Economic Development Trends of Mainland China

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- Chinese Economic Fundamentals
- External Dependence
- The Sources of Sustainable Growth of Aggregate Demand
- The Emergence of an East Asian Economic Community
- Concluding Remarks

Real Chinese GDP in US\$ Since 1952 (2009 Prices)



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 approximately 10% per annum over the past 30 years.
- Between 1978 and 2009, Chinese real GDP grew 18 times, from US\$274 billion to US\$4.91 trillion (2009 prices) (3rd largest economy in the world) and real GDP per capita grew more than 13 times, from US\$284 to US\$3,681. By comparison, the U.S. GDP (approx. US\$14.26 trillion) and GDP per capita (approx. US\$46,100) were respectively 3 and 12.5 times the comparable. Chinese figures in 2009. 4

Introduction

- China has survived the East Asian currency crisis of 1997-8 as well as the global financial crisis of 2007-8 reasonably unscathed.
- If current trends continue, Chinese GDP will approach the level of U.S. GDP in less than 20 years' time, some time between 2025 and 2030.

Real Chinese GDP per Capita in US\$ Since 1952 (2009 Prices)

Chinese Real GDP per Capita, in 2009 prices



Introduction

• However, despite its rapid growth, China is still a developing economy in terms of its real GDP per capita. An economy is generally considered to be developed if its GDP per capita exceeds US\$10,000 (if we take into account inflation, this threshold probably should be much higher). • It will probably take another 20 years before China joins the ranks of developed economies, achieving a per capita real GDP of US\$10,000, and a further 20 years before China reaches the same level of real GDP per capita as the United States, some time past the middle of the 21st Century (bear in mind that in the meantime, the U.S. economy will also continue to grow, albeit at rates significantly lower than those of China and that Chinese population will reach a peak in 2035 and then begin to decline slowly).

The Chinese Real GDP and Real GDP per Capita: Past, Present and Projected Future

197820092020US\$(2009 prices)Real GDP (trill.)0.2744.9110.00Real GDP/capita2843,6816,500

Introduction

- And despite the many problems that have arisen within the past decade—income disparity, environmental degradation, inadequate infrastructure—it is fair to say that everyone has benefited from the economic reform since 1978, albeit to varying degrees, and few want to return to the central planning days.
- 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 (e.g., Vietnam) and potential transition economies (e.g., North Korea).

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



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



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



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



The Economic Fundamentals

- Long-term economic growth of a country depends on its rates of growth of the primary inputs—capital and labour—and on technical progress (or equivalently total factor productivity)—that is, the ability to increase output without increasing inputs.
- The rate of growth of tangible capital depends on the rate of investment on structure, equipment and physical infrastructure, which in turn depends on the national savings rate.
- Almost all East Asian economies, with the possible exception of Philippines, have high savings rates. What this means is that the domestic savings in each economy are sufficient to meet the domestic investment needs for sustained economic growth without relying on foreign direct or portfolio investment flows or foreign loans.

The Economic Fundamentals

- Almost all East Asian economies at one time or another has also had an abundant supply of surplus labour (Japan, Taiwan, South Korea). Some, like China, still do. What this means is that such an economy can grow without being constrained by the supply of labour or by rising real wage rates of entry-level, unskilled labour over an extended period of time. Physical capital is very productive under these conditions and as long as there is sufficient complementary domestic physical capital, the surplus labour will allow the economy to grow rapidly.
- China also has a long tradition of emphasis on education and learning (human capital) sand entrepreneurship.

Chinese Economic Fundamentals

- Chinese economic growth during the past 30 years has been underpinned by three factors:
- (1) A consistently high domestic savings rate greater than 30 percent on average and occasionally approaching 45 percent—this means, among other things, the Chinese economy can finance all of its domestic investment needs from its domestic savings alone, and does not have to depend on foreign capital or foreign loans;
- ♦ (2) An unlimited supply of surplus labor—as long as the primary sector (agriculture and mining) produces approximately 10% of the GDP but employs almost 40% of the labor force, there is no shortage of and no upward pressure on the real wage rate of entry-level unskilled labor;
- (3) A huge domestic market of 1.3 billion consumers with pent-up demand for housing and transportation and other consumer goods and services (education and health care), enabling the realisation of significant economies of scale in production and in innovation based entirely on internal demand. Lawrence J. Lau, The Chinese University of Hong Kong

Savings Rate of Mainland China (1952-present)



Savings Rates of Selected Asian Economies (1952-present)



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



Are Chinese Households Saving Too Much?

- The high Chinese national savings rate, which sometimes approaches 50%, is also blamed as a cause of the Chinese trade surplus and hence the global imbalances and ultimately the global financial crisis.
- It is true that China has excessive domestic savings, but China also has excessive domestic investment. China both saves too much and invests too much. The excessive savings and excessive investment were in approximate balance and thus there was no excess savings, until 2005, when China began to have a trade surplus vis-à-vis the world, but not before that time.
- More recently, the Chinese trade surplus has declined significantly and turned into a trade deficit in 2010M3, reflecting the decline in export demand and the increase in domestic demand as a result of its economic stimulus program The University of Hong Kong 20

Savings Rates of Urban and Rural Households



Are Chinese Households Saving Too Much?

- The Chinese household savings rate, as distinct from the national savings rate, has been much lower, on the order of 30%.
- The savings behaviour of Chinese households on the Mainland are no different from those in Hong Kong and Taiwan at the same level of per capita household income, with an average savings rate of approximately 30%.

Chinese Savings Rates

- The share of Chinese national income received by the households can be increased if
- (1) the share of wages and salaries can be increased—this can only happen gradually as the general level of education is improved and human capital is accumulated; or
- (2) the Chinese enterprises can distribute more cash dividends to the households and to the Central Government (which owns almost 70% of all publicly listed enterprises) which can in turn increase their consumption (the government can spend the money on education, health care, and R&D).

Chinese Savings Rates

• However, there are limitations to (1) because of the existence of a vast reservoir of surplus labour, which prevents the real wage rate for entry-level, unskilled labour from rising. Thus, in the short and medium term, increasing the payout of cash dividends of state-owned enterprises is the most effective way of increasing consumption, both personal and government (since the government is the majority owner of most of the publicly listed state-owned enterprises).

Chinese Savings Rates

- However, increasing the payout of cash dividends will lower both savings and investment so that whether it will increase or decrease the net savings-investment gap remains to be seen. Households will increase their consumption and savings. Enterprises will decrease both their savings and investment. The government will increase both government consumption (for example, education and health care) and investment (for example, infrastructure).
- Moreover, it is also uncertain whether a simultaneous increase in total consumption and a decrease in investment will result in higher or lower imports. Many investment projects have very high import contents, Kong 25

The Fundamental Importance of Tangible Capital as a Source of Economic Growth

- The experience of Chinese economic growth confirms the overwhelming importance of the growth of tangible capital as a source of growth, especially in the early stages of economic development.
- The bulk of the gross domestic investment in China is financed by domestic savings. While helpful and even critical at times, foreign direct investment and foreign loans alone cannot sustain the rapid economic growth of China.
- This underscores the fundamental importance of domestic savings in Chinese economic growth--without the domestic savings financing the investment, the growth of the tangible capital input would not have been possible; and without the growth of the tangible capital input, the growth of real output would not have been possible. • Except for short early start-up periods, the domestic savings rate in China has always been high, on the order of 30 percent and above. A high domestic savings rate makes possible a high domestic investment rate. In addition heit has other, advantages. 26

The Advantages of a High Domestic Savings Rate

- A country with a high savings rate does not need to rely on foreign savings—does not need to borrow abroad and bear the potential risks of a large, and often interruptible, foreign-currency denominated debt.
- With new resources being made available each year from new savings, enabling new investments to be made, the necessity of restructuring and redeploying existing investment is greatly diminished (thus making it more possible to avoid creating losers).
- Moreover, with a high domestic savings rate, the non-state sector (which is generally more efficient) can grow without significant, possibly socially disruptive, large-scale privatization. Lawrence J. Lau, The Chinese University of Hong Kong 27

The Advantages of a High Domestic Savings Rate

- Latin American economies are the chronic sufferers of a low domestic savings rate. They are therefore forced to augment their domestic savings by borrowing abroad in foreign currency. But loans have to be repaid sooner or later. When that happens, there will be a net outflow of savings and investment and hence economic growth cannot be sustained; and often the net repayment will lead to an excess demand for foreign currency and a currency crisis will result, with a large devaluation.
- The low domestic savings rate in Russia made it necessary for Russia to privatize and restructure, a process which resulted in approximately a decade of declining real GDP and the creation of emany losers inversity of Hong Kong 28

The Distribution of Chinese GDP by Sector

The distribution of Chinese GDP by originating sector has become approximately: Primary, 11.3%; Secondary, 48.6%; and Tertiary, 40.1%. But the bulk of the labor force, more than 40%, is still in the primary sector, ensuring that there is no upward pressure on the real wage rate for unskilled entry-level labor for decades to come.

The Distribution of Chinese GDP by Sector Since 1952

The Distribution of GDP by Sector



Chinese Surplus Labour

- As long as the percentage of labour force in the primary sector (agriculture and mining) exceeds the percentage of GDP originating from the primary sector, there is little or no upward pressure on the real wage rate of entry-level, unskilled labour in the secondary and tertiary sectors.
- It took thirty years for the percentage of labour force in the Chinese primary sector to decline from 70 percent to its current 40 percent, at approximately 1 percent per year.

The Distribution of Chinese Employment by Sector Since 1952



Chinese Surplus Labour

- The surplus labour, coupled with the high rate of physical capital accumulation, has enabled the Chinese economy to grow rapidly. It is exactly what Nobel Laureate in Economic Sciences Prof. Arthur Lewis said in his famous paper on surplus labour more than fifty years ago.
 It will take another 30 years for the percentage of labour
 - force in the Chinese primary sector to decline below 10 percent, which is approximately the percentage of Chinese GDP produced by the primary sector today.

Chinese Economic Fundamentals

- In addition to a high national savings rate and a large pool of surplus labour, China 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).
- The large potential domestic market enables active Chinese participation in the setting of product and technology standards and sharing the benefits of such standard-setting.
- An abundance of scientific and technical manpower the cost of which is a fraction of the cost in developed economies.

Chinese Economic Fundamentals

- China has also begun to invest heavily in R&D in recent years.
- Chinese R&D expenditure has been rising rapidly, both in absolute value, and as a percentage of GDP.
- Investment in R&D capital is essential to innovation. As a result of this investment, the number of patents granted to Chinese applicants in the U.S. has also been rising rapidly.
- R&D capital can be shown to have a direct relationship to the number of patents granted.

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

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


R&D Expenditures as a Ratio of GDP: G-7 Countries, 3 East Asian NIES & China

Figure 8.1: R&D Expenditures as a Percentage of GDP: G-7 Countries, 3 East Asian NIEs and China



Patents Granted in the United States— East Asian NIEs and China



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



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



External Dependence of the Chinese Economy

- There is a common mis-impression that the Chinese economy is highly dependent on exports, and in particular, on its export surplus, as a source of growth.
- The fact is 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 growth of approximately 10 percent per annum since 1978.
- It should therefore be clear that the trade surplus could not have been an important source of growth for the Chinese economy during the past three decades. Chinese economic growth does not depend to the chinese trade surpluses. 41

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



External Dependence of the Chinese Economy

- Chinese exports as a ratio of GDP rose steadily and reached a peak of almost 40 percent in 2006 and then began to decline to approximately 25 percent in 2009.
- While this ratio appears large, it is not compared to Hong Kong, Singapore, South Korea and Taiwan, where exports are more than 100 percent of the respective GDPs.
- And it actually exaggerates the importance of exports in the Chinese economy because of the low domestic valueadded content of Chinese exports.

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

Chinese Exports of Goods and Services as a Ratio of GDP since 1970



Is Chinese Economic Growth Critically Dependent on Exports?

- The domestic value-added content of Chinese exports is no more than 30 percent, that is: for every dollar of goods exported, less than 30 cents, on average, consist of domestic value-added—the rest consists of imported raw materials, intermediate goods, components, parts, semi-finished goods, etc. The domestic value-added percentage is even less for the so-called "Processing and Assembly" exports.
- If we multiply the Exports/GDP ratio of say 40 percent (it is actually much lower) to the domestic value-added content of 30 percent, we obtain 12 percent, which is the maximum percentage of Chinese GDP attributable to exports.

Is Chinese Economic Growth Critically Dependent on Exports?

Now, 12 percent of GDP is a large number, and no economy can afford to lose 12 percent of its GDP overnight. However, if 12 percent of GDP does not grow, or even declines by 25 percent, as long as the other 88 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.

Is Chinese Economic Growth Critically Dependent on Exports?

- ♦ A 25 percent decline in Chinese exports should result in a 25 percent times 12 percent or 3 percent maximum decline in Chinese GDP, other things being equal. Thus, the reduction in exports caused by the global financial crisis should be expected to reduce the Chinese real rate of growth from 9 percent in 2008 to 6 percent in 2009, other things being equal.
- However, the 2-year, 4-trillion Yuan (equivalent to 8% of GDP per year) economic economic stimulus programme launched by the Chinese Government in November 2008 should help make up the short-fall in aggregate demand. And 8% growth should be achievable for 2010 following the 8.7% growth ine 2009 the Chinese University of Hong Kong

Is Chinese Economic Growth Critically Dependent on Exports?

- Moreover, even if Chinese exports manage to grow by 25 percent per year going forward (which is most unlikely), it will lead to only 3 percent overall economic growth, which is by itself hardly enough. That is why China cannot, and will not, rely on exports as a primary source of its future economic growth.
- If there were any lingering doubts on the degree of exportdependence of the Chinese economy, they should have been dispelled by the fact that the Chinese economy managed to achieve a real rate of growth of 8.7 percent in 2009, with exports down by 25 percent from 2008 and the U.S. and European economies still mireck in recession. 48

The Importance 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-theworld.
- 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), business models but money alone is not enough for successful foreign direct investment in China today Kong 49

The Importance 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 only very marginal impact on the real rate of growth of the Chinese economy.

External Dependence of Mainland China

An important implication of the relatively low external dependence of Chinese GDP is that the rate of growth of Chinese real GDP is relatively stable 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 the 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 Importance of International Trade

- Large continental economies, such as the United States, are mostly driven by their internal demands, and not by trade.
 Exports have never been very important to the U.S. economy, and the U.S. economy has never been dependent on exports, except perhaps in the 19th Century.
- For the Chinese economy it is the same—Chinese economic growth in the future decades will mostly depend on internal demand rather than exports.

The Shifting Economic Centre of Gravity and the Partial De-Coupling Hypothesis

- East Asia is taken to mean the 10 ASEAN countries (Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam) + 3 (China (including Hong Kong, Macao and Taiwan), Japan, and South Korea), that is, approximately, everything east of Bangladesh and west of the Pacific Ocean.
- The "Partial De-Coupling Hypothesis" says that while East Asia is not immune from the effects of the economic recession in North America and Europe, it can nevertheless continue growing, albeit at somewhat lower rates, even with economic contraction in North America and Europe.
- Partial de-coupling is a consequence of the economic centre of gravity of the world gradually shifting to East Asia from the United States and Western Europe and within East Asia from Japan to China (but the shifts are not yet completed).

The Shifting Economic Centre of Gravity

- In the following charts, East Asian and Chinese GDP as percentages of World GDP are respectively presented.
 Both show very strong trends of growth over the past half a century.
- In 1960, East Asian GDP, comprising of the GDPs of ASEAN (Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam)
 + 3 (China (Mainland only), Japan, and South Korea) was just over 10 percent of World GDP.
- Today, East Asian economies account for approximately a quarter of World GDP, comparable to the size of the U.S.
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East Asian Share of World GDP, 1960-present



China's Share of World GDP, 1960-present



Can the Economies of East Asia/China be De-Coupled from the U.S. and Europe?

- Given the current trends in rates of economic growth, East Asia will surpass the United States in terms of aggregate GDP with China perhaps contributing the highest proportion of the total by 2015.
- This is what gives credence to the idea of partial "decoupling" of the World economies—that the Chinese and East Asian economies can continue to do reasonably well despite the current economic problems in the U.S. and elsewhere.
- However, China, with its GDP accounting for only 7% of the World total, and East Asia are not large enough to turn around the whole World. The talk about G-2 is premature.
 Lawrence J. Lau, The Chinese University of Hong Kong

The Shifting Economic Centre of Gravity

- East Asian shares of World exports, imports, and international trade have also grown from approximately 10 percent in 1960 to a quarter in 2008, paralleling the growth of East Asian share of World GDP (see the following chart).
- Similarly, Chinese shares of World exports, imports and international trade have also grown.
- Chinese exports and imports have risen from approximately 1 percent of World exports and imports in 1960 to approximately 10 percent of World exports and imports in 2008.

The Rising Ratio of East Asian Trade in Total World Trade, 1960-present

East Asian Share of Total World Trade, 1960-present



Rising Intra-East Asian Interdependence

- The emergence of the Chinese economy on the global market was the one most important new development during the past three decades.
- China has overtaken Japan to become the largest exporting country in East Asia. China has also overtaken Japan to become the largest importing country in East Asia and the most important export market for almost all East Asian economies and runs trade deficits vis-à-vis almost every other East Asian economy.
 - Japan has been China's largest trading partner for the past decade and a half and China became Japan's largest source of imports in 2002. The recent pick-up in economic activities in Japan is due in no small parts to the Chinese demand for Japanese exports.

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



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

The Ratio of Chinese Trade to East Asian Trade **40** The Ratio of Chinese Exports to East Asian Exports The Ratio of Chinese Imports to East Asian Imports 35 The Ratio of Chinese Total Trade to East Asian Total Trade 30 25 Dercent 70 15 10 5 0

The Shifting Economic Centre of Gravity

- Because of the rapid economic growth of China and the rest of East Asia outside of Japan, and the demand and supply that such economic growth has generated, the East Asian economies now trade more with one another than with economies outside of East Asia, including the United States. By the late 1990s, approximately half of East Asian trade is among East Asian economies (see the following charts).
- And while much of the trade consists of raw materials, components, and semi-finished goods which are further processed for exports to developed economies ultimately, much of it has also found itself into the final demands of the domestic markets.
- This is a sea change compared to say thirty years ago when most of the East Asian trade was between East Asia and the United States and Western Europenand-moth-within/EasityAshagitself.

The Share of East Asian Exports Destined for East Asia



The Share of East Asian Imports Originated from East Asia



The Changing Pattern of World Trade

- Interdependence of the East Asian economies has been rising sharply over the years and East Asian dependence on the United States and Western Europe has declined.
 Interdependence of the East Asian economies will rise even further within the next five to ten years as East Asia becomes the only region with a high rate of economic growth.
- The ASEAN Free Trade Area as well as its variations (+1 (China); + 3 (China, Japan and South Korea)) are rapidly becoming a reality. (There is also the more recently concluded Indo-ASEAN Free Trade Agreement.)

Lawrence J. Lau, The Chinese University of Hong Kong

Sources of Sustainable Growth of Aggregate Demand

- Chinese economic growth beyond 2010 will have to depend mostly on internal demand and not on exports.
- The possible sectors, in addition to public infrastructural investment, include:
- ♦ (1) Owner-occupied residential housing
- (2) Education and Health Care and the introduction of high technology
- (3) Acceleration of urbanization and construction of mass transit systems
- (4) Conservation of energy, environmental protection and preservation, and promotion of the green economy

Lawrence J. Lau, The Chinese University of Hong Kong

The Owner-Occupied Residential Housing Sector

- One important source of sustainable aggregate demand is owneroccupied residential housing. Despite significant development of residential housing during the past thirty years, there is still a great deal of room 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 here in China.
- The demand for residential housing also generates with it the derivative demands for furniture, refrigerators, washing machines, television sets, curtains, carpets, household goods and services and with them a great deal of employment and activities for small and medium enterprises. It will generate demand for many products that face a sharply reduced export demand. It will help these enterprises to reorient themselves to serve the domestic market.

The Owner-Occupied Residential Housing Sector

• Two measures will greatly increase the demand for owneroccupied residential housing. First, longer-term, say thirty-five years, owner-occupied residential mortgage loans meeting certain criteria should be promoted. Second, fixed-rate mortgage loans should be offered for the duration of the loan period. These two measures will make residential housing ownership affordable (through the large reductions in the required monthly payments) and safe (through the fixed-rate feature reducing the risks of a variable interest rate) to a large majority of the middle- and lower-income households.
The Owner-Occupied Residential Housing Sector

- Long-term fixed rate mortgage loans made by commercial banks can be "toxic" because they do not have long-term fixed rate deposits and can easily get into trouble when the interest rate on short-term deposits rise. Thus a state policy bank, say, China Home Loan Bank, can be established to issue long-term fixed-rate bonds (potential purchasers are insurance companies and pension funds which have long-term funds and do not need the liquidity) and with the proceeds purchase qualified mortgage loans from the commercial banks.
- It is even possible for the rate of interest on such mortgage loans to be lowered since the state policy bank does not need such a large interest rate spread.
- In order that the market for residential housing, and hence the market for mortgage loans, functions properly, the rights of the home-owner owning the property and the rights of the lender, in the event of a loan default, must be protected.
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The Education and Health Care Sectors

- This is the time to increase support for the education sector across the board—primary, secondary and tertiary and for the health care sector, extending the accessibility and availability 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. • In addition, China should adopt a policy of assuring low-cost or nocost 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 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.
- 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 heerifications of Hong Kong 74

The Education and Health Care Sectors

- Making the internet accessible everywhere in China will greatly narrow the 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, for example, large and small enterprises will compete more or less equally on the internet.
- This will also create a great deal of domestic demand for the high-technology sector which faces a sharp and possibly long-term decline in their export markets.

Urbanization and Mass-Transit Systems

- Urbanization should be accelerated, but instead of making the existing cities larger and more crowded, new cities should be built in the rural areas, bringing capital and technology to labour rather than the other way around.
- Urbanization in the rural areas is possible only if the rural households currently with using their land can have their property rights recognized and made transferable.
- The inter-urban communication and transportation infrastructure needs to be further planned and improved, especially in the building of new cities. Super-high-speed trains should be promoted as the preferred mode of transportation between major cities.
- Central planning of new cities, with regard to their locations, layouts, land use, densities, and intra-urban communication and transportation infrastructure, his frequired, of Hong Kong 76

Urbanization and Mass-Transit Systems

- Mass-transit systems should be the principal means of intra-urban transportation for existing as well as new cities, and this also requires planning, preferably from the very beginning, and cannot be left to the market.
- With at least a couple of hundreds of Chinese cities say over 2 million in population and requiring mass-transit systems, the planning, designing, building and operating mass-transit systems can be a huge new industry with significant domestic and eventually export demand.
 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 fing the cities.

Environmental Protection and Green Technologies

- Green technologies can find significant application in the residential housing sector—in terms of heating, cooling, lighting, provision of 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. Urban residents should not require the use of an automobile in their everyday life.
- China has an advantage in introducing technologies for green or greener vehicles because it has relatively little sunk costs. China also has a substantial incentive in developing clean coal technologies, having large coal reserves itself.
- It can also introduce and promote alternative sources of energy, such as solar power and wind power based on its own huge internal demand.
 Lawrence J. Lau, The Chinese University of Hong Kong 78

The Sources of Chinese Economic Growth

- Chinese economic growth over the past three decades has been mostly driven by the growth of inputs, principally tangible capital (structures, equipment, and physical infrastructure) and not by technical progress or growth in total factor productivity. 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 percent) of the measured economic growth in China. The tangible capital stock has been growing at approximately^{L4v5n}percent^Cper year<sup>ty of Hong Kong</sub> 79
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The Fundamental Importance of Domestic Savings

- The bulk of the gross domestic investment in China is financed by domestic savings. Foreign direct investment accounts for approximately 10% of gross domestic investment in China. While helpful, foreign direct investment and foreign loans alone cannot sustain the rapid economic growth of China.
- This underscores the fundamental importance of domestic savings in Chinese economic growth--without the domestic savings financing the investment, the growth of the tangible capital input would not have been possible; and without the growth of the tangible capital input, the growth of real output would not have been possible.

The Advantages of a High Domestic Savings Rate

- Except for a short early start-up period in the early 1950s, the Chinese domestic savings rate has always been high, on the order of 30 percent. In recent years, it has approached 40-50%.
- A high domestic savings rate makes possible a high domestic investment rate. In addition, it has other advantages.

The Advantages of a High Domestic Savings Rate

- A country with a high savings rate does not need to rely on foreign savings—does not need to borrow abroad and bear the potential risks of a large, and often interruptible, foreign-currency denominated debt.
- With new resources being made available each year from new savings, enabling new investments to be made, the necessity of restructuring and redeploying existing investment is greatly diminished (thus making it more possible to avoid creating losers).
- Moreover, with a high domestic savings rate, the non-state sector (which is generally more efficient) can grow without significant, possibly socially disruptive, large-scale privatization. Lawrence J. Lau, The Chinese University of Hong Kong 82

Is Chinese Economic Growth Sustainable?

- The Chinese economy still lags far behind developed economies in tangible capital per unit labor.
- There is therefore considerable room for the continuation of rapid tangible input-driven economic growth in the future before diminishing returns step in.
- Intangible capital per unit labor, e.g., R&D capital, lags even further behind, offering additional opportunities for investment.
- Investment in intangible capital has begun to increase in some of the East Asian NIEs (South Korea and Taiwan), in R&D capital and in other forms of intangible capital (e.g., goodwill).

Is Chinese Economic Growth Sustainable?

- Boskin and Lau (1990) found that tangible capital, human capital, and technical progress (intangible capital) are complementary. At the microeconomic level, this phenomenon is manifested in the form of capital-skill, capital-technology and skill-technology complementarity.
 - Investment in intangible capital can enhance the productivity of tangible capital because of its complementarity with tangible capital and retard the decline in the marginal productivity of tangible capital and hence counteract the so-called "Krugman effect." Japan, and more recently South Korea and Taiwan, have shown how this can be done!
- Also, intangible capital is complementary with scale. The size of the Chinese economy is a huge advantage.

Is Chinese Economic Growth Sustainable?

- The attractiveness of investment in intangible capital depends on the protection of intellectual property rights, which in turn depends on whether a country is a producer of intellectual property--some of the East Asian economies, e.g., Hong Kong, South Korea, Singapore and Taiwan are ahead of other East Asian economies with the possible exception of Japan on this score.
- There is also empirical evidence of positive technical progress in the more recent period in South Korea, Singapore and Taiwan, reflecting their increased investment in intangible capital.

The Emergence of an East Asian Economic Community

- Interdependence of the East Asian economies has been rising sharply over the years and East Asian dependence on the United States and Western Europe has declined. Interdependence of the East Asian economies will rise even further within the next five to ten years as East Asia becomes the only region with a high rate of economic growth.
- The ASEAN Free Trade Area as well as its variations (+1 (China); + 3 (China, Japan and South Korea)) are rapidly becoming a reality. (There is also the more recently concluded Indo-ASEAN Free Trade Agreement.)

Towards an East Asian Economic Community: Areas of Cooperation

- Trade and investment--ASEAN + 3 (China, Japan and Korea) Free Trade Area (AFTA + 3); Harmonization of rules on foreign investment in East Asia; mutual investment protection and no double-tax agreements;
- Currencies, exchange rates and international settlement--Intra-Asian settlement mechanism; Real exchange rate coordination among East Asian economies; a common East Asian currency?
- Integration of East Asian capital markets--Coordination of regulation and supervision of financial markets in East Asia; cross-listing of securities; an East Asian bond market in local currencies<sup>nce J. Lau, The Chinese University of Hong Kong</sub> 87
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ASEAN + 3 (China, Japan and Korea) Free Trade Area

- The free trade area will have a population close to 2 billion consumers, providing a huge market for all the member countries that is sufficiently large to realise all the economies of scale in manufacturing, innovation and markets (brand building).
- Such a free trade area will allow comparative advantages to be fully exploited and the benefits of international trade to be fully realised.
- It will also greatly increase investment, especially if the free trade area is accompanied by efforts for real exchange rate coordination.

- The experiences of developed economies, especially that of Japan, and that of the East Asian NIEs in the more recent period, suggest that investment in R&D capital and other forms of intangible capital has high returns once a level of tangible capital per unit labor has been achieved.
- The complementarity of intangible capital and scale favors economies with large markets. The experiences of the United States and more recently China suggest that the size of the market can greatly increase returns to private investment in intangible capital.
 Intangible capital cap grow only through investment in education
 - Intangible capital can grow only through investment in education (human capital) and R&D. It is critical for East Asia to develop its own scientific and technological base in order for it to sustain its continued economic growth.

- That the United States has the highest rate of measured technical progress in the world, even though other economies may have invested similar percentages of their real GDPs in R&D, may be explained in part because of its own large domestic market. Additionally, its own large domestic market raises the expected rate of return on investment in intangible capital to potential private investors (venture capitalists) and hence increase the private investment in intangible capital in the United States.
- Globalization of world markets thus enhances the returns to intangible capital and measured technical progress for the world as a whole Lau, The Chinese University of Hong Kong 90

Continuing economic integration of the East Asian economies is inevitable—East Asian economies now trade more with one another than with either United States or Europe and are likely to continue to do so, especially given the economic problems being faced by the United States. • There is a great deal of scope for economic cooperation in East Asia that can be beneficial for all East Asian economies. The key is for the East Asian economies to maintain a common set of standards and not to engage in unhealthy competition among themselves, to the detriment of all.

- The experience of the East Asian Currency Crisis in 1997 shows that the downturns were sharp when they occurred simultaneously but the upturns were also rapid and sharp when all economies recovered together. This shows that the East Asian developing economies as a group can grow independently of the U.S. and Europe.
- The partial de-coupling of global economic growth is a new phenomenon. But with the rapid economic growth of not just East Asia, but also the other BRIC economies (Brail, Russia and India), the world should be able to manage even as the U.S. economy slows down or goes into a recession. Lawrence J. Lau, The Chinese University of Hong Kong 92

- The external dependence of the Chinese economy is actually quite low, and it should be able to continue growing at an average rate of 8 percent per annum for at least another couple of decades, driven by its strong economic fundamentals and based on its own domestic internal demand.
- Chinese GDP will probably equal U.S. GDP 20 years from now.
- It will probably take another twenty years, to the middle of this Century, for Chinese per capita GDP to reach a level comparable to that of U.S. per capita GDP.
- International trade will continue to be important, but not critical to the growth of the Chinese concerns.

- China will be internationalising the Renminbi gradually and in a planned and orderly manner. It has already made a beginning by allowing the Renminbi to be used on a voluntary basis as a settlement currency in its international trade with selected countries and regions.
- It is possible that the Yuan will become fully or almost fully convertible within the next five years. The global financial crisis has paradoxically accelerated rather than retarded the progress of the Renminbi towards full convertibility.
- However, it is also in China's interests to seek alternatives to the use of the US\$ as the principal medium of exchange for the conduct of international transactions. It will not necessarily be through making the Yuan an international reserve currency; it is possible to develop a clearing and settlement mechanism within East Asia based on local currencies.