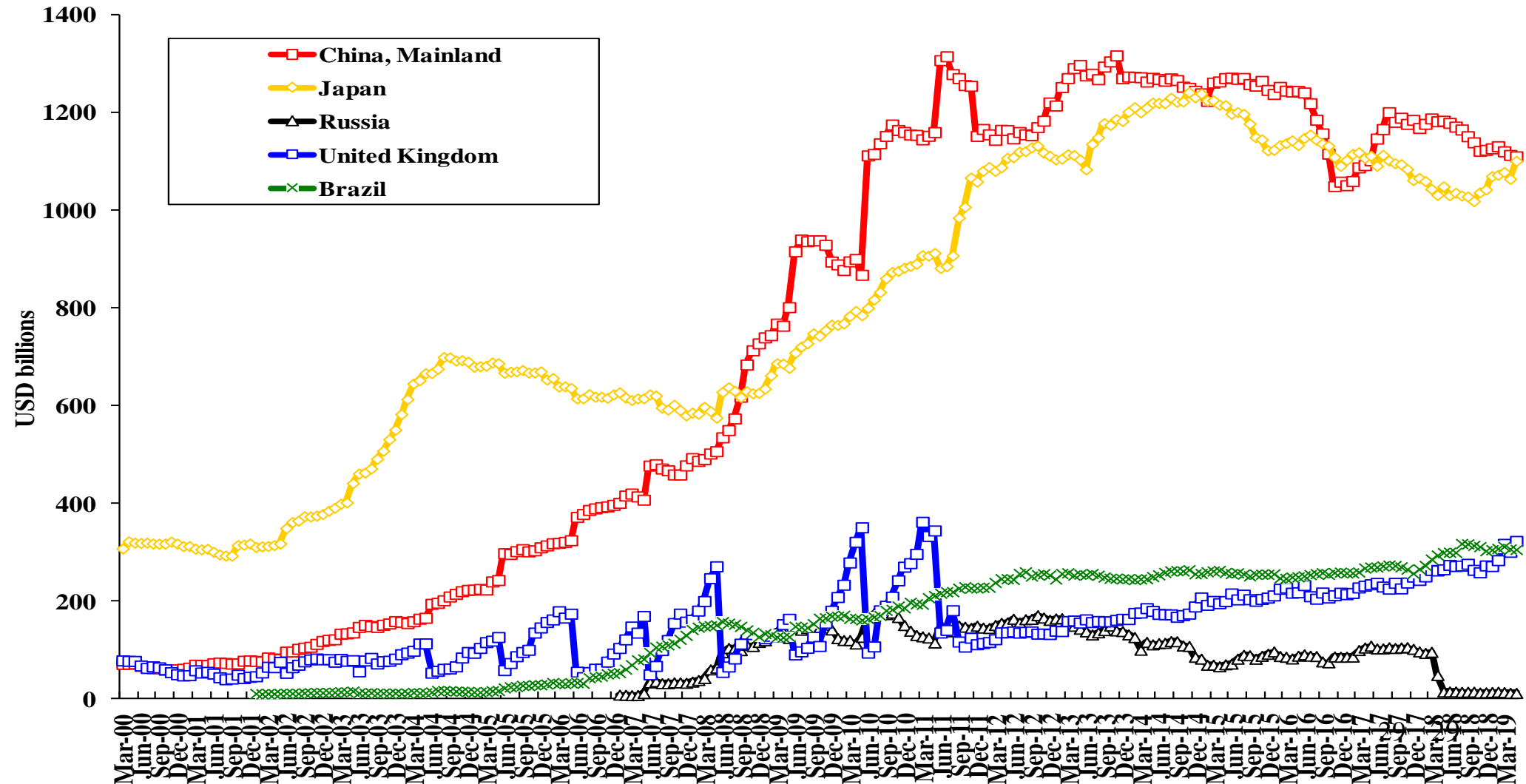
# The Rate of Growth of US Non-Oil Price Index and the Chinese Share of Non-Oil Imports

---



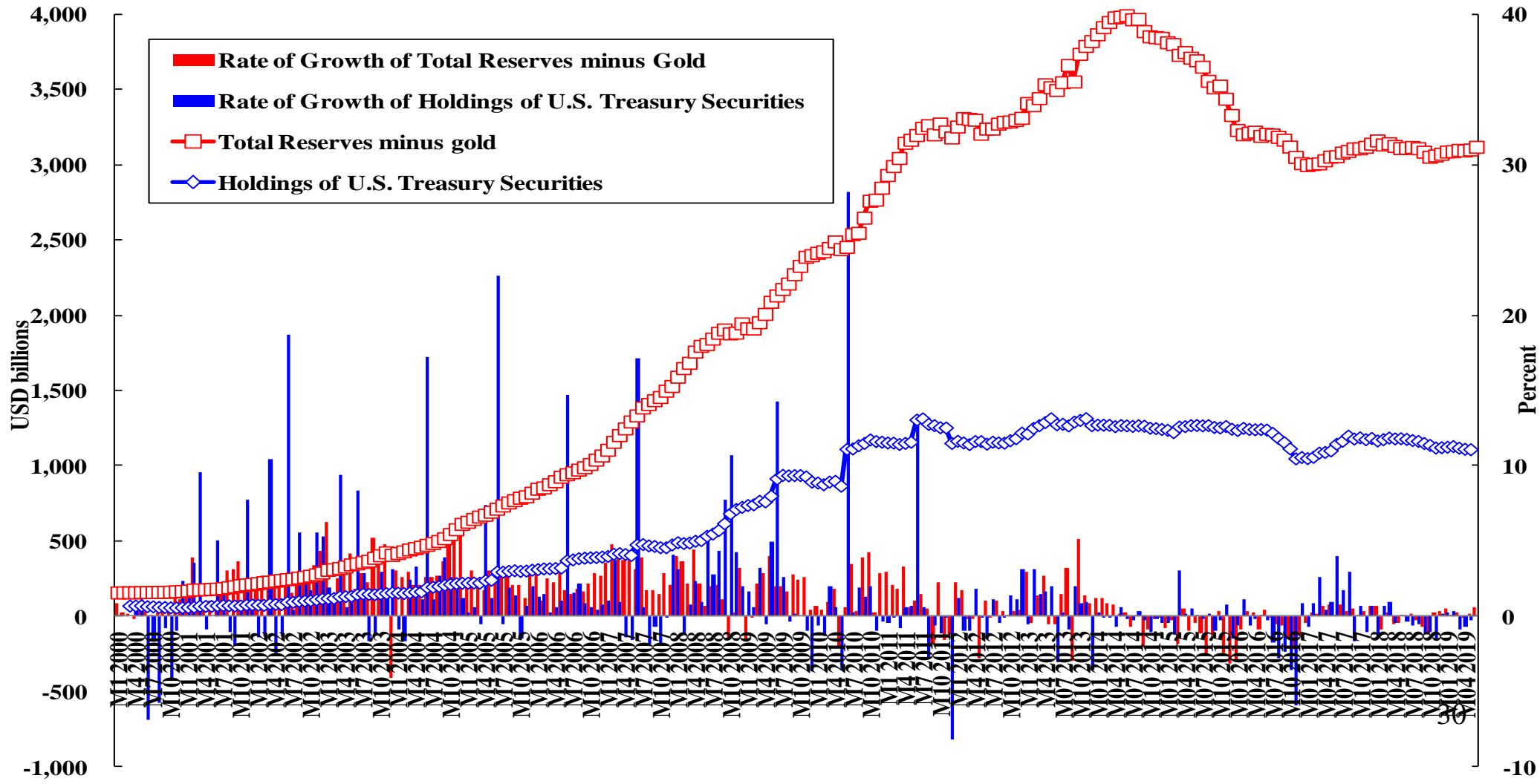
# Major Foreign Central Banks' Holdings of U.S. Treasury Securities

Major Foreign Central Bank's Holders of U.S. Treasury Securities



# Chinese Foreign Exchange Reserves and Holdings of U.S. Treasury Securities and Their Growth Rates, Month-over-Month

Chinese Foreign Exchange Reserves and Holdings of U.S. Treasury Securities and Their Growth Rates, Month-over-Month



# The Immediate Impacts of the China-U.S.

## Trade War

---

- ◆ The Chinese stock markets have already taken a hit. This is an area where the psychological factor dominates. As of the end of 2018, the shares on the Shenzhen Stock Exchange had on average lost 30%, Shanghai 20%, and Hong Kong 10%. In contrast, the Standard and Poor 500 Index of U.S. stocks did not suffer any loss on a whole-year (2018) basis.
- ◆ It should also be borne in mind that the increase in the rates of interest in the U.S. and elsewhere in 2018 would also have affected asset prices around the world negatively, so it was not solely the effect of the China-U.S. trade war.
- ◆ At the beginning of 2019, the Chinese stock market continued to fall, until the latter part of January, then it began to rise, buoyed by hopes of a successful conclusion of a China-U.S. trade agreement. However, since May 2019, it has become quite volatile, reflecting the progress or lack thereof of the trade negotiations, reacting to every trade-related tweet of President Donald Trump.
- ◆ The Standard and Poor 500 Index also fell at the beginning of 2019, but has also recovered and showed a gain of approximately 10% from the beginning of 2018. However, it has experienced volatility similar to the Chinese stock market price indices more recently.

# The Chinese, Hong Kong and U.S. Stock Market Indexes, 2018M1 to Date

Stock Price Indices of Various Stock Exchanges, 1 January 2018 = 100



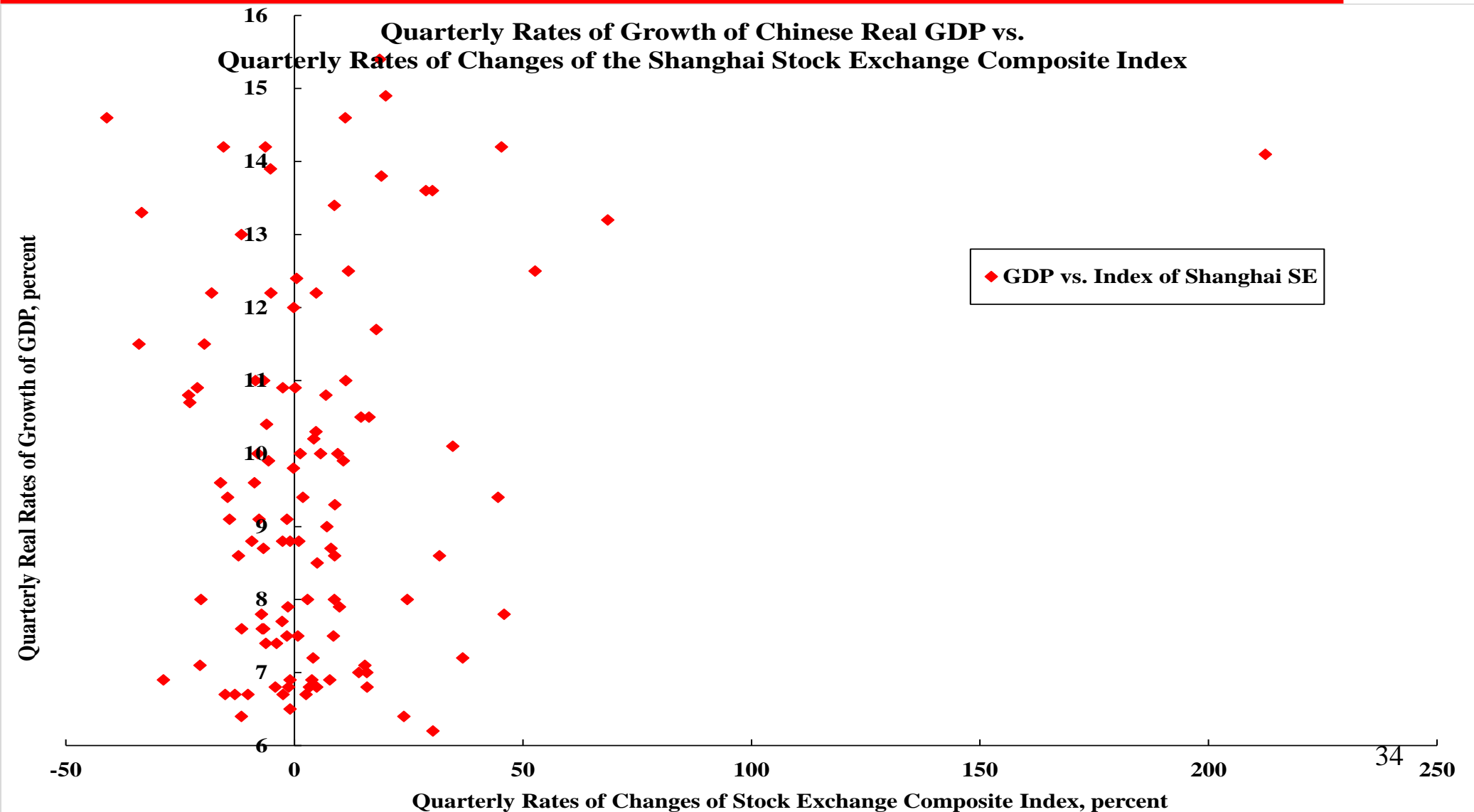


# The Immediate Impacts of the China-U.S. Trade War

---

- ◆ However, the Chinese stock markets are not a good barometer of the state of the Chinese real economy. There is essentially no correlation between the rate of growth of Chinese real GDP and the rate of growth of the Chinese stock market price index (see the following scatter diagram between the quarterly rates of growth of Chinese real GDP and the Shanghai Stock Exchange Composite Index).
- ◆ The majority (over 80%) of Mainland Chinese investors are individual retail investors. They are typically short-term traders who tend to leave the market at the first sign of potential trouble. The average holding period of individual Chinese investors is less than 20 trading days. The Chinese institutional investors have a slightly longer average holding period of between 30 and 40 trading days.
- ◆ The short holding period is due in part to the fact that Chinese publicly listed enterprises pay little or no cash dividends. Investors can make money only through frequent trading and have little incentive to hold a particular stock long term.

# The Quarterly Rates of Growth of Chinese Real GDP versus the Chinese Stock Price Index



# The Immediate Impacts of the China-U.S.

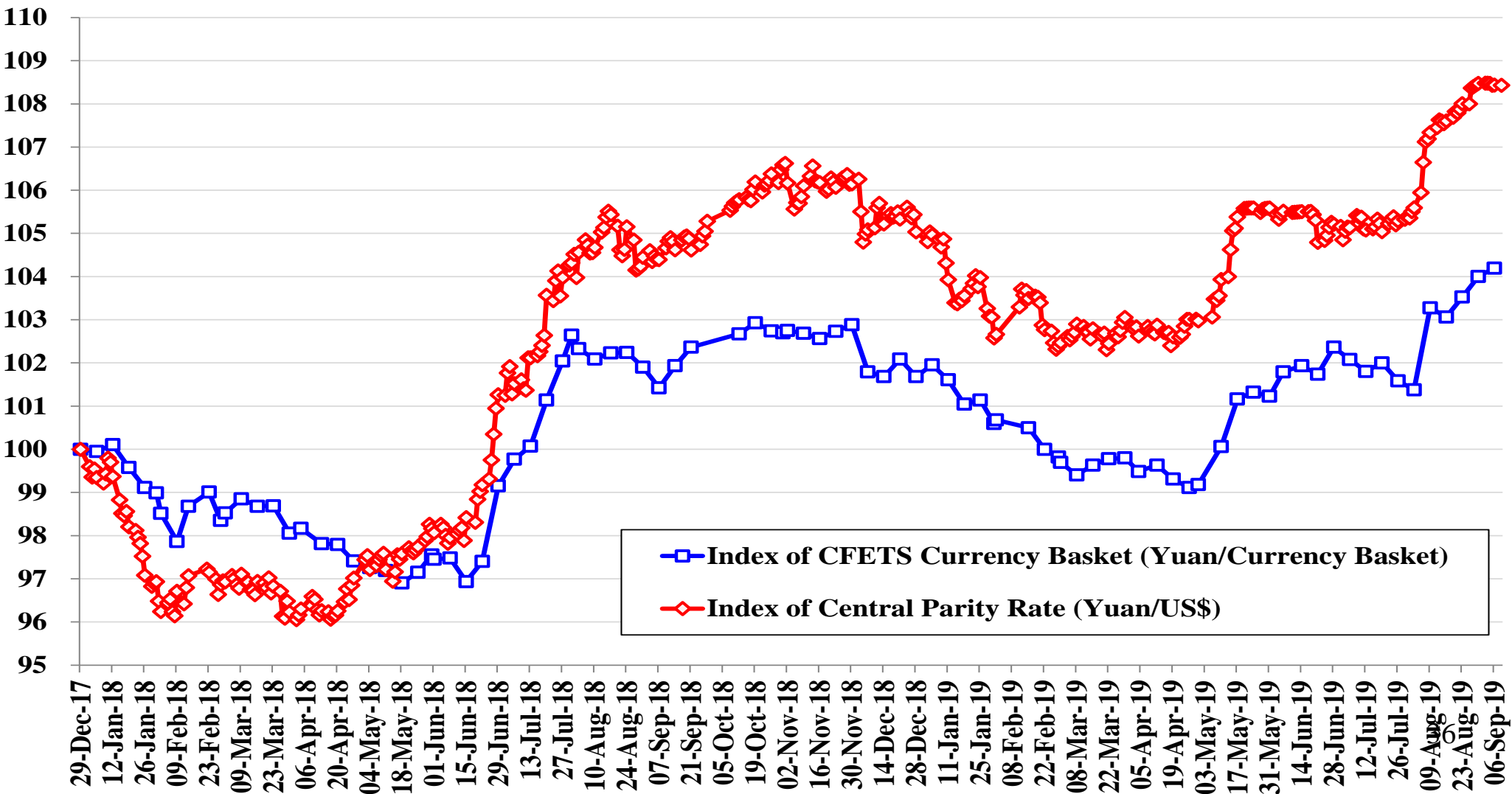
## Trade War

---

- ◆ The Renminbi exchange rate has also been affected by the trade war. Since the beginning of the trade war, the Renminbi devalued by approximately 8% relative to the US\$ (at one time almost 10%).
- ◆ However, relative to the CFETS (China Foreign Exchange Trade System) Index, which tracks the exchange rate of a Chinese trade-weighted basket of currencies, the onshore Renminbi central parity rate has only devalued by approximately 4%. Our focus should be on the onshore central parity rate rather than the offshore rate and on its relation to the CFETS Index.
- ◆ The Renminbi does not follow the US\$ any more because the U.S. accounts for only slightly more than 20% of Chinese international trade. For the Renminbi to follow the US\$ when the US\$ rises with respect to other currencies implies that China will raise its price of exports to all its other customers that account for almost 80% of its exports, which makes very little sense. Similarly, when the US\$ falls with respect to other currencies, if the Renminbi follows the US\$, it will imply that China will lower the price of its exports to all its other customers, which also makes little sense.<sup>35</sup>

# The RMB Central Parity Exchange Rate and the CFETS Index, 29/12/2017 to the Present

The Central Parity Rate and the CFETS Index, 29 Dec. 2017 = 100



# The Immediate Impacts of the China-U.S.

## Trade War

---

- ◆ Maintaining the relative stability of the Renminbi exchange rate with respect to the exchange rate of a Chinese trade-weighted basket of currencies, tracked by the CFETS (China Foreign Exchange Trade System) Index, implies that the Renminbi exchange rate vis-a-vis the currency of an average trading-partner country of China will be relatively stable and that the international purchasing power of the Renminbi will also be relatively stable.
- ◆ By following the CFETS Index rather than the US\$, the Renminbi exchange rate will be less volatile than the US\$ exchange rate when viewed from the perspective of a third country. The Renminbi exchange rate will move, in general, in the same direction as the US\$ but by a smaller amount. This means that when the US\$ appreciates with respect to other currencies, the Renminbi will devalue relative to the US\$, and when the US\$ devalues with respect to other currencies, the Renminbi will appreciate relative to the US\$ .
- ◆ It is in China's interests to maintain a relatively stable Renminbi exchange rate. It is the only way for the internationalisation of the Renminbi to become a reality eventually. China today has an approximate overall balance between total exports and imports of goods and services and it has ample official foreign exchange reserves and no major exchange rate adjustment is necessary.

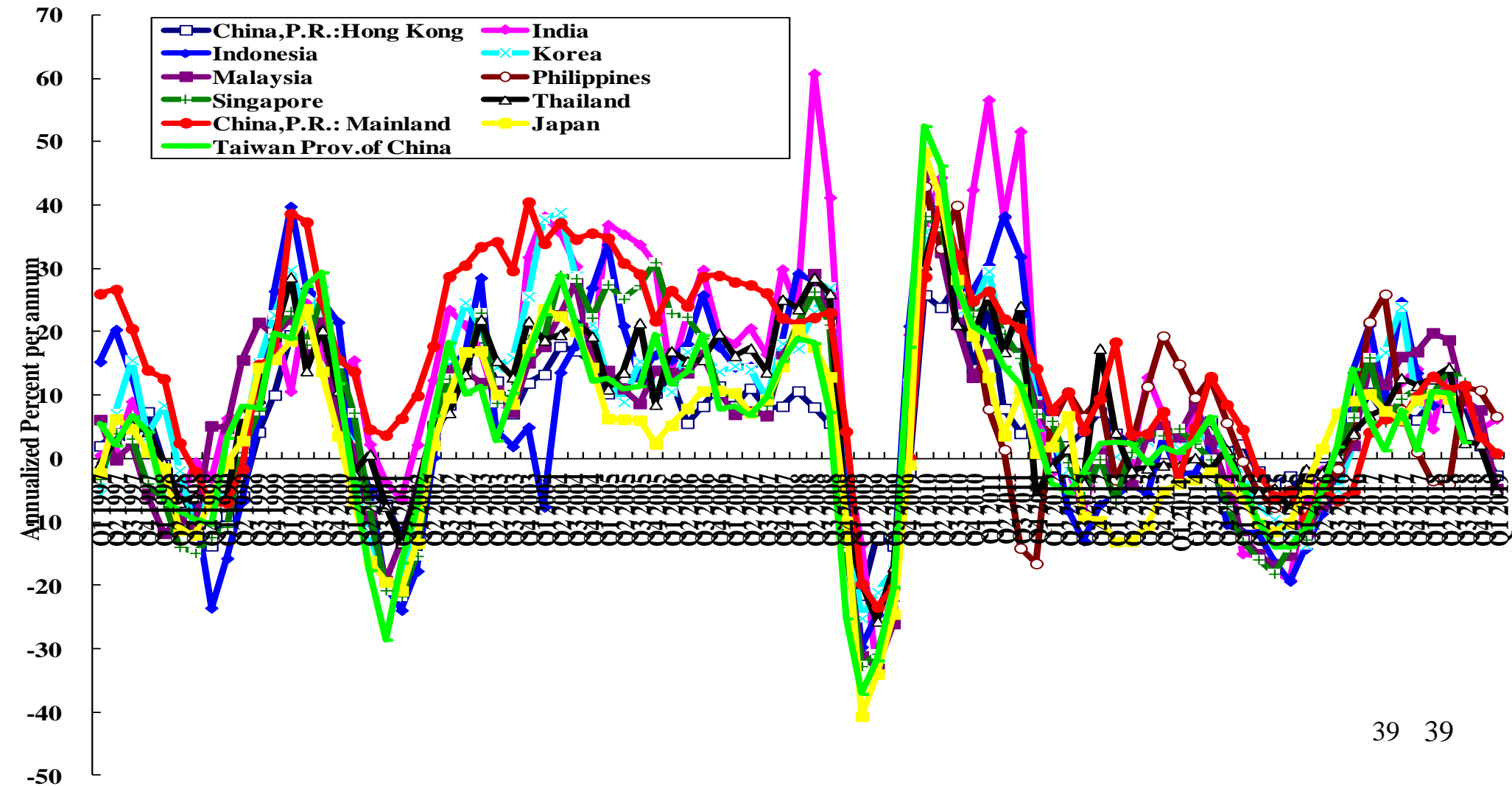
# The Real Impacts of the Mutual Tariffs on the Two Economies

---

- ◆ China, as a large continental economy with its own huge domestic market, has a relatively low degree of export dependence, and has always been relatively immune to external disturbances, just like the U.S.
- ◆ During the past decades, while the rates of growth of Chinese exports and imports of goods fluctuate like those of all other economies, the rate of growth of Chinese real GDP has remained relatively stable, and in fact has always stayed positive. (See the following charts which display the quarterly rates of growth of exports, imports and real GDP of selected Asian economies from 1997 to the present, with China represented by the red line).

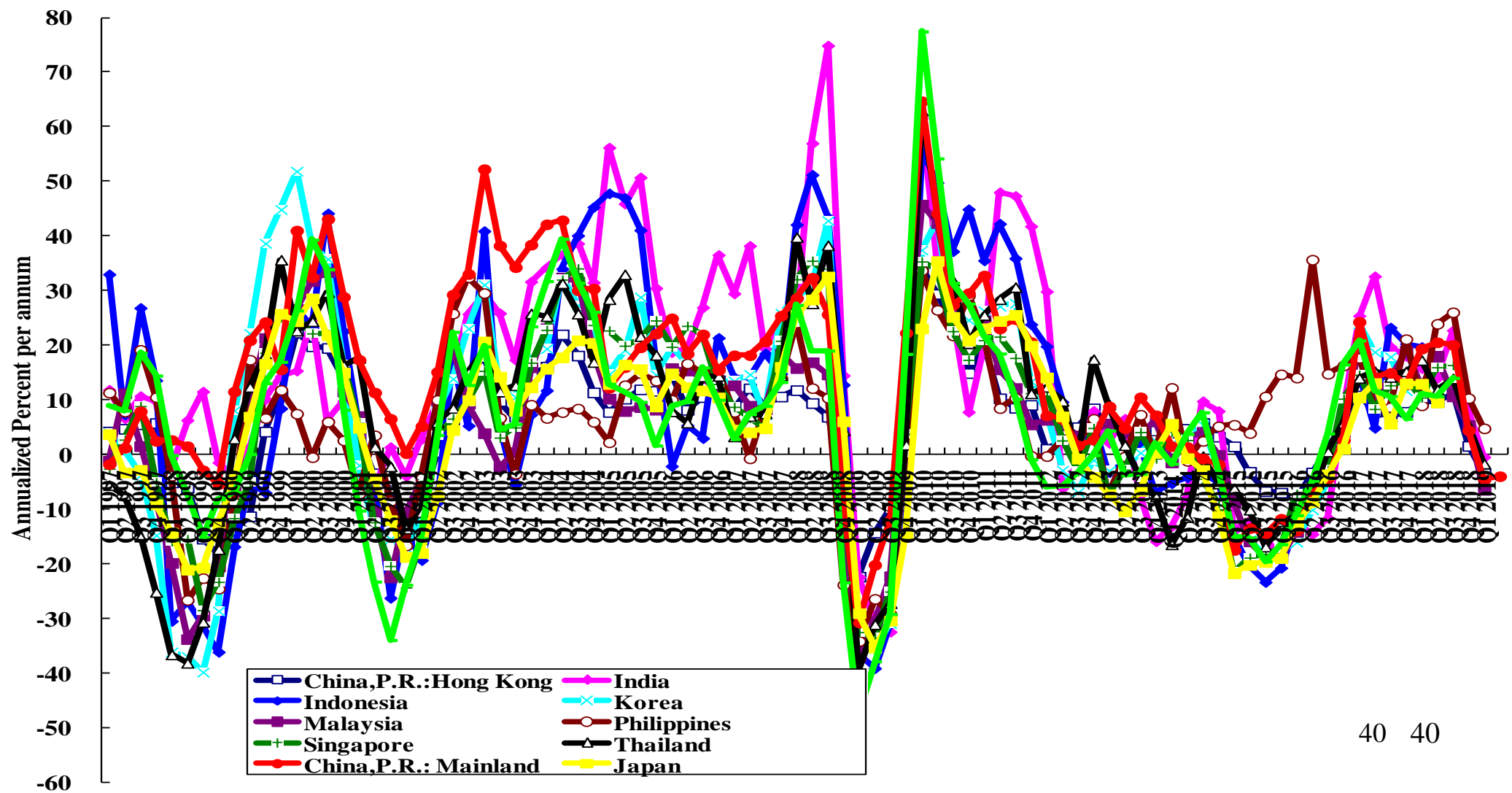
# Quarterly Rates of Growth of Exports of Goods: Selected Asian Economies

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



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

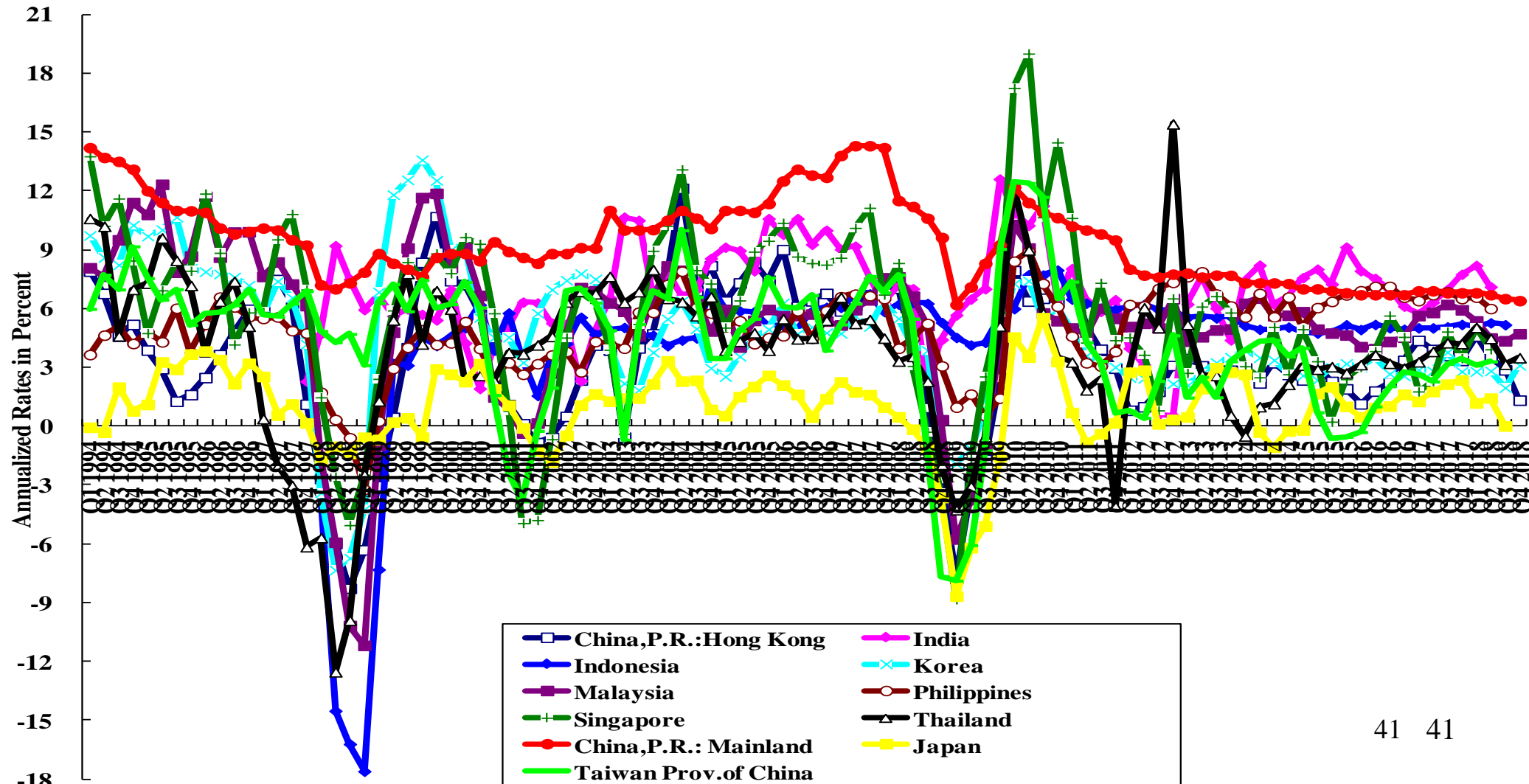
Quarterly Rates of Growth of Imports of Goods : Selected East Asian Economies





# 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

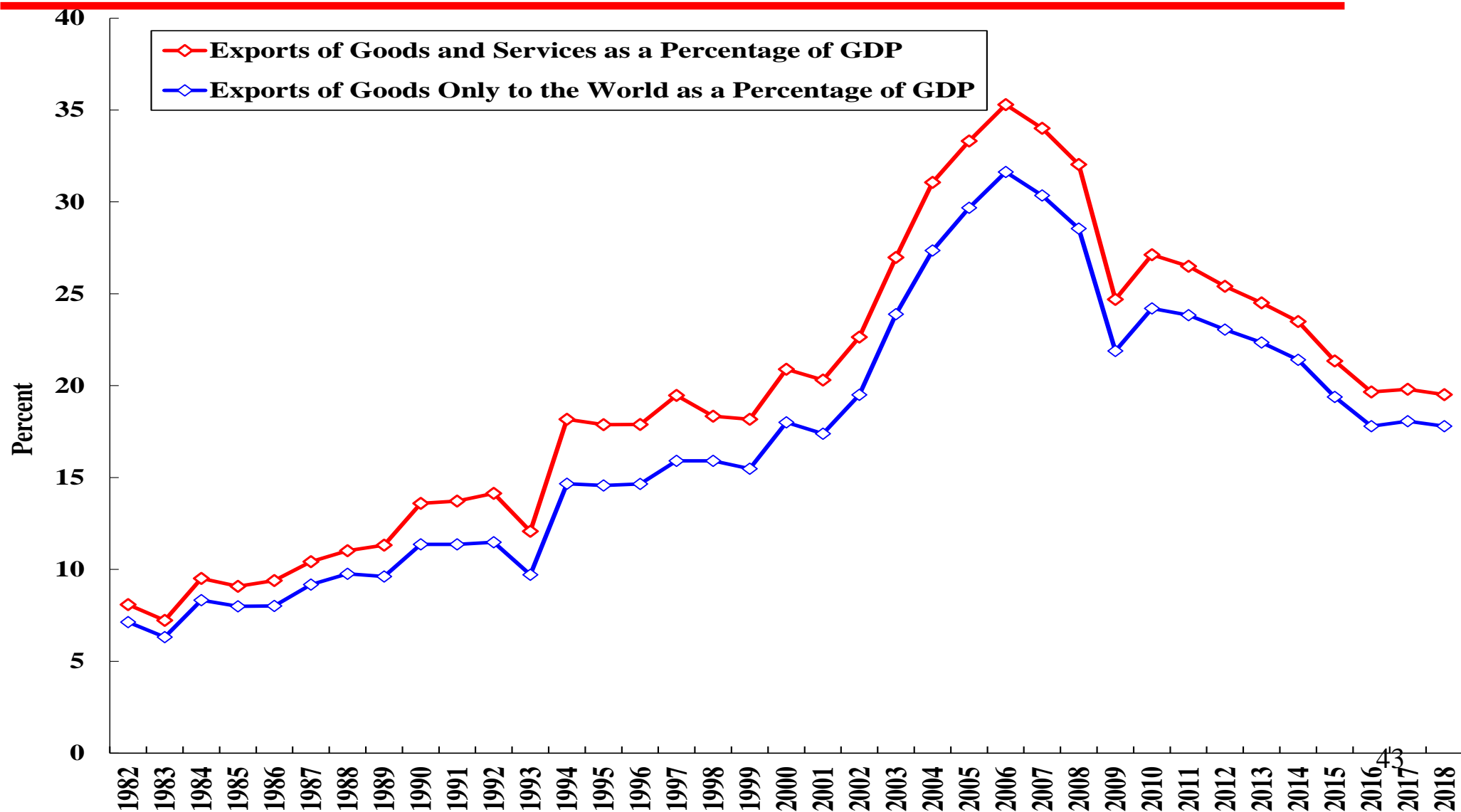


# The Real Impacts on the Chinese Economy

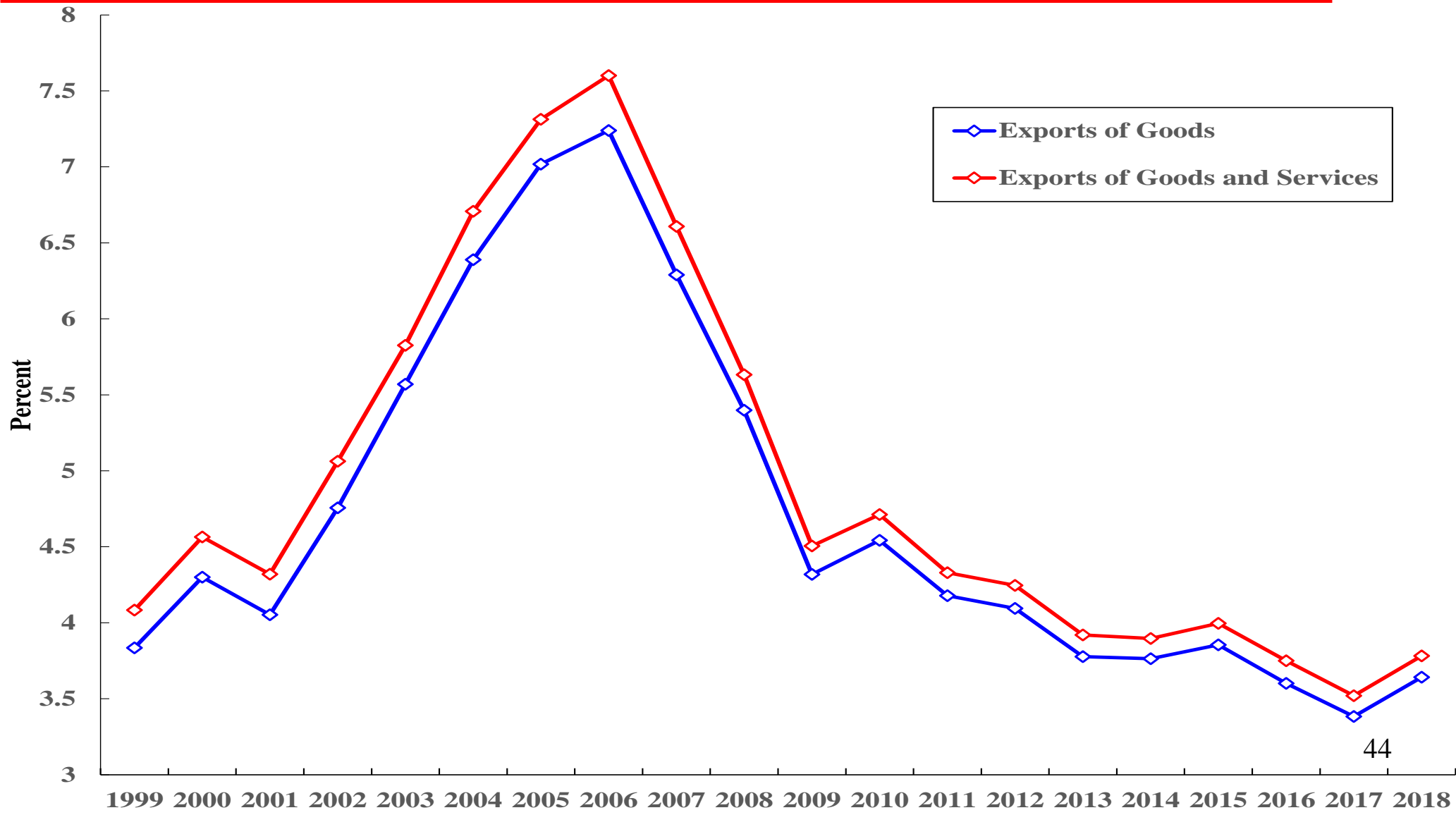
---

- ◆ Over the past ten years, Chinese dependence on exports has been declining. The share of exports of goods and services in Chinese GDP has fallen from a peak of 35.3% in 2006 to 19.5% in 2018.
- ◆ The share of exports of goods to the U.S. in Chinese GDP has also fallen by half, from a peak of 7.2% in 2006 to 3.6% in 2018. This sets a cap to the total amount of potential damages to the Chinese economy as a result of the U.S. tariffs. (See the following charts.)
- ◆ The 3.6% in 2018 represented an increase from the 3.4% in 2017. However, the increase reflected the acceleration of exports of goods to the U.S. from China in anticipation of the imposition and increases of tariffs. The trend of Chinese exports of goods to the U.S. as a percent of Chinese GDP is downwards.
- ◆ During this same period, the growth of Chinese exports to the world and to the U.S. has also slowed significantly. Chinese exports to the world grew at an average annual rate of 23.5% in the decade 1998-2007, but slowed to only 5.9% in the following decade, 2008-2018. Similarly, exports to the U.S. grew at 23.7% per annum in the decade 1998-2008, but slowed to less than 6.6% per annum in the most recent decade. Exports is no longer the engine of Chinese economic growth.

# Chinese Exports of Goods and Services and Goods Only as a Percent of Chinese GDP



# Chinese Exports of Goods and Services and Goods to the U.S. as Percent of Chinese GDP



# The Real Impacts on the Chinese Economy

---

- ◆ As we know, since mid-2018, U.S. tariffs ranging between 10% and 25 % have been imposed on US\$250 billion of U.S. imports of goods from China (arrival value, approximately equal to US\$227 (250 x 10/11) billion of Chinese exports of goods to the U.S., f.o.b. or departure value). This is slightly less than half of Chinese exports of goods to the U.S. in 2018. (Chinese exports of goods to the U.S. in 2018 amounted to US\$540 billion according to U.S. data based on arrival value, which is approximately equivalent to US\$500 billion at f.o.b. or departure value.) Thus, Chinese exports of goods amounting to slightly less than 1.8% (3.6%/2) of Chinese GDP will be affected in the first instance.
- ◆ The U.S. tariff rate on this first batch of Chinese exports of goods to the U.S. has recently been raised to 25% (and will be raised further to 30% on 15 October). Even at 25%, it is prohibitive for most of the Chinese exports of goods to the U.S., as neither the Chinese exporters nor the U.S. importers have the kind of profit margins that can absorb these tariffs. There is no evidence that the Chinese producers or exporters will pay for the U.S. tariffs. The cost of the tariffs will be mostly borne by U.S. consumers and users of Chinese imports.

# The Real Impacts on the Chinese Economy

---

- ◆ Moreover, U.S. tariffs ranging between 10% and 25% have also been imposed on the remaining approximately US\$300 billion of Chinese exports of goods to the U.S., to begin on 1 September 2019. However, approximately US\$160 billion worth of Chinese exports have been exempted until 15 December so as not to disrupt the Christmas shopping season in the U.S.
- ◆ These tariff rates have subsequently been increased by 5 percentage points, to take effect on 1 October. The increases have since been postponed to 15 October.

# The Real Impacts on the Chinese Economy

---

- ◆ The direct domestic value-added content of Chinese exports to the U.S. is 24.8%. Thus, the maximum loss in Chinese GDP, assuming that half of the exports to the U.S. is completely halted, in the first instance, may be estimated at 0.45% ( $3.6\%/2 \times 0.248$ ), a manageable level.
- ◆ However, the reduction of exports leads to a reduction in the demands for domestic inputs used in their production and the demands for consumption goods by the workers in the exporting industry, which in turn lead to a second-round reduction in the demands for domestic inputs used in the production of the domestic inputs and demands for domestic final consumption.
- ◆ With the indirect, that is, second-, third-, fourth- and higher-round effects of the reduction of Chinese exports kicking in, the total domestic value-added affected will eventually increase to 66 percent cumulatively.
- ◆ This implies ultimately a maximum total loss in Chinese GDP of 1.2% ( $3.6\%/2 \times 0.66$ ). In absolute terms, this amounts to US\$156 billion in 2018 prices, a manageable level, especially for an economy growing at an average annual real rate of 6.6 percent and with a per capita GDP of US\$9,415 in 2018.

# The Real Impacts on the Chinese Economy

---

- ◆ If all of Chinese exports of goods to the U.S. are halted because of the prohibitive tariffs, the maximum total loss in Chinese GDP would be doubled, to 2.4% ( $3.6\% \times 0.66$ ) of GDP, which is significant but not intolerable.
- ◆ These losses are all estimated assuming that nothing is done in response to the imposition and increases of U.S. tariffs.
- ◆ It is instructive to recall what transpired during the Global Financial Crisis of 2008-2009, which was triggered by the collapse of Lehman Brothers in the U.S. in September 2008. Chinese exports of goods to the world and to the U.S. declined by 16.0% and 12.5% respectively in 2009, with a total decrease of Chinese exports of US\$230 billion (in 2009 prices), approximately the same magnitude as half of Chinese exports of goods to the U.S. in 2019. Yet the Chinese real GDP still managed to grow 9.7% and 9.4% in 2008 and 2009 respectively. What this shows is that a decline in Chinese exports of goods of this magnitude is still quite manageable for the Chinese economy.



# The Real Impacts on the Chinese Economy

---

- ◆ The direct non-agricultural employment generated from Chinese exports of goods to the U.S. is 0.0133 person per US\$1,000. Thus, the reduction in direct non-agricultural employment, assuming that half of the exports to the U.S. is completely halted, in the first instance, may be estimated at 3.325 million ( $0.0133 \times 250,000,000$ ), a manageable level, especially for an economy creating new employment of more than 10 million a year (13.61 million in 2018, [http://www.stats.gov.cn/tjsj/zxfb/201902/t20190228\\_1651265.html](http://www.stats.gov.cn/tjsj/zxfb/201902/t20190228_1651265.html)).
- ◆ However, the reduction of exports leads to a reduction in the demands for domestic inputs used in their production, which in turn lead to a second-round reduction in the employment. With the indirect, that is, second-, third-, fourth- and higher-round effects of the reduction of Chinese exports kicking in, the total employment affected will eventually increase cumulatively to 0.0304 person per US\$1,000. This implies ultimately a reduction in Chinese employment of 7.6 million ( $0.0304 \times 250,000,000$ ). This is significant, but constitutes only 1.75% of the total non-agricultural employment of 434.19 million in 2018, which can be absorbed in a couple of years.

# The Real Impacts on the Chinese Economy

---

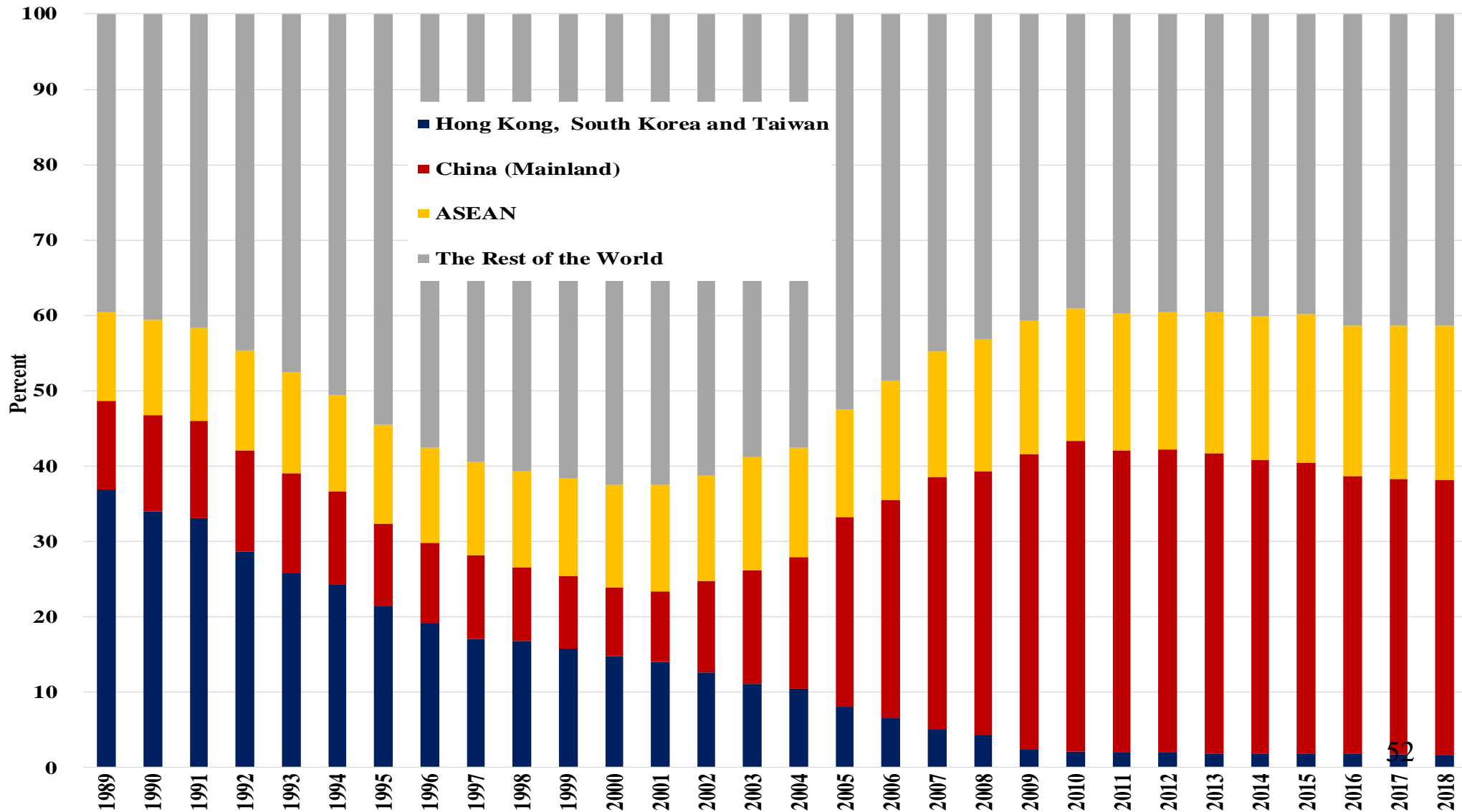
- ◆ Bear in mind, however, that our calculation of the loss in real GDP and other similar calculations do not take into account the effects of any possible economic stimulus measures that may be undertaken by the Chinese government. They also do not take into account the possibility of substitution of Chinese exports of goods from factories located elsewhere. For example, instead of shipping from a factory in China, the factory owner can ship goods to the U.S. from another factory it owns in Vietnam and instead ship goods to Japan from its factory in China. This would result in no decrease in its total Chinese export of goods despite the U.S. tariffs. More generally, exports of goods originally destined for the U.S. can be sold elsewhere in the world. And global supply chains can be reconstituted with the final finishing stage located outside of China. (This must satisfy the “rules of origin” regulations.)
- ◆ The same can apply to Chinese imports of goods. For example, instead of importing soybeans from the U.S., the Chinese importers can import from Brazil, and the U.S. exporters can sell to the original customers for the Brazilian soybeans.

# The Real Impacts on the Chinese Economy

---

- ◆ In the longer run, if tariffs continue on both sides, the U.S. importers will begin to replace Chinese imports by imports from other Asian countries such as Vietnam, Cambodia and Bangladesh, and eventually perhaps even North Korea if an agreement can be struck between it and the U.S.
- ◆ But the shift in the sourcing of imports away from China has already been occurring since 2010, because of the rise in labour costs in China and the appreciation of the Renminbi. This is similar to the earlier shift of the sources of U.S. imports of apparel from Hong Kong, South Korea and Taiwan to Mainland China (see the following chart).
- ◆ In 1989, the Chinese share of U.S. imports of apparel was 11.7 %, compared with a share of 35.9% from Hong Kong, South Korea and Taiwan combined, with the ASEAN accounting for 11.9%. In 2018, the Chinese share has declined from its peak of 41.2% in 2010 to 36.6% and the Hong Kong, South Korea and Taiwan share has declined to 1.6%, whereas the ASEAN share has risen to 20.5%. The new U.S. tariffs will accelerate this process.
- ◆ The ASEAN and South Asian countries may benefit, but it is really hard to predict by how much because the supply chains today are so internationalised. However, it is unlikely, in most cases, that the tariffs will stimulate new domestic production in the U.S.

# The Distribution of U.S. Apparel Imports by Countries and Regions of Origin



# The Real Impacts on the Chinese Economy: Specific Regional Impacts

---

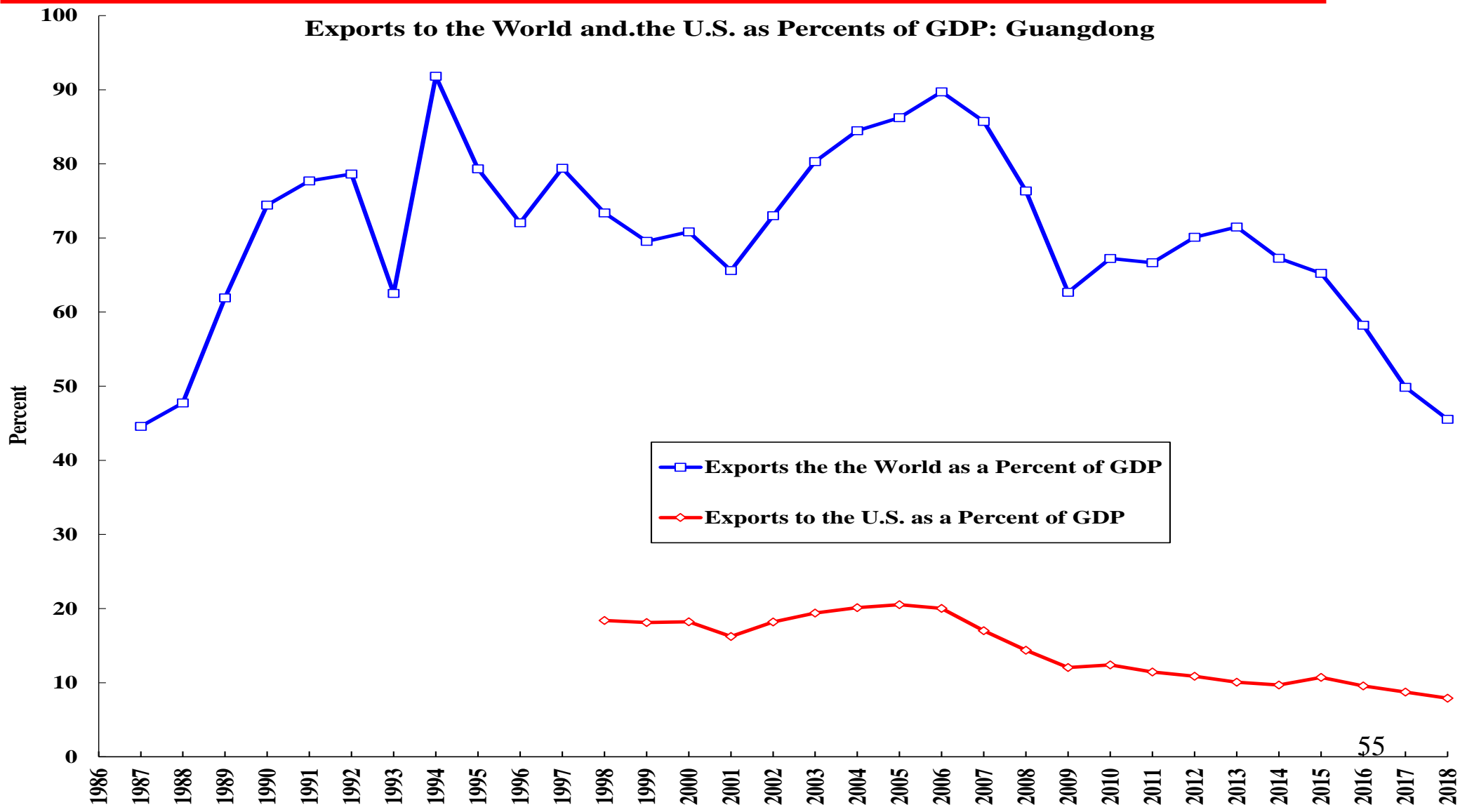
- ◆ Even though the real impacts on the Chinese economy in the aggregate are relatively small, they can be more significant for individual specific municipalities and provinces, especially those oriented towards exports.
- ◆ Guangdong, including Shenzhen, is the largest exporting region in China, followed by Shanghai and Zhejiang in second and third places. Even then, Guangdong exports as a percent of its GDP, which at one time had exceeded 90%, was just below 45.5% in 2018, and exports to the U.S. had fallen to only 7.9%. What this means is that the economic growth of Guangdong is increasingly dependent on domestic Chinese demand rather than exports.

# The Real Impacts on the Chinese Economy: Specific Regional Impacts: Guangdong

---

- ◆ The real GDP of Guangdong Province grew 6.8% in 2018 (Guangdong Statistical Bureau, [http://www.gdstats.gov.cn/tjzl/tjkx/201901/t20190129\\_421942.html](http://www.gdstats.gov.cn/tjzl/tjkx/201901/t20190129_421942.html), retrieved 10/2/2019), a decline of only 0.7 percent from 2017, showing that the real impacts of the trade war were so far relatively small, even for the most export-oriented province. However, the real impact may be larger in 2019 if the U.S. tariffs continue or, as expected, are expanded to all imports of goods from China.

# Exports to the World and the U.S. as Percent of GDP: Guangdong



# The Real Impacts on the Chinese Economy:

## Specific Regional Impacts: Guangdong

---

- ◆ Assuming the direct domestic value-added content of Guangdong exports to the U.S. is the same as that of Chinese exports as a whole, that is, 24.8%, the maximum loss in Guangdong GDP, and assuming that half of the Guangdong exports to the U.S. is completely halted, in the first instance, may be estimated at 0.98% ( $7.9\%/2 \times 0.248$ ). This magnitude is consistent with its actual decline of 0.7% in 2018.
- ◆ Such a decline in GDP is perfectly manageable by Guangdong as the real rate of growth of its GDP was 6.8% (Guangdong Statistical Bureau ([http://www.gdstats.gov.cn/tjzl/tjgb/201803/t20180302\\_381919.html](http://www.gdstats.gov.cn/tjzl/tjgb/201803/t20180302_381919.html), retrieved 10/2/2019)), and its GDP per capita was US\$13,058 in 2018 ([http://www.gdstats.gov.cn/tjzl/tjgb/201902/t20190227\\_423113.html](http://www.gdstats.gov.cn/tjzl/tjgb/201902/t20190227_423113.html)).
- ◆ If the total cumulative, direct and indirect, effects are included, the loss in Guangdong GDP will rise to 2.61% ( $7.9\%/2 \times 0.66$ ). However, from this we should deduct the 0.7% decline already realized in 2018, leaving 1.9%.
- ◆ This will represent a significant slowdown in the real rate of growth of the Guangdong economy. Even then, the Guangdong economy will still be growing at close to 5% ( $6.8\% - 1.9\%$ ).



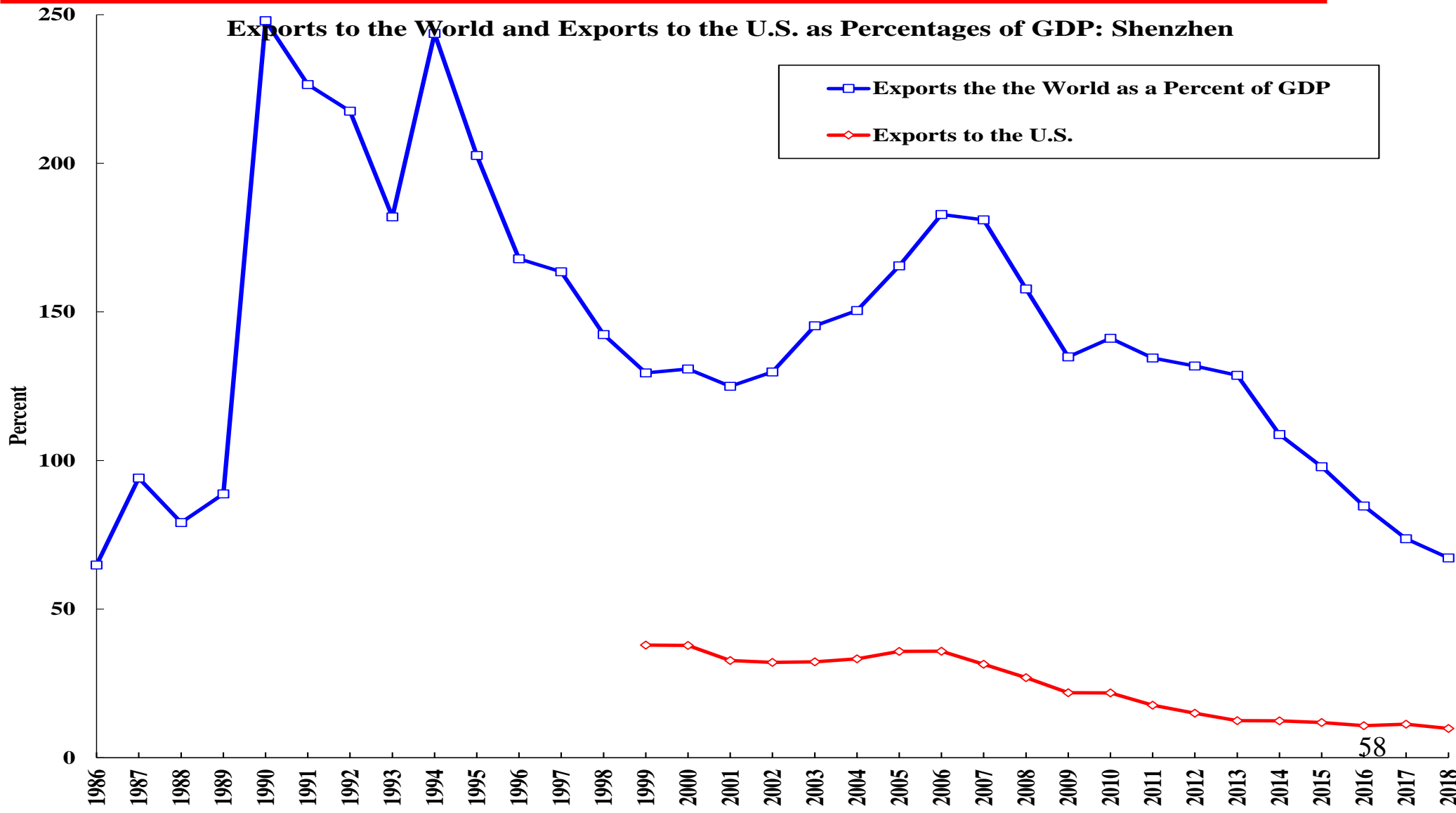
# The Real Impacts on the Chinese Economy:

## Specific Regional Impacts: Shenzhen

---

- ◆ The rate of growth of the Shenzhen real GDP in 2018 was 7.6%, a decline of 1.2% from 2017. Exports as a percent of GDP in Shenzhen was 67.2% in 2018, and exports to the U.S. was 9.8%.
- ◆ Assuming the direct domestic value-added content of Shenzhen exports to the U.S. is the same as that of China as a whole, that is, 24.8%, the maximum loss in Shenzhen GDP, and assuming that half of the exports to the U.S. is completely halted, in the first instance, may be estimated at 1.2% ( $9.8\%/2 \times 0.248$ ). This turned out to be exactly the decline in the rate of growth of the Shenzhen real GDP in 2018.
- ◆ Taking into account the indirect, that is, second-, third-, fourth- and higher-round effects of the reduction of exports, the total domestic value-added content affected increases to 66 percent. This implies ultimately a total loss in Shenzhen GDP of 3.2% ( $9.8\%/2 \times 0.66$ ), implying a further decline of 2%. This still leaves Shenzhen with a rate of growth of 5.6% in 2019, significantly higher than the projected rate of growth of the world economy of 3.2% and that of neighbouring Hong Kong.

# Exports to the World and the U.S. as Percent of GDP: Shenzhen

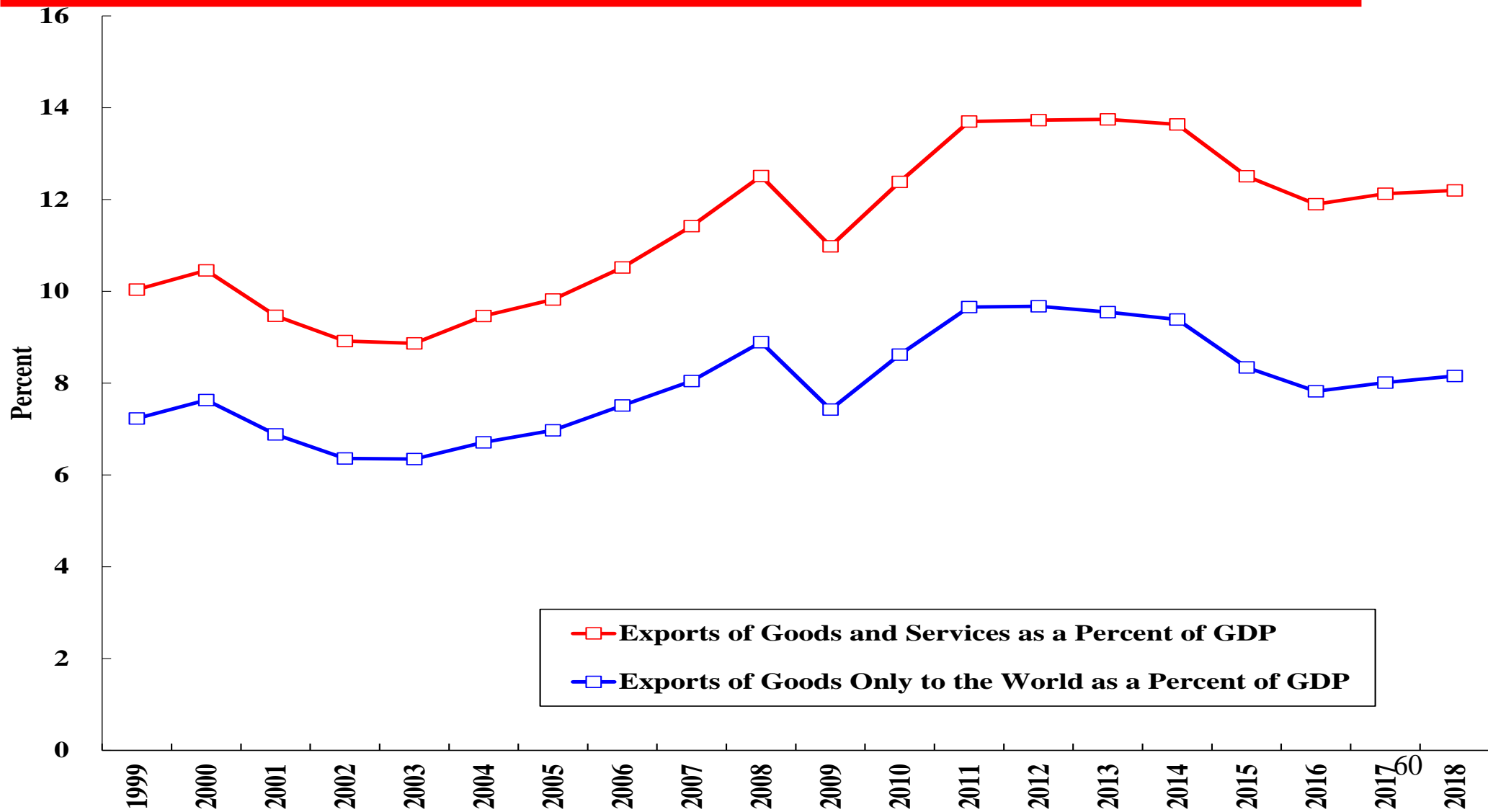


# The Real Impacts on the U. S. Economy

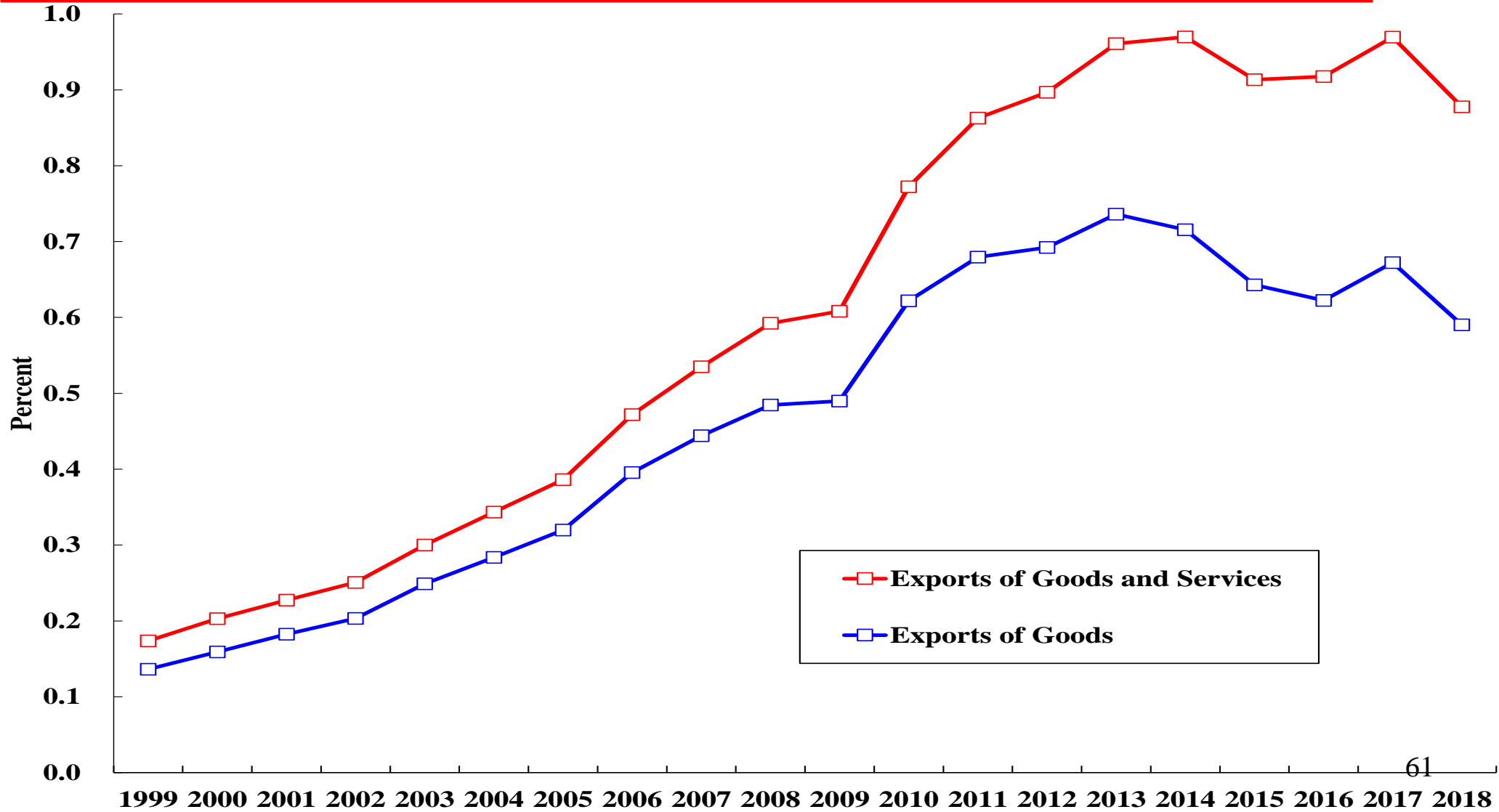
---

- ◆ The degree of dependence of the U.S., a large continental economy, on exports is even lower than that of China's. U.S. exports of goods and services combined as a share of GDP was 12.2% in 2018. The exports of goods alone as a share of GDP was only 8.2%.
- ◆ In 2018, the shares of U.S. exports of goods and services and goods alone to China in U.S. GDP declined from 0.97% to 0.88% and 0.67% to 0.58% respectively, reflecting the effects of the trade war (all of which were borne by the exports of goods). In absolute value, the exports were respectively US\$180 billion and US\$121 billion in 2018, much lower than those of Chinese exports to the U.S. However, the shares of U.S. exports of both goods and services and goods only to China have been rising over time until more recently.
- ◆ At the present time, Chinese tariffs have been imposed on US\$110 billion of U.S. exports of goods, with rates up to 25%. The tariff rates have recently been adjusted upwards on approximately US\$75 billion worth of U.S. exports to China.

# U.S. Exports of Goods and Services and Goods Only as Percent of U.S. GDP



# U.S. Exports of Goods and Services and Goods Only to China as Percent of U.S. GDP



# The Real Impacts on the U. S. Economy

---

- ◆ The direct domestic value-added content of U.S. exports of goods to China may be estimated to be 50.8%. Thus, the maximum loss in the U.S., assuming that all of its exports to China is completely halted by the tariffs, may be estimated in the first instance at 0.29% ( $0.58\% \times 0.508$ ), less than the initial impact on Chinese GDP of 0.45%, based on the assumption that half of Chinese exports of goods to the U.S. will be halted.
- ◆ Moreover, it is unlikely that all of the U.S. exports of goods will be halted; for example, computer chips will continue to be imported by China in large quantities in the medium term. (The price elasticity is low.) Suppose only half of U.S. exports of goods to China is halted, it would amount to a loss of U.S. GDP of 0.145% ( $0.29\%/2$ ). This is not significant for the U.S. economy, which grew 2.9% in 2018 and is expected to grow at 2.6% in 2019. U.S. GDP per capita is approximately US\$62,609. The U.S. economy can easily weather a reduction of 0.145% in its rate of growth.

# The Real Impacts on the U. S. Economy

---

- ◆ With the indirect, that is, second-, third-, fourth- and higher-round effects of the reduction of U.S. exports of goods kicking in, the total domestic value-added affected increases to 88.7% cumulatively. This implies ultimately a total loss in U.S. GDP of 0.51% ( $0.58\% \times 0.887$ ), assuming that all of U.S. exports to China will be halted.
- ◆ In absolute terms, this amounts to US\$104.6 billion ( $0.51 \times 20.5$  trillion) in 2018 prices, much less than the estimated potential Chinese loss in terms of GDP of US\$312 billion assuming all Chinese exports are halted.
- ◆ Thus, in both absolute and relative terms, the Chinese losses in real GDP will be much higher than those of the U.S.
- ◆ However, the U.S. has a significant trade surplus in services with China, estimated to be US\$38.8 billion in 2018 by the U.S. and US\$54 billion by China for 2017. This surplus may be in jeopardy if China-U.S. relations deteriorate further.

# Economic and Technological Competition

---

- ◆ Even though the proximate cause of the current trade war between China and the United States is the large trade imbalance in China's favour, but it is actually a manifestation of the potential competition between China and the U.S. for economic and technological dominance in the world.
- ◆ This competition, whether explicit or implicit, and whether intentional or not, will not go away soon. It did not begin with President Donald Trump. Both the “pivot to Asia” and the “Trans-Pacific Partnership” were initiated by President Barack Obama as strategies aimed in part at containing China. It will not go away even after President Trump leaves office.



# Economic and Technological Competition

---

- ◆ However, competition can potentially lead to constructive and positive as well as destructive and negative outcomes. For example, the competition on creating the fastest super-computer has already resulted in both countries producing better and faster super-computers. The champion in 2018 is the IBM Summit, a U.S. super-computer, which beat the Sunway TaihuLight, the champion in 2016 and 2017, a Chinese super-computer that was built entirely with indigenously designed chips.
- ◆ In terms of the number of nuclear-armed warheads, according to the New York Times, the U.S. is estimated to have more than 6,000 such warheads, compared to less than 300 for China. The difference is even more striking in per capita terms. This is not a competition that China should wish to join.
- ◆ However, a race to find an effective cure for cancer or Alzheimer's disease would be worthwhile for both countries and in fact for the entire mankind.

# Economic and Technological Competition

---

- ◆ In terms of aggregate GDP, China went from only one-fifth of the U.S. GDP in 2000 to two-thirds in 2017, in only 17 years (64.1% in 2018 because of exchange rate changes). It is only a matter of time that the Chinese GDP will catch up with the U.S. GDP, probably in the early 2030s.
- ◆ However, in terms of GDP per capita, China is still way behind, with US\$9,415 (less than S\$10,000, thus technically still a developing economy), compared to US\$62,609 for the U.S. in 2018.
- ◆ My own projections suggest that it will probably take until the end of the 21st Century before Chinese GDP per capita can approach the U.S. level, if ever. (Because of the difference in natural endowments between China and the U.S., China may not be able to catch up with the U.S. in terms of GDP per capita.)<sup>66</sup>

# Near-Term Forecasts by International Organizations

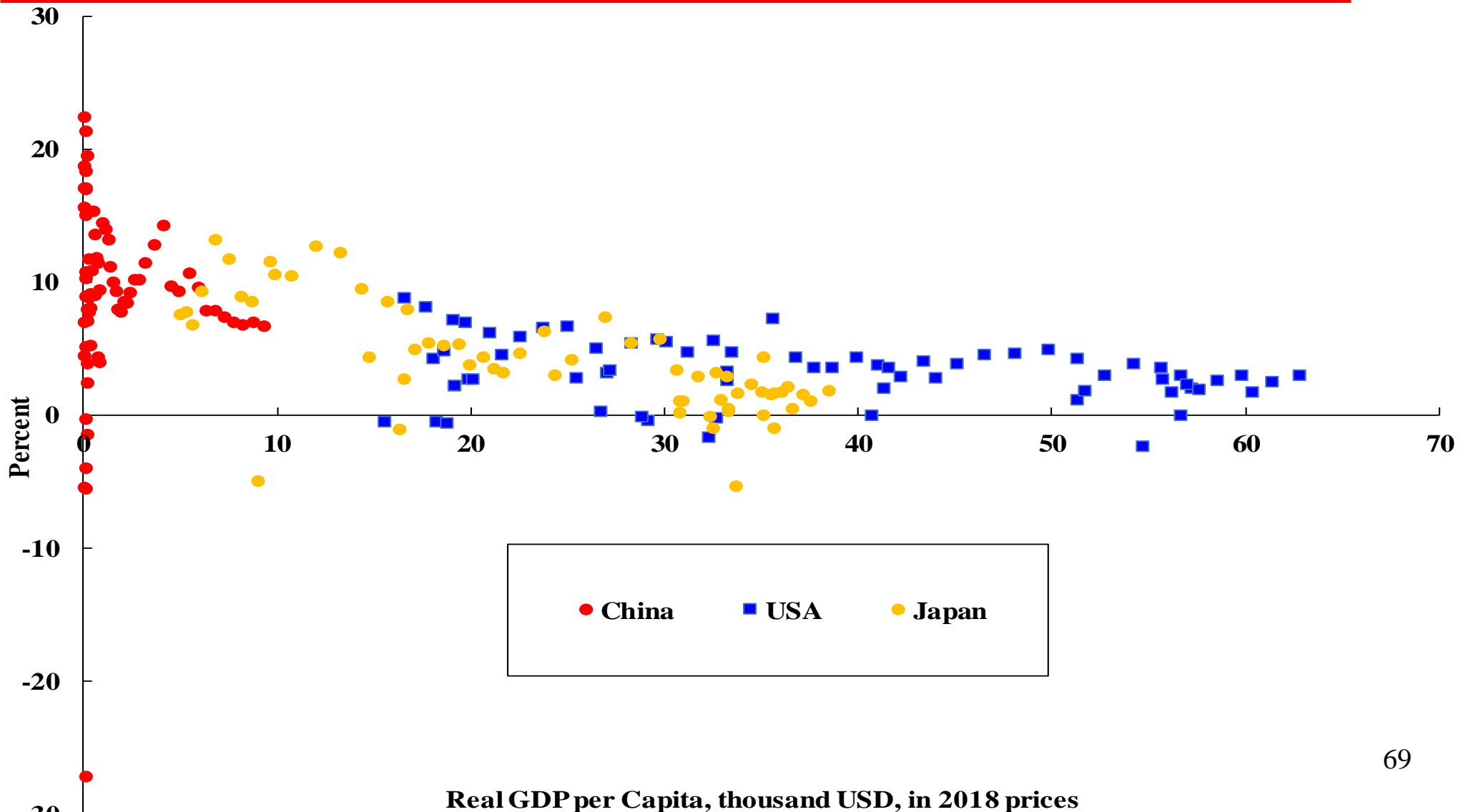
	World Bank				IMF	
	Real GDP Growth Forecasts				Real GDP Growth Projections	
	2019	2020	2021		2019	2020
World	2.6	2.7	2.8		3.2	3.5
China	6.2	6.1	6		6.2	6
the U.S.	2.5	1.7	1.6		2.6	1.9
EU	1.2	1.4	1.3		1.3	1.6
Japan	0.8	0.7	0.6		0.9	0.4
India	7.5	7.5	7.5		7	7.2 <sup>67</sup>

# Long-Term Forecasts of the Chinese and the U.S. Economies

---

- ◆ In 2018, the Chinese economy grew 6.6%. In 2019H1, Chinese real GDP grew at an annualised rate of 6.3%. The target range of the Chinese rate of growth for 2019 is between 6% and 6.5%. The Chinese economy is on course.
- ◆ In 2018, the U.S. economy grew 2.9%, close to its long-run average of 3%. The rates of growth of 2019Q1 and 2019Q2 were respectively 3.1% and 2.1%. Both the U.S. Federal Reserve Board and the U.S. Congressional Budget Office expect 2.3% growth for 2019.
- ◆ It is assumed that the Chinese economy will continue to grow around 6% per annum for a few more years, declining gradually to between 5% and 6%, and that the U.S. economy will grow at an average rate of 3% per annum between now and 2050.
- ◆ It may be thought that the Chinese economy will be unable to sustain an average annual rate of growth of between 5% and 6% for such a long time. Past experience shows that the rate of growth of an economy declines as its real GDP per capita rises. But given the still relatively low level of real GDP per capita in China, (below US\$10,000) and the low level of its capital per unit labor, such a rate of growth should still be possible for at least several decades (see the following charts in which the experiences of China, Japan and the U.S. are compared.)

# Growth Rate vs. Level of Real GDP per Capita (2018 tril. US\$): China, Japan and the U.S.

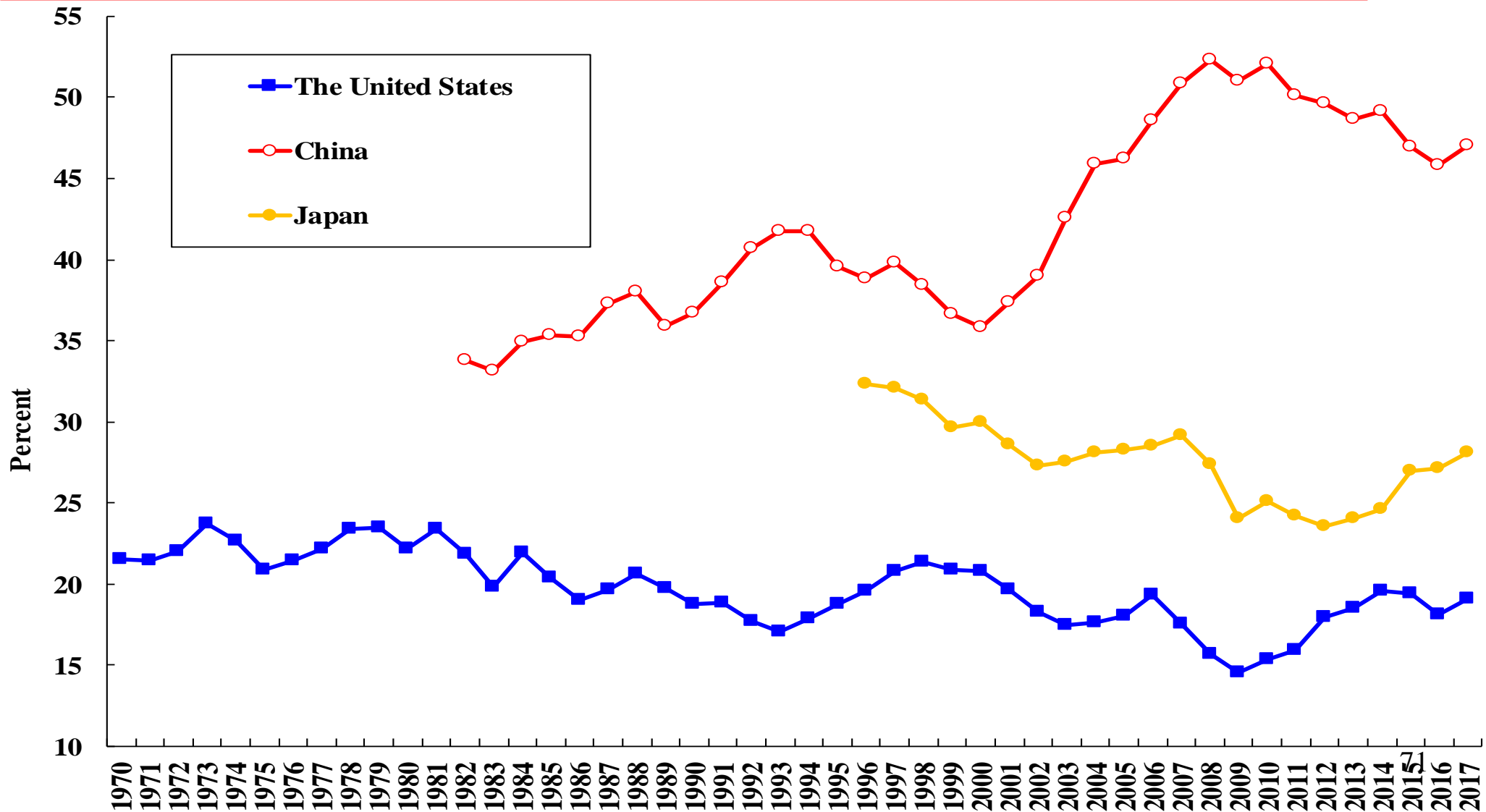


# Long-Term Forecasts of the Chinese and the U.S. Economies

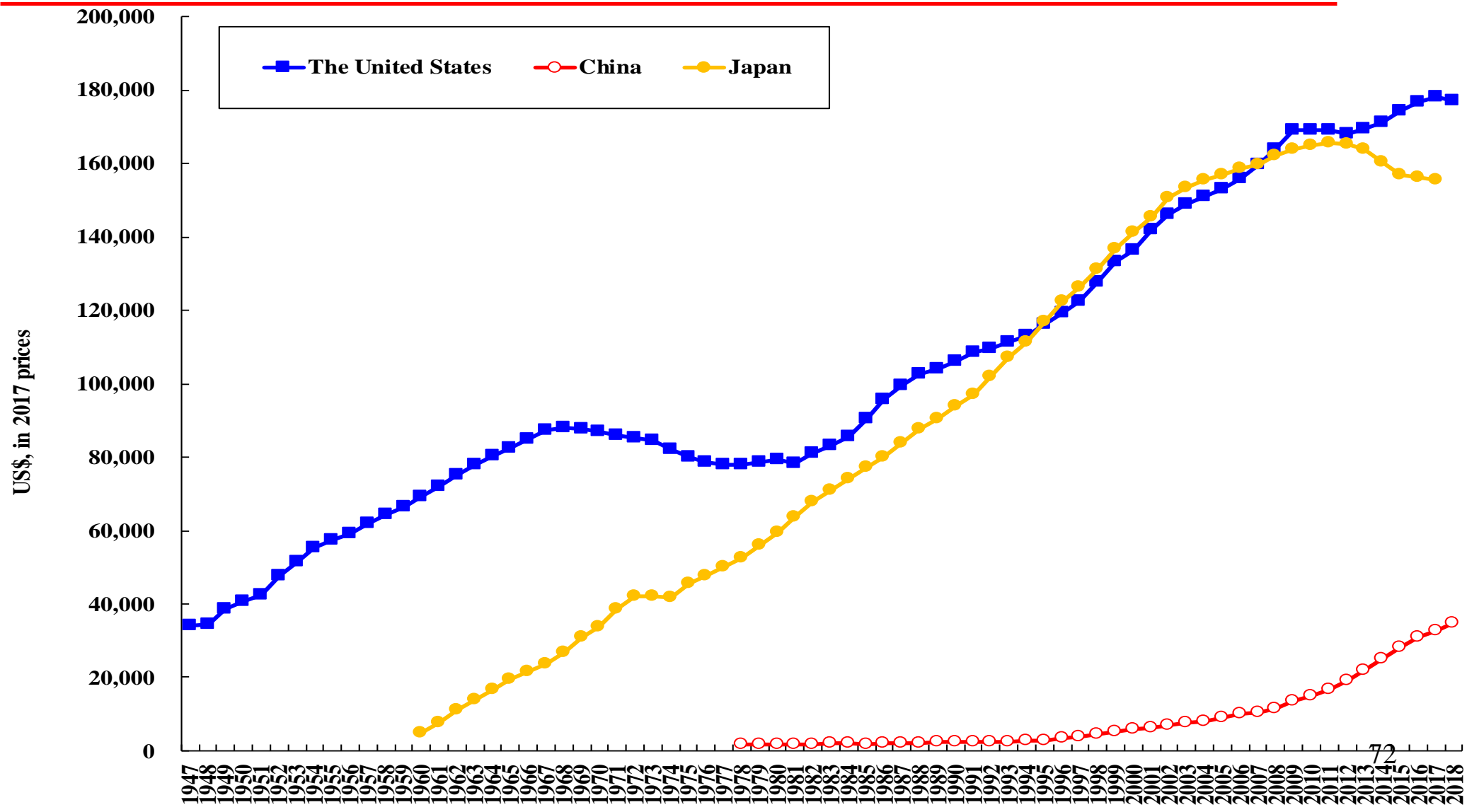
---

- ◆ The Chinese national savings rate is very high, which enables a very high investment rate. The capital-labour ratio of the Chinese economy is still very low compared to the U.S. and Japan. There is a great deal of room to grow.
- ◆ In addition, there is still significant surplus labour in the Chinese economy. The share of employment in the primary sector is around 30% whereas the share of GDP originating from the primary sector is below 10%.
- ◆ The manpower problem can be solved by increasing the mandatory retirement ages from their current 55 for women and 60 for men. (Chinese life expectancy at birth was 75 for men and 78 for women in 2017.)
- ◆ China has significantly increased its investment in human capital and research and development (R&D). It already has the largest number of internet users in the world. Moreover, it still has significant room to grow.

# Comparison of National Savings Rates: China, Japan and the U.S.



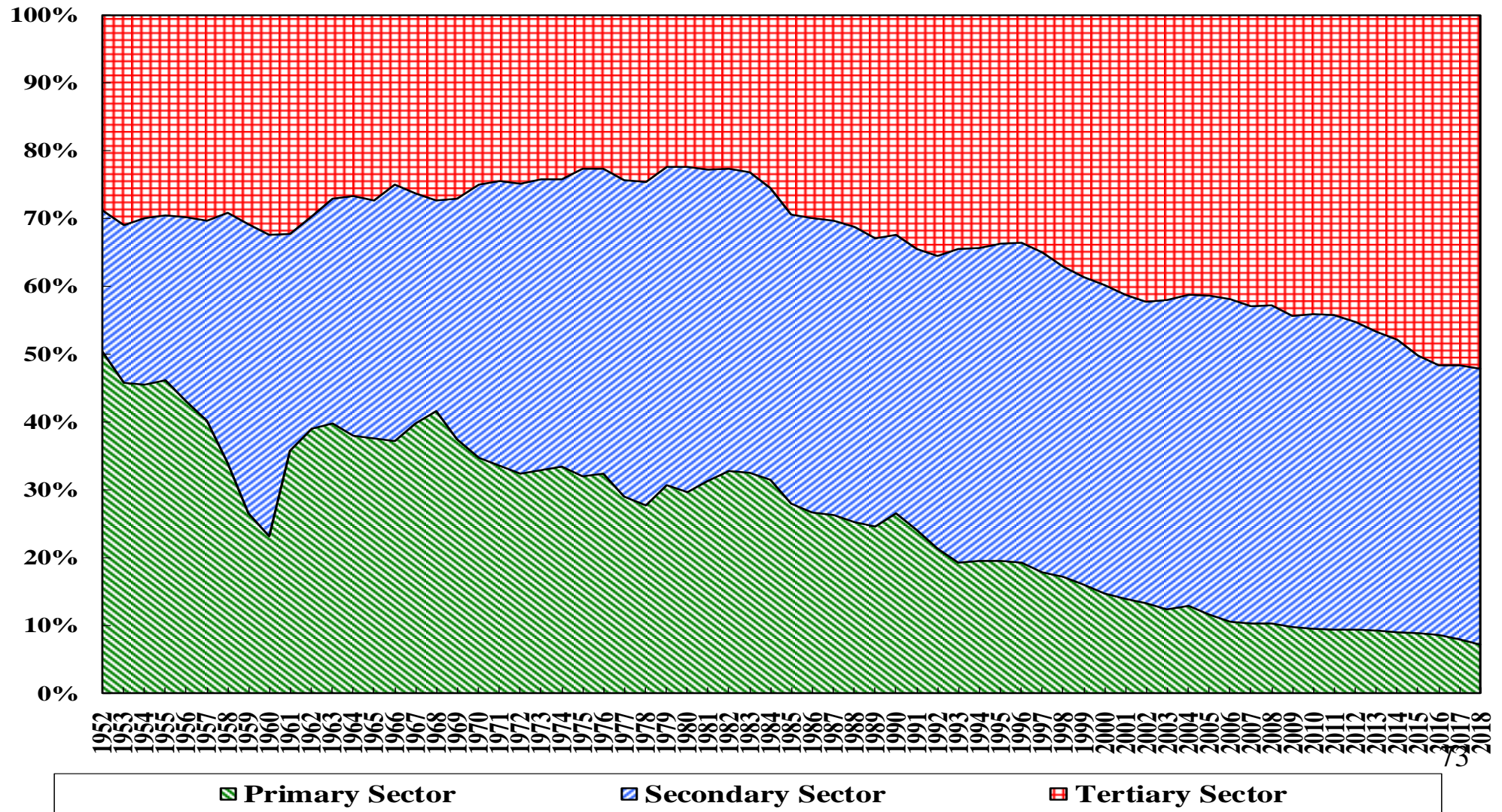
# Comparison of Capital-Labour Ratios: China, Japan and the U.S.





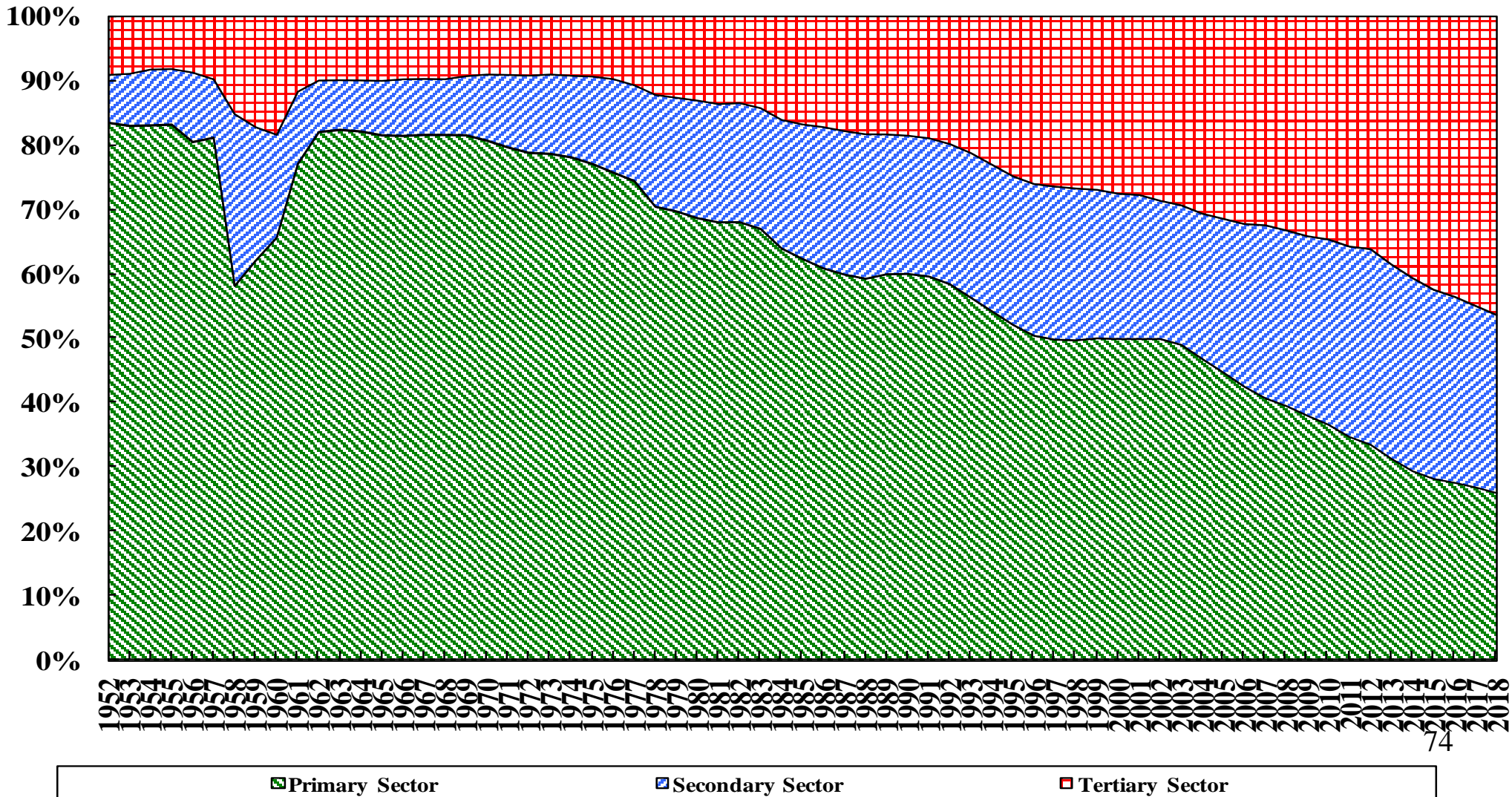
# The Distribution of Chinese GDP by Sector Since 1952

The Distribution of Chinese GDP by Originating Sector Since 1952

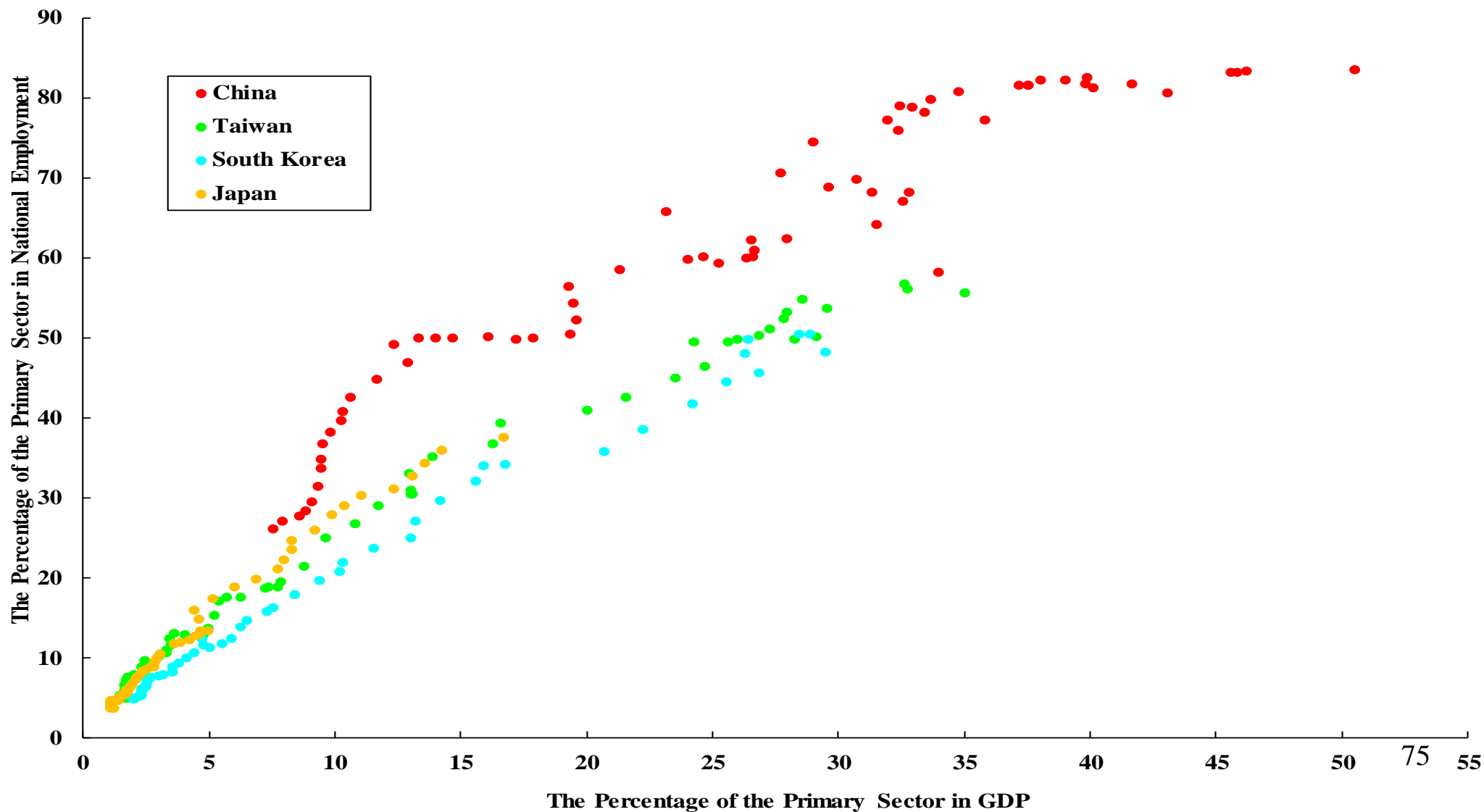


# The Distribution of Chinese Employment by Sector Since 1952

The Distribution of Employment by Sector since 1952

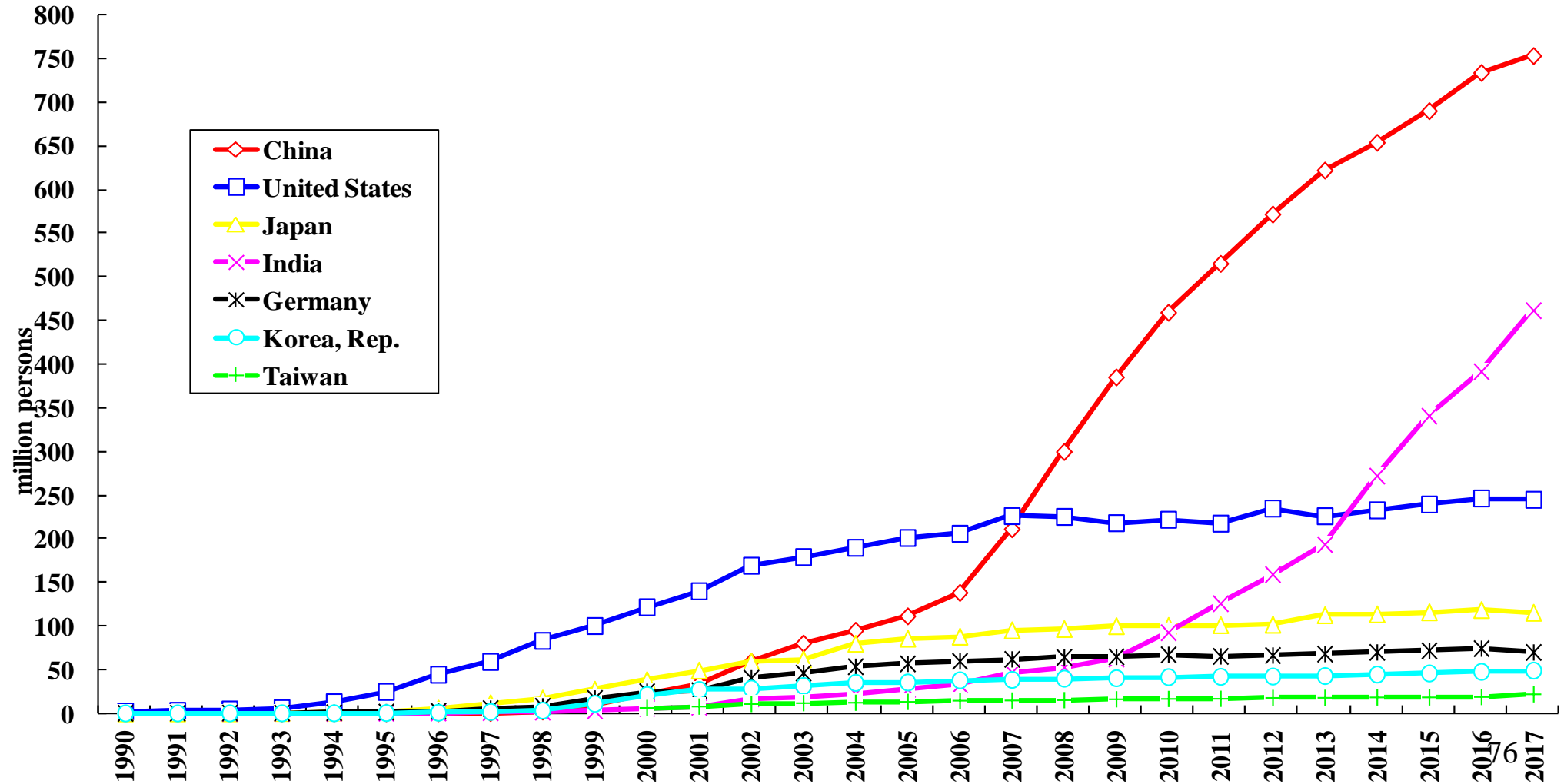


# Scatter Diagram between the Shares of Employment and GDP of the Primary Sector



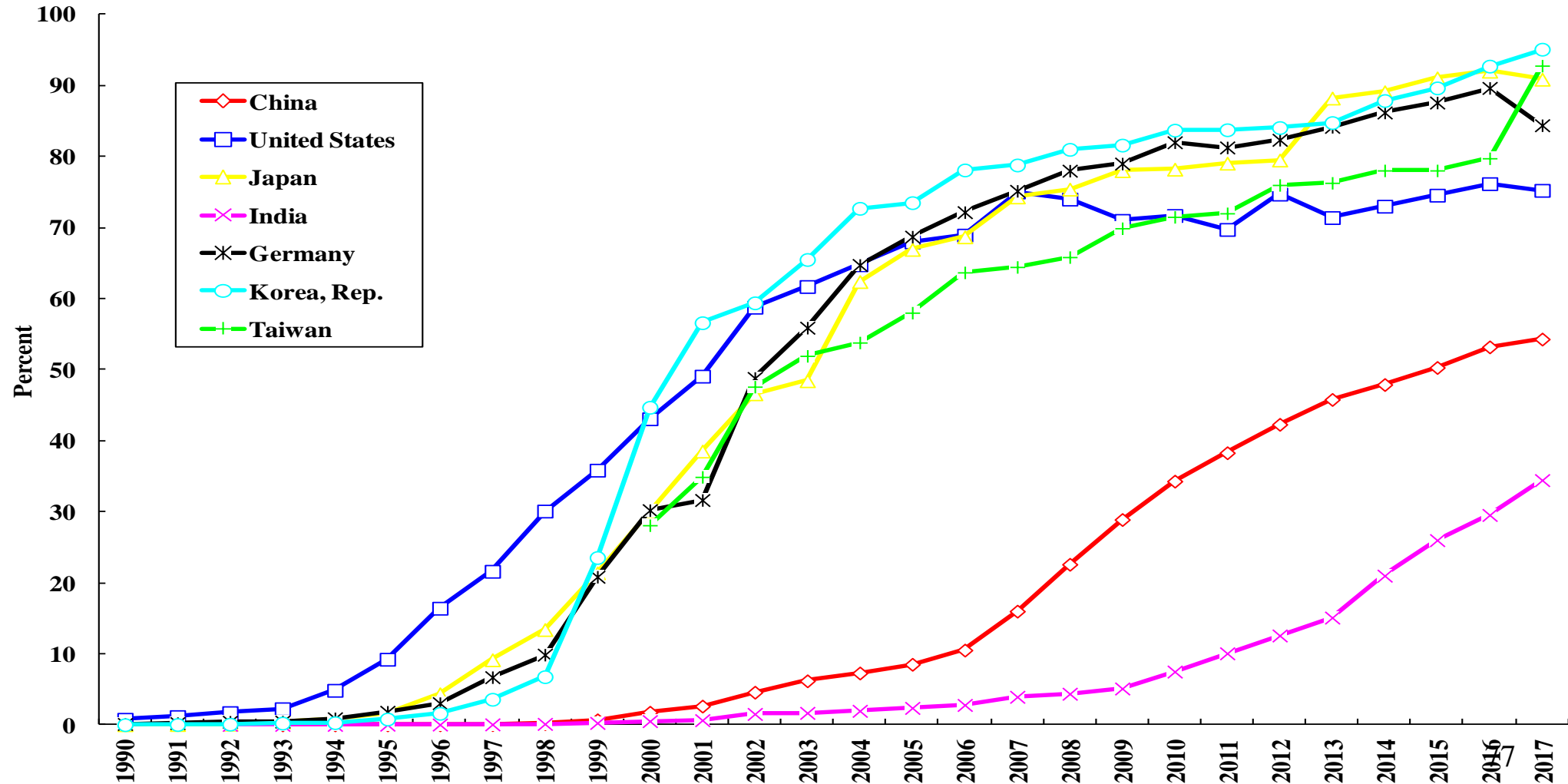
# The Number of Internet Users in Selected Economies

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



# Long-Term Forecasts of the Chinese and the U.S. Economies

---

- ◆ In addition, regardless of the outcome of the China-U.S. trade war, China will continue its reform and opening to the world. There is a risk that China may be isolated from the world. China must do its best to avoid it from happening.
- ◆ While the Chinese state-owned enterprises are here to stay, the market will be allowed to play a determining role in the Chinese economy.
- ◆ The projections of Chinese and U.S. real GDP and real GDP per capita between now and 2050 are presented in the following charts.

# Long-Term Forecasts of the Chinese and the U.S. Economies

---

- ◆ In his work report to the Nineteenth National Congress of the Communist Party of China, President XI Jinping identified several milestones in his speech at the Nineteenth Party Congress at 2020, 2035 and 2050.
- ◆ The first milestone is to become a moderately well-off society by 2020. Our projections show that by 2020, Chinese real GDP per capita (in 2018 prices) will reach US\$10,582 (compared to US\$65,541 for the U.S.).
- ◆ Our projections also show that by 2033 (plus or minus a couple of years), Chinese real GDP will surpass U.S. real GDP (US\$32.7 trillion versus US\$31.9 trillion), making China the largest economy in the world. However, in terms of real GDP per capita, China will still lag behind significantly, with US\$22,088 compared to US\$89,363 for the U.S., or only one-quarter of the U.S. GDP per capita.

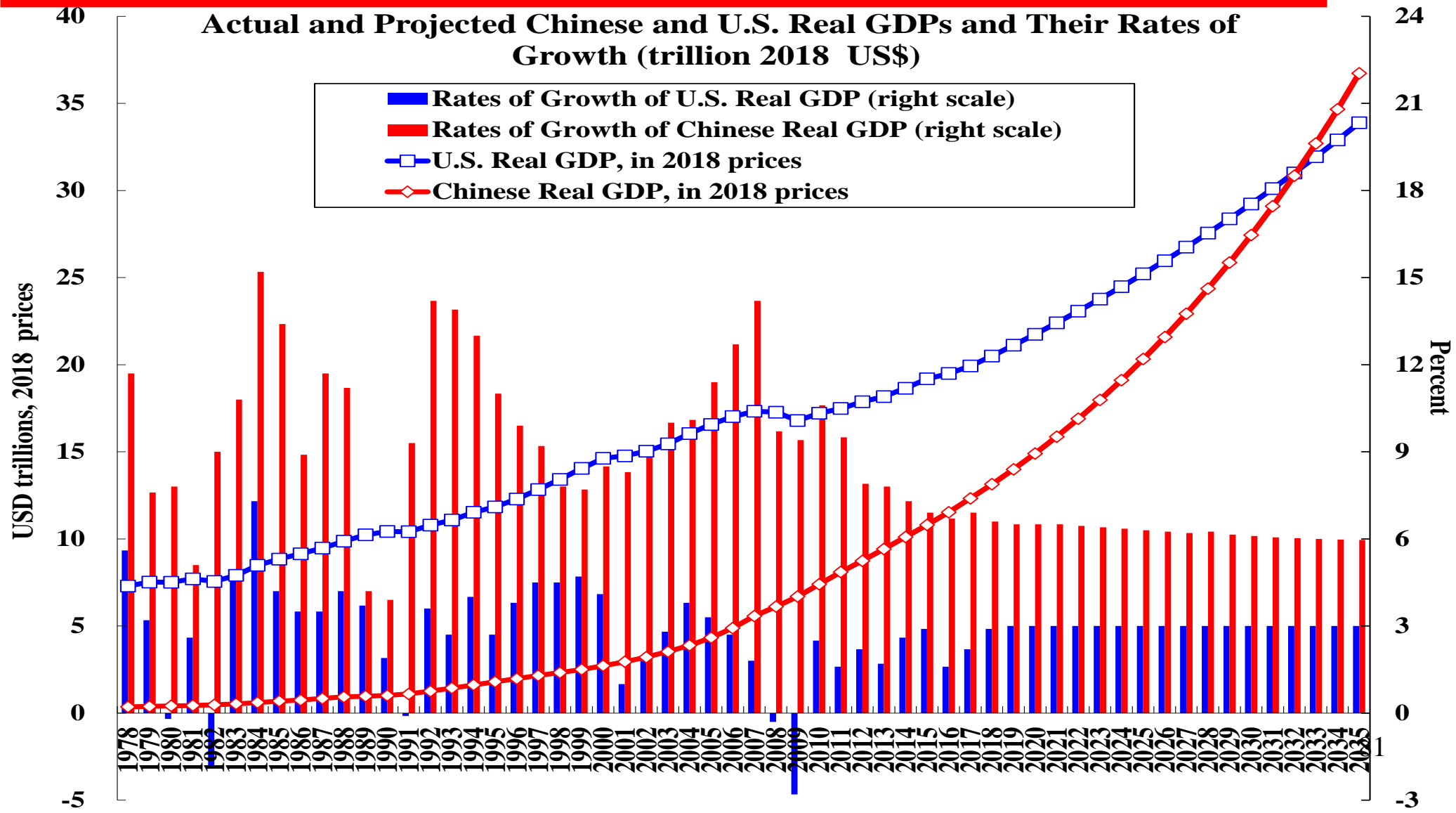
# Long-Term Forecasts of the Chinese and the U.S. Economies

---

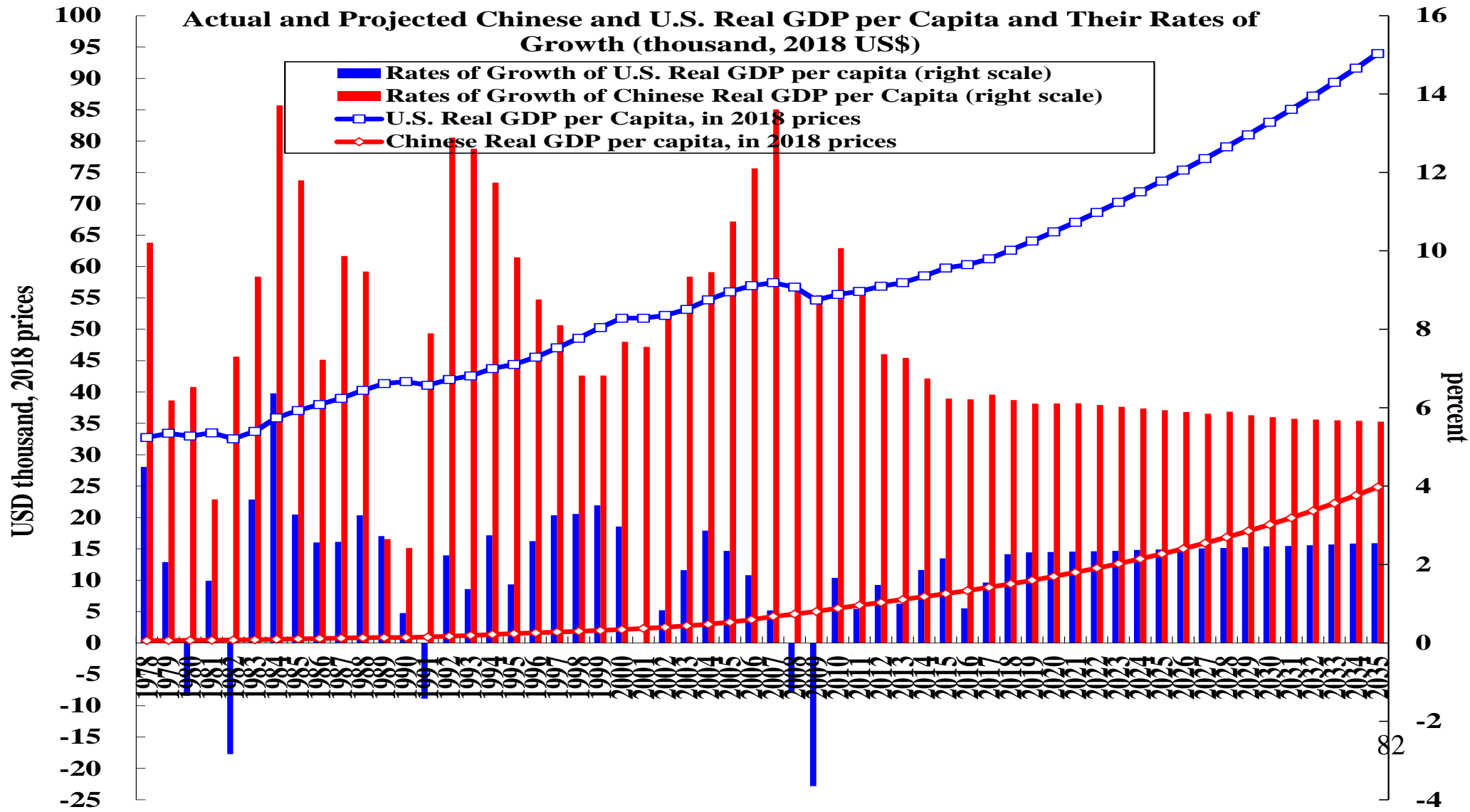
- ◆ By 2050, Chinese real GDP will reach US\$83 trillion compared to US\$53 trillion for the U.S. In terms of real GDP per capita, China will reach US\$53,408, still below the current (2018) level of U.S real GDP per capita of US\$62,609, compared to US\$138,693 for the U.S.
- ◆ It will not be until towards the end of the 21st Century for the Chinese real GDP per capita to catch up with the U.S. real GDP per capita.



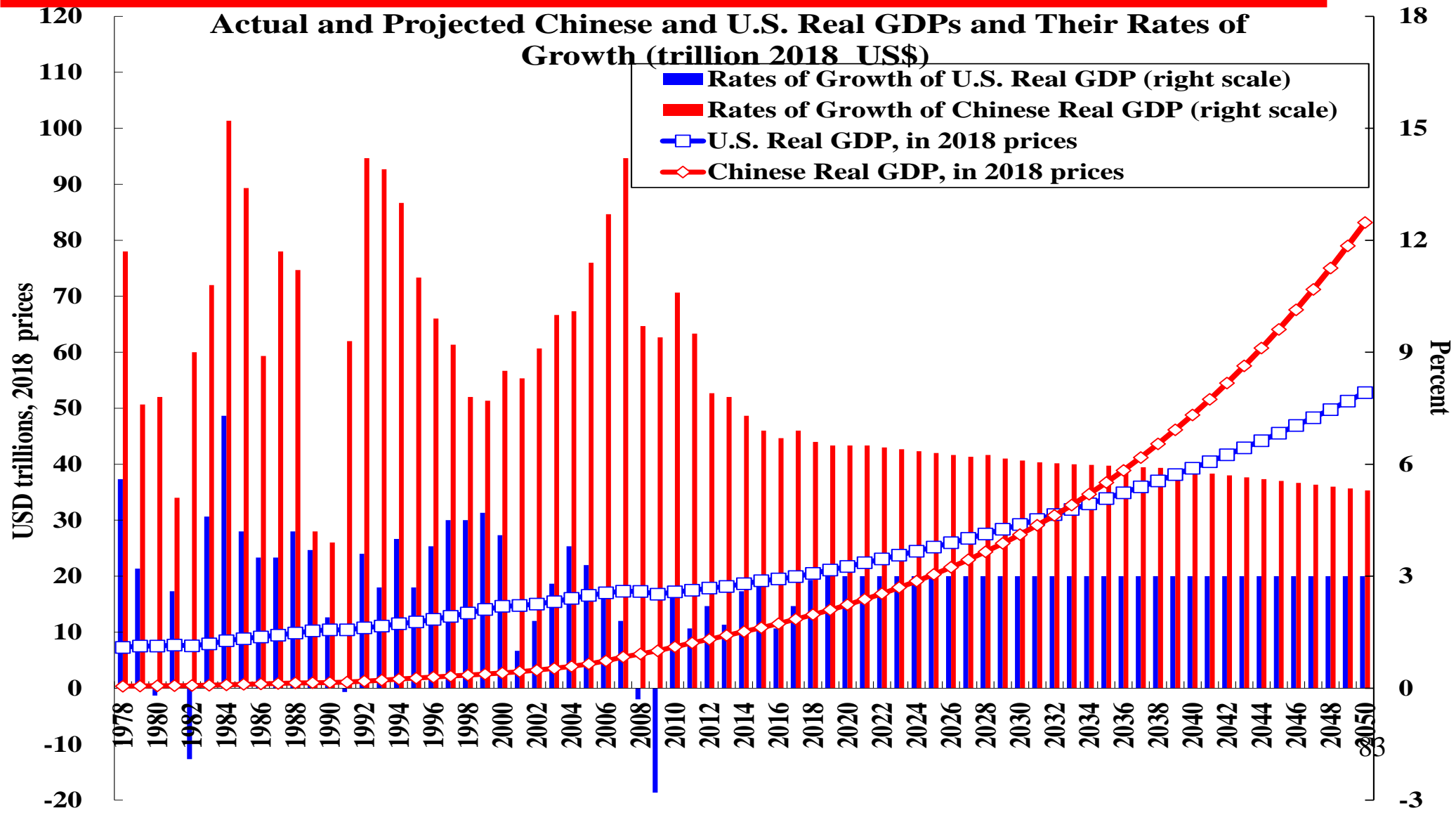
# Actual and Projected Levels and Growth Rates of Chinese and U.S. Real GDP (2018 tril. US\$)



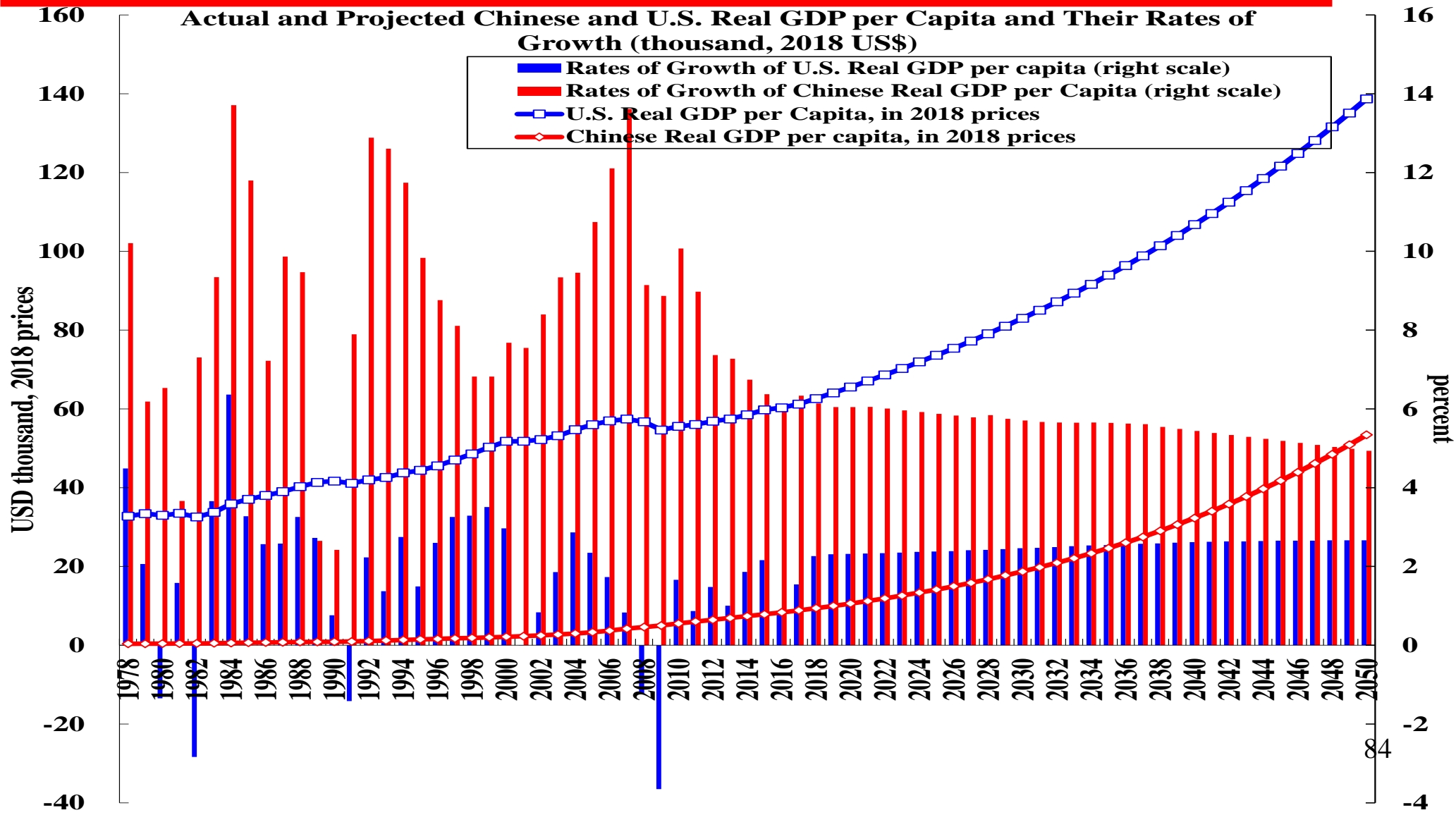
# Actual and Projected Chinese and U.S. Real GDP/Capita and Their Annual Rates of Growth (1,000 2018 US\$ & %)



# Actual and Projected Levels and Growth Rates of Chinese and U.S. Real GDP (2018 tril. US\$)



# Actual and Projected Chinese and U.S. Real GDP/ Capita and Their Rates of Growth (1,000 2018 US\$)



# Technological Competition

---

- ◆ Technological competition is motivated by national security considerations as well as commercial considerations.
- ◆ No individual or firm will want to give away or sell its core competence. In old China, masters typically do not teach their apprentices everything, unless they are male lineal descendants.
- ◆ It should therefore not be surprising that nations will protect their core competences,
- ◆ In the case of the atomic bomb—the former Soviet Union developed it independently; China developed it independently, without any foreign assistance; the U.K., France, India, Pakistan and even North Korea developed their nuclear bombs independently.
- ◆ China will have to continue to develop its own advanced semiconductor, artificial intelligence, and aircraft industries as it may not be able to import the best available from other countries.

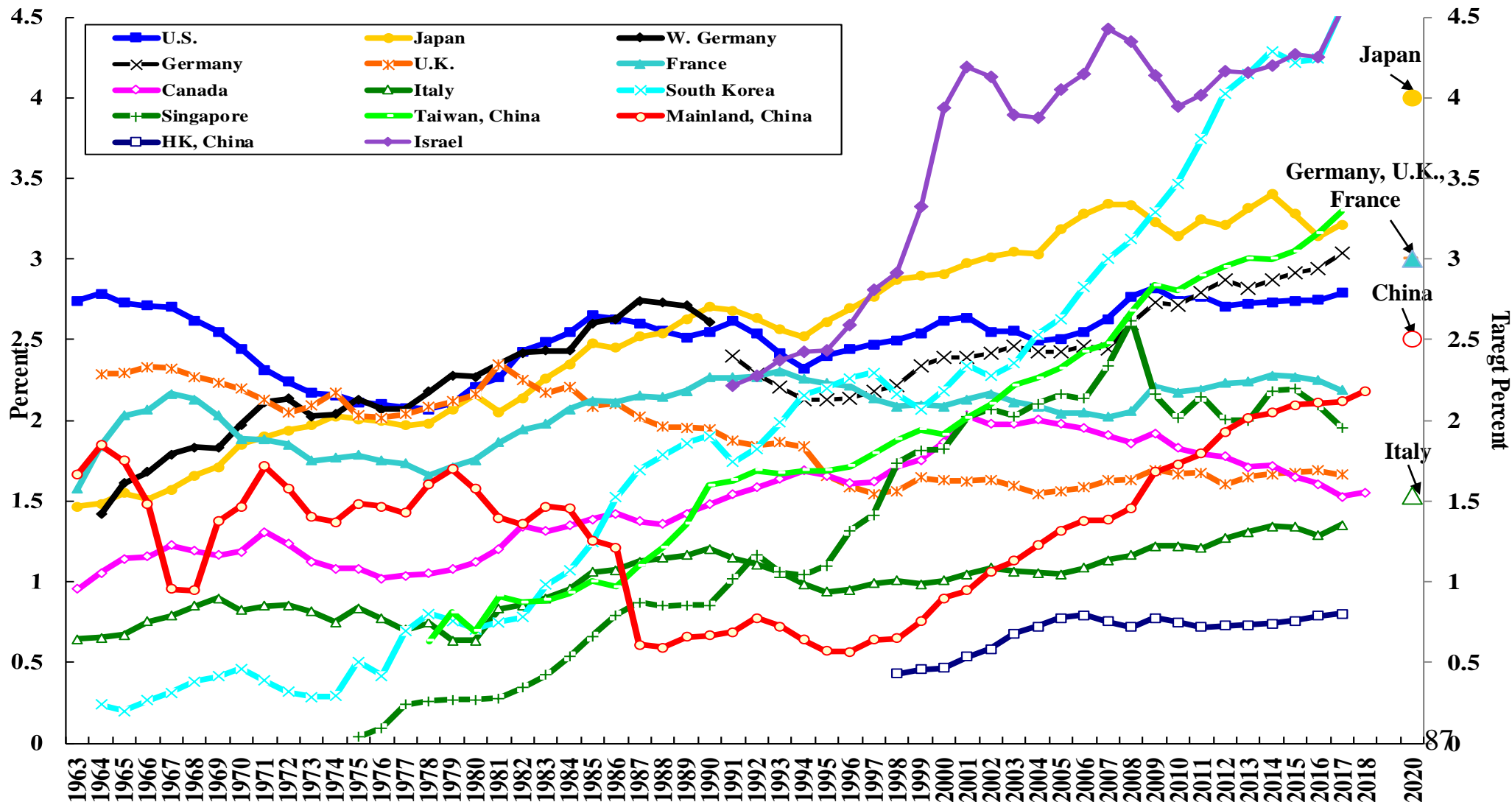
# Technological Competition

---

- ◆ Investment in intangible capital (human capital and Research and Development (R&D) capital) is indispensable for innovation.
- ◆ The annual expenditure on R&D as percentages of GDP are presented for selected economies in the following chart.
- ◆ The chart shows that the U.S. has consistently invested a relatively high percentage of its GDP in R&D, averaging 2.5% since 1963. The East Asian economies, including Mainland China, with the exception of Hong Kong, has been catching up fast.
- ◆ China is expected to reach its target of 2.5% of GDP in 2020, approximately the same as the average U.S. share over the past more than fifty years. However, it will still be below the expected or targeted levels of the European countries (France, Germany and the U.K.), Japan and South Korea.

# R&D Expenditures as a Share of GDP and Their Target Levels at 2020: G-7 Countries, 4 East Asian NIEs, China & Israel

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



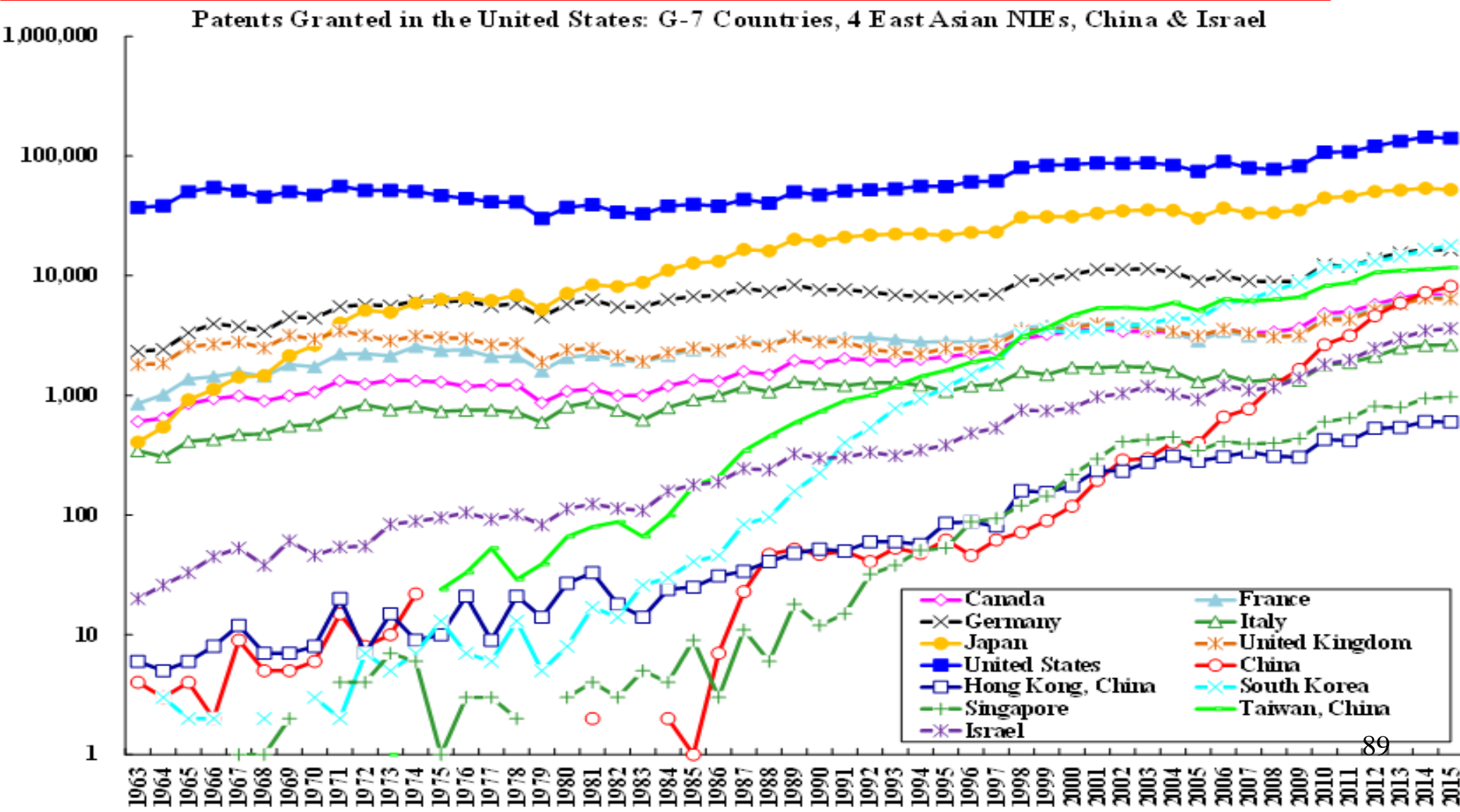
# Technological Competition

---

- ◆ One indicator of the potential for technical progress 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 140,969 patents granted in 2015, followed by Japan, with 52,409. (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.)
- ◆ The number of patents granted to Mainland Chinese applicants each year has increased from the single-digit levels prior to the mid-1980s to 8,166 in 2015.
- ◆ The economies of South Korea and Taiwan, granted 17,924 and 11,690 U.S. patents respectively in 2015, were far ahead of Mainland China. In contrast, the number of U.S. patents granted to Hong Kong nationals was only 601 in 2015.



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



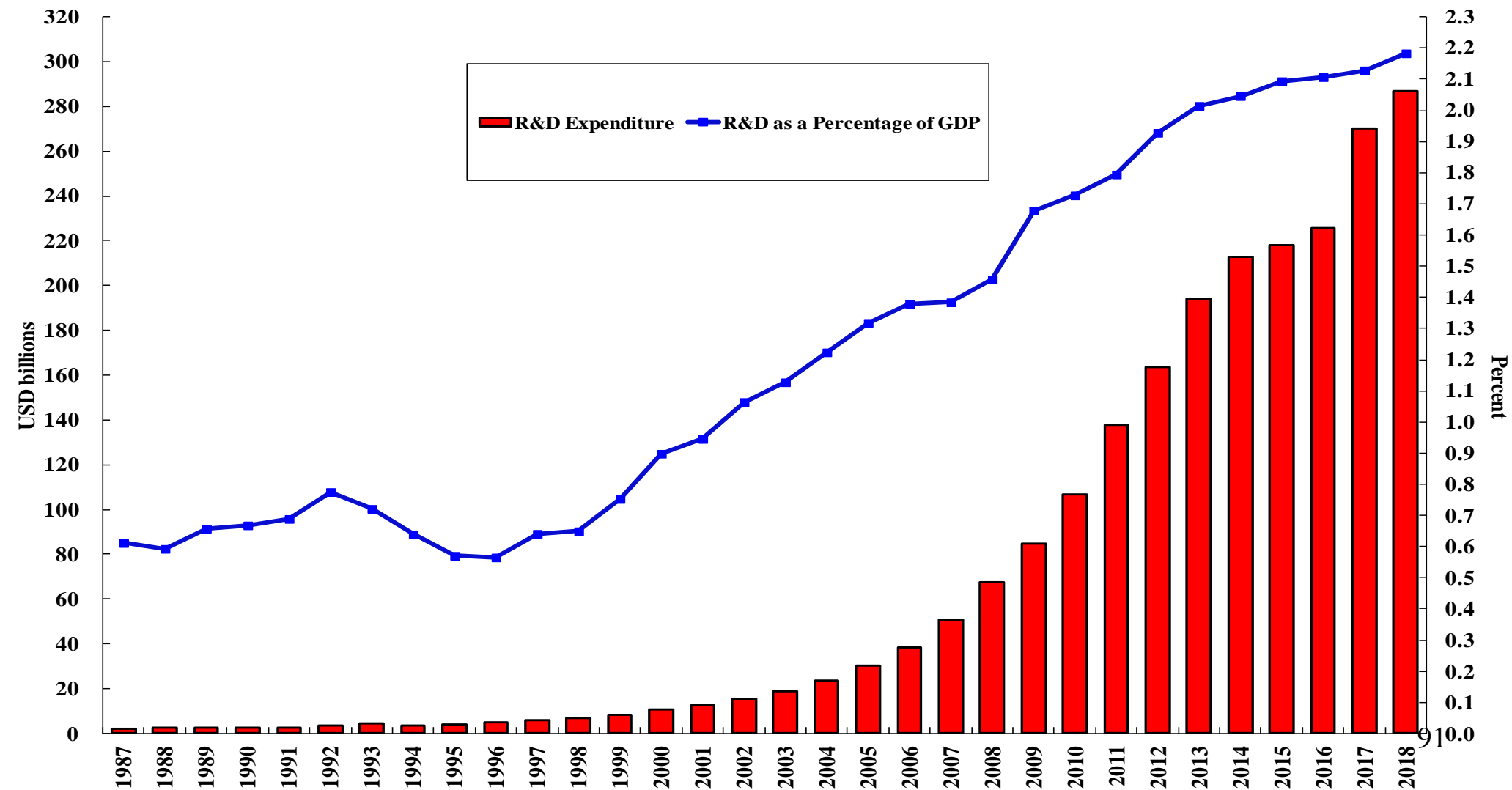
# Technological Competition

---

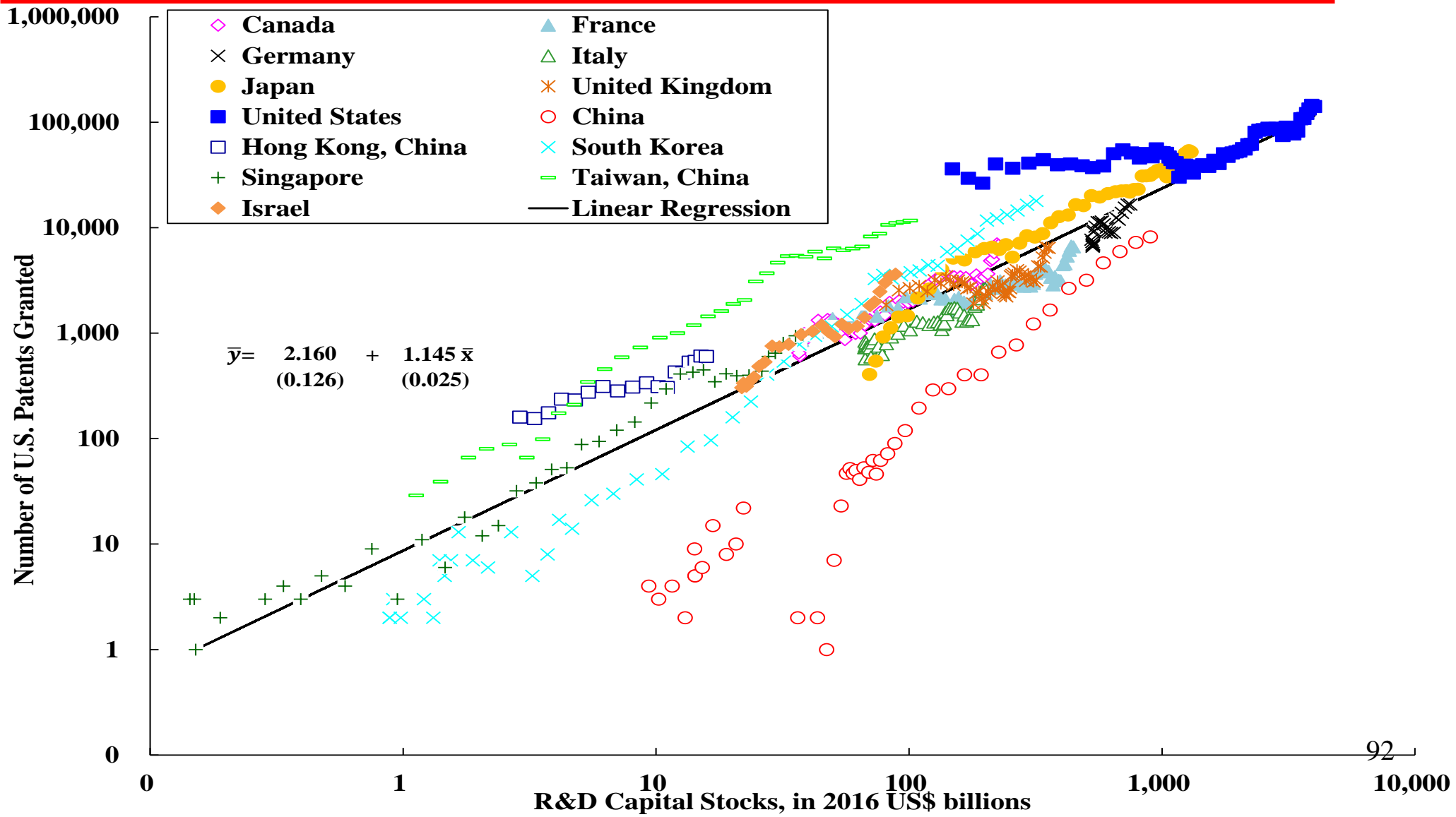
- ◆ The R&D capital stock, defined as the cumulative past real expenditure on R&D less depreciation of 10% per year, is an useful indicator of innovative capacity. R&D expenditure should quite properly be treated as investment since R&D efforts generally take years to yield any results.
- ◆ The R&D capital stock 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 economy).
- ◆ 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.

# China's R&D Expenditure and Its Share of Chinese GDP

China's R&D Expenditure and Its Share of Chinese GDP



# U.S. Patents Granted and R&D Capital Stocks: G-7 Countries, 4 EANIEs, China & Israel

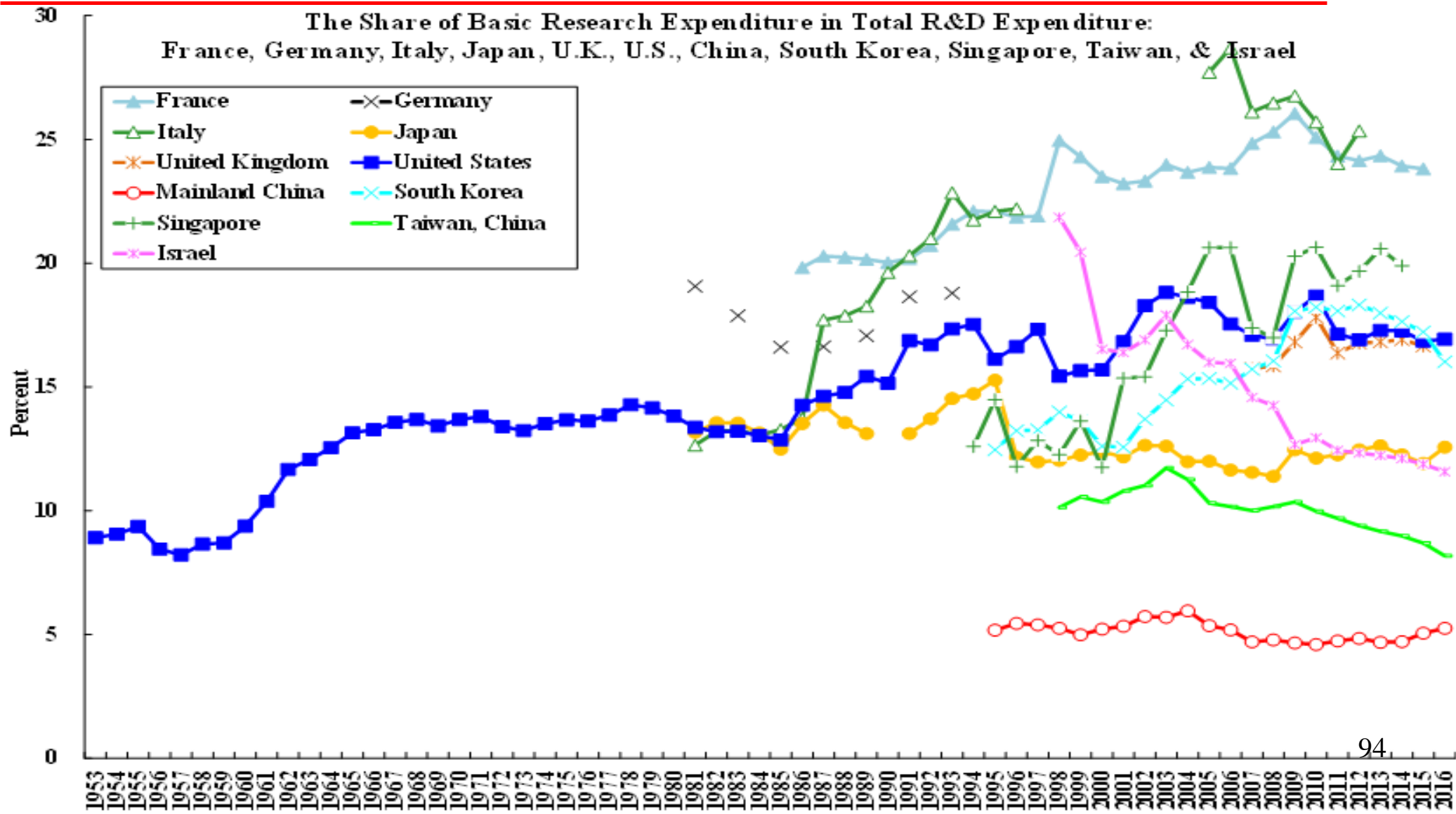


# Technological Competition

---

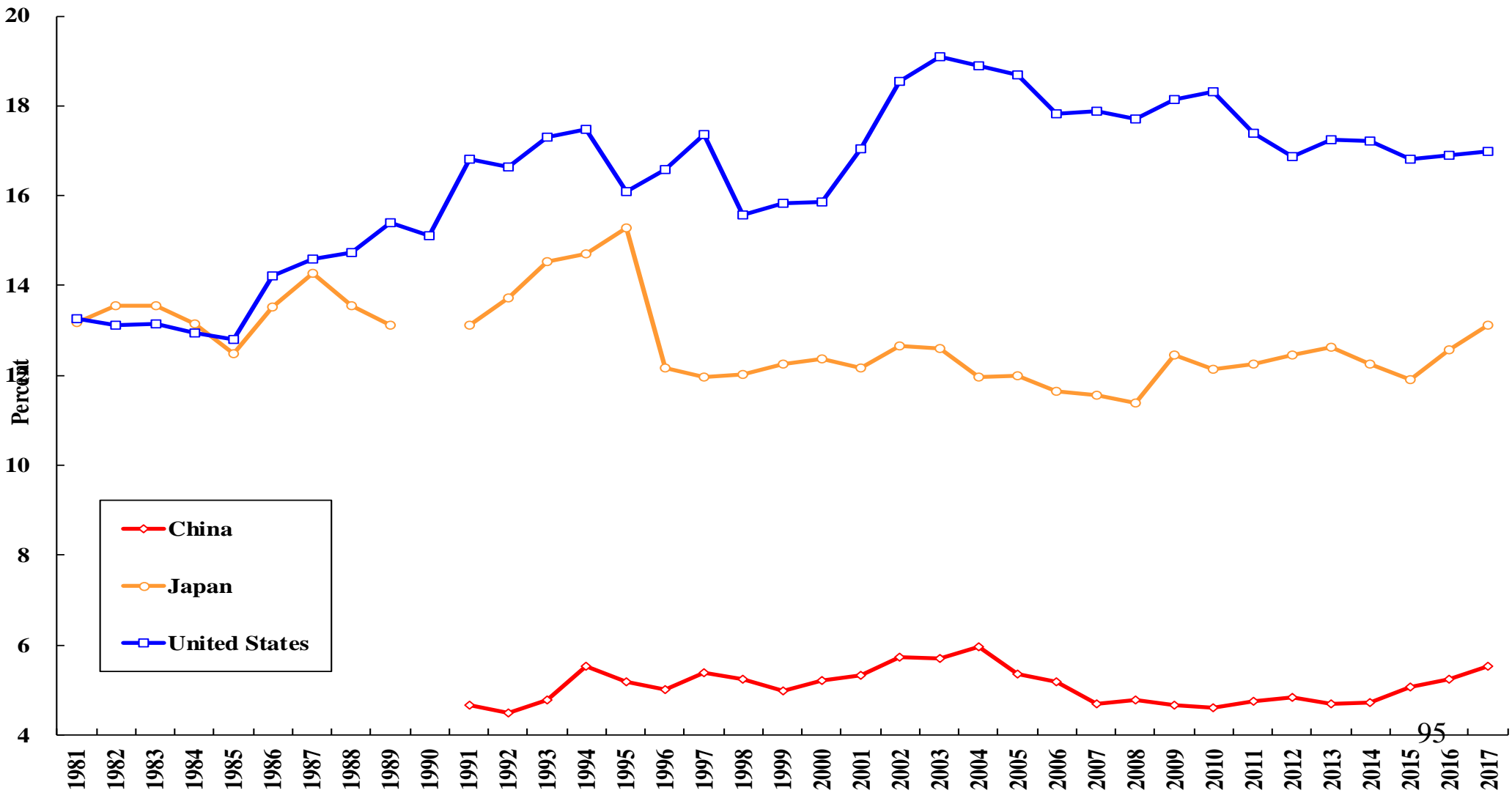
- ◆ The long-term determinant of the outcome of technological competition is the capacity for innovation. China has the same advantages as the U.S. in terms of the economies of scale, learning-by-doing and larger number of persons in the upper tail of the ability distributions.
- ◆ However, in order for break-through discovery or invention to be made, there must be significant investment in basic research.
- ◆ Basic research is by definition patient and long-term research. The rate of return, at any reasonable discount rate, will be low. It must therefore be financed by the government or non-profit institutions and not by for-profit firms.
- ◆ The atomic and hydrogen bombs, the nuclear reactors, the internet, the packets transmission technology and the browser are all outcomes of basic research done many years ago.
- ◆ However, Chinese investment in basic research has remained low relative to the other major countries (see the following chart). China devoted only 5 percent of its R&D expenditures to basic research, compared to the more than 15 percent of the U.S.
- ◆ The U.S. has a commanding lead in many basic scientific disciplines, reflected in for example, the cumulative number of Nobel Laureates. Of course, China is ahead in selected fields. For example, Huawei is a global leader in 5G technology.

# Basic Research Expenditure as a Share of Total R&D Expenditure: Selected Countries

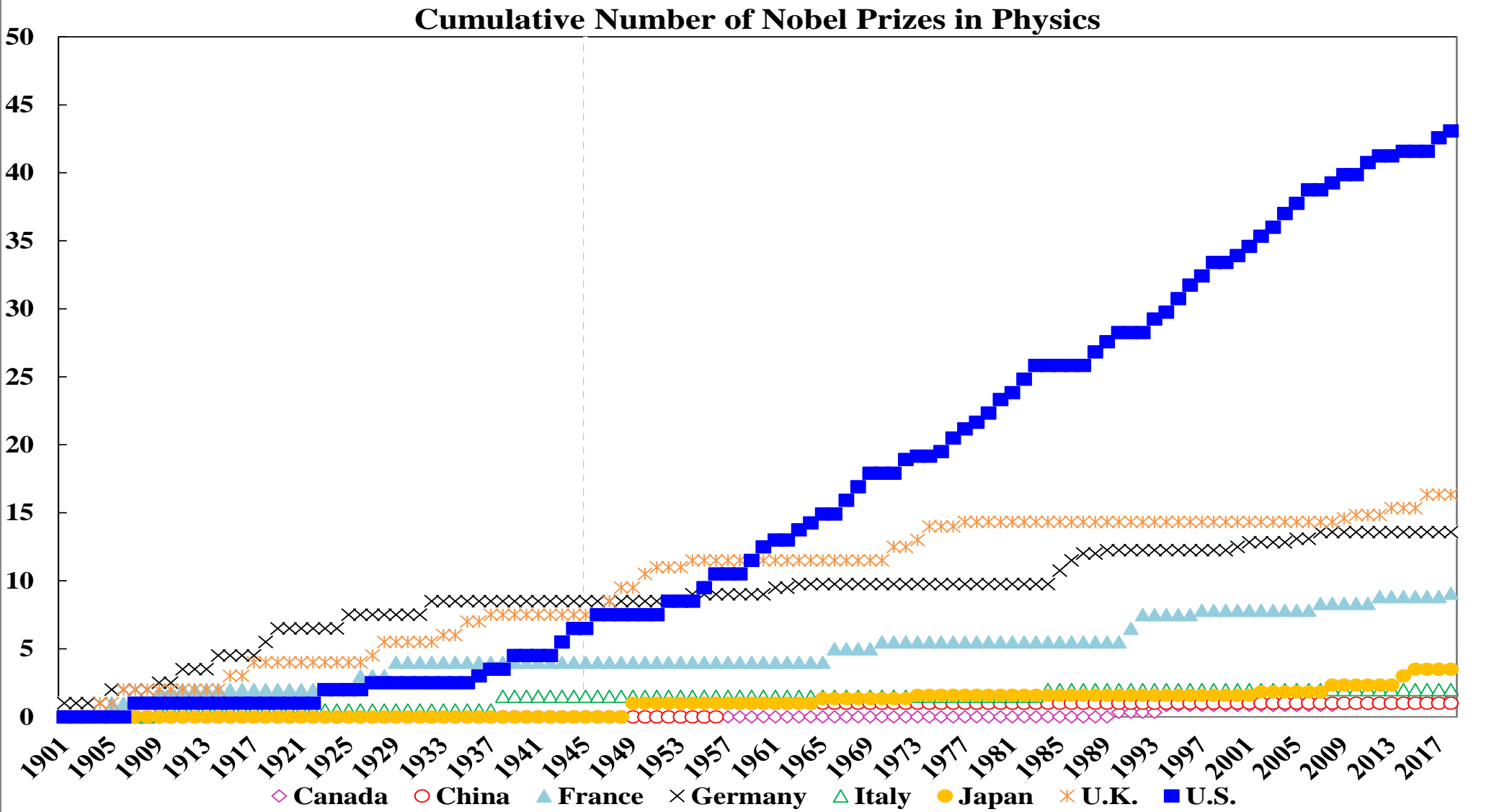


# Basic Research Expenditure as a Share of Total R&D Expenditure: China, Japan and the U.S.

Basic Research Expenditure as a Percentage of Gross Expenditure on R&D



# Technological Competition: Cumulative Number of Nobel Laureates in Physics





# Economic Complementarities between China and the U.S.

---

- ◆ China and the U.S. have very different economic endowments. China has a large population that is more than four times that of the U.S. The U.S. has more arable land, more tangible capital stock, almost four times more R&D capital stock than China, and much more natural resources (for example, oil and gas deposits) than China.
- ◆ China has a high savings rate and the U.S. has a low savings rate. Chinese savings exceed Chinese domestic investment and U.S. savings are less than U.S. domestic investment. China is a net capital exporter and the U.S. a net capital importer.
- ◆ Economic theory tells us that the more different two economies are, the greater they potentially benefit from trading and interacting with each other.

# Economic Complementarities between China and the U.S.

	China			U.S.		
	2015	2016	2017	2015	2016	2017
Population, thousands persons	1,374,620	1,382,710	1,390,080	321,323	323,668	325,983
Arable land, thousand hectare	134,999	134,921	134,863	152,263	152,263	
Tangible capital stock, 2016 prices, US\$ billions	21,268	23,405	25,351	26,953	27,657	28,061
Real R&D capital stock, 2016 prices, US\$ billions	898	1,015	1,139	4,005	4,106	4,205
Working-age population (ages 15-64), persons	996,030,376	995,072,896	993,792,919	212,357,568	213,254,816	213,911,387
Sources:						

Population, yearend for China, from National Bureau of Statistics of China (NBSC) and midyear for the U.S., the U.S. Bureau of Economic Analysis (BEA).

Arable land, for China, from the National Bureau of Statistics of China, and for the U.S. from the Food and Agriculture Organisation of the United Nations

Tangible capital stock, estimated by Lawrence J. Lau from national income accounts data.

Real R&D capital stock, estimated by Lawrence J. Lau and Yanyan Xiong (2018).

Working-age population, from the World Bank, World Development Indicators (WDI) Database.

# Economic Complementarities between China and the U.S.

	China			U.S.		
	2015	2016	2017	2015	2016	2017
Arable land per capita, hectare	0.098	0.098	0.097	0.474	0.470	
Real capital stock per capita, in 2016 prices, US\$	15,472	16,927	18,237	83,880	85,448	86,080
Real R&D capital stock per capita, in 2016 prices, US\$	654	734	819	12,463	12,685	12,900
Working age population per						

# Coordinated Expansion of Trade

---

- ◆ A bilateral trade gap can be closed by either the deficit country increasing its exports to the surplus country, or by the surplus country reducing its exports to the deficit country. (If two countries stop trading, the bilateral trade balance is by definition zero.) It is much better to close a bilateral trade gap by increasing the exports from the deficit country to the surplus country than for the surplus country to reduce its exports to the deficit country. In the former case, both countries benefit; in the latter case, both countries lose.
- ◆ It is conventional wisdom that reducing a bilateral trade surplus per se, for example, by increasing exports from the deficit country to the surplus country, cannot change the aggregate trade deficit with the world of the deficit country, nor increase the GDP of the deficit country.

# Coordinated Expansion of Trade

---

- ◆ However, this is not necessarily true if the increased exports can come from new domestic production, which increases both domestic GDP and employment, rather than the diversion of existing exports from another trading-partner country.
- ◆ One may raise the question: if such profitable opportunities for trade exist, why has the trade not occurred already? The answer lies in the fact that the creation of genuinely new export supply requires significant investment, and significant investment can be justified only if the production and export activities can be sustained over time. That is why a new committed long-term demand for the good to be exported is necessary in order that there is new production.
- ◆ However, new long-term demand can arise only if there is new long-term supply and vice versa. There is therefore the need for the coordination of both the supply and the demand sides. But markets, especially futures markets, are incomplete. There is no long-term futures market that extend beyond a couple of years. The insurance markets are also not complete--there are many risks that cannot be insured in an economically viable way. For example, it is impossible, or prohibitively expensive, to either sell or buy beef or wheat on the futures market for delivery twenty years from the present (actually even three years from the present). Thus one cannot rely on the free markets alone for such long-term trade arrangements involving new supply and demand.

# Coordinated Expansion of Trade

---

- ◆ Non-market coordination becomes necessary because of the incompleteness of markets. The market, left to its own, may not bring about some otherwise productive economic activities. Thus, coordination (or some would say managed trade or planning) can enable certain beneficial economic activities to take place that otherwise may not occur.
- ◆ An example is the possible development of the natural gas reserves in Alaska to be sold to Chinese customers. Significant long-term investments will have to be made. Without committed buyers, the project cannot be financed (future markets for natural gas does not extend beyond a couple of years). Without committed and well-capitalised developers with a track record, the potential buyers will not commit either.
- ◆ Moreover, there is always the concern that the trade may be interrupted for political reasons by either government. Thus, coordination by state and non-state actors are necessary.

# Coordinated Expansion of Trade

---

- ◆ Two sources of potential U.S. exports to China that can be huge and are relatively uncontroversial are agricultural commodities and energy. China has a huge demand for agricultural commodities, and, in addition, there is also great potential for the U.S. to increase the value-added content of U.S. agricultural exports, for example, by producing and exporting meat (beef, pork and poultry) instead of feed grains (corn and soybeans) to China.
- ◆ In 2017, China imported more than US\$115 billion of agricultural commodities, but only 20 percent of the imports came from the U.S. Moreover, Chinese imports of agricultural commodities has been increasing by more than 10 percent per year. Thus, there is the potential of U.S. exports of agricultural commodities to China rising from the current US\$20 billion plus a year to US\$50 billion a year in three to five years, on the basis of new as well as higher value-added U.S. production. The U.S. has significant surplus production capacity (for example, it has an abundance of land, water and pastures) for<sup>103</sup> agricultural commodities if there is assured long-term demand.

# Coordinated Expansion of Trade

---

- ◆ There is also a huge and growing Chinese demand for energy, especially relatively clean energy, which can be met by exports of liquefied natural gas (for example, from Alaska) and shale oil, which are again new production, from the U.S.
- ◆ In 2016, China imported a total of US\$117 billion of crude oil and US\$9 billion of natural gas. Chinese imports of oil and gas from the U.S. was minuscule, at US\$0.2 billion and US\$0.08 billion respectively. Given China's huge and growing demand for energy, and especially for non-polluting energy such as natural gas, and the U.S. being transformed into a net energy exporter because of its rising shale oil and gas production, it is entirely possible for the U.S. to become a top energy exporter to China, gradually increasing to US\$50 billion a year or more, again based on new production and not the diversion of existing production, thus increasing both U.S. GDP and employment.



# Coordinated Expansion of Trade

---

- ◆ It is therefore possible to envisage that additional exports in the agriculture and energy areas alone can amount to more than US\$100 billion a year, with almost 100 percent U.S. value-added content. Moreover, these increased exports are likely to persist for a long time.
- ◆ The advantage of this type of arrangements is that no one is hurt economically. In the U. S., the new exports consists of new domestic supply that already has its committed export demand, so that it will not drive up or drive down prices or otherwise affect the markets. In China, not only are the imports likely to be less expensive than the cost of domestic production on the margin, they serve the important purpose of meeting the expanded and expanding domestic demand, without affecting the prices in the domestic markets. So, everything considered, this is likely to be win-win all around.

# Coordinated Expansion of Trade

---

- ◆ Another fast-growing component of U.S. exports of services to China that has huge potential for expansion is education and tourism. The expenditures of Chinese students (currently totalling 360,000) and tourists in the U.S. have been rising rapidly. Moreover, their presence in the U.S. can enhance the understanding between the Chinese and American people and improve long-term ties. And on their return to China, they can act as goodwill ambassadors for the U.S., especially those who have been students in the U.S. U.S. students and tourists in China can also play the same role.
- ◆ A further area of significant potential win-win collaboration is the deployment of the excess Chinese savings in the U.S. for the financing of the renovation and upgrading of U.S. basic infrastructure as well as the augmentation of the equity capital of U.S. corporations through a secondary listing of their shares on the Chinese stock market.

# Coordinated Expansion of Trade

---

- ◆ Can “managed trade” change the aggregate trade balance with the world?
- ◆ The conventional wisdom takes the aggregate output of each economy as given so that given the savings-investment gap, reallocation of trade flows among trading partners cannot change the aggregate trade balance with the world.
- ◆ However, to the extent that a “managed trade” agreement leads to new output being produced from previously idle resources, it can increase both GDP and employment, as well as exports. Thus, the aggregate trade balance will be improved in the positive direction. One way to think about it is that there is an autonomous increase in permanent supply in response to an exogenous increase in permanent demand.

# Bilateral Economic Issues

---

- ◆ U.S. economic issues include intellectual property right protection, forced transfer of technology, market access for U.S. direct investors, cyber-theft and state-owned enterprises. (Note that none of these issues have much to do with trade per se.)
- ◆ Chinese economic issues include the U.S. restrictions on high-technology exports to China and the U.S.'s practice of unilateral enforcement of agreements rather than reliance on multilateral organisations such as the World Trade Organisation (WTO).

# U.S. Issues:

## Intellectual Property Right Protection

---

- ◆ Intellectual property right protection in China has actually been vastly improved since special intellectual property courts were established in Beijing, Shanghai and Guangzhou in 2014. Economically meaningful fines have begun to be levied on violators of intellectual property rights in China.
- ◆ Both Japan and Taiwan in their early stages of economic development did not do much to protect intellectual property rights either. But as they changed from being a user and imitator to a creator of intellectual property, they began to enforce intellectual property rights vigorously.
- ◆ Intellectual property right protection in China should get even better over time. Today, China grants the largest number of patents in the world, over 300,000 a year. And Chinese inventors and discoverers, just like their foreign counterparts, will want their intellectual property rights protected.
- ◆ The way forward is to step up enforcement action in and by Chinese courts, especially through lawsuits filed by the victims against the violators of intellectual property rights.

# U.S. Issues:

## Forced Technology Transfer

---

- ◆ Forced technology transfer has to do with the Chinese requirements for foreign direct investors in certain industries to take Chinese enterprises as equal (50-50) joint-venture partners. If foreign direct investors are no longer required to take an equal domestic joint-venture partner, no transfer of technology to a Chinese enterprise is required, and certainly no forced transfer of technology. On 30 June 2019, Chinese Premier LI Keqiang announced in Dalian that foreign investors in the Chinese financial sector will be permitted to have wholly-owned Chinese subsidiaries beginning in 2020, instead of the previously announced 2021.
- ◆ Thus, forced transfer of technology is fast becoming a moot issue because of recent Chinese liberalisation measures, including the abolition of the joint-venture requirement for direct investors. For example, in the automobile manufacturing industry, Tesla of the U.S. has been able to establish a wholly-owned subsidiary in Shanghai to manufacture electric cars; Germany's BMW has been able to increase its ownership stake in its China automobile-manufacturing joint-venture to 75%; and even though it is now possible for the U.S.'s General Motors to buy out its Chinese joint-venture partner, it has indicated that it does not intend to do so. Allianz of Germany and Chubb of the U.S. (based in Switzerland) have also been allowed to wholly-own insurance companies in China.

# U.S. Issues:

## Market Access for U.S. Direct Investors

---

- ◆ The newly passed Foreign Investment Law is also a step in the right direction. The expectation is that China will continue to open its economy to international trade in goods and services and to both inbound and outbound cross-border direct investment on a reciprocal basis, regardless of the outcome of the China-U.S. trade war.
- ◆ The new and much shortened negative list on foreign direct investment should also go a long way towards improving market access.
- ◆ The expectation is that China will continue to open its economy to international trade in goods and services and to both inbound and outbound cross-border direct investment on a reciprocal basis, regardless of the outcome of the China-U.S. trade war.
- ◆ The best solution is for China to grant national treatment to all foreign direct investors on a reciprocal basis (with national security consideration being the only possible exception).

# U.S. Issues:

## Cyber-Security

---

- ◆ Commercial cyber-thefts should be vigorously prosecuted, with the collaboration and cooperation of both governments.
- ◆ Spying, the world's second oldest profession, will probably go on as usual.
- ◆ However, it may be useful for China and the U.S. to agree on some rules for cyber-warfare, in the same way as the arms control treaties on biological, chemical, missiles and nuclear weapons in the past.



# U.S. Issues:

## State-Owned Enterprises

---

- ◆ Another potential issue is that of Chinese “state-owned enterprises (SOEs)”. SOEs are here to stay. However, It is useful if the U.S. can be specific on its objections to SOEs.
- ◆ It can be either behaviour, for example, anti-competitive behavior such as predatory pricing, or attempting to monopolise the market, etc.; or it can be government subsidies; or it can be something else. It is much more effective and productive to focus on the behaviour of the enterprises and discriminatory treatment by the government rather than the ownership per se.
- ◆ Otherwise, if all firms, domestic (state-owned or private), joint-venture and foreign firms are granted national treatment, it will be a level playing field for all. (National security considerations will be the only acceptable exception.)
- ◆ However, basic research will need to be financed and supported by the government and non-profit organisations as is done in all countries including the U.S.

# Chinese Issues:

## Restrictions on U.S. High-Technology Exports

- ◆ The U.S. restrictions on high-technology exports to China, which dated back to the Korean War, have never been lifted.
- ◆ The recent U.S. measures aimed at Huawei, Dajiang Industries, and Hikvision raised the question whether there would be a full technological embargo against China. (It was a “Sputnik” moment for China. It would mean that China must develop its own indigenous scientific and technological capabilities in order to continue its economic development.)
- ◆ Potentially, this may lead to de-coupling of the high-technology industries in China and the U.S., which is probably not good for either country, nor for the world as a whole. However, some redundancy in critical systems is not a bad idea because it provides insurance against catastrophic risks.

# Chinese Issues:

## Unilateral Enforcement of Agreement

---

- ◆ Any trade agreement should be jointly enforced by both China and the U.S. after the necessary judicial process in either (or both) countries rather than unilaterally enforced.

# Enhancing Mutual Economic Interdependence

---

- ◆ The problem with a trade war is that there are no real winners—both countries lose because the feasible choices open to each of them are reduced.
- ◆ Exporters in both countries will be hurt because of the reduction in their exports, and importers in both countries will see their businesses decline. And the consumers and producers who rely on imported goods and inputs in both countries will have to pay higher prices.
- ◆ A better way to narrow the U.S. trade deficit with China is for the U.S. to increase its exports of goods and services to China, especially new production of goods and services, for example, by exporting newly developed liquefied natural gas from Alaska and shale oil and shale gas from the continental U.S. and producing and exporting meat (beef, pork and poultry) instead of feed grains (corn and soybeans) to China. However, such trade should be structured so that it is reliable, sustainable and long-term.

# Enhancing Mutual Economic Interdependence

---

- ◆ Long-term bilateral trade can enhance economic interdependence, and economic interdependence can enhance mutual trust over time, and mutual trust in turn can promote more long-term bilateral trade and direct investment.
- ◆ Both countries should therefore promote greater mutual economic interdependence so that their economic relations are win-win making a real war between them unthinkable.
- ◆ The two European powers, France and Germany, which were at one time rivals, fought three wars between them in 1870, 1914 and 1939 respectively. After World War II, the European Common Market was launched so as to increase the degree of economic collaboration and cooperation between them. Today, France and Germany and the best of allies in the European Union, and a war between them is not possible.

# Chinese Economic Policy Options

---

- ◆ Increasing Domestic Aggregate Demand
- ◆ Mobilising Domestic Savings
- ◆ The Three Zeroes Strategy
- ◆ Promoting Innovation

# Increasing Domestic Aggregate Demand

---

- ◆ Basic infrastructure projects such as a national network of 5G base stations, high-speed railroads and urban mass-transit systems.
- ◆ Additional investments in public goods provisions such as environmental preservation, protection and restoration, education, health care and elderly care.
- ◆ The planned publicly owned national oil-and-gas pipeline network open to all potential users will allow the markets to play a more decisive role, facilitating competitive entries both upstream and downstream; the same is true of the national electricity grid and the planned 5G network of base stations.

# Mobilising Domestic Savings

---

- ◆ Encouragement of the substitution of equity for debt by enterprises, thus lowering the leverage of enterprises;
- ◆ Making cash dividends deductible to corporations, thus increasing the attractiveness of using equity rather than debt finance;
- ◆ Profitable SOEs should be required to pay cash dividends, thus increasing the attractiveness of long-term share ownership to Chinese households;
- ◆ Establishment of an international board on Chinese stock exchanges for foreign multinational corporations so that Chinese household savings can be rewarded with higher rates of return.



# The Three Zeroes Strategy

---

- ◆ Zero tariffs, zero non-tariff barriers and zero subsidies;
- ◆ National treatment for all, including foreign enterprises, on a reciprocal basis;
- ◆ Transformation from the world's factory to the world's market;
- ◆ Maintaining competitiveness through research and development and upgrading.

# Promoting Innovation

---

- ◆ Increasing R&D expenditures, especially expenditures on basic research;
- ◆ Protection of intellectual property rights.

# Concluding Remarks

---

- ◆ Even though the direct real impacts of the China-U.S. trade war are relatively small and manageable for the Chinese economy, the uncertainty and unpredictability that it has created, and the negative influence it has on public confidence and expectations, have also affected investment and consumption and hence the real economy.
- ◆ Regardless of whether China and the U.S. can reach an agreement, once it is settled one way or the other, it will at least eliminate the uncertainty. And firms and households can make their investment and consumption decisions accordingly.
- ◆ The Chinese Government is expected to implement cuts in its tax rates, including the value-added tax, corporate and individual income tax, social insurance contribution rates, and continue investing in basic infrastructure projects such as high-speed railroads and urban mass-transit systems. Additional investments in public goods provisions such as environmental preservation, protection and restoration are also possible, especially if a comprehensive trade agreement fails to materialise as expected.

# Concluding Remarks

---

- ◆ The competition between China and the U.S., whether friendly or unfriendly, can be assumed to be an ongoing and long-term one. It is the “new normal”. The trade dispute is only a symptom of the potential possible conflicts between the two countries.
- ◆ Prof. Graham Allison, of the Kennedy School of Government at Harvard University, has written a book titled **Destined for War**, about the inevitability of a war between China and the U.S. As a rising power challenges the dominance of an established power, the established power is likely to respond with force. He refers to this “inevitability” as the “Thucydides Trap”, drawing on the book by Thucydides, **History of the Peloponnesian War**, a war in ancient Greece (431-404 B.C.) between Athens and Sparta.<sup>1,24</sup>

# Concluding Remarks

---

- ◆ However, the rise of the former Soviet Union between the end of the Second World War and 1990 provides a counter-example that an established power and a rising power must go to war. The truth is that a thermonuclear war today is so devastating that there are effectively no real winners. It is this “mutually assured destruction” that prevented the Soviet Union and the U.S. from going to war and instead to enter into a number of arms control treaties such as the Anti-Ballistic Missile (ABM) Treaty. And it will similarly prevent wars between major powers in the future.
- ◆ It is also important to distinguish between the rivalry between the U.S. and the former Soviet Union with the competition between China and the U.S. The former was existential, as the former Soviet Union would like to impose the Communist system on other countries. China has no intention of proselytising its ideology or system of government to other countries and hence its competition with the U.S. is non-existential.

# Concluding Remarks

---

- ◆ To reduce the probability of an armed conflict between China and the U.S. down the road, China-U.S. relations must be carefully managed going forward. Both countries should try to promote greater mutual economic interdependence, to make their relations win-win, so that a war between them would be unthinkable, just as another war between France and Germany, which fought three wars between them, in 1870, 1914 and 1939, is not possible today.
- ◆ It is likely that the China-U.S. trade negotiations will be stretched out, perhaps with an interim “understanding”. I believe a complete rupture of the China-U.S. relation is unlikely as the U.S. still needs Chinese cooperation on such issues as North Korean denuclearisation and large U.S. corporations still have significant interests in the large and growing Chinese market. China also needs the U.S. to continue to supply critical semi-conductors and semi-conductor manufacturing equipment.

# Concluding Remarks

---

- ◆ President Donald Trump is focused solely on his re-election in 2020. Signing an agreement with China may expose him to attacks by his Democratic opponent(s). There are also people inside and outside the U.S. Government who do not want to have an agreement. Dragging things out is not such a bad strategy because it shows that he is tough on China and that he will not hesitate to walk away from a “bad deal”. No one will attack him openly for no agreement. Also, continuing to talk can help to keep the stock markets afloat.
- ◆ President XI Jinping is also not likely to accept any terms that appear to infringe on Chinese sovereignty because it may arouse domestic discontent and possible opposition. Accepting U.S. terms under duress also creates moral hazard and encourages similar behaviour in the future.
- ◆ Moreover, the Chinese side is also concerned about the possibility of imposition of last-minute additional conditions by the U.S. as in the Trump-Kim summit in Hanoi. In addition, if even Kim Jong-Un can refuse to accept last-minute U.S. conditions, it is most unlikely that President XI Jinping will be willing or able to accept them.

# Concluding Remarks

---

- ◆ The Chinese economy grew 6.3% in 2019H1, it should be able to achieve a real rate of growth of at least 6% for 2019 as a whole.
- ◆ Regardless of the ultimate outcome of the China-U.S. trade war, the Chinese economy is poised to grow at an average annual rate of between 5% and 6% over the next couple of decades.
- ◆ The U.S. economy is projected to grow at 3% per annum during the same period.
- ◆ The Chinese economy is likely to surpass the U.S. economy in terms of aggregate real GDP at market prices in the early 2030s.
- ◆ However, Chinese real GDP per capita will lag behind that of the U.S. until at least the end of the 21<sup>st</sup> Century.



# Concluding Remarks

---

- ◆ China and the rest of the world, except possibly the U.S., will continue to uphold the current multilateral trading system under the World Trade Organisation (WTO). After all, they have all benefitted and will continue to benefit from it.
- ◆ China is committed to further opening of its economy to international trade and both inbound and outbound direct investment. It will likely adopt a “three zeroes strategy”—zero tariffs, zero barriers and zero subsidies and offer national treatment to foreign direct investors on a reciprocal basis.
- ◆ Maintaining good economic relations with the rest of the world, and opening its economy further to international trade and investment, in particular, to the European Union, ASEAN, Japan and Russia on a reciprocal basis, is a must for China going forward.

# Concluding Remarks

---

- ◆ In the long run, if China and the U.S. cooperate and work together, many global problems such as prevention of climate change, denuclearisation, and the economic development of Africa, can be solved.
- ◆ China and the U.S. can both collaborate and compete in finding cures for diseases such as cancer and Alzheimer's disease, and every country in the world will benefit from it.
- ◆ The U.S. can invite China to participate in the exploration of Mars and share in the cost, which has been estimated to be hundreds of billions of U.S. dollars.
- ◆ If the two countries compete in a friendly way, much innovation is possible, as in the competition to build the fastest super-computer. The two countries should aim to become **competitive partners!**