The Chinese Economy: A Macroeconomic View

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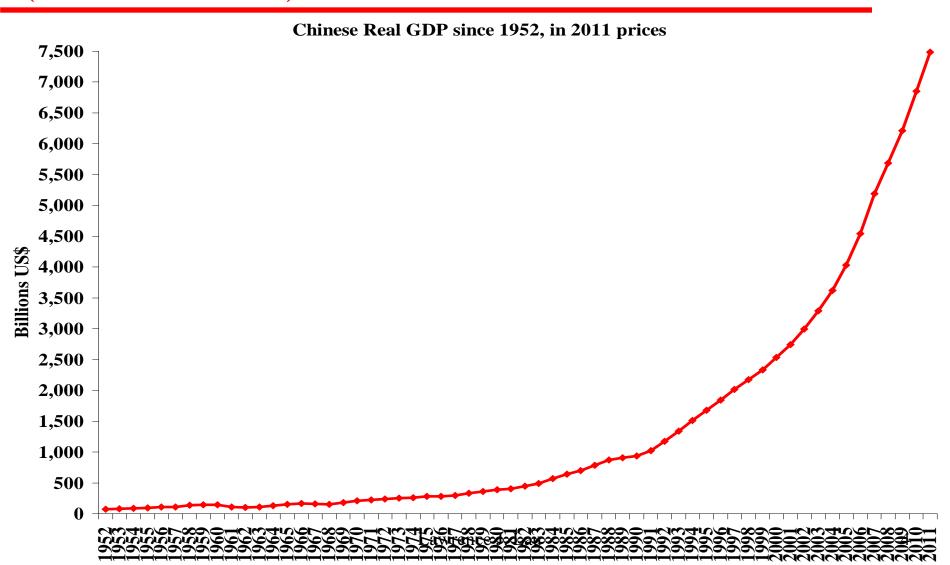
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- **♦** The Macroeconomic Outlook
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- ◆ The Sources of Sustainable Aggregate Demand
- Projections of the Future
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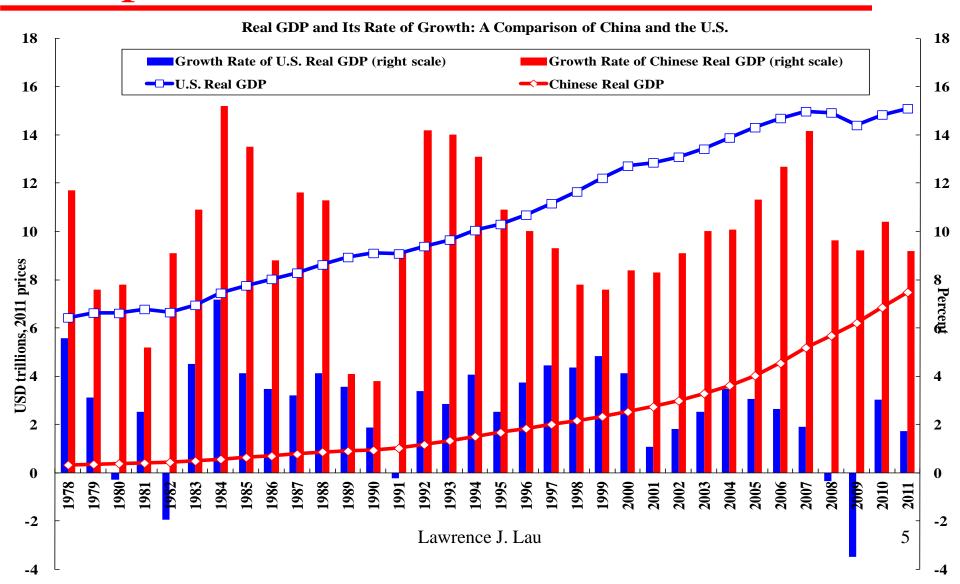
Introduction

- ◆ China has made tremendous progress in its economic development since it began its economic reform and opened to the World in 1978. China is currently the fastest growing economy in the World—averaging 9.8% per annum over the past 33 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 2011, Chinese real GDP grew almost 22 times, from US\$333 billion to nearly US\$7.5 trillion (2011 prices) to become the second largest economy in the World, after the U.S.
- ◆ By comparison, the U.S. GDP (approx. US\$15.1 trillion) was 2 times Chinese GDP in 2011.

Chinese Real GDP in US\$ Since 1952 (2011 Prices)



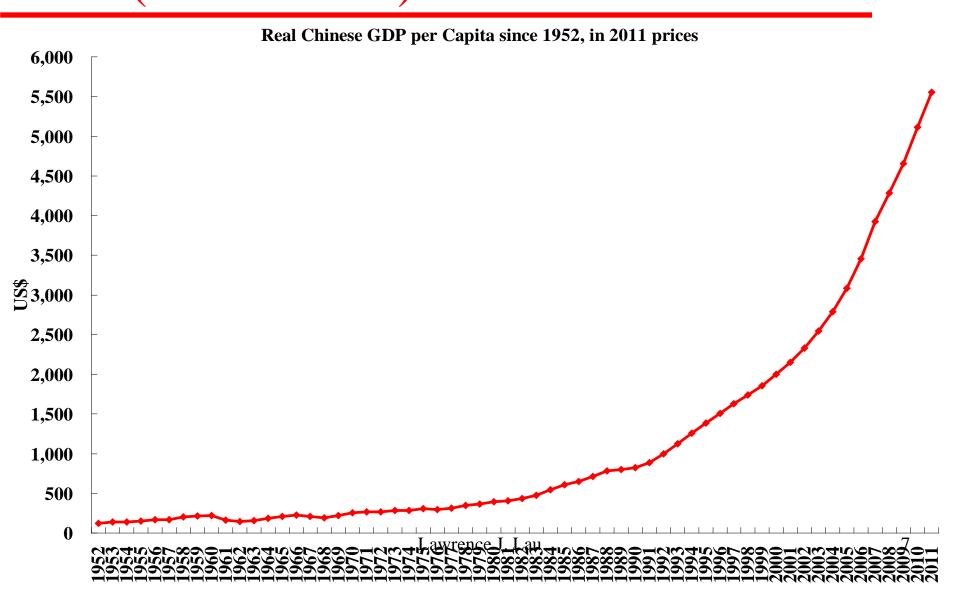
Real GDP and Its Rate of Growth: A Comparison of China and the U.S. (2011\$)



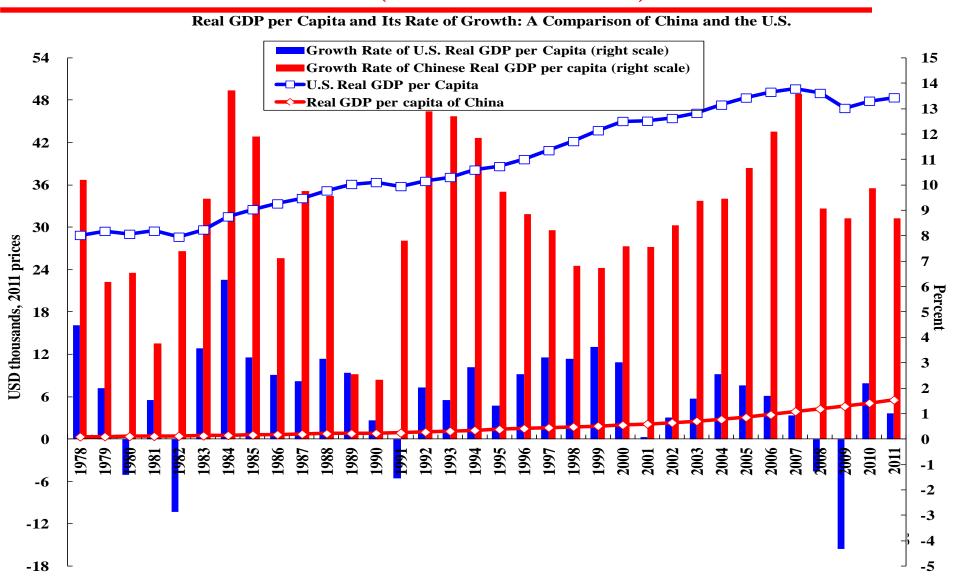
Introduction

- ◆ Despite its rapid growth, in terms of its real GDP per capita, China is still a developing economy.
- ◆ Between 1978 and 2011, Chinese real GDP per capita grew 15 times, from US\$346 to US\$5,555 (in 2011 prices). By comparison, the U.S. GDP per capita of approximately US\$48,236, was 8.7 times Chinese GDP per capita in 2011.

Real Chinese GDP per Capita in US\$ Since 1952 (2011 Prices)



Real Chinese and U.S. GDP per Capita in US\$ Since 1952 (2011 Prices)



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 benefited 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 GDP, 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.

Key Performance Indicators Before and

After Chinese Economic Reform			
	Growth Rates percent per annum		
	Period I	Period II	
	1952-1978	1978-2011	
Real GDP	6.15	9.89	
Real GDP per Capita	4.06	8.78	
Real Consumption	5.05	9.04	
Real Consumption per Capita	2.99	7.94	
Exports	9.99	17.32	

	Growth Rates percent per annum	
	Period I	Period II
	1952-1978	1978-2011
Real GDP	6.15	9.89
Real GDP per Capita	4.06	8.78
Real Consumption	5.05	9.04
Real Consumption per Capita	2.99	7.94
Exports	9.99	17.32
Imports	9.14	16.63

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Inflation Rates (GDP deflator)

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Introduction

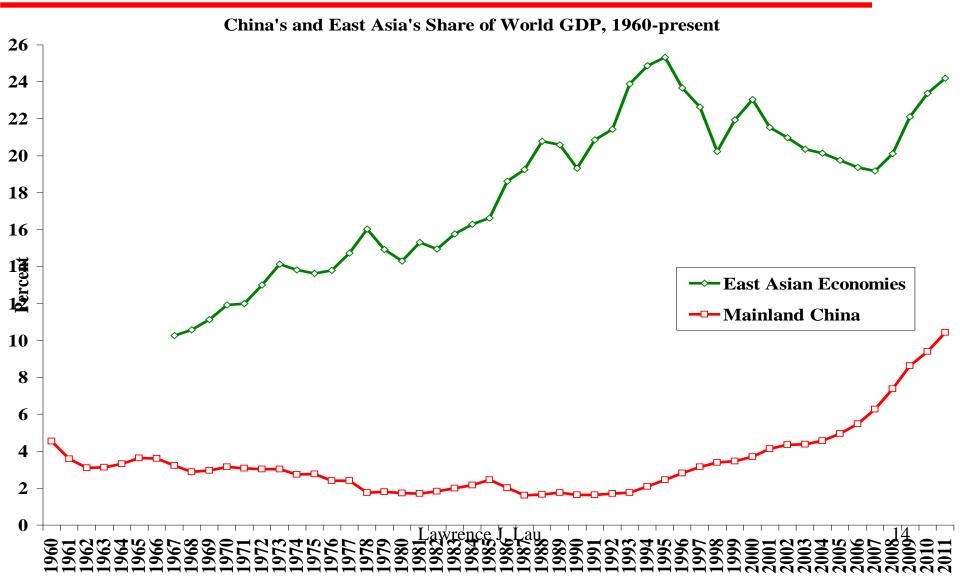
- ◆ The Chinese Government leaders have also amply demonstrated their ability to confront important challenges and solve difficult problems over the past 34 years, surviving various economic and financial crises such as the 1997-1998 East Asian currency crisis, the 2007-2009 global financial crisis and the more recent European sovereign debt crisis.
- ◆ China is one of the very few socialist countries that have made a smooth transition from a centrally planned to a market economy. It is a model for other transition economies such as Vietnam and potential transition economies such as Cuba, Laos, and North Korea.

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The Shifting Centre of Gravity of the World Economy

- ◆ Through the past three decades, the centre of gravity of the World economy has been gradually shifting from the United States and Europe to Asia, including both East Asia and South Asia.
- ◆ The East Asian economies have become partially decoupled from the rest of the World economy, as evidenced by the strong performance of China, India and other East Asian economies during the 2007-2009 global financial crisis as well as the current European sovereign debt crisis.
- ♦ However, the Chinese and East Asian economies are not large enough to turn the World around. The idea of a G-2 group of countries consisting of only China and the United States leading the World economy is premature.

China and East Asia's Share of World GDP, 1960-present (Current Prices)



- ◆ 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 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 rate of growth of tangible capital depends on the rate of investment on structure, equipment and basic infrastructure, which in turn depends on the availability of national savings.
- ◆ The rate of technical progress depends on investment in intangible capital (principally human capital and R&D capital).

- ◆ 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. This experience is not unlike those of other East Asian economies such as South Korea and Taiwan and even Japan at a similarly early stage of economic development.
- ◆ The growth of tangible capital accounts for the bulk (more than 80%) of the measured economic growth in China. The tangible capital stock has been growing at approximately 15% per year.
- ◆ However, unlike the experience of the other East Asian economies, economies of scale have played an important role in Chinese economic growth because of the size of the Chinese domestic market.

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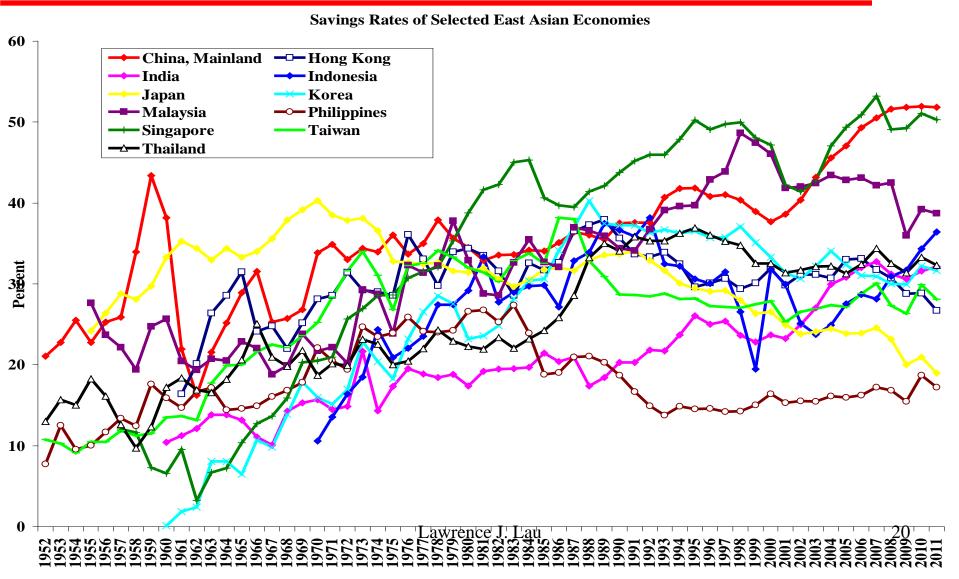
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- ◆ Chinese economic growth since 1978 has been underpinned by three factors:
- (1) A consistently high national savings rate on the order of 30% and above except for a brief start-up period. It has stayed around 40% since the early 1990s and has at 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).

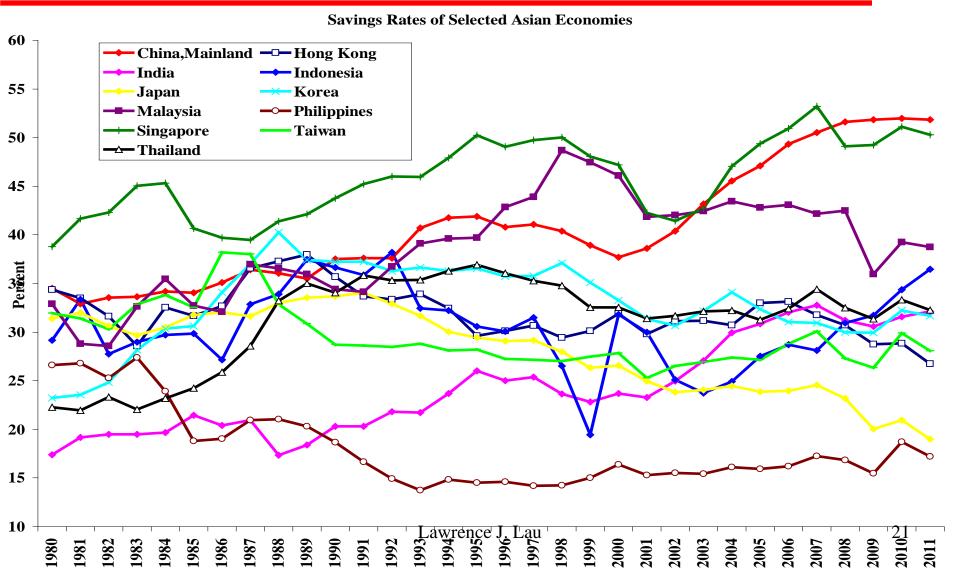
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- ◆ (2) An unlimited supply of surplus labour—there is no shortage of and no upward pressure on the real wage rate of unskilled, entry-level labour. And
- ◆ (3) A huge domestic market of 1.34 billion consumers with pent-up demand for housing and transportation 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.

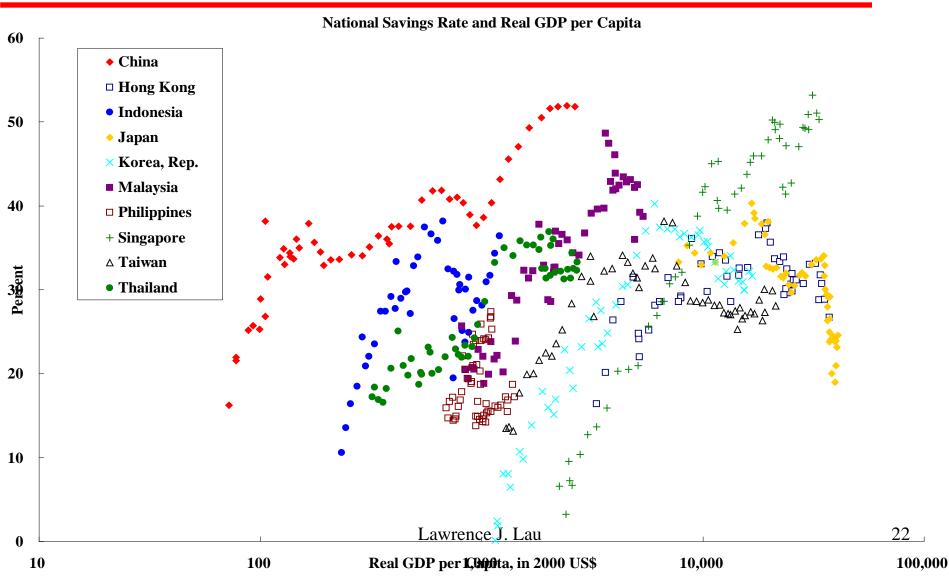
Savings Rates of Selected Asian Economies (1952-present)



Savings Rates of Selected Asian Economies (1980-present)

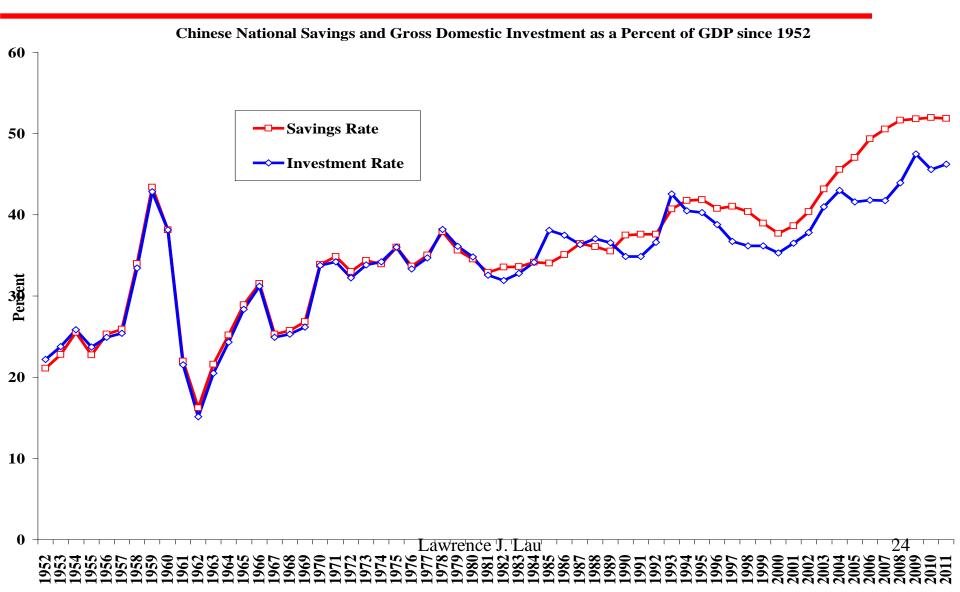


The Savings Rate and Real GDP per Capita: East Asian Economies



- ◆ China both saves too much and invests too much. However, the excessive savings and excessive investment were in approximate balance and thus there was little or no excess savings to be exported, and hence no trade surplus vis-a-vis the World, until 2005, when China began to have a trade surplus.
- ◆ Since 2008, the Chinese savings-investment gap has once again narrowed, resulting in a large reduction in the Chinese trade surplus relative to its GDP. The Chinese trade surplus has declined to 2% of its GDP by the end of 2011 and is expected to decline further during the next couple of years, reaching essentially balanced trade by perhaps 2015. 23

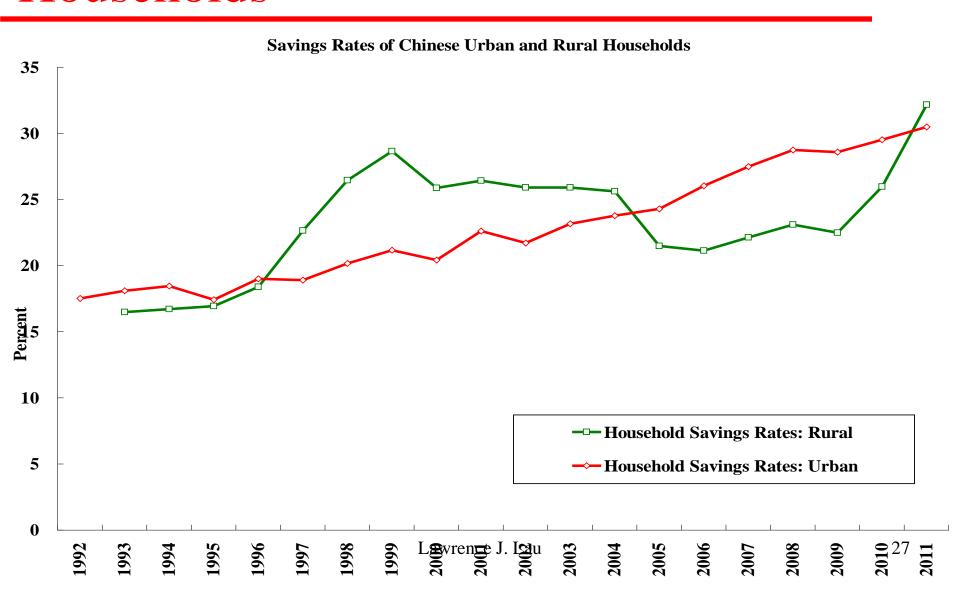
Chinese National Savings and Gross Domestic Investment as Percents of GDP



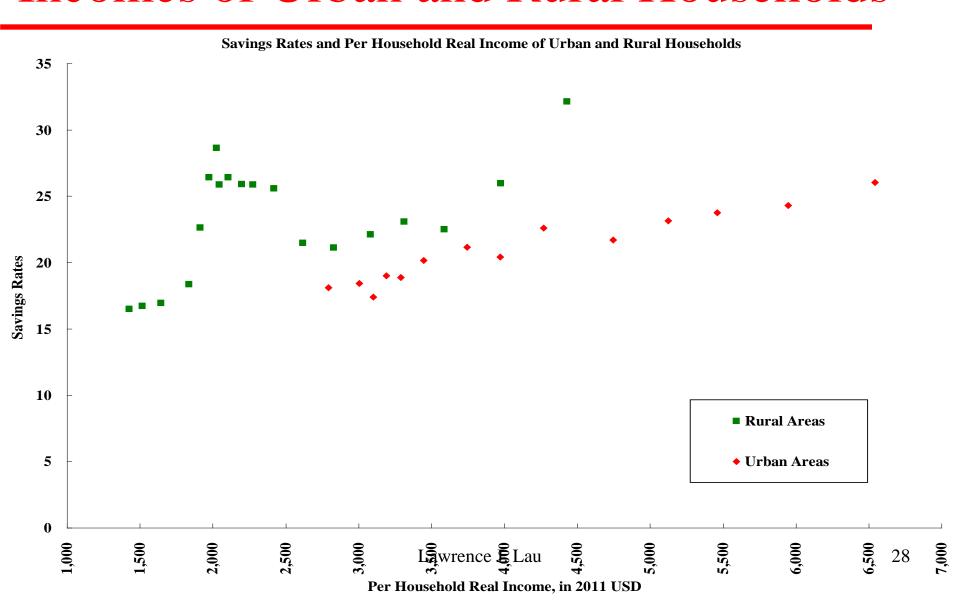
- ◆ However, the high Chinese national savings rate is not due to an exceptionally high household savings rate. In fact, the Chinese household savings rate is not significantly different from those of ethnically Chinese households in Hong Kong and Taiwan, both market economies and where the social safety net is not completely adequate, particularly in Hong Kong. The high Chinese national savings rate is due to:
- ◆ (1) the lagged adjustment of household consumption to increases in household income because of the rapidity of the increases in the latter. It takes time for the growth of consumption to catch up to the growth of income. Thus, a high household savings rate is only transitory; it will settle down and stabilise as the rate of growth of household income reaches steady-state.

◆ (2) the much lower share of GDP received by households as income; in particular, the share of labor is low in China, currently less than 50% of GDP, compared to approximately 70% in the developed economies of the World.

Savings Rates of Urban and Rural Households



Savings Rates and per Capita Real Incomes of Urban and Rural Households



- ◆ (3) the much higher Chinese corporate savings rates— Chinese enterprises, state-owned as well as non-stateowned, typically reinvest their earnings and distribute little or no cash dividends to their shareholders. (For privately owned enterprises, this is done in part to avoid personal income taxation.) Thus, the enterprise savings rate out of enterprise income (after taxes) is almost 100%.
- ◆ The high Chinese national savings rate is the result of a weighted average between the household savings rate and the high enterprise savings rate (with the government savings rate—the percentage budget surplus (deficit)—being relatively insignificant until more recently).

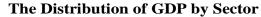
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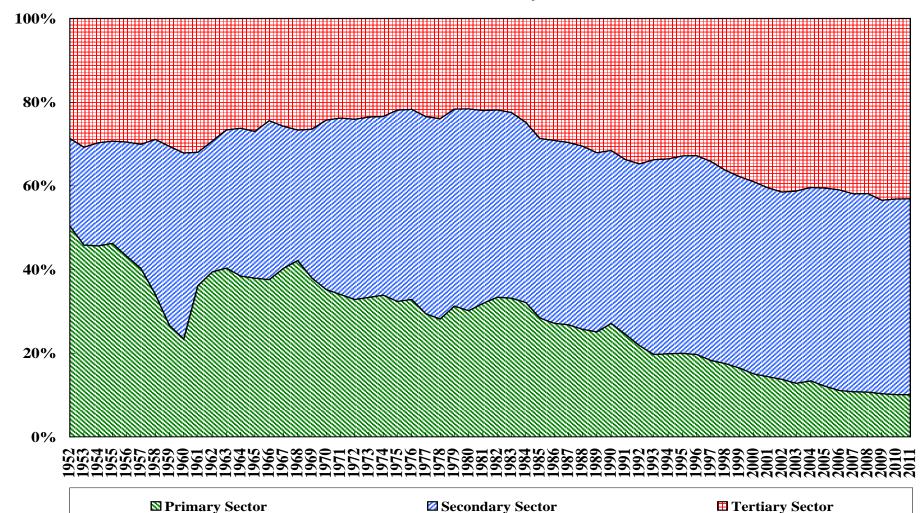
- ◆ China, like Japan, Taiwan, and South Korea in their early stages of economic development, has an abundant supply of surplus labour. This means China can grow without being constrained by the supply of labour or by rising real wage rates of unskilled, entry-level labour over an extended period of 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 more than fifty years ago.

- ◆ The distribution of Chinese GDP by originating sectors in 2011 was approximately: Primary (agriculture), 10.1%; Secondary (manufacturing, mining and construction), 46.8%; and Tertiary (services), 43.1%. (Note that mining is normally included in the primary sector in most other economies.)
- ◆ But the bulk of the labour force, more than 36%, 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.

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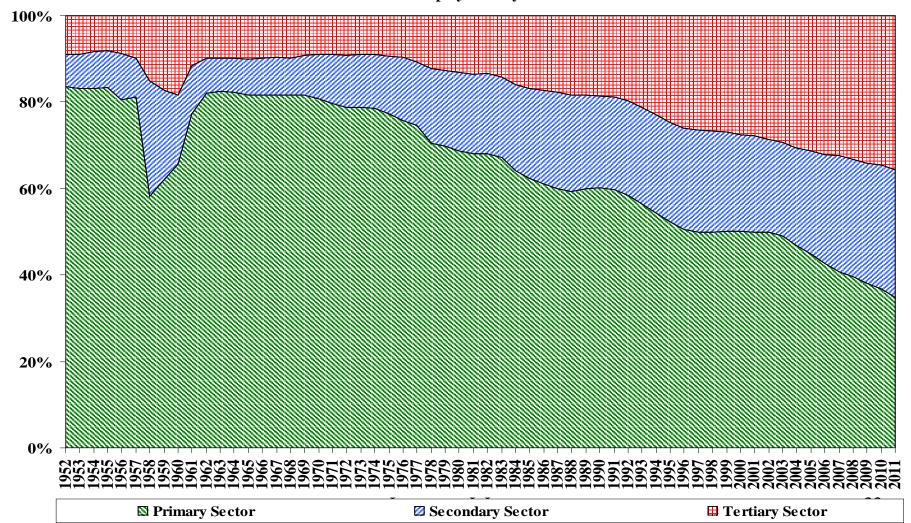
The Distribution of Chinese GDP by Sector Since 1952





The Distribution of Chinese Employment by Sector Since 1952





- ◆ It took 33 years for the percentage of labour force employed in the Chinese primary sector to decline from 70.5% in 1978 to 36.7% in 2011, 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 36.7% to below 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.

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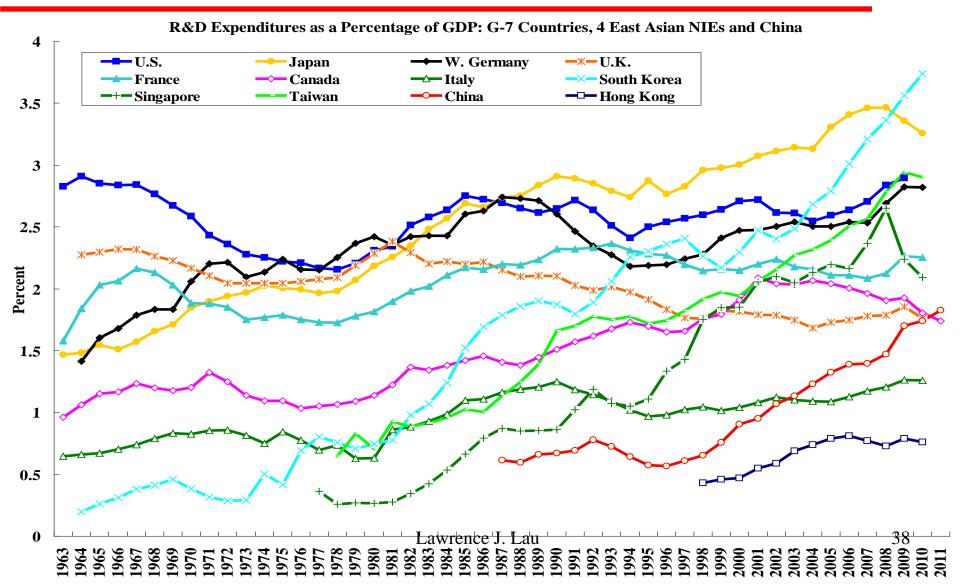
- ♦ While it is true that because of the "one-child" population policy, the Chinese working-age population may reach a peak within the next decade, this trend can be mitigated by a gradual lengthening of the retirement age (currently 60 for men and 55 for women) and by a modification of the "one-child" policy in the longer run.
- ◆ China also has a long tradition of emphasis on education and learning (human capital) and will be increasing its investment in human capital. The enrollment rate of tertiary education has been rising rapidly and stands at 24 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.

- ◆ 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--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 2.5% in 2015, still below the historical average for the U.S.)
- ◆ By comparison, both Japan and South Korea invest more than 3% of their GDPs in R&D annually. The United States has on average invested avalamost 3% of its GDP in R&D since the late 1950s.

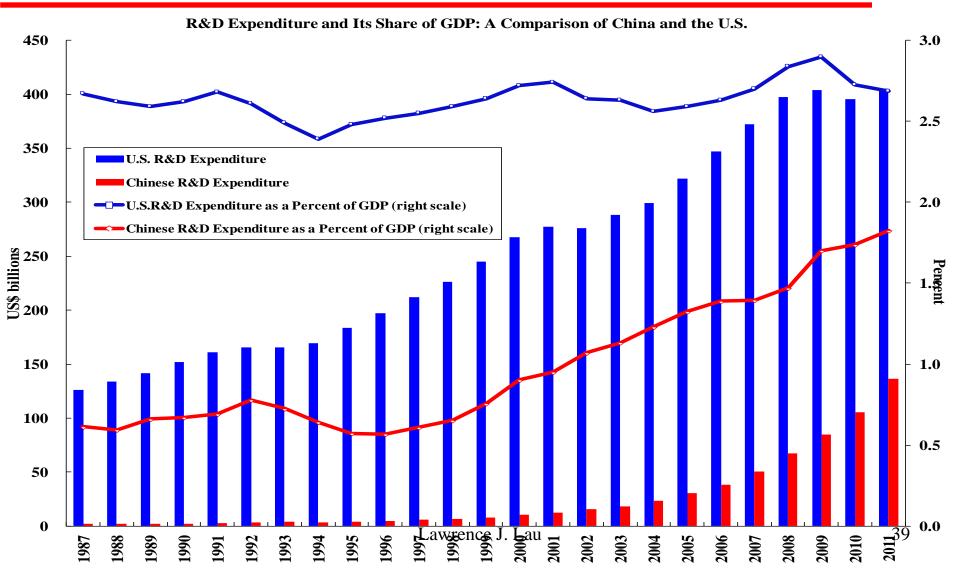
China's R&D Expenditure and Its Share of Chinese GDP



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



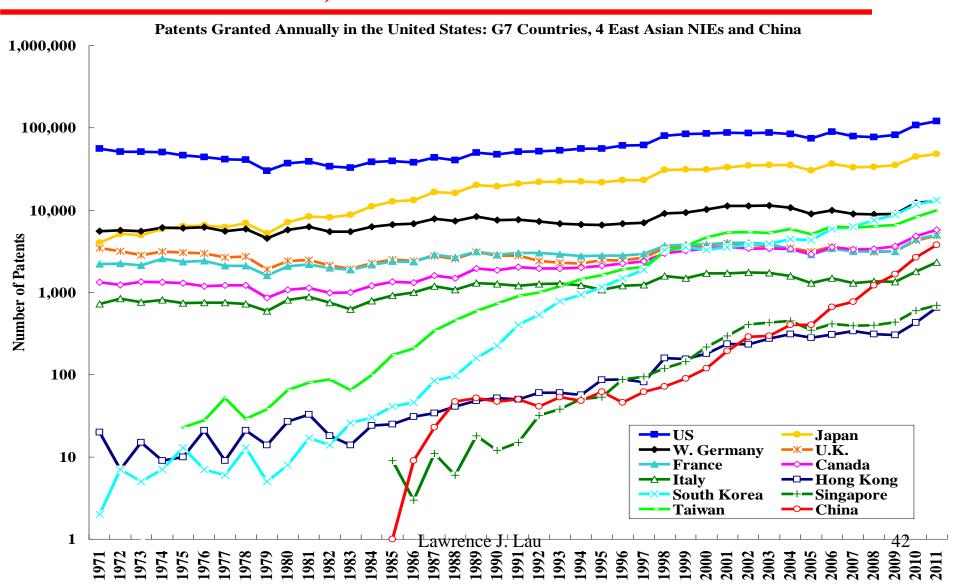
R&D Expenditure and Its Share of GDP: A Comparison of China and the U.S.



 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 more than 120,000 patents granted in 2011, followed by Japan, with approximately 48,000. (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.)

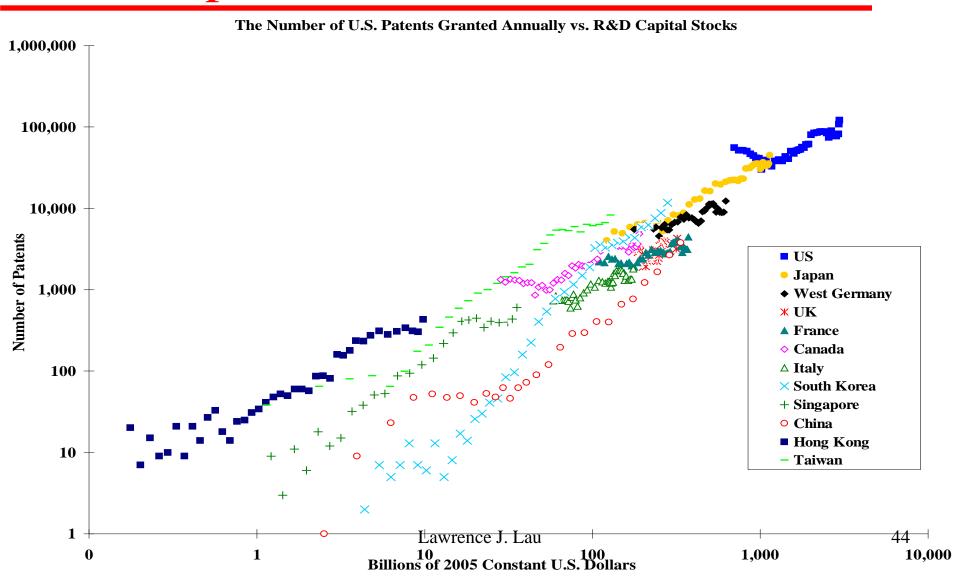
- ◆ The number of patents granted to Chinese applicants each year has increased from 1 in 1985 to 3,786 patents in 2011.
- ◆ The economies of South Korea and Taiwan, granted 13,239 and 9,907 U.S. patents respectively in 2011, are still far ahead of Mainland China—they have been averaging approximately 10,000 patents a year each.

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



- ◆ The stock of R&D capital, defined as the cumulative past real investment in 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 number of patents granted is plotted against the R&D capital stock for each country and each year).
- ◆ 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 patents granted each year). ₄₃

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



- ◆ Chinese efficiency in the generation of patents in the U.S. also lags behind those of other economies in terms of the number of U.S. patents granted for given levels of the stock of R&D capital.
- ◆ For example, when Japan had the same level of R&D capital stock as China today, it was able to generate more than 8,700 patents, compared to China's 3,786 in 2011.
- ◆ More recently, Chinese efficiency has shown some improvement, having caught up to the level of France and the United Kingdom. However, it will clearly take a while before China can catch up to the U.S. level of the R&D capital stock as well as the U.S. efficiency in the generation of patents, and hence to the number of patents granted each year.

- ◆ The huge potential domestic market of 1.34 billion consumers not only enables the realisation of economies of scale but also greatly enhances the productivity of intangible capital (e.g., R&D capital, goodwill). The fixed research and development costs of a new product or process can be easily amortised over a large market. The benefits of investment in goodwill, e.g., brand-building, are also much greater in a large market.
- ◆ The huge potential domestic market also enables active Chinese participation in the setting of product and technology standards and sharing the benefits of such standard-setting.

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◆ 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.

- ◆ In addition to a high national savings rate, a large pool of surplus labour, a huge domestic market, and rising investment in intangible capital (human capital and R&D capital), China also has the advantage of relative backwardness:
 - ◆ The ability to learn from the experiences of successes and failures of other economies;
 - ◆ The ability to leap-frog stages of development (e.g., the telex machine, the VHS video players, the fixed landline phones); 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 the first place).
- ◆ An abundance of scientific and technical manpower the cost of which is a fraction of the cost in developed economies.

The Metaphor of the "Wild Geese Flying Pattern"

- ◆ The metaphor of the "wild-geese-flying pattern" of East Asian economic development over time (Kaname Akamatsu (1962)) suggests that industrialisation will spread from economy to economy as the initially fast-growing economies, beginning with Japan, run out of surplus labour and face labour shortages, rising real wage rates, and quota restrictions on their exports.
- Thus East Asian industrialisation spread from Japan to first Hong Kong, and then Taiwan, and then South Korea, and then Southeast Asia (Thailand, Malaysia, Indonesia), and then to Guangdong, Shanghai, Jiangsu and Zhejiang in Mainland China. 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 the Hairs.

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 and Shaanxi. As the coastal provinces, regions and municipalities slow down in their economic growth, the central and western provinces, regions and municipalities will take their turn as the fastest growing areas in China. China as a whole will be able to maintain its high rate of growth for many years to come.

The Metaphor of the "Wild Geese Flying Pattern"

◆ However, 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.

- ◆ The Eleventh Five-Year Plan for National Economic and Social Development (2006-2010) officially ended on 31 December 2010.
- ◆ Most of the targets were achieved or exceeded, including the reduction in energy consumption per unit GDP by 20 percent compared to year end 2005.
- ◆ The Eleventh Five-Year Plan provided for a target rate of growth of real GDP of 7.5% per annum between 2006 and 2010. The actual rate of growth achieved was 10.84% per annum.
- ◆ The only major target not achieved was the percentage of GDP expended on R&D—the target was 2% and the actual achieved was 1.8%. Lawrence J. Lau

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- ◆ The Twelfth Five-Year Plan for National Economic and Social Development (2011-2015) was approved by the National People's Congress in Mid-March of 2011. It is mostly an indicative plan rather than a mandatory plan.
- ◆ The most remarkable feature of the Twelfth Five-Year Plan was the lowering of the target average annual growth rate of real GDP from 7.5% per annum in the Eleventh Five-Year (2006-2010) Plan to 7% per annum. (It is almost certain that this target will be exceeded, just as the target average annual rate of 7.5% was exceeded in the Eleventh Five-Year Plan by the actual average annual rate of 10.84%.) However, what the reduction in the target growth rate signals is the determination of the Chinese Government to de-emphasise quantitative economic growth and to focus on improving the quality of the economic growth. Lawrence J. Lau

- ◆ During this same period, the rate of inflation is to be kept below an average of 3% per annum.
- ◆ One principal theme of the Twelfth Five-Year Plan is the transformation in the mode of Chinese economic development—first, from export-oriented to domestic demand-oriented and second, from input-driven to technical progress-driven or innovation-driven.
- ◆ The Plan also aims at essentially balanced international trade.

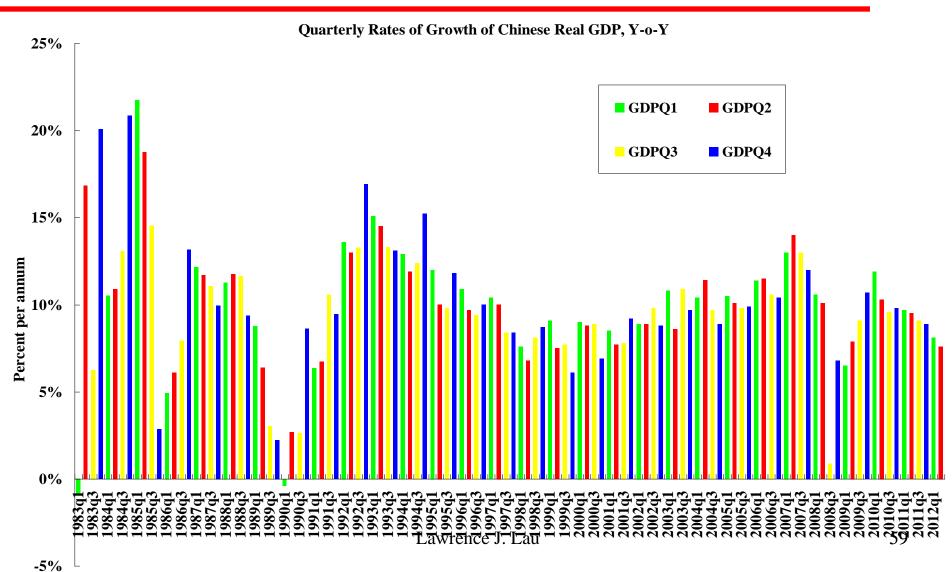
- ◆ The Plan also provides for further urbanisation—the share of rural population is to decrease from 51% to 47% during this period.
- ◆ It also provides for increased expenditures for education and healthcare, especially in the rural areas, environmental preservation and protection, and air and water pollution control. It also has mandatory targets for improvement in energy efficiency (energy consumption per unit GDP to decrease by 16%) and reduction in carbon emission (to decrease by 17%).

◆ The Plan also provides for reduction in real income disparity through taxation, transfer payments and targeted government expenditures on public goods such as education and health care, the improvement of the social safety net and the pension system.

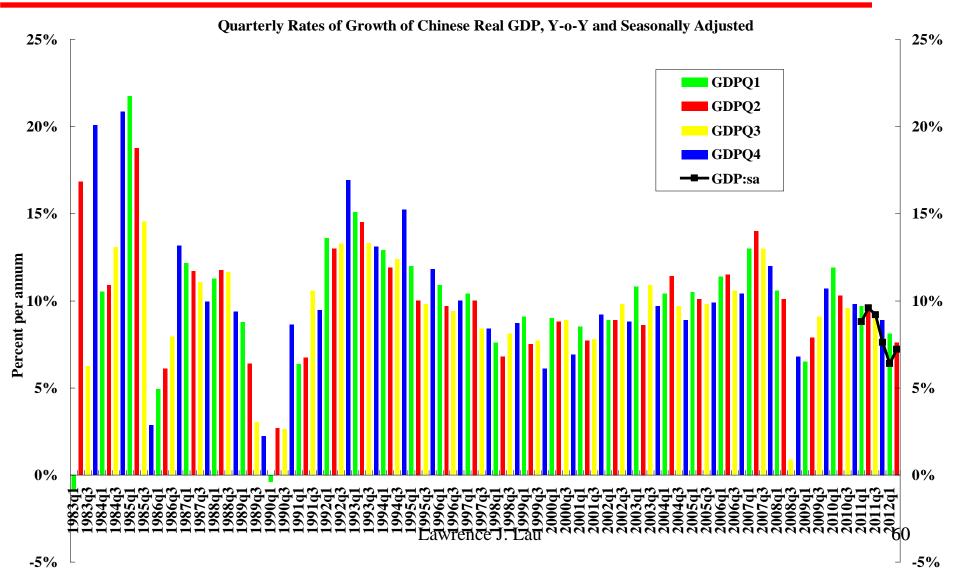
- ◆ The Chinese economy has survived the East Asian currency crisis of 1997-8, the global financial crisis of 2007-9 as well as the currently on-going European sovereign debt crisis relatively unscathed.
- ◆ The 4-trillion Yuan economic stimulus package launched by the Chinese Government in November 2008, barely six weeks after the bankruptcy of Lehman Brothers, has been quite effective in sustaining the confidence and positive expectations of the future of Chinese enterprises and households to continue investing and consuming and thereby maintaining Chinese economic growth despite the economic turmoil in the United States and Europe. ⁵⁷

- ◆ The Chinese economy grew 9.2% in 2009, 10.4% in 2010 and 9.2 % in 2011 even as the European and U.S. economies remained in recession.
- ◆ In 2012Q1, the rate of growth of real GDP was 8.1%, Y-o-Y, and 6.4% per annum, seasonally adjusted, according to revised data of the National Bureau of Statistics. In 2012Q2, the rate of growth of real GDP was 7.6%, Y-o-Y, and 7.2% per annum, seasonally adjusted, up from the 6.4% of Q1.

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



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

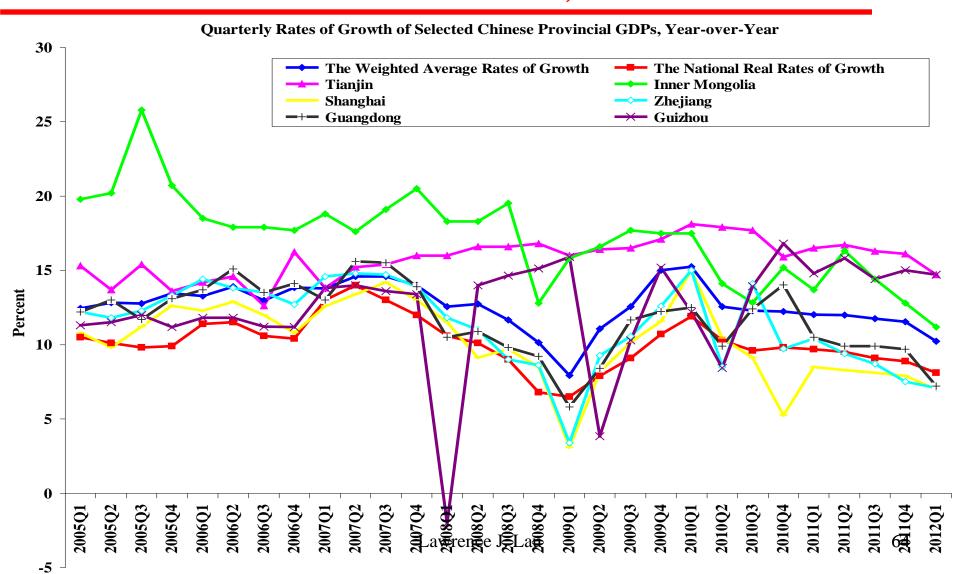


◆ The recent slowdown in the Chinese economy is due, in part. to the continued weakness in exports to the United States and Europe, and in part, to the change in the inventory behaviour of importers in the United States and Europe (attempting to minimise the holding of inventory), and in part to the political uncertainty surrounding the oncein-a-decade political transition in China itself. Just as U.S. firms hold off on important investment decisions until after the U.S. presidential election in November, Chinese enterprises, state-owned or otherwise, have the incentive to wait until the new administration is in place in March 2013.

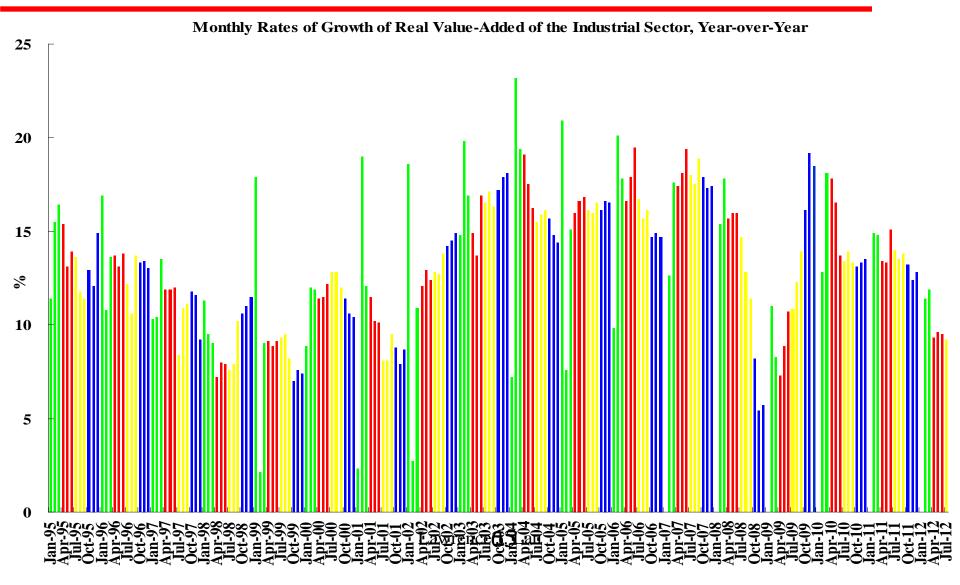
- ◆ While the real rate of growth of 2012H1 of 7.85% Y-o-Y may seem like a significant reduction from 9.2% in 2011, there are reasons to believe that the impact of the economic slowdown on Chinese employment is not that severe.
- ◆ For example, since it is almost impossible to separate out from the stated profit of real estate developers the land appreciation component (which is not GDP) and the value-added component (which is GDP), the rate of growth of GDP tends to be overestimated when it is in part real estate driven. Thus, the effect of the recent slowdown which is coupled with a slowdown in the real estate sector is not as severe as the numbers themselves might indicate.

- ◆ The outlook is that there will be a gradual slowdown in the real rate of growth of the economy in 2012, to perhaps a little above 7.5%, which is actually a positive development for the Chinese economy. The official target growth rate for the year, announced by Premier WEN Jiabao at the National People's Congress, is 7.5%. The official target average growth rate for the Twelfth Five-Year Plan (2011-2015) period is a relatively modest 7%.
- ◆ 7.5% growth for the year 2012 is certainly achievable. In fact, most recent predictions of Chinese economic growth for 2012 as a whole are still higher than 7.5%. For example, the World Bank has recently lowered its projection for Chinese economic growth in 2012, but only from 8.4% to 8.2%.

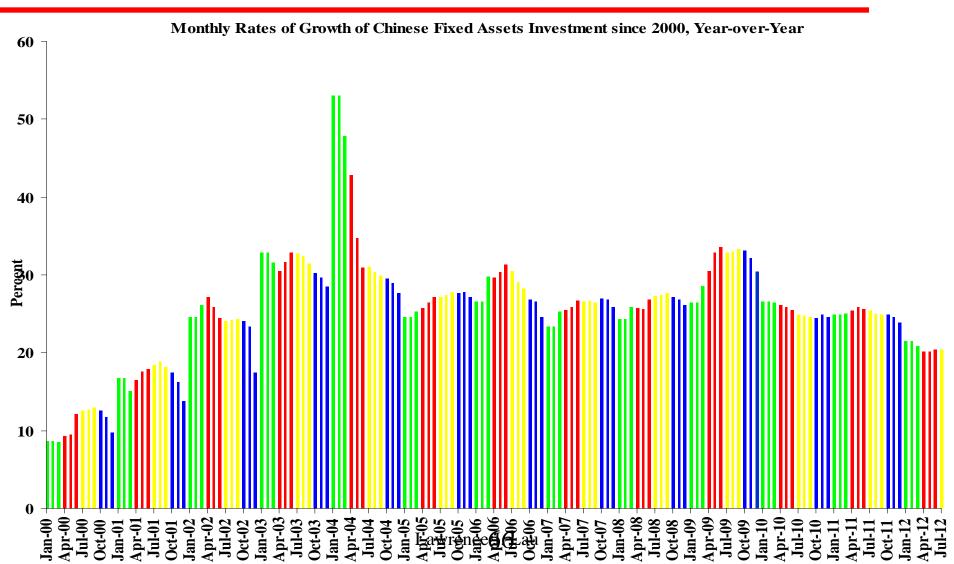
Quarterly Rates of Growth of Selected Chinese Provincial GDPs, Year-over-Year



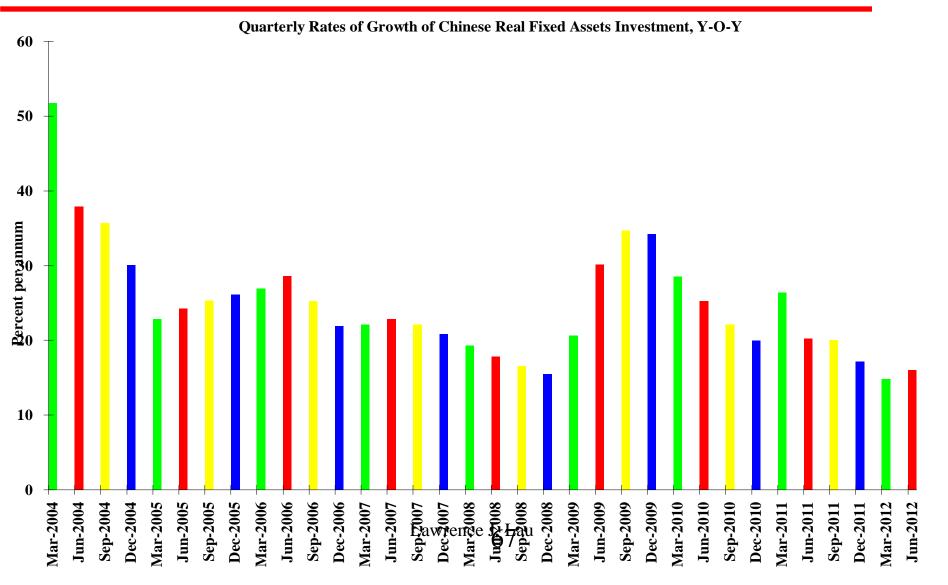
Monthly Rates of Growth of Real Valueadded of the Industrial Sector, Y-o-Y



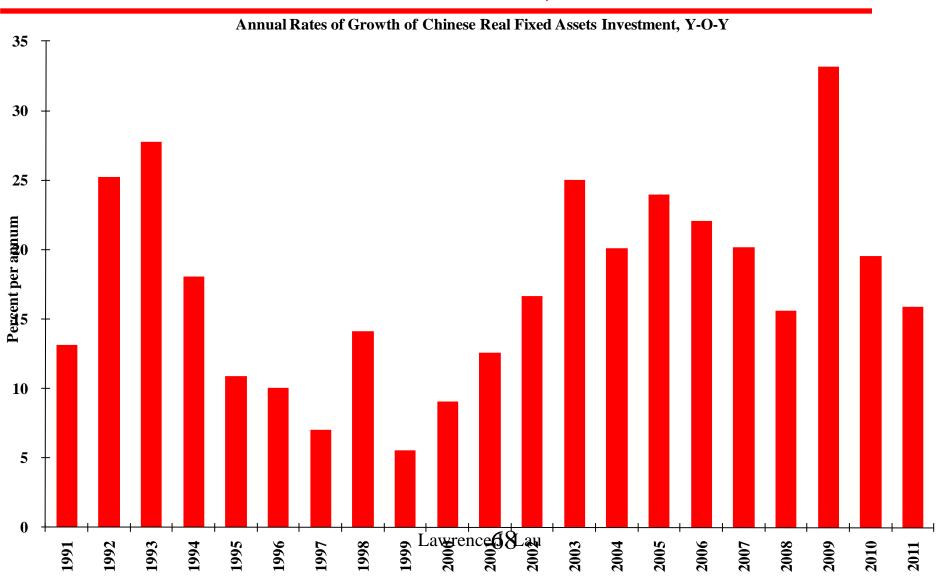
Monthly Rates of Growth of Chinese Fixed Assets Investment, Y-o-Y



Quarterly Rates of Growth of Chinese Real Fixed Assets Investment, Y-O-Y



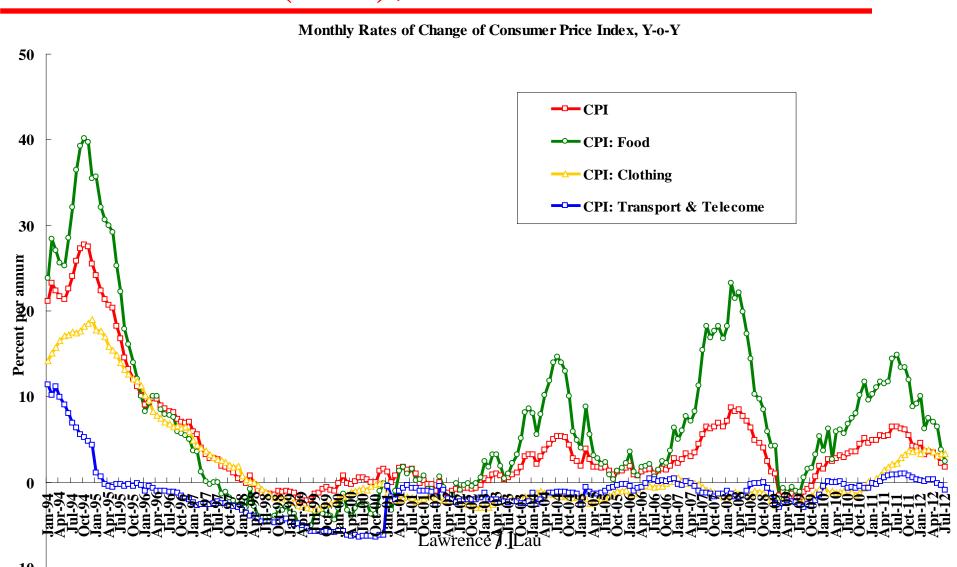
Annual Rates of Growth of Chinese Real Fixed Assets Investment, Y-O-Y



◆ The rate of inflation of goods and services, as measured by the consumer price index (CPI), rose during the first half of 2011, reaching a peak of 6.5% year-over-year in July, and then declined in the second half of the year as the rate of growth of agricultural prices declined. For 2011 as a whole, the rate of inflation exceeded the objective of the Chinese Government of 4%, at 5.4%, an increase from the 3.3% of 2010.

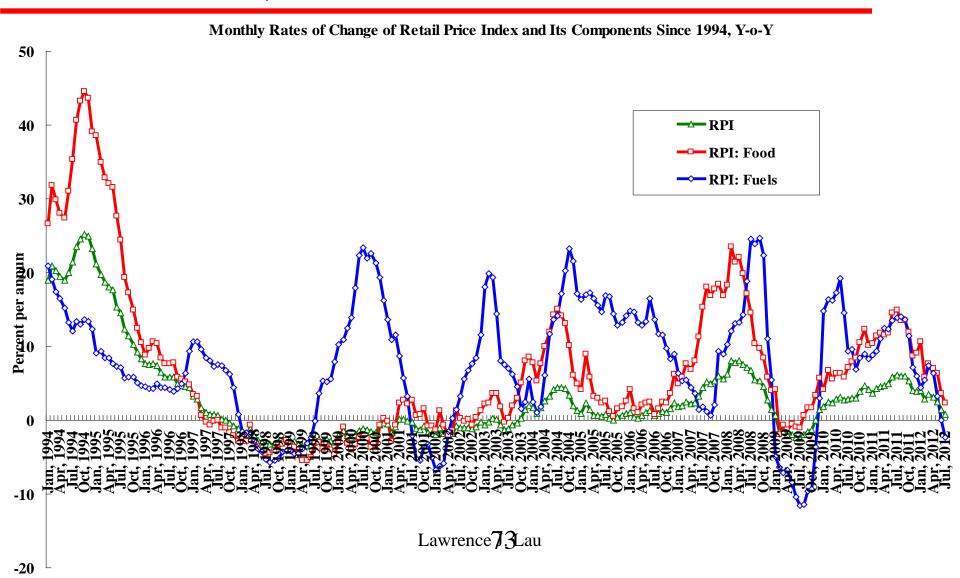
- ◆ For the first six months of 2012, the rates of inflation as measured by the CPI year-over-year were 4.5%, 3.2%, 3.6%, 3.4%, 3% and 2.2% respectively. Seasonally adjusted, they were, at annualised rates, 18%, -1.2%, 2.4%, -1.2%, -3.6% and -7.2% respectively. The consumer price index fell to 1.8% year-on-year in July, its lowest level since January 2010.
- ◆ The government target for 2012 is to keep the rate of inflation to below 4%, which appears quite feasible at this time.

Monthly Rates of Change of the Consumer Price Index (CPI), Y-o-Y



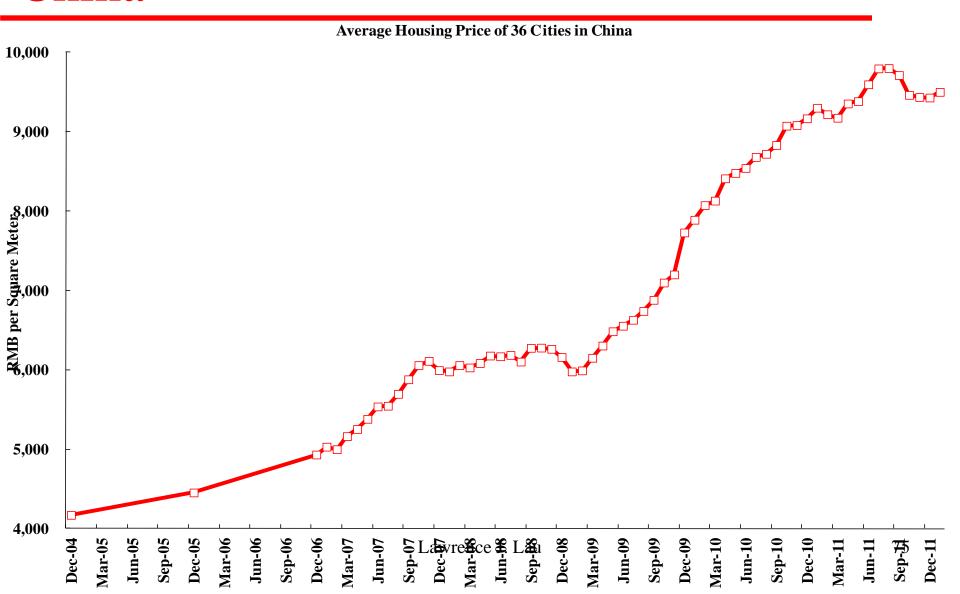
- ◆ However, it should be noted that the bulk of the increase in the consumer price index (approximately 70%) was caused by increases in food prices (principally the prices of pork and vegetables), due mostly to weather and the natural production cycle and possibly hoarding and market manipulation and not to monetary factors.
- ◆ The core rate of inflation, that is, the rate of inflation net of the changes in the prices of agricultural and energy goods, has remained relatively tame, below 2% per annum level, as has been the case in the past few years.

Monthly Rates of Change of the Retail Price Index, Y-o-Y

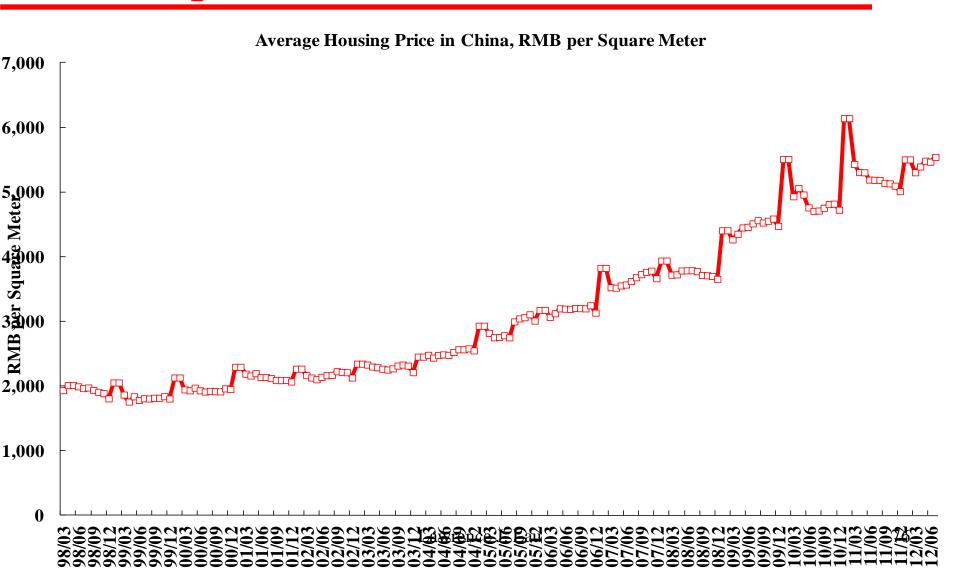


- ◆ Moreover, given the excess production capacity in many key industries, such as steel, cement, and glass, it is unlikely that there will be much inflation in the prices of non-agricultural goods in the next couple of years.
- ◆ However, there has been significant inflation in the prices of assets such as real estate in the past few years due to the implementation of the economic stimulus package and the resulting significant increases in the rates of growth of money supply and commercial bank credit.

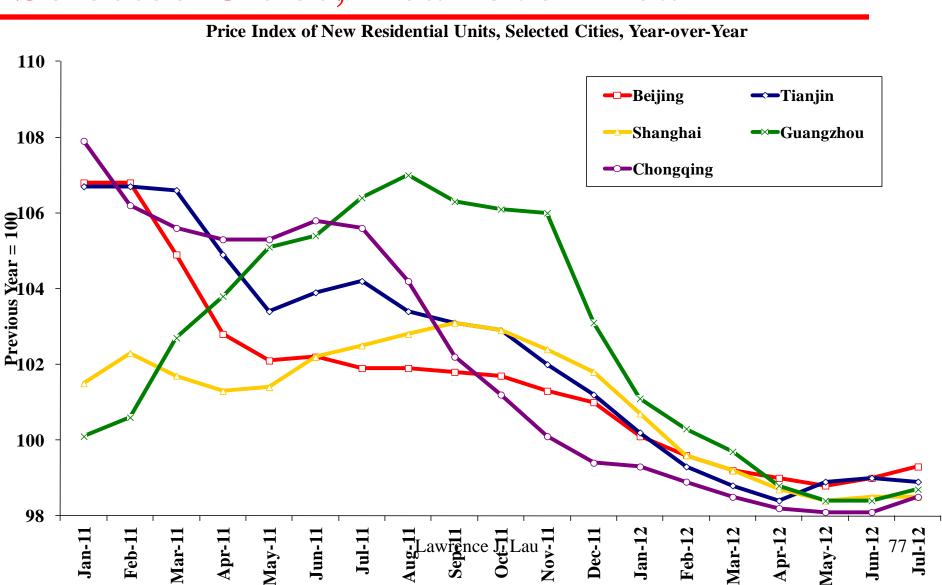
Average Housing Price of 36 Cities in China



Average Housing Price in China, Yuan/Square Meter



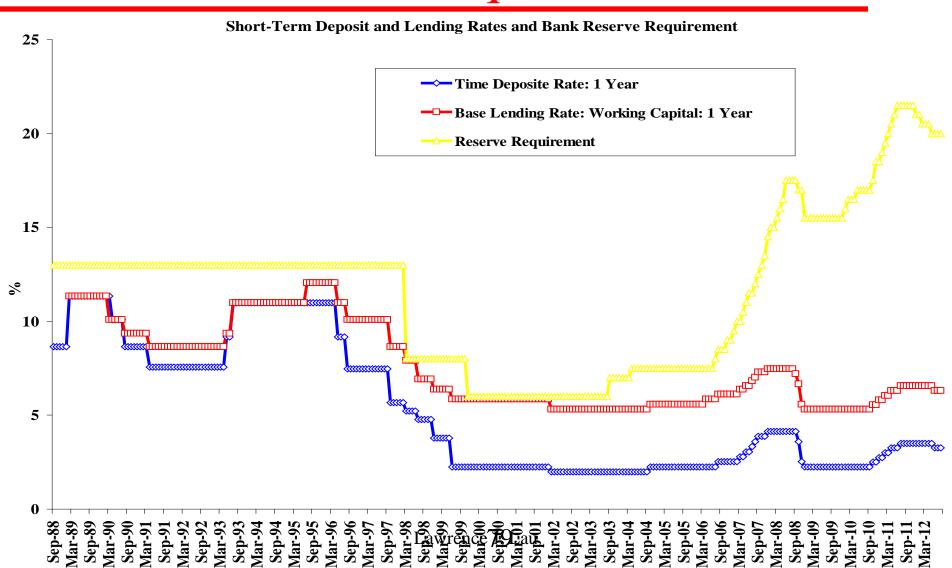
Price Index of New Residential Units, Selected Cities, Year-over-Year



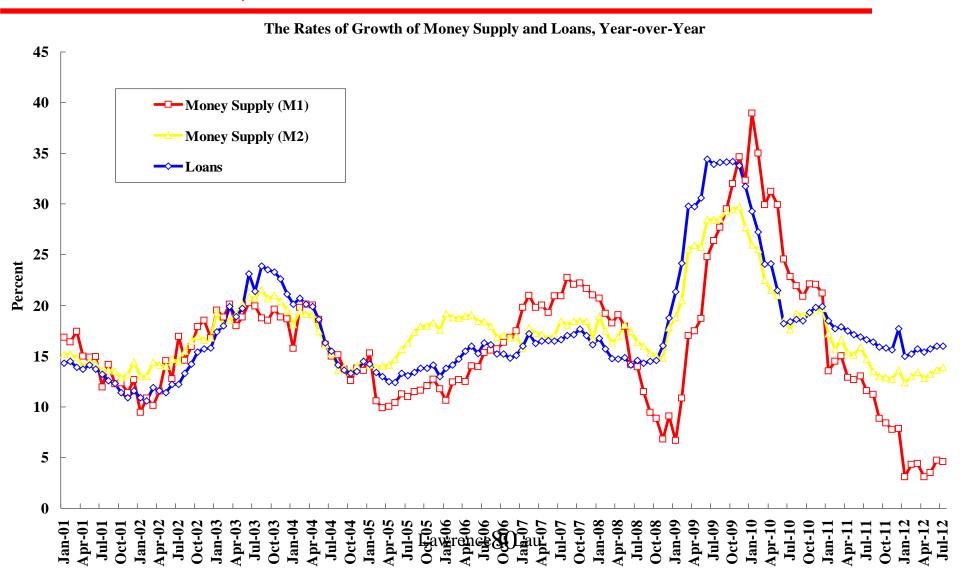
- Measures have been taken to contain the asset price bubble. State-owned enterprises that have not been explicitly authorised are now forbidden to invest in real estate. Bank lending rules have also been tightened so as to discourage the purchases of more than one residential unit by a single household. Recently, however, the People's Bank of China, the central bank, after increasing the rates of interest (the minimum lending rate and the maximum deposit rate) and the reserve requirement ratio repeatedly, has begun to reduce them.
- ◆ The rates of growth of money supply (both M1 and M2) and loans have also declined significantly.

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Short-Term Deposit and Lending Rates and Bank Reserve Requirement



The Rates of Growth of Money Supply and Loans, Year-over-Year



- ◆ There is not much any central bank can do about agricultural prices. No head of a central bank anywhere in the World has been able to control the weather or for that matter the hog cycle.
- ◆ The key in reining in increases in asset prices, especially real estate prices, is to ensure that there is a continuing dependable and steady supply of the assets going forward. Only the expectation of future supply availability can change price expectations. The Government must therefore try to create the expectation of regular increases of actual and potential supply through both its stated policy and its actual behaviour.

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- ◆ Price bubbles can be caused by self-fulfilling expectations. For example, if the public expects housing prices to go up by 25% a year, and behaves accordingly, that is, rushes out to buy before the prices actually go up, the prices will in fact be driven up by 25% or even more.
- ◆ Expectations of price increases bring future buyers into the present, thus greatly increasing current demand, but current supply of real estate can only adjust upwards slowly, and so large actual price increases are bound to result.

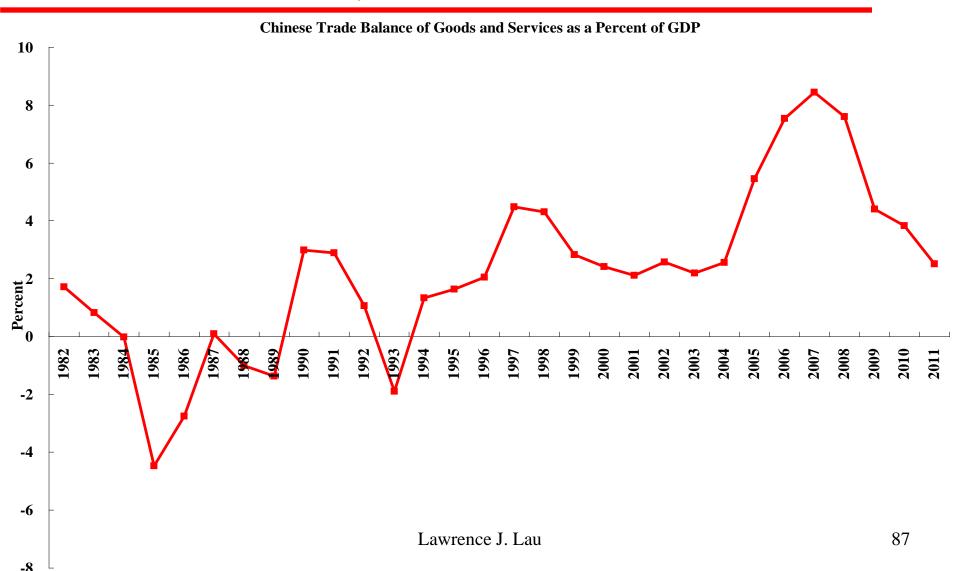
- ◆ If the public can be convinced that residential housing units will be just as available or even more available next year compared to this year, there will be no reason for anyone to rush out to buy something now. Thus, the real estate price bubble can be more readily contained.
- ◆ Other instruments in addition to the rate of interest include the strict control, perhaps even prohibition, of financing of any non-owner-occupied residential unit, and increasing the equity (down payment) ratio. The introduction of a property tax as a source of revenue for local governments will also help to discourage speculation as well as reduce the dependence of local governments on revenue from the sale of land leases and hence their incentive for maintaining expectations of high and rising land prices.

- ◆ Even with increases in the levels of minimum wage rates in the different provinces, regions and municipalities, the <u>real</u> wage rate of unskilled, entry-level labour has basically remained stable and is expected to be stable for a long time because of the continuing existence of significant surplus labour in the Chinese economy as a whole.
- ◆ However, there is upward pressure on the real wage rate of skilled and experienced labour, which is actually in short supply, especially as Chinese enterprises move up the value-added chain.
- ◆ But given the trend of rapid expansion of Chinese tertiary education in recent years, with 6 million annual new graduates projected, the increase in the real wage rate of even skilled labour is likely to be relatively limited going forward.

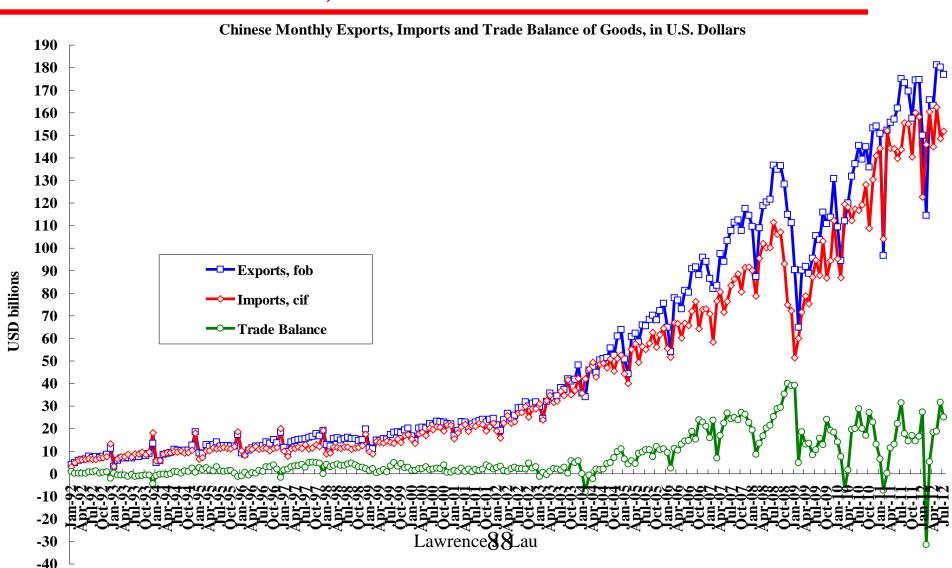
- ◆ There is a common mis-impression that the Chinese economy is highly dependent on exports, and in particular, on its export surpluses, as a source of growth.
- ◆ The facts are that China only began to have a significant trade surplus vis-a-vis the World in 2005, whereas the Chinese economy has been 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 Chinese trade surpluses.

- ◆ Chinese trade surplus as a percent of Chinese GDP fluctuated between -4.5 percent and 4.5 percent between 1982 and 2004 with an average of less than 2 percent of GDP. It then rose to almost 9 percent in 2007. It has since declined significantly and is around 2 percent at the end of 2011. It is expected to continue to decline, perhaps to around zero, some time between now and 2015.
- ◆ Thus, Chinese international trade vis-à-vis the whole world is expected to be essentially balanced in a couple of years, without necessarily any large adjustments in the Yuan/US\$ exchange rate.
- ◆ One reason that this is possible is the gradual closing of the savings-investment gap in China, as well as the substantial real appreciation of the Yuan versus the U.S.\$ that has occurred since mid-2005, to the tune of approximately 30%.

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



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



- 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 stands today.
- ♦ While this ratio appears large, it is not when compared to Hong Kong, Singapore, South Korea and Taiwan, where exports are often several 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 domestic value-added content of Chinese exportsyrence J. Lau

Chinese Exports of Goods and Services as a Percent of GDP, 1970-present



◆ The domestic value-added content of Chinese exports is no more than 30 percent, that is: for every dollar of Chinese goods exported, less than 30 cents, on average, consist of domestic value-added. The rest consists of imported raw materials, intermediate goods, components, parts, semifinished goods, etc. The domestic value-added percentage is even less for the so-called "Processing and Assembly" exports, which account for more than half of total Chinese exports.

- ◆ If we multiply the Exports/GDP ratio of say 25 percent to the domestic value-added content of 30 percent, we obtain 7.5 percent, which is the percentage of Chinese GDP (value-added) generated by exports.
- ◆ Now, 7.5 percent of GDP is a large number, and no economy can afford to lose 7.5 percent of its GDP overnight. However, if 7.5 percent of GDP does not grow, or even declines by 25 percent, as long as the other 92.5 percent of the economy continues to grow, the economy as a whole should do all right, especially if appropriate compensatory economic stimulus measures are taken by the government.

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- ◆ 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. Thus, we shall see a gradual shift in China from a policy of export promotion 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 is apparent in the Twelfth Five-Year Plan.
- ◆ Chinese Premier WEN Jiabao has said publicly that China wants balanced trade with the rest of the World in the future, which is also a goal of the Twelfth Five-Year Plan.

The Relative Unimportance of International Capital

- ◆ Except for the initial decade after China adopted the reform and opening strategy in 1978, China has not had to rely on foreign loans to any significant extent. Instead, China is today a very large net creditor to the rest-of-the-World.
- ◆ Foreign direct investment (FDI) was important in the 1980s and early 1990s. By now it is no longer important quantitatively, accounting for less than 10% of aggregate domestic Chinese investment. FDI is still helpful and welcomed to the extent that it brings in technology, markets, intangible capital (e.g., brand names), new business models, but money alone is not enough for foreign direct investment to be successful in China today.

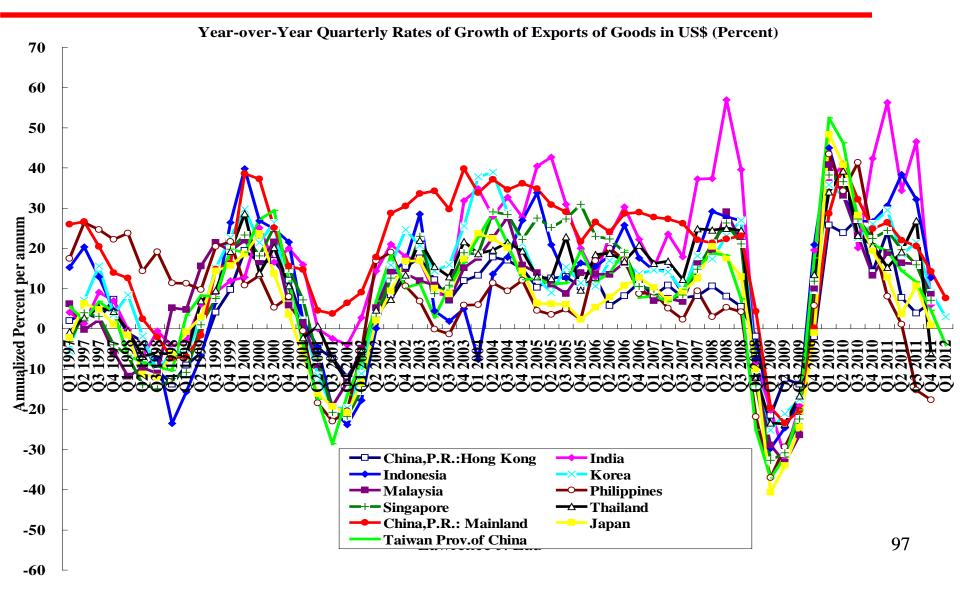
The Relative Unimportance of International Capital

- ◆ Foreign portfolio investment (FPI) has played a relatively minor role in the Chinese economy. China does not really need more net inflows of foreign capital at the present time. The investment by foreign institutions in the initial public offerings (IPOs) of Chinese state-owned enterprises is not so much for the money but for the "certification" effect.
- ◆ Thus, fluctuations in FDI and FPI have had only very marginal impacts on the real rates of growth of the Chinese economy.

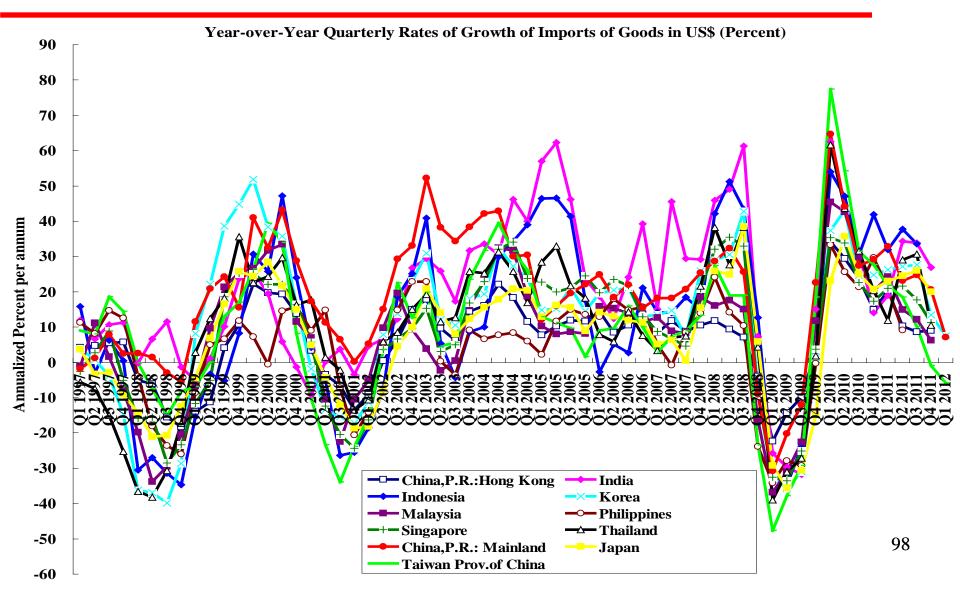
- ◆ An important implication of the relatively low export dependence of Chinese GDP is that the rate of growth of Chinese real GDP is relatively stable, unlike the other East Asian economies, even as Chinese exports and imports fluctuate as widely as the exports and imports of other East Asian economies.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

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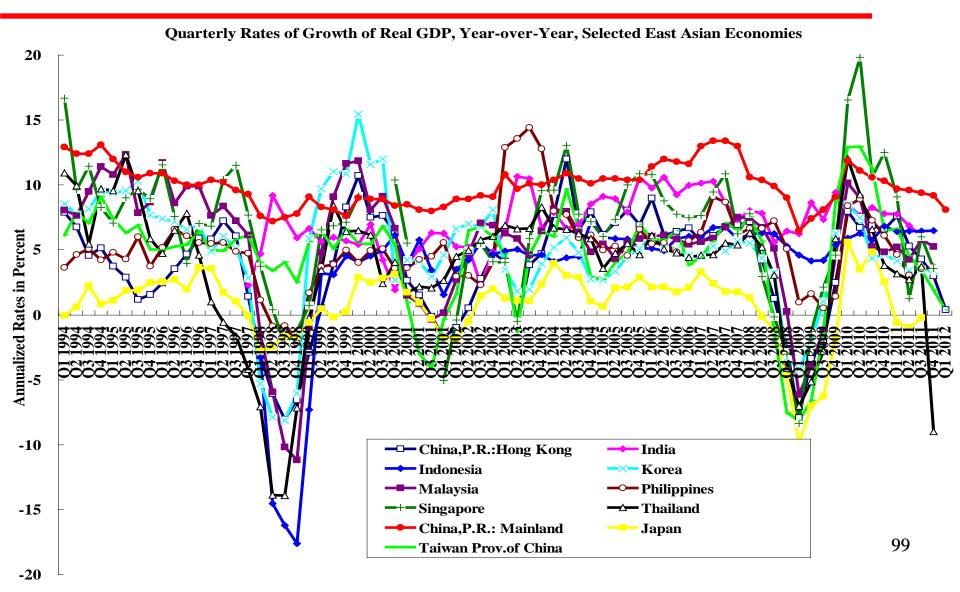
Quarterly Rates of Growth of Exports of Goods: Selected East Asian Economies



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



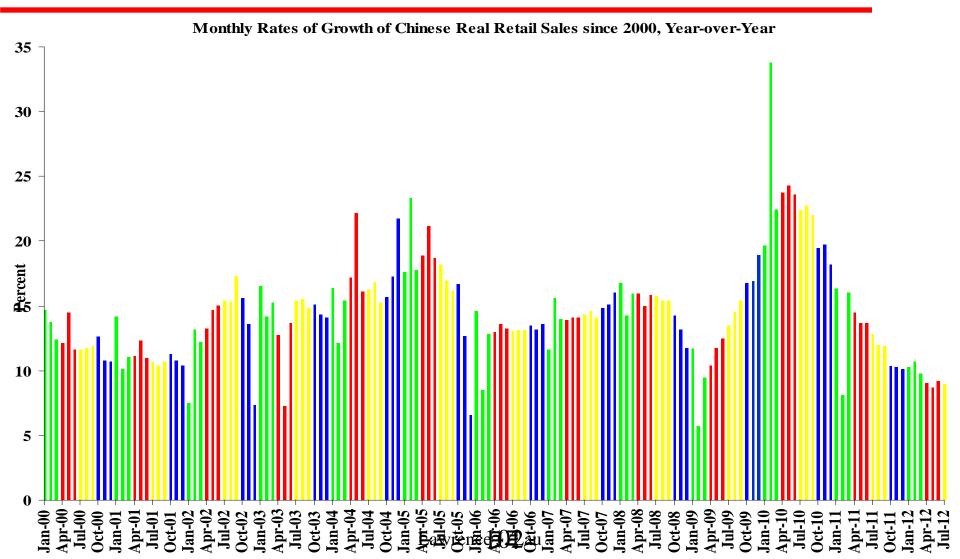
Quarterly Rates of Growth of Real GDP, Y-o-Y: Selected East Asian Economies



◆ The fact that the Chinese economy has continued to grow at an average rate of almost 10% per annum since the beginning of the global financial crisis in 2007 is ample proof that the Chinese economy has been at least partially de-coupled from the rest of the World, and in particular, from the United States and Europe, both of which have been and still are mired in economic recession.

- ◆ Chinese household consumption is sometimes viewed as a potential sustainable source of growth of Chinese domestic aggregate demand.
- ◆ Chinese household consumption has actually been growing quite rapidly, as indicated by the double-digit monthly year-over-year rates of growth of real retail sales since the first quarter of 2009. The rates of growth of real retail sales have begun to slow since 2011 but still exceeded the rates of growth of real GDP or real household income for the corresponding period.

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



- ◆ The Chinese household savings rate, as distinct from the much higher national savings rate, currently stands at approximately 30% (for urban households).
- ♦ However, the consumption-savings behaviour of Chinese households on the Mainland today appears to be little different from ethnic Chinese households in Hong Kong and Taiwan at the same level of per capita household income, with an average savings rate of urban households of approximately 30%. Thus, the Chinese household savings rate is not likely to fall significantly in the foreseeable future. Increases in consumption must come from increases in household income rather-than-decreases in the household savings rate

- ♦ Chinese household consumption can be expected to increase significantly faster than GDP only if Chinese household (disposable) income as a share of GDP rises significantly. There are structural reasons why this is unlikely to occur in the near term even though in the long term, the income share of labour, which currently stands at less than 50%, is likely to rise in China.
- ◆ Continuing Chinese economic growth beyond 2011 will therefore have to depend mostly on the growth of internal demand and not on exports, and, as analysed above, not on the growth of household consumption per se in the absence of a significant sustained increase in the share of household income in GDP.
- ♦ Household income can be increased through wage increases but also through increases in the cash dividend payouts from state-owned enterprises. Recently, the Chinese Government has called for an increased cash dividend payouts from state-owned enterprises.

- ◆ Increased cash dividend payouts have many advantages in addition to increasing household income and thereby household consumption.
- ◆ They increase government revenue, both directly, as the government is a major shareholder in many publicly listed enterprises and will receive the increased cash dividends, and indirectly, through the increased individual income taxes collected on the cash dividends paid to the other shareholders. The increased government revenue can in turn be used to increase public consumption—e.g., the provision of public services such as education and health care, the preservation and restoration of the environment, etc.
- An increased cash dividend payout by the state-owned enterprises reduces their excess retained earnings so that they can no longer make investments at will—it will have to apply for loans and hence their investment projects will have to be justified to and evaluated by the lenders

- ◆ Increased cash dividend payouts may make long-term holding of shares more attractive and may attract a different breed of investors. It will encourage investors to hold their shares longer and hence indirectly improve corporate governance as only long-term shareholders pay any attention to corporate governance.
- ◆ An increased cash dividend payout provides a support level for the price of the shares of a publicly listed enterprise.
 Thus, the government does not need to worry as much about supporting the market.

- ◆ The ability to pay cash dividends on the part of an enterprise actually provides a real verification of the true profitability of an enterprise. An enterprise with only virtual or fictional or only accounting profits does not have the ability to pay out cash dividends whereas it can always declare stock dividends.
- ◆ The average cash dividend yield of common stock listed on Shanghai and Shenzhen stock exchanges has been rising slowly from 1.04% in 2009 to 1.14% in 2010 and 1.82% in 2011. Potentially the higher cash dividend yield can attract many more long-term investors into the Chinese stock market.

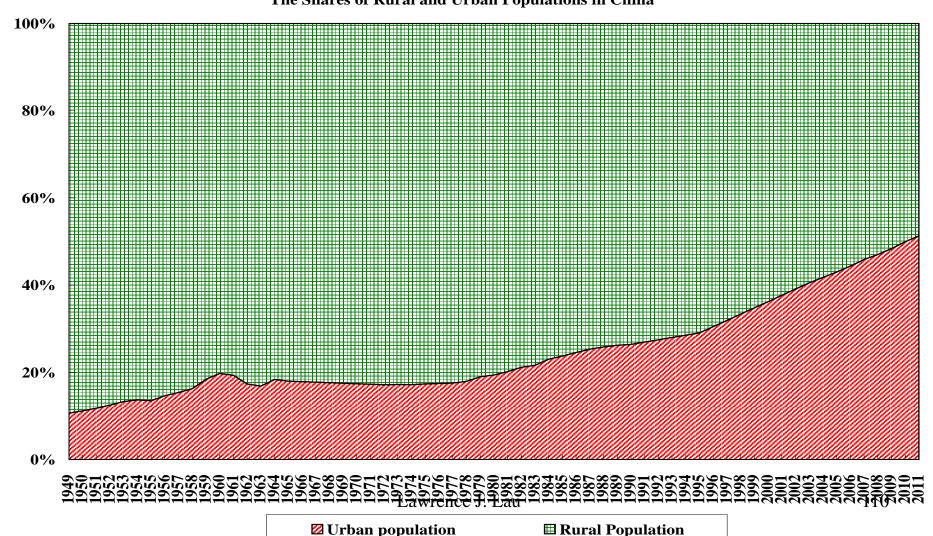
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- ◆ The possible areas that have the potential of generating sustainable increases in aggregate demand, in addition to household consumption and public infrastructural investment (e.g., high speed railroads, mass-transit systems, power plants, etc.), include:
- ◆ (1) Acceleration of urbanisation;
- (2) Residential housing;
- ◆ (3) Education and health care and the application of high technology in these sectors;
- ♦ (4) Conservation of energy, environmental protection and preservation, and promotion of the green economy.

- ◆ The share of rural population in China was just under 90% in 1949. By 1978, the beginning of the Chinese economic reform and opening to the World, the share of rural population was 82%. At the end of 2010, the share was 51%.
- ◆ By 2011, the share of rural population has fallen to 48.7%. It is expected to continue to fall during the period of the Twelfth Five-Year Plan, 2011-2015, to 47%. It is possible that this goal may be exceeded.
- ◆ The rate of decline of the share of rural population has been approximately 1 percentage point per year, about the same rate of decline as the share of employment of the primary (agriculture) sector.
- ◆ It is expected that the share of rural population will continue to decline by 1 percentage point a year until 2040, when the share of rural population will have fallerieto approximately 20%.

The Shares of Rural and Urban Population in China, 1949-Present





Urban population

- ◆ Instead of making the existing cities larger and more crowded, urbanisation should proceed by building new cities in the rural areas, particularly in the central and western regions, taking advantage of the traditional market towns and bringing capital and technology to labour rather than the other way around.
- ◆ Urbanisation in the rural areas is greatly facilitated if the rural households currently living on and working with their land can have their property rights recognised and made transferable and if the household registration (hukou) system can be reformed so as to allow conversion from a rural residency to an urban residency under certain conditions.

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- ◆ The inter-urban communication and transportation infrastructure needs to be further planned and improved, especially with the building of new cities. Super-high-speed trains are promoted as the preferred mode of transportation between major cities over air travel, resulting in significant savings of time as well as energy consumption.
- ◆ Central planning of new cities, with regard to their locations, layouts, land use, densities, and intra-urban communication and transportation infrastructure, is necessary—left entirely to itself, the market system will result in urban sprawls and slums and a heavy reliance on the private automobile, which neither China nor the World can afford from the point of view of energy consumption and carbon entires ion! ¹¹²

- ◆ Mass-transit systems should be the principal means of intra-urban transportation for existing as well as new cities, and as mentioned above, this requires planning and cannot be left to the market.
- ♦ With at least a couple of hundreds of Chinese cities of over say 2 million in population and requiring mass-transit systems, the planning, designing, building and operating mass-transit systems can become a huge new industry with significant domestic and eventually export demands.
- ◆ In order to economise on the use of the scarce land resource, and to assure the efficiency and environmental friendliness of the urban transportation system, high density land use should be mandated in the cities.

The Residential Housing Sector

- ◆ One important source of sustainable aggregate demand is owner-occupied residential housing. Despite significant development of residential housing during the past thirty years, there is still a great deal of room for it to grow, especially in the interior provinces and regions and for the middle-to-lower-middle income households.
- ◆ Owner-occupied residential housing has been a major engine of growth for many countries and regions for decades during their periods of fastest economic growth. There is no question that there is a huge potential demand in China.

The Residential Housing Sector

- ◆ The demand for residential housing also generates with it the derivative demands for furniture, electric home appliances such as air-conditioners, refrigerators, washing machines, and television sets, curtains, carpets, household goods and services and with them a great deal of employment and activities for not only large enterprises but also small and medium enterprises.
- ◆ In order to promote owner-occupied residential housing for all, one has to assure that there is both the supply and the demand. Supply can be promoted by making sure that land is available at an affordable cost and is used efficiently (that is, predominantly high-density use). Demand can be promoted by making available long-term (say 35 years),₁₁₅ fixed interest-rate mortgages.

- ◆ This is the time to increase support for the education sector across the board—primary, secondary and tertiary—and for the health care sector, expanding the accessibility, availability and affordability in the rural areas.
- ◆ Both the physical structures as well as the human resources of primary and secondary schools and of hospitals need to be upgraded, especially in the rural and low-income areas.

◆ In addition, China should adopt a policy of assuring low-cost or no-cost access to the internet by all students in China everywhere, all the way down to the primary school level. Promoting and making universal the laptop or the tablet is one way to achieve this goal. Many Chinese households are able to afford laptop computers—the difficulty is having inexpensive and ready access to the internet.

- ◆ Making the internet accessible, available and affordable everywhere in China (certainly from all the educational institutions) will greatly narrow degree of inequality of education (and information) between the urban and rural areas and reduce the so-called digital divide between the rich and the poor. It will be a great equaliser, because on the internet, for examples: a student in Qinghai, one of the poorest provinces in China, will have more or less the same access to information as a student in Shanghai; large and small enterprises will compete more or less equally.
- ◆ This will also create a great deal of domestic demand for the high-technology sector. Lawrence J. Lau 118

◆ Public health and preventive medicine should be widely promoted. Food and drug safety should be a top priority and high technology can be applied to testing and certification of food and drugs under the supervision of institutions with public credibility, such as the Chinese Academy of Sciences or the Chinese Academy of Engineering.

Environmental Protection and Green Technologies

- ◆ Green technologies can find significant application in the residential housing sector—in terms of heating, cooling, lighting, provision of electricity and hot water, etc.
- ◆ The mass-transit systems provide an indispensable alternative to the use of the automobile. "A car in every garage" would be a nightmare for China and for the World. Cities should be planned so that the residents do not require the use of an automobile in their everyday life (although they may well own an automobile for weekend and leisure use).

Environmental Protection and Green Technologies

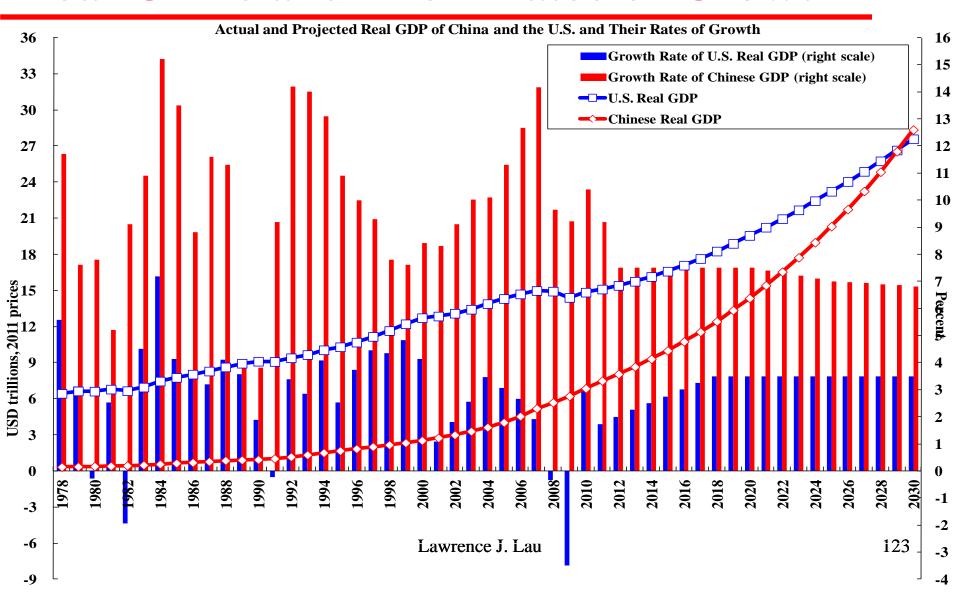
- ◆ China has an advantage in introducing technologies for green or greener vehicles because it has relatively little sunk costs. (An electric car consortium has been formed recently to develop an electric car suitable for China.) China also has a substantial incentive in developing clean coal technologies, having large coal reserves itself. China also has very large shale oil and gas reserves.
- ◆ It can also introduce and promote alternative renewable and clean sources of energy, such as solar power and wind power based on its own huge internal demand. However, the most promising directions are in energy conservation—the energy consumption/GDP ratio in China is still too high relative to other economies at a similar stage of economic development—and in the increased utilisation of hydroelectric and nuclear power for electricity generation. A gasoline tax can be imposed to bring the retail price of gasoline in China to Japanese and Western European levels.

Projections of the Future

- ◆ If current trends continue, with the U.S. economy recovering slowly but surely, East Asia as a whole will surpass the United States in terms of aggregate GDP with China contributing the highest proportion of the total by 2015.
- ◆ Chinese real GDP is projected to catch up to U.S. real GDP in approximately 18 years' time--around 2030, at which time both Chinese and U.S. real GDP will exceed US\$28 trillion (in 2011 prices). (Bear in mind that in the meantime, the U.S. economy will also continue to grow, albeit at rates lower than those of the Chinese economy.)
- ◆ By this time, China and the U.S. will each account for approximately 15% of World GDP.

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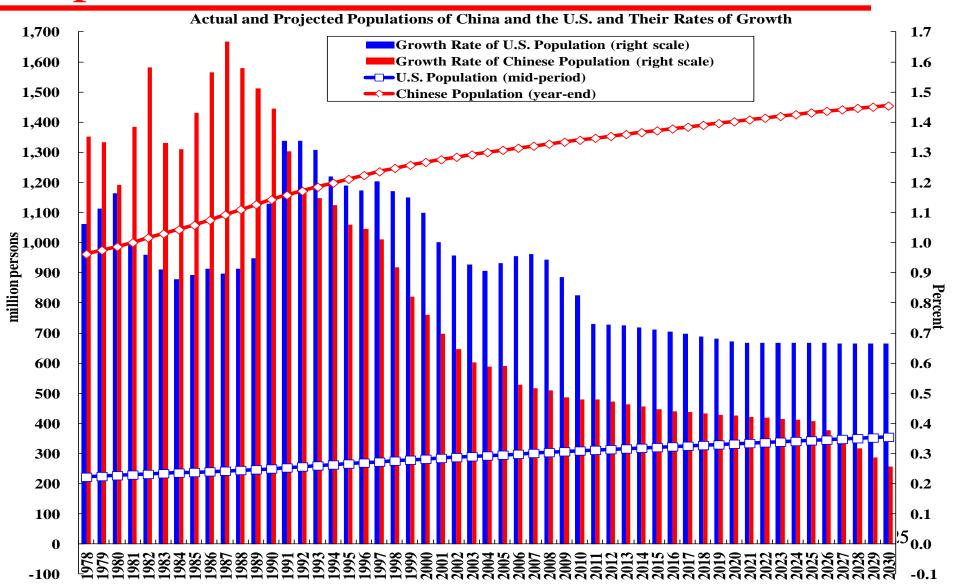
Actual and Projected Chinese and U.S. Real GDPs and Their Rates of Growth



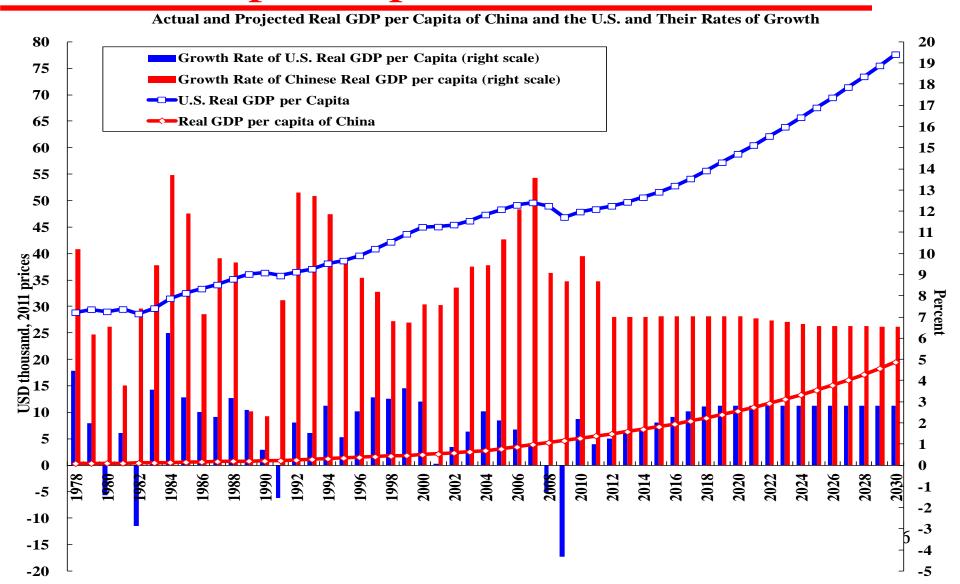
Projections of the Future

- ◆ During this period, Chinese population is projected to reach a plateau around 2045 and then become more or less stationery. Some population projections suggest that Chinese population will reach a peak in 2035; however, this scenario does not appear likely as the Chinese population policy is likely to be modified long before 2035.
- ◆ By 2030, Chinese real GDP per capita is projected to exceed US\$19,500, which will still only be slightly more than a quarter of the projected US per capita real GDP of US\$77,600.

Actual and Projected Chinese and U.S. Populations & Their Rates of Growth



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



Projections of the Future

- ◆ It will take another 30 years, some time around 2060, for China to reach the same level of real GDP per capita as the United States.
- ◆ By that time, Chinese GDP is likely to be more than three times the U.S. GDP, and will account for perhaps 30 percent of World GDP (depending on the rates of growth of other economies, especially the developing economies of today).
- ◆ According to Angus Maddison, China accounted for 30% of World GDP in early 19th Century.

Concluding Remarks

- ◆ On the basis of its economic fundamentals, China should be able to continue to grow around 7% per annum for the next couple of decades, more or less independently of what happens in 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.
- ◆ 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 economy.

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Concluding Remarks

- ◆ The long-term sustainable sources of Chinese aggregate demand will all be internal: urbanisation (building new cities), public infrastructure, mass-transit systems, household and public consumption, residential housing, investment in education and health care, environmental protection and preservation, energy conservation and renewable energy, and the green economy.
- ◆ Chinese consumption will rise, as GDP per capita and wage rate rise and the social safety net is gradually perfected. But the national savings rate may remain high for a long time.

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 be approximately balanced with the rest of the World.
- ◆ However, China may well become a net overseas direct as well as portfolio investor over the next decade.
- ◆ For 2012, the short-term economic targets of the Chinese Government are to achieve a real rate of growth of 7.5 percent and to control the rate of inflation to below 4 percent. I am confident that both targets are achievable.