China Hi-tech Achievements Fair

Knowledge Economy and Financial Markets

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7 October 1999, Shenzhen

Knowledge-based Society

- 3 stages of economic development
  - primary - agriculture and mining
  - secondary - manufacturing
  - tertiary - services
- Knowledge as driver of productivity and economic growth

Knowledge-based Economy

- Knowledge-workers + knowledge-networked organisations + knowledge-production processes
- Smart products / smart process / smart services
- Made possible by innovation in computing, telecommunications, biotechnology and transportation

Changes in Global Economic Structure

- Service prices have increased 3 times faster than industrial prices since 1960s
- 64% of world's wealth comprises human capital
- In US, General Electric derives 75% revenue from services and 25% from production (compared to 85% from production in 1961)

Global Competitiveness

Factors affecting income per capita

Bivariate regression results, dependent variable:1998 GDP per capita*
All Countries (n=58)

	Slope	*Adj. R2*
Nature of Competitive Advantage	6143.2**	0.8062
Production Processes	7845.8**	0.7608
A. Factor (input)		
Physical Infrastructure		
Overall Infrastructure Quality	5069.6**	0.7275
Information Infrastructure		
Business Information Availability	706.1**=	0.7420
Computer Utilization	9888.3**	0.7722
Capital Availability		
Financial Market Sophistication	5368.1**	0.6014
Stock Market Access	621.0**=	0.5289
Venture Capital Availability	5882.3**	0.4427
Human Resources		
Quality of Business Schools	6534.0**	0.3250
Science & Technology		
University/Industry research collaboration	8014.3**	0.6404
B. Demand Conditions		
Buyer Sophistication	875.7**=	0.7765
Demanding Regulatory Standards	7285.3**	0.7772
C. Related and Supporting Issues		
Domestic Supplier Quality	924.1**=	0.8044
Intellectual Property Protection	790.7**=	0.8023

*** denotes p<0.05; = denotes regressions for which the question value is squared*
**Source: The Global Competitiveness Report 1999, World Economic Forum, Harvard Institute for International Development*

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Application of Knowledge

- From technology revolution to management revolution
- Cheap and ready access of knowledge at all levels by the public
- Competition of economies becomes the competition of knowledge
- Value added by knowledge

Virtual Economy

- Power not directly related to amassing land and labour
- Virtual states specialise in modern technical and research services
- Virtual states derive income mainly from product design, marketing and finance

Hong Kong as a Virtual Economy

- Skipped primary economic development rapidly into manufacturing
- Concentrated on supporting services in 1970s and 1980s
- Shifted to high value services such as investment banking, securities and derivatives in 1990s
- Largest service sector component in the world of 84% of GDP (76% in the US and 62% in Japan)

Factors Leading to Hong Kong's Success as Virtual State

- Clear legal and accounting framework
- Sound infrastructure
- Free and open press
- Free and open access to international knowledge and information
- Low taxation and free immigration

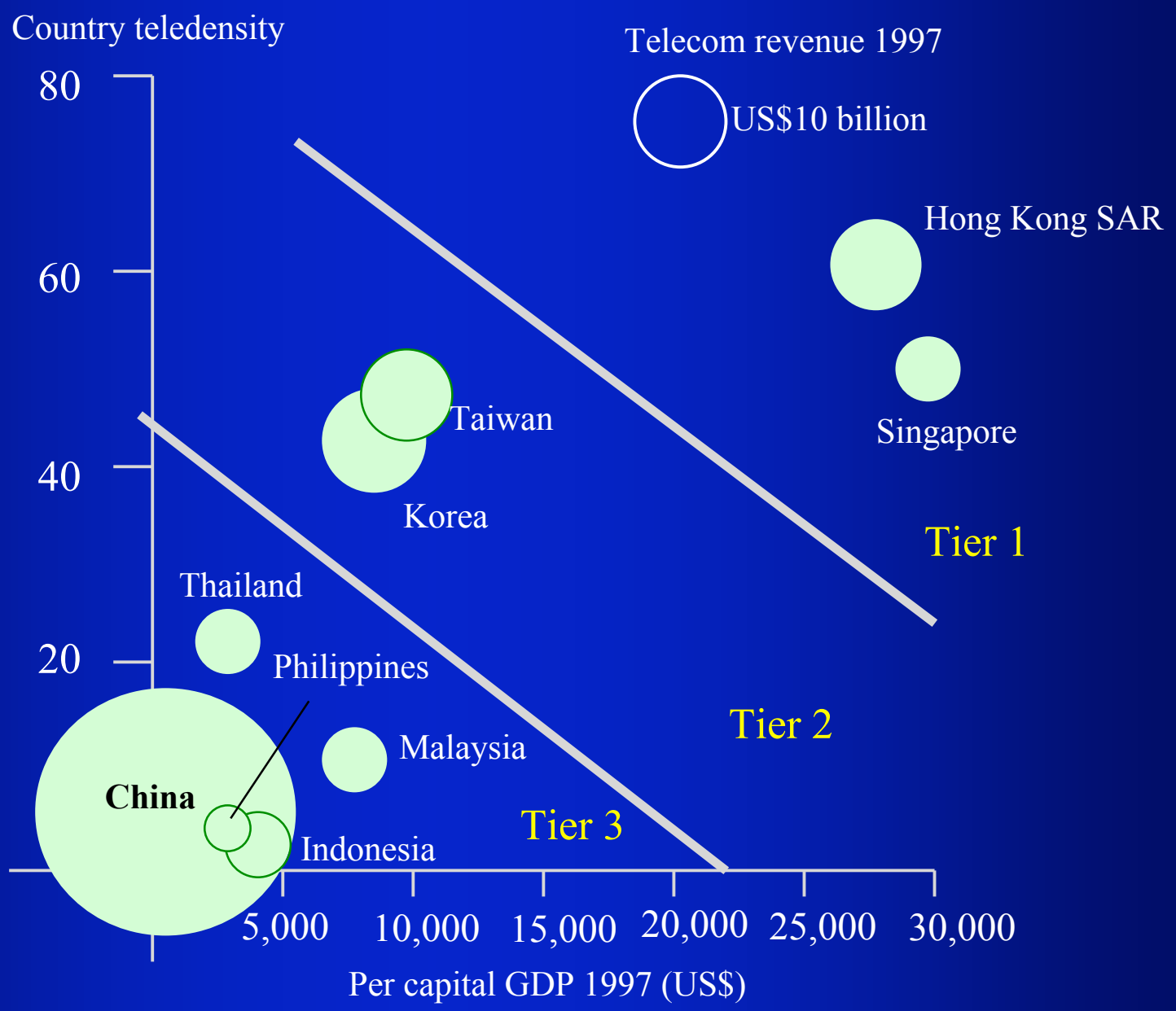
Hong Kong - Telecommunications

- Best technical telecom infrastructure, with 150,000 kilometres of fibre optic cables linked to 1,500 buildings
- Highest television, mobile and cellular phone penetration in Asia
- 150 Internet providers, with 150 users per 1,000 population
- Ranked 12th in the world's Information Technology-driven economies

Challenges of the Digital Economy

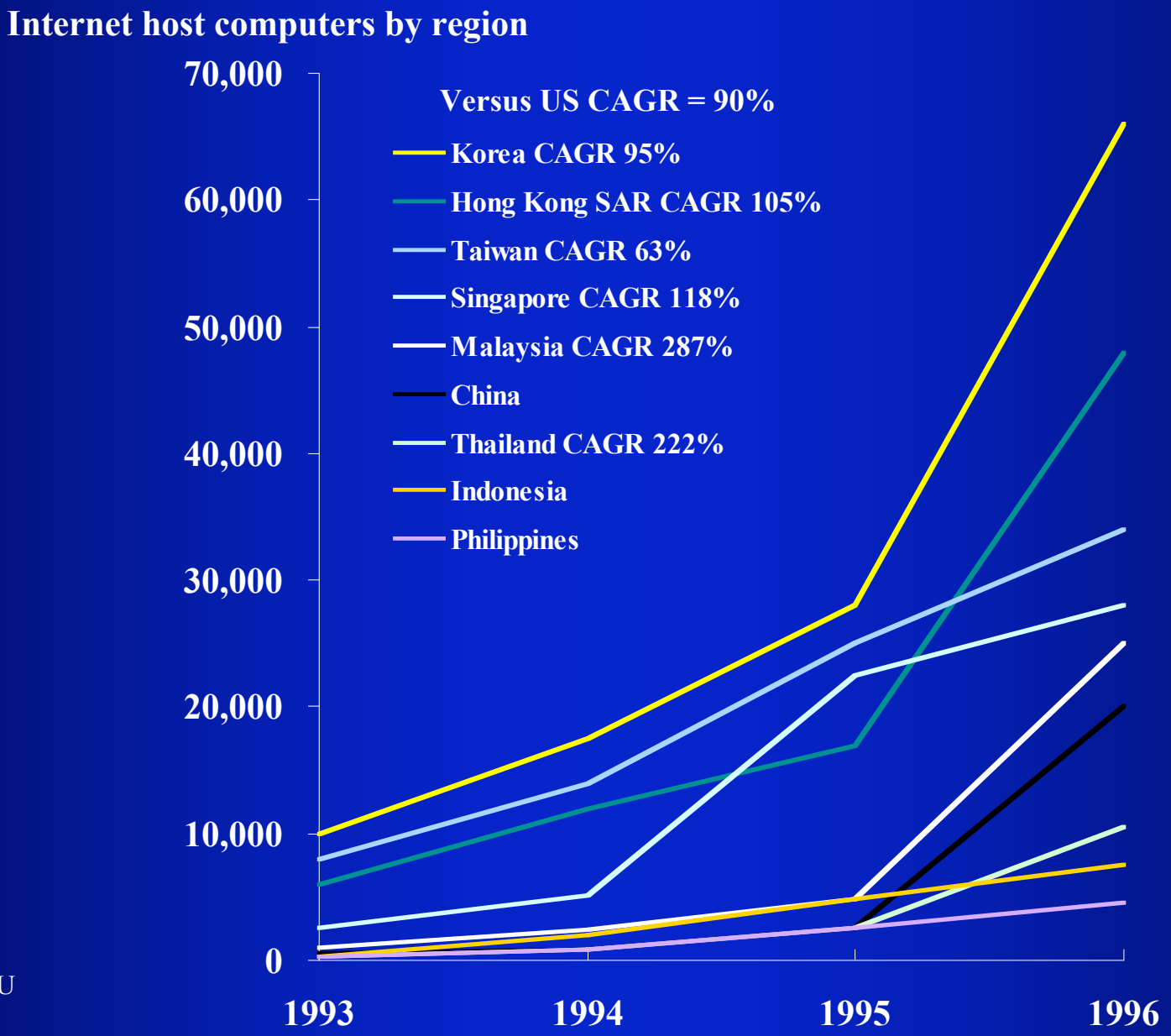
- Fastest growth in high technology and knowledge based industries
- Even higher value added in knowledge-intensive industries (education, telecom, media and information, finance and risk management)
- Hong Kong's skills as an international financial centre combine with the technology skills of the Mainland to address the challenges

Relative development of Asian telecom markets, 1997



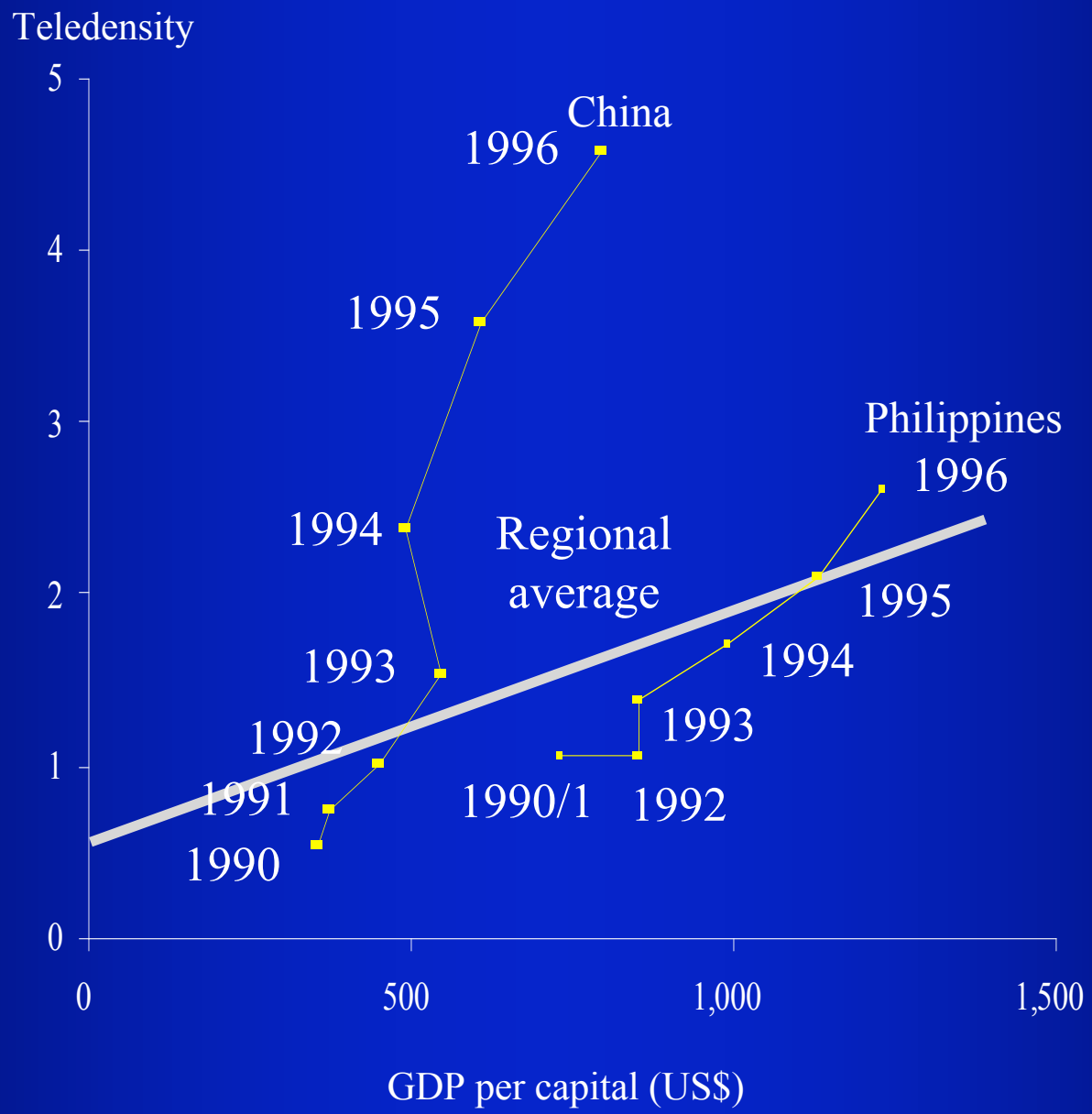
Source: EIU forecasts of 1997 GDP data; ITU teledensity data; industry sources

Growth in Internet capability, 1993-96



Source: ITU

Growth in teledensity, China and Philippines



Source: ITU

China Teledensity

	Internet user base (million)	PC base (million)
1997	0.9	8.2
1998	2.1	11.1
1999	6.7	14.0
2000	12.0	17.7
2001	17.3	22.6
2002	25.5	28.9
2003	33.6	37.3

Source : IDC

China Teledensity (2)

- Internet user base will exceed 33m, growing at an annual rate of nearly 60% over the next five years
- mobile phone usage grew by 2.34m subscribers in the first two months this year. By the end of June, total number of subscribers reached 33.1m
- fixed-line phone subscribers jumped to 145m by the end of June, nearly triple the number three years ago
- IT market, worth US$9.24bn in 1998, is expected to grow by 24.3% in 1999 and 31.3% in 2000

Basic Functions of Financial Market

- Resources Allocation
- Price Discovery
- Risk Management
- Corporate Governance

Financial Markets as Networks

- The wider the network, the more valuable it becomes as it draws on more resources and knowledge
- Networks have negative and positive externality
- Lessons of the Asian financial crisis

Market Test of Knowledge

- That technology could be tested, packaged and applied for the market
- Such knowledge could be independently verified and trusted
- The risk, reward and regulation aspect of investing in high technology must be balanced fairly

Venture Capital in Hong Kong

- Highest concentration of venture capital professionals managing the largest pool of funds outside of Japan
- 107 venture capital funds in 1997
- More than US$10.7 billion under management, nearly one-third of total venture capital funds in Asia

Utilisation of Technology

- Experience in bringing tested technology into Asia through investments in the Mainland
- Blending Western demand, Asian skilled labour and management and financing expertise in Hong Kong

Liquid Pool of Risk Capital

- Most liquid pool of risk capital in Asia
- International financial regulatory standards
- Low tax base, absence of capital gains tax, high disclosure environment, deep professional and retail base of investors
- Growth Enterprise Market