# Reflections on Chinese Economic Growth
# 反思中国经济成长历程


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*本文仅代表作者个人意见，并不必然反映与作者相关的各机构的观点。

# Outline

- Introduction
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- Inherent Economic Inefficiency under Central Planning
- The Significance of Economic Reform and Opening
- Daring Experimentation and Implementation
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- Concluding Remarks

# Introduction

- China has made tremendous progress in its economic development since it began its economic reform and opened to the World in 1978. China is currently the fastest growing economy in the World—averaging 9.8% per annum over the past 35 years. It is historically unprecedented for an economy to grow at such a high rate over such a long period of time.
- Between 1978 and 2012, Chinese real GDP grew more than 24 times, from US$341 billion to US$8.262 trillion (in 2012 prices), to become the second largest economy in the World, after the U.S.
- By comparison, the U.S. GDP (approx. US$15.676 trillion) was less than 2 times Chinese GDP in 2012.

# Introduction

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

# Introduction

- While many problems have arisen in the Chinese economy within the past decade—for example, increasing income disparity (both inter-regional and intra-regional), uneven access to basic education and health care, environmental degradation, inadequate infrastructure and corruption—it is fair to say that every Chinese citizen has benefitted from the economic reform and opening since 1978, albeit to varying degrees, and few want to return to the central planning days.

# Introduction

- In the following table, the key performance indicators of the Chinese economy before and after the initiation of the economic reform and opening policy in 1978 are compared. It is readily apparent that there has been a huge improvement in every aspect of the economy—rates of growth of real GDP, real consumption, and international trade, on both an aggregate and per capita basis—except the average rate of inflation, which has become considerably higher in the period since 1978.
- One important factor for the improvement of the per capita performance indicators is the adoption of the “one-child policy”, which applies to the 94% Han ethnic majority in China, in 1979.

# Key Performance Indicators Before and After Chinese Economic Reform

| | Growth Rates percent per annum | |
|---|---|---|
| | Period I | Period II |
| | 1952-1978 | 1978-2012 |
| Real GDP | 6.15 | 9.83 |
| Real GDP per Capita | 4.06 | 8.73 |
| Real Consumption | 5.05 | 9.17 |
| Real Consumption per Capita | 2.99 | 8.08 |
| Exports | 9.99 | 17.03 |
| Imports | 9.14 | 16.24 |
| Inflation Rates (GDP deflator) | 0.50 | 5.35 |

# The Economic Fundamentals

- The quantity of output of an economy depends on the quantities of inputs, as well as the efficiency with which inputs are transformed into output, in other words, the ability to increase output without increasing inputs.
- Long-term economic growth of a country therefore depends on the rates of growth of its primary inputs—tangible or physical capital and labour—and on intangible capital (human capital and R&D capital) and technical progress (also known as the growth of total factor productivity), that is, the ability to increase the efficiency with which inputs are transformed into output.

# The Economic Fundamentals

- The rate of growth of tangible (or physical) capital depends on the rate of investment on structure, equipment and basic infrastructure, which in turn depends on the availability of national savings. Foreign aid, foreign investment and foreign loans can sometimes augment domestic savings, especially at an early stage of economic development. However, the lack of sustainability of imported foreign resources over time can be a problem.
- The rate of technical progress depends on investment in intangible capital (principally human capital and R&D capital).

# The Economic Fundamentals

- The most important source of Chinese economic growth since 1978 has been the growth of inputs, principally tangible capital (structures, equipment, and basic infrastructure) and not technical progress or total factor productivity.
- Chinese tangible capital stock has been growing at the rate of approximately 15% per year. The growth of tangible capital accounts for the bulk, approximately 75%, of the measured economic growth in China.
- Thus, past Chinese economic growth was mainly due to "working harder, not working smarter (流汗多于用脑) ".

# The Economic Fundamentals

- This experience is not unlike those of other East Asian economies such as South Korea and Taiwan and even Japan and the U.S. at a similarly early stage of economic development.
- But tangible capital-input-driven economic growth has its limitations, because as the stock of tangible capital relative to labour increases, the marginal productivity of tangible capital will begin to decline and will eventually reach a point when additional tangible capital is no longer productive. This is a point made by Professor Paul Krugman.

# The Economic Fundamentals

- However, unlike the experience of the other East Asian economies, economies of scale have also played an important role in Chinese economic growth because of the huge size of the Chinese domestic market.

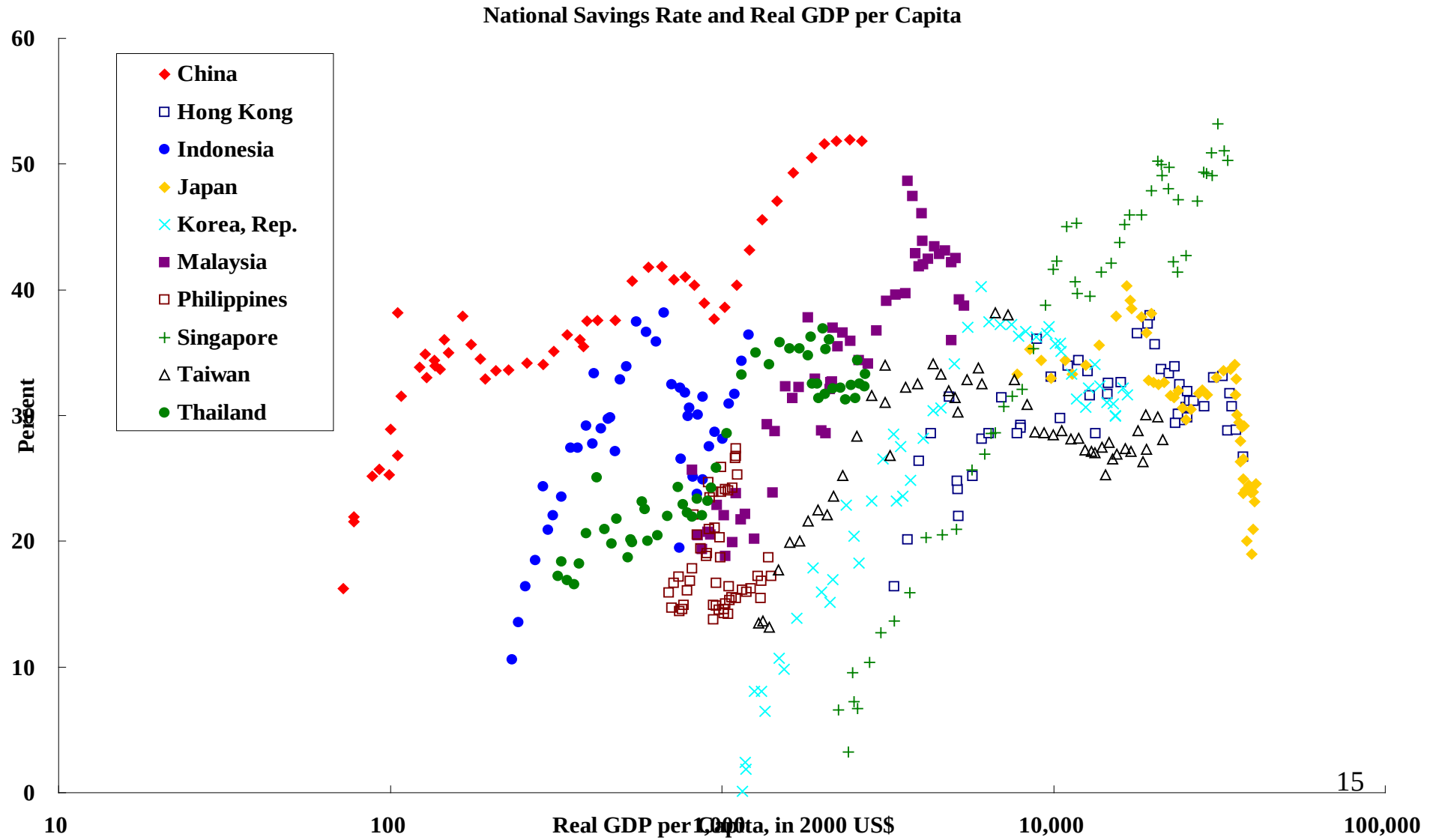
# The Economic Fundamentals

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

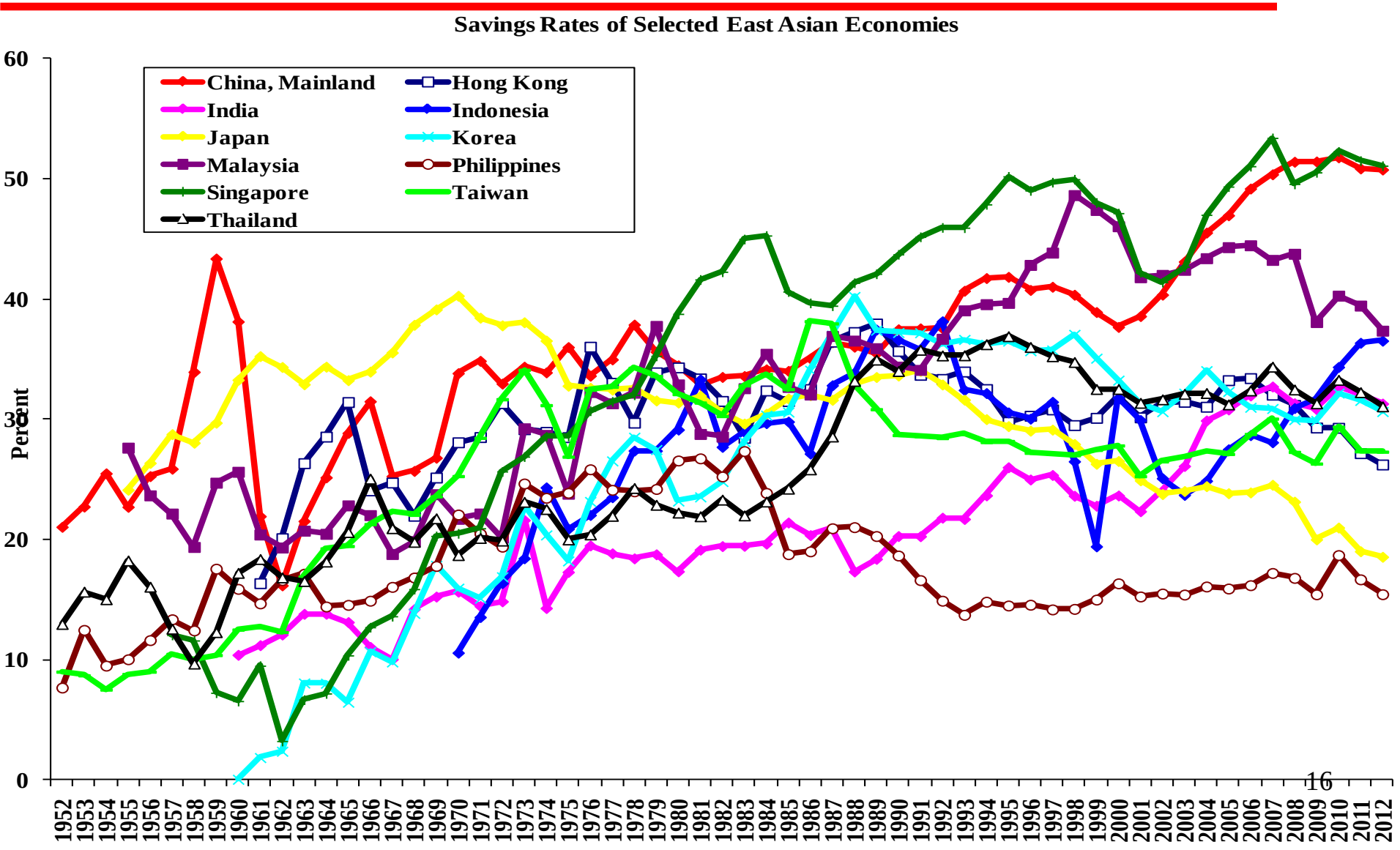
# The Economic Fundamentals

- (2) An unlimited supply of surplus labour—there is no shortage of and no upward pressure on the real wage rate of unskilled, entry-level labour. And
- (3) A huge domestic market of 1.34 billion consumers with pent-up demand for housing and transportation and other consumer goods and services (e.g., education and health care), enabling the realisation of significant economies of scale in production and in investment in intangible capital, including innovation and goodwill (e.g., brand building), based entirely on domestic demand. This is an advantage not available to the other East Asian economies.

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



# Saving Rates of Selected Asian Economies (1952-present)

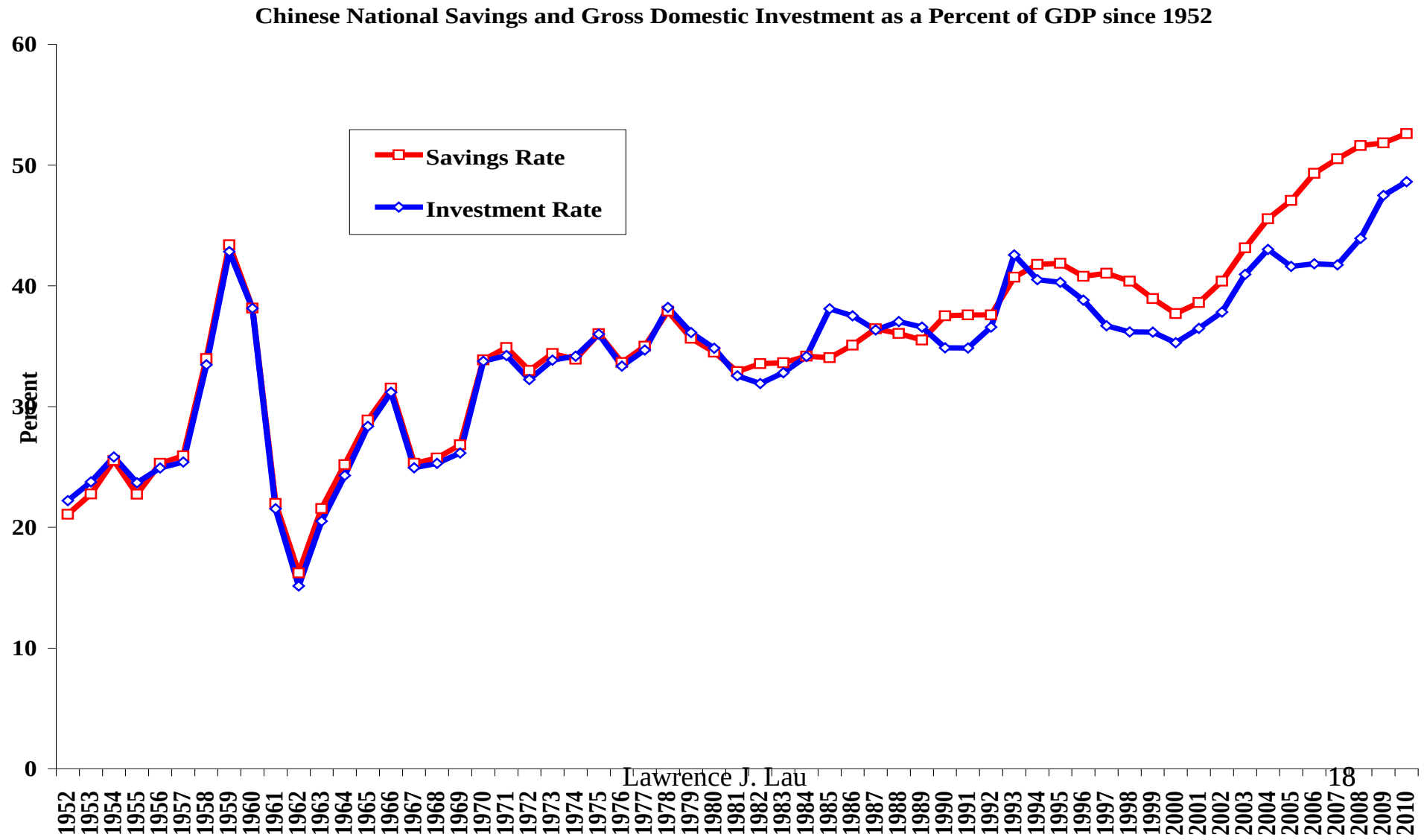


# The Economic Fundamentals

## Capital

- The national saving rate in China will remain high even though it is expected to decline gradually.
- The decline will be caused not so much by a decline in the saving rate of Chinese households, but by a decline in the saving rate of Chinese enterprises through either reduced profits due to increases in wage rates or increased distribution of cash dividends to shareholders, including both households and the government, as called for recently in the resolutions of the Third Plenum of the Central Committee of the Chinese Communist Party, or both. The payout rate from the profits of the state-owned enterprises is expected to be increased to 30% by 2020.
- Household income can be increased through increases in the wage rates but also through increases in the cash dividend payouts as mentioned above.
- Even with a decline in the national saving rate, the Chinese domestic saving should continue to be adequate to finance the domestic investment needs without relying on foreign investment and/or foreign loans.

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



# The Economic Fundamentals: Capital

- A country with a high national savings rate does not need to rely on foreign savings—it does not need to borrow abroad and bear the potential risks of a large, and often interruptible, foreign-currency denominated debt.
- In addition, with new resources being made available each year from new savings, enabling new investments to be made, the necessity of restructuring, redeploying or privatising existing fixed assets is greatly diminished (thus making it more possible to avoid potentially politically divisive issues and the creation of "losers"). There was, for example, little privatisation of state-owned enterprises in Taiwan and South Korea in the initial periods of their industrialisation.
- A high national savings rate also allows the normally more efficient non-state sector greater room and greater scope for development and expansion (there is less "crowding out"). The Chinese non-state sector accounts for approximately 75% of Chinese GDP in 2010, compared to essentially 0% in 1978.

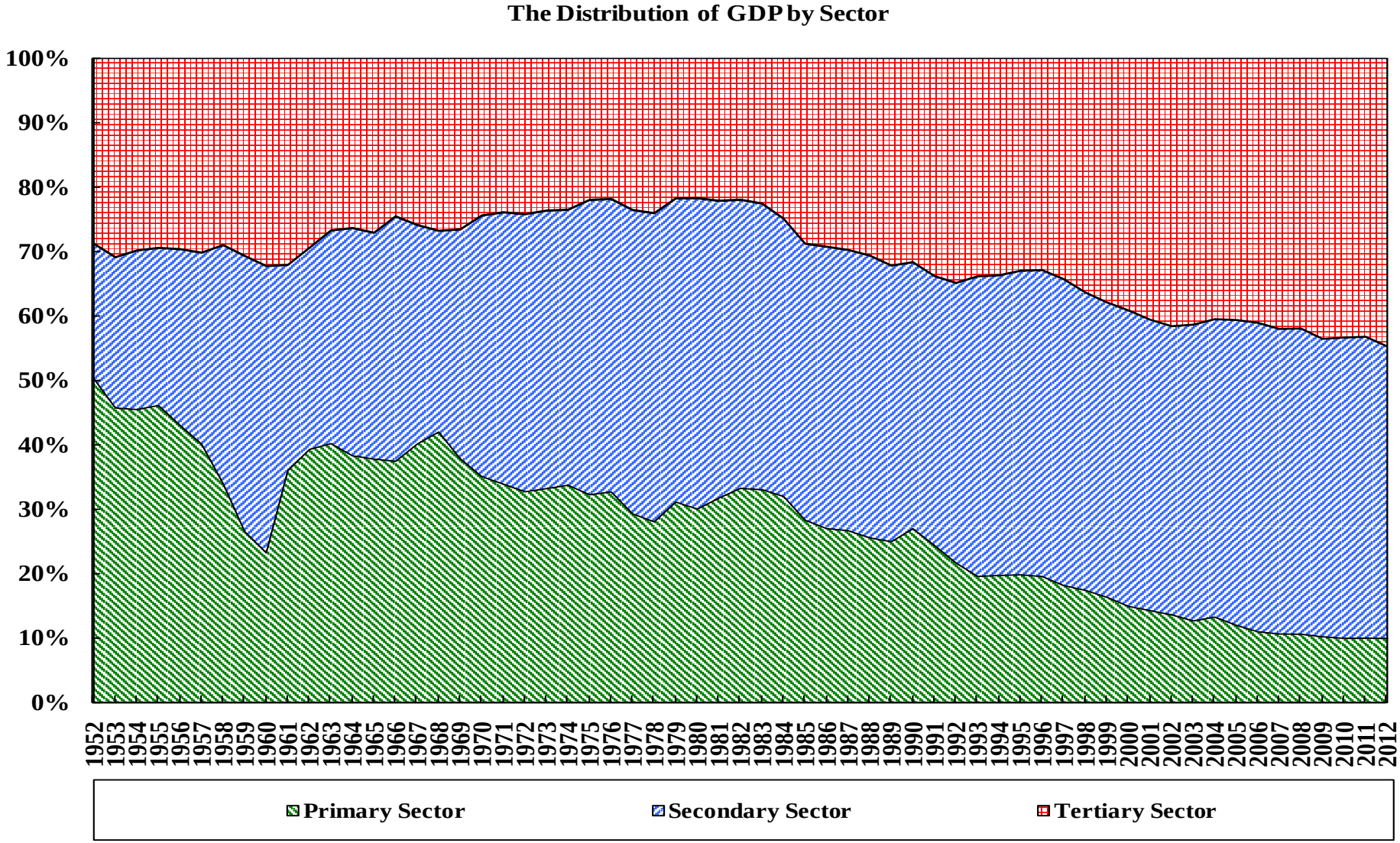
# The Economic Fundamentals
# Labour

- China, like Japan, Taiwan, and South Korea in their early stages of economic development, has an abundant supply of surplus labour. This means China can grow without being constrained by the supply of labour or by rising real wage rates of unskilled, entry-level labour over an extended period of time.
- Investment in physical capital is very productive under conditions of surplus labour and as long as there is sufficient complementary domestic physical capital, the surplus labour will enable the output of the economy to grow rapidly.
- This is exactly what the late Prof. W. Arthur Lewis, Nobel Laureate in Economic Sciences, said in his famous paper on surplus labour published in 1954.

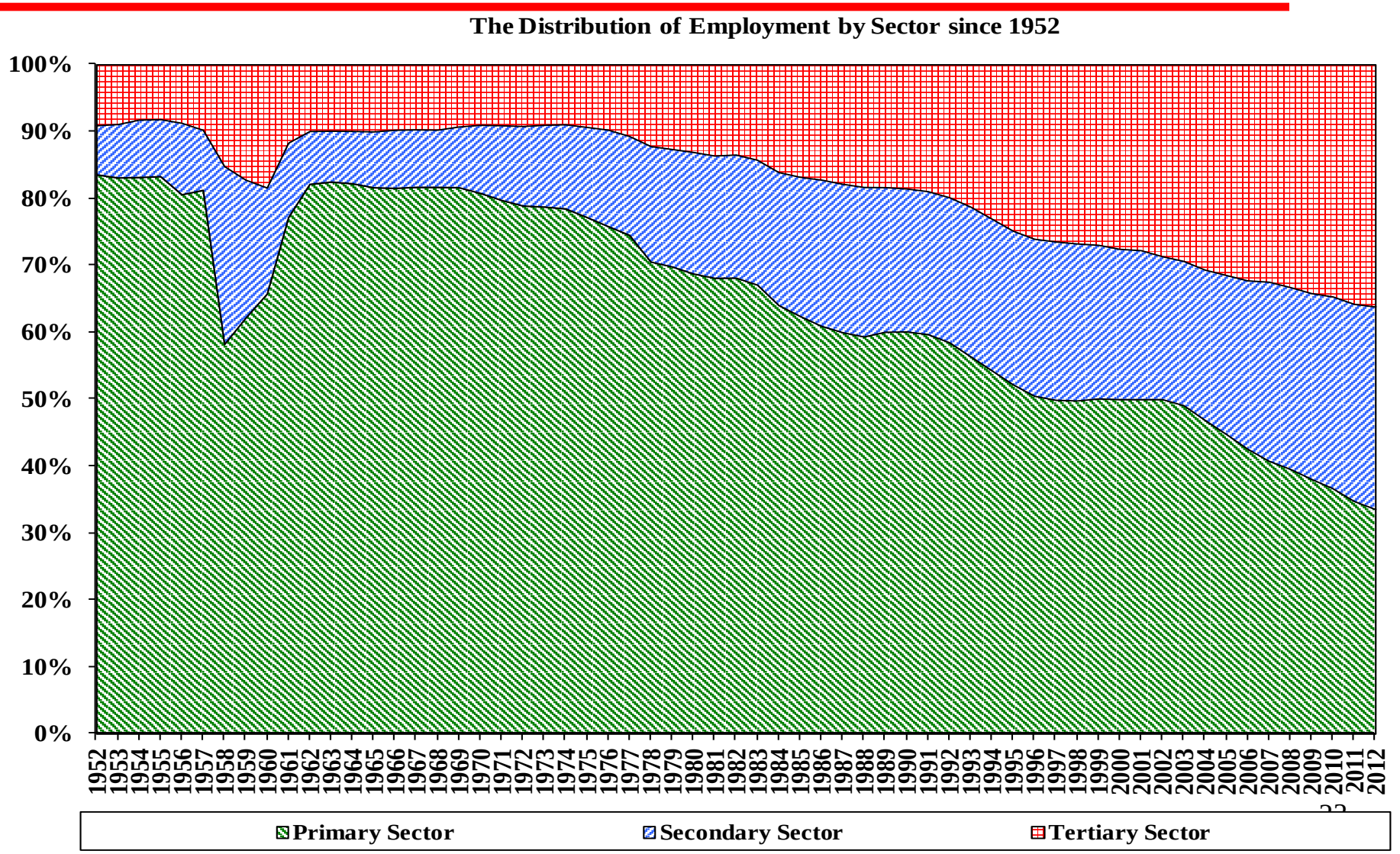
# The Economic Fundamentals
# Labour

- The distribution of Chinese GDP by originating sectors in 2012 was approximately: Primary (agriculture), 10.1%; Secondary (manufacturing, mining and construction), 45.3%; and Tertiary (services), 44.6%. (Note that mining is normally included in the primary sector in most other economies.)
- But a large proportion of the labour force, more than 33.6%, is still employed in the primary sector, which in the case of China consists of only agriculture, waiting to be transferred to the other two sectors which have higher productivities.
- As long as the percentage of labour force employed in the primary sector significantly exceeds the percentage of GDP originating from the primary sector, there is little or no upward pressure on the real wage rate of unskilled, entry-level labour in the secondary and tertiary sectors.

# The Distribution of Chinese GDP by Sector Since 1952



# The Distribution of Chinese Employment by Sector Since 1952



# The Economic Fundamentals
# Labour

- It took 34 years for the percentage of labour force employed in the Chinese primary sector to decline from 70.5% in 1978 to 33.6% in 2012, at the rate of approximately 1 percentage point per year.
- It will take approximately another 25 years or so for the percentage of labour force employed in the Chinese primary sector to decline from 33.6% to 10%, which is approximately the same as the percentage of Chinese GDP produced by the primary sector today. By that time, it is expected that the primary sector will account for no more than 5% of Chinese GDP.
- China will therefore continue to have surplus labour for another two or three decades. During this period, there will not be any shortage of unskilled, entry-level labour, even though there may be shortages of skilled or experienced labour in the secondary and tertiary sectors. (The loss of competitiveness in the exports of labour-intensive, light-manufactured goods was due primarily to the significant appreciation of the Renminbi since 2005.)

# The Economic Fundamentals
# Labour

- There will not be a “real” labour shortage despite the decline of the “working-age population”—the existing retirement ages of 55 for women and 60 for men are too low given the lengthened life expectancy of the Chinese population. One possible compromise is to raise the retirement age to 65 but require senior executives to give up their administrative leadership positions at age 60. It is also important to provide potential retirees an option during the transition to a higher mandatory retirement age.
- The “one-child policy” is already in the process of being modified, for example, the resolutions of the Third Plenum would allow a married couple, one of whom is a single child, to have two children. Further changes are possible, but their effects will not be felt for another two decades or more.

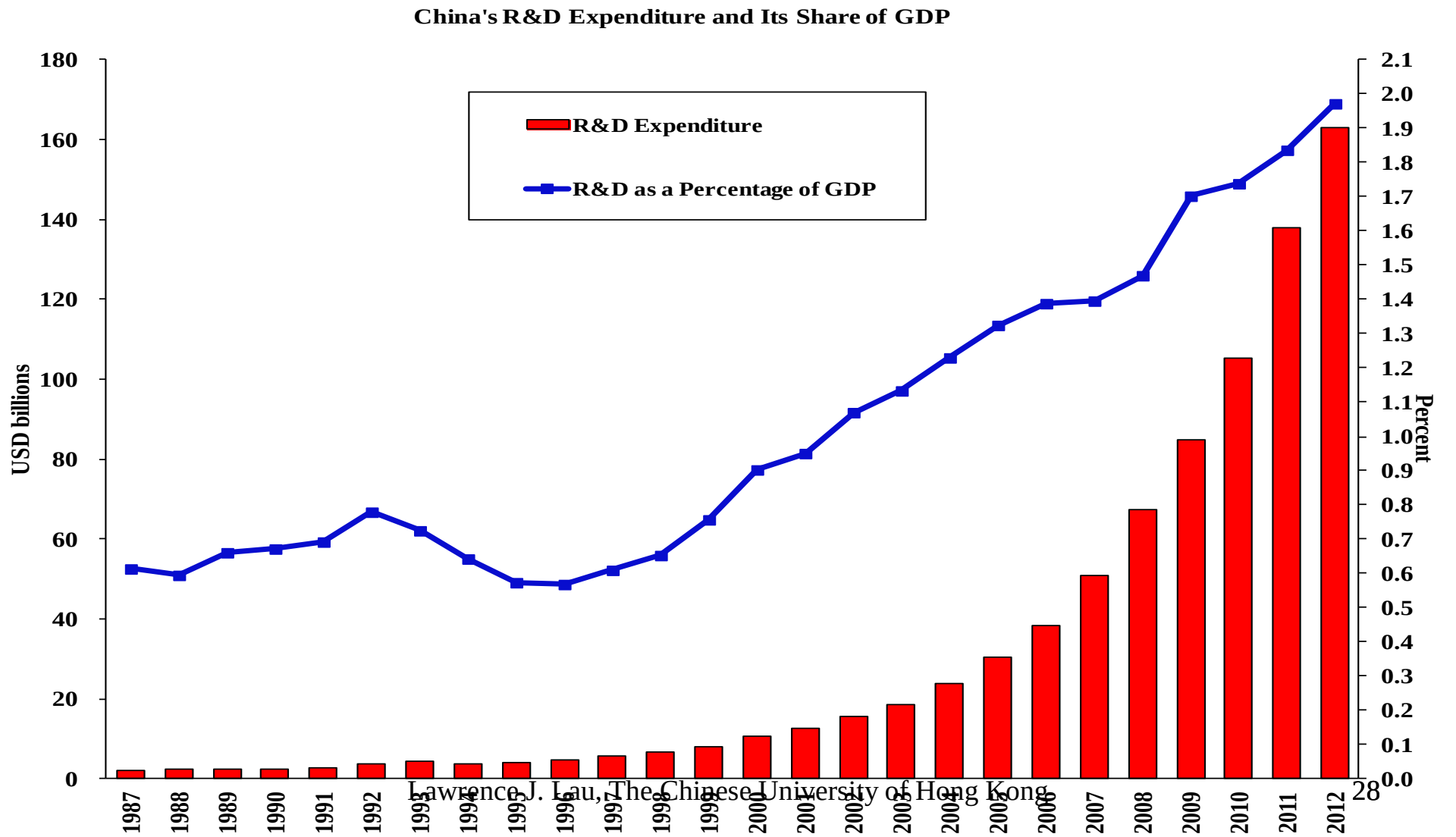
# The Economic Fundamentals
# Intangible Capital

- Investments in intangible capital such as human capital and R&D capital are critical if China were to become an innovative economy.
- China also has a long tradition of emphasis on education and learning (human capital) and will be increasing its investment in human capital. The enrolment rate of tertiary education has been rising rapidly and stands at more than 25 percent today. It is expected to rise further over the next three decades as private tertiary educational institutions become more numerous in response to demand and facilitated by government policy.
- China also has an abundance of scientific and technical manpower the cost of which is a fraction of the cost in developed economies.
- There will continue to be adequate investment in human capital.

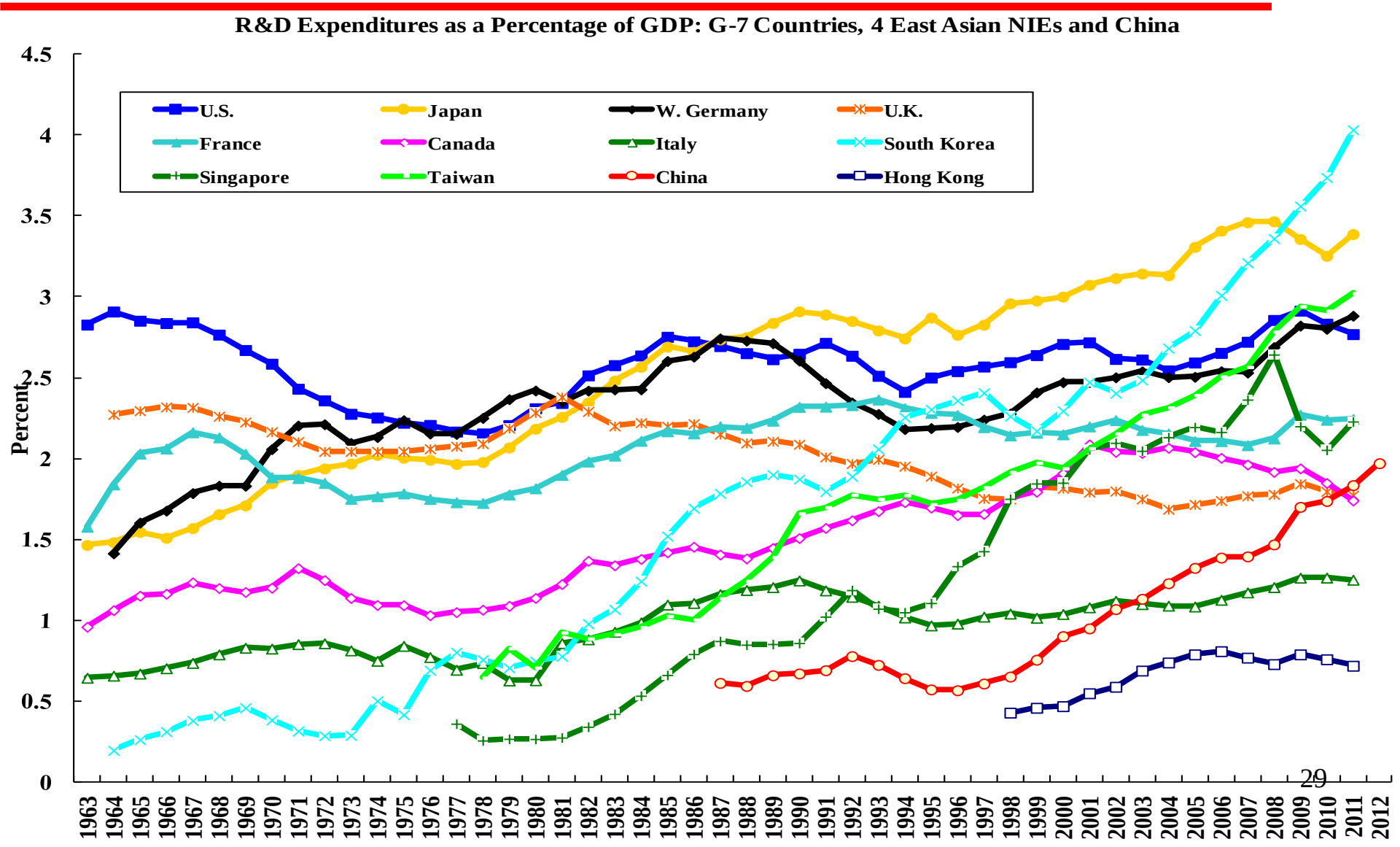
# The Economic Fundamentals
# Intangible Capital

- Sustained investment in research and development (R&D) is essential for technical progress in an economy. China has also begun to invest heavily in R&D in recent years—its R&D expenditure has been rising rapidly, both in absolute value, and as a percentage of GDP, but still lags behind the developed economies as well as the newly industrialised economies of East Asia. (The Chinese R&D Expenditure/GDP ratio is targeted to reach 2.2% in 2015, still below the historical average of 2.5% for the U.S.)
- By comparison, both Japan and South Korea invest more than 3% of their GDPs in R&D annually.

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



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



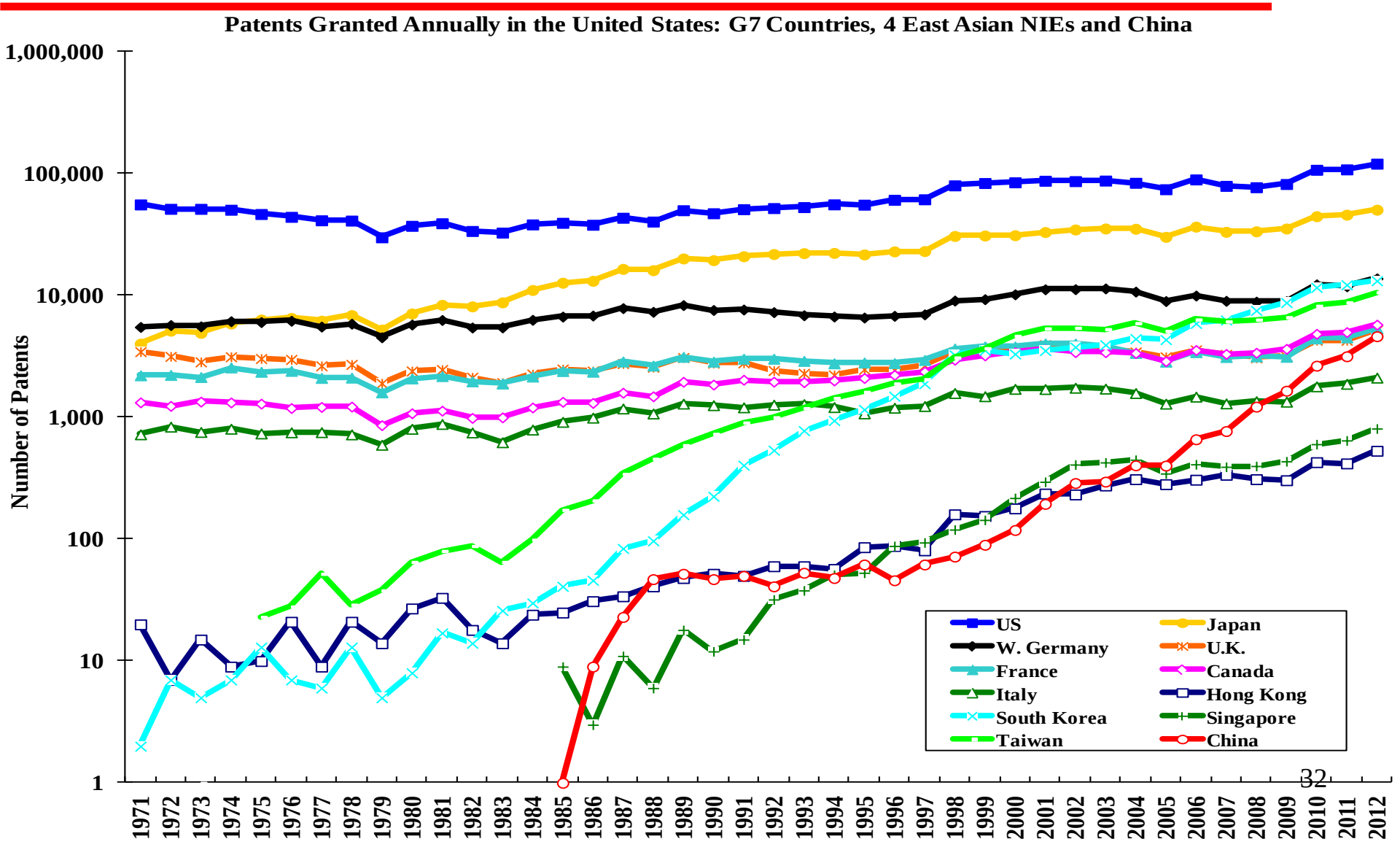
# The Economic Fundamentals
# Intangible Capital

- One indicator of the potential for technical progress (national innovative capacity) is the number of patents created each year. In the following chart, the number of patents granted in the United States each year to the nationals of different countries, including the U.S. itself, over time is presented. The U.S. is the undisputed champion over the past forty years, with 121,026 patents granted in 2012, followed by Japan, with 50,677. (Since these are patents granted in the U.S., the U.S. may have a home advantage; however, for all the other countries, the comparison across them should be fair.)

# The Economic Fundamentals
# Intangible Capital

- The number of patents granted to Chinese applicants each year has increased from 1 in 1985 to 4,637 in 2012.
- The economies of South Korea and Taiwan, granted 13,233 and 10,646 U.S. patents respectively in 2012, are still far ahead of Mainland China—they have been averaging approximately 10,000 patents a year each.

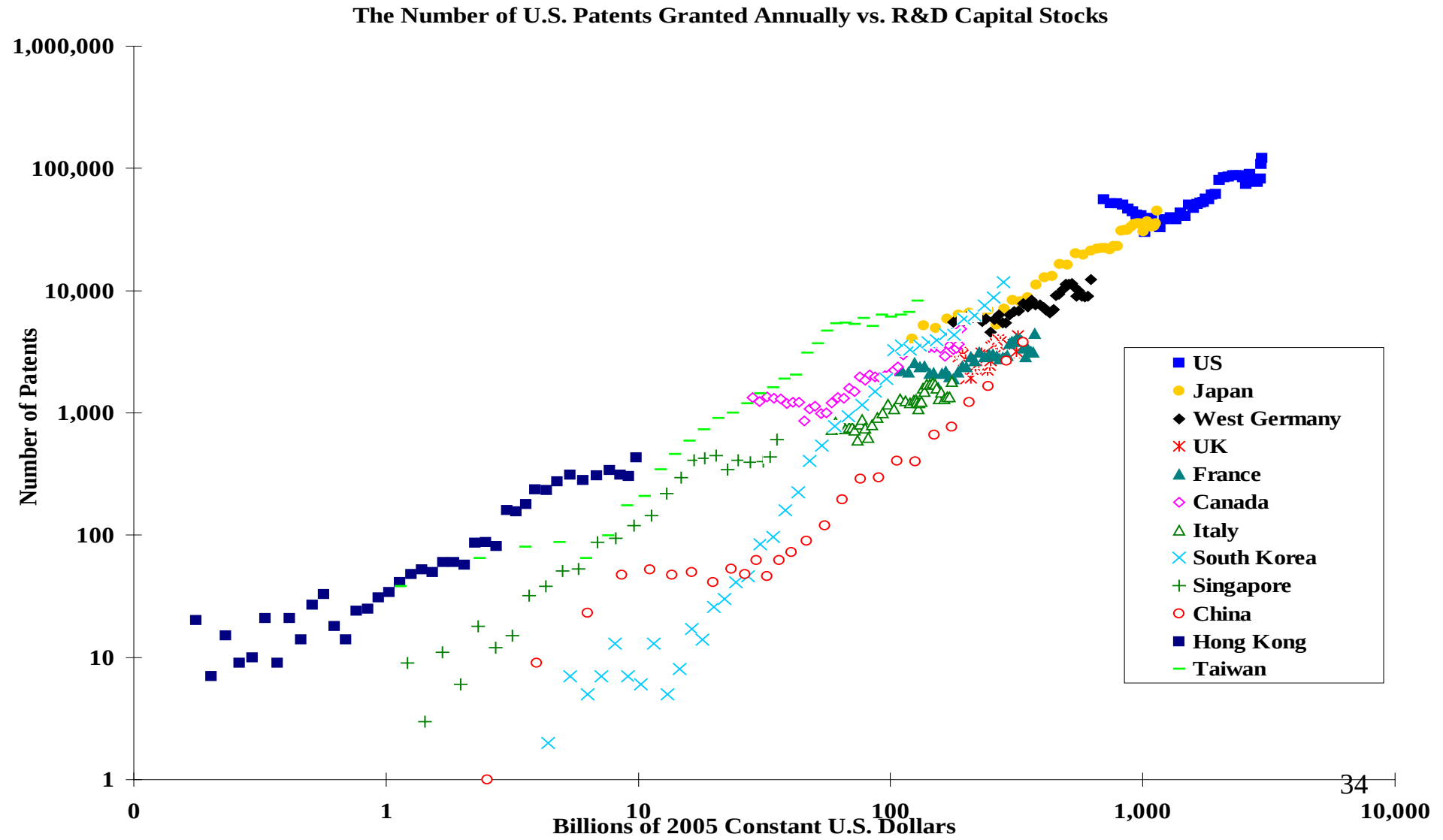
# Patents Granted in the United States: G-7 Countries, 4 East Asian NIEs & China



# The Economic Fundamentals
# Intangible Capital

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

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



# The Economic Fundamentals
# Intangible Capital

- However, innovation also depends on the existence of competition. Monopolies are not very good in innovation, or not very good in making full use of their innovation. China must create and maintain a competitive market environment with free entry and exit so as to encourage innovation.
- In addition, in order to encourage innovation, China also needs to protect intellectual property rights vigorously. The resolutions of the Third Plenum called for the study of the establishment of an intellectual property court, which is an important step towards better protection of intellectual property rights, both Chinese and foreign.

# The Economic Fundamentals: Size and Economies of Scale

- There are very significant returns to scale in the Chinese economy—both technological economies of scale as well as market economies of scale—that remain to be exploited.
- The huge domestic market of 1.34 billion consumers allows economies of scale in production to be easily realised in China. The strong domestic demand in for example, housing, transportation, other consumer goods and services (education and health care) alone is large enough to support efficient-scale plants in many heavy industries without reliance on the export markets.
- The returns to monopolising or cartelising the Chinese domestic market are also similarly huge.

# The Economic Fundamentals: Size and Economies of Scale

- The huge domestic market of 1.34 billion consumers also greatly enhances the productivity of intangible capital (e.g., R&D capital and goodwill). The fixed research and development costs of a new product or process, and investment in brand-building through advertising, can be easily amortised over a large market. Intangible capital is highly productive in a large economy because once the fixed cost of invention/innovation is fully amortised, the rest is almost all pure profit.

# The Economic Fundamentals: Size and Economies of Scale

- The huge potential domestic market also enables active Chinese participation in the setting of product and technology standards, for example, fourth-generation (4-G) standards for telecommunication, and sharing the benefits of such standard-setting.
- Brand-building is a pre-requisite for Chinese enterprises to re-orient themselves to take advantage of the huge domestic market. It is true that brand-building requires resources, but it also enables the owners of brand names to have much more pricing power and higher profit margins than enterprises that do only OEM (original equipment manufacturing) business.

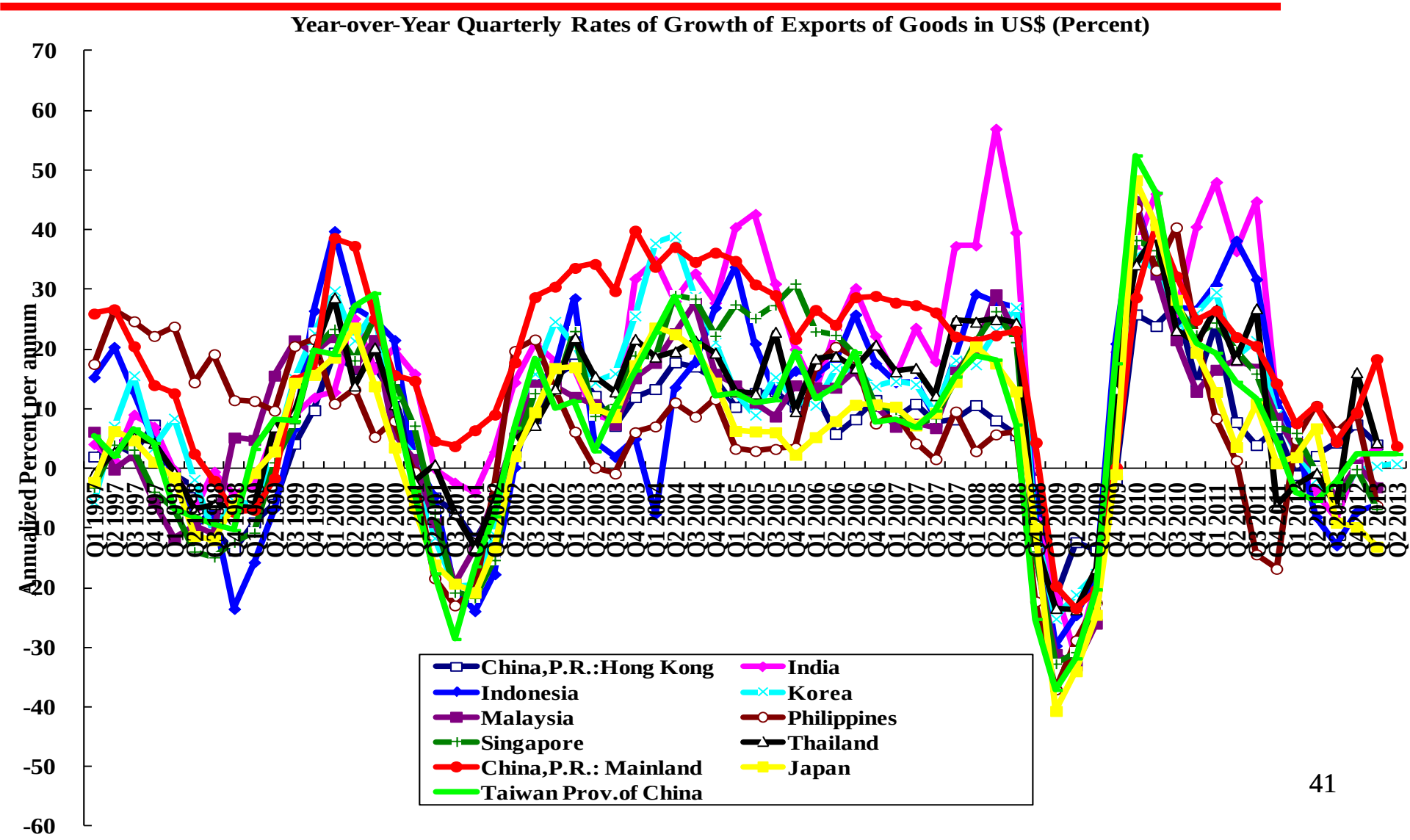
# The Economic Fundamentals: Size and Economies of Scale

- Large continental economies, such as China, Russia and the United States, are likely to be self-sufficient in many of the resources because of their large size and geographically diversified locations.
- These economies are also mostly driven by their internal demands, and not by international trade. For example, exports have never been very important to the U.S. economy, and the U.S. economy has never been dependent on international trade, except perhaps in the 19th Century when it had to import capital goods.
- The Chinese economy is similar—China has adequate supplies of most natural resources domestically (with the possible exception of oil). Chinese economic growth in the future decades will mostly depend on its internal demand rather than exports.

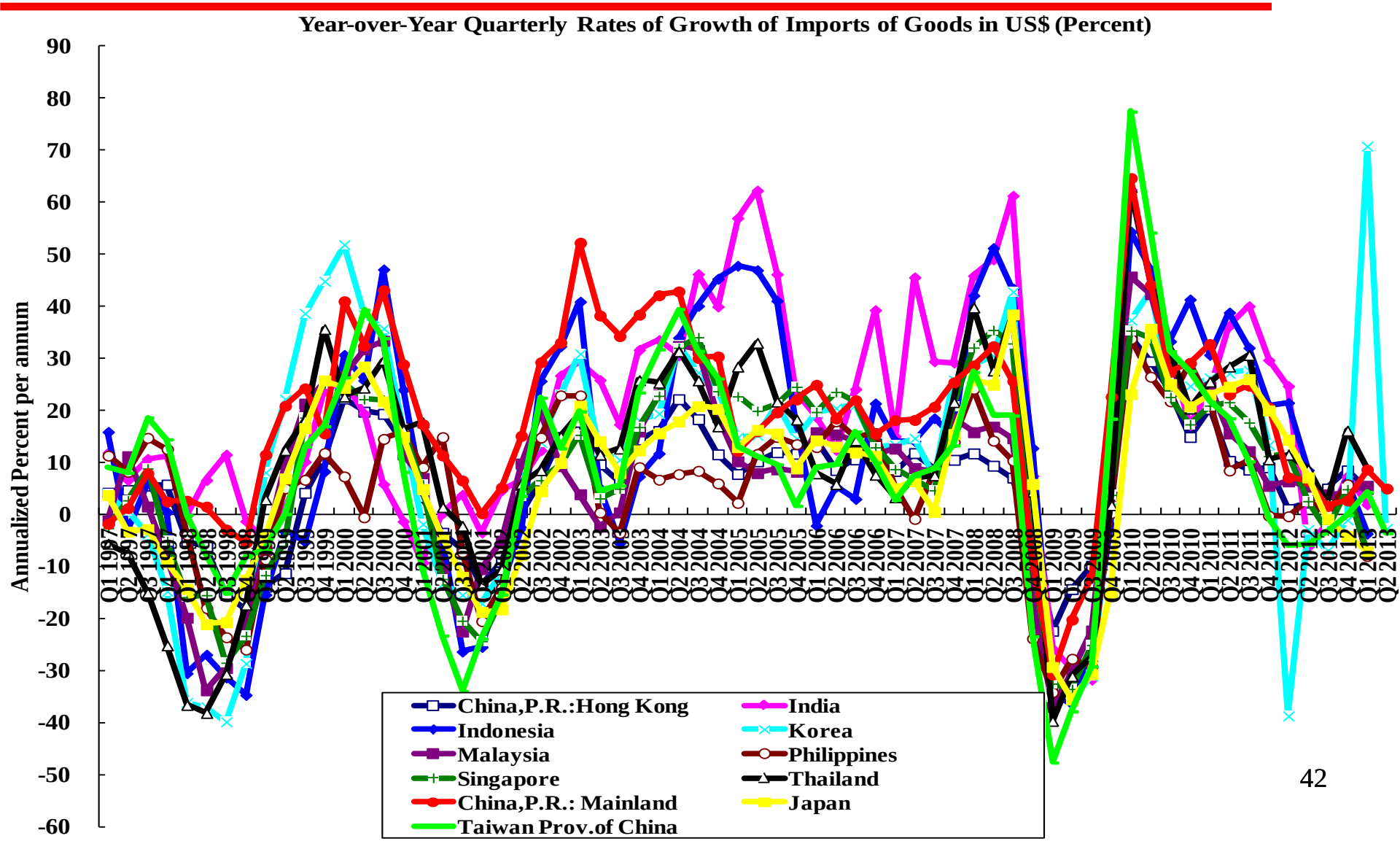
# The Economic Fundamentals: Size and Economies of Scale

- An important implication of the size of the domestic economy is the relatively low external dependence of the Chinese economy. As a large, continental economy like the United States, China is relatively self-sufficient and is therefore relatively insulated from disturbances in the rest of the World.
- Thus, the rate of growth of Chinese real GDP is relatively stable, unlike those of other East Asian economies, even as the rates of growth of Chinese exports and imports fluctuate as widely as the exports and imports of other East Asian economies. (see the following charts on the rates of growth of exports, imports and real GDP of East Asian economies).

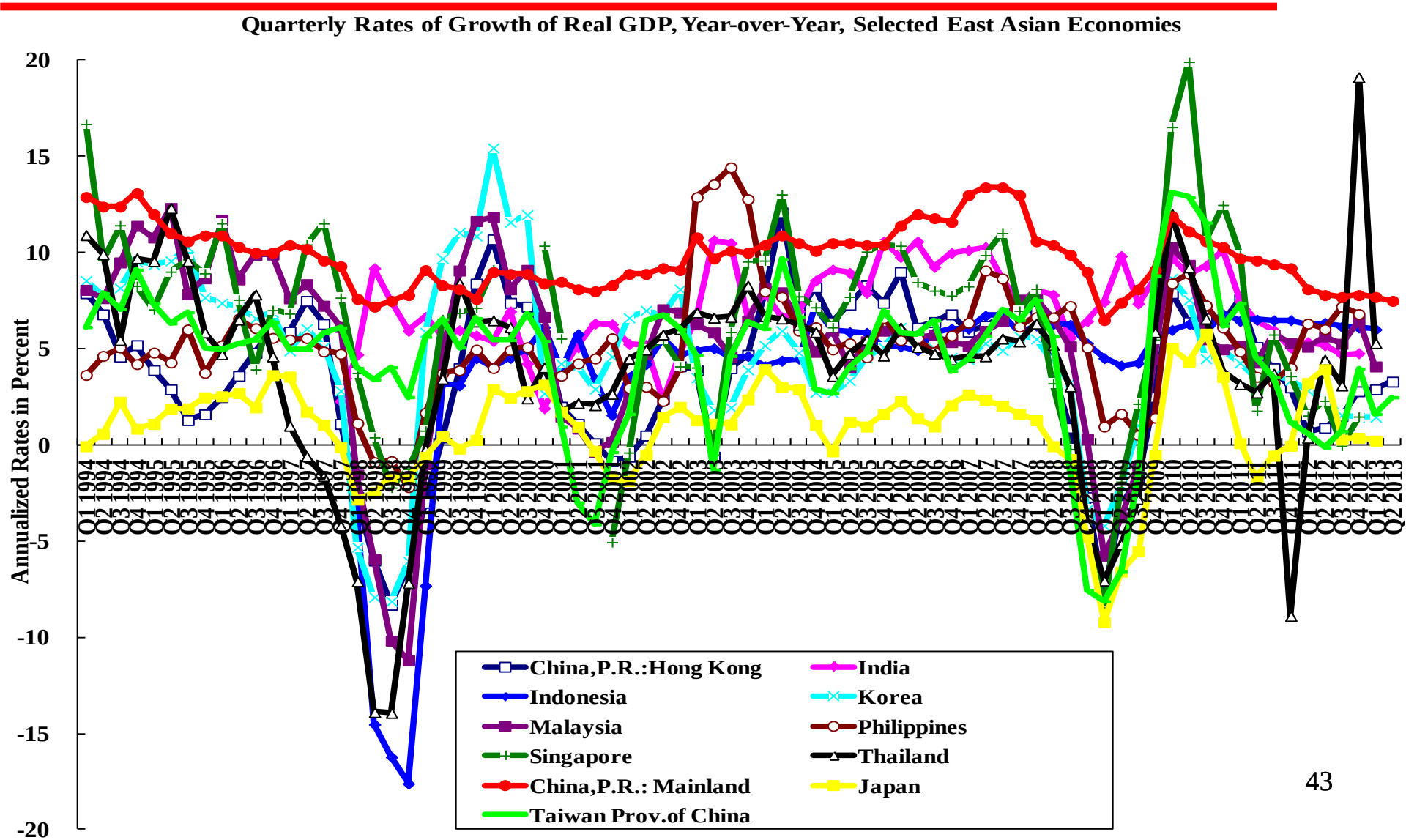
# Quarterly Rates of Growth of Exports of Goods: Selected East Asian Economies



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



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



# The Metaphor of the "Wild Geese Flying Pattern"

- The metaphor of the "wild-geese-flying pattern" of East Asian economic development over time, introduced by Professor Kaname Akamatsu (1962), suggests that industrialisation will spread from economy to economy within East Asia as the initially fast-growing economies, beginning with Japan, run out of surplus labour and face labour shortages, rising real wage rates, appreciating exchange rate of the currency and quota restrictions on exports, and need to relocate some of its production in lower-cost economies. The fastest-growing economy will thus slow down and the lower-cost economy will take over as the fastest-growing economy just as the lead changes from one wild goose to another.

# The Metaphor of the "Wild Geese Flying Pattern"

- Thus, East Asian industrialisation spread from Japan to first Hong Kong in the mid-1950s, and then Taiwan in the late 1950s, and then South Korea and Singapore in the mid-1960s, and then Southeast Asia (Thailand, Malaysia, Indonesia) in the 1970s, and then to Guangdong, Shanghai, Jiangsu and Zhejiang in China as China undertook economic reform and opened to the World beginning in 1978.
- The industrial migration in East Asia has continued with Vietnam, Khmer Republic, Laos and Bangladesh, and also with the provinces, autonomous regions and municipalities in the central and western regions of China as the real wage rate begins to rise in the coastal regions of China and the Renminbi appreciates in value.
- During this industrial migration, the large trading firms such as Mitsubishi, Mitsui, Marubeni and Sumitomo of Japan and Li and Fung of Hong Kong played an important role as financiers, intermediaries and managers of logistics and supply chains.

# The Metaphor of the "Wild Geese Flying Pattern"

- This metaphor applies not only to East Asia but also to China itself. Within China, industrialisation first started in the coastal provinces, regions and municipalities. It has begun to migrate and spread to other provinces, regions and municipalities in the interior—to Chongqing, Henan, Hunan, Jiangxi, Shaanxi and Sichuan—as real wage rates rose on the coast. As the coastal provinces, regions and municipalities slow down in their economic growth, the central and western provinces, regions and municipalities will take their turns as the fastest growing areas in China. China as a whole will be able to maintain a relatively high rate of growth for many years to come.
- The economies of the Chinese coastal regions such as the Pearl River Delta (Guangdong Province) and the Yangzi River Delta (Jiangsu and Zhejiang Provinces and Shanghai Municipality) would have slowed down a long time ago had it not been for the couple of hundreds of million migrant labourers that flocked to these regions from the interior, constantly replenishing the supply of surplus labour there.[46]

# The Economic Fundamentals

- In addition to a high national savings rate, a large pool of surplus labour, rising investment in intangible capital (human capital and R&D capital), and a large economy, the Chinese economy also has the advantage of relative backwardness. The Chinese economy has:
  - The ability to learn from the experiences of successes and failures of other economies;
  - The ability to leap-frog and by-pass stages of development (e.g., the telex machine, the VHS video players, the fixed landline telephones); and
  - The possibility of creation without destruction (e.g., online virtual bookstores like Amazon.com do not have to destroy brick and mortar bookstores which do not exist in China in the first place).

# The Economic Fundamentals

- However, while good economic fundamentals are necessary for a sustained high real rate of growth of an economy, they are by no means sufficient.
- In the thirty years between 1949, the year of the founding of the People's Republic of China, and 1978, the first year of the Chinese economic reform and opening, China also had (1) a high domestic savings rate; (2) an unlimited supply of labour; and (3) a large domestic economy. But the Chinese economy did not experience a sustained high real rate of growth during that period.
- Similarly, the former Soviet Union also had a high rate of tangible capital accumulation as well as a large domestic economy, but did not experience a sustained high real rate of economic growth either.

# Inherent Economic Inefficiency under Central Planning

- We now turn to look at the initial conditions faced by the Chinese economy at the beginning of its economic reform and opening in 1978.
- From 1952, when China adopted its First Five-Year Plan, to the end of the last Century, the Chinese economy operated under a series of mandatory central plans. On the eve of Chinese economic reform in 1978, China was still a centrally planned economy.

# Inherent Economic Inefficiency under Central Planning

- A principal characteristic of a centrally planned economy is the administrative allocation of resources. What goods and services to produce? How much to produce? Where to produce them? What raw materials and parts should be used to produce them? From which enterprises should the raw materials and parts be bought? To which enterprises should the output be sold? All of these decisions are made by the central planners and embodied in the mandatory central plan. Enterprises do not have any autonomy in these decisions.
- The prices of goods and services are also completely determined in the central plan. They do not necessarily reflect relative scarcities in the economy, and do not play any role in the equilibration of market supply and demand. The prices are only used for accounting purposes.

# Inherent Economic Inefficiency under Central Planning

- There is inherent economic inefficiency in a centrally planned economy.
- Why does inefficiency always exist in a centrally planned economy? We begin by defining what economists mean by efficiency.
- A production allocation (or plan) for an economy is said to be efficient if for given aggregate quantities of inputs (the tangible capital stock and labour), no output of any good or service can be increased without decreasing the output of another good or service. In other words, the economy is operating on the frontier of its set of production possibilities.

# Inherent Economic Inefficiency under Central Planning

- A centrally planned economy always operates in the interior of its set of production possibilities. Thus, output can be increased by simply moving to the frontier of the set of production possibilities without decreasing any other output, The existence of inefficiency therefore also implies the existence of surplus potential output.
- In order to understand why there always exists inefficiency and hence surplus potential output in a centrally planned economy, we consider the following simple example drawn from agriculture.

# Inherent Economic Inefficiency under Central Planning

- There are two farm households, A and B. Each has a hectare of land. Both cotton and rice are needed. The central planner's problem is to decide—who should grow cotton and who should grow rice, as well as how much of each crop to grow.
- First of all, there may be a problem of insufficient or incorrect information. The central planner may not know which plot is more suitable for growing cotton and which plot is more suitable for growing rice. Moreover, the central planner may not know whether Farmer A can grow cotton better than Farmer B or vice versa. If the central planner makes any mistake in the assignment of production responsibilities, a simple exchange between the two farmers can increase total output without having to increase any input.

# Inherent Economic Inefficiency under Central Planning

- Second, there is the problem of a lack of incentive on the part of the farmers to exceed the assigned production targets even if they can in principle do so. To the farmer, if he or she manages to produce an output that exceeds the assigned production target, not only would his or her income not increase, so that the extra efforts would have been in vain, but also the assigned production target for the following year might be raised, making it more difficult for the framer to fulfill his or her obligation. (This is sometimes referred to as the "ratchet" effect.) Thus, under a centrally planned system, the optimal strategy for the farmer is to try to produce the assigned target output, and not try to exceed it.

# Inherent Economic Inefficiency under Central Planning

- However, if there is a way to provide the necessary incentives to the farmers, then without increasing the aggregate inputs assigned under the central plan, aggregate output can also be increased. For example, the farmers can be given the autonomy to grow anything on their plots once they have fulfilled their obligations under the central plan, and to retain the resulting profits and to bear the resulting losses, if any.
- We therefore conclude that under central planning, there always exists inefficiency and hence surplus potential output.

# Inherent Economic Inefficiency under Central Planning

- On the eve of the beginning of economic reform and opening in 1978, the Chinese economy still operated under a mandatory central plan, and therefore had significant surplus potential output.
- The countries of the former Soviet Union and Eastern Europe were all centrally planned economies and thus also had similarly significant surplus potential output.
- If the surplus potential output can be fully exploited and realised, the real rates of growth of these economies can be very high, even without any significant growth in the aggregate inputs, at least in the initial period.

# The Significance of Economic Reform and Opening

- As mentioned above, the Chinese economy had abundant but under-utilised productive capacity on the eve of its economic reform and opening in 1978. Beginning in 1978, the Chinese Government implemented a series of measures to allow the productive potential to be fully realised, such as the "responsibility system" in the rural areas, the introduction of "conditional" enterprise autonomy (conditional on the prior fulfillment of the obligations under the central plan) in the urban areas, and free markets.

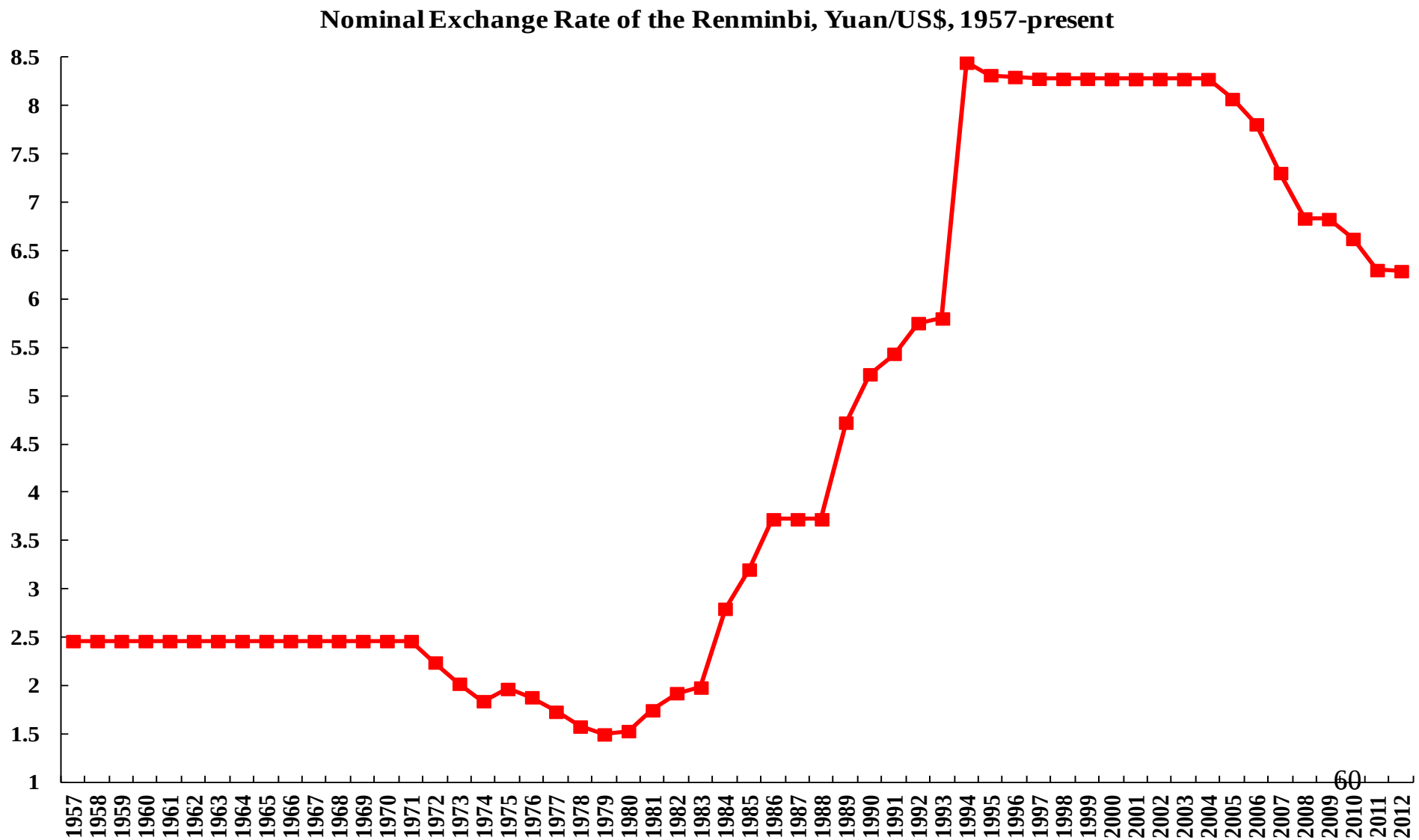
# The Significance of Economic Reform and Opening

- Through the open-door policy, China imported capital goods as well as advanced technology and further enhanced its domestic production capacity. It also introduced the concept of "Processing and Assembly" trade to create employment opportunities for the surplus labour in China, under the conditions that such activities would not disrupt the implementation of the central plan whatsoever.
- For example, the initial manufacturing enterprises set up by foreign investors are restricted to the four Special Economic Zones of Hainan, Shantou, Shenzhen and Zhuhai. Moreover, these foreign-invested enterprises must import all of its inputs, including equipment, and export all of its outputs. They will only be allowed to employ labour in China, which is in surplus supply. Thus, these foreign-invested enterprises would not affect the existing central plan at all because they would not create any demand for domestic goods and services nor would they create any additional supply for the domestic market.
- Exporting is critical in this phase of Chinese economic reform and opening, because otherwise there is no demand for the additional output produced.

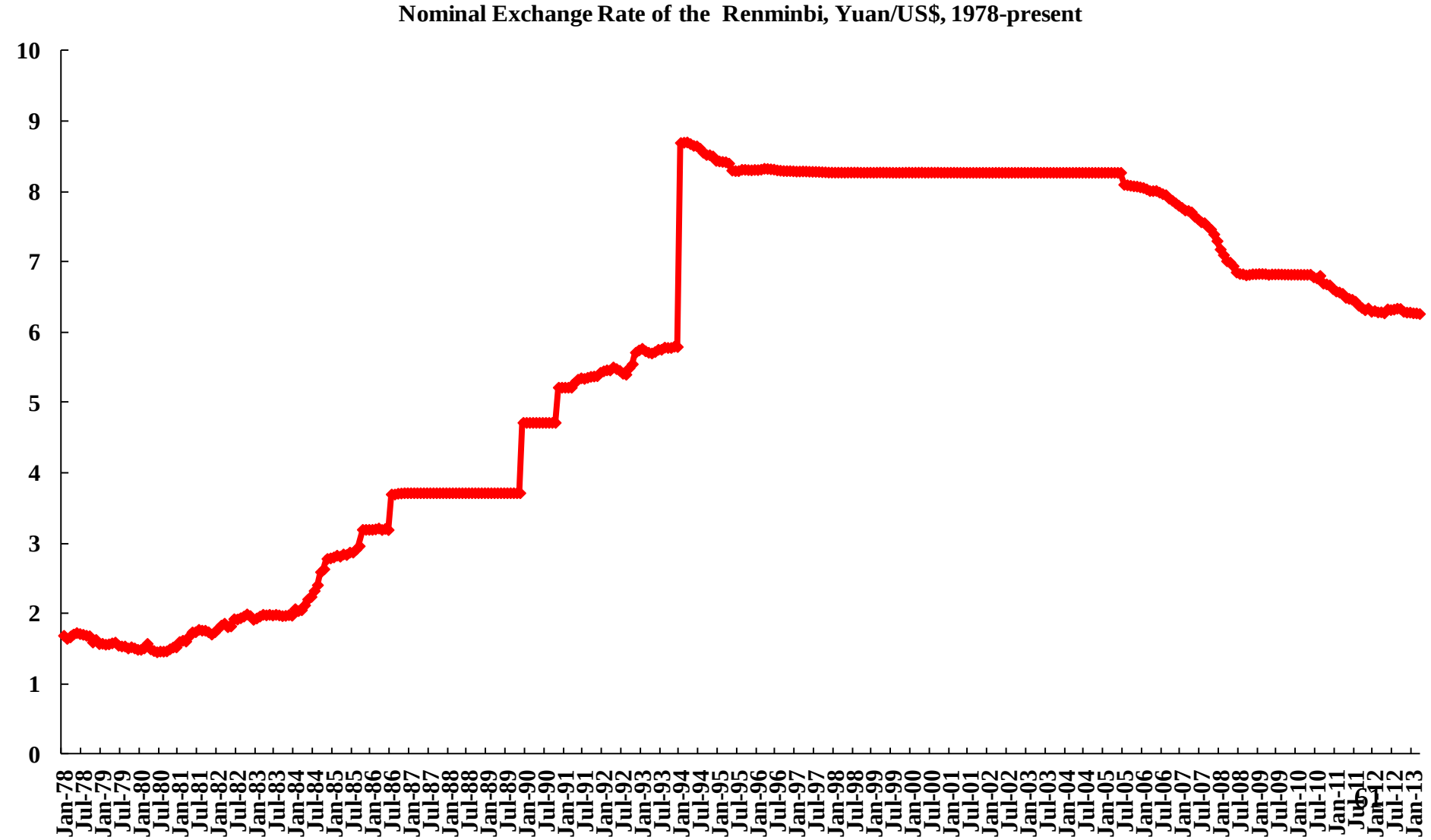
# The Significance of Economic Reform and Opening

- In order to maximise the benefits of the policy of economic reform and opening, the Chinese Government devalued the Renminbi significantly, to a more reasonable and sustainable level, so as to enable exports, and also implemented full current accounts convertibility in 1994.
- The opening of the Chinese economy to the rest of the World also enhanced the ability and willingness of Chinese enterprises to compete with foreign enterprises in the World market.

# Nominal Exchange Rate of the Renminbi, Yuan/US$, 1957-present



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



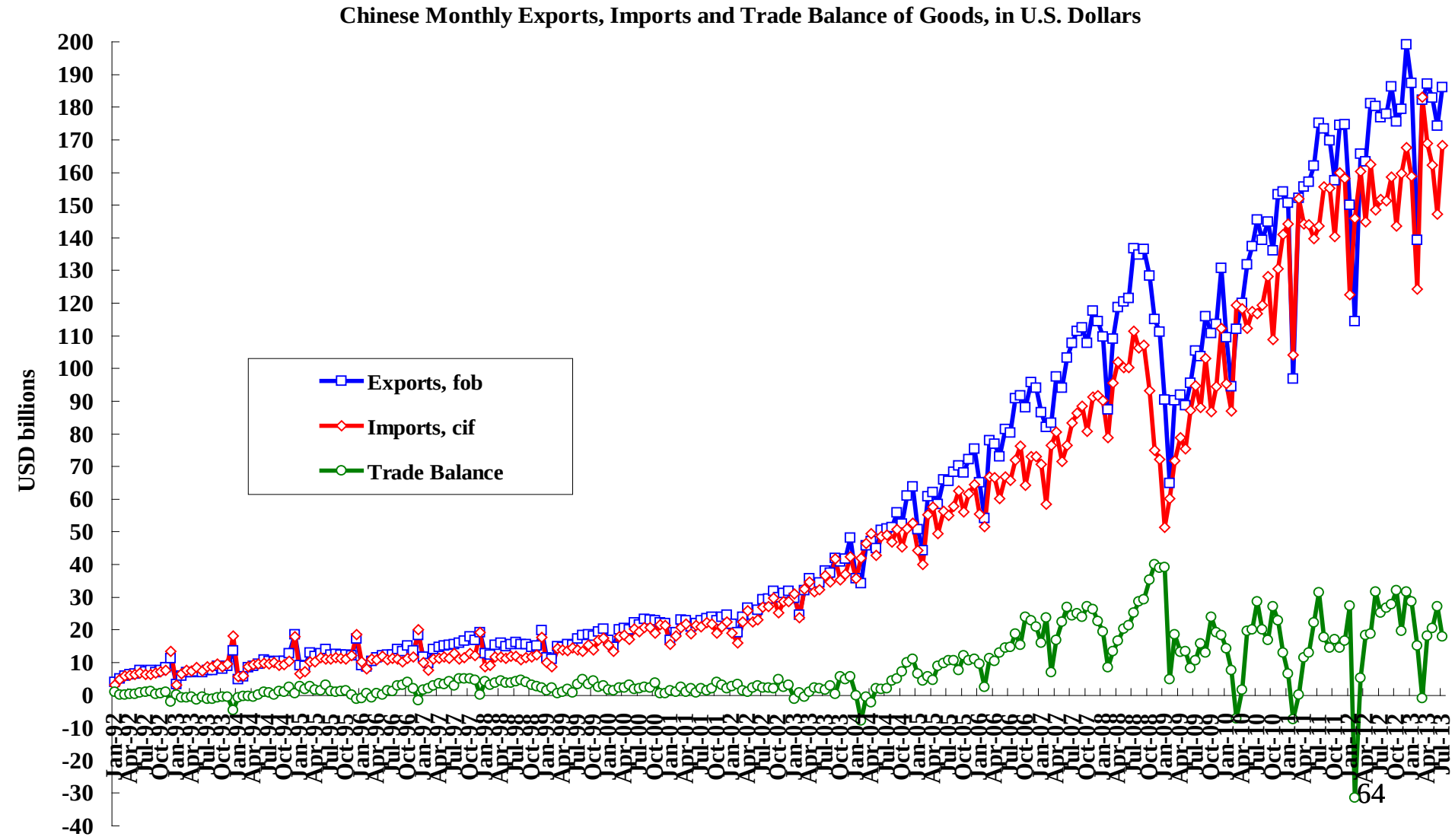
# The Significance of Economic Reform and Opening

- Exports provided the initial increase in aggregate demand that is needed to make full use of the latent unused productive potential of the Chinese economy, without disrupting the domestic economy itself.
- The Chinese policy of economic reform and opening provided enterprises and households not only the opportunity but also the desire and incentive to increase production, to invest and to innovate.

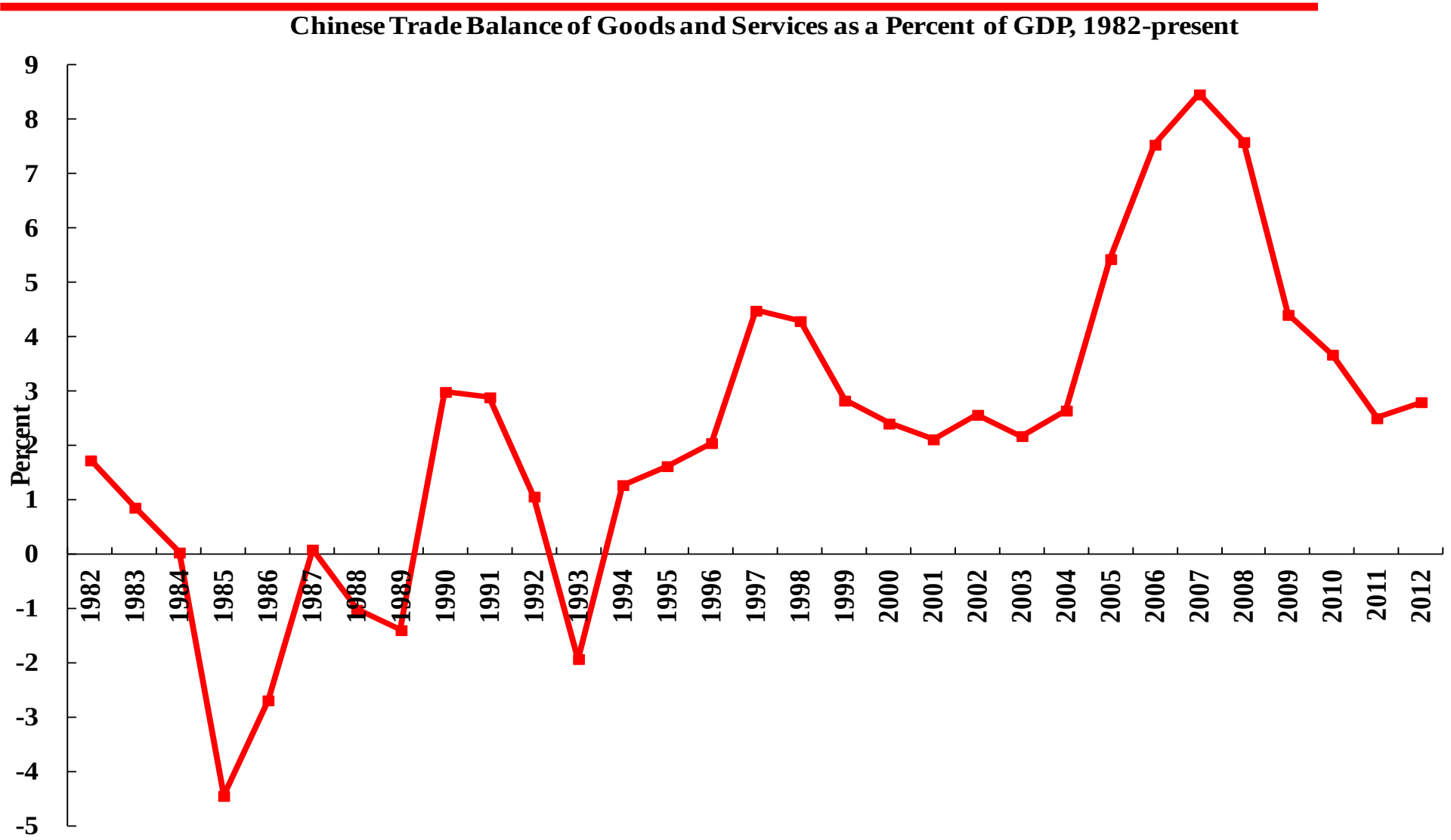
# The Role of International Trade

- There is a common mis-impression that the Chinese economy is highly dependent on exports, and in particular, on its export surpluses, as a source of growth.
- It is true that "processing and assembly" exports enabled the success of the initial economic reform by providing the increase in aggregate demand while simultaneously insulating the domestic planned economy from the World economy.
- However, the facts are that China only began to have a significant trade surplus vis-a-vis the World in 2005, whereas the Chinese economy has been growing at an average real rate of almost 10 percent per annum since 1978.
- It should therefore be clear that the trade surpluses could not have been an important source of growth for the Chinese economy during the past three decades. Chinese economic growth does not depend on the Chinese trade surpluses.

# Chinese Monthly Exports, Imports and Trade Balance, US$



# Chinese Trade Balance of Goods & Services as a Percent of GDP, 1982-



# The Role of International Trade

- In fact, Chinese economic growth has not been export-led for quite some time now.
- First, since 2009, China no longer has a large trade surplus relative to its GDP.
- Second, Chinese exports have a low domestic-value-added content, estimated to be approximately 30 percent.
- Third, export-oriented labour-intensive light manufacturing has been relocating from China to other economies such as Bangladesh, Cambodia, Indonesia, Vietnam and even Myanmar where the wage rates are lower.
- It is a goal in the Twelfth Five-Year (2011-2015) Plan for China to achieve balanced international trade.
- Going forward, the gross value of exports may decline (they have already been declining in Renminbi terms) even as the domestic value-added content rises.

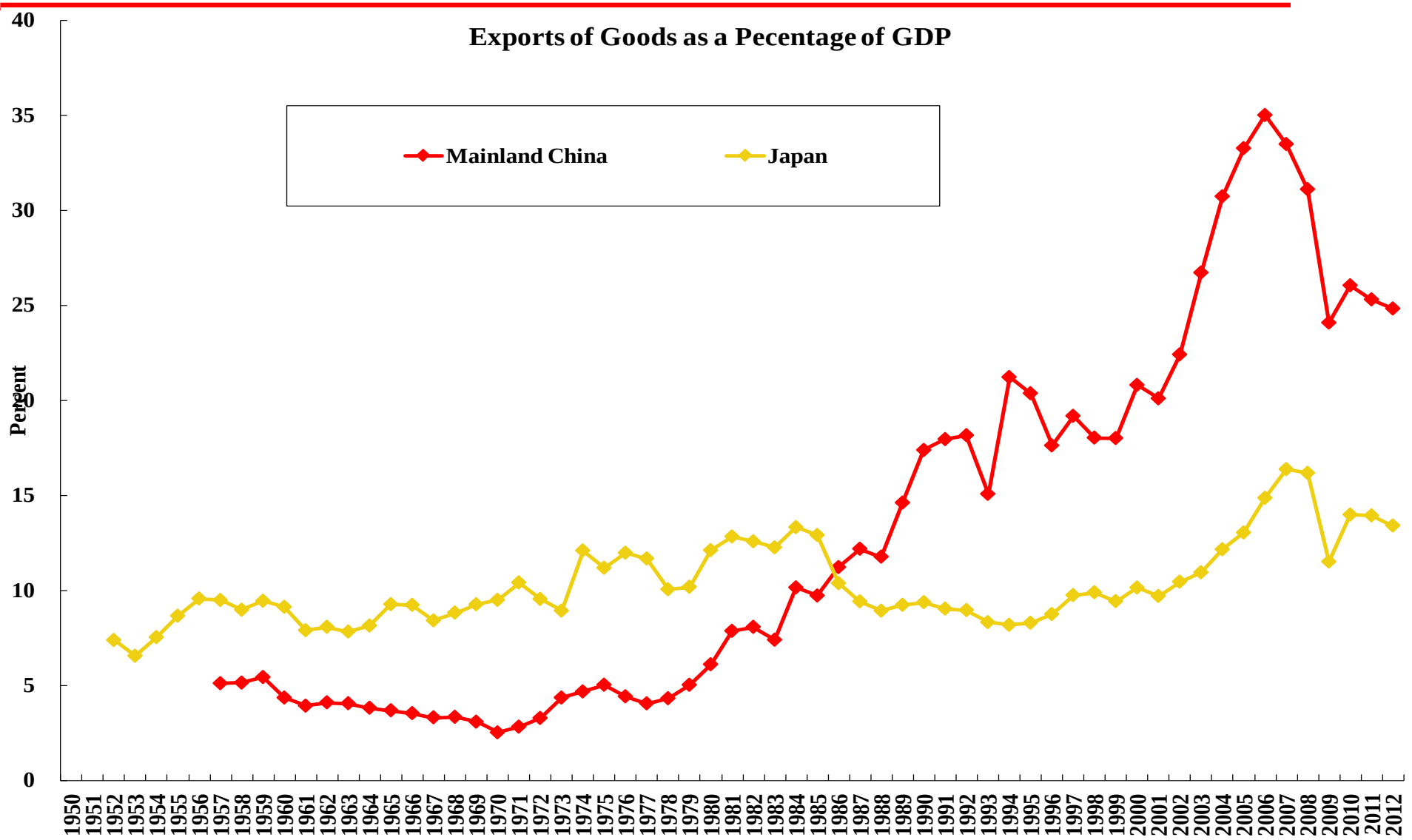
# The Role of International Trade

- An important implication of the relatively low export dependence of Chinese GDP is that the rate of growth of Chinese real GDP is relatively stable, unlike the other East Asian economies, even as Chinese exports and imports fluctuate as widely as the exports and imports of other East Asian economies. (See the previous charts on the rates of growth of exports, imports and real GDP of East Asian economies).

# The Role of International Trade

- Chinese exports as a ratio of GDP rose steadily beginning in 1978 and reached a peak of almost 40 percent in 2006 and then began to decline to approximately 25 percent in 2009, where it continues to stand today.
- While this ratio appears large, it is not when compared to those of Hong Kong, Singapore, South Korea and Taiwan, where exports are sometimes more than one hundred percent of the respective GDPs.
- The Chinese Exports/GDP ratio actually exaggerates the importance of exports in the Chinese economy because it fails to take into account the low average domestic value-added content of Chinese exports.

# Exports of Goods as a Percent of GDP: Mainland China and Japan



# The Role of International Trade

- In any case, it is unlikely that Chinese exports can resume its rapid growth any time soon with the U.S. and European economies in recession. This is a principal reason why China must shift from a policy of promotion of exports to a policy of promotion of internal demand, which is the only way to ensure sustained and sustainable economic growth in China. Such a policy shift has been incorporated in the Twelfth Five-Year Plan.
- It is a goal of the Twelfth Five-Year Plan for China to achieve essentially balanced international trade with the rest of the World by the end of the Plan period in 2015.

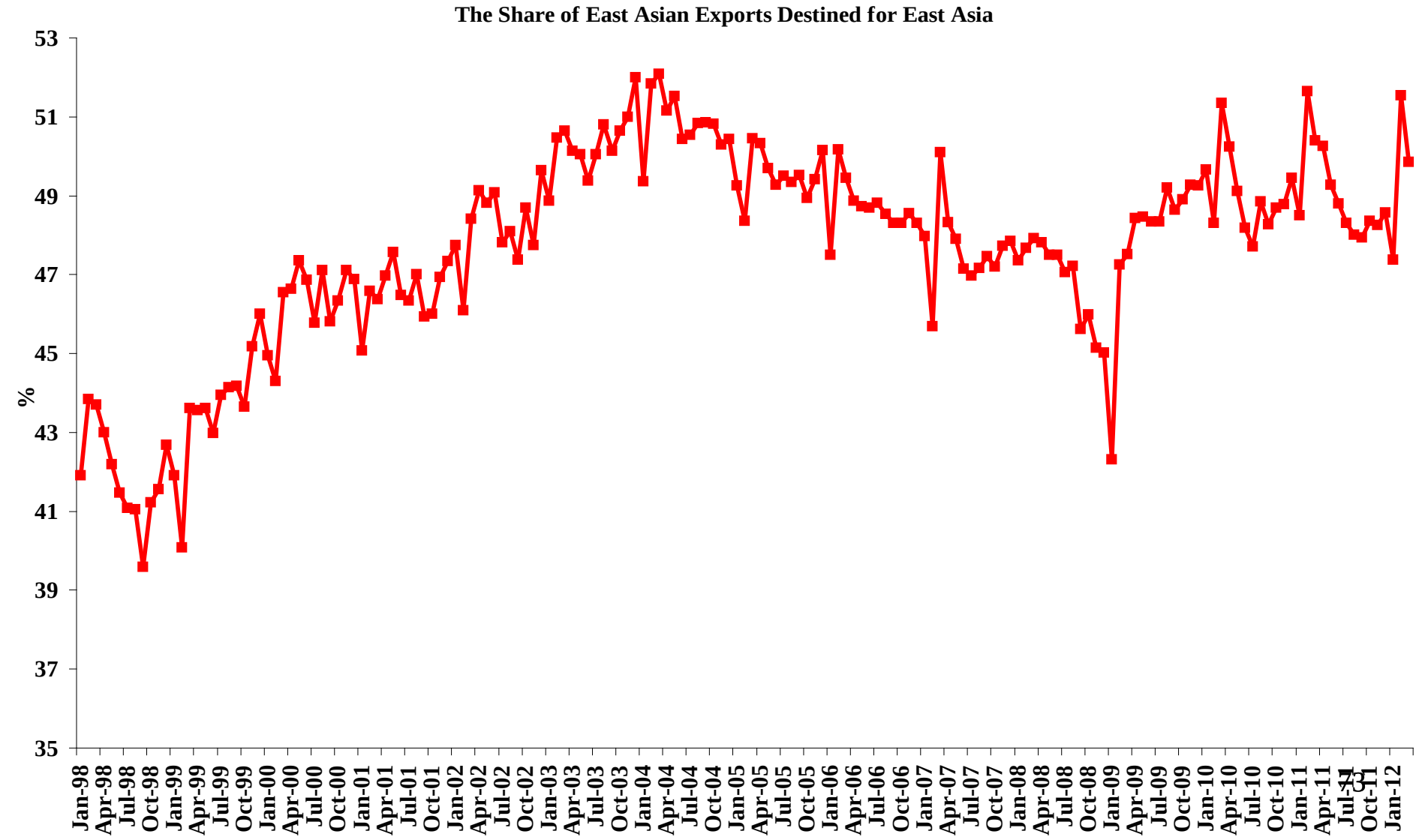
# The Partial De-Coupling Hypothesis

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

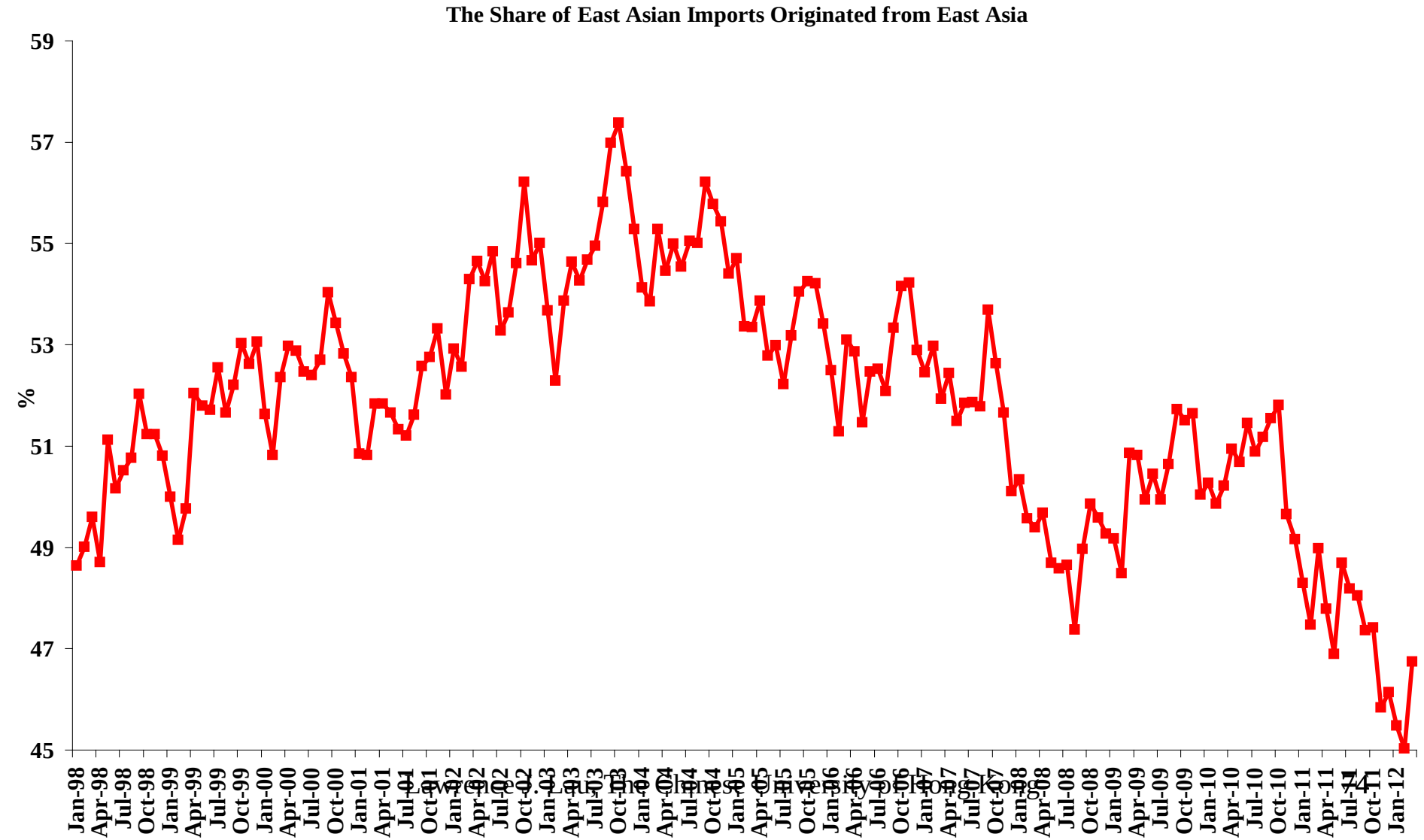
# The Partial De-Coupling Hypothesis

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

# The Share of East Asian Exports Destined for East Asia



# The Share of East Asian Imports Originated from East Asia



# The Partial De-Coupling Hypothesis

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

# Daring Experimentations and Implementations

- The Chinese economic reform and opening to the World in 1978 were characterised by many daring experimentations and spontaneous implementations.
- There was an explicit recognition that China was still at the primary stage of socialism, that is, it still had to go through the capitalist stage in order for the forces of production to expand and grow. Thus, private enterprise was allowed.
- It was also accepted that some people would get rich first before the others.
- The household responsibility system was introduced in the agricultural sector in one locality and was then spontaneously adopted nation-wide.

# Daring Experimentations and Implementations

- Free markets were introduced so that as long as the responsibilities had been fulfilled, any additional output produced could be sold on the free markets with the profits kept and losses borne by the household.
- The commune, which was no longer responsible for agricultural production, began to transform itself into a township and village enterprise, taking advantage of the newly introduced free markets.
- A system of conditional autonomy was also introduced for enterprises in the industrial sector, so that if their responsibilities under the mandatory central plan had been fulfilled they could sell any additional outputs on the free markets and retain any profits (losses).

# Daring Experimentations and Implementations

- China opened its economy to foreign trade and investment and established four Special Economic Zones (Hainan, Shantou, Shenzhen and Xiamen).
- China also adopted the one-child policy for all of China, exempting only the ethnic minorities.
- China permitted Chinese scholars and students to visit, study, and train abroad. This was a bold move because the Soviet Union never sent its scholars and students abroad even though it was also relative backward when the Soviet Union was first established in 1917.
- In the 1990s, in the process of restructuring of the industrial sector, tens of millions of workers in the state-owned factories were laid off (xiagang).

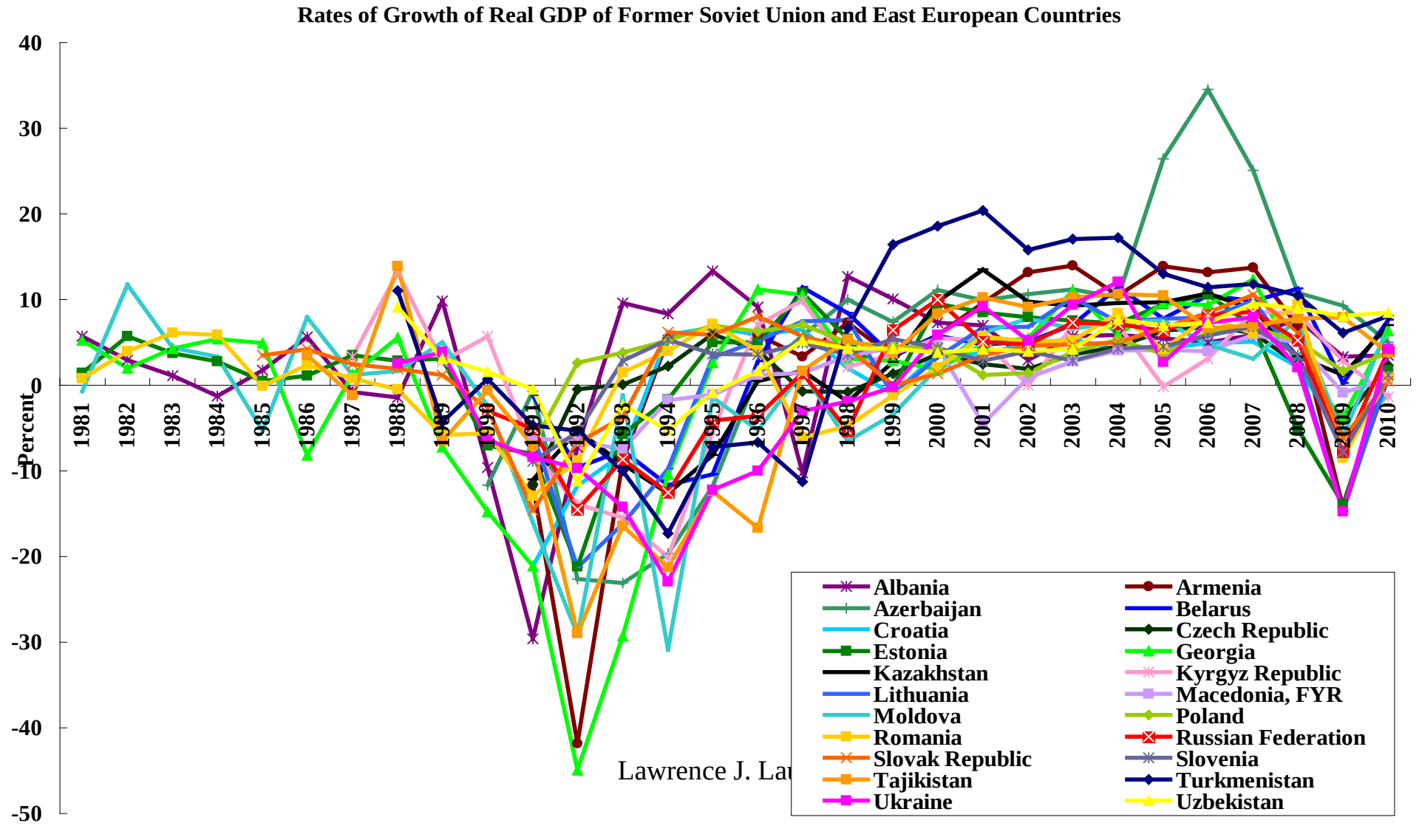
# Reform without Losers

- We next consider why the transition of the China from a centrally planned economy to a market economy succeeded whereas the transition of the former Soviet Union and European countries failed miserably. Even though both China prior to its economic reform and the former Soviet Union and Eastern European socialist economies had surplus potential output, the former Soviet Union and Eastern European countries were unable to exploit this advantage effectively.
- In the former Soviet Union and the Eastern European countries, the method used for the transition was "shock therapy" or "big bang"—that is, the immediate and full abolition of the mandatory central plan, relying only on the operations of the markets (which were still new and primitive).
- The resulting outcomes are far from satisfactory. Most of these countries experienced negative real rates of growth for approximately a full decade and suffered from extremely high rates of domestic inflation.

# Reform without Losers

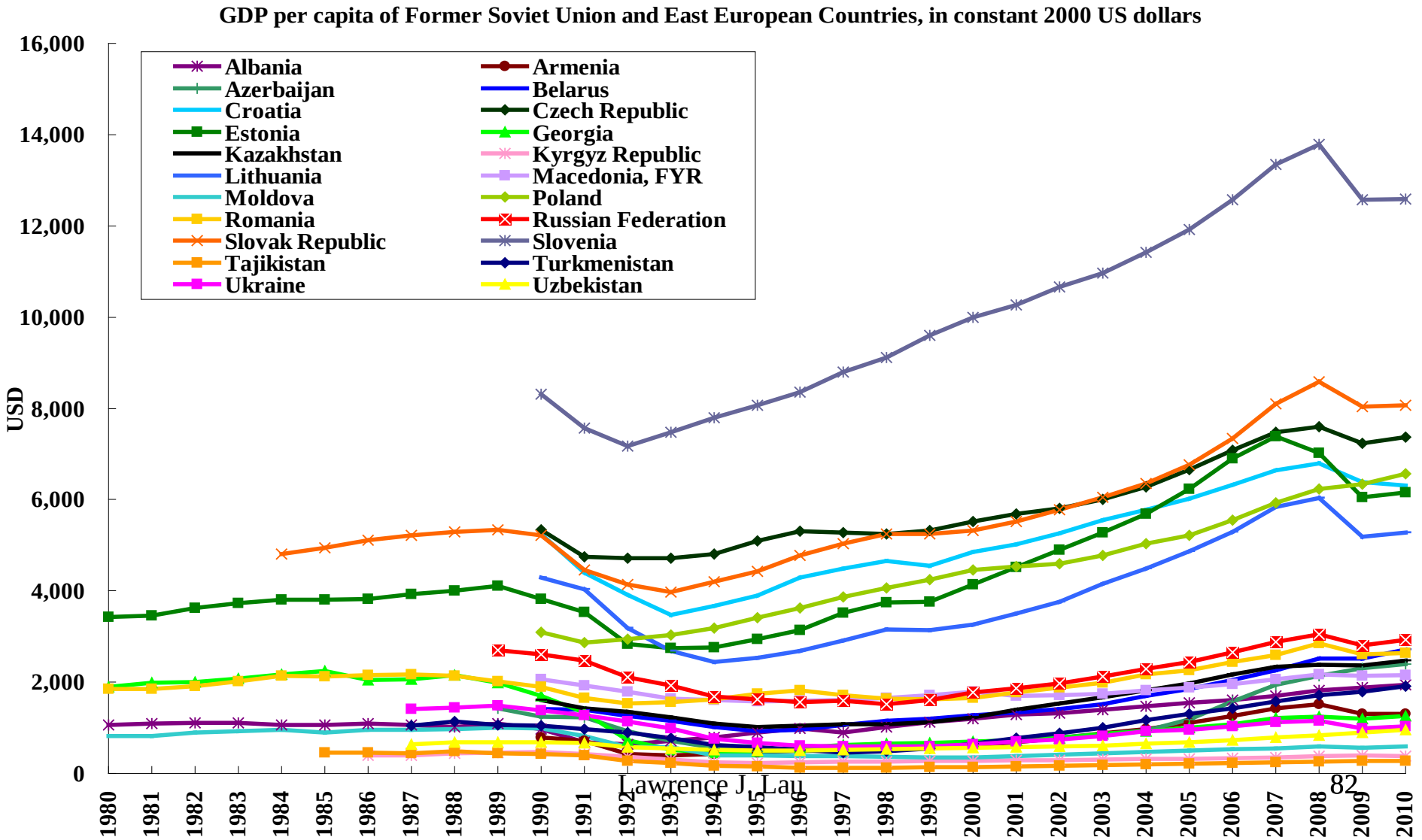
- Real GDPs per capita in these formerly centrally planned economies took even longer to recover to the 1989 levels. For example, real GDP per capita of Russia did not recover to its 1989 level until 2007.
- Thus, even though there might have been economic inefficiency and hence surplus potential output, it alone could not assure rapid economic growth and successful economic reform.

# Rates of Growth of Real GDP of Former Soviet Union and East European Countries

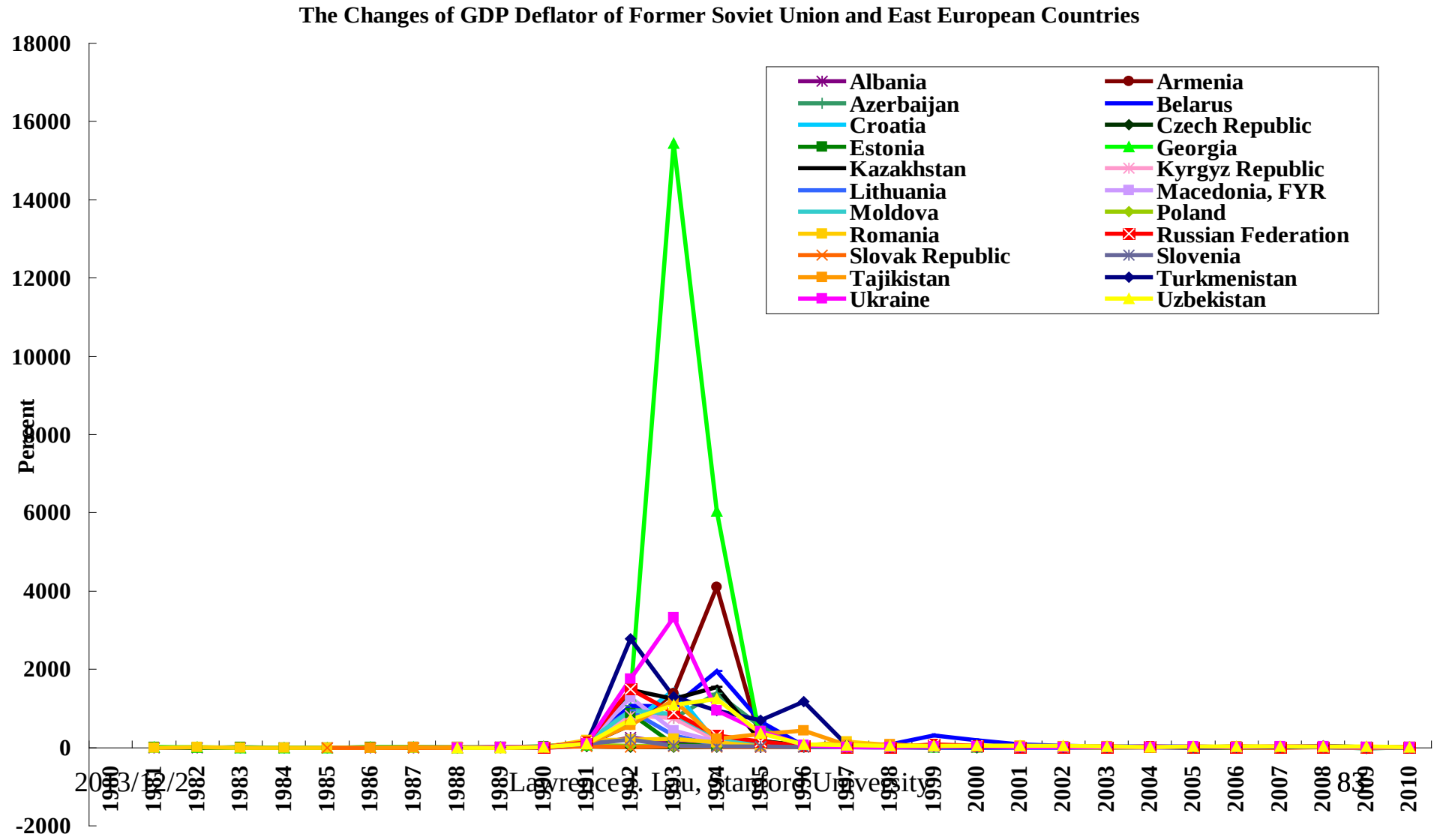



Lawrence J. Lau

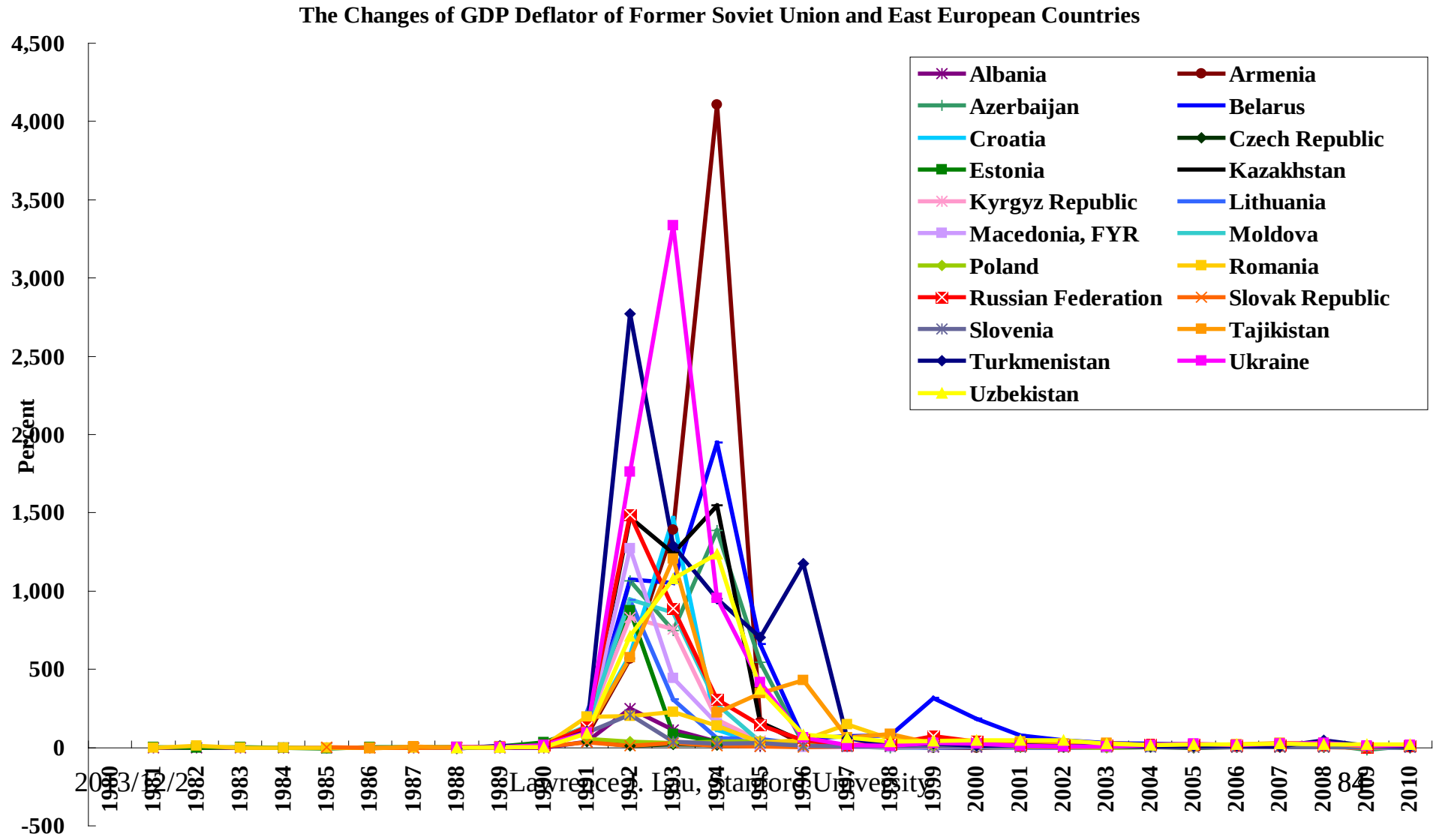
# GDP per Capita of Former Soviet Union and East European Countries, in 2000 US$



# The Rates of Inflation of Former Soviet Union and East European Countries



# The Rates of Inflation of Former Soviet Union and East European Countries, ex Georgia



# Reform without Losers

- So far, we have identified two factors that contributed to Chinese economic success, surplus production potential and opening to the World. But these are factors that were also common to other developing and transition economies. There is, however, one factor that is unique to the Chinese experience, and it is the explicit avoidance of the creation of losers in the process of economic reform.
- Most economic reforms create both winners and losers. While it is true that in the aggregate, the gains from economic reform should outweigh the losses. The question is whether it is possible to redistribute the gains so that no one is worse off. In economic parlance, we ask whether there is a path of reform that is Pareto-optimal, with no one being made worse off, or better still, Pareto-improving, that is, with everyone being made better off.

# Reform without Losers

- The idea that existing people and new people should be treated differently (新人新办法, 旧人旧办法) is the unique Chinese contribution to the strategy of economic reform. It embodies the idea of "grandfathering"—whatever rights and privileges (and obligations) a person had before the economic reform, he or she would have the option of retaining the same.
- The two-tiered wage structure used in some enterprises in Western market economies, for example, in the airline industry, also represents an attempt to implement a similar philosophy.
- It is obvious that such a strategy of economic reform helps to minimize opposition and preserve social stability and

# Reform without Losers

- Moreover, such a strategy can often not only achieve Pareto improvement (that is, with everyone better off than before) but also full economic efficiency.
- "Reform without Losers" means win-win for all. A win-win strategy for economic reform has the best chance of success. Efforts must therefore be made to identify feasible win-win economic reform strategies.
- The Chinese Government did not adopt the "shock therapy" or the "big bang" approach to implement its economic reform. Instead, it opted for the "dual track" approach—in introducing enterprise autonomy and free markets, it also continued to enforce the existing mandatory central plan.

# The Dual-Track Approach Adopted in the Chinese Transition

- The “Plan Track”--the pre-existing mandatory central plan remains and its rights and obligations continue to be enforced by the government.
- The “Market Track”--all markets are instantaneously open, with prices determined by market supply and demand.
- As long as their obligations under the plan have been fulfilled, producers (communes, townships, enterprises, households and individuals) are given the autonomy and incentive to plan their production on the margin and participate in the free markets, which are open to them, and are responsible for any profits and losses resulting from their market activities outside the mandatory central plan.
- Individuals are also completely free to plan their consumption and participate in the markets, given their allocated consumption goods and fulfillment of their labour obligations.

# The Dual-Track Approach Adopted in the Chinese Transition

- Profits and losses (taxes and subsidies) of enterprises under the central plan remain the same before and after the initiation of the “dual-track” approach.
- Differences between plan and market prices of plan-assigned inputs constitute feasible lumpsum transfers among enterprises.
- Continued planned consumer goods deliveries enable the maintenance of the pre-reform standard of living for households as a floor.

# The Political Economy of the Dual-Track Approach

- No one is worse off, because everyone—a commune, a township, an enterprise, a household and an individual--has the option of staying with the pre-reform arrangements, with identical rights and obligations. Thus, there are no losers.
- The “Vested Interests” are “Grandfathered.”
- The enterprises are granted autonomy and provided incentives on the margin through the free markets.

# Reform without Losers

- The Chinese economic reform did not lead to economic chaos or contraction as in the former Soviet Union and Eastern European countries. The Chinese economy was able to continue to grow rapidly in the midst of its transition from a centrally planned to a market economy.
- Ultimately, in the late 1990s, the centrally planned part of the Chinese economy, which had been contracting relative to the market part of the economy, became sufficiently insignificant so that the mandatory features of the central plan could be gradually phased out.

# Reform without Losers

- The feasibility of the dual-track approach depended critically on the continued enforcement of the rights and obligations under the existing mandatory central plan, which in turn depended on whether the central government had sufficient authority, credibility and power to do so.
- Credibility of state enforcement, and expectations thereof, affect the behaviour of enterprises and households, and hence their degree of compliance with the mandatory central plan (post reform).

# Reform without Losers

- The Chinese Government, in the implementation of its economic reform, tried to minimise as much as possible the creation of losers, and the impact of the economic reform on the existing economic system and vested interests. At the same time, it also tried to create new value, create new winners.
- Examples of measures include the introduction of the "responsibility system," the township and village enterprises, the special economic zones, the processing and assembly export activities, the reforms of the foreign exchange system and the national taxation system.

# Reform without Losers

- More recently, the costs of Chinese economic growth that are not reflected in the market have begun to rise. For example, environmental degradation of air, water and earth has become common place. For another example, the provision of public goods and services such as education and health care has become very uneven and unequal across income groups and regions. Some people have become the "losers".

# Concluding Remarks

- The highly successful experience of Chinese economic growth over the past 35 years (as well as those of other East Asian economies) strongly reaffirm the fundamental importance of having and maintaining a high national savings rate and surplus labour.
- In addition, the size of the domestic economy is a favourable factor not only for Chinese economic growth but also for its long-term sustainability.
- However, these favourable factors alone were not sufficient, as the Chinese economy did not experience sustained economic growth between 1949 and 1978.

# Concluding Remarks

- Economic reform and opening allowed the realisation of the huge surplus potential output, helped to enhance and assure the efficiency of the Chinese economy, and facilitated technology transfer from abroad.
- It is the unique achievement of China that in its transition from a centrally planned economy to a market economy, it was able to use a strategy of reform without losers--making sure that no one would be worse off. Such a strategy of reform without losers maximised support, minimised opposition and promoted social harmony and stability. It led to win-win for all. As a result, the transition was smooth, stable and successful.

# Concluding Remarks

- The Chinese Government was willing to experiment with many different policies and strategies. If they proved successful, they would be extended to the entire country. This approach was described as “Crossing the river by feeling the pebbles”.
- Further economic reform from this point onwards may have reached the deep-water zone.

# Concluding Remarks

- Going forward, further economic reform is not going to be easy. It will require sustained determination. It will also require a long time for full implementation and for the beneficial effects to be felt. However, it must be re-started at some point. And the reform should strive to be win-win if possible.
- Reform without losers—In order to minimise opposition to these reform measures, it is best to grandfather existing vested interests insofar as possible—that is, new ways should be applied only to new people; old people should continue to be treated in the old way (新人新办法, 旧人旧办法).
- The visible hand (of the government) and the invisible hand (of the market) must work hand-in-hand to bring about an efficient, rational and equitable economy.

# Concluding Remarks

- On the basis of its strong economic fundamentals, and the fact that Chinese investment in intangible capital will be increasing rapidly in the future, the Chinese economy will be able to continue to grow at an average annual rate of at least 7% for the next couple of decades, more or less independently of what happens in the rest of the World.
- Technical progress should gradually become an important source of growth for the Chinese economy, as it did for some of the other East Asian economies.

# Concluding Remarks

- Exports as a share of Chinese GDP will probably continue to decline over time, as befitting a large, continental economy. Chinese international trade will become approximately balanced with the rest of the World.
- Chinese economic growth will be marginally, but not critically, affected by a large decline in its exports, as demonstrated by its experience in the past several years as well as during the 1997-1998 East Asian currency crisis. Thus, it will be able to survive even prolonged economic recessions in the European and U.S. economies.

# Concluding Remarks

- China will develop into a largely internal-demand driven economy like the United States. International trade and international investment will not have a decisive impact on the Chinese economy.
- However, China may well become a net overseas direct as well as portfolio investor over the next decade.