

Regional Innovation Forum

4 Mar 2008

John Kao

- Innovation guru, wrote Innovation Nation.
- Argued importance of Innovation to the US.
- Glad that many of his proposals are similar to what Singapore has been doing
- Many Singapore initiatives favourably mentioned in book.

John's Question

- Question:
 - If innovation is the answer, what is the question?
- Answer
 - At a national level, it might well be the vehicle for fulfilling a society's dreams for itself.

Part of those dreams is econ growth

- Management of innovation in aid of econ growth
- It is like managing a portfolio of investments
 - Has to follow market; cant go against it
 - Cannot be partial to any particular sector or stock
 - Has to decide on investment strategy, passive through to active

- IT is a blue chip sector
- The result of market forces
- Strong sector from innovation and growth points of view

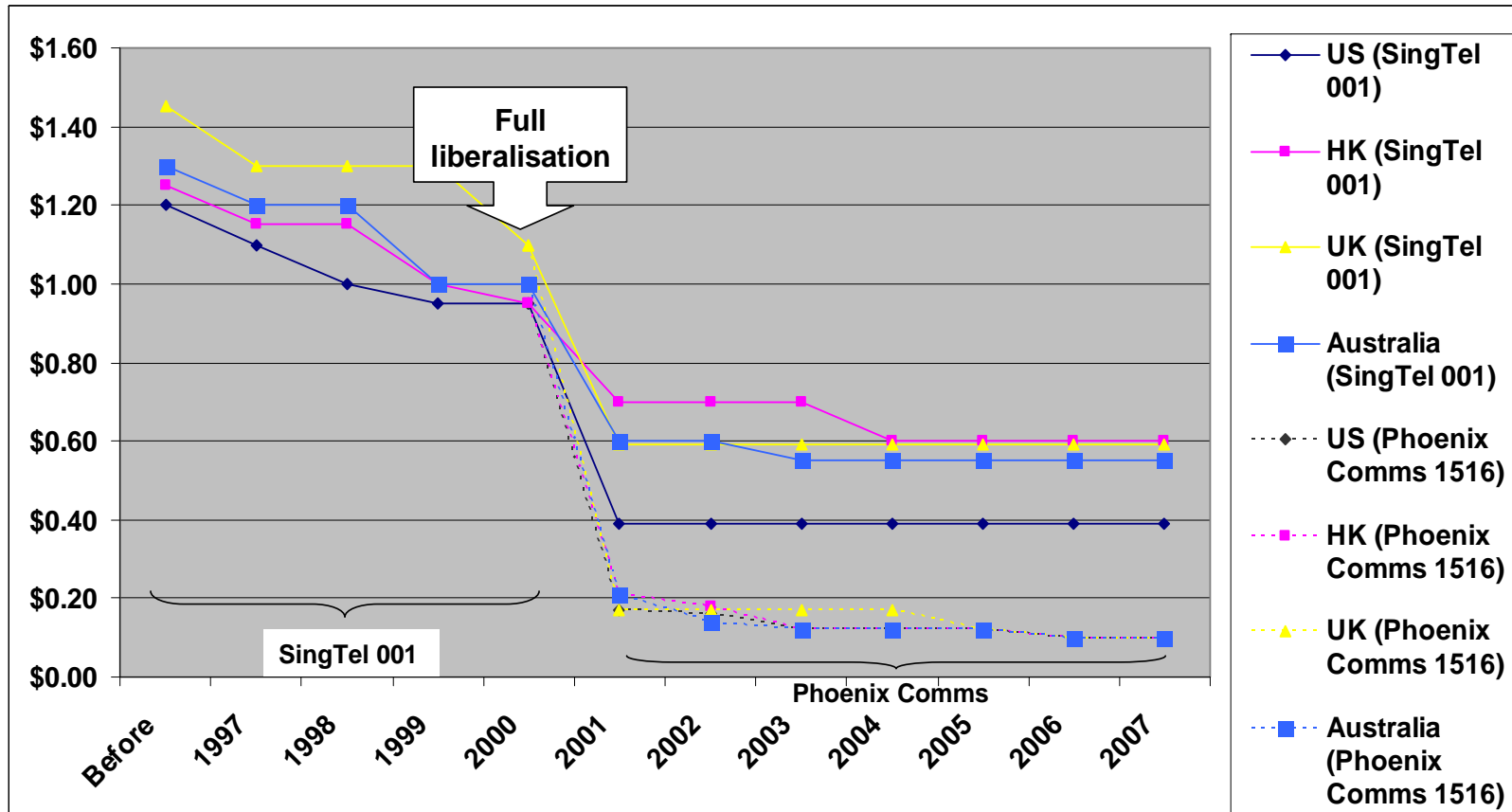
IDA's approach

- allowing the market to lead
- encourage foreign investment as well as developing local talent and companies
- under a strong and robust legal regime and rule of law.
- The key principle is to encourage companies be more efficient and competitive in the global market place.

Effect of liberalisation and competition

- Competition drives down prices
- Increases consumer choices
- Overall benefit to economy
 - Innovation
 - efficiency

Chart 1: International Call Prices



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IDA's role

- As a user - enormous catalytic effect on IT adoption and also the development of private sector support functions.
- As a provider of education and manpower training - a developmental role.
- As a supporter of industry development through partial funding support, convening and facilitation.
- As a standards setter facilitating inter-operability and protecting legitimate intellectual property rights.

As a user

- As a user itself
 - catalytic effect on IT adoption and also the development of private sector support functions.
- direct expenditure on IT services about \$600 to \$800 million per annum.
 - Multiplier effect on the economy
- Just awarded \$1.3 bln Standard ICT Operating Environment project

Manpower development the key

- Developmental role – education and manpower development
- Govt does best here
- Increasing recognition of education in OECD esp science education
 - OECD report on improving science education
- 3 levels
 - Develop, attract and retain infocomm talent for the sector
 - Provide managers, non-specialist with enough IT knowledge to exploit and use IT
 - Develop globally competitive infocomm professionals

Some examples

- For next 3-5 years, IDA and industry will invest \$70 m in manpower development programs.
- Additional to \$120 m under the Infocomm Manpower Roadmap launched in Nov 05.
- National Infocomm Competency Framework (NICF) to develop infocomm professionals to better respond to the needs of the industry.
- National Infocomm Scholarship (NIS)
 - some 200 scholarships by 2010.
- Enhanced Learning in Infocomm Technology Programme or in short, “ELITE”
 - Target the top 20% of infocomm students at universities.
 - Involves companies attachment and project work

The third role – Support Industry development

- More direct support for industry devt
 - Co-funding for projects
 - Calls for collaboration where it is beneficial for many companies to come together to work on common issues
- Examples
- infocomm Local Upgrading Programme (iLIUP)
 - Fostering collaborations between local partners and MNC players.
 - 17 iLIUP MNC partners
 - Last 3 years, helped iLE's generate \$75.3m revenue
 - 231 new or enhanced products and services
 - Trained 931 info comm manpower

Industry development examples

- Backpack.NET with Microsoft
 - Allowed R&D, testing of innovative solutions such as tablet PC's, campus wide wireless network for use in schools.
 - Crescent Girls School is FutureSchools@Singapore conferred by MOE and IDA.
 - declared by Bill Gates at the 2007 Global Leaders Forum (January 31, 2007) as mentor school for schools of the future around the world.
 - Crescent now mentors innovative schools in 12 countries under the Worldwide Microsoft Innovative Schools Programme.
 - 3 companies, iCell, Heulab and Amdon Consulting have exported this idea in a middle east country

Industry development

- **Wireless@SG**
 - Extend broadband access to public places
 - Free access up to 512 Kbps at 6500 hotspots
 - Won an award from the Wireless Internet Institute
- **National Healthcare Network**
 - \$15m program to accelerate infocomm adoption in the primary healthcare sector
 - Develop an integrated clinic management system
 - When finished 2010, GP's can plug into the national healthcare network to achieve the MOH vision of One Singaporean, One Electronic Medical Record.

Standards setter - facilitating interoperability

- Singapore Standard for Contactless ePurse Application, SS 518 CEPAS.
 - Collaboration by IDA, LTA and industry
- Benefits
 - Allows nationwide interoperable micro-payment platform across multiple sectors, the transit and retail e-payment space
 - Levels the playing field for more card issuers such as banks and merchants

How successful are we?

- Scorecard from EIU – key findings wrt Singapore

	Top	20th	Singapore
Infrastructure	Switzerland (88)	Israel (46)	12th (58)
Human capital	US(96)	Germany (59)	2nd (85)
Support for IT	Denmark (89)	Korea (75)	3rd (88)
Legal Env	US(92)	Israel (75)	15th (81)
R&D	Japan (84)	Ireland (14)	17th (16)
Overall business environment	Hongkong (100)	France (83)	10th (91)
Overall competitive index	US (77.4)	Israel (54.5)	11th (63.1)

Notes: Figures in brackets refer to the actually score of the countries.

Singapore's Scorecard

- Well done
 - Human capital – ranked 2nd
 - Support for IT – 3rd
 - Legal environment – 15th score 81 only 11 points behind the 1st (US) at 92
- Less well
 - Infrastructure – 12th
 - R&D – 17th

More details - Infrastructure

- Factors of ranking
 - Market spending on hardware, software, and IT services (US\$ per 100 people);
 - Desktop and laptop computers per 100 people;
 - Broadband connections (xDSL, ISDN, PRI, FWB, cable, FTx) per 100 people; and
 - Secure Internet servers per 100,000 people
- Broadband and Next Generation Network?

R&D ranking factors – weakness in # of patents

	Rank in 2004	Rank in 2005
Government expenditure on R&D	5th	2nd
Private sector expenditure on R&D	7th	2nd
Licence fees	15th	9th
Number of patents	19th	22nd

Conclusion

- Generally at the forefront in IT
- Govt facilitation and support is a positive factor
- Ranked high on the EIU analysis and most other international rankings
 - Human capital
 - Support for IT
 - Legal environment
- Relatively weak on infrastructure and R&D

- Thank you