

China and the World: Economic Interdependence 中国与世界：经济相依存

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The China Construction Bank High-Level Training Seminar
Hong Kong, September 24, 2008

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Introduction

- ◆ Approximately ten years ago, at the height of the East Asian currency crisis, I wrote an article, “The Sky is not Falling (天塌不下来),” basically saying that the Chinese economy will be able to emerge from the crisis more or less whole. China at the time decided not to devalue the Renminbi even though every other East Asian economy, except Hong Kong, had done so. This was helpful not only to China itself, but also enabled the relatively fast recovery of the other East Asian economies, and earned their gratitude and respect.
- ◆ Today, the external environment facing the Chinese economy is similarly negative, though in a totally different way. There is a major financial crisis in the United States, the magnitude of which has not been seen since the Great Depression of 1929. I would argue that despite the economic slowdown and possible recession in the U.S. and perhaps in some of the Western European countries, the Chinese economy will also be able to manage to continue to grow based on its internal demand alone. Thus, once again, “The Sky is not Falling (天塌不下来).”

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 2007, Chinese real GDP grew fifteen-fold, from US\$228 billion to US\$3.42 trillion (2007 prices) (4th largest economy in the world) and real GDP per capita grew more than ten-fold from US\$236 to US\$2,571. By comparison, the U.S. GDP (approx. US\$13.84 trillion) and GDP per capita (approx. US\$45,671) were respectively 4 and 18 times the comparable Chinese figures in 2007.

Introduction

- ◆ 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 raised).
- ◆ It will probably take another 20-25 years before China joins the ranks of developed economies, and a further 20-25 years before China reaches the same level of real GDP per capita as the United States (some time around the middle of the 21st Century).

Real GDP & Real GDP per Capita: Past, Present & Projected Future

	1978	2007	2020
	US\$	(2007 prices)	
Real GDP (trill.)	0.228	3.42	8.00
Real GDP/capita	236	2,571	5,500

Introduction

- ◆ 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 does not depend on foreign capital or foreign loans;
- ◆ (2) An unlimited supply of surplus labor—as long as the primary sector 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 realization of significant economies of scale in production and in innovation based entirely on internal demand.

Introduction:

The Chinese Advantages in Innovation

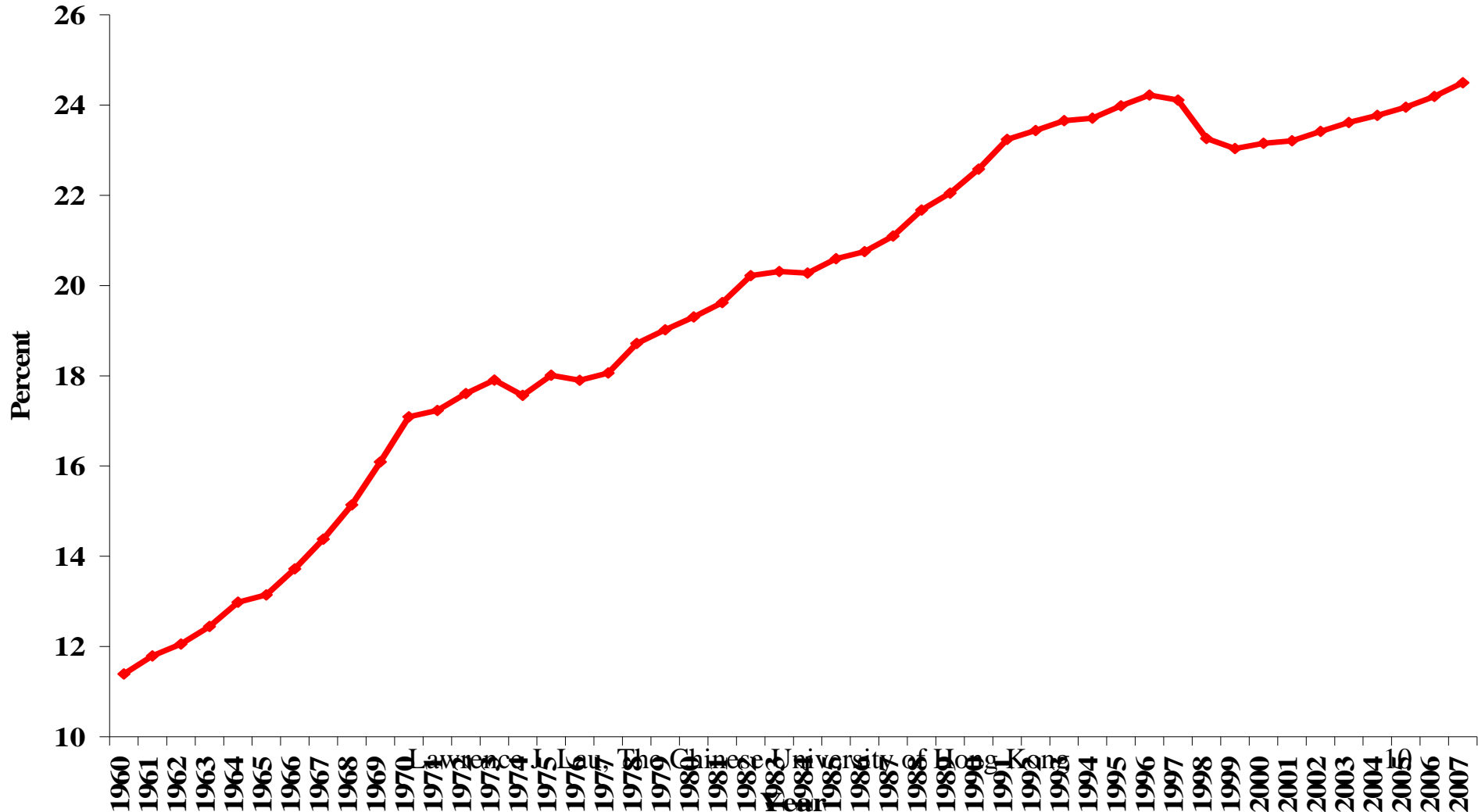
- ◆ Moreover, China has the advantage of backwardness:
 - ◆ The ability to learn from the successes and failures of other economies;
 - ◆ The ability to leap-frog stages of development (e.g., the telex machine, the VHS video players, the fixed landline phones); and
 - ◆ The possibility of creation without destruction (e.g., online virtual bookstores do not have to destroy brick and mortar bookstores which do not exist in the first place).
- ◆ The large potential market enables active participation in the setting of standards and sharing the benefits of standard-setting.
- ◆ As well as the advantage of an abundance of scientific and technical manpower the cost of which is a fraction of the cost in developed economies.

Introduction

- ◆ Moreover, Chinese economic growth has not been at the expense of the Rest of the World. It has not been a zero-sum game. Almost every country has benefitted from China's economic progress and its opening to the world. For example:
 - ◆ The consumers in the developed economies are able to enjoy low and stable prices for their everyday light-manufactured consumer goods.
 - ◆ China has become the most important importing country for and runs a trade deficit with almost every country and region in East Asia, including Japan.
 - ◆ China has become a major donor of development aid and assistance to developing countries, especially those in Africa.

East Asian Share of World GDP, 1960-present

East Asian Share of World GDP, 1960-present

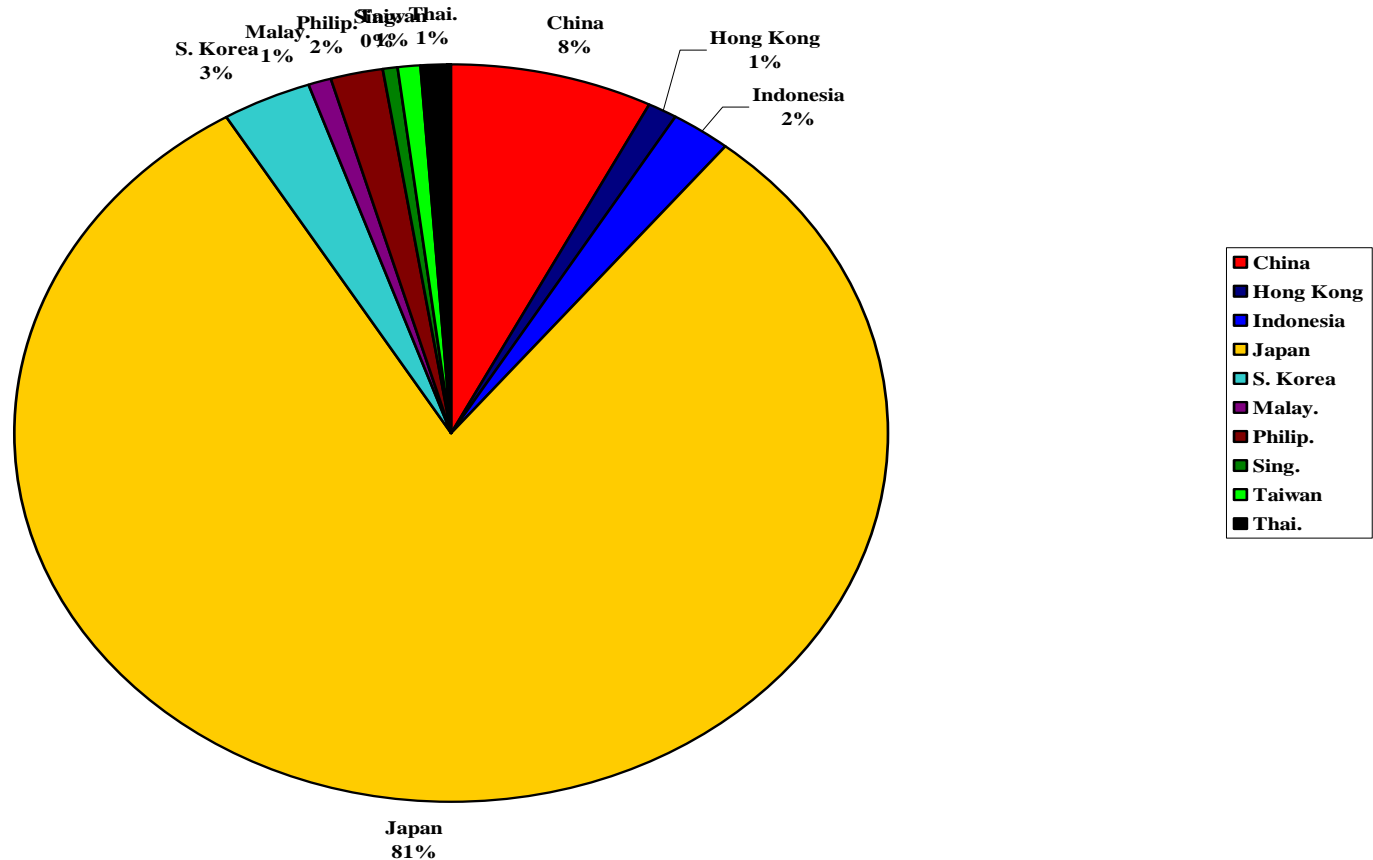


The Chinese Economy in the World: The Shifting Economic Center of Gravity

- ◆ The economic center of gravity of the world has been gradually shifting to East Asia from the United States and Western Europe.
- ◆ In 1960, the GDP of ASEAN (Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam) + 3 (China (Mainland only), Japan, and South Korea) was approximately 40% of US GDP, with Japan contributing more than 80% of total East Asian GDP, followed by China (Mainland only), with not quite 8%.
- ◆ In 2006, the GDP of ASEAN + 3 was approximately comparable to that of US GDP, with Japan contributing a little more than a half of total GDP, followed by China (Mainland only), which contributed somewhat more than 20%.
- ◆ South Korea, and Hong Kong, Macau, and Taiwan combined, contributed between 10% and 15%.
- ◆ ASEAN + 3 is also comparable to the Zone Euro in terms of the order of magnitude of its GDP.

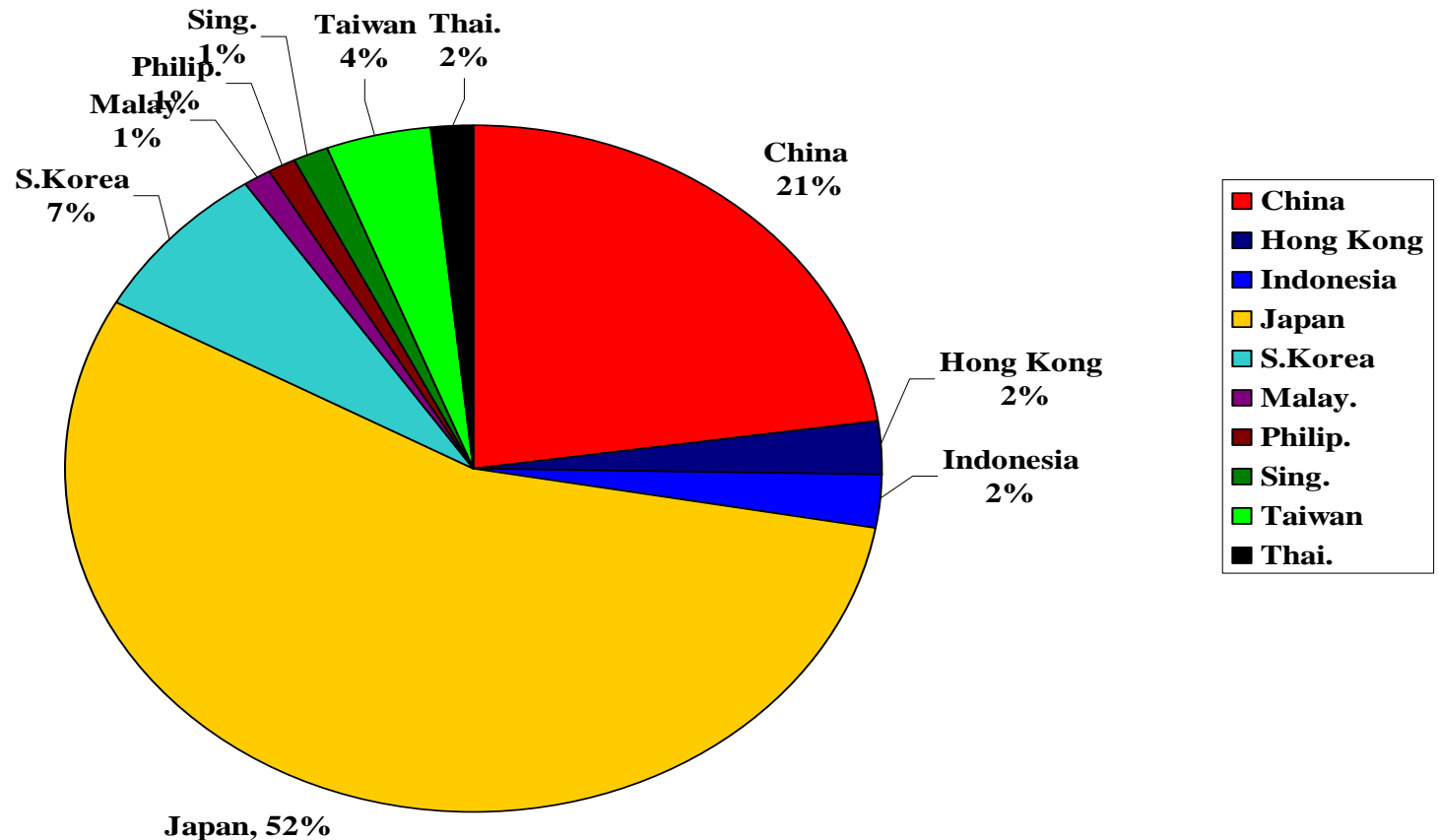
Composition of East Asian GDP, 1960

Figure 2.1: Composition of East Asian GDP, 1960



Composition of East Asian GDP, 2006

Figure 2.1: Composition of East Asian GDP in 2006 (in 2000 prices)

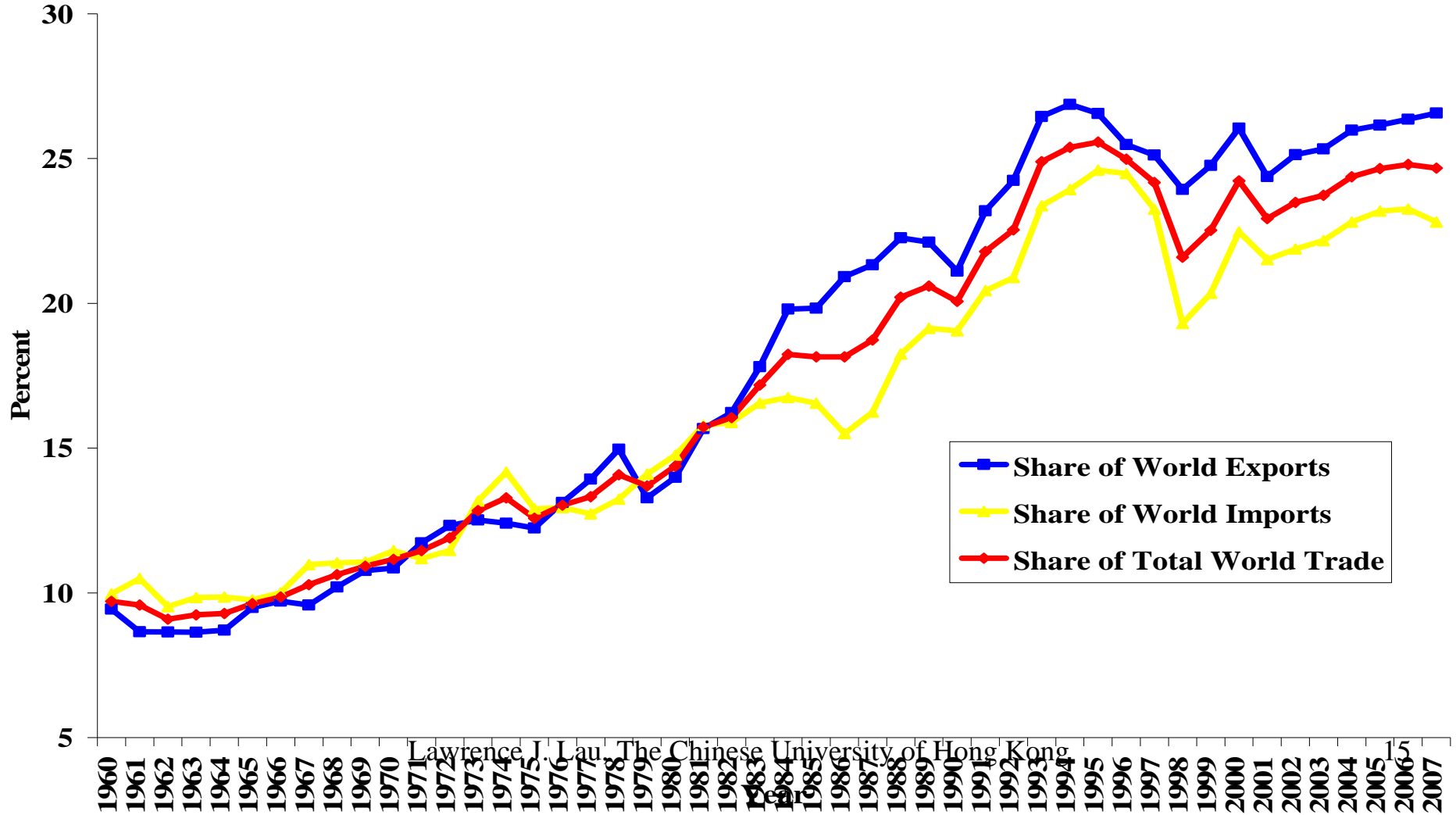


The Shifting Economic Center of Gravity

- ◆ These figures and percentages are sensitive to the exchange rates used for the conversion, but the general conclusions that (1) The contribution of East Asia to total World GDP has increased significantly; (2) The contribution of East Asia other than Japan to East Asian GDP has also increased significantly; and (3) Japan remains for the time being the leading economy within East Asia in both aggregate and per capita terms are reasonably robust to exchange rate changes.
- ◆ However, given the trends in current rates of economic growth, ASEAN + 3 will probably surpass the United States in terms of aggregate GDP with China perhaps contributing the highest proportion of the total by 2010.
- ◆ This is what gives credence to the idea of “de-coupling” 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.

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

East Asian Share of Total World Trade, 1960-present

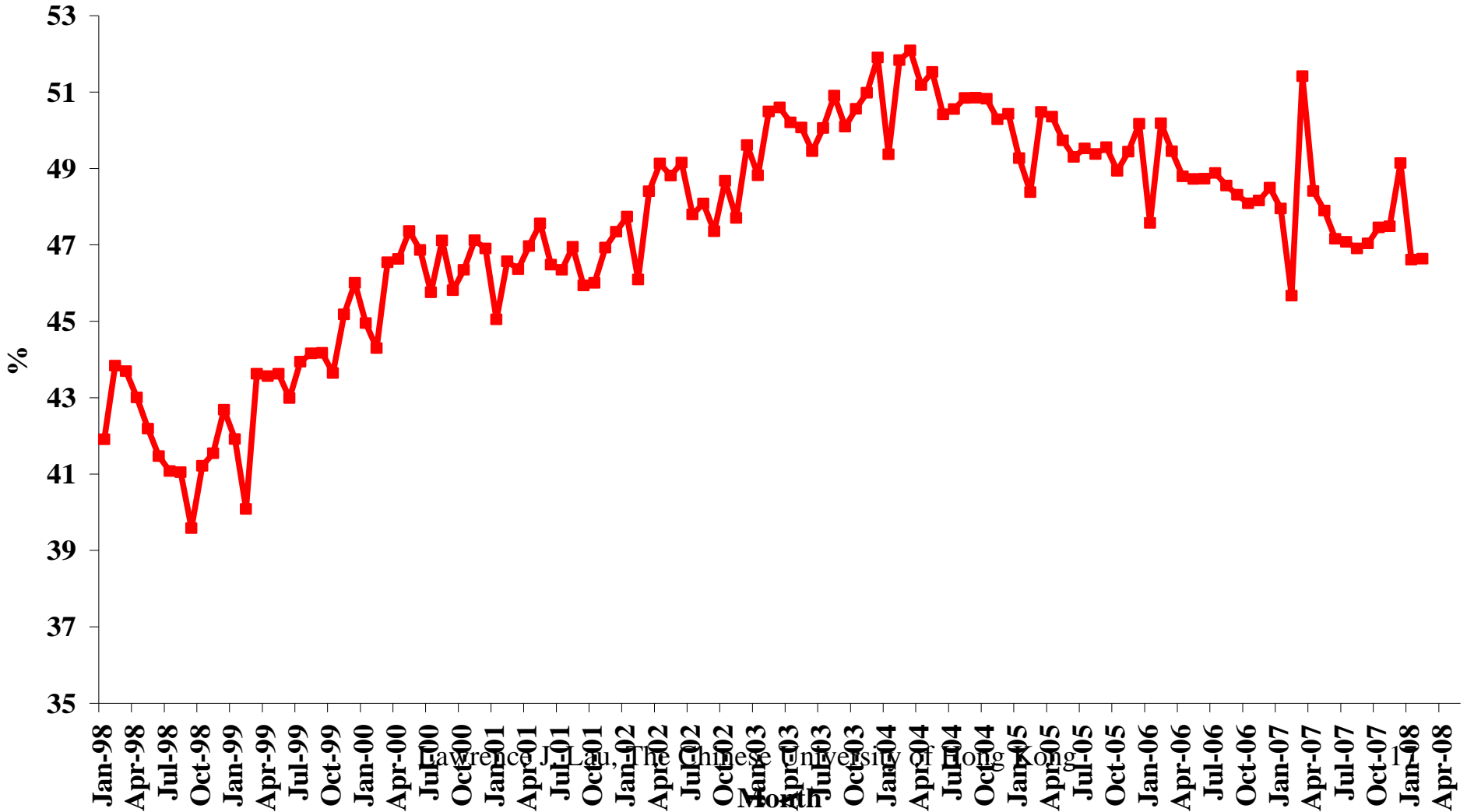


The Chinese Economy in the World: The Changing Pattern of World Trade

- ◆ Because of the rapid economic growth of China and the rest of East Asia, 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. This is a sea change compared to say thirty years ago.
- ◆ 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.
- ◆ 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 one.
- ◆ The ASEAN Free Trade Area as well as its variations (+1 (China); +3 (China, Japan and South Korea)) are rapidly becoming a reality.

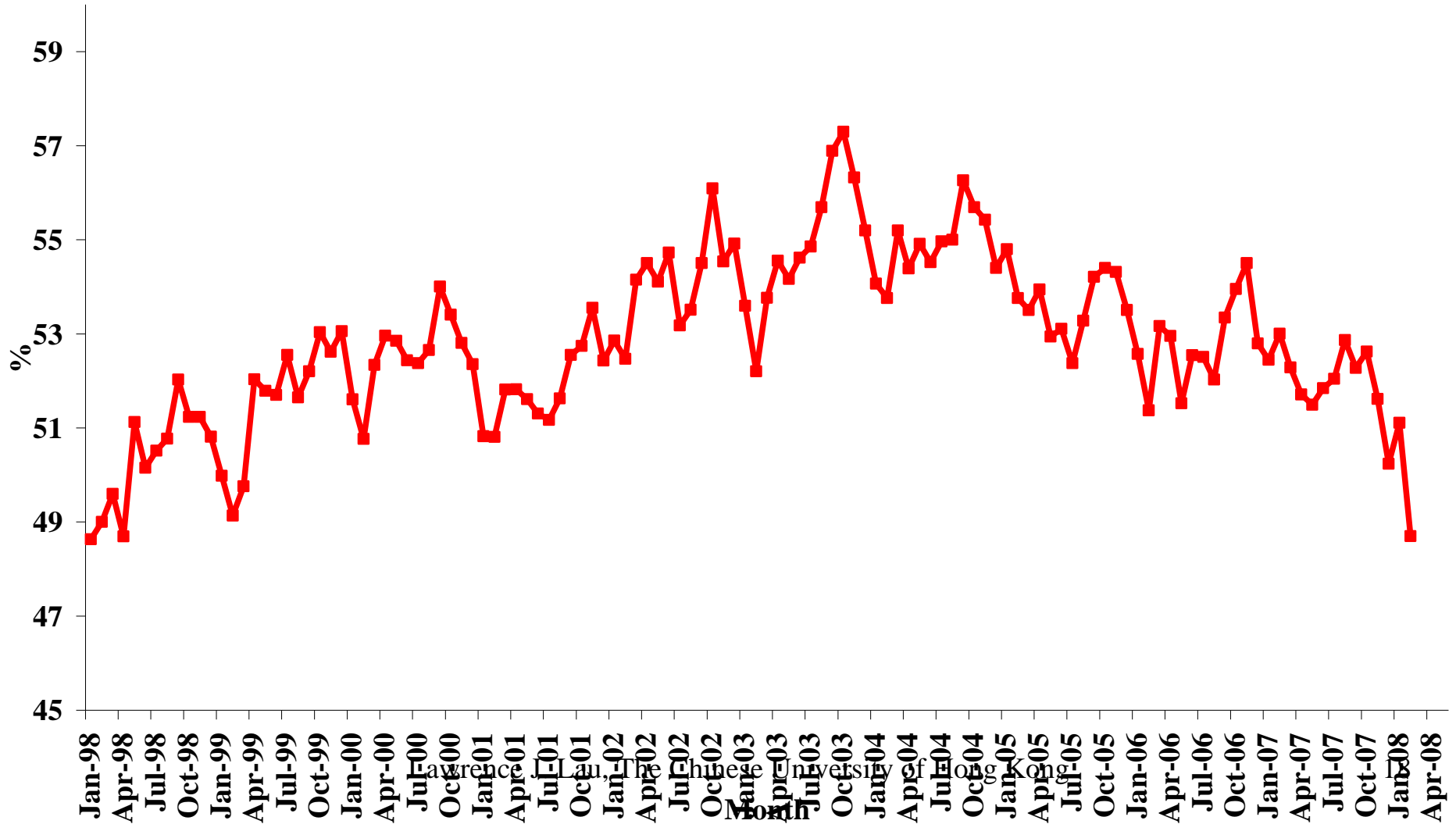
The Share of East Asian Exports Destined for East Asia, 1960-present

The Share of East Asian Exports Destined for East Asia



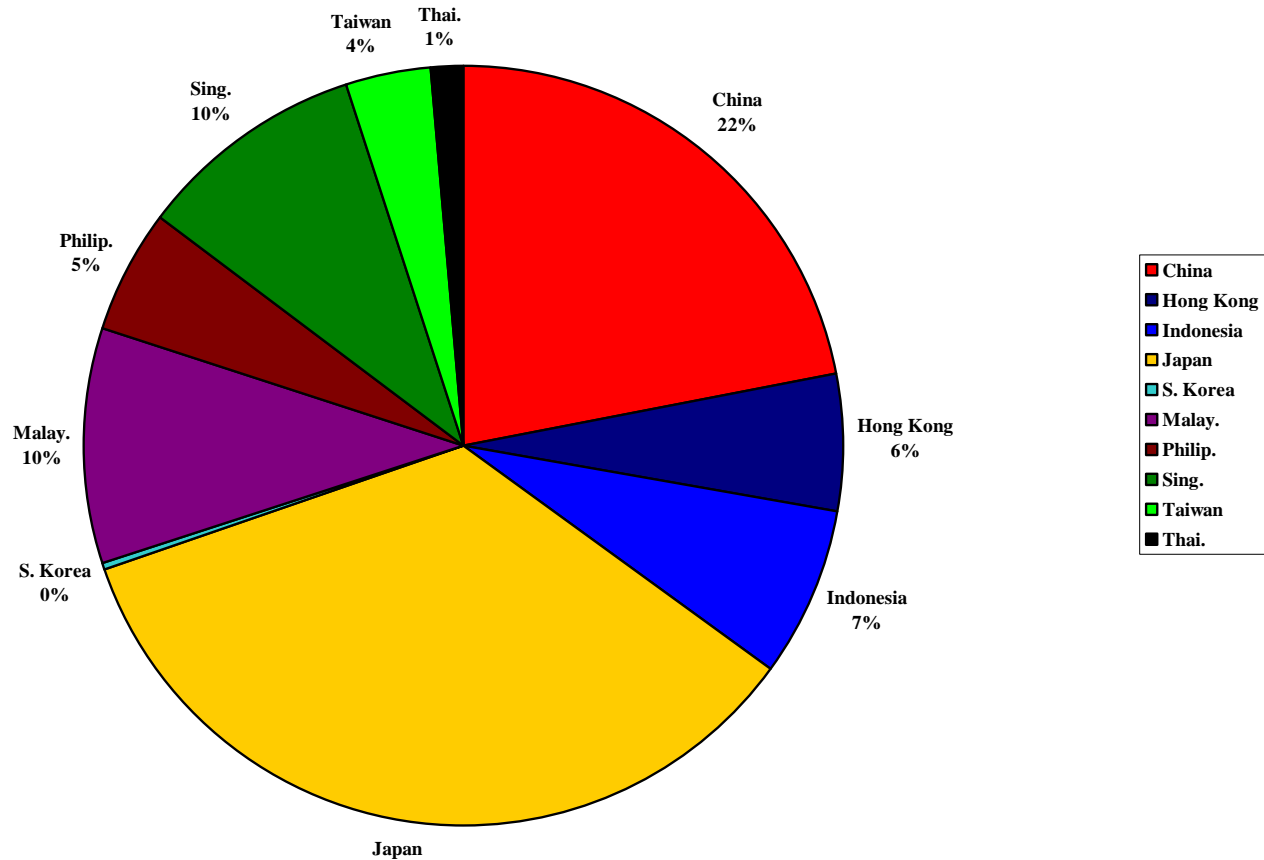
The Share of East Asian Imports Originated from East Asia, 1960-present

The Share of East Asian Imports Originated from East Asia



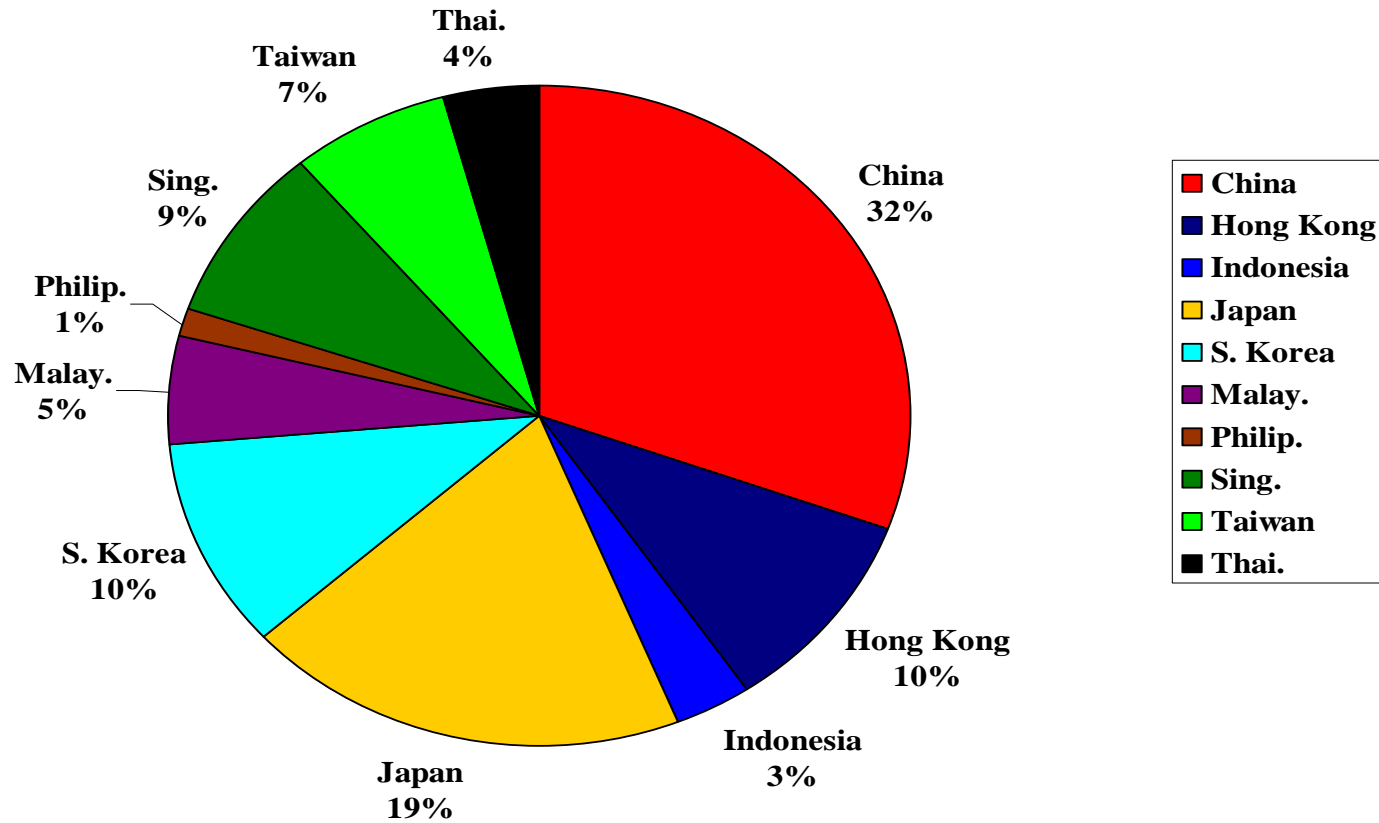
Composition of East Asian Exports, 1960

Figure 3.1: Composition of East Asian Exports, 1960



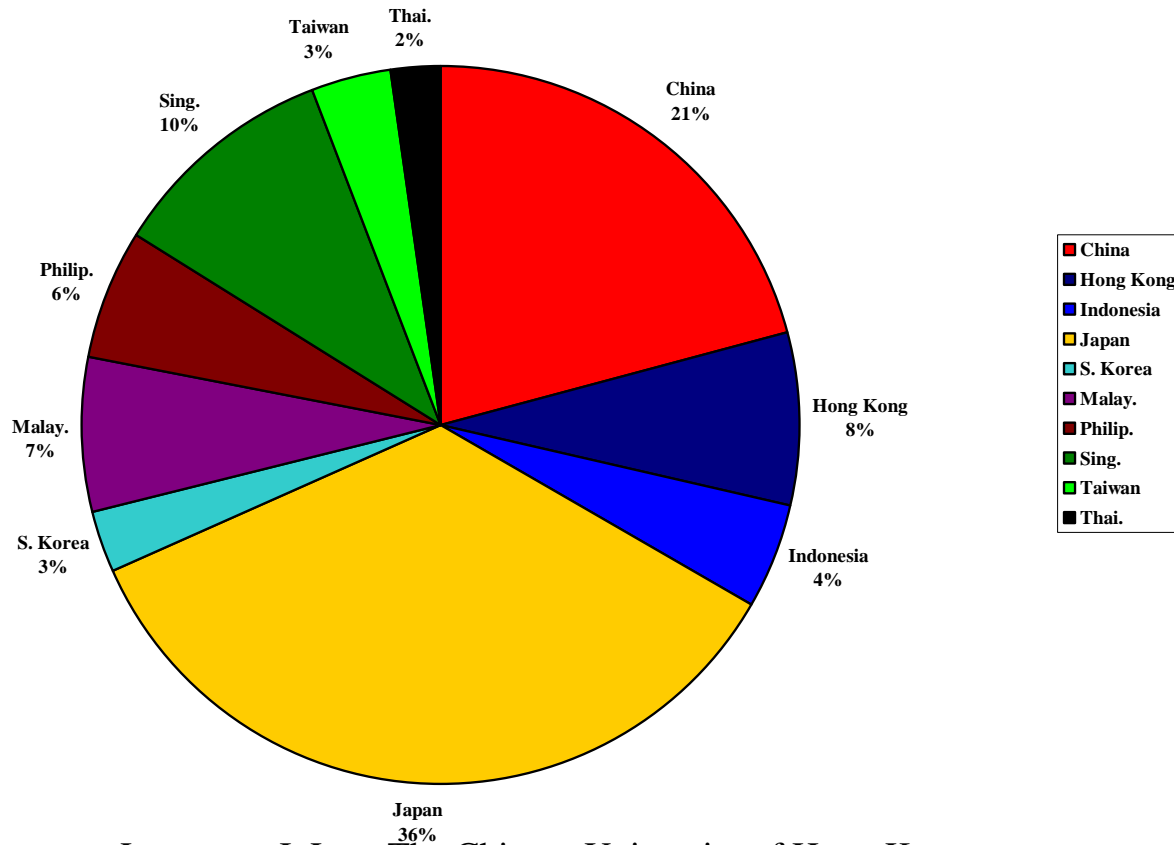
Composition of East Asian Exports, 2006

Figure 3.1: Composition of East Asian Exports, 2006



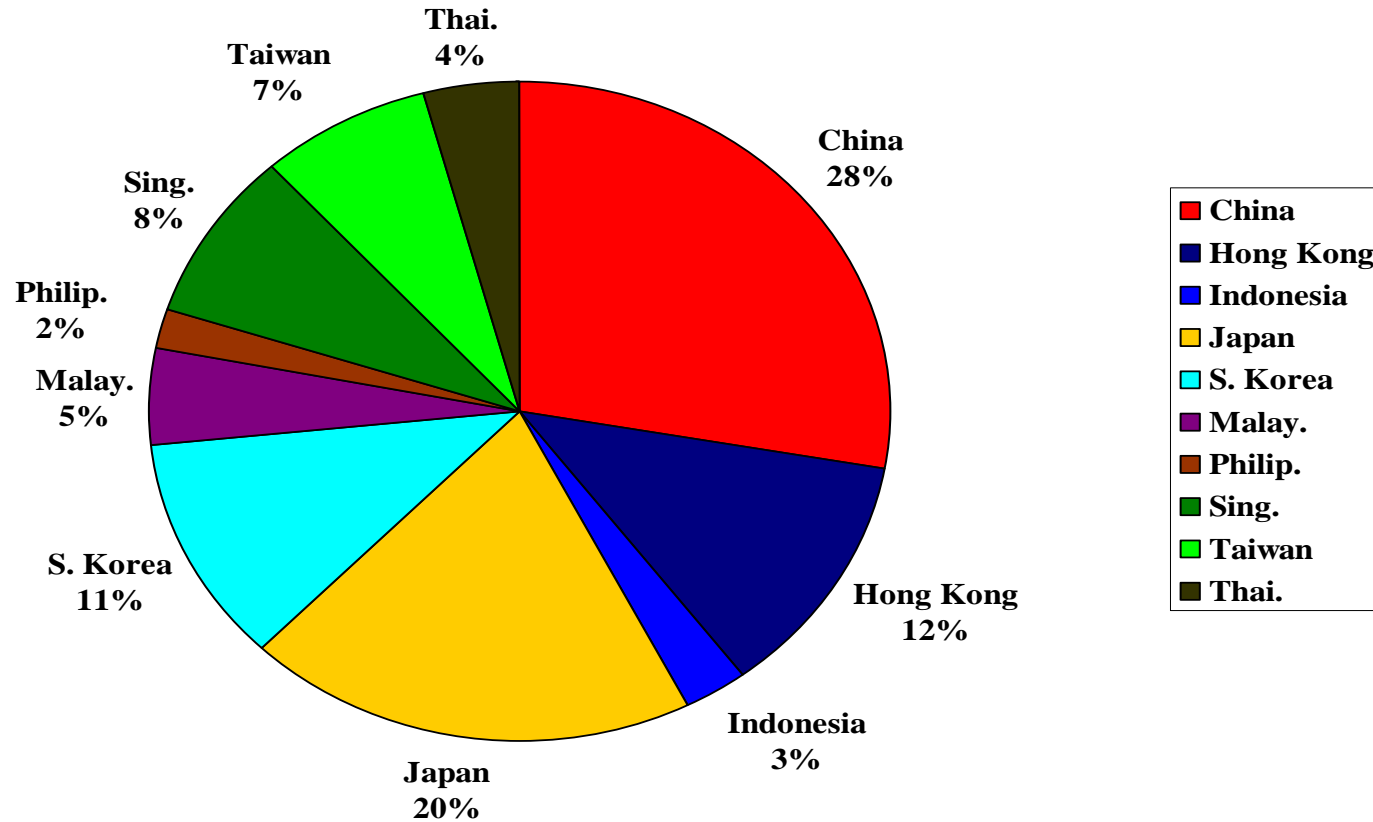
Composition of East Asian Imports, 1960

Figure 3.3: Composition of East Asian Imports, 1960



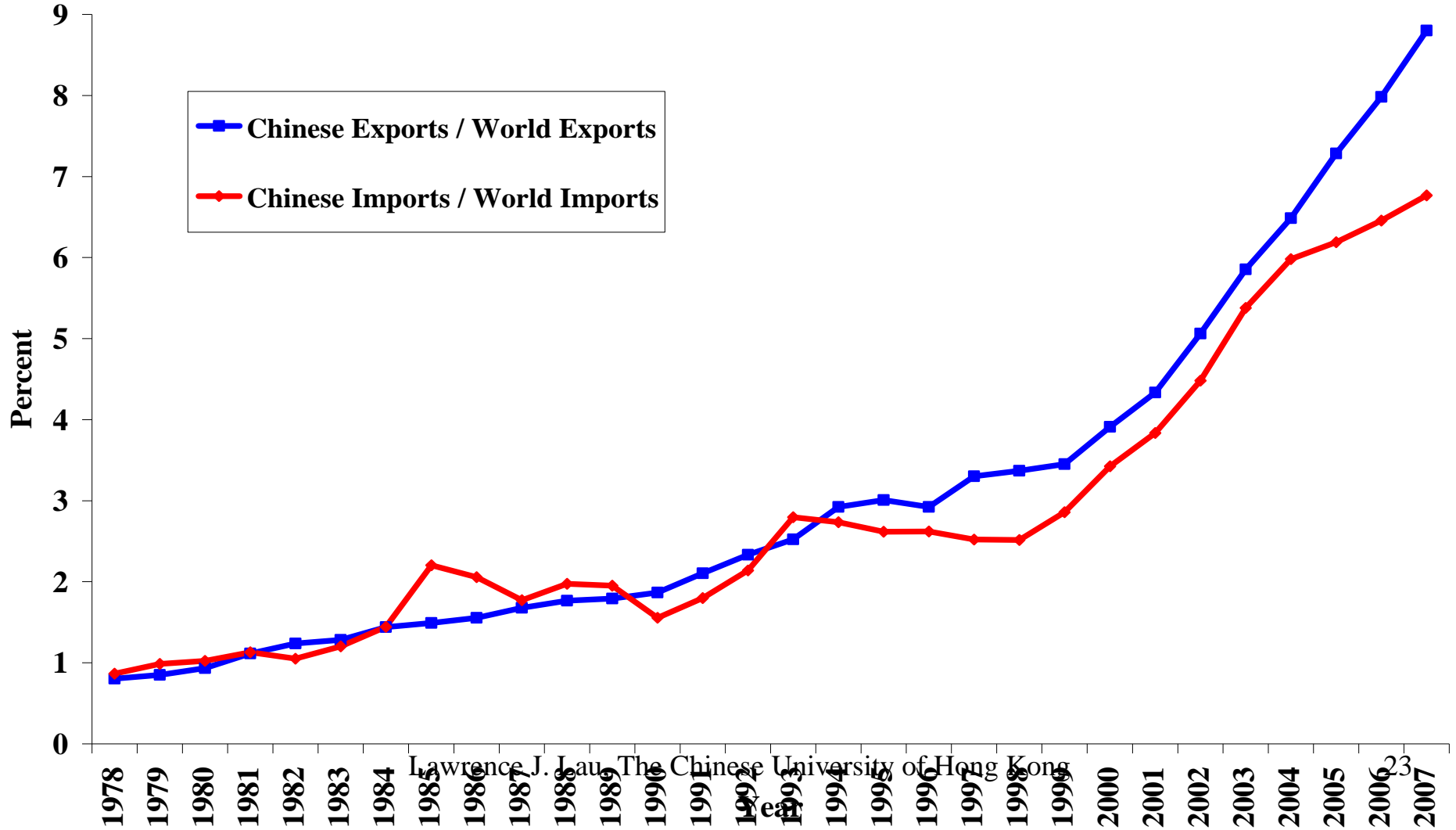
Composition of East Asian Imports, 2006

Figure 3.3: Composition of East Asian Imports, 2006



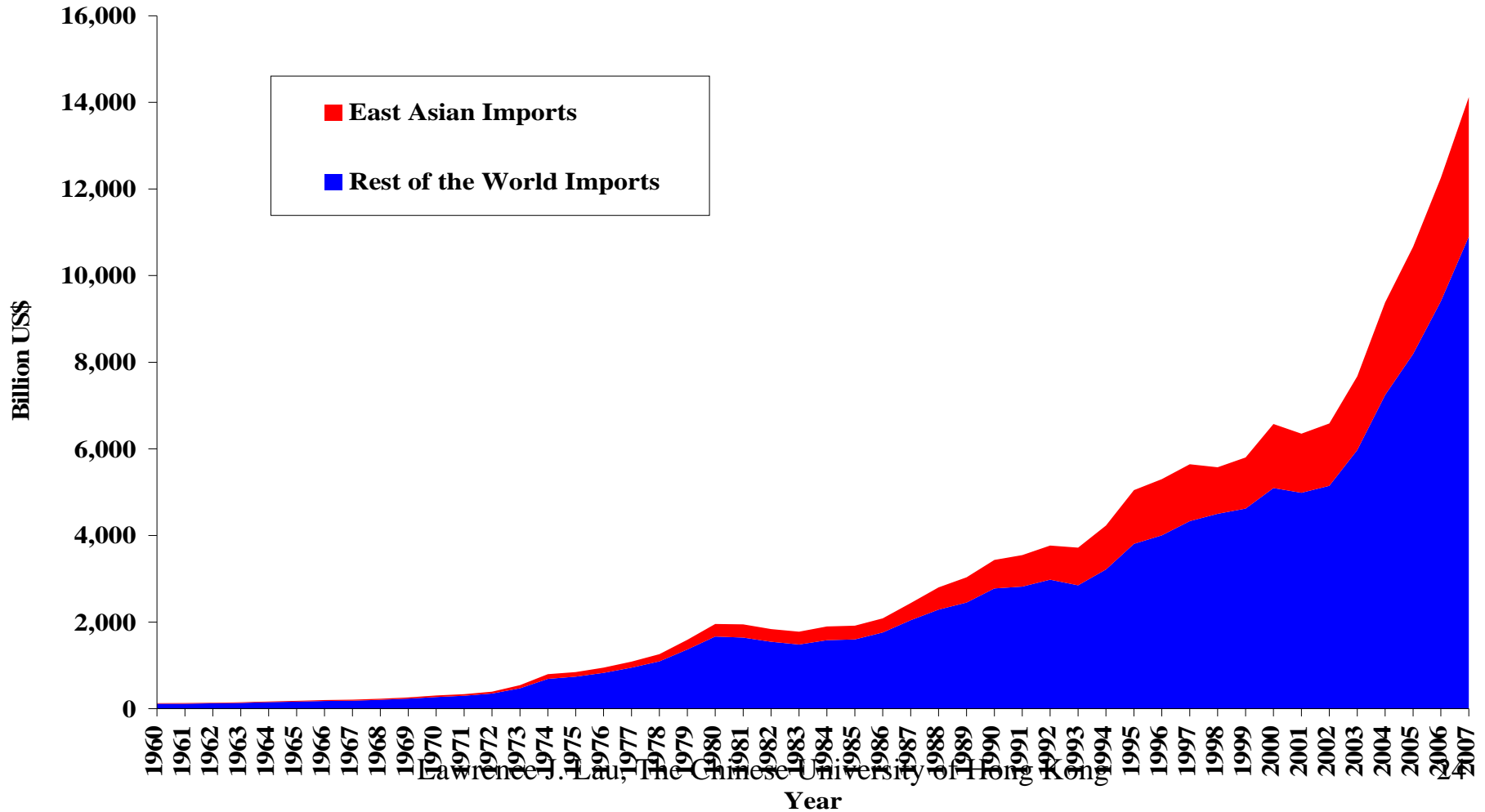
The Rising Ratio of Chinese Trade in Total World Trade

The Ratio of Chinese Trade to World Trade



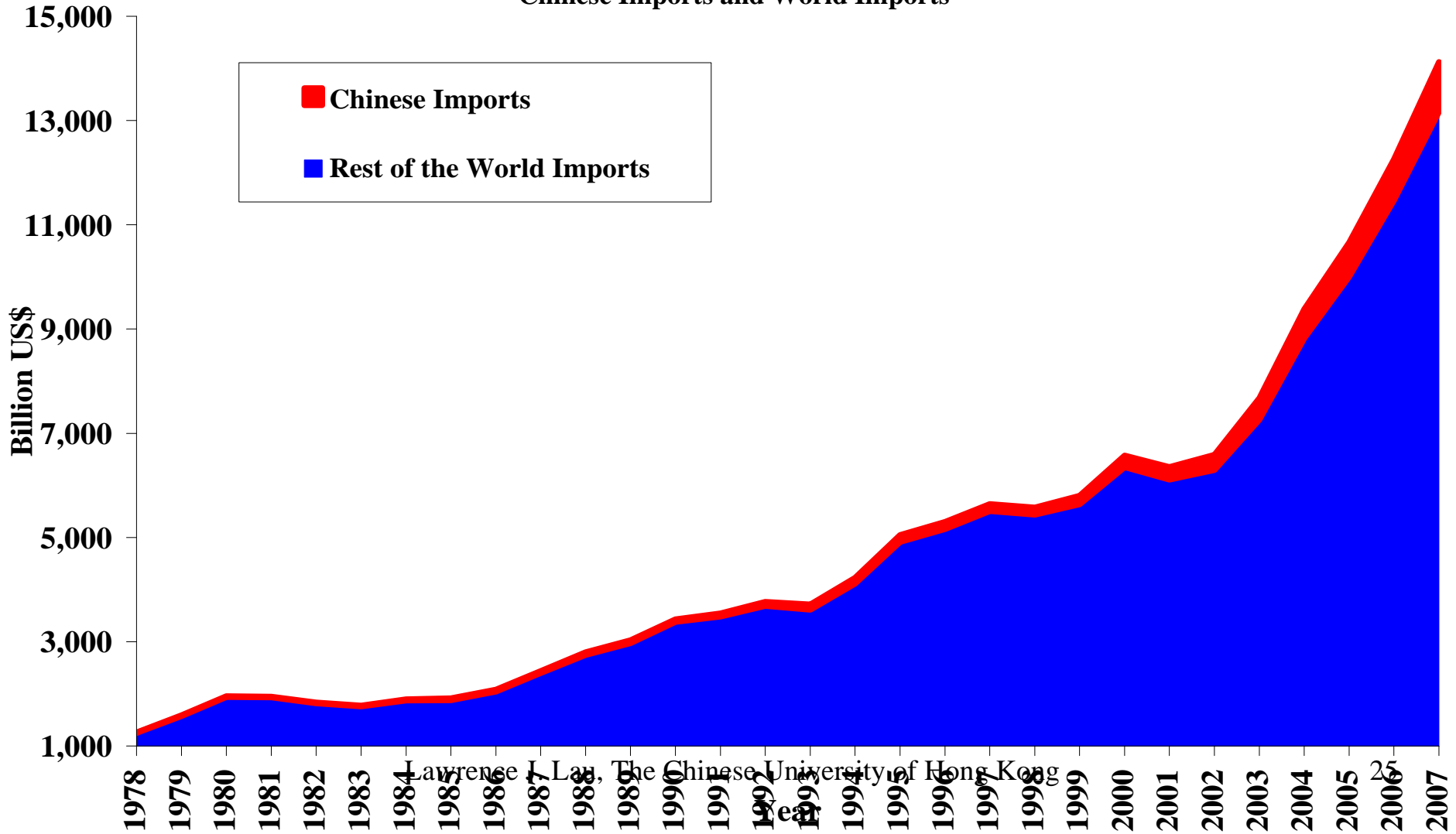
East Asian Imports & World Imports, 1960-present

East Asian Imports & World Imports, 1960-present



Chinese Imports and World Imports

Chinese Imports and World Imports

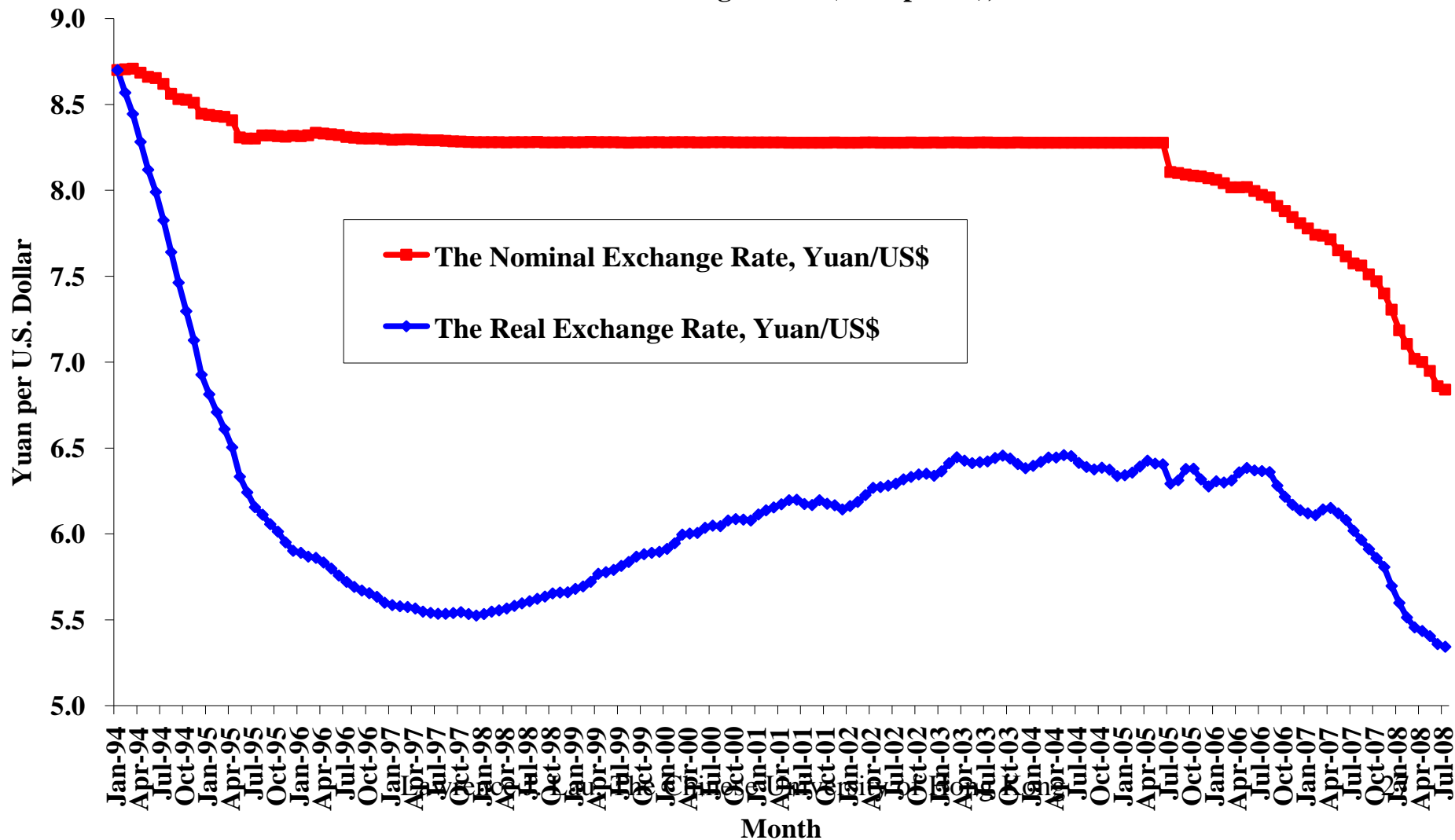


The External Environment

- ◆ The U.S. financial crisis is now more or less under control, but there may be a few more failures of large financial institutions. Recovery in the U.S. housing market will take at least a couple of years. In the meantime, the U.S. is unlikely to press for a weaker Dollar for fear that it may put upward pressure on the U.S. rate of interest and the U.S. rate of inflation.
- ◆ The world price of oil has begun to return to more normal levels. China can help accelerate its decline by committing to energy conservation and environmental protection policies which are beneficial to both China and the World. The world price of oil, in real terms, is not significantly different from the price of oil prevailing in the 1980s.
- ◆ With expected slowdown in the U.S. and in Western Europe, China should rely on its own resources to stimulate its internal demand. It can also provide support for other East Asian economies. De-coupling is real and can be made even more significant through appropriate policies.
- ◆ China can provide help to the U.S. and speed up its recovery by increasing its imports from the U.S. (including agricultural commodities) as well as by financing U.S. non-financial corporations during its current credit crunch.

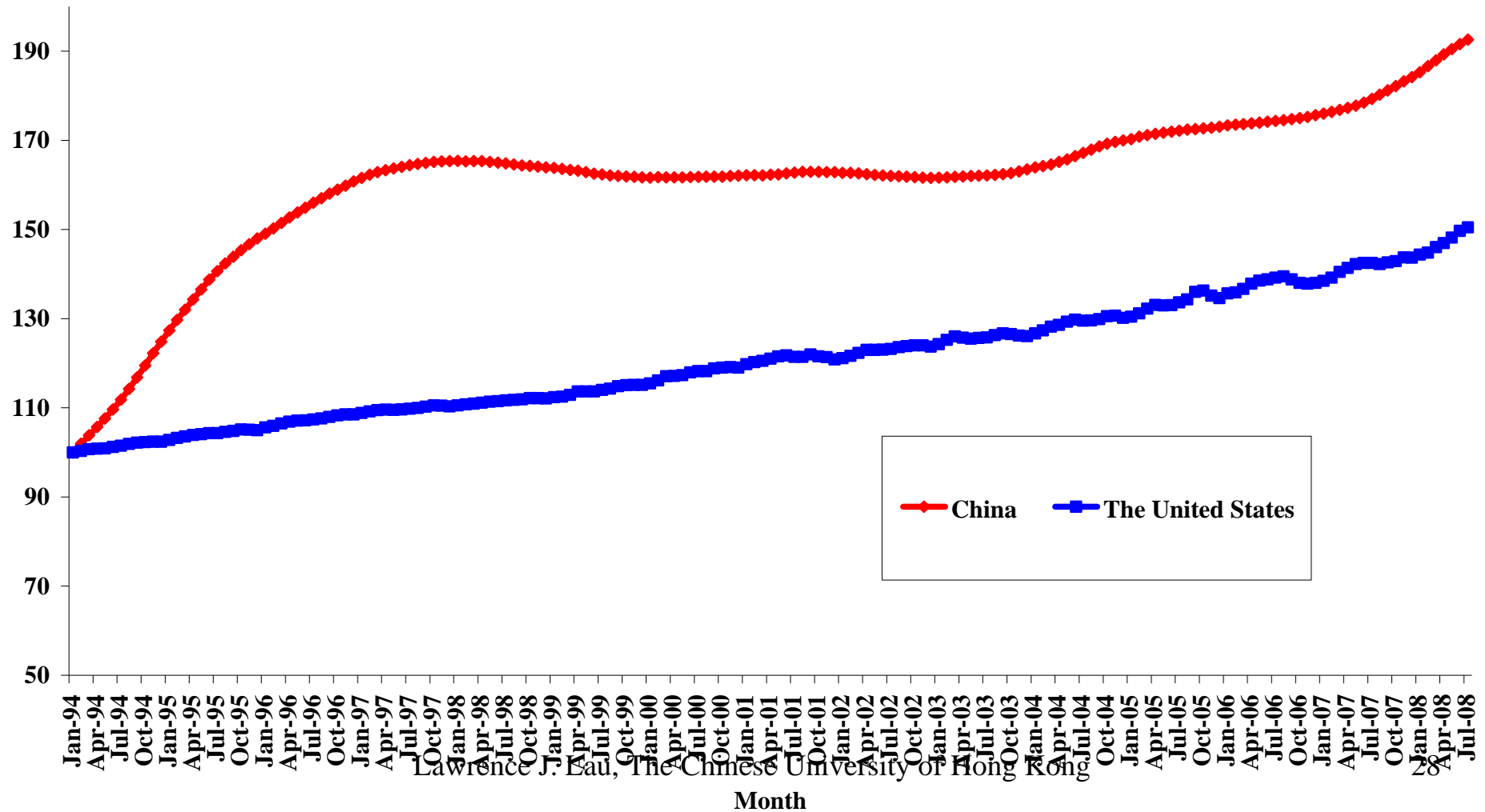
The Nominal and Real Yuan/US\$ Exchange Rates

The Nominal and Real Exchange Rates (1994 prices), Yuan/US\$



The Consumer Price Indexes of China and the United States

Index of Consumer Price Index in China and the United States since 1994
(1994M1=100)



The External Environment— De-Coupling from the U.S. Economy

- ◆ In general, the phenomenon of “decoupling” is expected to be operative. Chinese economic growth is largely unaffected by external developments, including a possible economic recession in the United States. The other so-called BRIC countries—Brazil, Russia and India—are even less dependent on exports, especially exports to the U.S. Brazil has recently discovered huge oil reserves and should be entering a new era of rapid economic development, financed by its new found oil wealth instead of foreign loans. Russia has already been benefiting from the high world price of oil and is not a major exporter of manufactured goods and hence will be relatively unaffected by external developments. India is also not a major exporter, except in computer software, and its economic growth is mostly internally driven.

The External Environment— De-Coupling from the U.S. Economy

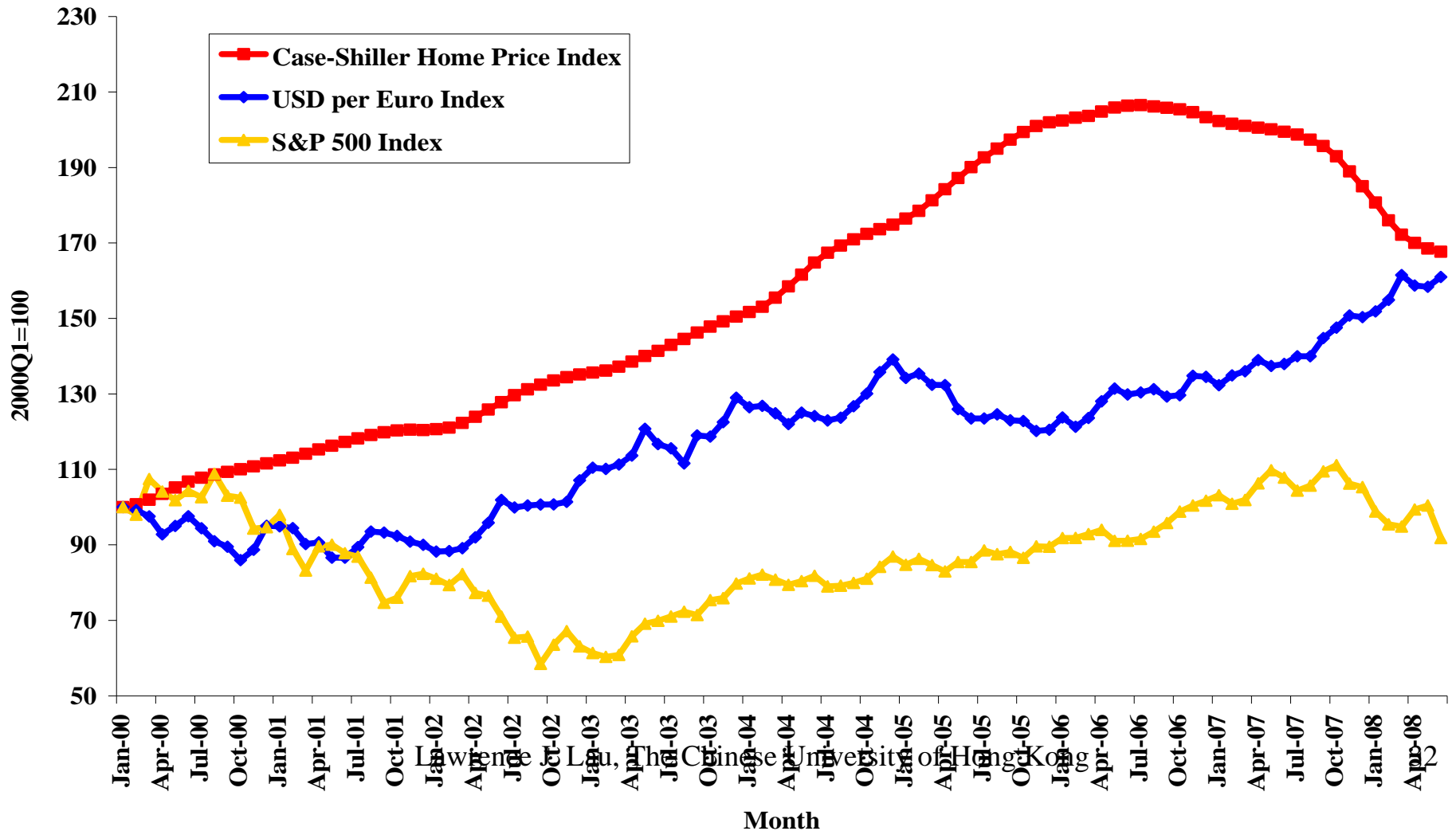
- ◆ The BRIC countries can be expected to maintain their rates of growth, more or less, the rest of the world, including developing East Asia, should be able to manage.
- ◆ During the East Asian currency crisis of 1997-1998, the impact of simultaneous downturns and upturns on the part of East Asian economies was amply demonstrated. So that so long as they continue growing together, by creating demands for one another's exports, their collective growth can be sustained. The high domestic savings rate found in almost all of the East Asian economies is a major advantage of East Asia which makes it more or less independent of capital inflows from developed economies and hence de-coupling much more possible and likely.

The Impact of the Economic Slowdown in the U.S.

- ◆ The overall economic slowdown in the U.S. will last another year or two, until more positive expectations are restored for both firms and households.
- ◆ U.S. home prices still have some way to fall, and despite a fairly healthy rate of growth of 2.8% in 2008Q2, the rate of inflation as measured by the consumer price index and the unemployment rate has reached a new recent high.
- ◆ The U.S. demand for imports will likely decline with the reduced household consumption, or at a minimum the rate of growth will decline.
- ◆ Such decline will have a negative effect on the rate of growth of Chinese exports to the U.S. and hence on Chinese GDP, but the effect is expected to be marginal.
- ◆ Despite its current near-term strength, caused in part by the repatriation of U.S. investment overseas to the U.S., in the longer term horizon of 3-5 years, the U.S. dollar will weaken relative to other reserve currencies as the net inflow of capital, especially that of direct and portfolio investment, is reduced.

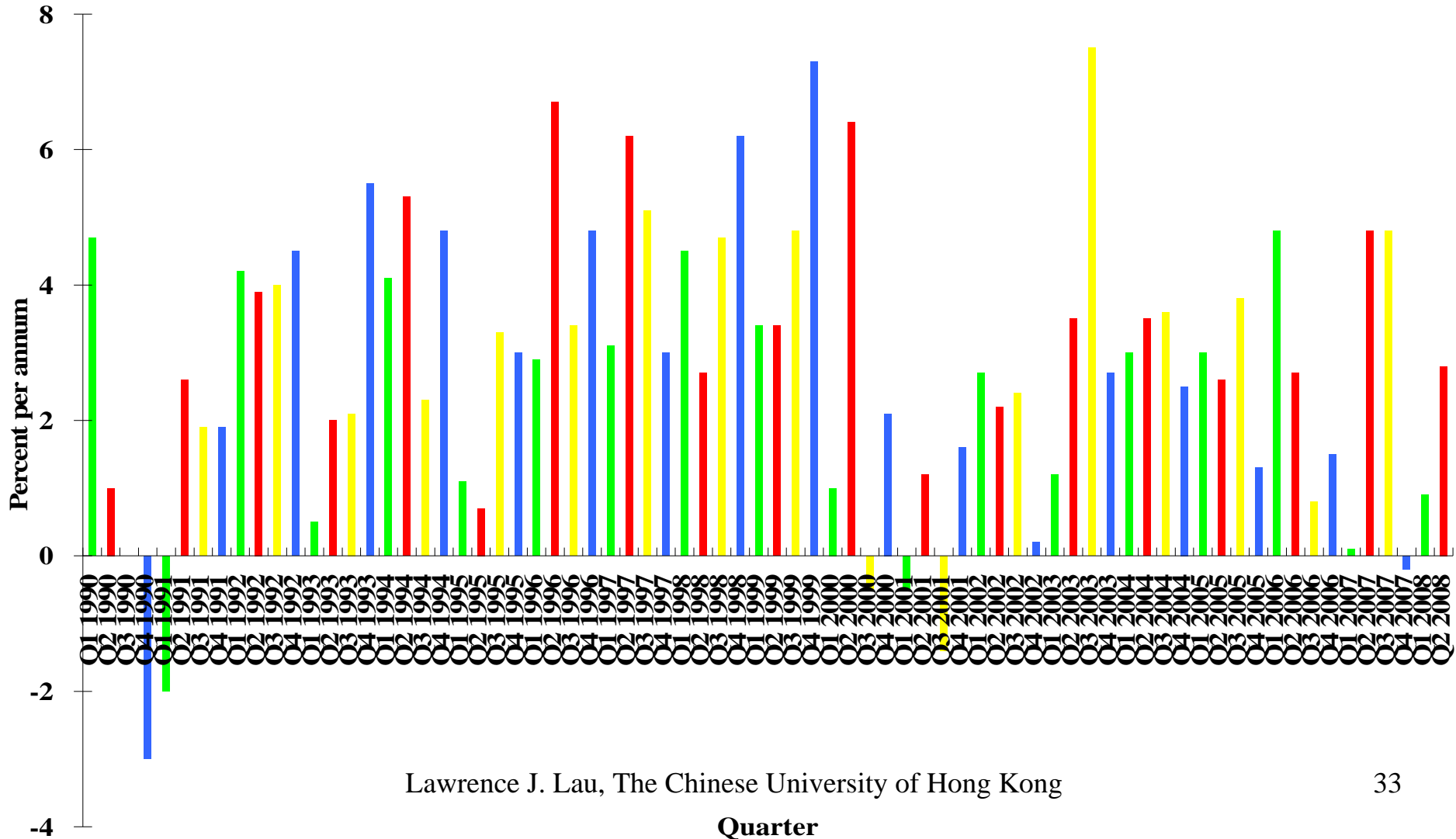
Case-Shiller Home Price, S&P500 Index & US\$ Exchange Rate Index 2000Q1=100

Comparison of Case-Shiller Home Price Index, S&P 500 Index and the Exchange Rate of U.S. Dollar
(2000Q1=100)



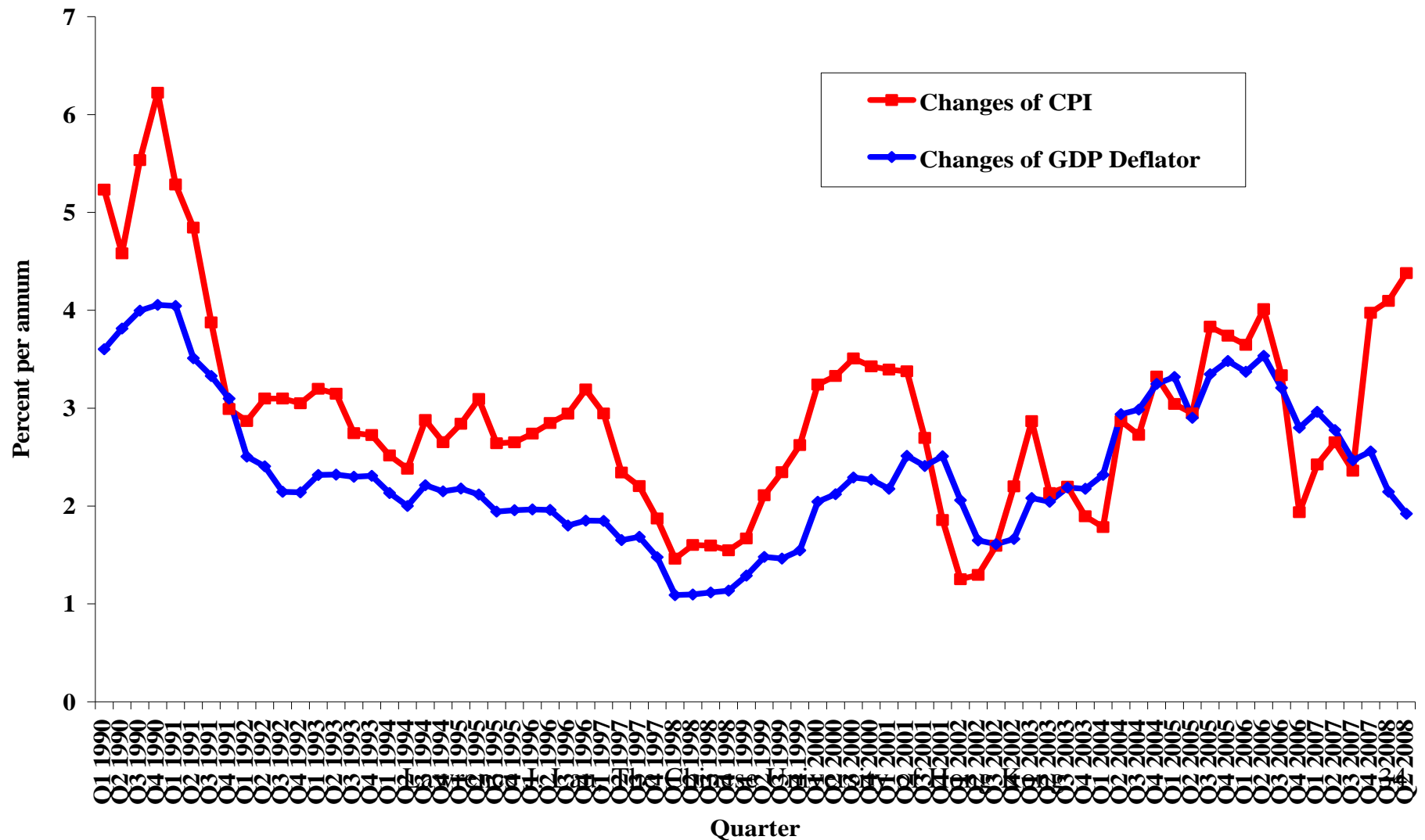
Seasonally Adjusted Quarterly Real Rates of Growth of U.S. GDP

Seasonally Adjusted Quarterly Rates of Growth of Real GDP of the U.S.



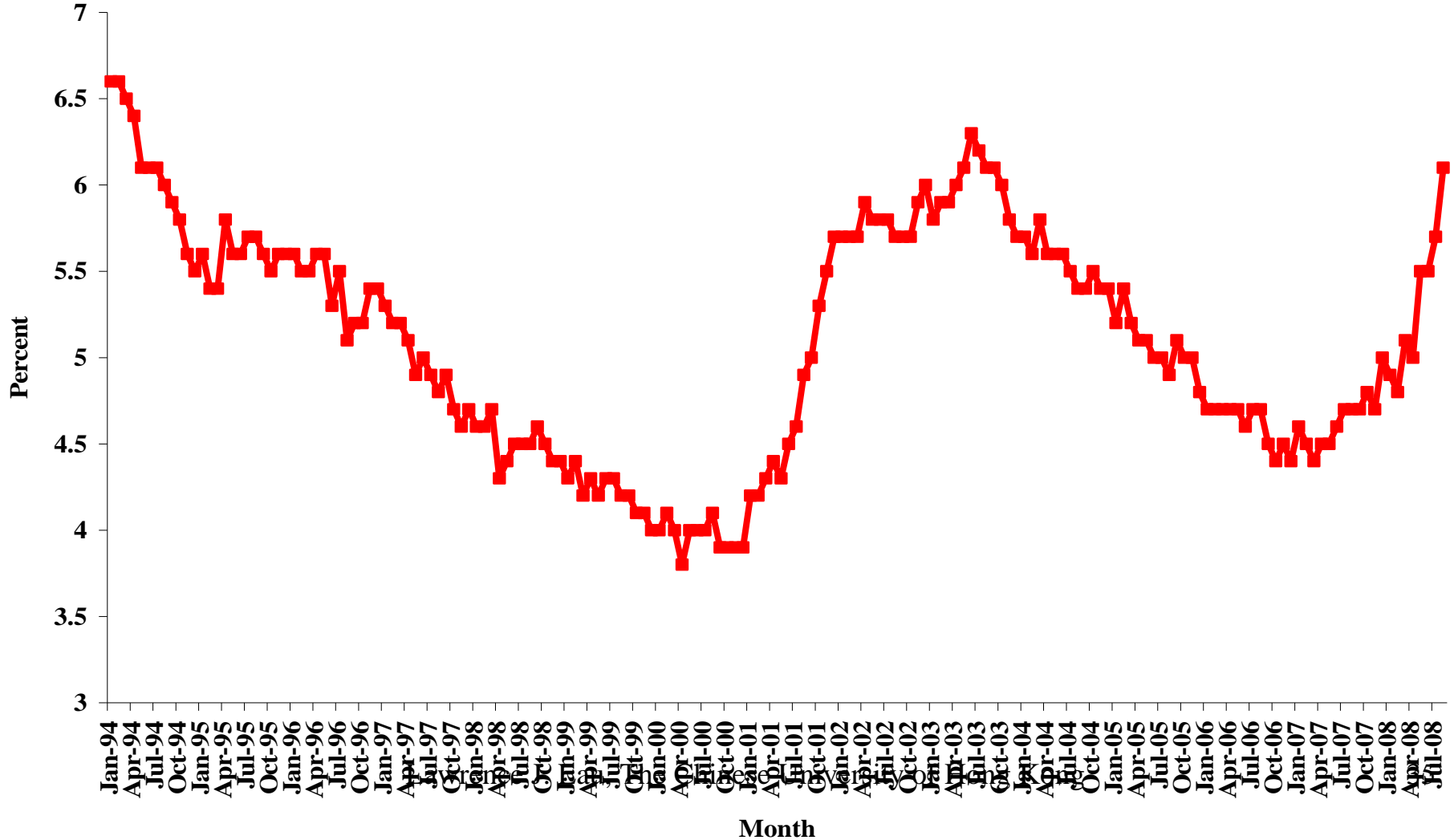
Quarterly Rates of Change of U.S. CPI & GDP Deflator

Quarterly Rates of Change of U.S. Consumer Price Index and GDP Deflator Since 1990



Unemployment Rate Seasonally Adjusted

Monthly Rates of U.S. Unemployment, seasonally adjusted



The Impact of the Economic Slowdown in the U.S.

- ◆ Chinese exports to the U.S. constitute between 8% (Chinese estimate) and 12% (U.S. estimate) of Chinese GDP; however, the direct domestic value added content of Chinese exports to the U.S. is quite low, averaging 17.7%. Thus, the Chinese GDP originating from Chinese exports to the U.S. is only approximately 2.2% (12% times 18% = 2.16%).
- ◆ 2.2% of GDP is reasonably significant and will result in hardships in some localities if completely lost. However, even if Chinese exports to the U.S. falls by 10% (which is considered unlikely), it will cause Chinese GDP to fall by only 0.22%, which is clearly tolerable, especially if the remaining 97.8% of the Chinese economy continues to grow.

The Impact of the Economic Slowdown in the U.S.

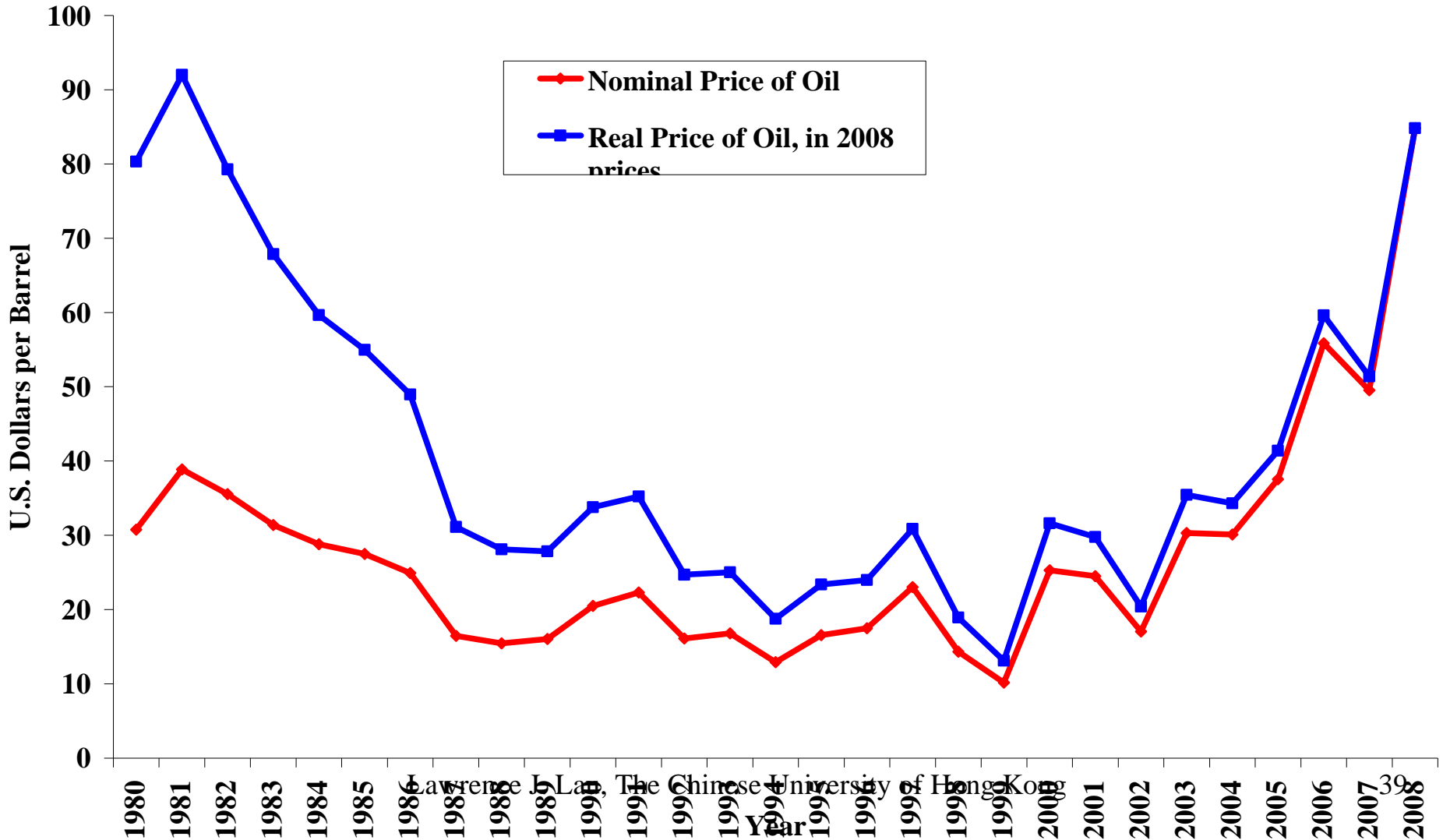
- ◆ If the indirect domestic value added of Chinese exports to the U.S. is also taken into account, a 10% decline in Chinese exports to the U.S. may result in a decline of Chinese GDP of no more than 0.5%.
- ◆ However, the impact may be quite severe on certain localities where most of the economy is dependent on exports, e.g., the cities of Dongguan and Shenzhen in the Province of Guangdong, and Suzhou in the Province of Jiangsu, where the value of exports is greater than the local GDP. Measures must be put in place in these localities to take care of expected lay-offs of workers as a result of the slowdown in export demand.

The World Price of Oil

- ◆ The short-run price elasticities of supply and demand of crude oil are both very low. It is difficult to increase the supply of crude oil significantly in the short run (even though Saudi Arabia seems to have extra production capacity) and exploration for and eventual production from new oil reserves discovered take time. It is also difficult to decrease demand in the short run because of the inherited capital stock which are not economically efficient at the current high prices, but it also takes time for the capital stock to turn over.
- ◆ However, ultimately, the long-run elasticity is quite high—estimates vary between 0.75 and can be as high as unity (one). The experience of the oil shock in the 1970s and 1980s shows that the long-run price elasticity of demand for oil can be quite high. Similarly, the long-run price elasticity of supply of crude oil is also quite high, and there are also substitutes such as oil converted from coal, oil from oil shale and tar sands, all of which can be economical at less than half of the current world price of approximately US\$100.

The Nominal and Real Prices of Oil (2008 prices)

Nominal and Real Prices of Oil



The Spot Market for Crude Oil

- ◆ It is in the interests of the oil-producing countries with large reserves (e.g., Saudi Arabia) to keep the price of crude oil at a reasonable and stable level so as not to encourage the development of alternative forms of supply. However, it is in the interests of the oil-producing countries that are about to exhaust their reserves to try to obtain as high a price as possible for their remaining reserves. There is therefore a conflict with the Organization of Petroleum Exporting Countries (OPEC) itself as to whether it should go for a high price or a low price.
- ◆ In any case, the supply of crude oil in the world is monopolistic—a few large producers/exporters can have undue market power in terms of setting or influencing the world price.

The Spot Market for Crude Oil

- ◆ The large users/importers, such as China and the United States, have not made full use of their market power. For example, by imposing a significant tax on oil, or on retail gasoline domestically, or on imported oil, China can greatly reduce the current and future Chinese demand of oil. However, in so doing, China can not only reduce total world oil demand, and hence lower the world price of oil, but also benefit by its increase in tax revenue from such taxes. In other words, the incidence of any tax on oil or on gasoline is shared by both Chinese consumers/users of oil and by oil producers.
- ◆ Moreover, even in the absence of new taxes, if the direct and indirect subsidies on crude oil and its derivative products in China are phased out, with appropriate protection of the low-income households, Chinese demand for oil will decline quite rapidly within a couple of years.

The Spot Market for Crude Oil

- ◆ Despite the short-run rise in the world price of oil, mostly caused by speculation by the hedge funds, the short-term spot market supply and demand of crude oil are in approximate equilibrium, with perhaps a little excess supply.
- ◆ This is because there is not enough refining capacity in the world. The current output of crude oil exceeds slightly the operable refining capacity in the world.
- ◆ The spot price of crude oil is high only because the forward/future price of crude oil was high. It is the price of the futures market affecting the price of the spot market.
- ◆ The high price in the forward/future market is caused by speculators, not by the producers or the users.

Actual and Potential Demand

Management by Large Users/Importers

- ◆ As mentioned previously, large users/importers such as China can manage actual and potential demand for oil through the imposition of an oil tax, a retail gasoline tax, a tax on oil imports, etc.
- ◆ They can also impose serious energy efficiency standards on automobiles (fuel efficiency) and appliances (electricity consumption) and on cooling (air conditioning) and insulation (e.g., glazing) in public buildings.
- ◆ They can also impose “gas guzzler’s tax” and differential license fees on vehicles depending on their “horsepower” and/or fuel efficiency.
- ◆ Life-style changes can also affect demand. For example, the Japanese Government has mandated that its offices be kept at 28 degrees Centigrade and that its employees need not wear suits unless they have to meet outside visitors. The Chinese government has mandated 25.5 degrees Centigrade in its offices.

Actual and Potential Demand

Management by Large Users/Importers

- ◆ Elimination of direct and indirect subsidies so that users face the true scarcity cost of oil and energy should also decrease demand.
- ◆ Subsidies should be designed so that they can be targeted at and benefit only the most deserving households. For example, the price of residential use of electricity can be raised but the first say 30 kilowatt hours consumed each month can be charged at a different price, or even made free. Thus low-income households which consume less electricity will be protected. High-income households can afford to bear the true scarcity cost.

Long-Term Supply and Demand Expectations

- ◆ The government should promote and support the research and development and large-scale production of alternative forms of energy, including, in particular, substitutes for oil. This includes the conversion of coal into oil, the technology for which is already proven and needs to be scaled up and made more efficient; oil shale, tar sands, wind energy,
- ◆ One strategy is for the Government to establish a program of R&D on alternative forms of energy, coupled with guaranteed long-term supply contracts. For example, the Government can offer long-term (20 years) guaranteed purchase contracts for oil converted from coal at US\$60 (purchasing power adjusted) a barrel, to selected Chinese and foreign enterprises for in the aggregate up to 1 million barrels a day. Such a program will have a major impact on the expected future supply and demand for crude oil as well as the expected price of crude oil.

Long-Term Supply and Demand Expectations

- ◆ Urban planning and the provision of mass transit also have a large impact on the future transportation demand for oil.
- ◆ Mass transit in Chinese cities should be promoted in a major way so as to reduce not just oil consumption but also congestion and pollution. However, in order for mass transit to be successful, the residential density should be high. For example, mass transit is extremely successful in London, New York and Paris but does not work in Los Angeles and San Jose. Early urban planning is essential so that most of the residents of the cities can rely on mass transit as opposed to private automobiles for their day to day commute between home and work. This requires efficient zoning and transit planning so that the movement of people is between high-density neighborhoods.
- ◆ An emphasis on urban planning and mass transit will also have an impact on expectations of future Chinese demand for oil.

Incentives for Conservation

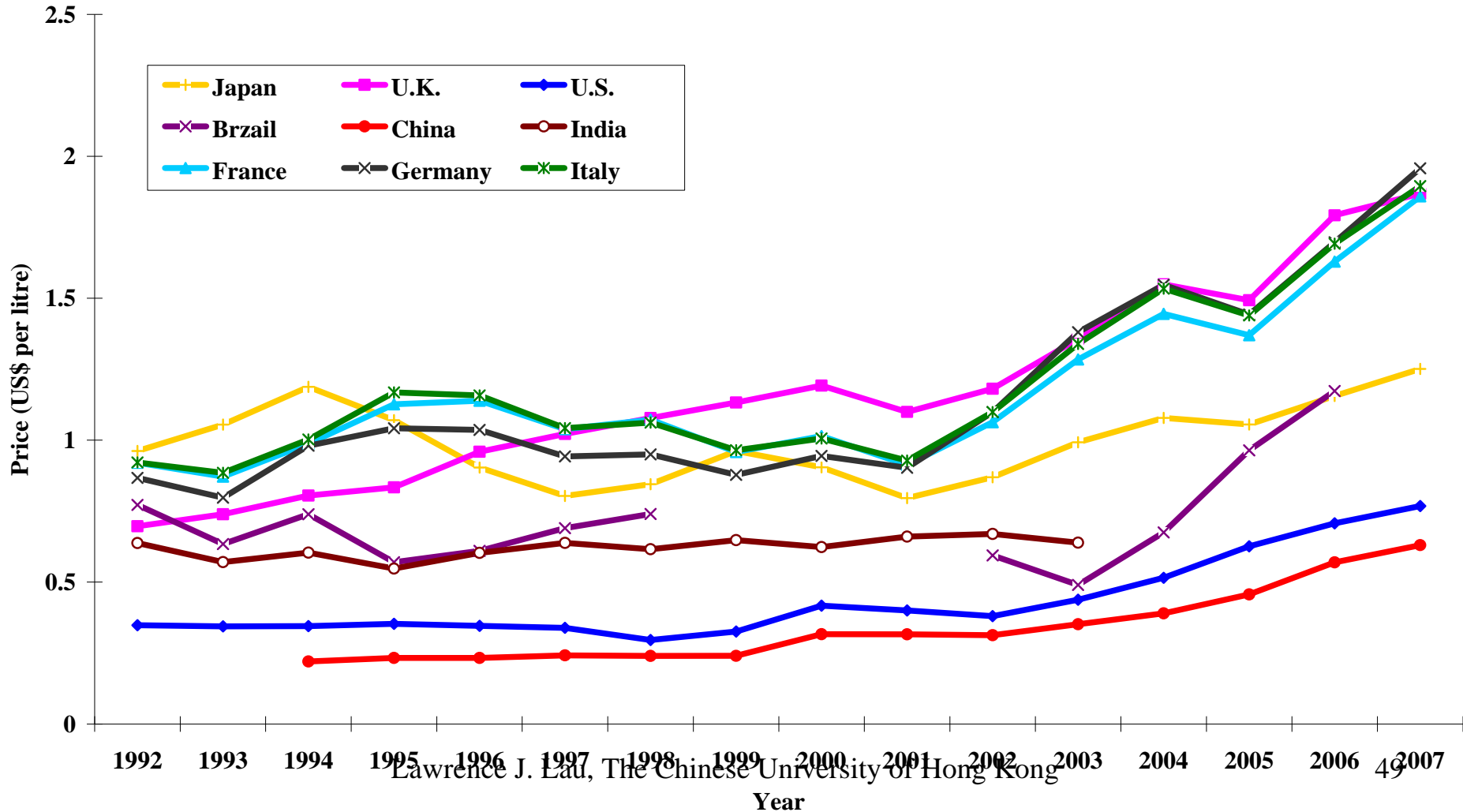
- ◆ Incentives for capital cost-operating cost substitution—for examples: better insulation and construction of buildings lead to lower energy consumption for the useful life of the building; energy-efficient light bulbs are more expensive; more durable products; buildings with higher ceiling height per floor for better natural ventilation and reduced demand for air conditioning; solar heating systems. The government can provide credit subsidies for financing these incremental capital expenditures do as to encourage life-cycle costing.
- ◆ (For example, triple-paned windows are more expensive but houses equipped with them consume much less energy. Without incentives the developers are likely to opt to use single-paned windows to lower the up-front capital cost.)
- ◆ The government can also mandate energy efficiency standards. For example, the government can mandate double-paned windows in regions where the average winter temperature is below a certain level.

The Gasoline Tax, the “Gas Guzzler Tax” and Fuel Efficiency Standards

- ◆ The retail price of gasoline in China is among the lowest in the world, even lower than in the United States. China can impose a tax on gasoline that is similar in order of magnitude to that in the Western Europe and Japan.
- ◆ It is a myth that the high price of domestic gasoline deters the development of the automobile industry. Both Japan and Western Europe have long had high retail prices of gasoline and both have prosperous automobile manufacturing firms. The automobile manufacturing firms in the U.S., which has the lowest price of gasoline among developed economies, are struggling hard to survive.
- ◆ China can also impose a gas guzzler tax (license fee) linked to the fuel efficiency of the automobile that penalizes inefficiency.
- ◆ The gasoline tax and the “gas guzzler” tax can reduce the externalities generated by the use of the automobile (e.g., congestion and public health (including loss of productive time), local and global environmental pollution, as well as global warming).
- ◆ Fuel efficiency standards can be very effective and have the advantage of not affecting the prices and hence the rate of inflation directly through the consumer price index.

Retail Prices of Gasoline in Selected Countries

Retail Price of Gasoline in Selected Countries



The Gasoline Tax and the “Gas Guzzler” Tax

- ◆ The best time to impose and/or raise gasoline taxes and other user taxes is before there are too many automobile owners, not afterwards. It becomes politically difficult or even impossible to do so once the majority of the households own and depend on automobiles for their daily transportation needs.
- ◆ The gasoline tax does not necessarily discourage automobile ownership—it does change the relative demands for different types of automobiles by making it more advantageous to acquire more “fuel-efficient” automobiles. It does have impact on the usage of automobiles, especially if a good alternative mode of transportation is available.
- ◆ Such taxes as the gasoline tax and the “gas guzzler” tax are likely to be progressive in China because only high-income people are likely to have private automobiles. It may therefore be viewed as another means of “redistribution”

The Implementation of the Gasoline Tax and Other Measures

- ◆ The gasoline tax can be flexibly structured so as to maintain the retail price of gasoline (in real terms) at a stable level, independently of the short-term fluctuations in the world price of oil.
- ◆ The proceeds of the gasoline tax can be used to finance public investment in urban mass transit. But it can also be done in a revenue-neutral manner, reducing the income taxes of the low income households, providing some compensation for the increase in the retail price of gasoline.
- ◆ Access fees to the central business districts during peak periods, as used in Singapore, are also an option.
- ◆ The promotion of a car rental industry and the encouragement of ride-sharing and car-pooling.
- ◆ The fares for urban mass-transit can be directly subsidized on a per-passenger basis.

The View from Capital Markets

- ◆ The current spot price and futures price of crude oil appear significantly over-priced when compared to the stock prices of oil companies with substantial reserves.
 - ◆ The common stock of these oil companies seem to have priced in a barrel of crude oil at approximately US\$60 (of course, these are expected long-run prices) rather than over US\$100.
 - ◆ There are analysts in the market who predict a price of oil of US\$200 a barrel. Such a price is not impossible, if, for example, military action was taken against Iran by Israel or the United States.
- However, it is important to ask whether the analysts themselves, or the institutions represented by the analysts, have positions in the futures market for oil and how large these positions are. It is not enough for these analysts to claim that there is a firewall separating them and the investment officers of their institutions.

The View from Capital Markets

- ◆ There is a total lack of transparency in the futures market for oil. Who are the buyers bidding up the price of crude oil? What is the total volume of daily trade? What percentage of each day's "future delivery" does each trader own? If it exceeds 5 percent, it ought to be disclosed, just as required for stock markets around the world. And the ultimate beneficiaries should also be disclosed.
- ◆ There should also be limits to how much each trader can own directly and indirectly, just as in the stock markets around the world.
- ◆ There should be also be full disclosure on the degree of leverage. How much capital is put up by the trader? Lending by banks for speculative purposes should be limited. Ideally the degree of leverage should not be more than the low single digits. (They should have learned their lessons from the sub-prime mortgage loan-backed securities experience.)
- ◆ The world market for oil is far too important to be left completely to the speculators alone. It is subject to manipulation. The market should be regulated just like any other securities market.

Win-Win Strategies for Economic Development

- ◆ China can play a leading role among the developing economies in the world in helping to craft a global post-Kyoto Accord agreement on energy conservation, environmental protection, and the prevention of global warming that every country and region can accept.

Energy Conservation, Environmental Protection & Prevention of Global Warming

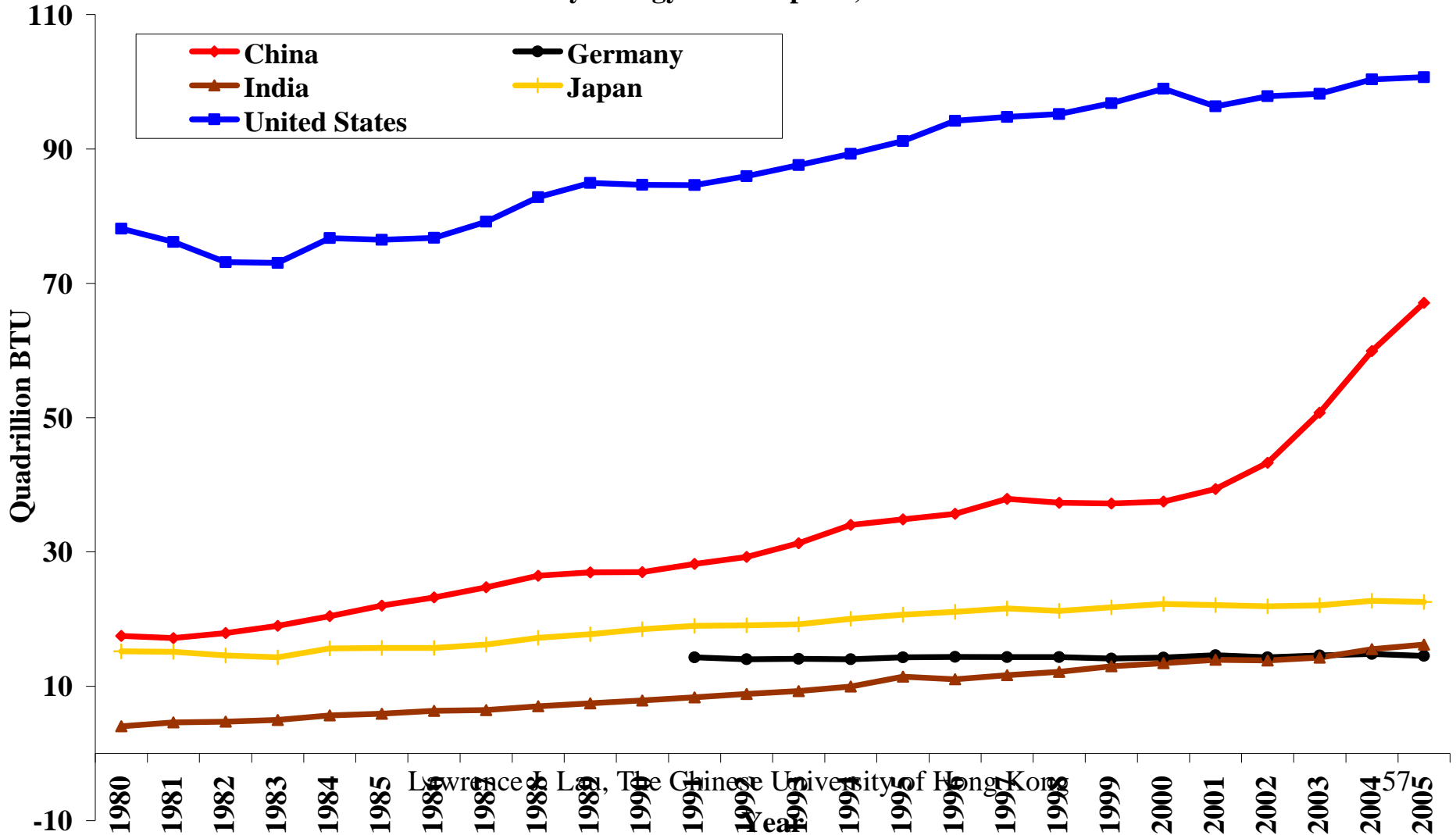
- ◆ Without a global post-Kyoto Accord agreement, it is unlikely that one can achieve the goal of reducing carbon dioxide and avoiding global warming. A global agreement must require sacrifices from all: the developed economies must be willing to reduce their consumption per capita and the developing economies must be willing to consume much less energy than the developed countries at the latter's comparable stage of development. Thus, both sets of countries will have to make some sacrifices.

Energy Conservation, Environmental Protection & Prevention of Global Warming

- ◆ However, these sacrifices must take into account the status quo—that the developed countries have vastly higher energy consumption per capita than the developing countries. It is not really equitable to ask both set of countries to make equal proportional reductions. Nor is it likely to be accepted by developing countries.
- ◆ China can provide leadership by setting achievable targets and implementing policies (including pricing) for national energy conservation and environmental protection, which are in Chinese own national interests.

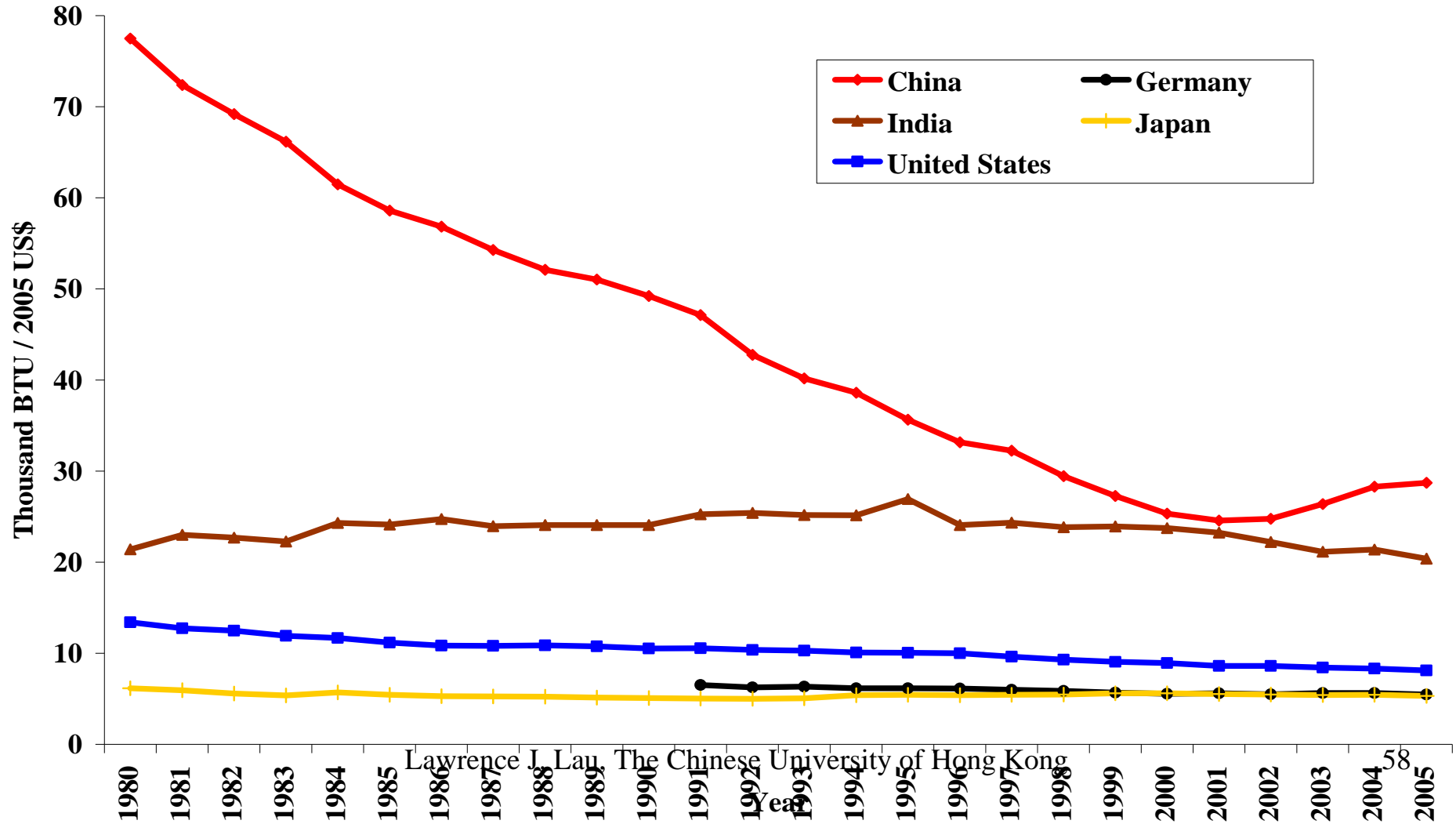
Primary Energy Consumption: Selected Countries

Primary Energy Consumption, 1980-2005



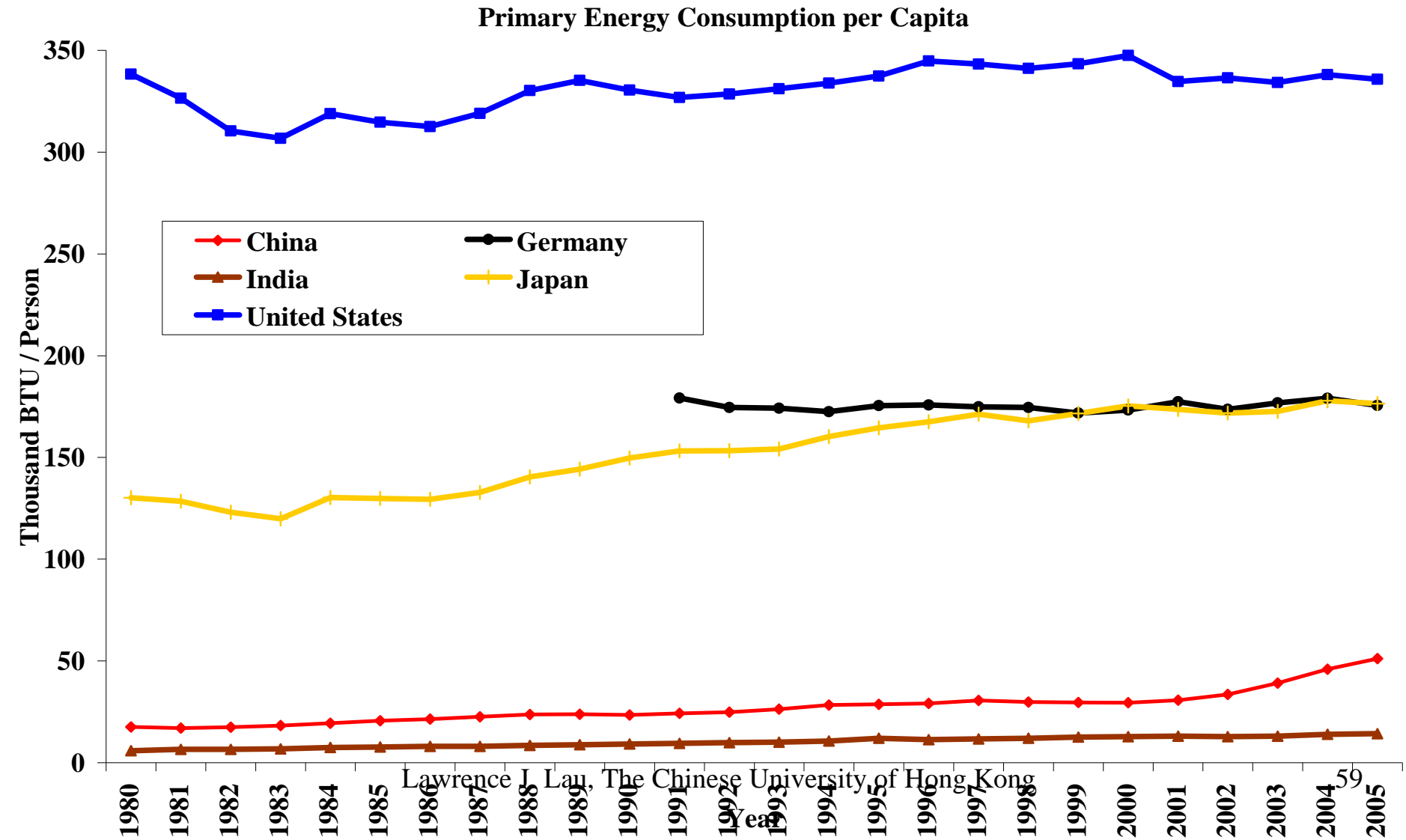
Primary Energy Consumption/Real GDP Ratio: Selected Countries

The Ratio of Primary Energy Consumption to Real GDP



Lawrence J. Lau, The Chinese University of Hong Kong

Primary Energy Consumption per Capita: Selected Countries



Energy Conservation, Environmental Protection & Prevention of Global Warming

- ◆ A reasonable way to proceed on trying to achieve an implementable version of a global agreement to avoid climate change is the following:
- ◆ All countries will subscribe to a global scale of primary energy consumption per capita ceiling standards calibrated, to a first approximation, to the real GDP per capita so that when the GDP per capita of a specific country or region reaches a certain level, it should have adopted and implemented policies so as to stay below or equal to the corresponding target standard energy consumption per capita. That is, there is a global “life-style” energy consumption standard linked to real GDP per capita.

Energy Conservation, Environmental Protection & Prevention of Global Warming

- ◆ This will imply that for some developed countries, they will need to be willing to reduce the energy consumption per capita; and for some developing countries, they will need to adopt policies that will prevent them from exceeding the standard as their real GDPs per capita grow.
- ◆ In long-run steady-state, all countries will become developed and their energy consumption patterns should become largely similar. For example, when China achieves the same real GDP per capita as, say, the European Union, its energy consumption per capita should be at or below the energy consumption per capita of the European Union at the time (assuming that such a global agreement is already in place).

Energy Conservation, Environmental Protection & Prevention of Global Warming

- ◆ It is possible to introduce modifications of these standards to reflect possible differences across countries based on climate, location, size, on the proportion of primary energy consumption that is non-carbon dioxide producing, and the carbon dioxide emission quota owned (assuming that trading in such quotas continues). For example, those living in cold climates arguably may need to consume more energy for heating purposes. Countries with large territories and widely dispersed population may need to consume more energy for transportation. These possible modifications to the basic scale will have to be part of the overall agreement.

The Optimal Policy for China

- ◆ China currently has a population of more than 1.3 billion, or approximately 400 million households, assuming slightly more than 3 persons per household.
- ◆ “A car in every garage” will mean 400 million vehicles on the road, not counting trucks and vehicles for commercial, industrial and public uses.
- ◆ It is imperative that China sends a signal to the world that it will contain the growth in its demand for oil. This will have a large impact on the futures as well as spot markets for crude oil in the world.
- ◆ Useful signals that can be used include an announcement of retail gasoline taxes to be imposed say three years from now, differential license fees on automobiles depending on horsepower as well as on weight (which has already taken effect), automobile and appliance energy efficiency standards on new automobile and appliances.

The Optimal Policy for China

- ◆ Regardless of whether the price of crude oil will stay up at a level of more than US\$100 a barrel, or how long it will stay up there, and regardless of whether it is a bubble caused by speculators, it is in the interests of China to adopt policies so as to lower its current and expected future consumption, and thereby to help lower the current and expected future price of energy in general and crude oil in particular. There are many reasons:
- ◆ China is exposed to huge risks, not only economic, but also political and military, if a significant proportion of its energy needs has to be supplied from abroad, from suppliers located in geo-politically unstable regions.
- ◆ Continued expansion of the use of oil increases environmental pollution and congestion at home.
- ◆ Continued expansion of the use of oil also worsens global warming.

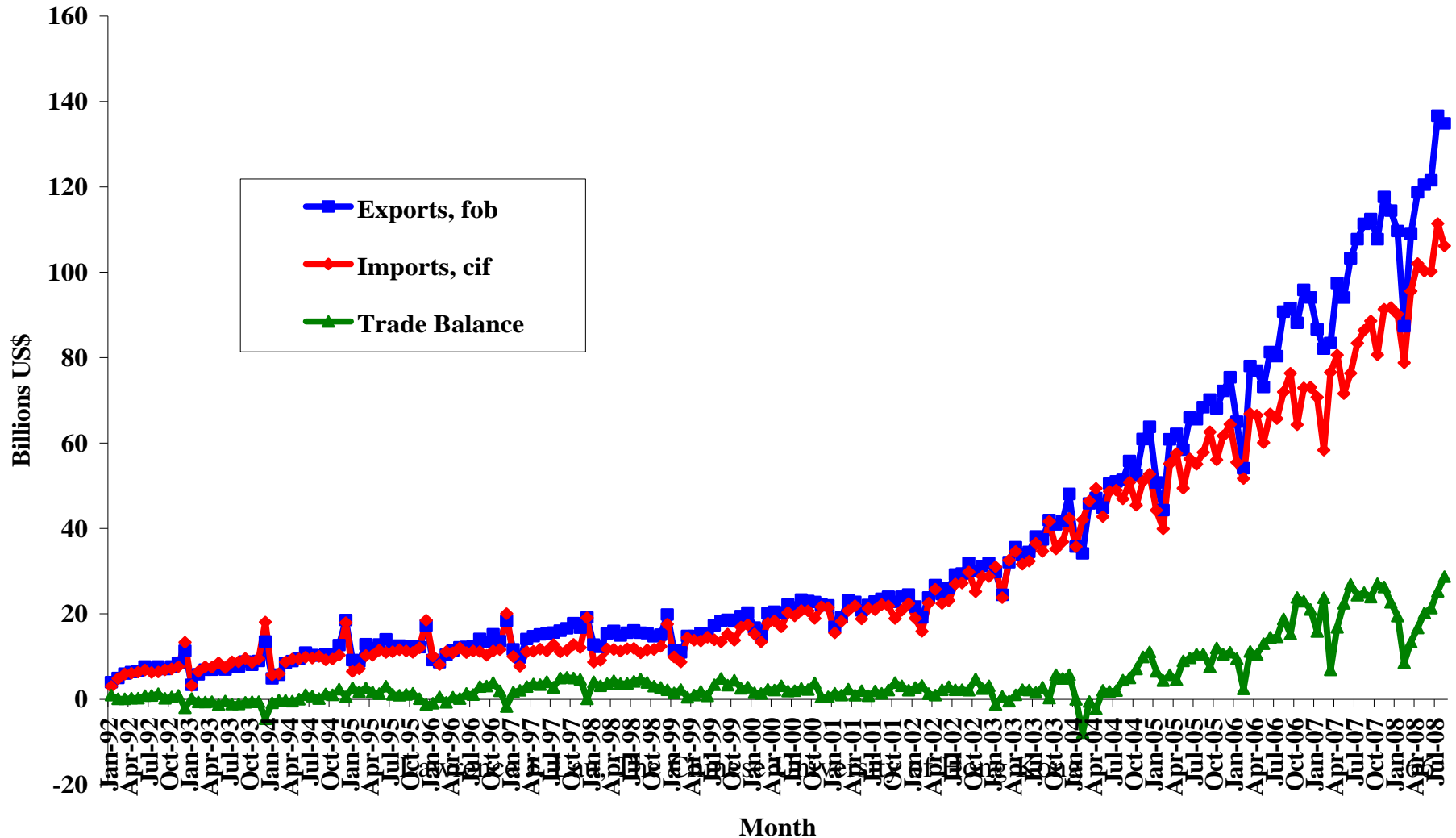
The Chinese Economy

The Macroeconomic Situation

- ◆ The Chinese economy has begun to slow, albeit rather slowly. However, there is reason to believe that the more recent real rates of growth have been somewhat over-estimated because of the difficulties in measuring real value added in real estate development.
- ◆ Exports are likely to continue to slow because of the economic recession in the U.S. and the possible slowdown elsewhere in the World and because of other factors such as the revaluation of the Renminbi, the new labor law, the intensified enforcement of environmental regulations and the unification of the tax rates for domestic and foreign-invested enterprises.

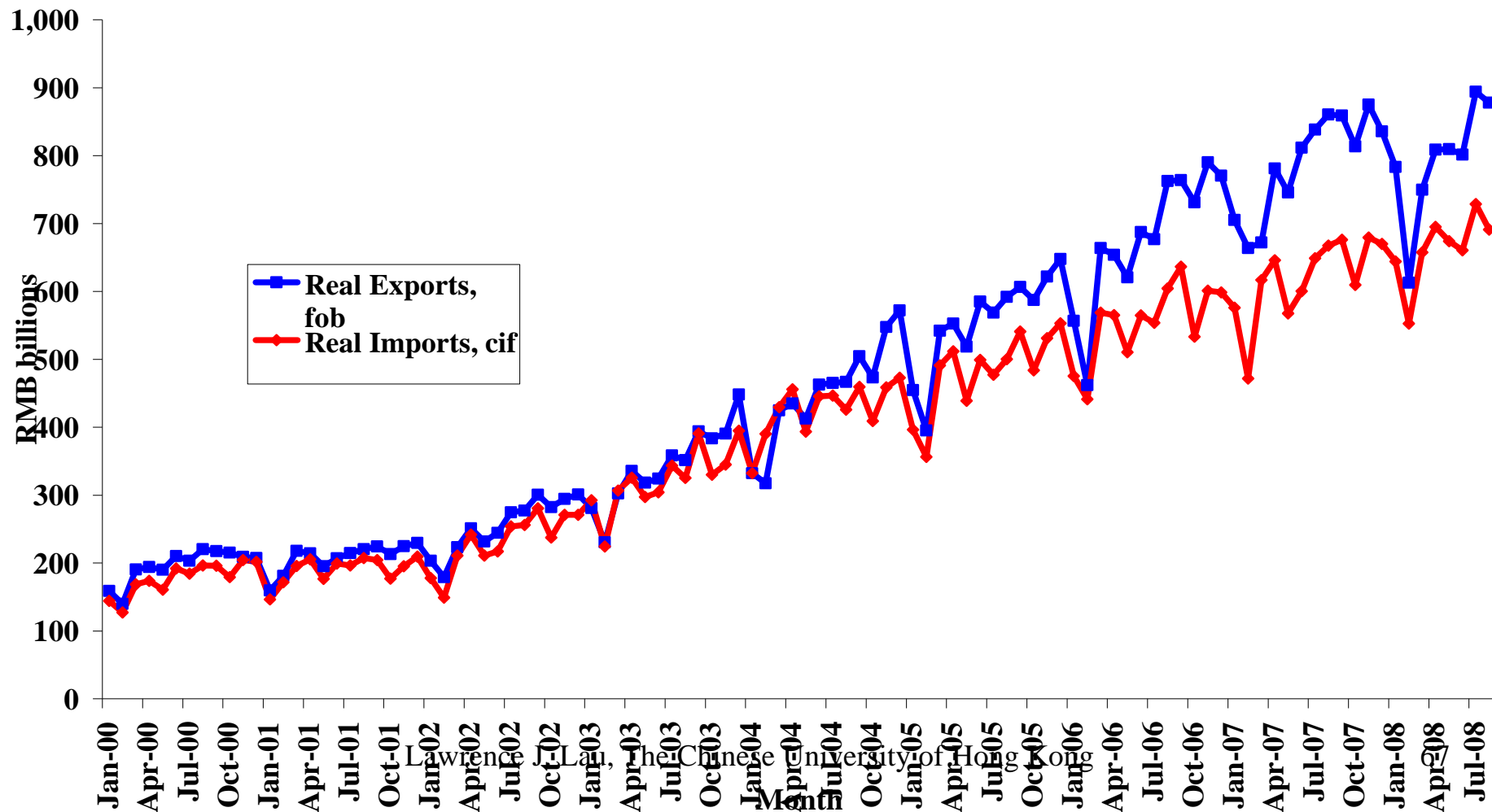
Chinese Exports and Imports in US\$

The Level of Exports, Imports and Trade Balance of Goods at the End of the Month



Real Chinese Exports and Imports in RMB (2007M12 prices)

The Real Level of Exports and Imports of Goods at the End of the Month since 2000
(in 2007M12 prices)



The Macroeconomic Situation

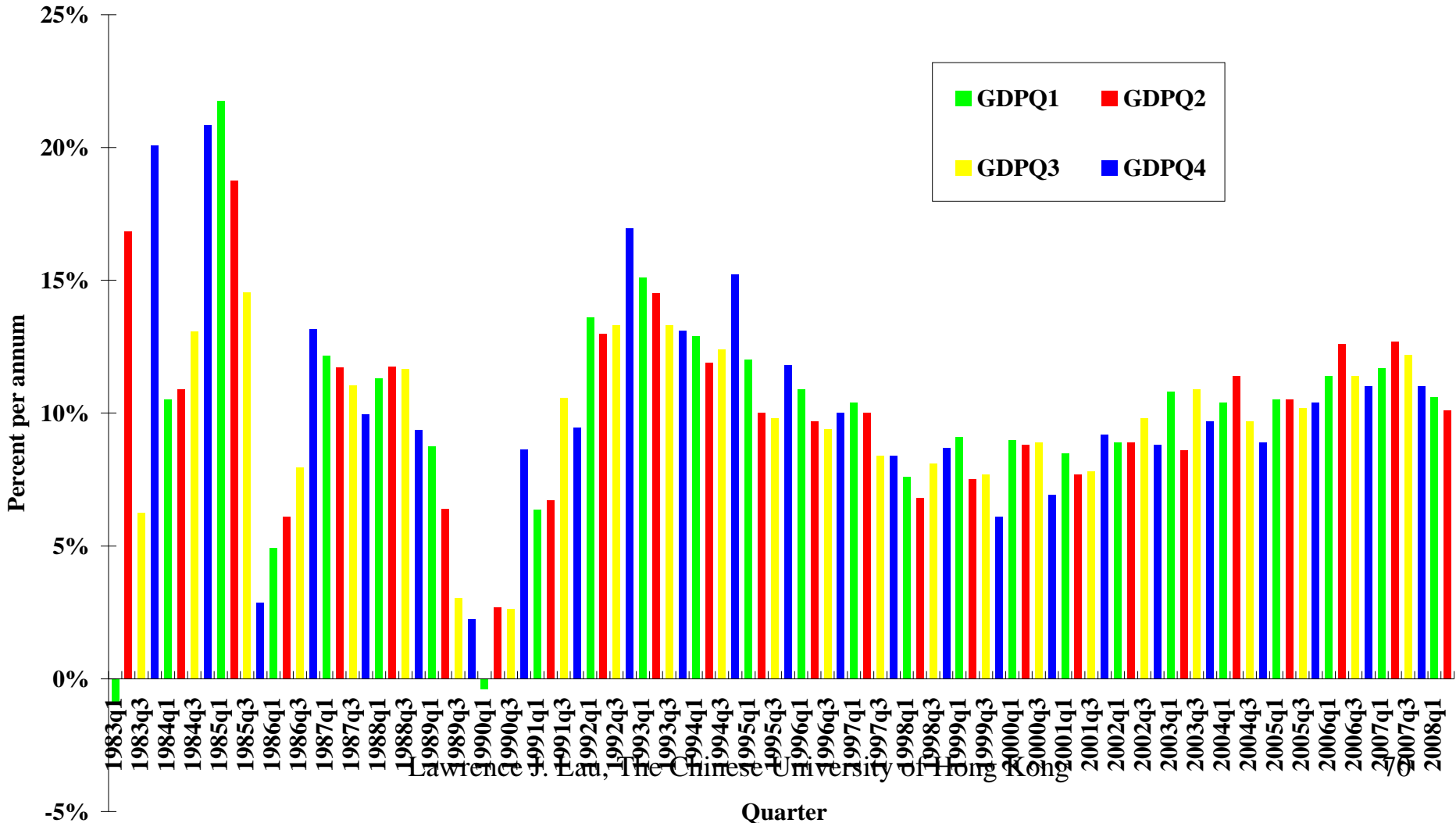
- ◆ However, the reduction of the overall Chinese trade surplus is positive for China because it helps to decrease the inflow of foreign exchange (hot money). If trade is balanced, then there is no net inflow of foreign exchange. In addition, a zero or negative trade surplus will alter the expectation that the Renminbi will continue to appreciate, and that will in turn further decrease the speculative inflow of foreign exchange (hot money). With hot money inflow reduced or stopped altogether, China will be able to better control its money supply and conduct its monetary policy.
- ◆ China should continue to try to increase its imports, especially from the United States. Agriculture and high-technology products are areas where substantial progress can be made. There is also an opportunity for China to import old ships, with the sharp slowdown in international trade, to be scrapped, as a replacement for ore imports in the production of steel. And this will enable the development of mini-steel mills in China.

The Macroeconomic Situation

- ◆ There are many opportunities for the expansion of Chinese domestic demand through infrastructural investment, especially in the earthquake-affected regions, and environmental clean-up and protection. Education and medical care and upgrading of facilities are other possibilities. All of these investments contribute to the achievement of a harmonious society.
- ◆ For individual households, there are still huge demands for new and better housing, and for both private and public (mass) transportation. The housing demand will become even stronger if appropriate policies for the financing of owner-occupied residential housing can be adopted.

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

Quarterly Rates of Growth of Real GDP (YoY)



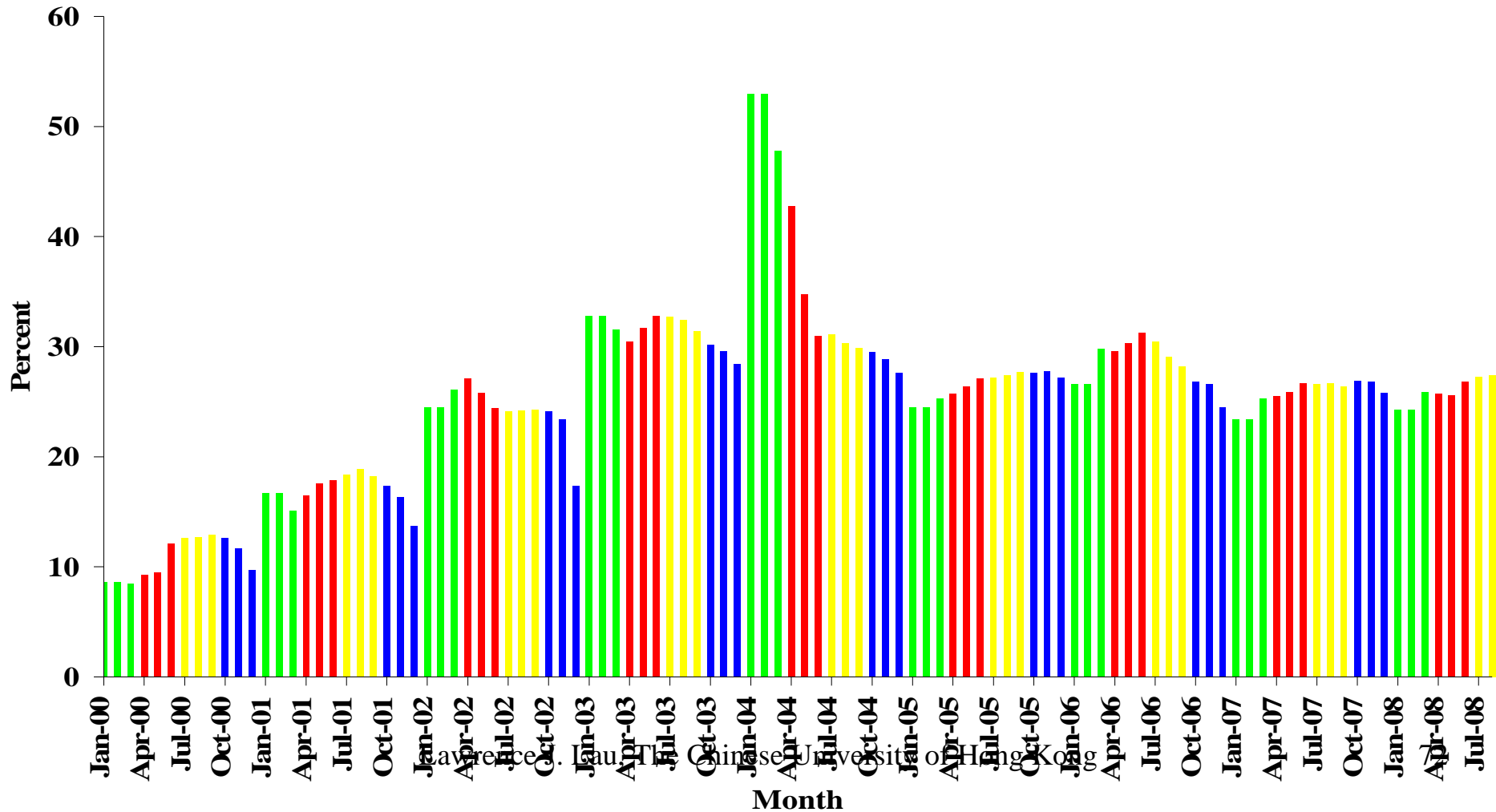
Monthly Rates of Growth of Value-Added of Industry, Y-o-Y

Real Rates of Growth of the Value Added of Industry, Year-over-Year



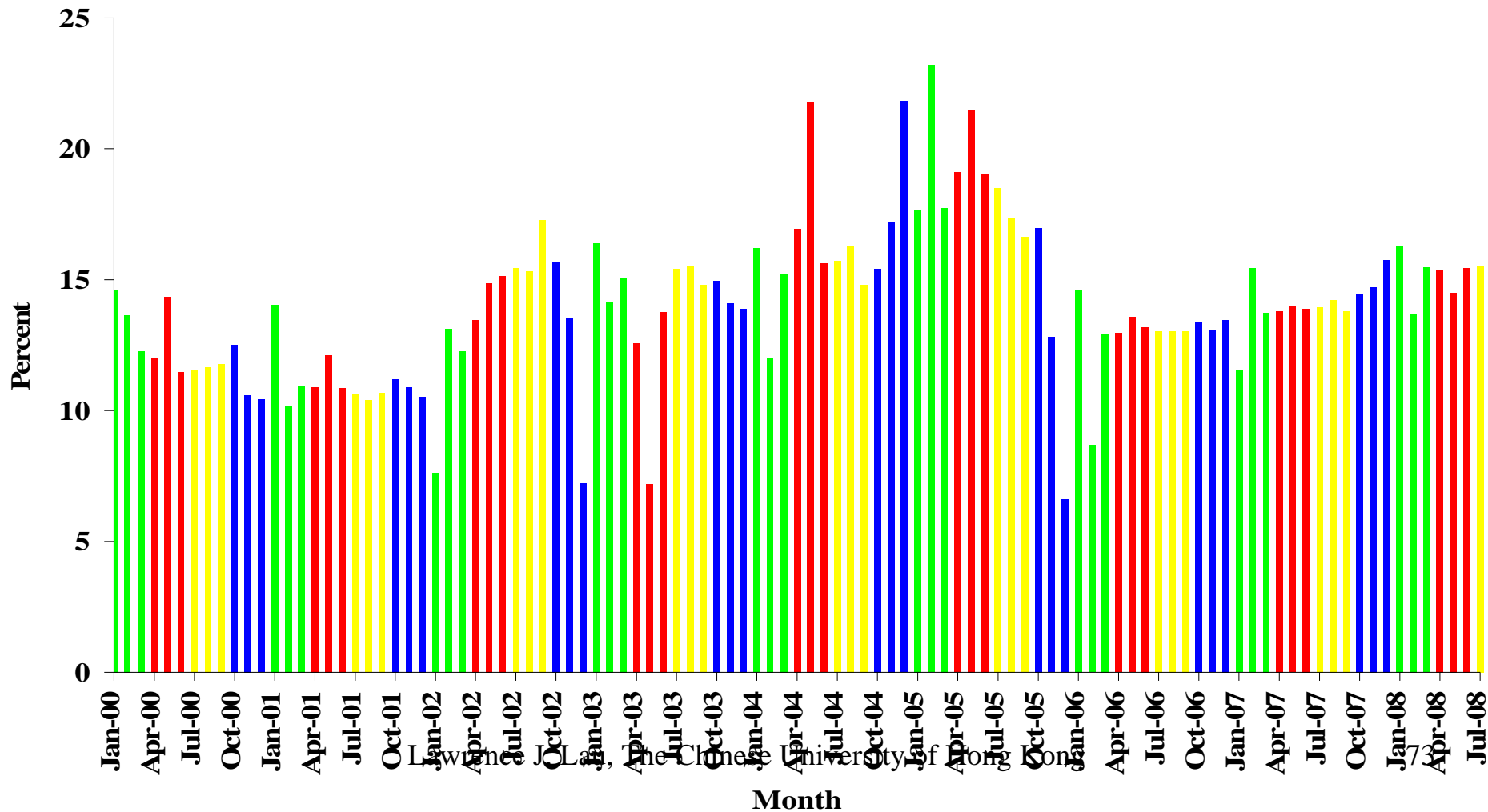
Monthly Rates of Growth of Real Fixed Investment, Y-o-Y

Rates of Growth of Fixed Investment since 2000, Year-over-Year



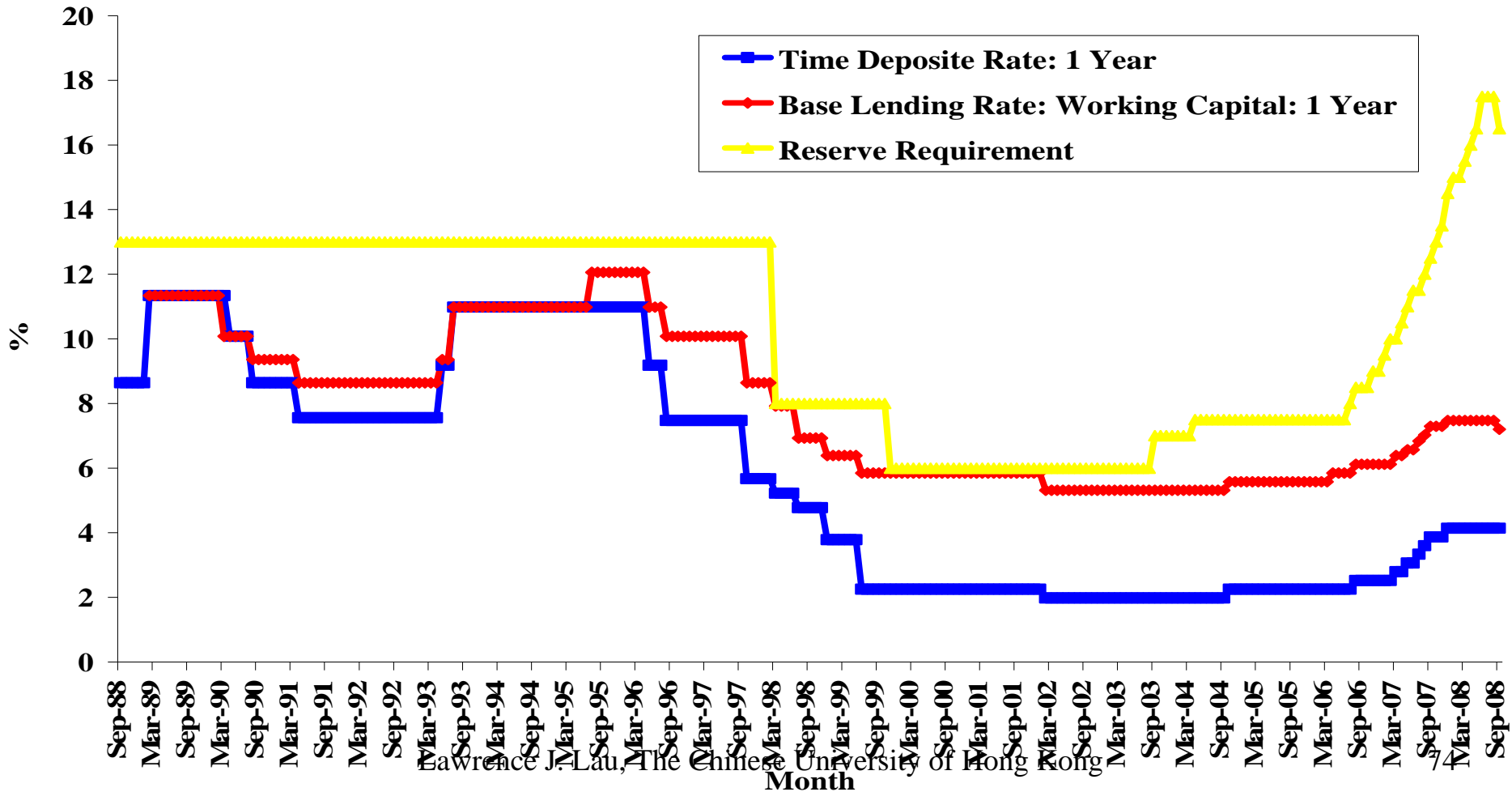
Monthly Rates of Growth of Real Retail Sales, Y-o-Y

Rates of Growth of Real Retail Sales since 2000, Year-over-Year



Short-Term Deposit and Lending Rates and Bank Reserve Requirement

Short-Term Deposit and Lending Rates and Bank Reserve Requirement

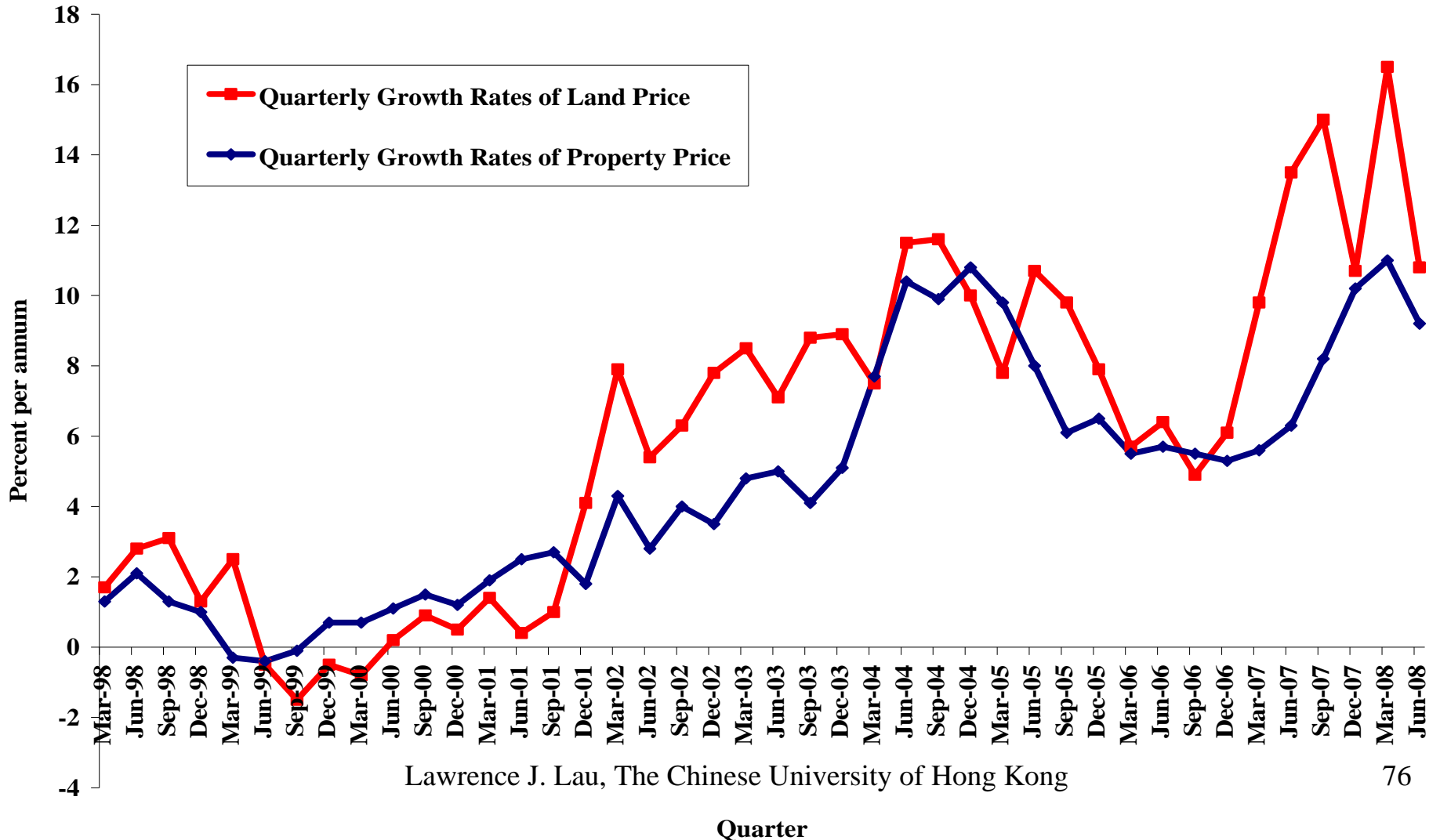


The Macroeconomic Situation

- ◆ The Chinese fiscal situation remains healthy, with large annual increases in government revenue at rates much higher than those of real GDP. And the banks are flush with cash. Long-term bonds can be issued by the Government to finance infrastructural projects.
- ◆ A slowdown of the economy to 8% per annum is not a bad thing—it is still among the highest rates of growth in the world.
- ◆ However, the central government must take care of the subsistence needs and the retraining and reemployment of workers who become unemployed because of the slowdown in the export sector.
- ◆ It is best to let the asset markets—stock and property markets—adjust by themselves. The key objective of the central government should be to encourage long-term investment and owner-occupied residential housing, but not short-term speculation. Policies should be crafted to achieve these objectives.

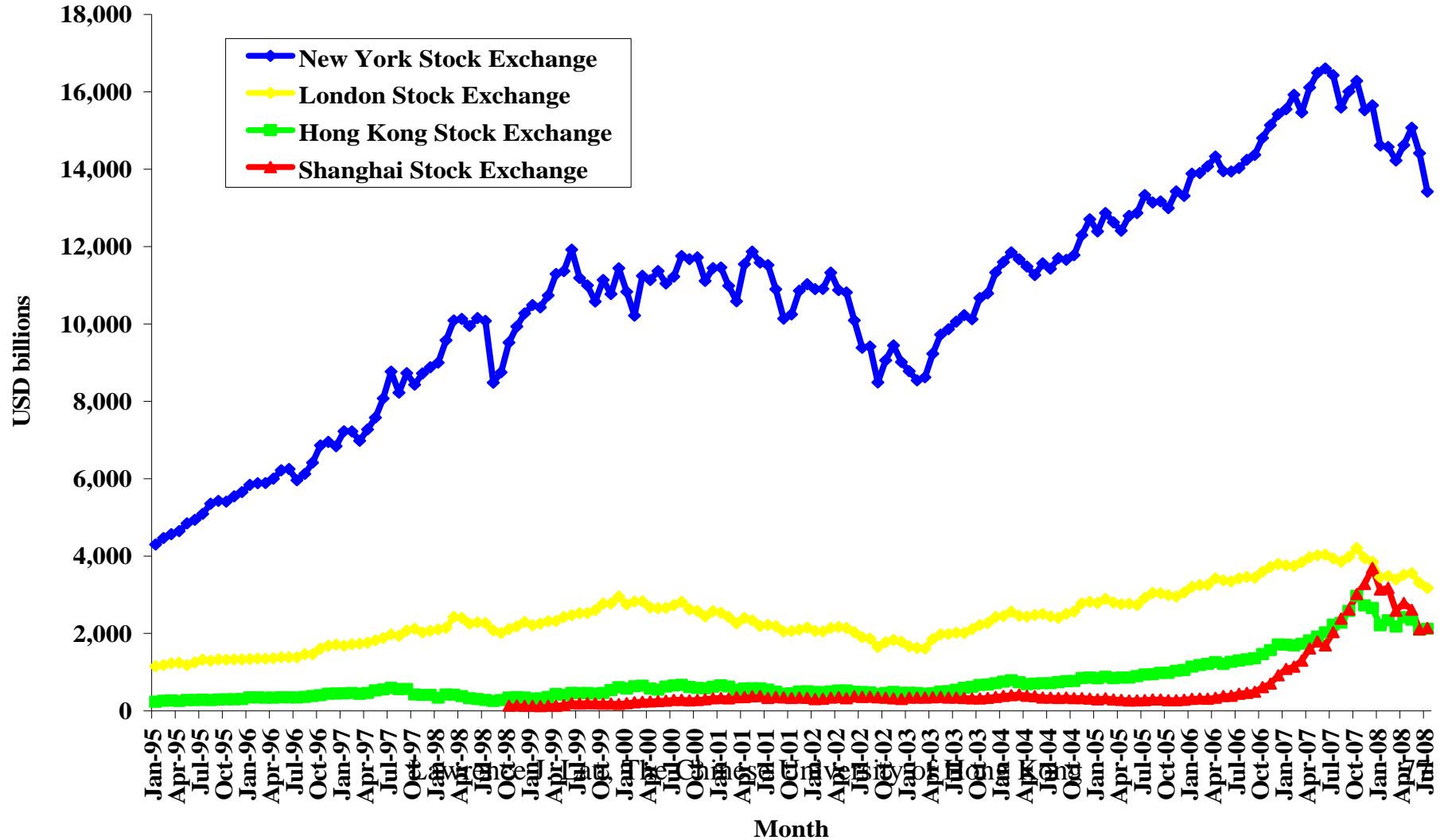
Quarterly Rates of Growth of Land Price and Property Price, Y-o-Y

Quarterly Growth Rates of Land Price and Property Price, Year-over-Year



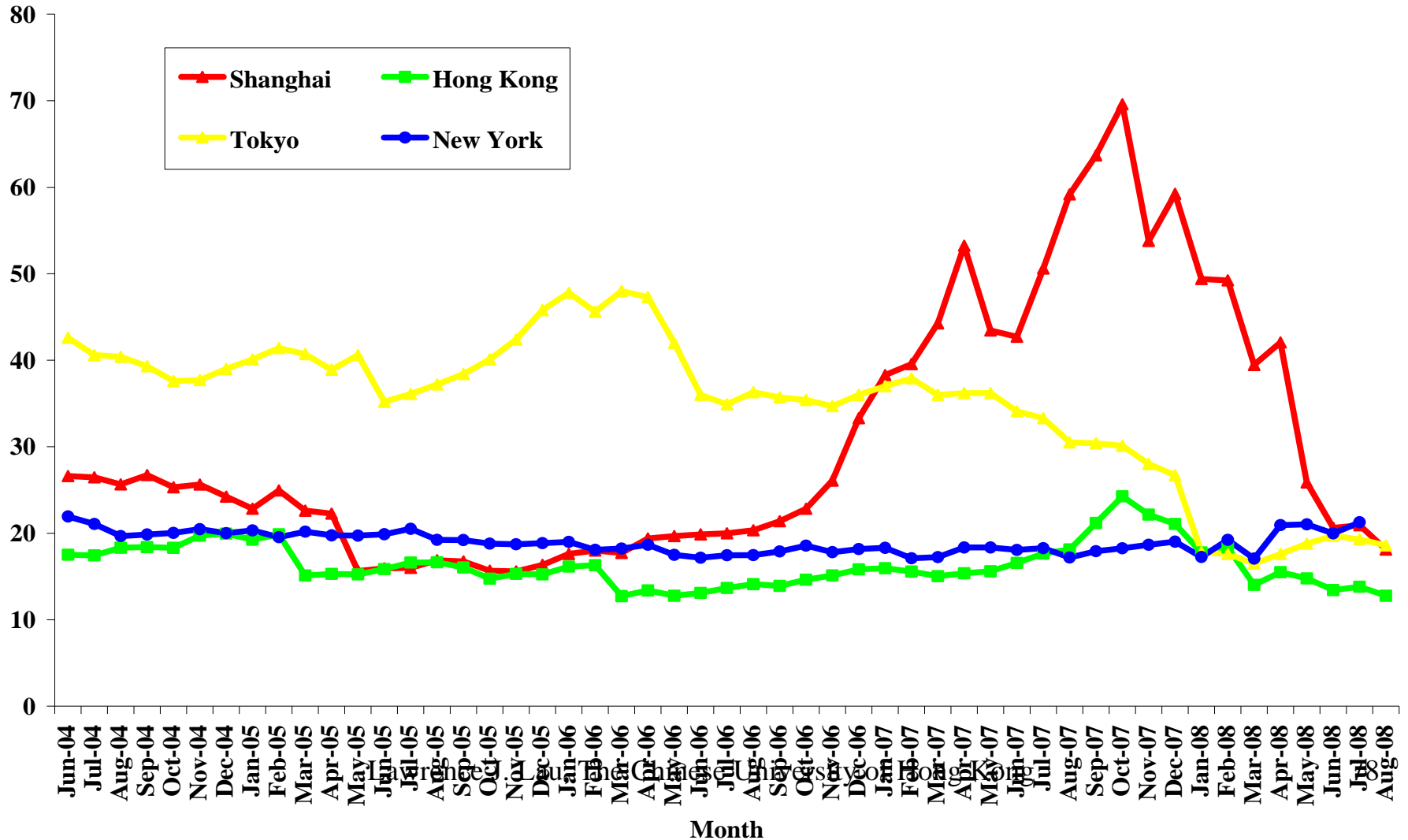
Market Capitalization of Four Stock Exchanges

Domestic Market Capitalization of Four Stock Exchanges



Price/Earning Ratios of Four Stock Exchanges

Price/Earnings Ratios of Four Stock Exchanges

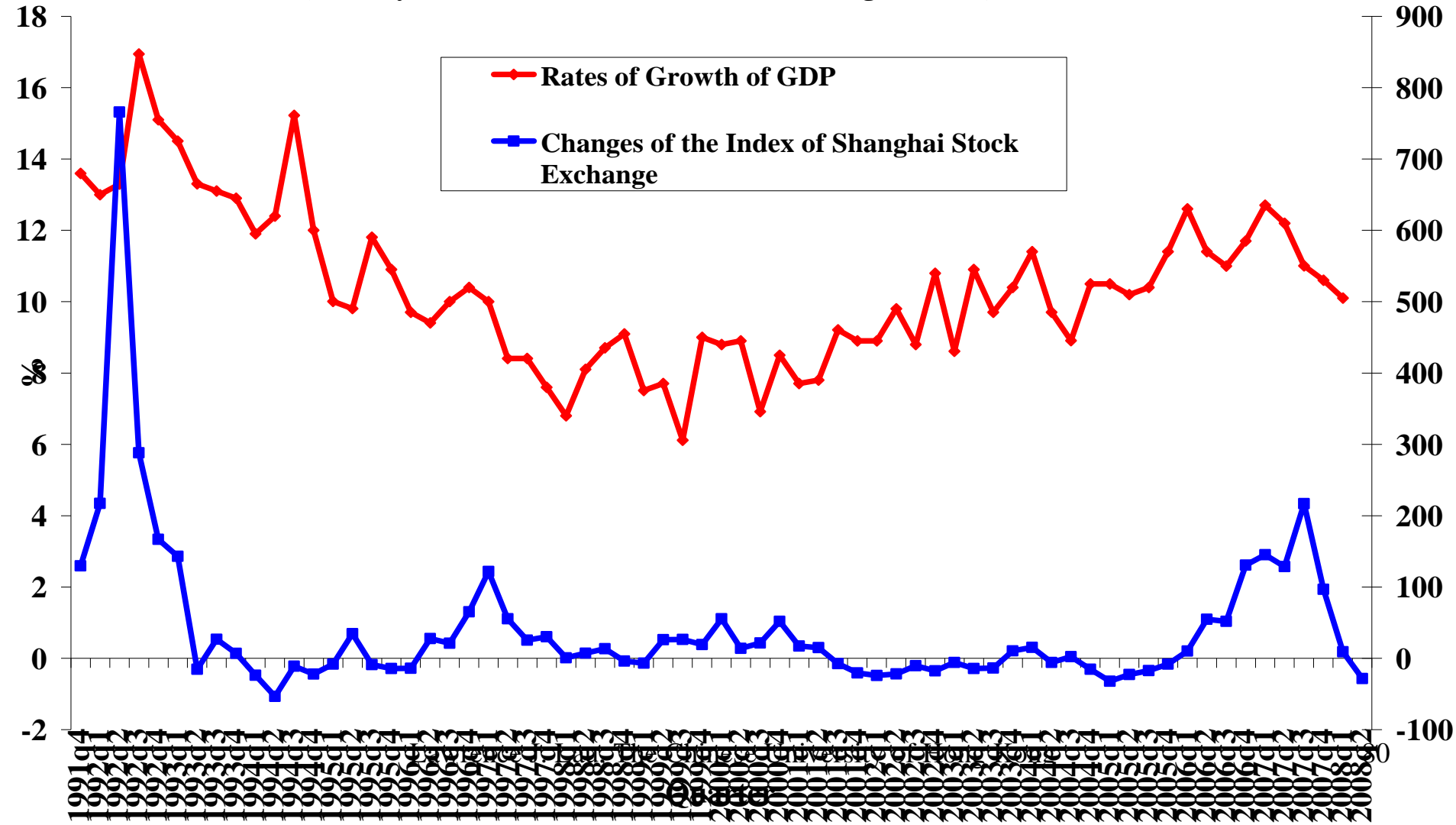


The Impact of the Asset Markets

- ◆ The prices of land, property and stocks have all come down significantly during the past year. Is this a cause for great concern?
- ◆ If we look back, the 30 year-period of successful economic performance in China since the beginning of the economic reform and opening to the world in 1978 is almost completely independent of the Chinese stock markets or the Chinese property markets. The Chinese stock markets have been prosperous only within the last couple of years. The rate of growth of GDP and the rate of change of the index of the prices of stocks on the Shanghai Stock Exchange do not show much correlation.
- ◆ The situation facing the Chinese economy is much more adverse back in 1998, during the East Asian currency crisis, with the Chinese Government then having far less resources. But the Chinese economy managed to do all right then (and earned the gratitude and respect of the East Asian economies). Today the Chinese Government has far more resources and instruments at its disposal.

Quarterly Rates of Growth of GDP and the Index of the Shanghai Stock Exchange

Quarterly Rates of Growth of GDP and the Shanghai Index, Year-over-Year

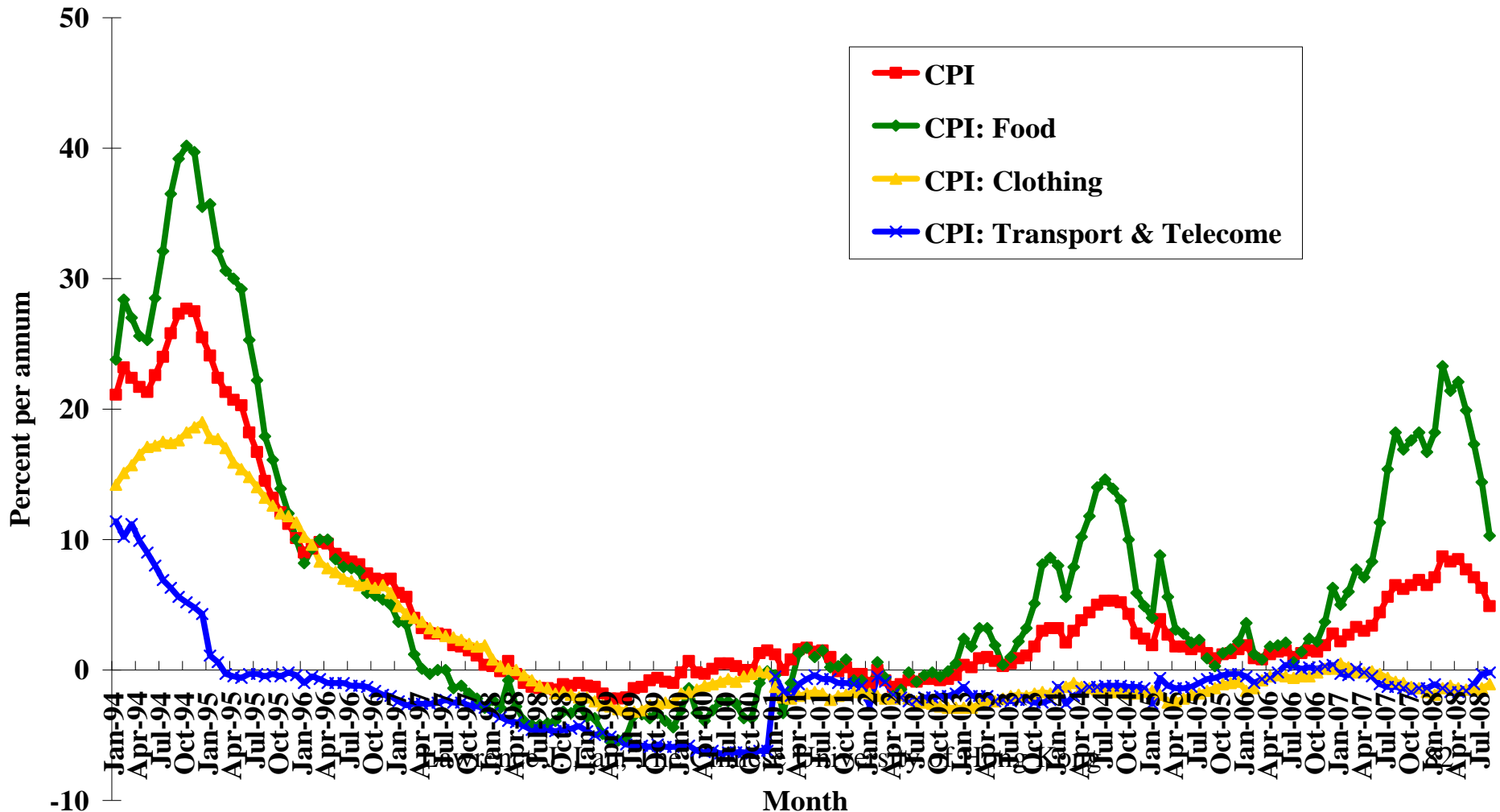


Domestic Inflation

- ◆ The rate of inflation has slowed significantly, as expected. This is the time to try to adjust the domestic prices of energy commodities such as coal, gas and oil, as well as the retail prices for electricity, gas and transportation fuel, while introducing differential pricing policy to protect the low-income households.

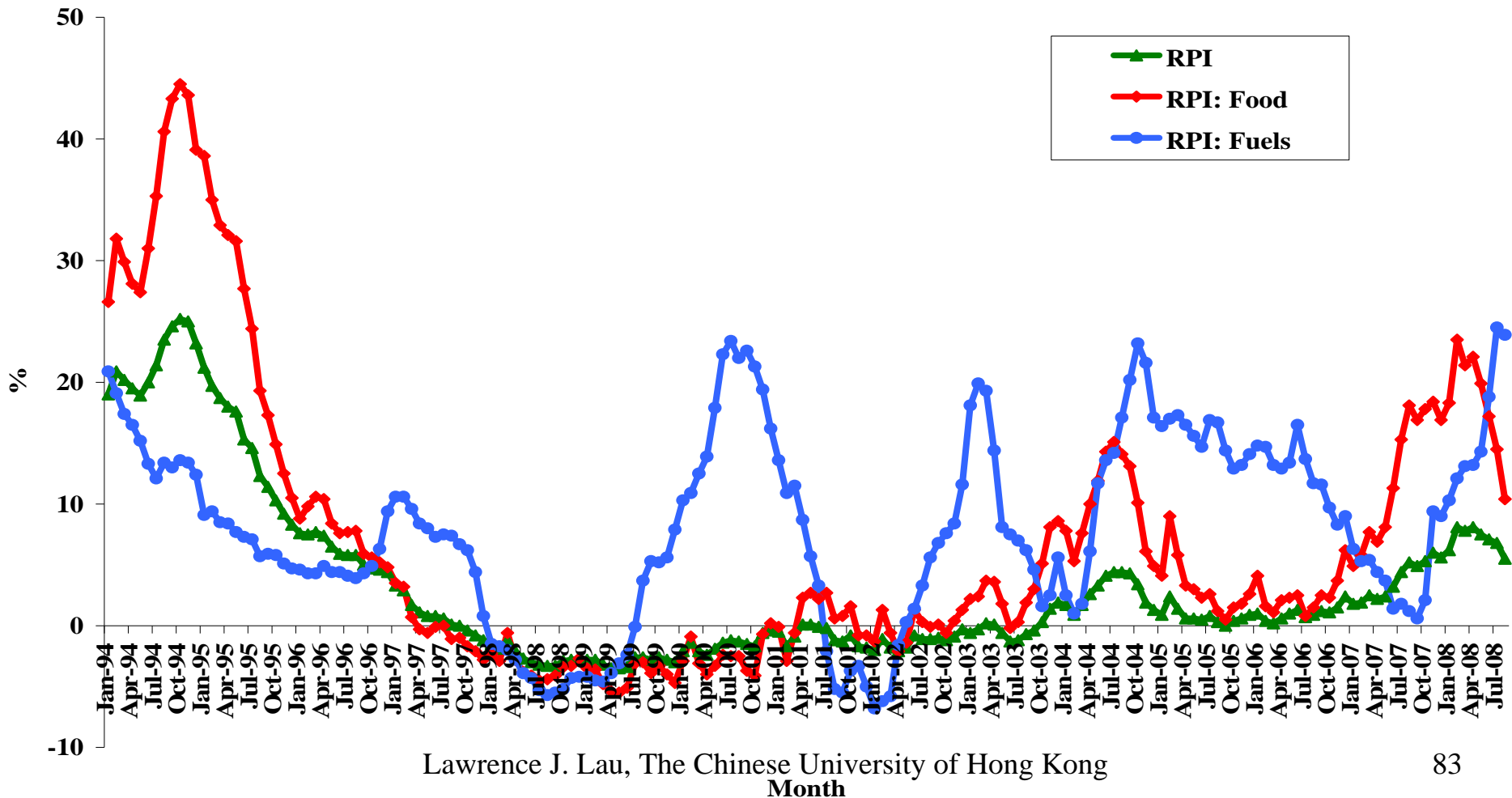
Monthly Rates of Changes in the Consumer Price Index & Components

Monthly Rates of Change of Consumer Price Index and Its Components Since 1994, Y-o-Y



Monthly Rates of Change of Retail Price Index & Its Components, Y-o-Y

Monthly Rates of Change of Retail Price Index and Its Components Since 1994, Year-over-Year



Concluding Remarks

- ◆ For economic, environmental and global warming reasons, it is in the interests of China to reduce its consumption of energy and in particular the consumption and importation of crude oil.
- ◆ Over-dependence on oil imports is a huge strategic liability and opens the country to huge risks.
- ◆ Chinese economic growth during the next several decades will depend mostly on internal factors and be largely unaffected by the policies of other countries or events outside of China (a disruption of the oil supply may be an exception).
- ◆ China can affect the current and future prices of crude oil through its policies on demand management and on the promotion of alternative forms of energy.

Win-Win Strategies for Economic Development

- ◆ China can also play a leading role in the world to enhance the stability of the international exchange rate mechanism, creating an environment that facilitates the stability and sustainability of international trade, direct investment and capital flows, and enables the sustained growth of developing economies.

Concluding Remarks

- ◆ 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 also shows that the East Asian developing economies as a group can grow independently of the U.S. and Europe.
- ◆ The 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 (Brazil, Russia and India), the world should be able to manage even as the U.S. economy slows down and goes into a recession.

Concluding Remarks

- ◆ China is at the present time much better prepared to cope with a negative external environment—it has more resources (much higher reserves, large fiscal surpluses, a much more effective social safety net).
- ◆ There is a great deal of scope for China to exercise its leadership in important initiatives that can be beneficial for all East Asian economies and for the world. The key is to ensure that the resulting outcomes are win-win for all.
- ◆ 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.