Policy Strategies for a Knowledge Based Economy: The Asian Experience

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Structure of Presentation

• Differing Size and Performance Among Asian Countries
• Examples of Different Policy Strategies
  – Singapore
  – China
  – Korea
  – India
• Some Emerging Lessons
• Developing Effective Knowledge Strategies
• Refining Strategies
• Implementing Strategies

Size & Performance Differences: Asian Economies

Comparison of Selected Countries by Economic Size (PPP, 2000)

GDP per capita (PPP, 2000)

Average Growth Rate of Per capita GDP (1985-2000)
Key Elements of Knowledge Strategies

- Continuing Importance of Macro Fundamentals
  - The Economic and Institutional Regime
  - Macro stability
  - High Investment Rates
- Going Beyond the Fundamentals to Knowledge Strategies
  - Tapping into Global Knowledge
  - Domestic R&D Efforts
  - Education
  - Information Infrastructure

Examples of Different Knowledge Policy Strategies

- Singapore - High growth by leveraging through foreign direct investment (FDI)
- China - High growth by tapping into global knowledge through trade and FDI
- Korea - High Growth by importing global knowledge, but maintaining high domestic ownership
- India - Trying to go it alone for too long

Singapore

- Initially attracted FDI based on low wages and disciplined labor force
- Success in attracting FDI raised wages and eroded source of initial competitive advantage
- Then invested heavily in physical infrastructure (port, airport, information infrastructure), education and training, and facilitating business (Trade Net, EDB)
- Managed to continue to attract higher value added foreign investment
  - Corporate Headquarters
  - R&D Center
- Now focused on becoming knowledge service hub for East Asia
  - Finance and other business services
  - Education and health
  - Research and development
Singapore

Performance:  
Economic Regime:  
Governance:  
Education:  
Innovation:  
ICTs:

China

- Opened up to global knowledge in 1978
- Imported massively capital goods and components
- Attracted FDI for both internal and export markets
- Induced FDI to set up large domestic research facilities
- Tapped extensive overseas Chinese to set up high tech industries
- Made premier universities key knowledge institutions
  - Many alliances with global universities
  - Spinning off high tech companies
- Increasing domestic R&D effort and getting larger share done by productive sector
- Has been moving rapidly toward market economy
- Joined WTO to lock in need for structural reform
- Has become major global player

Increased Competitiveness of Asian Economies

Share of World Merchandise Exports (1980-2000)
Knowledge makes the Difference between Poverty and Wealth...

Thousands of constant 1995 US dollars

- **Rep. of Korea**: Difference attributed to knowledge
- **Ghana**: Difference due to physical and human capital

- Started major export orientation in mid 1960s
- Used export performance as disciplining device
- Acquired a lot of technology from foreign export buyers—designs, production technology
- Imported capital goods and disembodied technology but restricted foreign investment
- Invested heavily in education—now has highest educational attainment among Asia (except Japan)
- Invested heavily in own R&D
  - Highest as share of GDP in Asia
  - Almost 80% done by private sector (mostly chaebols)
- Opened up to FDI only after 1997 crisis
- Making lots of strategic alliances with major MNCs
- Now a major player in global knowledge economy
Until roughly 1990 India was very inward oriented—almost autarkic, especially with regard to knowledge. Since 1990, more aggressive reforms, greater openness to getting global knowledge, growth performance has improved since that period—From average rate of 2-3% until 90s—To 6% in 1990s. Dramatic success story is software industry. India has leadership position, with exports projected to reach 50 billion by 2008, but is enclave export sector. India has tremendous potential—Large domestic market—Excellent highly trained human capital and scientific capability. But is constrained by—Bureaucratic red tape and corruption—Low competitive pressure & little integration to global system—Poor government effectiveness and rule of law. Needs to develop a more coherent and integrated strategy to realize its greater potential.
Emerging Lessons

- Good performance depends on coherent strategies, with an explicit focus on how to use knowledge effectively for development
- Important to find advantageous ways participating in globalization
- Some of the earlier labor intensive export strategies are being pre-empted by size and strength of some of the new developing country players
- Now critical to engage and move up in global value chains
- This requires strengthening ability to acquire, adapt, disseminate, and even to create knowledge
- But knowledge strategies still have to be conceived and implemented with an appropriate economic and institutional regime

Developing Effective Knowledge Strategies

- Start by benchmarking country and taking into account new global context as well as country specifics, strengths, weaknesses and opportunities
- Critical to go from analysis of problems to concrete initiatives to improve KE performance
- Successful further reform requires creating stakeholder awareness
- Consultation and discussion necessary to create stakeholder ownership
- Monitorable goals and constant evaluation key to improving performance
- In designing policies take into account that rapid adjustment needed in light of experience and changing circumstances
Refining Strategies

- Need to set priorities and sequencing of reforms
  - Need to build awareness of critical issues
  - Build consensus and stakeholder ownership
- Critical to improve the incentive and institutional regime in order to get better impact
  - In short run focus on improving use of existing resources and tapping private resources
  - In longer run increase public and private resources for priority needs in education, ICT and R&D
- Need more coordination within federal government and with private sector and civil society
  - But provincial and municipal govs also have key role, especially in larger countries where some of the states are larger than many countries
- Learn from experiences
  - Share experiences with-in country
  - Benefit from foreign experiences
  - Experiment with reforms and programs

Implementing Strategies

- Some require little resources, but shift of policy, such as
  - Establishment of clear rule of law
  - Improving the effectiveness of government
    - Getting out of areas where the market may work better
    - Supporting the development of market institutions and organizations
    - Correcting for market failures but avoiding the risk of government failure
  - Development of dynamic private and social sector
- Others require more resources
  - Some by re-deploying and improving use of existing public budget like improving efficiency of public education and public goods R&D,
  - Others like require increased public budget such as expanding access and quality of education and increasing public good R&D, offsetting digital divide
  - All require tapping more non-govt. resources

Annex:

Functional Scorecards for the other Asian Countries
### Malaysia

<table>
<thead>
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<th>Performance</th>
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