Economic Prospects in East Asia Including China

Lawrence J. Lau, Ph. D., D. Soc. Sc. (hon.)
Kwoh-Ting Li Professor of Economic Development
Department of Economics
Stanford University
Stanford, CA 94305-6072, U.S.A.

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Phone: 1-650-723-3708; Fax: 1-650-723-7145
Email: ljlau@stanford.edu; WebPages: http://www.stanford.edu/~ljlau

Economic Prospects in East Asia Including China

- Postwar economic growth in East Asia
- A brief history of the East Asian currency crisis (1997-1998) and its recovery
- Prospects for future economic growth (excluding Japan)
- Investment in East Asia

The Economy of East Asia Today

- East Asia is the fastest-growing region in the world over the past two decades, the East Asian currency crisis of 1997-1998 notwithstanding
- Hong Kong, South Korea, Singapore and Taiwan are the first "Newly Industrialized Economies" (NIEs) in East Asia
- Industrialization has subsequently spread to Indonesia, Malaysia, Thailand, and to a lesser extent, Philippines (the wild-geese-flying pattern)
- The real GDP of the People's Republic of China has grown at an average annual rate of almost 10 percent in the two decades since Chinese economic reform began in 1979
- The East Asian economies survived the East Asian currency crisis and with the exception of Indonesia and possibly Philippines have largely recovered from their troughs
- How has East Asia been able to achieve this economic performance?

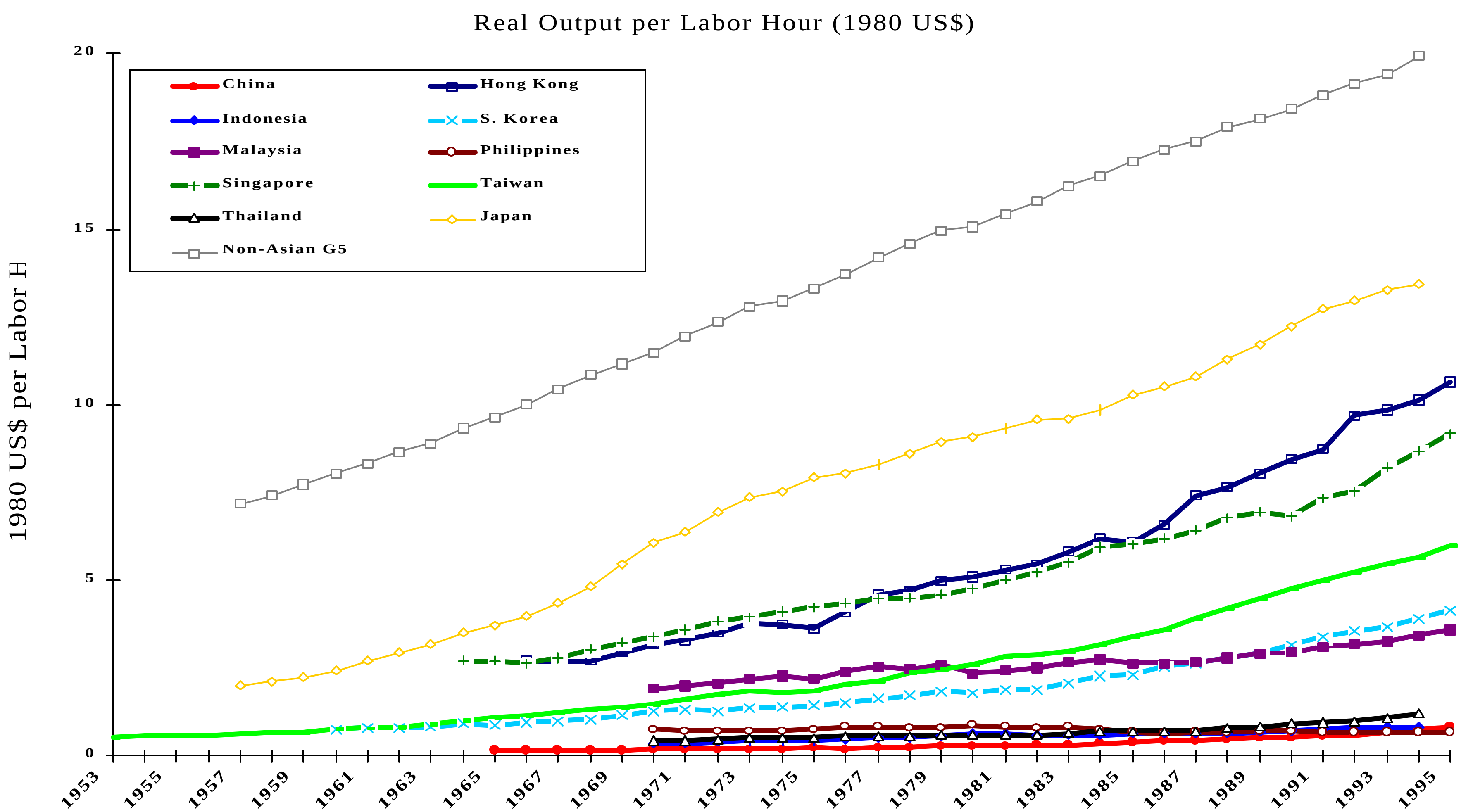
Rates of Growth of Inputs & Outputs of the East Asian Developing & the G-7 Countries

Table 3.1: Average Annual Rates of Growth of Real GDP, Capital, Labor and Human Capital (percent)

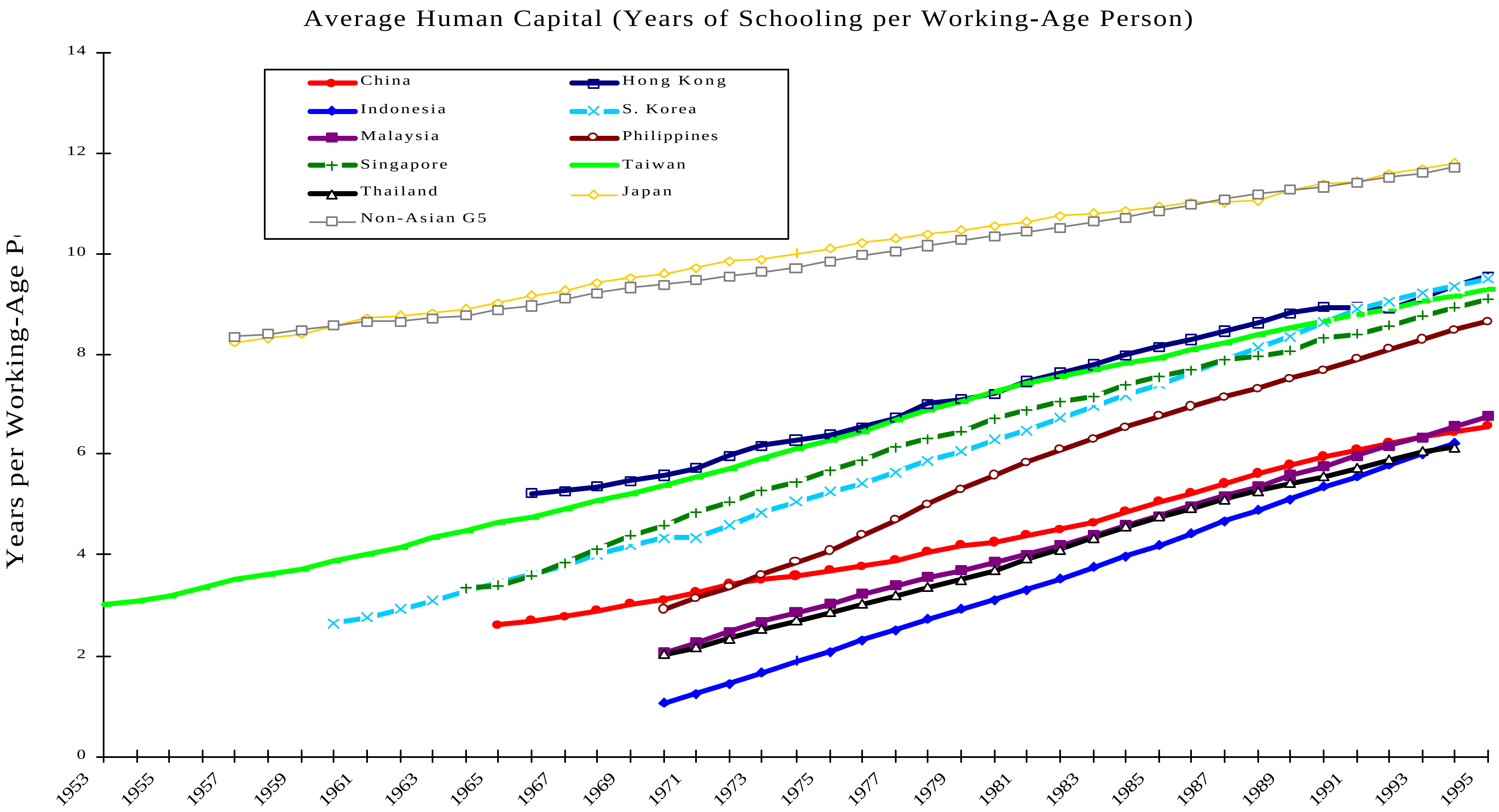
(Extended sample period)

Country	Period	GDP	Capital Stock	Utilized Capital	Employment	Labor Hours	Human Capital	Average Human Capital
Hong Kong	66-95	7.4	8.8	8.6	2.6	2.4	4.8	2.1
S. Korea	60-95	8.5	12.3	12.3	3.1	3.3	6.2	4.0
Singapore	64-95	8.8	10.3	10.3	4.3	4.7	5.9	3.5
Taiwan	53-95	8.4	11.8	11.8	2.7	2.3	5.3	2.8
Indonesia	70-94	6.7	8.9	9.8	3.1	3.1	9.6	7.7
Malaysia	70-95	7.3	11.8	11.8	3.7	3.7	7.7	4.9
Philippines	66-95	4.0	5.8	5.9	3.2	3.2	10.8	8.5
Thailand	66-94	7.6	9.1	9.4	2.8	2.8	8.5	5.8
China	65-95	8.4	10.3	10.3	3.0	3.0	5.9	3.3
Japan	57-94	5.9	8.1	8.0	1.1	0.6	2.1	0.9
Canada	57-94	3.8	4.8	4.7	2.3	1.9	3.0	1.1
France	57-94	3.3	3.9	3.9	0.4	-0.2	2.0	1.1
W. Germany	57-94	3.2	3.3	3.1	0.1	-0.3	1.5	1.0
Italy	59-94	3.5	5.2	5.3	0.0	-0.3	1.8	1.3
UK	57-94	2.4	3.9	3.8	0.2	-0.1	1.2	0.8
US	49-94	3.1	3.0	3.3	1.7	1.3	2.1	0.8

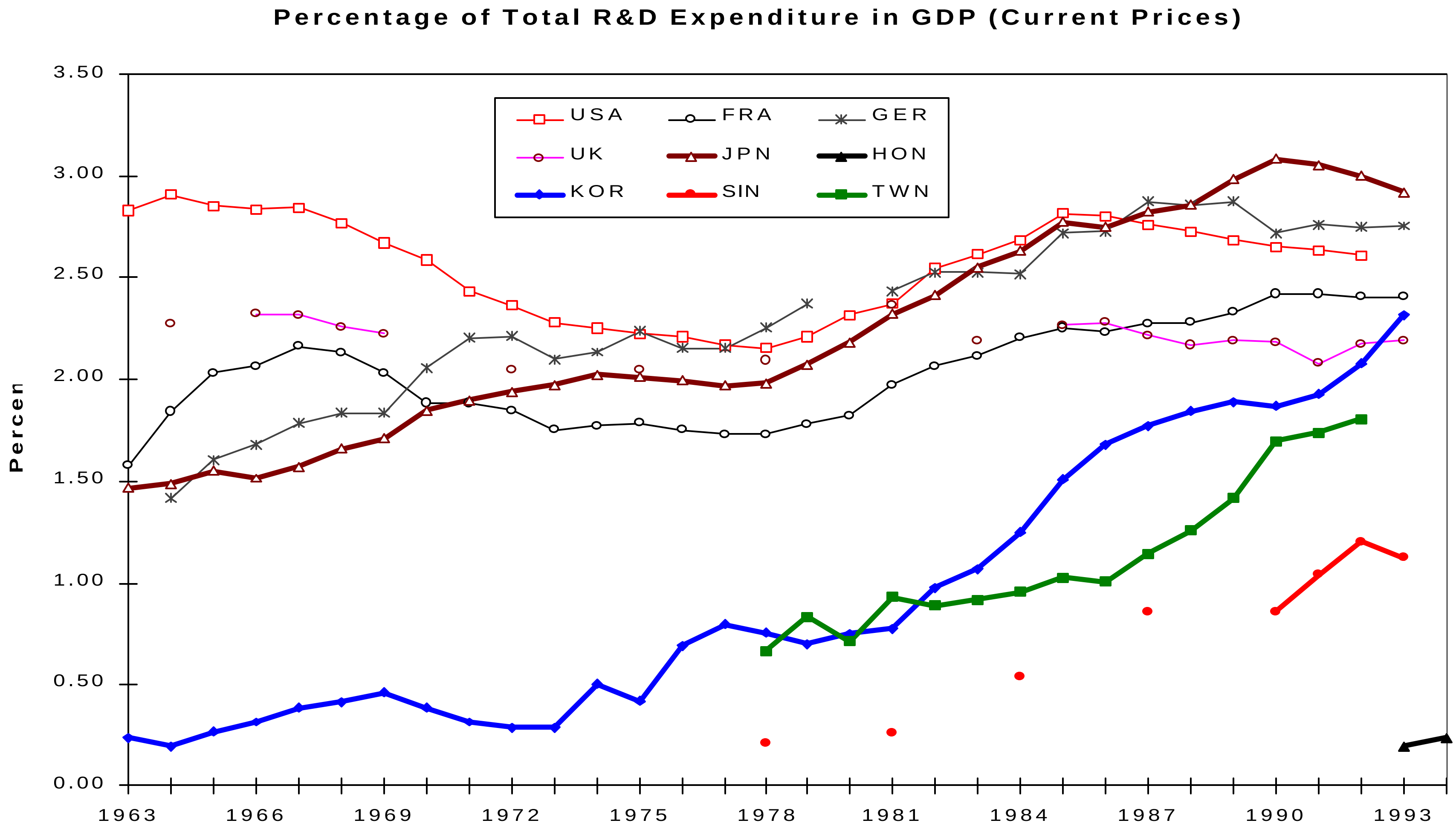
Real Output per Labor Hour



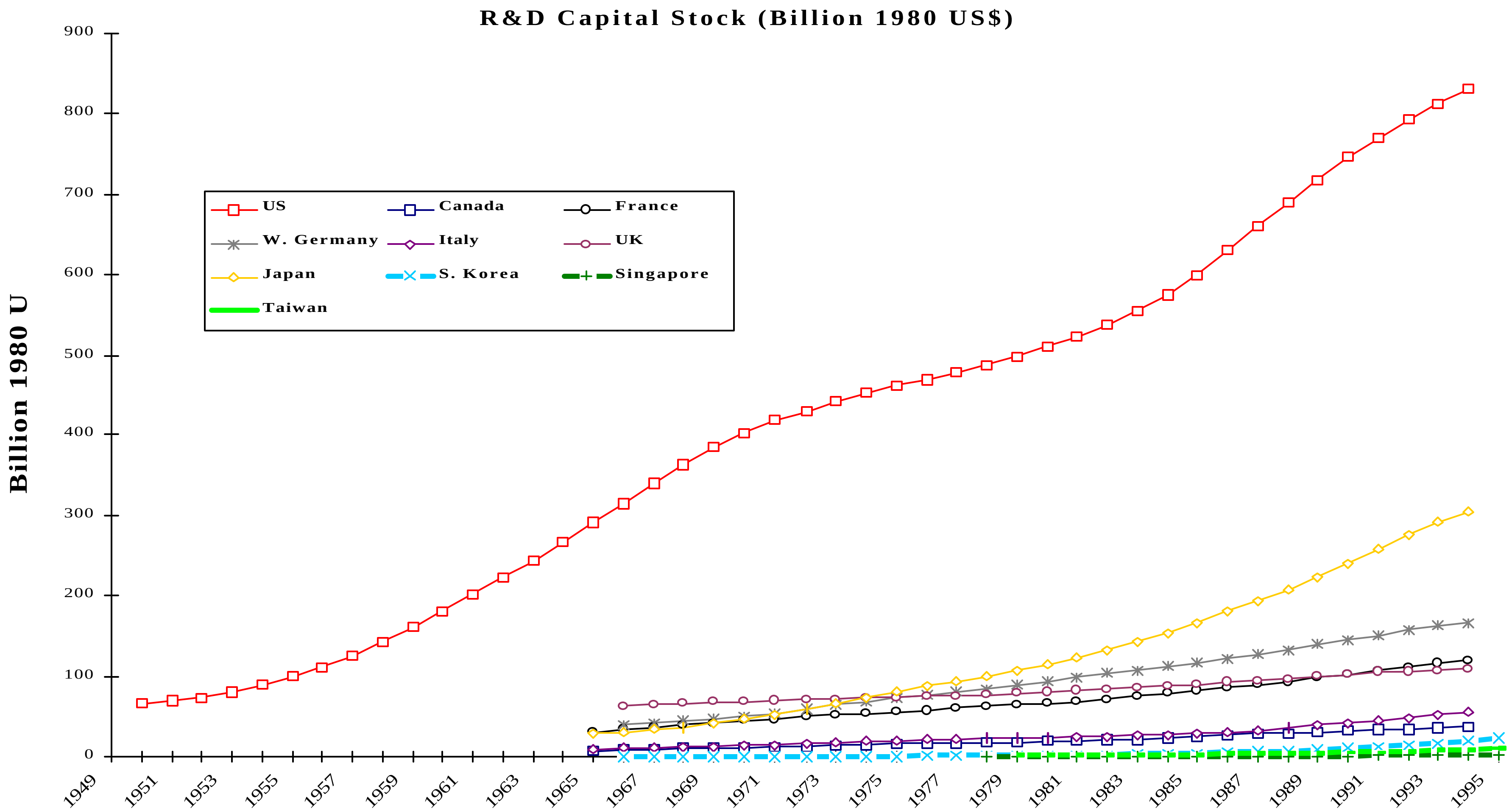
Human Capital



R&D Expenditure as a Percentage of GDP



R&D Capital



R&D Capital Stock (Billion 1980 US$)
Billion 1980 U
900
800
700
600
500
400
300
200
100
0
US
Canada
France
W. Germany
Italy
UK
Japan
S. Korea
Singapore
Taiwan
1949
1951
1953
1955
1957
1959
1961
1963
1965
1967
1969
1971
1973
1975
1977
1979
1981
1983
1985
1987
1989
1991
1993
1995

Accounting for Economic Growth

- Decomposing the growth of output by its proximate sources:
  - How much of the growth of output can be attributed to the growth of <u>measured</u> inputs, tangible capital and labor? and
  - How much of the growth of output can be attributed to technical progress (aka growth in total factor productivity), i.e. improvements in productive efficiency over time?
- **TECHNICAL PROGRESS (GROWTH IN TOTAL FACTOR PRODUCTIVITY)**
  = GROWTH IN OUTPUT HOLDING ALL <u>MEASURED</u> INPUTS CONSTANT

Interpretation of Technical Progress (Growth of Total Factor Productivity)

- Not “Manna from Heaven”
- The effects of growth in unmeasured “Intangible Capital” (Human Capital, R&D Capital, Goodwill (Advertising and Market Development), Information System, Software, etc.)
- The effects of growth in other omitted and unmeasured inputs (Land, Natural Resources, Water Resources, Environment, etc.)
- The effects of improvements in technical and allocative efficiency over time, e.g., learning-by-doing
- “Residual” or “Measure of Our Ignorance”

The Sources of Economic Growth: Findings of Kim & Lau As Reported by Krugman (1994)

- Using data from the early 1950s to the late 1980s, Kim and Lau (1992, 1994a, 1994b) find that:
- (1) No technical progress in the East Asian NIEs but significant technical progress in the industrialized economies (IEs)
- (2) East Asian economic growth has been input-driven, with tangible capital accumulation as the most important source of economic growth (the latter applying also to Japan)
  - Working harder as opposed to working smarter
- (3) Technical progress is the most important source of economic growth for the IEs, followed by tangible capital, accounting for over 50% and 30% respectively, with the exception of Japan
  - NOTE THE UNIQUE POSITION OF JAPAN!
- (4) Technical progress is purely tangible capital-augmenting and hence complementary to tangible capital

The Sources of Growth: Further Results with Extended Sample--Lau and Park (2000)

Sample (G-5 + 4 NIEs)			
	Tangible Capital	Labor	Technical Progress
Hong Kong	74.46	25.54	0
South Korea	78.2	21.8	0
Singapore	64.8	35.2	0
Taiwan	84.04	15.96	0
Japan	49.9	4.84	45.26
Non-Asian G-5	38.71	2.77	58.52
Sample (G-5 + 9 Asian)			
	Tangible Capital	Labor	Technical Progress
Hong Kong	74.61	25.39	0
South Korea	82.95	17.05	0
Singapore	63.41	36.59	0
Taiwan	86.6	13.4	0
Indonesia	88.79	11.21	0
Malaysia	66.68	33.32	0
Philippines	66.1	33.9	0
Thailand	83.73	16.27	0
China	94.84	5.16	0
Japan	55.01	3.7	41.29
Non-Asian G-5	41.51	1.97	56.53

The Sources of Economic Growth--Developing Economies in East Asia

- Different types of measured inputs play different roles at different stages of economic growth
- Tangible capital accumulation is the most important source of growth in the early stage of economic development
- But simply accumulating tangible capital is not enough--it must also be efficiently allocated
- Efficient tangible capital accumulation is the major accomplishment of the East Asian NIEs in the postwar period
    - Market-directed allocation of new investment, aided by export orientation, promotes efficiency
    - Private enterprises have the incentives for prompt self-correction
- Intangible capital accumulation becomes important only after a certain level of tangible capital per worker is achieved but has begun to be important for some East Asian NIEs such as South Korea and Taiwan

A Brief History of the East Asian Currency Crisis

- The East Asian currency crisis began in Thailand in late June of 1997 and essentially stabilized in the last quarter of 1998
- With the exception of two currencies, the Chinese Yuan and the Hong Kong Dollar, all other East Asian currencies lost significant value vis-à-vis the U.S. Dollar, albeit by varying degrees, and did not recover to pre-crisis levels
- Once the exchange rates stabilized at their new (lower) levels, the rates of interest began to fall to more reasonable levels that permit normal real economic activities to resume
- While the declines in real GDP were exceptionally sharp in the affected East Asian economies, the recoveries were equally rapid--by mid-1999 the real GDPs of all of the affected economies began to show positive rates of growth

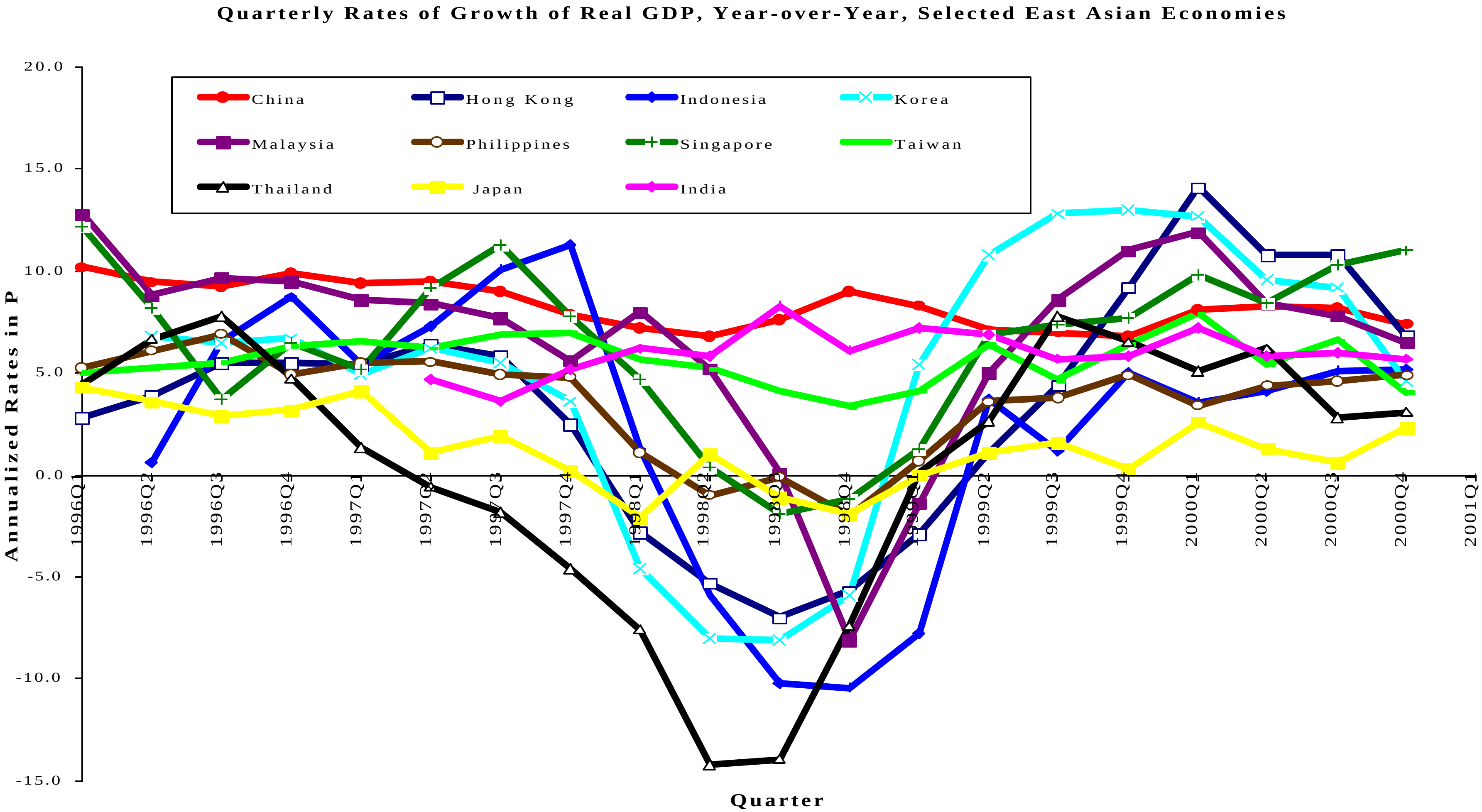
Is the Recovery Real?

- For most of the East Asian economies, the bottom was reached (0% rate of growth of real GDP) in 2Q/1999 with the recovery most tentative in Indonesia and Philippines with their political problems
- In terms of quantity, exports as well as imports have been growing very rapidly
- The current accounts have turned positive and foreign exchange reserves have been largely replenished
- Inflation caused by the devaluation has largely subsided
- The stock markets have rebounded from their troughs but not all of them have fully recovered to their pre-crisis levels
- While the simultaneous downturns in the East Asian economies exacerbated the problems of one another, the simultaneous upturns have allowed the recovery to be extraordinarily and unexpectedly rapid, with the rising import demands of each economy feeding into rising export demands of its trading partners

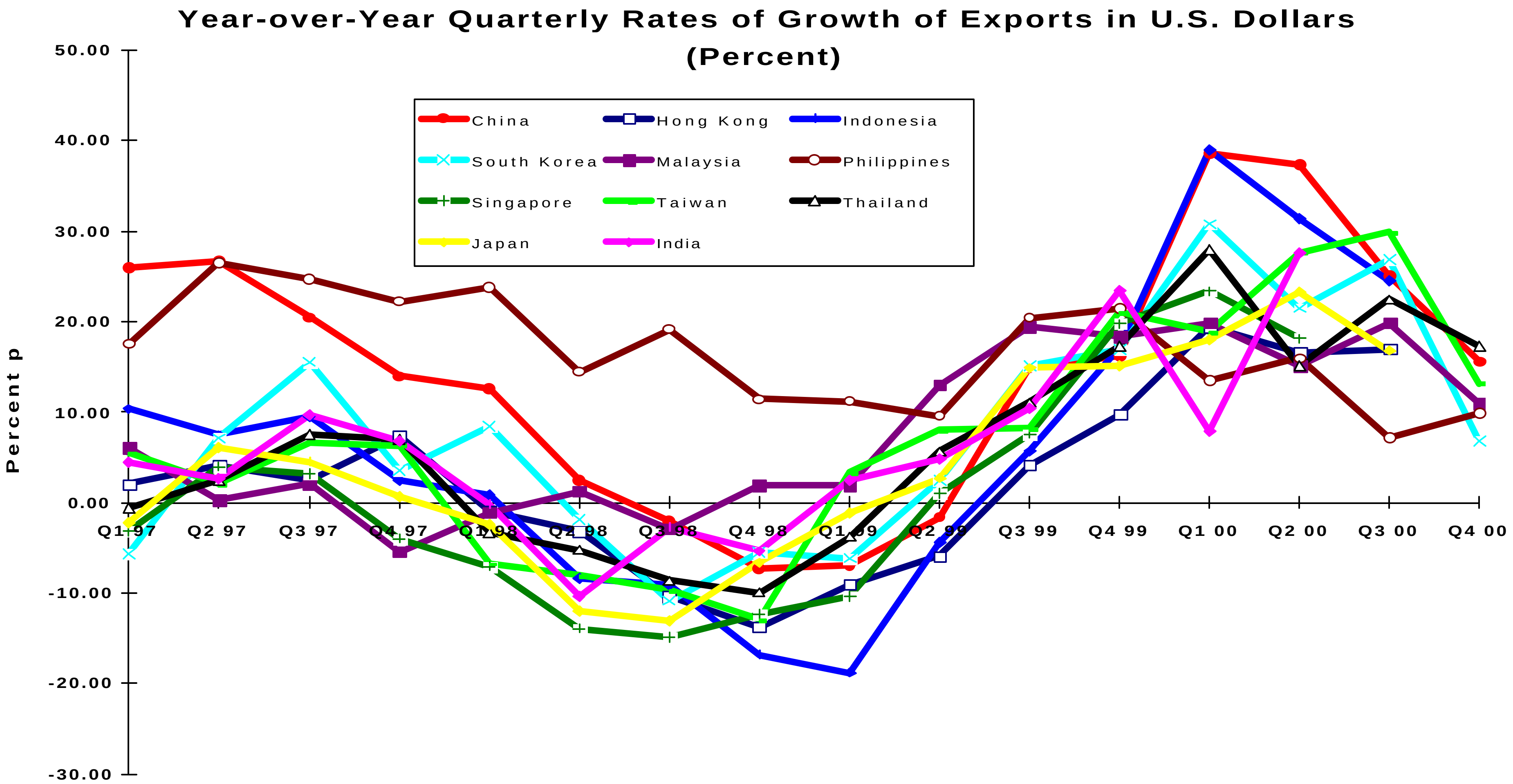
The Recovery Followed the Stabilization of the External Environment

- Since 3Q/1998, there have not been any speculative attacks on the Thai Baht or any other East Asian currency.
- The hedge funds had a "credit crunch" due to losses, net redemption and curtailment of available credit lines in the aftermath of the collapse of the Russian ruble and the "Long-Term Capital Management" crisis.
- The U.S. economy has been exceptionally strong throughout the period of the East Asian currency crisis (until 4Q/2000), providing a market for East Asian exports and compensating for the very slow recovery of the Japanese economy.

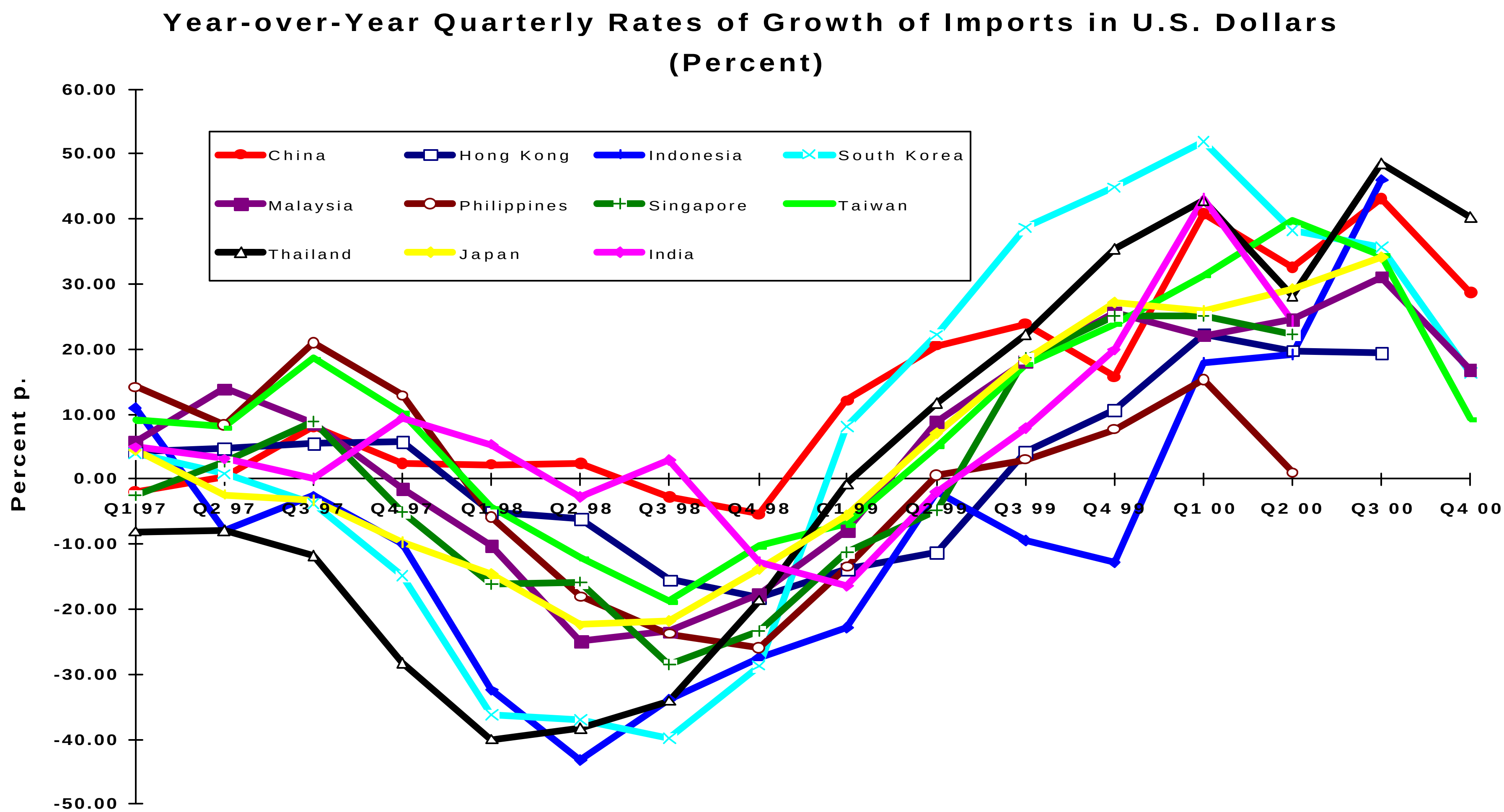
The Rates of Growth of Real GDP Have All Turned Significantly Positive and Remained So



Rates of Growth of Exports in US$ Terms Have Turned Significantly Positive



Rates of Growth of Imports in US$ Terms Have Also Turned Significantly Positive



How Robust has the Recovery been? Aggregate Demand Stimulation (1)

- The recovery was supported by the growth in public investment and in exports
- Private consumption demand has gradually revived because of lower rates of interest and stabilization of the unemployment rates
- Domestic fiscal stimulus was necessary because of weak domestic investment demand--International Monetary Fund conditions notwithstanding (IMF position on deficit financing by the affected East Asian countries has changed), e.g., South Korea, Thailand
- Turning around expectations and providing incentives were the keys to stimulating private consumption and new private investment
- The real devaluation in the East Asian currencies presented new opportunities for profitable investments once they were stabilized

Aggregate Demand Stimulation (2)

- Recapitalizing the domestic banks so that new loans to new projects are possible
  - Bailing out of old failed projects should be avoided
  - Recapitalization by the government should require capital contribution and risk-sharing by new or existing shareholders to avoid moral hazard
  - The political economy--who will bear the costs--may prove to be the most difficult problem
- Maintaining domestic political and social stability

Domestic Political Instability Has Affected the Economic Recovery

- Continuing as well as more recent domestic political instability has affected the exchange rates as well as the economies of Indonesia and Philippines and to a lesser extent Taiwan and Thailand
  - Indonesia: President Abdurrahman Wahid is in a struggle with the National Assembly with regard to alleged financial improprieties; potential successor Vice President Megawati Sukarnoputri also has weaknesses
  - Philippines: President Gloria Macapagal Arroyo took over from President Estrada on Jan. 20, 2001
  - Taiwan: Taiwan suffers from a crisis of public confidence in the ability of the new government to govern effectively
  - Thailand: The presumptive Prime Minister, Thaksin Shinawatra, has yet to be cleared of charges of less than full financial disclosure
- A code of ethics for political leaders in East Asia?
  - All assets of self and spouse and minor dependent children placed in blind trust

Is Another Crisis Likely in East Asia?

- The interesting question for investors and potential investors, is, of course, "Can this happen again?"
- An article in the Economist in November, 2000 predicted that there would be another crisis in Taiwan by Chinese New Year's time, 2001
- As someone who predicted the vulnerability of South Korea, Thailand, and Indonesia to a Mexican style crisis back in the summer of 1995, I told the press last November that such a crisis would be unlikely in Taiwan (Chinese New Year has come and gone)
- Today, I would say that there is little likelihood of another currency crisis in East Asia within the next couple of years, even taking into account the economic slowdown in the United States
- That is not to say one should not be vigilant--the East Asian economies must maintain a low rate of inflation relative to the U.S. as well as a low short-term external debt relative to their reserves

The Likely Problem Areas

- The domestic banking crisis has remained unresolved in many of the East Asian economies. The high levels of non-performing loans and the capital constraints in the domestic banks have reduced the availability of credit to finance new businesses and hence hampered efforts to promote renewed economic growth.
- There is some danger of the spread of the "Japanese disease", that is, the economy may sink into an indefinitely continuing and self-reinforcing state of stagnation. Once the expectations of the consumers and investors deteriorate to such a state, it will be very difficult to turn them around.

Lessons from the East Asian Currency Crisis

- In order to draw lessons from the East Asian currency crisis, to assess the probability of its recurrence, and perhaps to devise and take measures to prevent its recurrence, one must first identify correctly the fundamental causes of the crisis
- The East Asian crisis is a currency crisis that induced a financial crisis
  - The problem stemmed from insufficient liquidity in terms of foreign exchange
  - Unexpected outflow of short-term capital caused the exchange rate to plunge
  - A "bank run" on foreign exchange ensued
  - Financial insolvency caused by the resulting revaluation of the foreign-currency denominated debt and the rise in the rate of interest (due to expected further devaluation and increased volatility of the exchange rate)
  - Domino effects of insolvency and bankruptcy, magnified by high leverage (that is, debt to equity ratio), leading to systemic failure

Fundamental Macroeconomic Causes of the East Asian Currency Crisis

- Savings-investment imbalance--also reflected as current account imbalance
- Dependence on potentially short-term foreign capital (portfolio investment--both equity and debt instruments--and loans) by private investors
  - Equity is better than debt
  - Direct investment is better than portfolio investment
  - Insolvency caused by the revaluation of foreign-currency denominated debts and the rise in the rate of interest
  - Domino effects of insolvency and bankruptcy
  - Problems magnified by high leverage (or high debt to equity ratio)
- Inadequacy of foreign exchange reserves (working capital of a country) for supporting imports, debt service, and (potential) net short-term capital outflows
- Real exchange rate appreciation (loss of competitiveness) due to a domestic rate of inflation higher than the U.S. rate of inflation

Fundamental Microeconomic Causes:Borrowing Too Much, Short-Term and in Wrong Currency

- Maturity mismatch--borrowing short and investing (lending) long
- Currency mismatch--revenue and cost (liability) in different currencies
  - Vulnerability magnified by high debt to equity ratio
  - Insolvency caused directly or indirectly by declines in the exchange rates
  - Oversold currencies create unnecessary bankruptcies and discourage re-capitalization and re-structuring
- Moral hazard on the parts of both lenders and borrowers
  - Past bailouts (Latin American loans, Mexican loans) of developed country lenders encourage moral hazard on the part of lenders
  - Implicit guarantee of banks and enterprises "too big to fail" by governments encourage moral hazard on the part of borrowers

Fundamental Microeconomic Causes:

- Excessive Leverage
  - Excessive leverage of enterprises magnifies the negative effects of a sharp devaluation on foreign-currency denominated debt as well as the resulting rise in both the domestic and the foreign rates of interest
  - Excessive leverage encourages moral hazard (recklessness) on the part of the borrowers
  - Excessive leverage magnifies the domino effect of insolvency and bankruptcy on the entire financial system
  - Excessive leverage also enables the hedge funds to engage in predatory speculation on a large scale
- "Herd mentality"--too much money chasing too few good projects leading to mis-pricing by developed country investors and lenders (it is better to make the same mistake as everyone else)--the making of an East Asian "bubble"

Was “Crony Capitalism” or the Primitive Financial System the Culprit?

- The real mistake was to borrow too much short-term and in the wrong currency
- Even a perfectly efficient enterprise cannot withstand the increase in debt servicing required due to the massive exchange rate devaluation
- Japan, despite its massive devaluation between 1995 and mid-1998, has been able to muddle through because its firms have little net foreign debt
- Hong Kong, Singapore and Taiwan have also escaped relatively unscathed because they did not and do not have significant net foreign debt, especially short-term debt, relative to their foreign exchange reserves
- China has not been significantly affected because it retains capital control and its foreign debt is mostly medium to long-term

Was "Crony Capitalism" or the Primitive Financial System the Culprit?

- The financial systems collapsed in the affected countries because of the currency crisis. Many of the firms became insolvent because of illiquidity. Whatever weaknesses they might have had were not the direct causes of the crisis.

Is Another Crisis Likely?

- Based on the early warning economic indicators, the East Asian economies are unlikely to have another crisis in the foreseeable future
  - The savings rates have remained high while the savings-investment gaps--also reflected as the current account gaps--have largely disappeared
  - The dependence on short-term foreign capital (portfolio investment--both equity and debt instruments--and loans) has been significantly reduced
    - Foreign investment now consists mostly of direct rather than portfolio investment
    - Both total and short-term external debts have declined
    - The ratio of short-term to total external debts has also declined
  - Foreign exchange reserves have risen both absolutely and as a percentage of annual imports
  - Real exchange rates have depreciated significantly from their peaks in most of the affected economies

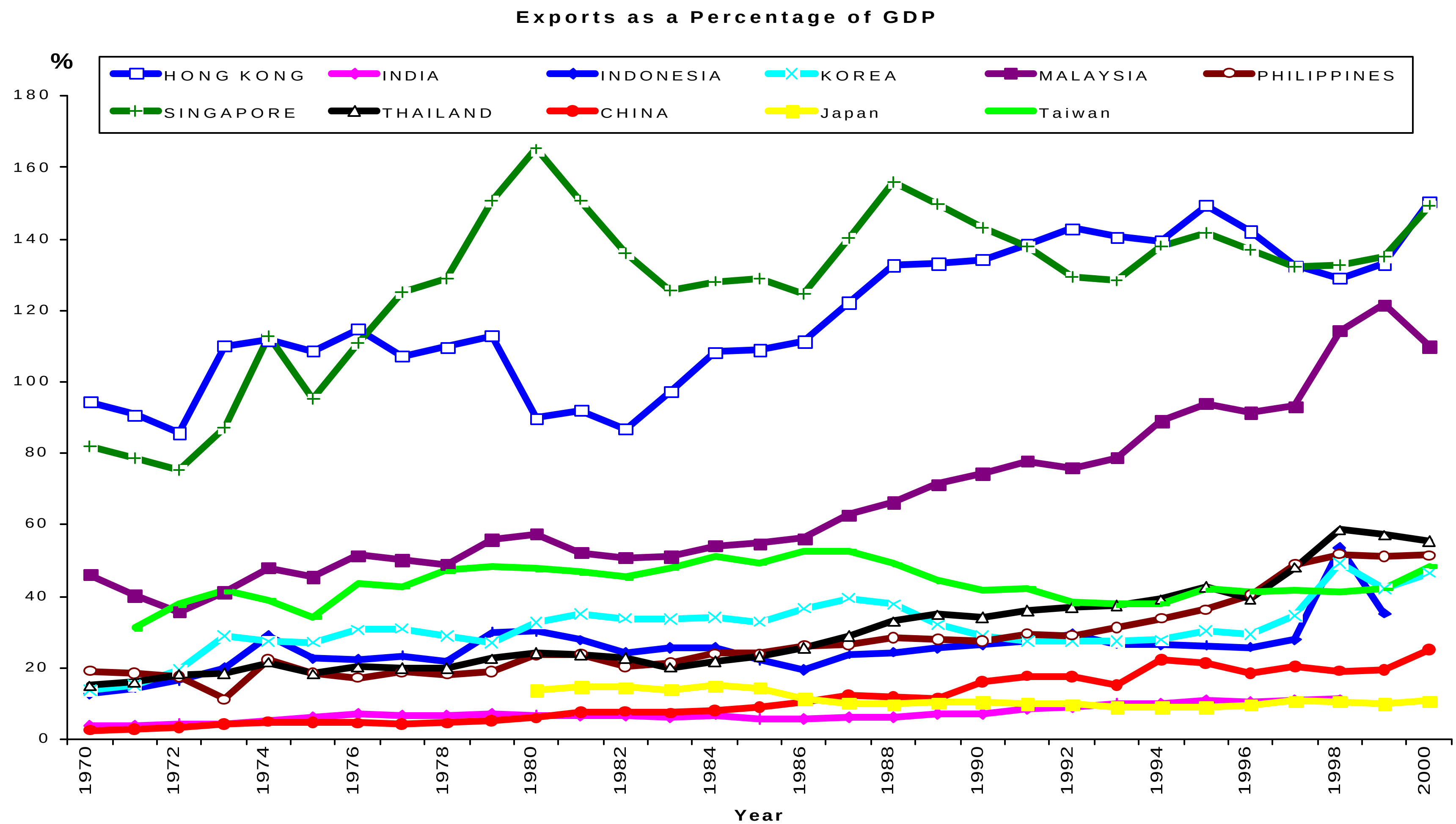
Segmentation of the East Asian Currency Markets

- The currency markets of the different East Asian economies have since become segmented:
  - Contagion through competitive devaluation is limited because of domestic supply side constraints in the devaluing economies and speculative activities
  - Contagion through speculative activities have not recurred because of an overall decline in the vulnerability of these economies and because of the reduction of hedge fund activities due to supply side constraints

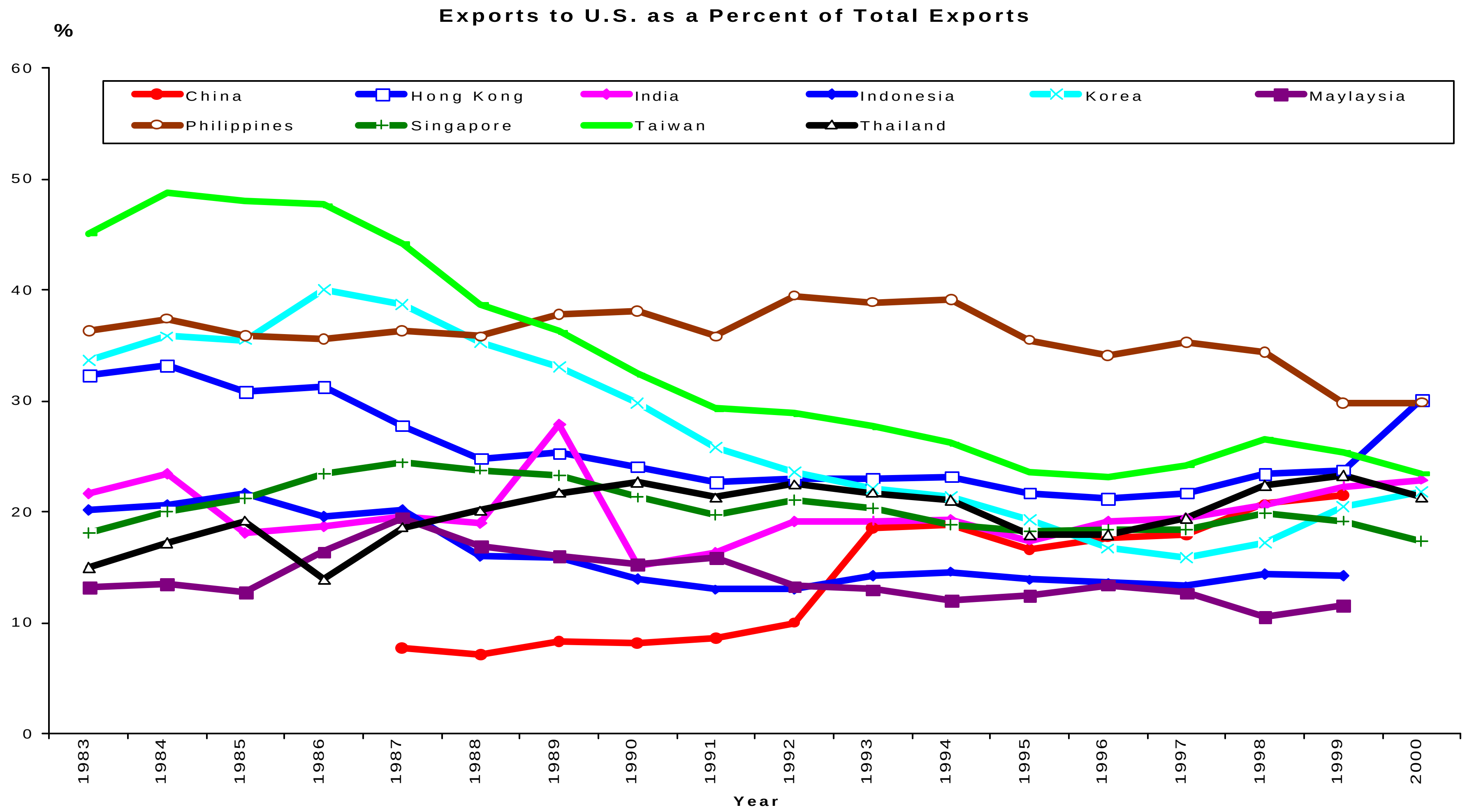
Looking Ahead:
The External Environment Has Deteriorated

- The U.S. economy, and its high-technology sector in particular, has slowed down rather precipitously--the rate of growth of real GDP is expected to be no higher than 1% in 2001
- The slowdown in the U.S. will have an impact on East Asia, both directly and indirectly, and in particularly in economies where the high-technology sector is important, such as South Korea, Malaysia and Taiwan
- The continuing stagnation of the Japanese economy does not help but is not expected to have a negative impact because has gone on for an entire decade
- The European economies are expected to grow somewhat faster and thus to provide a partial offset to the U.S. economic slowdown

Exports as a Percent of GDP: Selected East Asian Economies



Exports to U.S. as a Percent of Total Exports



The Effects of the Slowdown in the United States Economy on East Asia

- While exports is a very high percentage of GDP in Hong Kong, Malaysia, Singapore and Taiwan, it is a relatively low percentage of the other East Asian economies, including South Korea and Thailand
- The proportion of exports to the U.S. relative to total exports to the U.S. has declined in the East Asian economies over the years, to less than 30 percent, with the exception of the Chinese economy; the proportion of Chinese exports destined for the U.S. has been rising to its current level of approximately 20 percent
- The slowdown in the U.S. economy will have a significant, but not overwhelming, negative impact on the rate of growth of real GDP in the East Asian economies--on the order of 1 percentage point decline in Hong Kong, Malaysia, Singapore and Taiwan and a less than 0.5 percentage point decline in the other East Asian economies

Projections of the Asian Development Bank

- The Asian Development Bank says: “Although growth is already slowing in most economies, fears of a new crisis are exaggerated.”
- Actual and projected rates of growth

	Actual 2000	Projected 2001
Indonesia	4.8%	4.2%
South Korea	8.8%	3.9%
Malaysia	8.5%	4.9%
Philippines	3.9%	3.1%
Thailand	4.2%	3.5%

Is East Asian Economic Growth Sustainable? Was It a Bubble?

- Past economic growth neither a miracle nor a mere bubble
  - Economic growth experience replicated in different East Asian economies
  - Sustained economic growth over decades
  - Recent crisis due to many factors, of which "irrational exuberance" is only one
  - Economic fundamentals remain sound--high savings rates, investment in human capital, and more recently in R&D capital, entrepreneurship, market orientation
- Past economic growth input (especially capital)-driven rather than technical progress-driven--it is attributable to growth in inputs, particularly the efficient and rapid accumulation of tangible capital
- Considerable room for continuation of rapid tangible inputs-driven economic growth--tangible capital per unit labor still lags significantly behind the developed economies
- Intangible capital per unit labor, e.g., R&D capital, lags even further behind, offering additional opportunities for investment

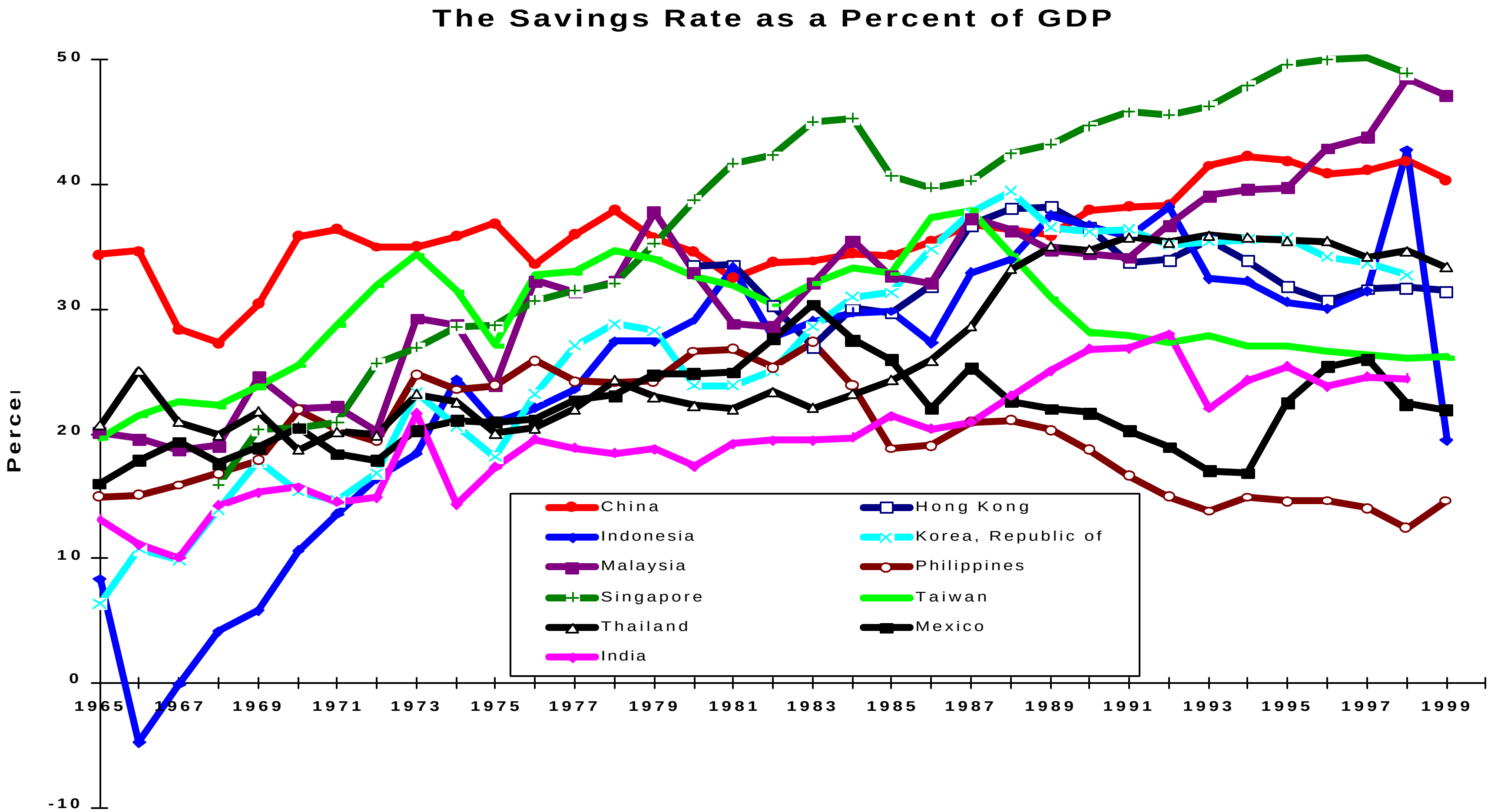
Where Is the "Miracle"?

- Achievement of a high savings rate
- Translating domestic savings into investments--the role of self-fulfilling expectations
- Creating and maintaining an environment in which investments are productive
- Philippines as a counter-example

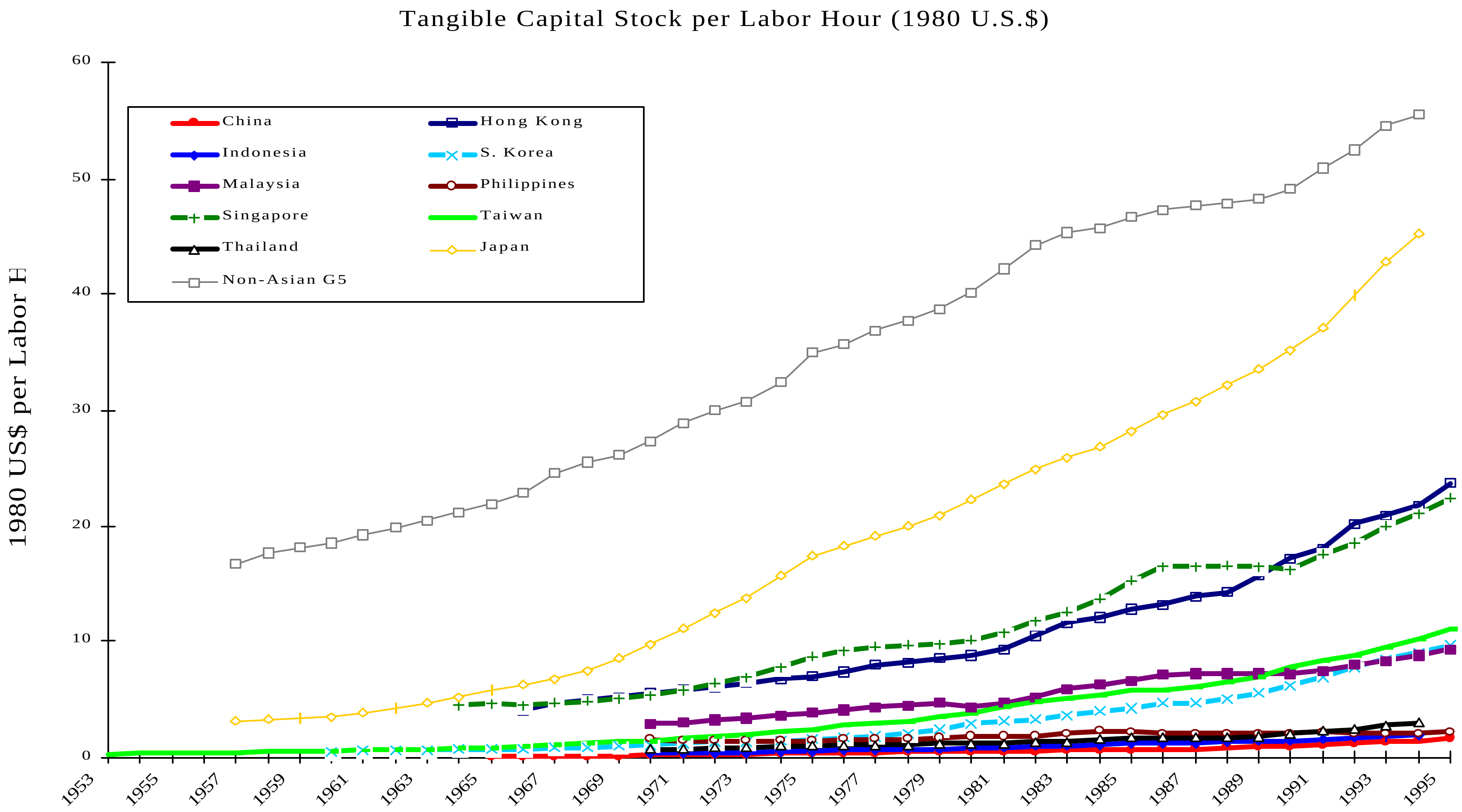
Is East Asian Economic Growth Sustainable? Paul Krugman's Worry

- Since the major source of postwar East Asian economic growth is found to be the growth of tangible capital (Kim and Lau, 1992), then given the diminishing marginal productivity of tangible capital, as more and more tangible capital is accumulated, each additional unit of tangible capital will be less productive than the unit before it. Eventually economic growth must slow down and then stop altogether.
- The former Soviet Union was used as an example where a great deal of tangible capital was accumulated but failed to be productive
- However, East Asian economies lag far behind the industrialized economies in the levels of both tangible and intangible capital stocks
- Investment in intangible capital can enhance the productivity of tangible capital and counteract the diminishing marginal returns to tangible capital

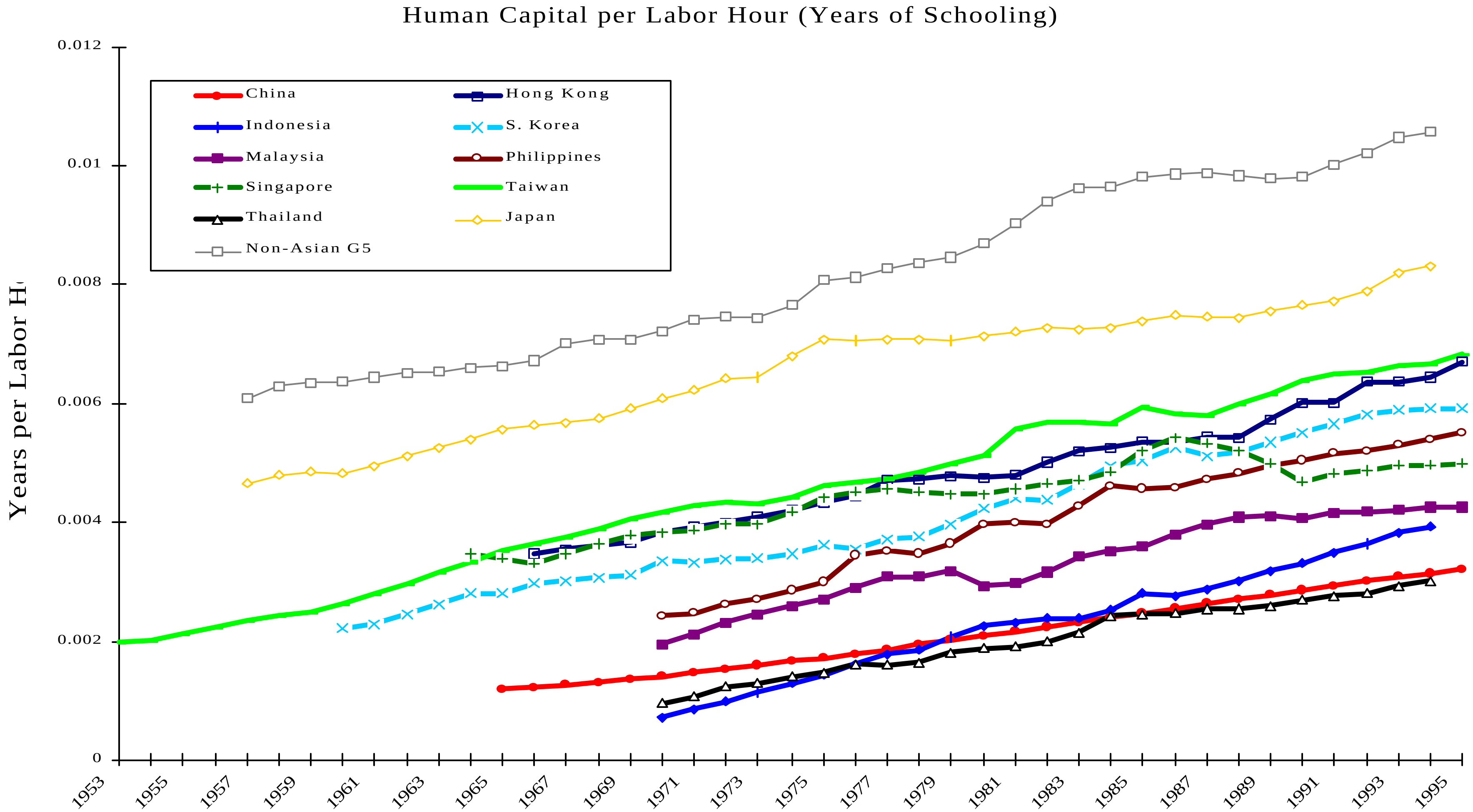
Savings Rates as a Percent of GDP of Selected East Asian Countries



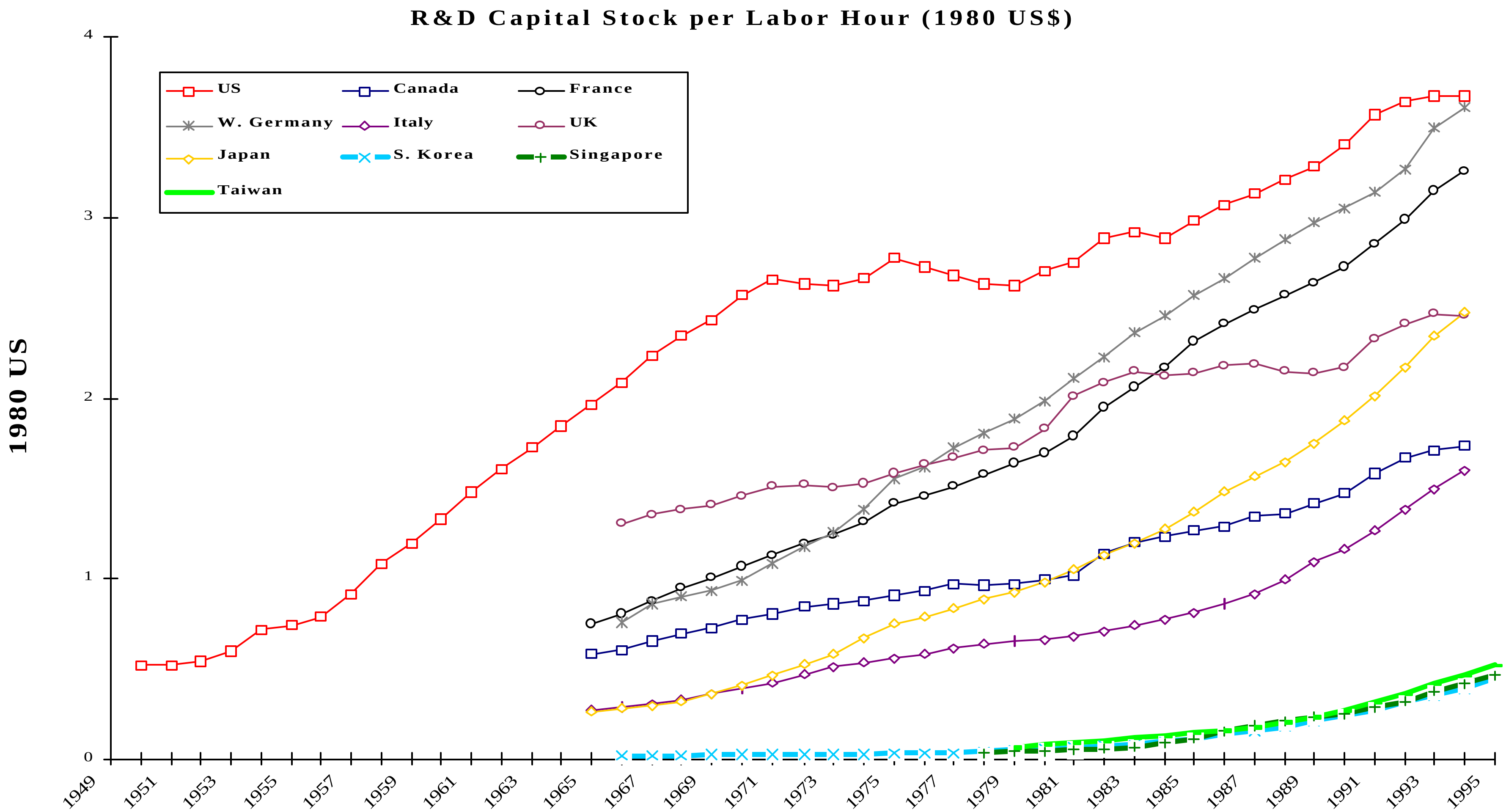
Capital Intensity



Human Capital per Unit Labor



R&D Capital Stock per Unit Labor



Is East Asian 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
- Intangible capital is different from tangible capital in three important aspects:
  - Intangible capital is freely mobile across countries
  - Intangible capital is simultaneously deployable in different locations without diminution of its effectiveness (increasing returns in the utilization of intangible capital)
  - Intangible capital enhances the productivity of existing tangible capital whereas additional tangible capital diminishes the productivity of existing tangible capital

Prospects for Future Economic Growth Remain Good

- Prospects for continued economic growth in East Asia remain good—room for continuation of tangible-inputs-driven growth
- Fundamentals are sound—high savings rates, priority for education, private-enterprise market economy
- The experience of developed economies, especially that of Japan, suggests that investment in R&D capital and other forms of intangible capital has high returns
- Because of its complementarity with tangible capital, investment in intangible capital can retard the decline in the marginal productivity of tangible capital and counteract the "Krugman effect"
- There is also evidence of positive technical progress in the more recent period
- The people of East Asia are entrepreneurial, hard-working, and thrifty--all they need is a good, market-friendly, predictable and stable environment

Investment in East Asia by Foreign Investors: Considerations

- Covariance between East Asian and U.S. markets
  - The high-technology sector versus the traditional and the non-tradable sectors
- Public versus private markets
  - Credibility of public markets (insider trading, manipulation, protection of minority shareholders, disclosure and transparency)
  - Ease and necessity of direct financial monitoring
  - Casino mentality of public markets
- Portfolio versus direct investment
  - Possibility of capital control and other forms of restrictions on short-term capital flows
  - Necessity of continuous active direct monitoring
  - Choice of joint-venture partner(s), if any, critical
- Competitive advantage
  - Money alone is not sufficient because of relative abundance of domestic savings—foreign direct investors must have superior technology, know-how, knowledge of markets

The New Economy Levels the Playing Field between Large and Small Firms

- Small firms can have access to services and supplies heretofore only available to large firms
  - E.g., Charles Schwab and E-trade benefit small investors by bringing down the cost of securities trading proportionally much more than large investors
  - Rapid delivery services and warehousing facilities, e.g., FedEx, are available to both large and small firms
- Small firms can also become more accessible to their customers and potential customers through the Internet with only marginal expenditures on advertising and public relations
- Small firms have access to large firms as potential suppliers in a global supply chain
- East Asian economies with a higher concentration of smaller firms and more primitive information infrastructure (and thus the potential for leap-frogging) may benefit much more from the new economy than other economies
  - E.g., B2B dot.coms seem to have relatively greater success in Taiwan than in the United States