

The Impacts of the Trade War on the Globalised Economy

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『從全球貿易戰看國際政經變化』

Taipei, 19 September 2018

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Introduction

- ◆ While the immediate direct impacts on the Mainland Chinese economy of the China-U.S. trade war are certainly negative, they are small in real terms, affecting an estimated 0.43 percent of GDP, and quite manageable for China. There is no need to panic.
- ◆ But the trade war is not likely to end soon, at least not before the U.S. mid-term elections.
- ◆ However, the trade war itself may do damage to the longer-term relations between China and the U.S.
- ◆ It is a reflection of the underlying China-U.S. competition for economic and technological dominance and the rise of populism, isolationism and protectionism almost everywhere in the world.

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

- ◆ The impacts on the Mainland economy
- ◆ The impacts on the economy of Guangdong Province
- ◆ The impacts on the economy of Shenzhen
- ◆ The impacts on the economy of Hong Kong
- ◆ The impacts on the rest of the world

The Impacts of the Trade War on the Mainland Economy

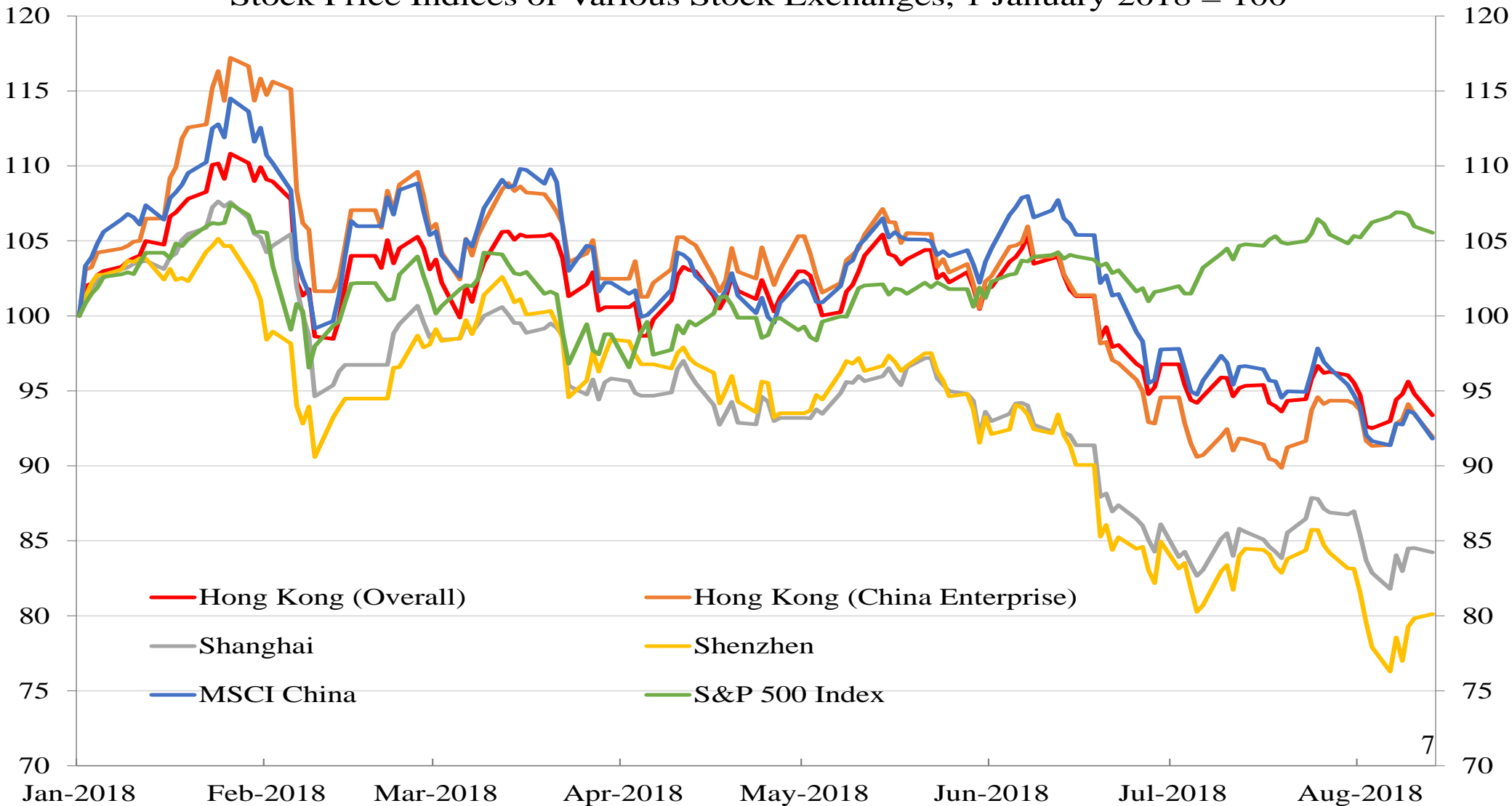
- ◆ The early impacts are psychological: they affect the prices of Chinese shares on the Mainland Chinese and Hong Kong stock exchanges and the Renminbi exchange rate.
- ◆ However, the real impacts on the economy are relatively small and manageable for the Mainland economy as a whole.

Immediate Impacts

- ◆ Stock markets abhor uncertainty. Any uncertainty will lead to a decline. The Chinese stock markets—Shanghai and Shenzhen, and even Hong Kong—have taken a direct hit from very beginning of the trade war, long before the effective date of the U.S. tariffs (see the following Chart). The Shenzhen Stock Exchange has seen its average stock price decline by approximately 20 percent since the beginning of 2018. Similarly, the average price level of the Shanghai Stock Exchange has declined 15 percent. Hong Kong overall has declined more than 5 percent, but Mainland Chinese enterprises listed there have declined by approximately 8 percent.
- ◆ By comparison, the S&P 500 has gained 5 percent since the beginning of 2018. However, not all of the declines in the Chinese stock markets can or should be attributed to the trade war. The actual and expected increase in the rate of interest in the U.S. by the U.S. Federal Reserve Board also had a role in the falling prices of assets and exchange rates vis-a-vis the U.S. Dollar in emerging markets.

The Chinese, Hong Kong and U.S. Stock Market Indexes, Year to Date

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



Immediate Impacts

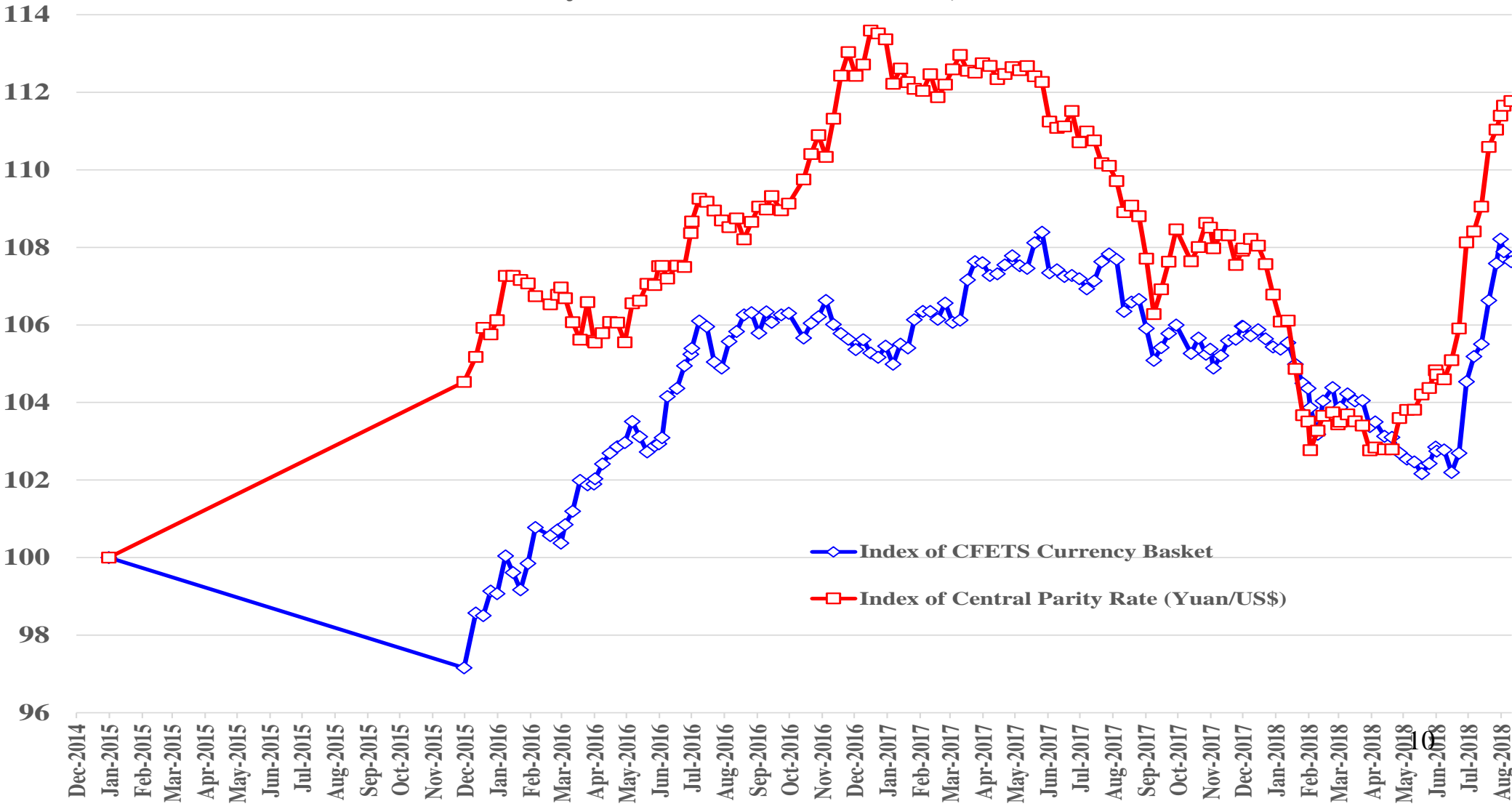
- ◆ However, the performance of the Shanghai and Shenzhen stock markets is not a reliable barometer of the state of the Chinese economy. Rather, it is a measure of the degree of “irrational exuberance”, to use a phrase coined by Dr. Alan Greenspan, the former Chairman of the U.S. Federal Reserve Board, or the opposite, “irrational gloom”.
- ◆ This is because most of the investors on the Mainland Chinese stock exchanges are individuals looking for a quick profit through frequent trading. The average holding period of individual Chinese common stock investors is less than 20 trading days and that of institutional investors is between 30 and 40 trading days. Since the trade war looks like it will last much longer, at least until the mid-term elections in the U.S. to be held on 6 November of this year, most Mainland Chinese investors have elected to bail out and stay on the sidelines for now.

Immediate Impacts

- ◆ Similarly, the Renminbi exchange rate has also been negatively affected, but also in part because of the actual and expected increases in the U.S. rate of interest. In the following charts, the Renminbi central parity rate, the rate set by the People's Bank of China (the central bank of China) at the beginning of each daily trading session of the onshore Renminbi, is compared to the China Foreign Exchange Trade System (CFETS) Index, an index of the exchange rate changes of a Chinese trade-weighted basket of currencies, for the period since 2015.
- ◆ While there was wide divergence at the beginning, they began to move in tandem with each other in the second half of 2017. More recently, while the Renminbi has devalued vis-a-vis the U.S. Dollar by almost 9 percent since the end of January 2018, the deviation of the central parity rate from the CFETS Index has not widened beyond 3 percent.

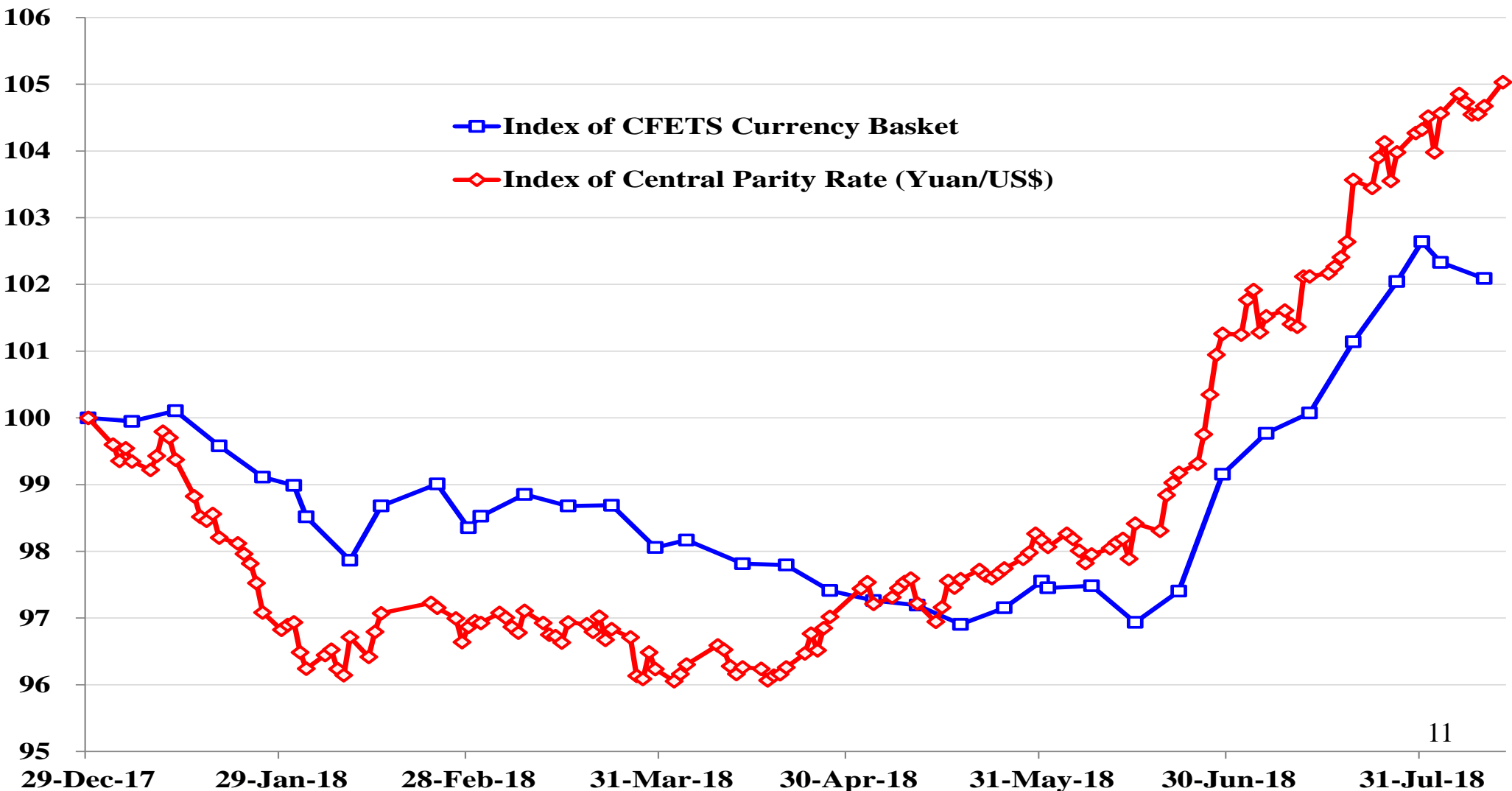
The Renminbi Central Parity Exchange Rate and the CFETS Index

The Central Parity Rate and the CFETS Index, 12/31/2014 = 100



The Renminbi Central Parity Exchange Rate and the CFETS Index

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



Immediate Impacts

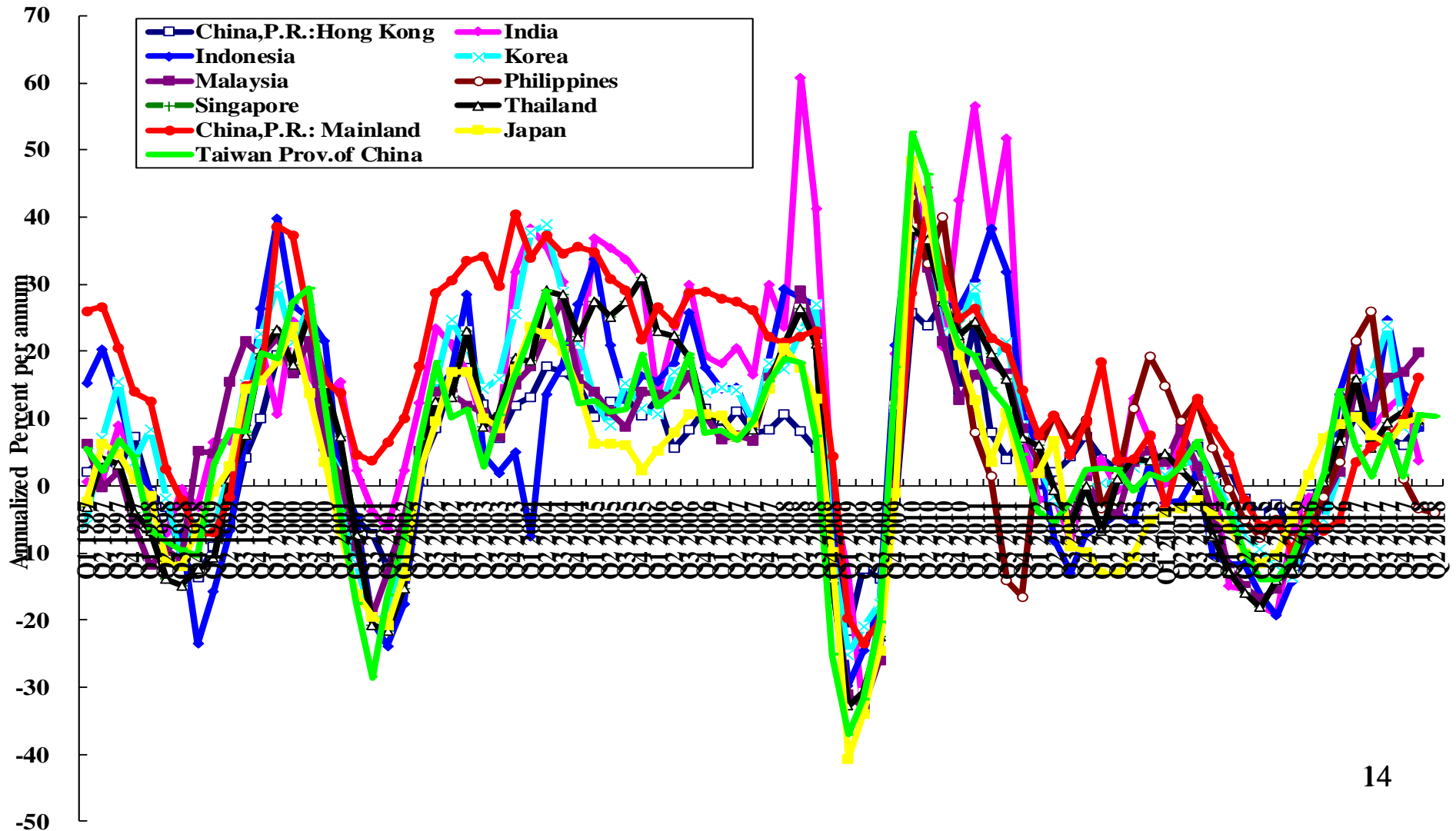
- ◆ The CFETS Index measures the weighted average of the percentage changes in the exchange rates of China's major trading-partner countries, with the weights given by each trading-partner country's share in the total international trade of China. For example, the U.S. share of China's total international trade is approximately 25 percent, thus the U.S. Dollar should have a weight of approximately 25 percent.
- ◆ One way to interpret the CFETS Index is that it measures the exchange rate of the average trading-partner country of China. If the percentage change of the central parity rate is the same as the CFETS Index, it means that the Renminbi exchange rate is unchanged for China's average trading-partner country, even though the Renminbi may have appreciated or devalued vis-a-vis the U.S. Dollar.
- ◆ Thus, for the Renminbi exchange rate to follow the CFETS Index amounts to keeping the Renminbi exchange rate constant for the average trading-partner country of China.
- ◆ 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.

Real Impacts

- ◆ China, as a large continental economy with a huge domestic market, has a relatively low export dependence, and has always been relatively immune to external disturbances. During the past four decades, while the rates of growth of Chinese exports and imports 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).

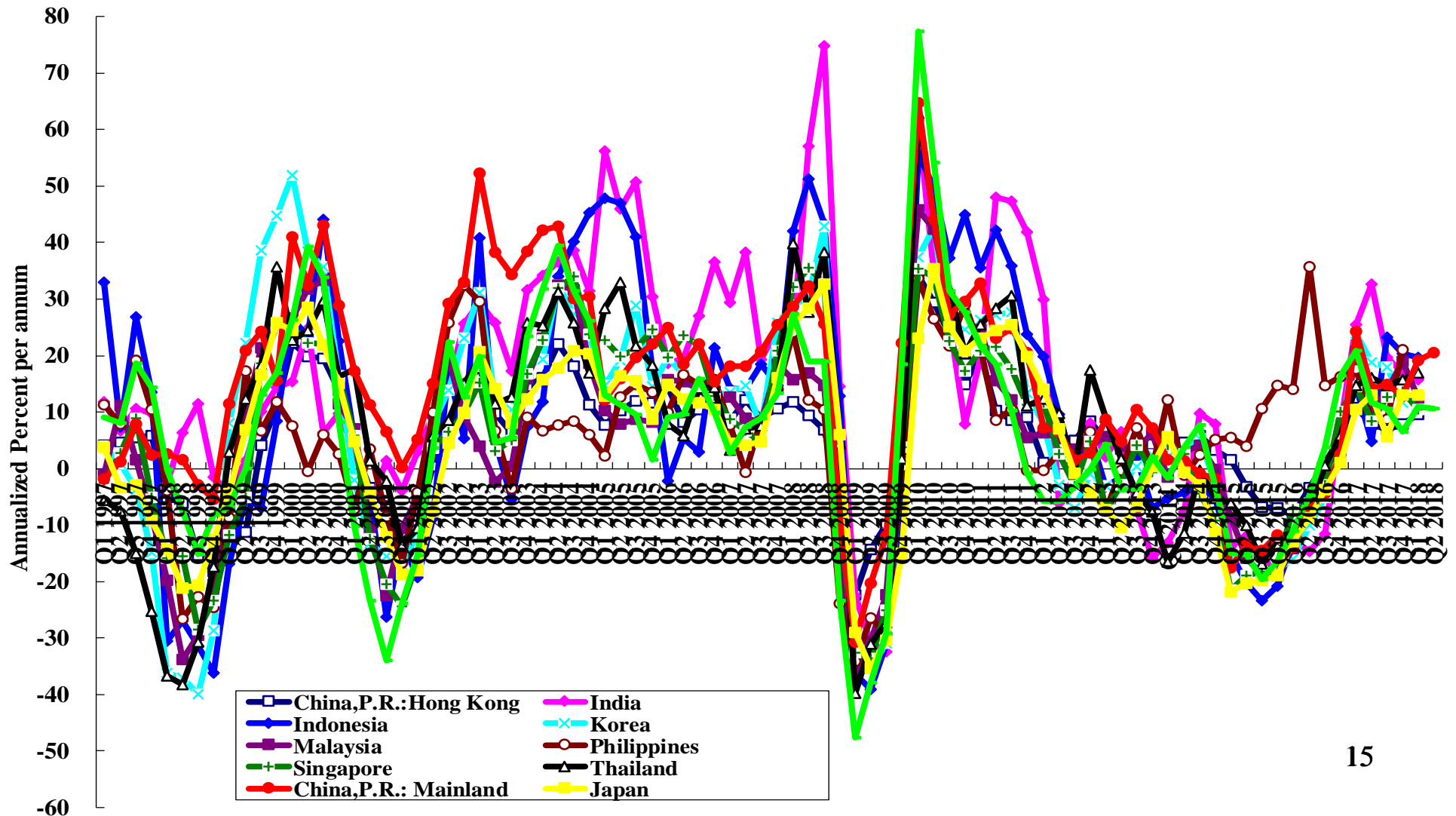
Quarterly Rates of Growth of Exports of Goods: Selected Asian Economies

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



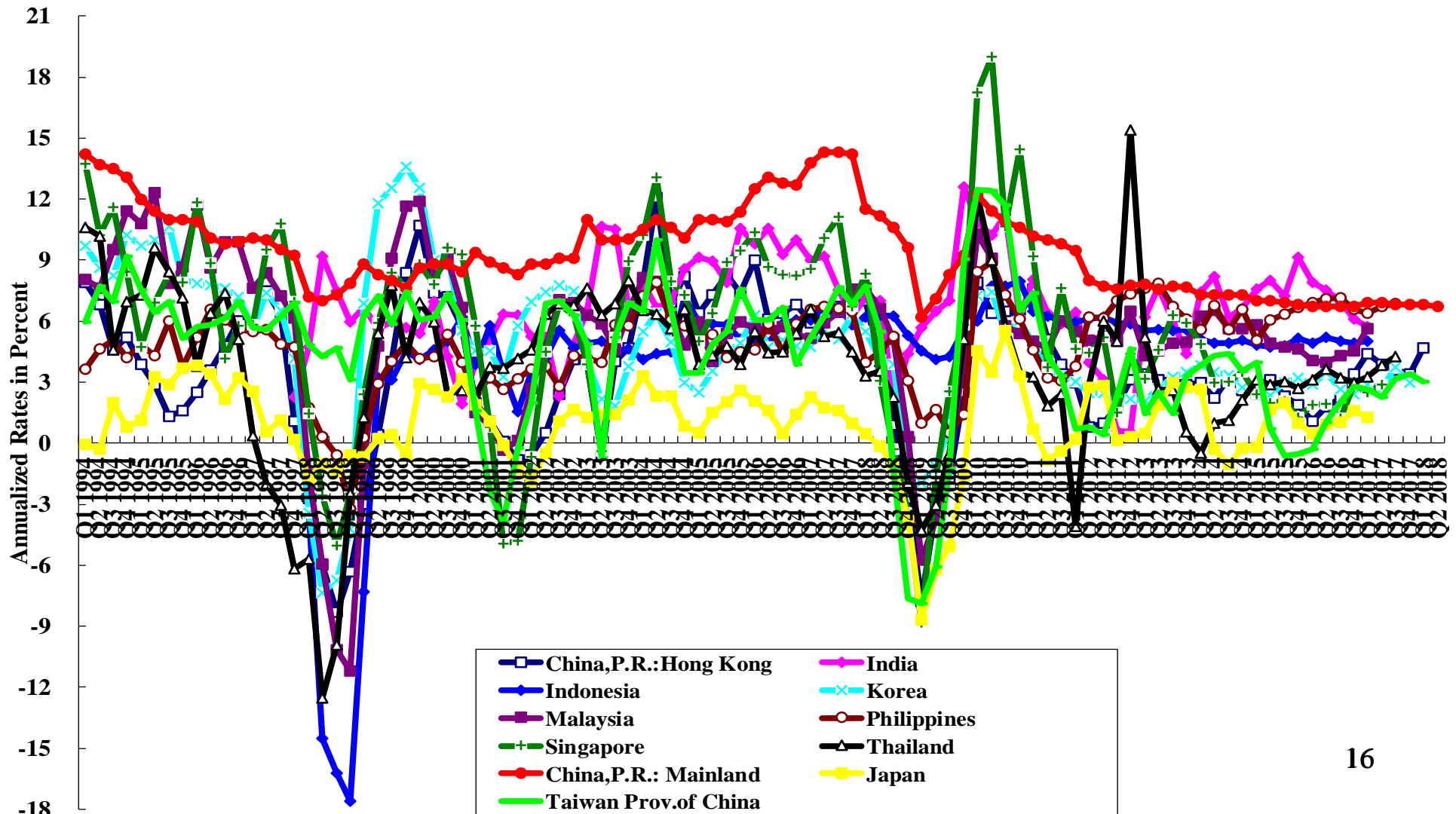
Quarterly Rates of Growth of Imports of Goods: Selected Asian Economies

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

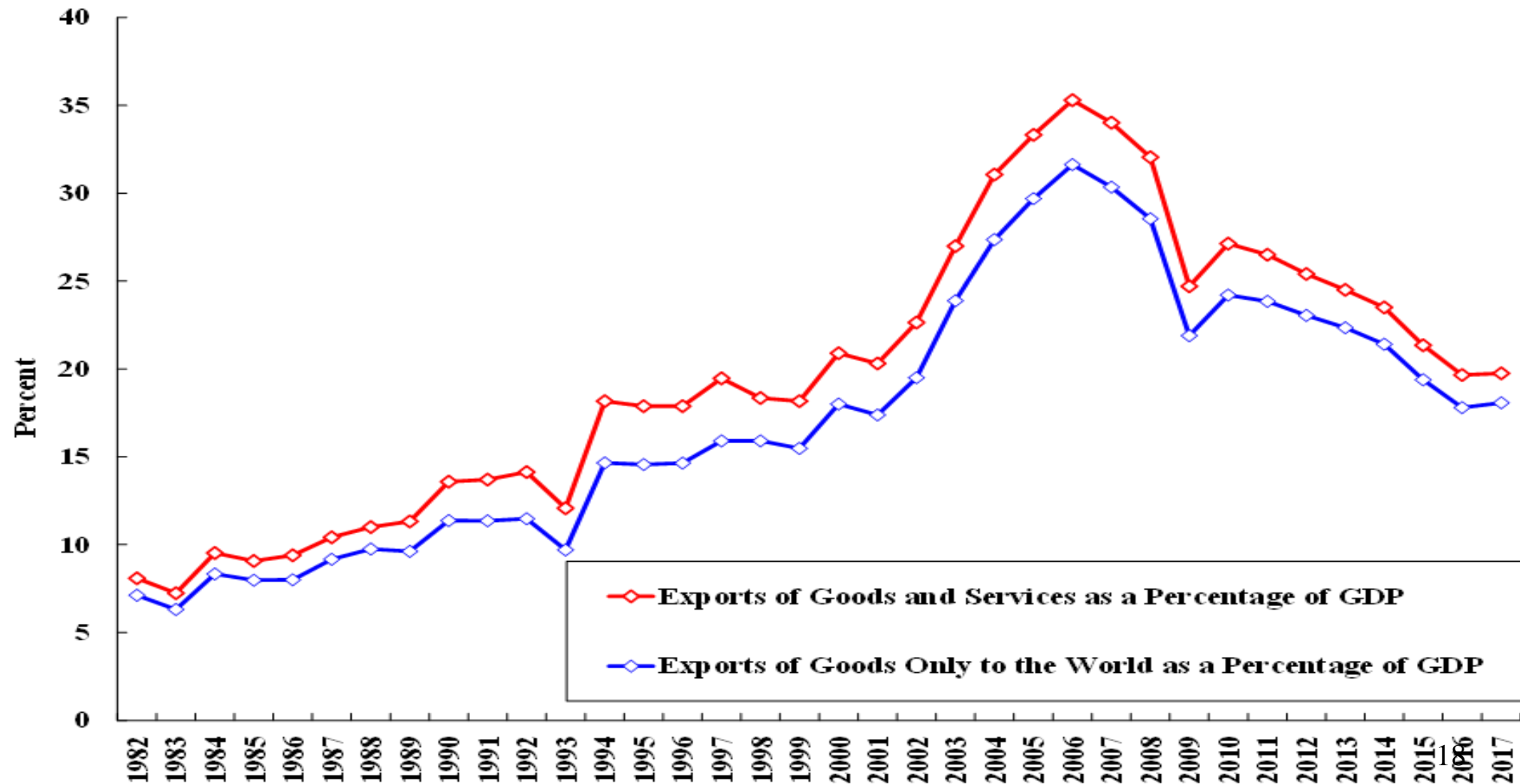


The Real Impacts of the Trade War on the Mainland Economy

- ◆ Chinese dependence on exports has been declining over the past decade. The share of exports of goods in Chinese GDP has fallen from a peak of 35.3% in 2006 to 18.1% in 2017.
- ◆ The share of exports of goods to the U.S. in Chinese GDP has also fallen by more than half, from a peak of 7.2% in 2006 to 3.4% in 2017.
- ◆ During this same period, the growth of Chinese exports to the world and to the U.S. has also slowed significantly (see the following charts). Chinese exports to the world grew at an average annual rate of 22.6% in the decade 1998-2007, but slowed to only 7.9% in the following decade, 2008-2017. Similarly, exports to the U.S. grew at 22% per annum in the decade 1998-2007, but slowed to less than 7% per annum in the most recent decade. Exports is no longer the engine of Chinese economic growth.

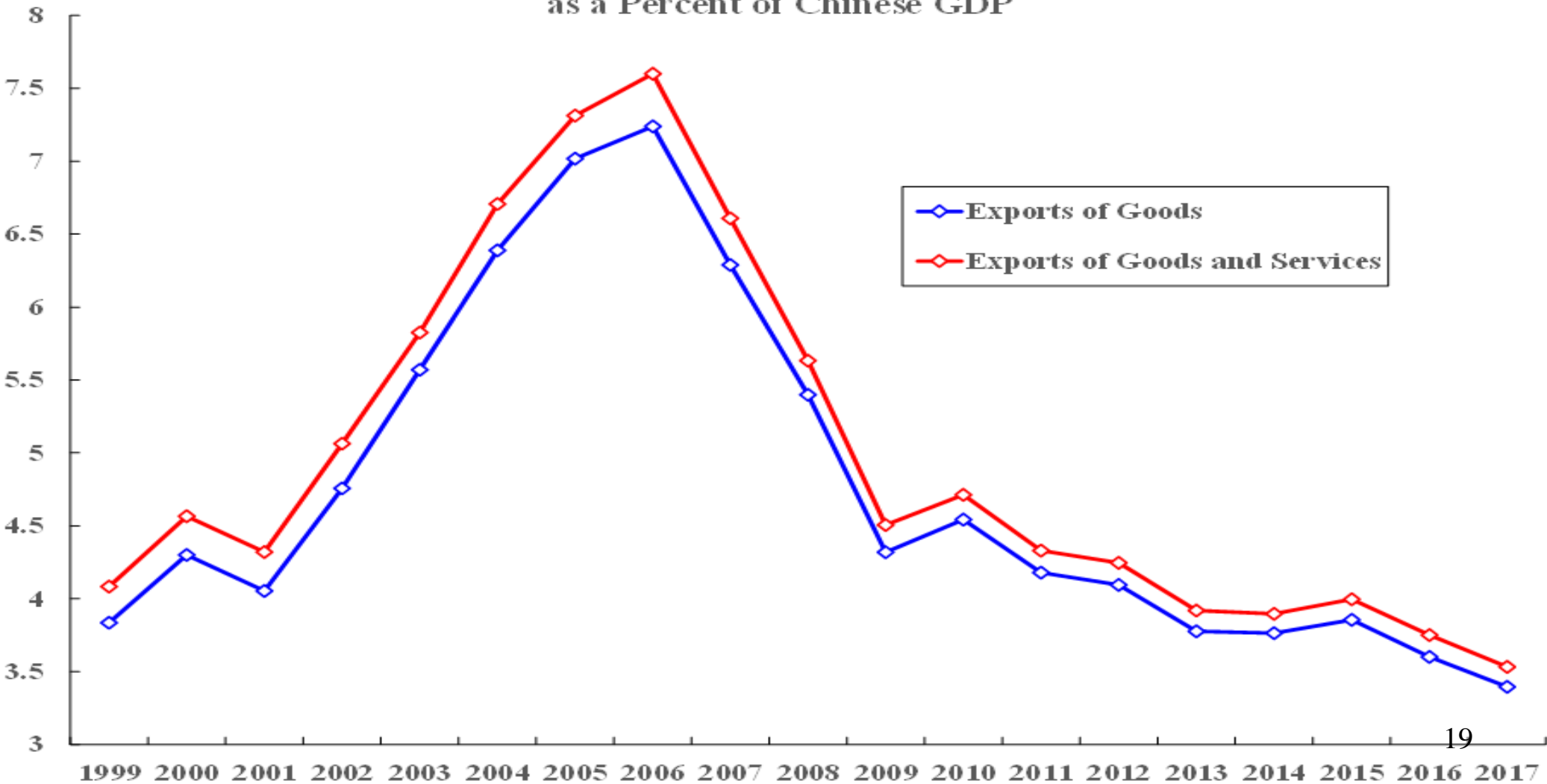
Chinese Exports of Goods and Services and Goods Only as a Percent of Chinese GDP

Exports of Goods & Services and of Goods as a Percent of Chinese GDP



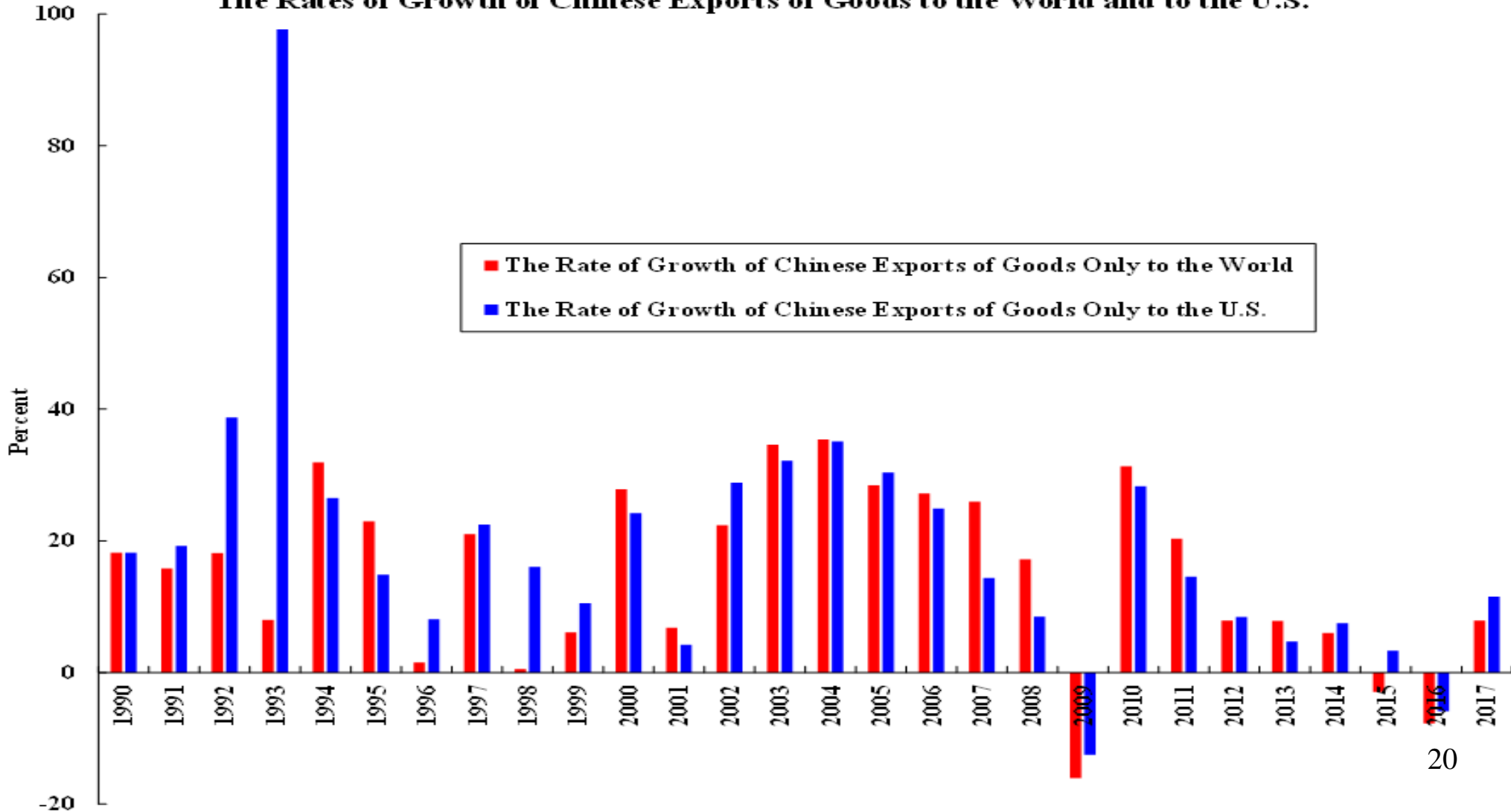
Chinese Exports of Goods and Services to the U.S. as a Percent of Chinese GDP

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



The Annual Rates of Growth of Chinese Exports of Goods to the World and to the U.S.

The Rates of Growth of Chinese Exports of Goods to the World and to the U.S.



The Real Impacts of the Trade War on the Mainland Economy

- ◆ New U.S. tariffs will affect US\$250 billion of U.S. imports of goods from China (approximately equal to US\$227 ($250 \times 10/11$) billion of Chinese exports of goods to the U.S., f.o.b.) or approximately half of Chinese exports of goods to the U.S. (Only goods are subject to tariffs.)
- ◆ Thus, Chinese exports of goods amounting to approximately 1.7% ($3.4\%/2$) of Chinese GDP will be affected.
- ◆ The U.S. tariff rates will range from 10% to 25% on the value of the imports from China. These rates will be prohibitive for most of the goods imported from China as neither the Chinese exporters nor the U.S. importers have the kind of profit margins that can afford these tariffs.

The Real Impacts of the Trade War on the Mainland Economy

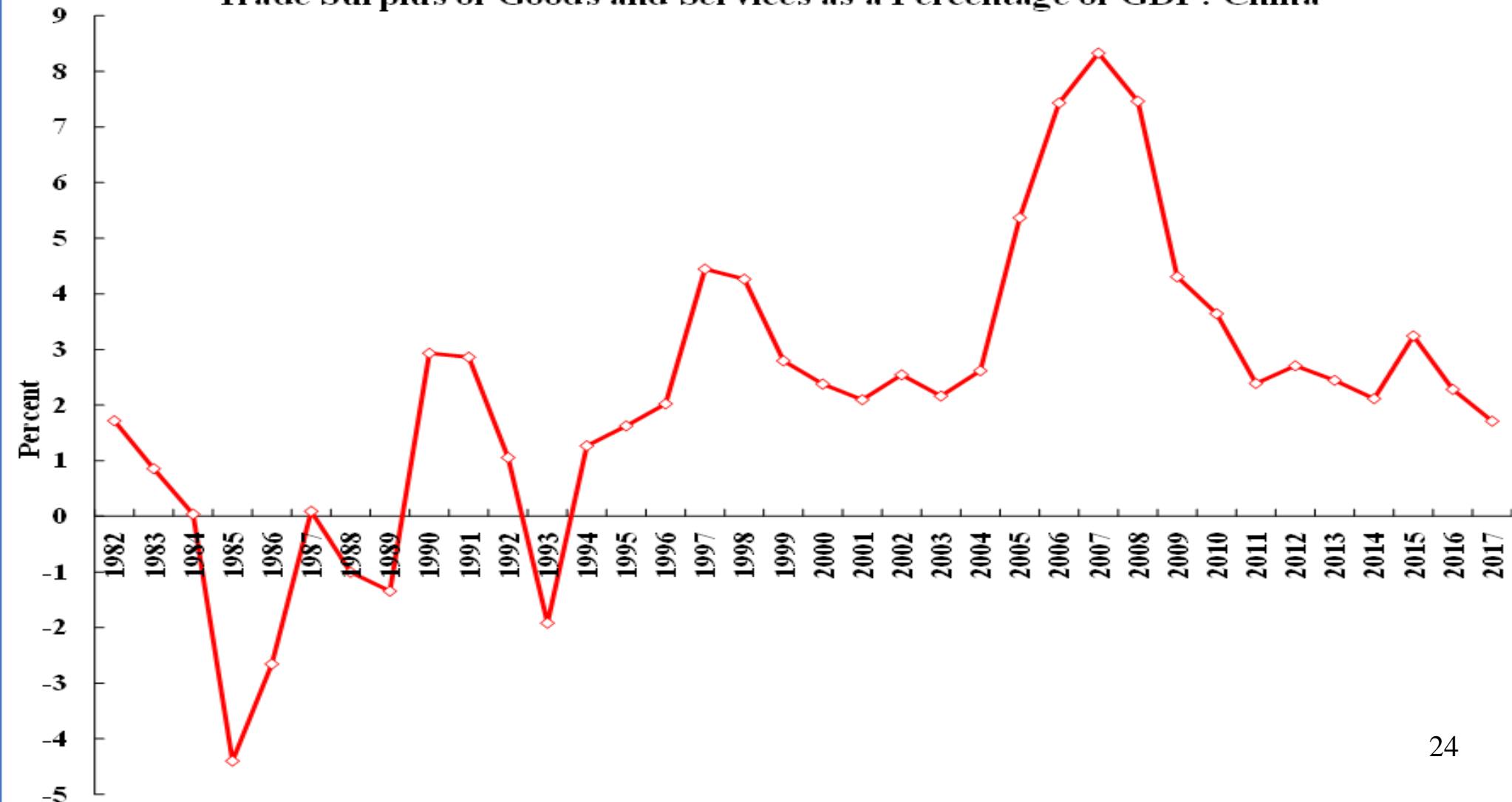
- ◆ However, the direct domestic value-added content of Chinese exports to the U.S. is less than 25%. Thus, assuming that half of the exports to the U.S. is completely halted, the maximum loss in Chinese GDP in the first instance, may be estimated at 0.43% ($1.7\% \times 0.25$), a tolerable level, especially for an economy growing at an average annual real rate of 6.5 percent and with a per capita GDP of US\$9,137 in 2017, which is way over the subsistence level.
- ◆ However, with the reduction of the output of the export goods, there will be reductions in the domestic inputs used in the production of the export goods. The reductions in the domestic inputs used will in turn lead to an indirect, or second-round, reduction in the domestic inputs used in the production of the domestic inputs. The second-round reductions in the domestic inputs will lead to a third-, and then fourth- and higher-round reductions in the domestic inputs used. Eventually, the total domestic value-added reduced in all the successive rounds, including the first, would amount to 66% of the export goods. This implies ultimately a total loss in Chinese GDP of 1.12% ($1.7\% \times 0.66$). In absolute terms, this amounts to US\$137 billion in 2017 prices (compared to a total GDP of US\$12.7 trillion).

The Real Impacts of the Trade War on the Mainland Economy

- ◆ A reduction of 1.1% from an expected annual growth rate of 6.5% leaves 5.4%, still a very respectable rate compared to the average of 3.9% for the world in 2018 projected by the International Monetary Fund.
- ◆ Moreover, even with the reduction of Chinese exports of goods amounting to 1.7% of GDP, the Chinese trade in goods and services, which had a surplus of 1.71% of GDP in 2017, will still remain in balance, without taking into account any potential reduction of Chinese imports from the U.S. Thus, there should be little pressure for the Renminbi to devalue.
- ◆ In fact, it is probably in the best interests of the Chinese economy to maintain a relatively stable Renminbi exchange rate. By following the CFETS Index, an index of a trade-weighted basket of currencies, the Renminbi exchange rate will have a lower volatility than the U.S. Dollar exchange rate because it will move, in general, in the same direction as the U.S. Dollar but by a smaller amount. This means when the U.S. Dollar appreciates with respect to other currencies, the Renminbi will devalue relative to the U.S. Dollar, and when the U.S. Dollar devalues with respect to other currencies, the Renminbi will appreciate relative to the U.S. Dollar. The Renminbi exchange rate will be less volatile than the U.S. Dollar exchange rate.

Chinese Trade Surplus in Goods and Services as a Percent of GDP

Trade Surplus of Goods and Services as a Percentage of GDP: China



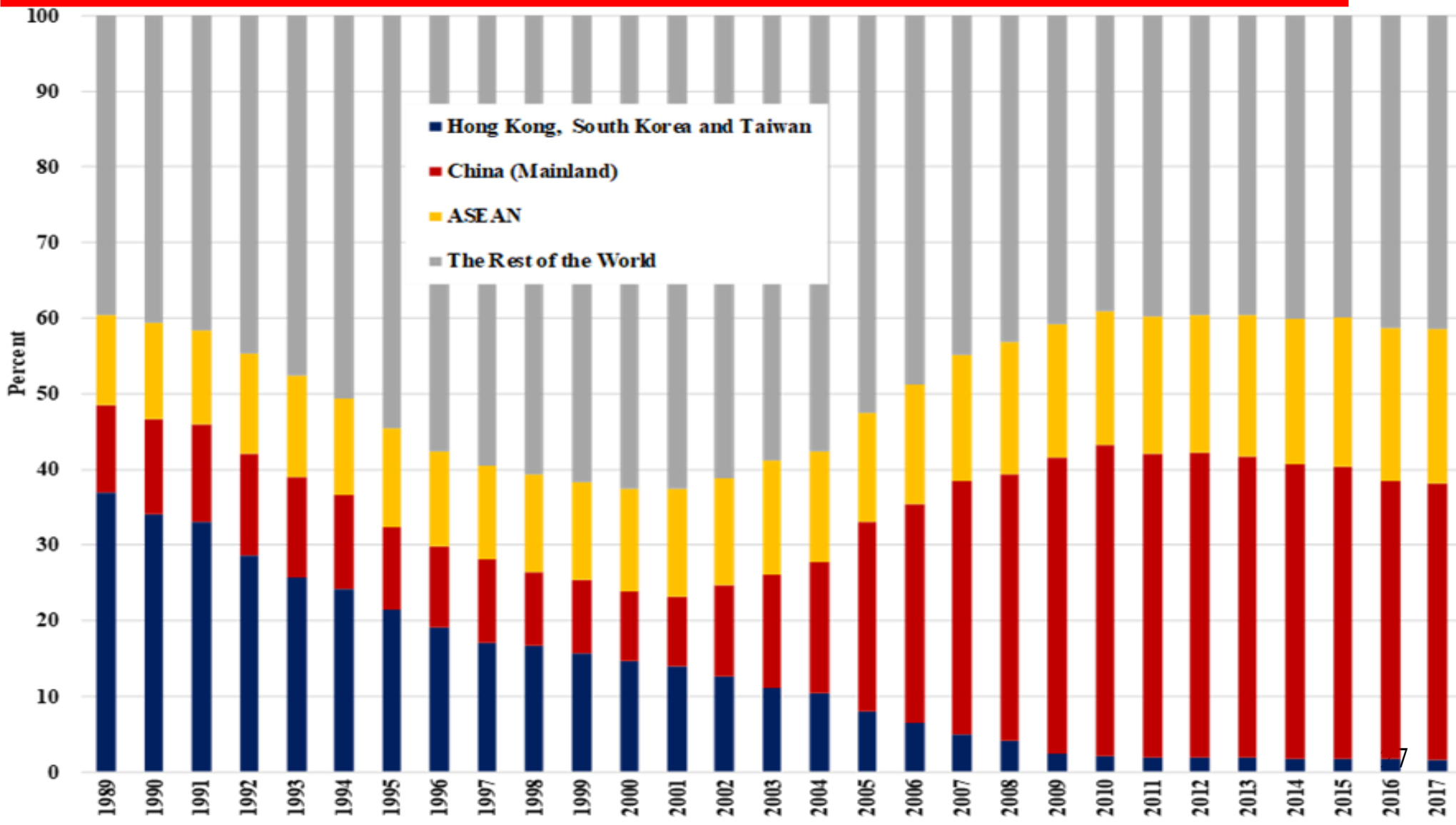
The Real Impacts of the Trade War on the Mainland Economy

- ◆ In the worst-case scenario, all Chinese exports to the U.S. may be halted. This implies a direct real impact of a reduction of 0.85% ($3.4\% \times 0.25$) of Mainland Chinese GDP and an eventual total effect of 2.24% ($3.4\% \times 0.66$), which is significant.
- ◆ However, in that case, we should expect an economic stimulus package that will maintain the level of the domestic aggregate demand and public confidence in the economy.

The Real Impacts of the Trade War on the Mainland Economy

- ◆ In the longer run, assuming that the 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.
- ◆ 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 because of 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). 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 of Origin

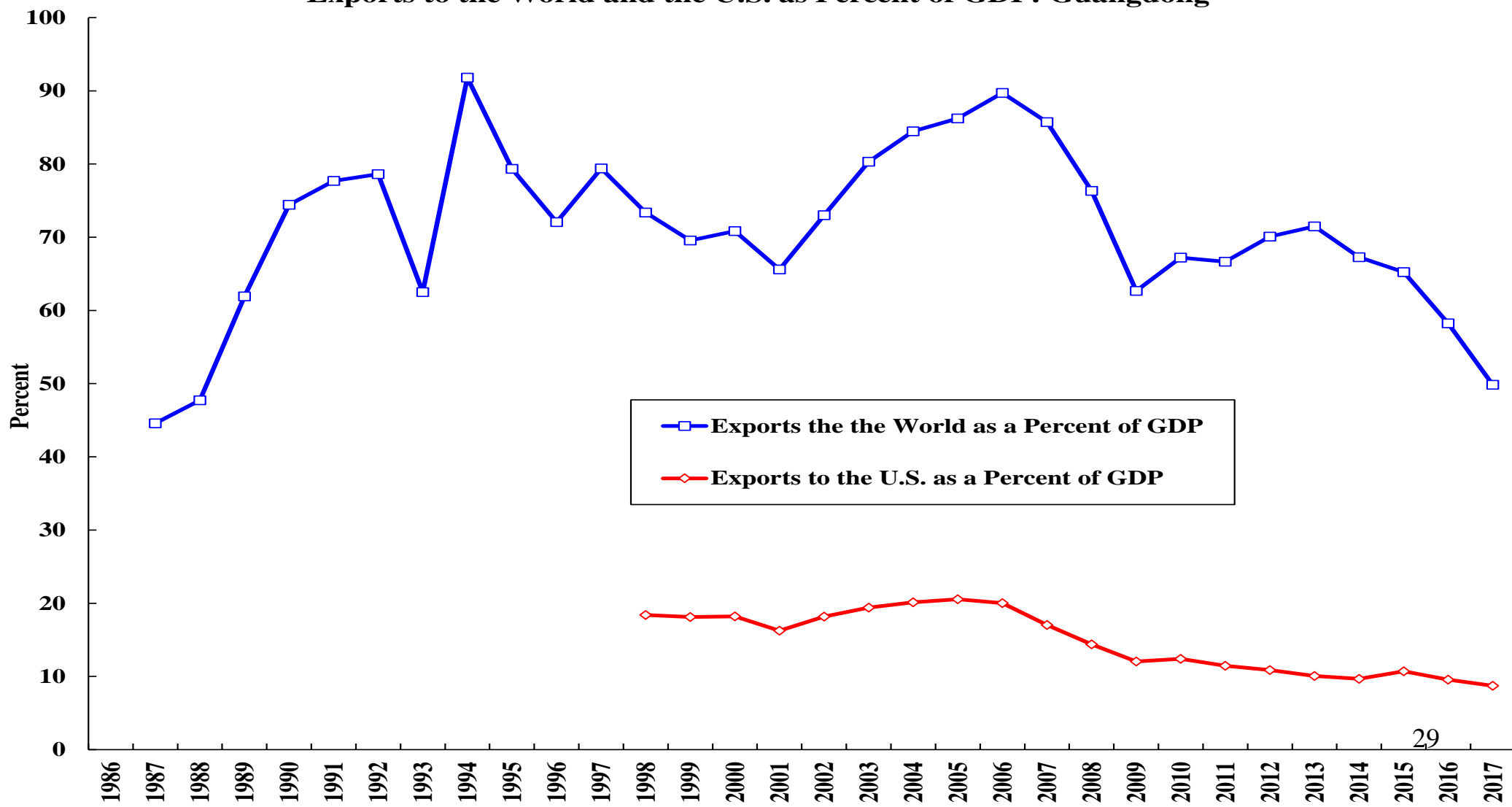


Real Impacts on the Chinese Economy: Specific Regional Impacts

- ◆ 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 then Zhejiang. Exports as a percent of its GDP was just below 50% in 2017, compared to a national average of 18%, and exports to the U.S. was 8.7%, compared to a national average of 3.4%.

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

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



The Impacts of the Trade War on the Economy of the Guangdong Province

- ◆ 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, 25%, the maximum loss in Guangdong GDP, assuming that half of the exports to the U.S. is completely halted, in the first instance may be estimated at 1.09% ($4.35\% \times 0.25$). Such a decline in GDP is perfectly manageable by Guangdong as the real rate of growth of its GDP was 10.2% and its GDP per capita was US\$12,909 in 2017.
- ◆ Taking into account the indirect, that is, second-, third-, fourth- and higher-round effects of the reduction of exports from Guangdong, the total domestic value-added content affected increases to 66 percent of the export goods. This implies ultimately a total loss in Guangdong GDP of 2.87% ($4.35\% \times 0.66$). 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 more than 7% per annum.

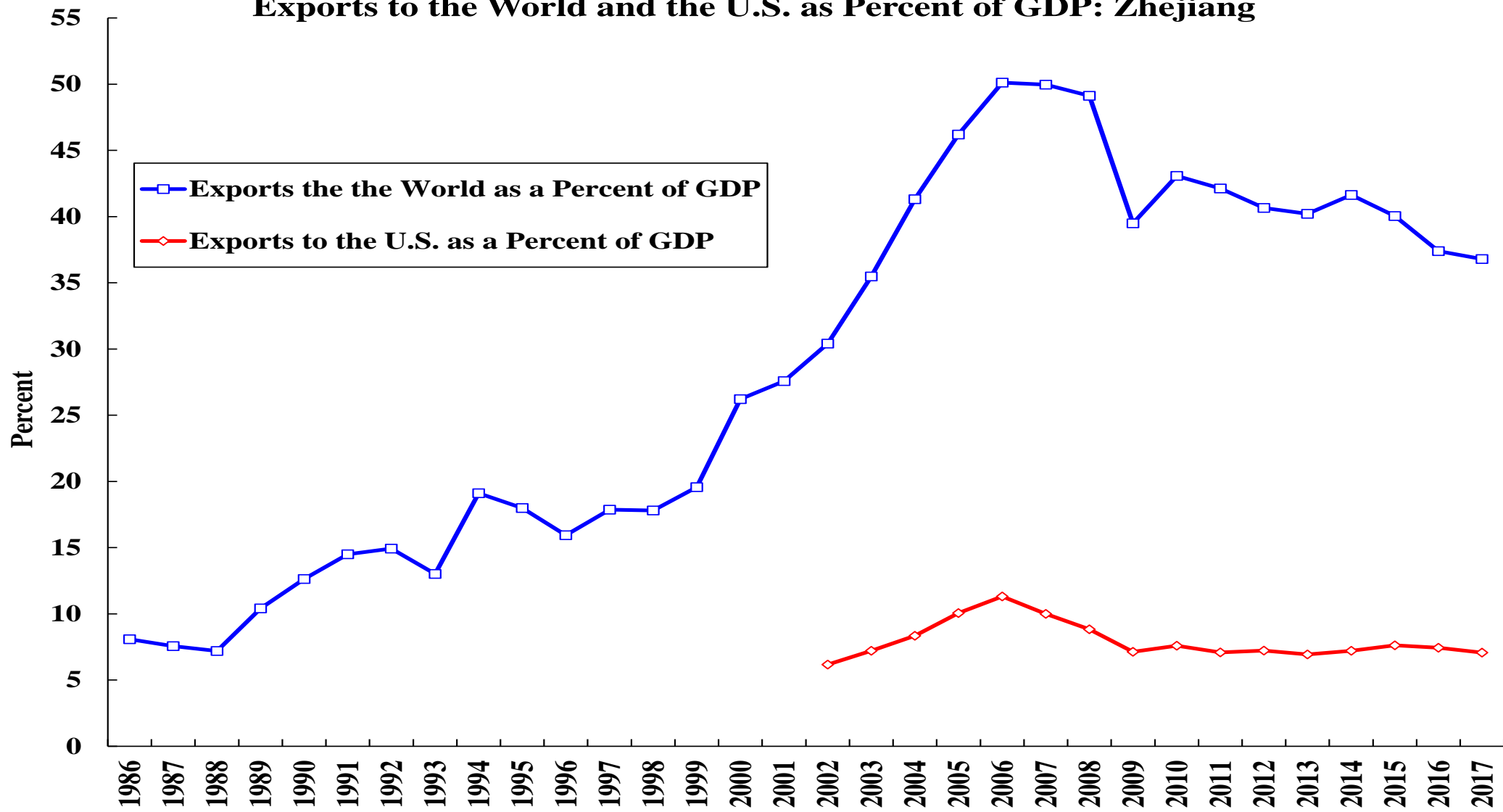
Real Impacts on the Chinese Economy:

Specific Regional Impacts

- ◆ Exports as a percent of GDP in Zhejiang was just below 36.8% in 2017, and exports to the U.S. was 7.1%.
- ◆ Assuming the direct domestic value-added content of Zhejiang exports to the U.S. is the same as that of China as a whole, that is, 25%, the maximum loss in Zhejiang GDP, assuming that half of the exports to the U.S. is completely halted, in the first instance may be estimated at 0.89% ($3.55\% \times 0.25$). A decline of this magnitude is manageable as the real rate of growth of Zhejiang GDP was 8.6% and its GDP per capita was US\$14,630 in 2017.
- ◆ 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 of the export goods. This implies ultimately a total loss in Zhejiang GDP of 2.3% ($3.55\% \times 0.66$). This will also represent a significant slowdown in the real rate of growth of the Zhejiang economy, but the rate of growth would still be higher than 6%.

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

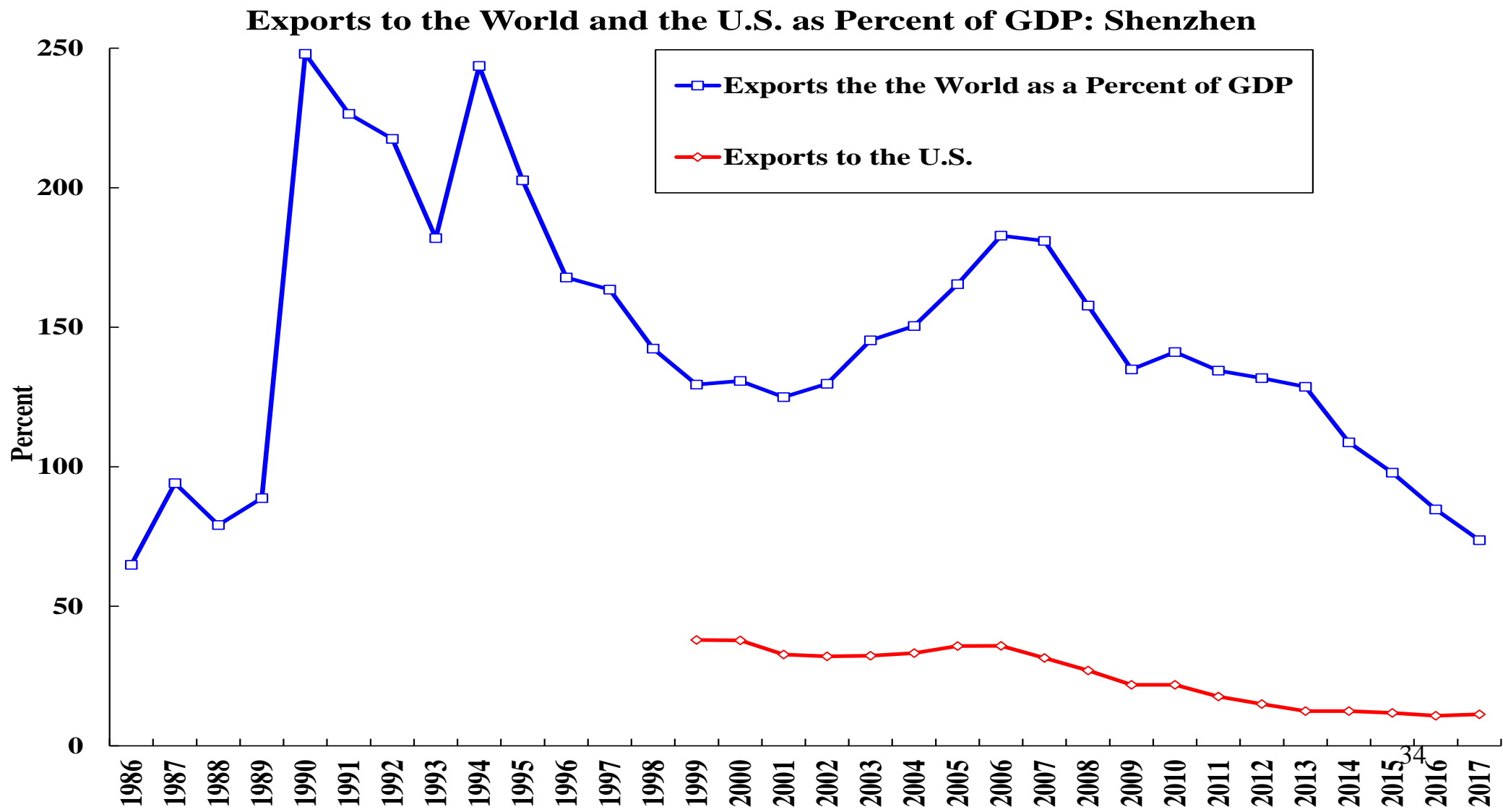
Exports to the World and the U.S. as Percent of GDP: Zhejiang



The Impacts of the Trade War on the Economy of the Shenzhen Municipality

- ◆ Exports as a percent of GDP in Shenzhen was 73.7% in 2017, and exports to the U.S. was 11.3%, all higher than those of Guangdong and of the Mainland as a whole.
- ◆ 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, 25%, the maximum loss in Shenzhen GDP, assuming that half of the exports to the U.S. is completely halted, in the first instance may be estimated at 1.41% ($5.65\% \times 0.25$). However, for the Shenzhen economy, which grew at 8.8% in 2017, a decline of this magnitude would still be manageable.
- ◆ 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 of the export goods. This implies ultimately a total loss in Shenzhen GDP of 3.7% ($5.65\% \times 0.66$), still leaving Shenzhen with a rate of growth of 5.1%, significantly higher than the average rate of growth of the world economy of 3.9% and that of neighbouring Hong Kong in 2018 which is expected to be between 3 and 4 percent.

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



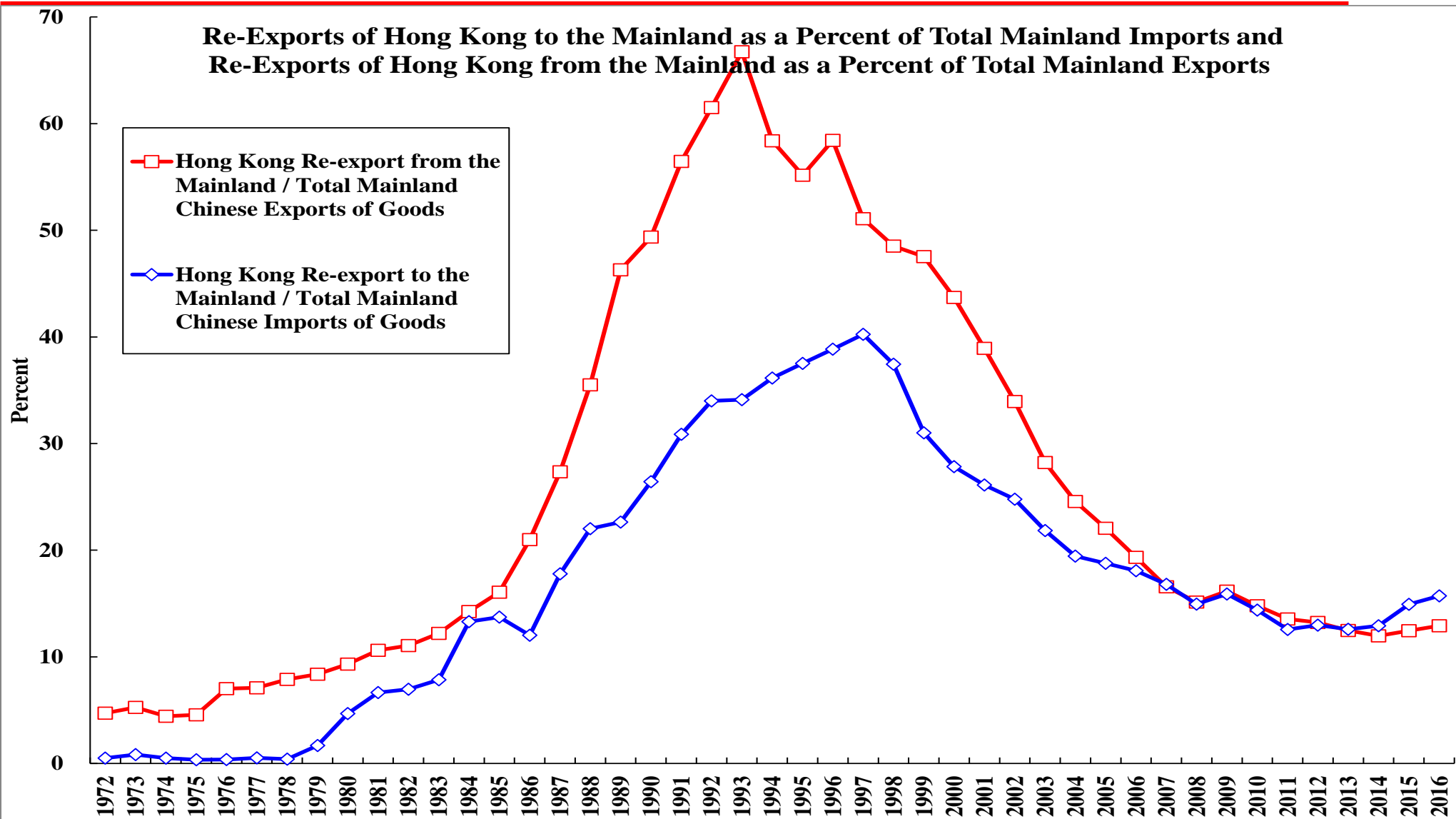
The Impacts of the Trade War on the Economy of Hong Kong

- ◆ The U.S. tariffs are not targeted against Hong Kong domestic exports.
- ◆ In 2017, Hong Kong domestic exports (excluding re-exports) to the world and to the U.S. amounted to US\$ 5.6 billion and US\$ 0.45 billion respectively, representing 1.6% and 0.13% of Hong Kong GDP in 2017.
- ◆ We do not know the domestic value-added content of Hong Kong domestic exports, but it is unlikely to be higher than that of the Mainland, which is 25 percent in the first instance and 66 percent after all second- and higher-round effects are included. Thus even if all Hong Kong domestic exports to the U.S. are halted, the real impact will be quite small.

The Impacts of the Trade War on the Economy of Hong Kong

- ◆ More problematic is what happens to the volume of re-exports of Chinese goods to the U.S. through Hong Kong. The following Chart shows that re-exports through Hong Kong accounts for just slightly more than 10 percent of total Mainland exports at the present time. Re-exports to the U.S. amounted to 12.3 percent of Hong Kong GDP in 2017. However, the domestic value-added in Hong Kong on re-exports of Chinese goods cannot be very high, probably no more than a couple of percentage points.
- ◆ Assuming that one-half of the re-exports of Chinese goods to the U.S. is halted because of the trade war, the net effect on Hong Kong GDP is given by $12.3\%/2 \times 0.02 = 0.12$ percent, which is also a very small number.

HK Re-Exports to and from the Mainland as a Percent of Mainland Imports and Exports



The Impacts of the Trade War on the Economy of Hong Kong

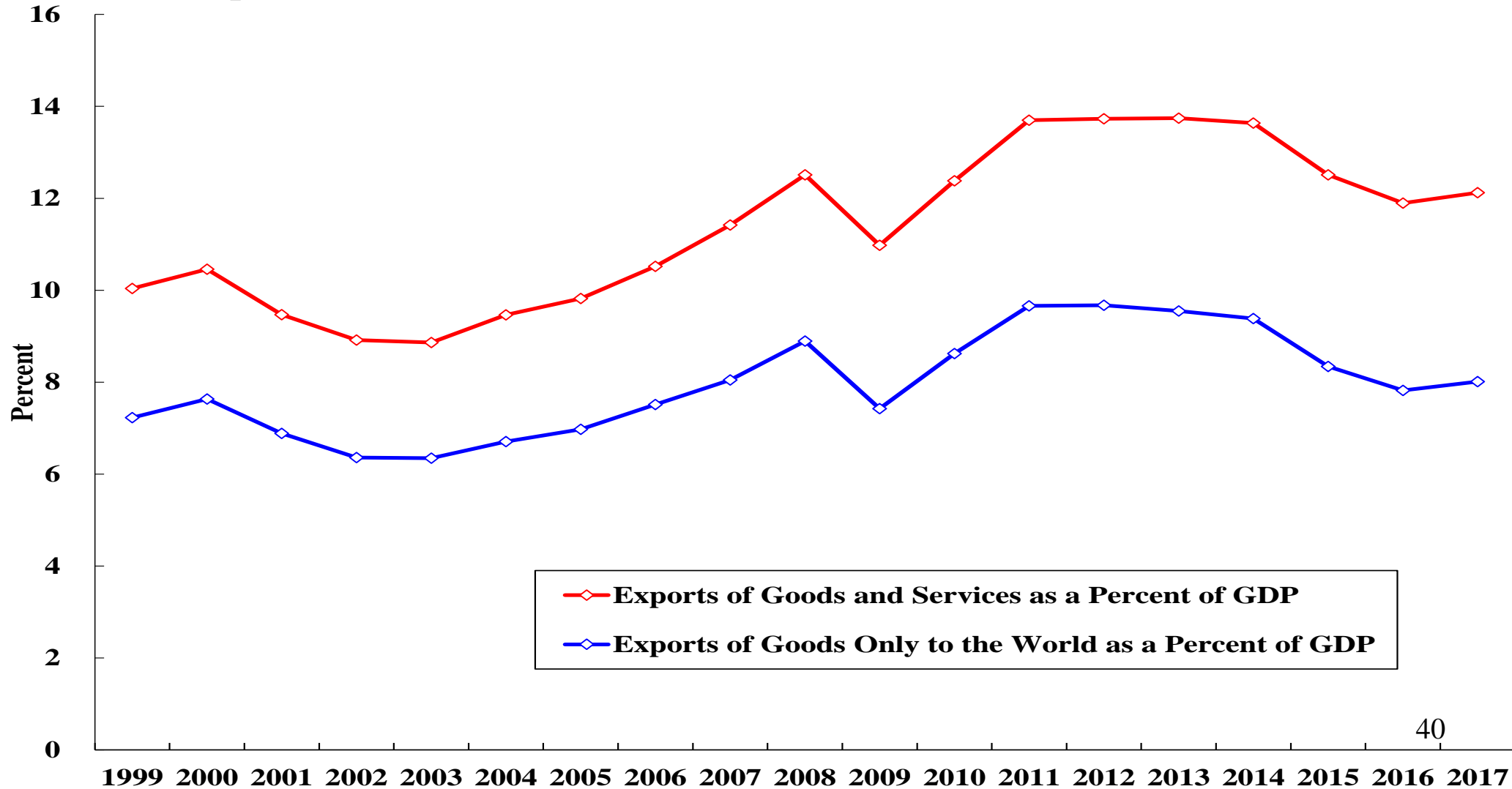
- ◆ What might affect the economy of Hong Kong more are the indirect impacts.
- ◆ One source of indirect impact is the reduction of the profits from operations that Hong Kong entrepreneurs and direct investors have in Guangdong.
- ◆ There is already and will continue to be a direct impact on the prices and transaction volumes on Hong Kong Stock Exchange.
- ◆ There will be an impact on the number of Mainland tourists visiting Hong Kong and consequently on the retail sales in Hong Kong.
- ◆ Finally there may be an impact on the price of residential housing in Hong Kong as fewer Mainlanders may buy because of the uncertainty. Hopefully this will prove positive for the Hong Kong permanent residents in the residential housing market.

Real Impacts on the U. S. Economy

- ◆ The 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 12.12% in 2017. The exports of goods alone as a share of GDP was only 8.01%.
- ◆ The shares of U.S. exports of goods and services and goods alone to China in GDP was 0.97% and 0.67% respectively in 2017, much lower than those of Chinese exports to the U.S.

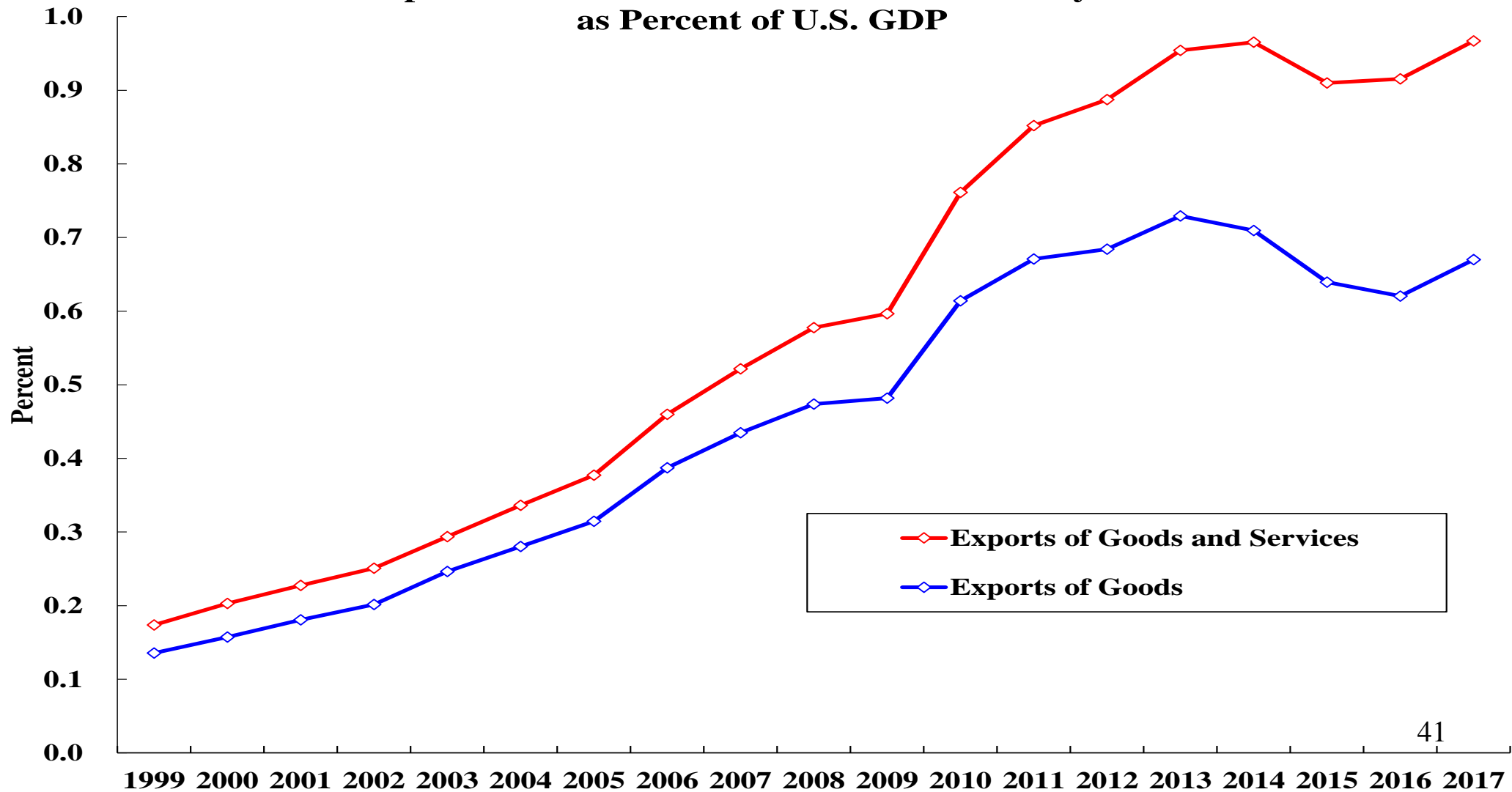
U.S. Exports of Goods and Services and Goods Only as Percent of U.S. GDP

Exports of Goods & Services and of Goods as a Percent of the U.S. GDP



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

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



Real Impacts on the U. S. Economy

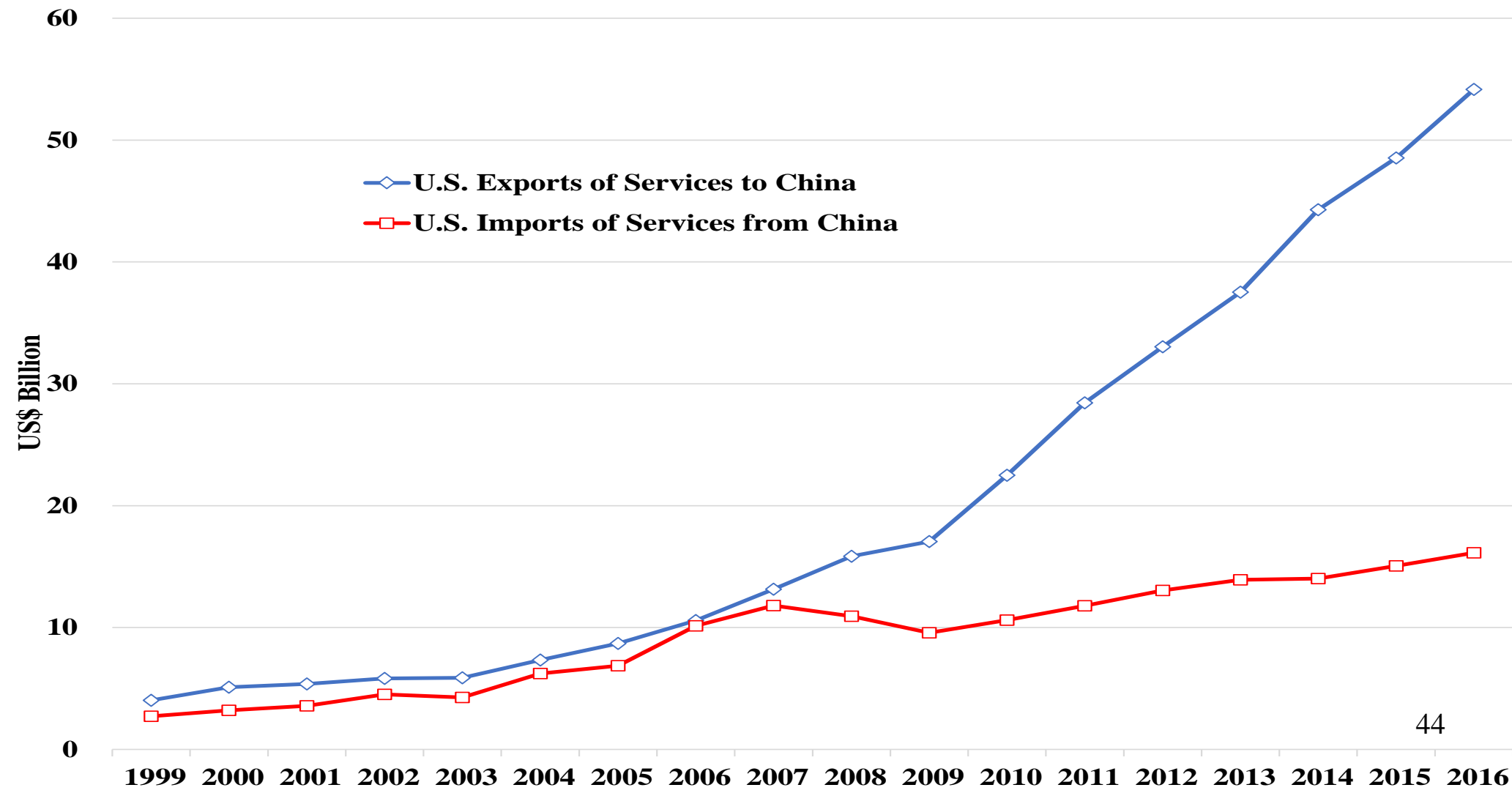
- ◆ The direct domestic value-added content of U.S. exports of goods to China may be estimated to be 50.8%. Thus, the maximum loss in U.S., assuming that all of the exports to China is completely halted, in the first instance may be estimated at 0.34% ($0.67\% \times 0.508$), less than the impact on Chinese GDP of 0.43%.
- ◆ Moreover, it is unlikely that all of the exports of goods will be halted; for example, computer chips will continue to be imported in large quantities. Also, Chinese tariffs on imports of goods from the U.S. range from 4% to 10%. Suppose only half of U.S. exports of goods to China is halted, it would amount to a loss of U.S. GDP of 0.17%. This is not significant for the U.S. economy as a whole, especially with the recent recovery of the quarterly rate of growth of GDP to 4.1%. U.S. GDP per capita is approximately US\$60,000. The U.S. economy can easily weather a reduction of 0.17% in its rate of growth.

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 content affected increases to 88.7% of the export goods. This implies ultimately a total loss in U.S. GDP of 0.30% ($0.67\% \times 0.887/2$), assuming that half of U.S. exports to China will be halted.
- ◆ In absolute terms, this amounts to US\$58 billion (0.30×19.4 trillion) in 2017 prices, much less than the estimated Chinese loss in terms of GDP of US\$137 billion.
- ◆ However, the U.S. has a significant trade surplus in services with China, estimated to be US\$40 billion by the U.S. Government but US\$54 billion by the Chinese Government. This surplus may be in jeopardy if China-U.S. relations deteriorate further.

Real Impacts on the U. S. Economy: China-U.S. Trade in Services

China-U.S. Trade in Services (U.S. Official Data)



Real Impacts on the U. S. Economy: Estimates of U.S.-China Trade Surplus in Services



Real Impacts on the U. S. Economy

- ◆ President Donald Trump's primary objective is to run and win re-election in 2020. In the interim, he would need to have the Republican Party maintain a majority in both the House of Representative and the Senate of the U.S. Congress in the mid-term elections to be held on 6 November 2018.
- ◆ He will use China as a villain in the mid-term election. It is easy enough to bash China and he did promise that he would be tough on China during his presidential campaign in 2016.
- ◆ Thus, the trade war is unlikely to end before the U.S. mid-term elections.

Real Impacts on the Rest of the World

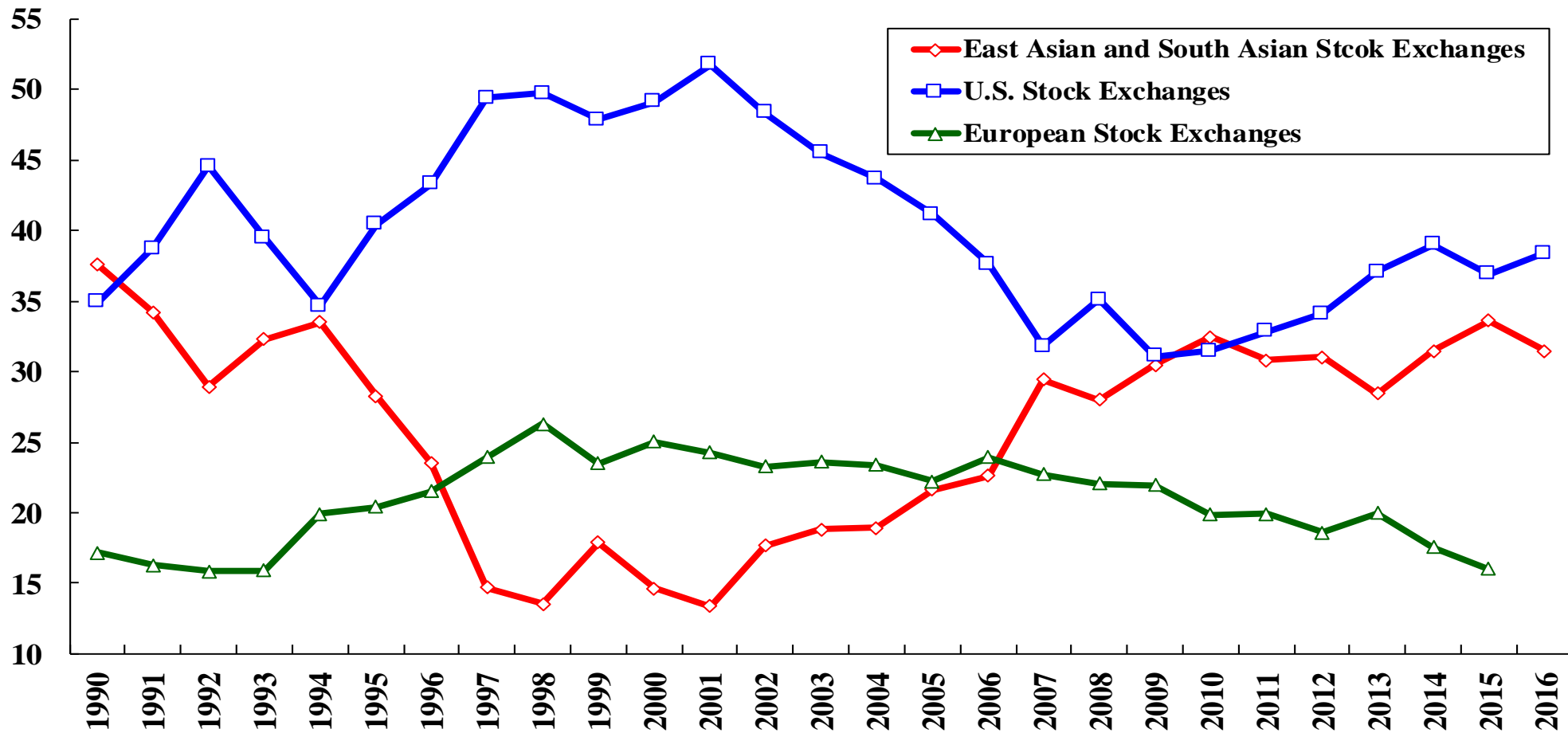
- ◆ While the impacts on both the Chinese and the U.S. economies are negative, the impacts on the economies of the rest of the world are likely to be positive.
- ◆ Trade will be diverted to the other economies. China will substitute agricultural imports from the U.S. with imports from Canada, South America, Western Europe and Australia, and manufactured imports from the U.S. with imports from Western Europe. Energy imports from the U.S. are not yet large enough to matter.
- ◆ U.S. will substitute Chinese imports with imports from Southeast Asian economies such as Vietnam, Cambodia, Indonesia and Bangladesh and perhaps eventually even from North Korea.

The Shifting Distribution of Wealth

- ◆ The wealth of Asian household has been growing very rapidly since 2000, driven by the rapid rate of growth of their GDPs and wealth as well as the high saving rates.
- ◆ The share of East Asian and South Asian stock exchanges in the total world market capitalisation stood above 35% in 2016, compared to 38% for the U.S. and 17% for Europe (see the following chart).
Reportedly there are at the present time more than 600 known US\$ billionaires in Mainland China, more than the number in the U.S.
Asian household wealth is projected to exceed European wealth within the next five years.
- ◆ The annual turnover of the Shanghai and Shenzhen Stock Exchanges combined was more than US\$41 trillion, higher than that of the New York Stock Exchange of US\$30 trillion, in 2016. In contrast, the average annual turnover of the Hong Kong Stock Exchange was only US\$2 trillion. This demonstrates the wealth and potential investment power of the Mainland investors.
- ◆ A worsening China-U.S. relationship may discourage Chinese entrepreneurs and investors from investing in the U.S.

The Distribution of the Market Capitalisation of World Stock Exchanges by Region, percent

The Distribution of the Market Capitalization of World Stock Exchanges by Region, percent



Longer-Term Developments

- ◆ One of the principal causes of the current trade war between China and the United States is actually not trade itself, but 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. It will not go away even after President Trump leaves office.
- ◆ 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 50 designed chips.

Longer-Term Developments

- ◆ In terms of aggregate GDP, China went from only 20 percent of the U.S. GDP in 2000 to two-thirds in 2017. 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\$9,137 compared to almost US\$60,000 for the U.S. in 2017. My own projections suggest that it will probably take until the end of the Twenty-First Century before Chinese GDP per capita approaches the U.S. level.
- ◆ In terms of the number of nuclear-armed warheads, I believe the U.S. is way ahead by at least an order of magnitude in total and even more 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.

Longer-Term Developments

- ◆ U.S. grievances against China include intellectual property rights protection, forced transfer of technology and cyber-theft. (Note that none of these grievances have much to do with trade per se.)
- ◆ Intellectual property rights protection in China has actually been vastly improved since special intellectual property courts were set up 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.
- ◆ China currently grants the largest annual number of invention patents to both domestic and foreign applicants among all the countries in the world. Intellectual property right protection in China should get even better over time.

Longer-Term Developments

- ◆ Forced technology transfer has to do with the Chinese requirements for foreign direct investors in certain industries to take Chinese enterprises as equal joint-venture partners.
- ◆ However, the sharing of technology in a joint venture is a voluntary one. The foreign direct investor will have to weigh the benefits of having a local joint-venture partner versus the costs. In any case, the technology used in the current manufacturing process is probably already on the way to becoming obsolete. What is more valuable is the next-generation technology that has yet to be implemented. This is what the foreign direct investor can still maintain as its own in its home factories and laboratories.
- ◆ Forced transfer of technology is fast becoming a moot issue because of recent Chinese liberalisation measures. For example, in the automobile manufacturing industry, Tesla has been able to establish a wholly-owned subsidiary in Shanghai to manufacture electric cars; and even though it is now possible for General Motors to buy out its Chinese joint-venture partner, it has indicated that it does not intend to do so.

Longer-Term Developments

- ◆ These latest moves on the part of China and the new, much shortened negative list on foreign direct investment should go a long way towards eliminating the issue of forced technology transfer.
- ◆ Commercial cyber-thefts should be vigorously prosecuted, with the collaboration of both governments.
- ◆ If Huawei is perceived as a national security risk by the U.S., will the Apple i-phone be considered a national security risk by China eventually?

Longer-Term Developments

- ◆ The rise of populist, isolationist and protectionist sentiments in the U.S. and elsewhere in the world will also have significant impacts on international trade and investment (and migration). Even though these sentiments were not created by President Donald Trump, he has been able to tap into them and exploited them very effectively.
- ◆ Economic globalisation and innovation benefit every country in the aggregate. However, they also create winners and losers in every country. The free market cannot compensate the losers. It is up to the government of each country to take care of its domestic losers, who naturally oppose economic globalisation and free trade.
- ◆ In addition, it is also natural and instinctive for any individual to entertain the feeling of “us” versus “them”. And most people believe that all deals are zero-sum, that is, “more for them is less for us, and vice versa”. It is therefore a revelation to many that voluntary trade between two countries benefits both, that is, it is in fact win-win.

Longer-Term Developments

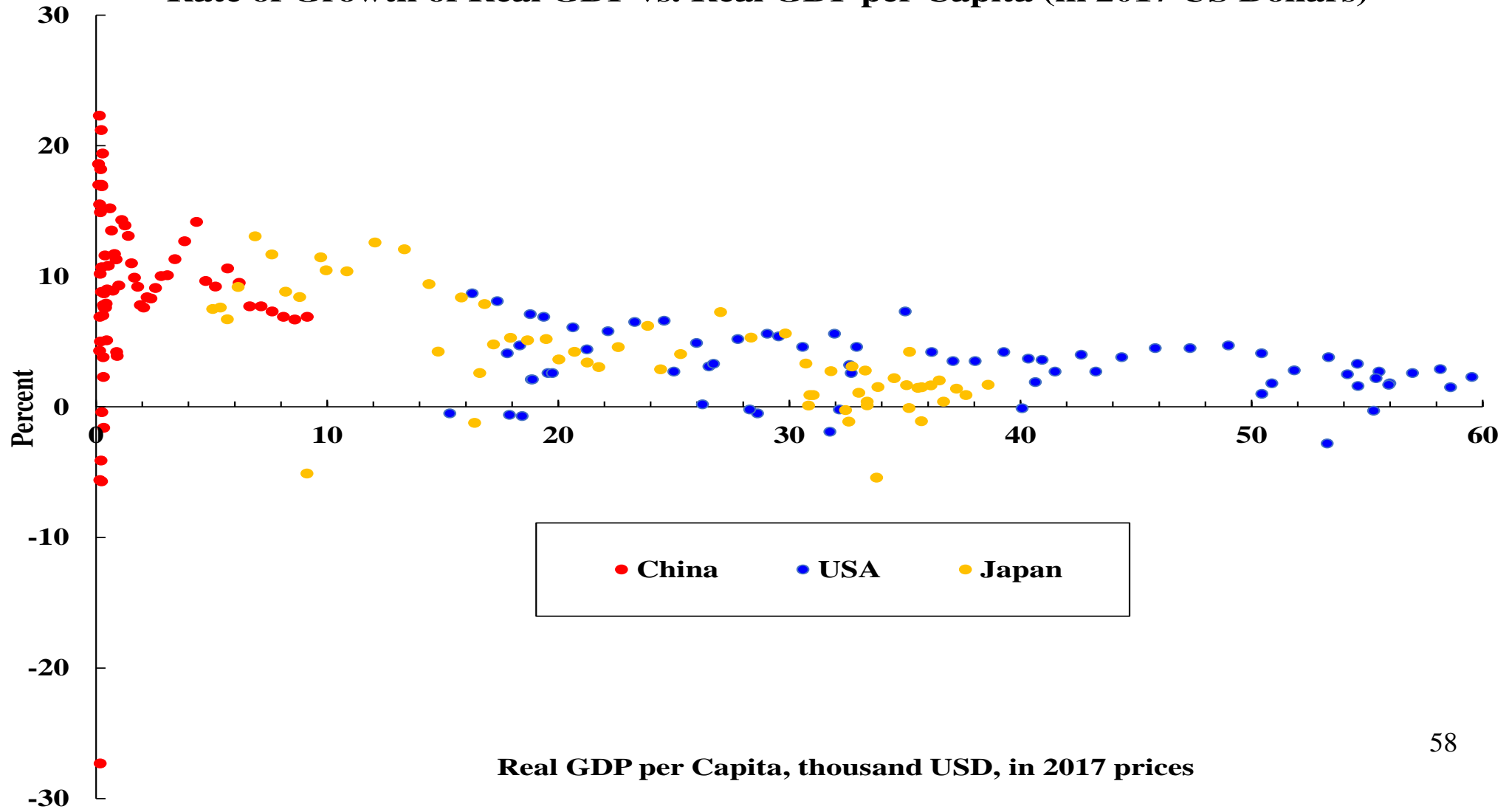
- ◆ Unfortunately, it will take a while before the people at large realise that protectionism is a lose-lose proposition.
- ◆ The eventual solution has to be some form of redistribution within each country—taxing the winners to compensate the losers so that everyone wins.
- ◆ President Donald Trump also believes that every deal is zero sum--one country's gain must be another country's loss. Moreover, he would like to modify the existing distribution of gains from trade between the U.S. and its trading-partner countries. He believes that the U.S. can achieve much better trade deals by negotiating bilaterally with each single country, taking full advantage of the market size and bargaining power of the U.S. This would work best for the U.S. in a bilateral rather than multilateral context.

Projections of the Mainland Economy 中國內地經濟的預測

- ◆ It is assumed that the Chinese economy will continue to grow above 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. 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 (US\$9,137) in 2017, and the low level of its tangible capital per unit labour compared to the U.S. and Japan, such a rate of growth should still be possible for at least several decades (see the following chart in which the experiences of China, Japan and the U.S. are compared.)
- ◆ In addition, there is still significant surplus labour in the Chinese economy. The share of total Mainland employment in the primary sector is around 30% whereas the share of Mainland GDP originating from the primary sector is below 10%.
- ◆ These projections presented here were made without taking into account the impacts of the China-U.S. trade war which erupted in 2018. However, as we have shown above, the real effect of the trade war on Mainland GDP is at most a one-time reduction of 1.12 percent.

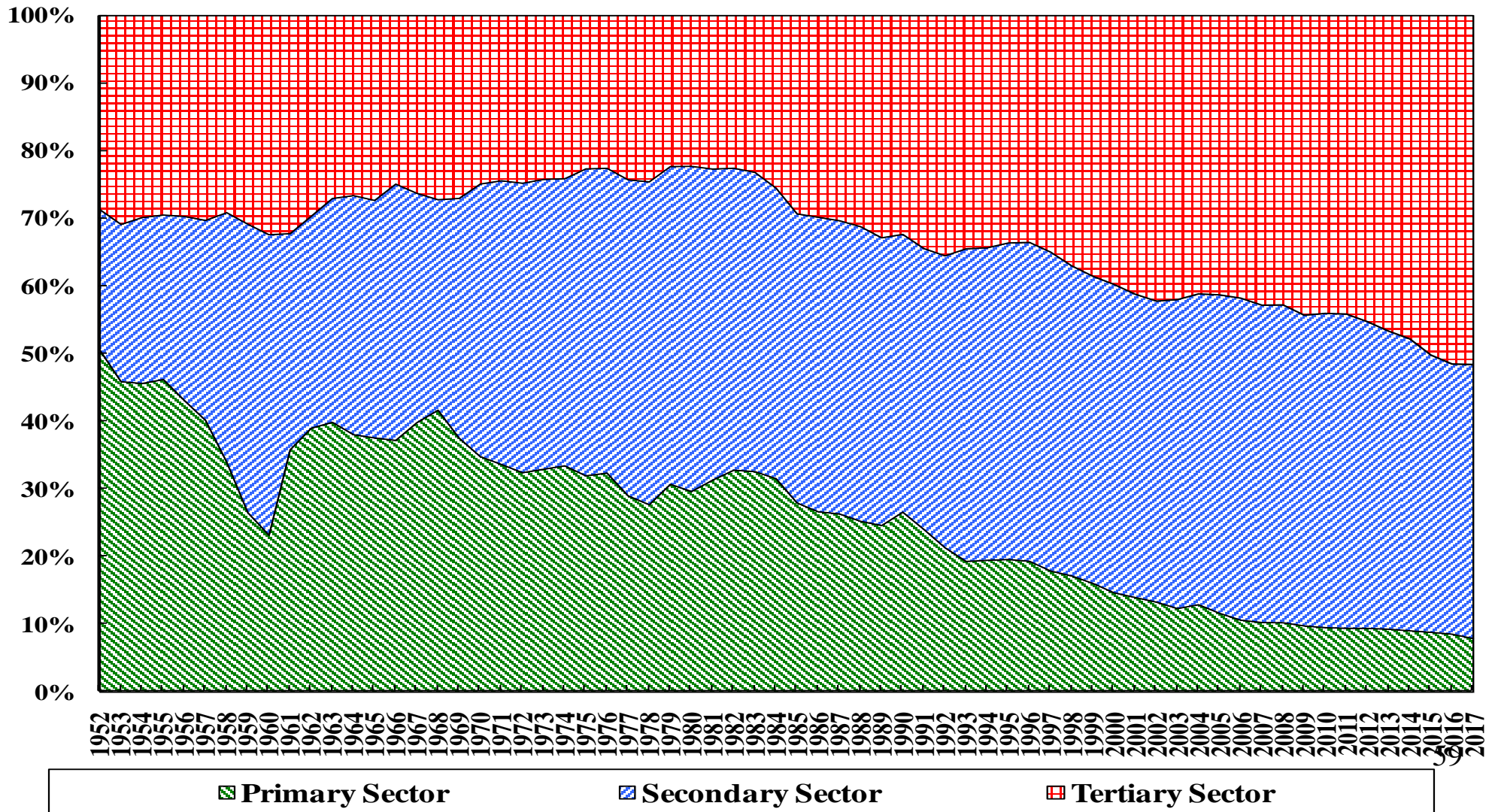
Growth Rate vs. Level of Real GDP per Capita (2017 tril. US\$): China, Japan and the U.S.

Rate of Growth of Real GDP vs. Real GDP per Capita (in 2017 US Dollars)



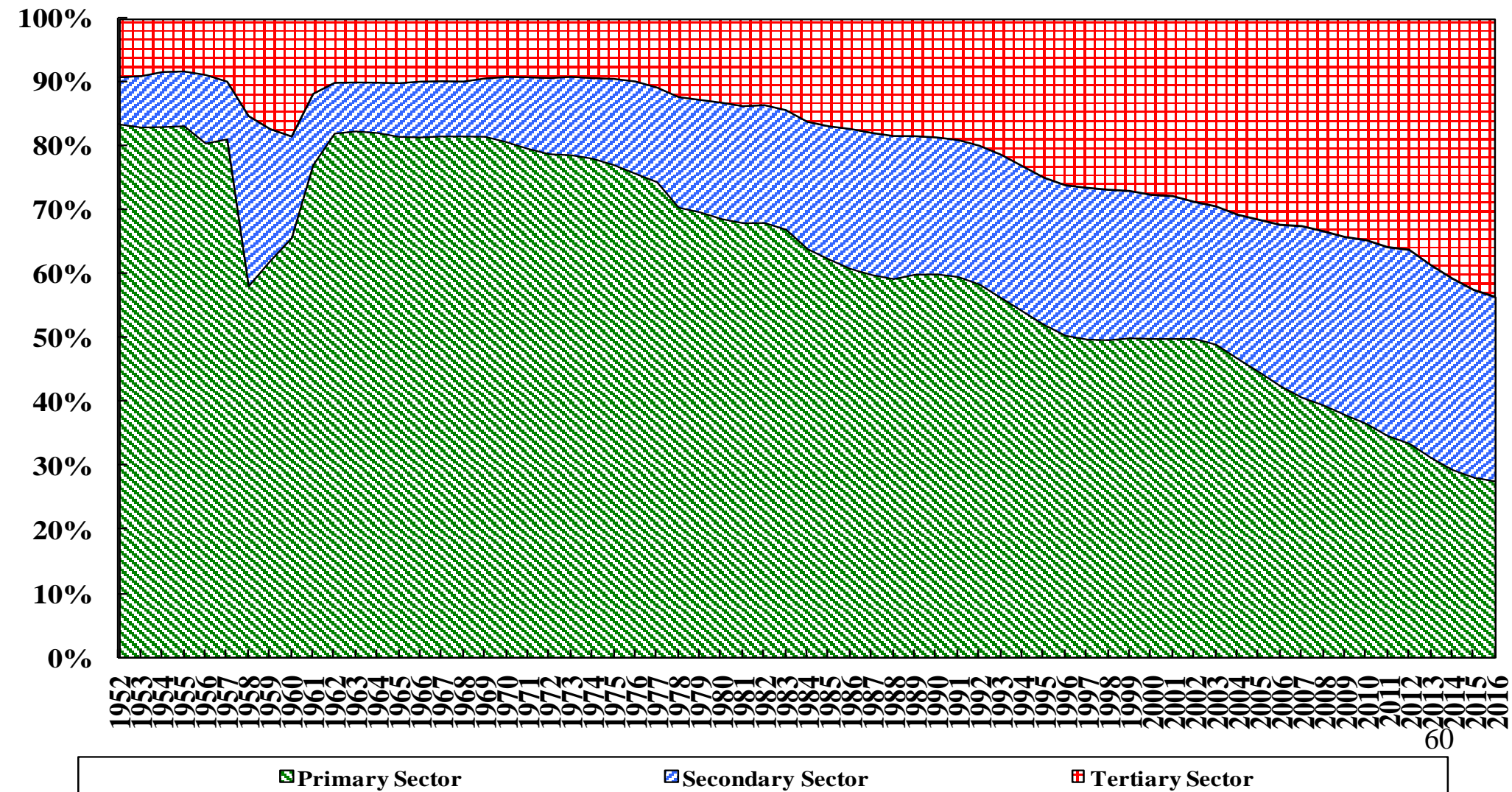
The Distribution of Chinese GDP by Sector Since 1952

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

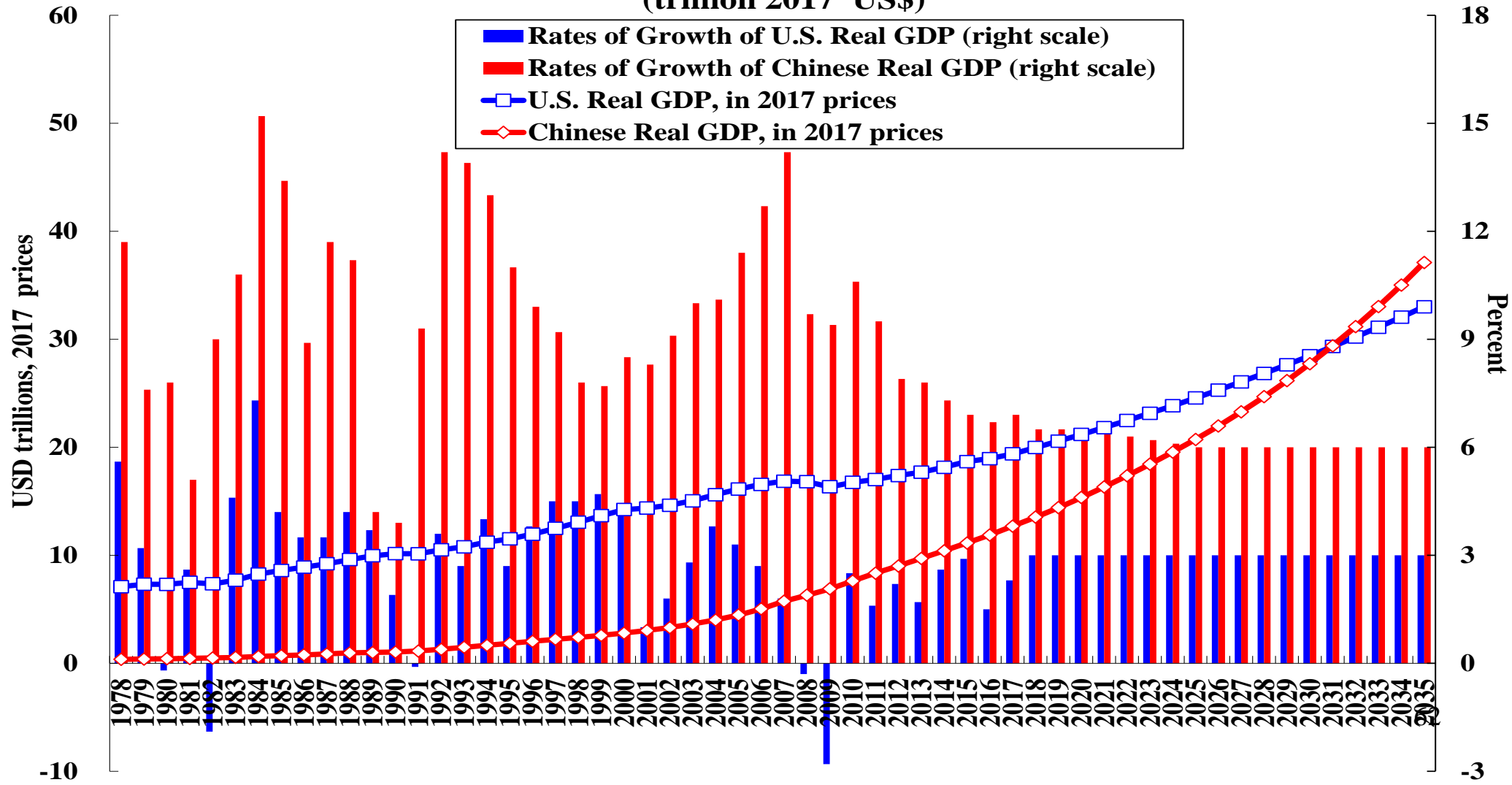


Projections of the Chinese and the U.S. Economies

- ◆ In his work report to the Nineteenth National Congress of the Communist Party of China, President XI Jinping identified several Chinese development milestones 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 2017 prices) will exceed US\$10,898 (compared to US\$63,703 for the U.S.).
- ◆ Our projections also show that by 2031, Chinese real GDP will surpass U.S. real GDP (US\$29.4 trillion versus US\$29.3 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\$20,009 compared to US\$82,502 for the U.S.
- ◆ By 2050, Chinese real GDP will reach US\$82.6 trillion compared to US\$51.4 trillion for the U.S. In terms of real GDP per capita, China will reach US\$52,870, still less than the current level of U.S. real GDP per capita, compared to US\$134,071 for the U.S.
- ◆ The Chinese real GDP per capita will not catch up with the U.S. real GDP per capita until the end of the 21st Century.

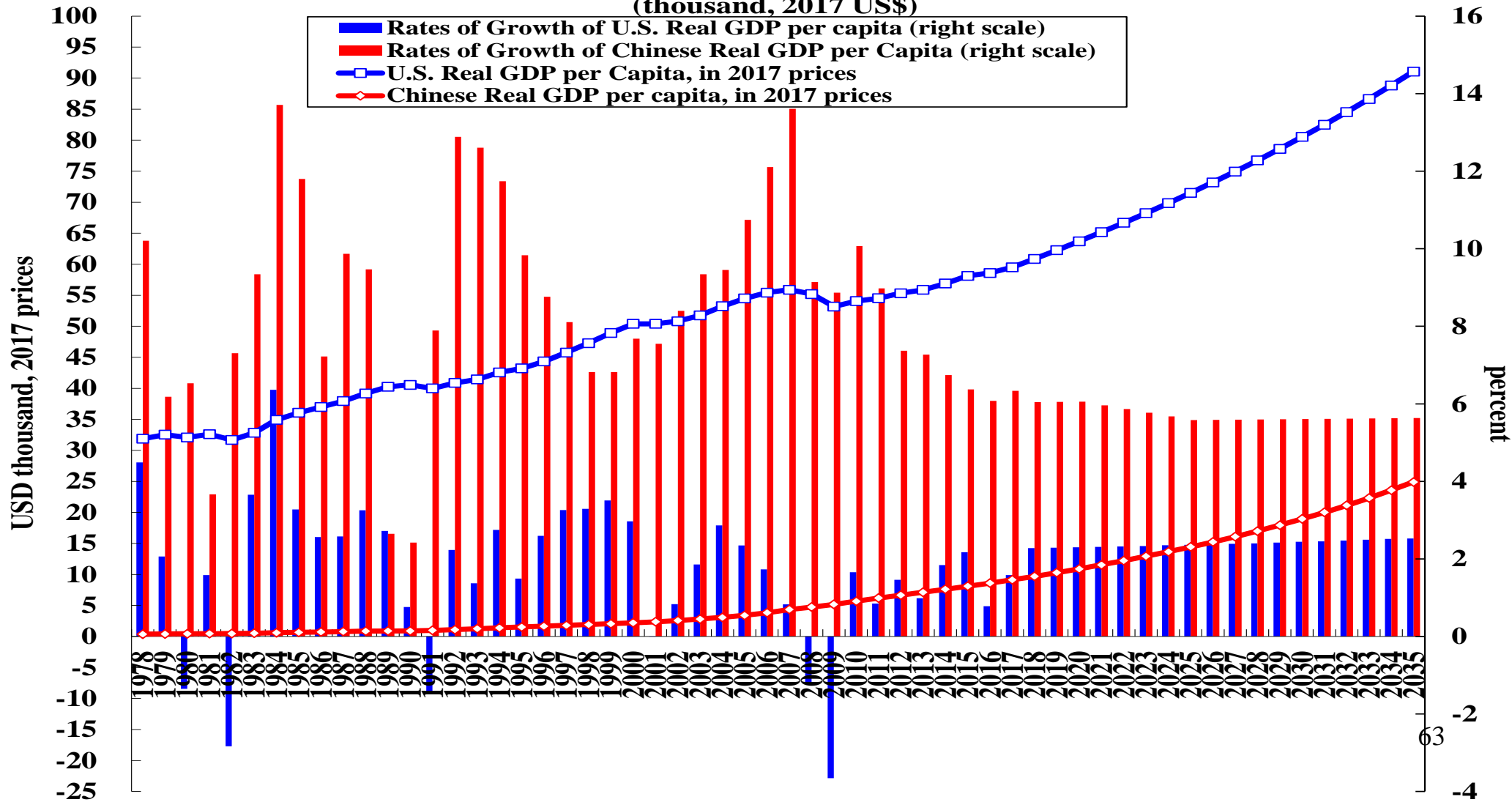
Actual and Projected Levels and Growth Rates of Chinese and U.S. Real GDP (2017 tril. US\$)

**Actual and Projected Chinese and U.S. Real GDPs and Their Rates of Growth
(trillion 2017 US\$)**



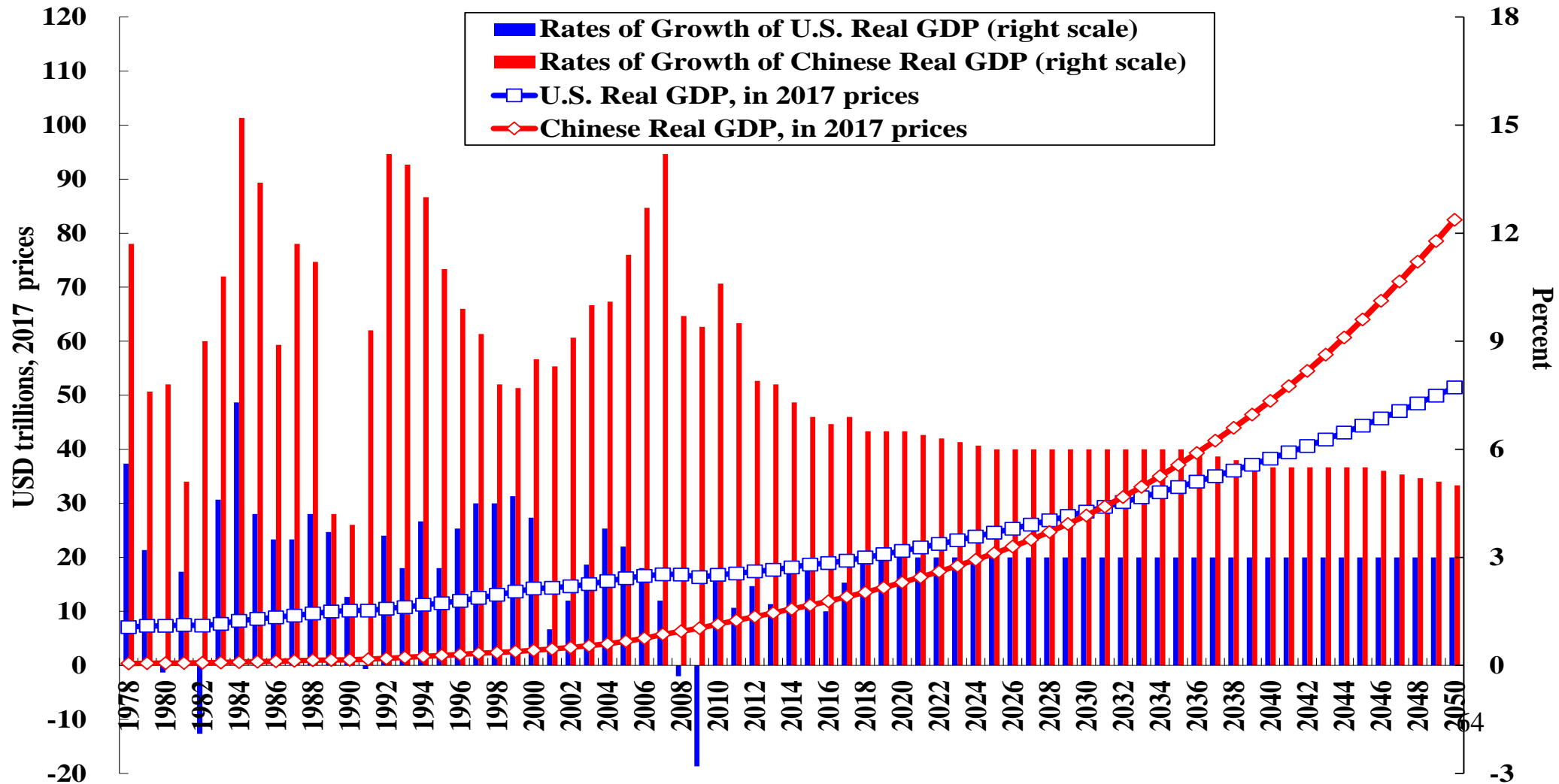
Actual and Projected Chinese and U.S. Real GDP/ Capita and Their Rates of Growth (1,000 2017 US\$)

Actual and Projected Chinese and U.S. Real GDP per Capita and Their Rates of Growth
(thousand, 2017 US\$)



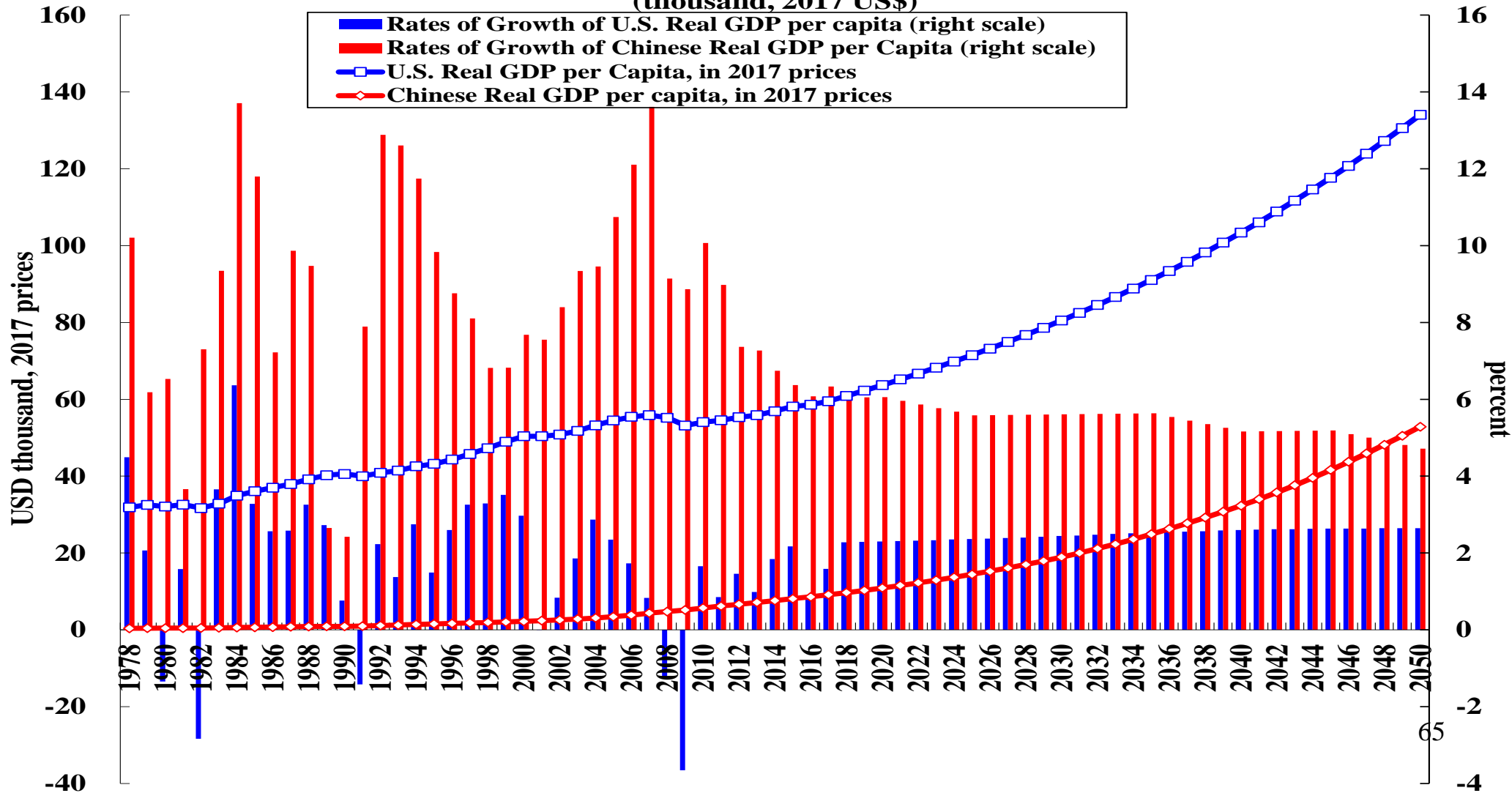
Actual and Projected Levels and Growth Rates of Chinese and U.S. Real GDP (2017 tril. US\$)

Actual and Projected Chinese and U.S. Real GDPs and Their Rates of Growth
(trillion 2017 US\$)



Actual and Projected Chinese and U.S. Real GDP/ Capita and Their Rates of Growth (1,000 2017 US\$)

Actual and Projected Chinese and U.S. Real GDP per Capita and Their Rates of Growth
(thousand, 2017 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; India, Pakistan and even North Korea developed their nuclear bombs independently.
- ◆ China will have 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.

Promoting 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 newly created goods and services, for example, by producing and exporting meat (beef, pork and poultry) instead of feed grains (corn and soybeans) to China, and exporting the newly developed liquefied natural gas from Alaska and shale oil from the continental U.S.

Promoting Mutual Economic Interdependence

- ◆ 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 350,000) 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. 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.

Promoting Mutual Economic Interdependence

- ◆ It is difficult to assess which country has benefitted more from their economic relations. China has been able to lift 600 million of its citizens out of poverty, initially through the vast expansion of export-oriented jobs in China that result from China's opening up and accession to the World Trade Organisation (WTO).
- ◆ 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.
- ◆ Additional benefits for the U.S. include the profits of U.S. corporations earned by their operations within China, such as General Motors and Walmart, 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.
- ◆ This also does not include the benefits that the U.S. has derived from seigneurage, that is, from being the provider of the international medium of exchange.

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. The trade dispute is only a symptom of the potential possible conflicts between the two countries.
- ◆ To reduce the probability of an armed conflict between China and the U.S. down the road, both countries should 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 (1870, 1914 and 1939) is not possible today.
- ◆ Graham Allison, a professor at the Kennedy School of Harvard University, has written about the inevitability of a China-U.S. war. 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.

Concluding Remarks

- ◆ China and the rest of the world, except possibly the U.S., will probably 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.
- ◆ However, China-U.S. relations, and in fact, China's relations with the rest of the world, in particular with the European Union and Russia, must be carefully managed going forward.