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Human Capital Investment Towards Innovation and Knowledge Based Economic Development

Submitted by: Russian APEC Study Center



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**Symposium on APEC 2015 Priorities
Manila, Philippines
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Human Capital Investment towards Innovation & Knowledge Based Economic Development

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Outline

- Objectives & Challenges
- Success stories
- Lessons to learn
- Recommendations



Objectives and Challenges

- to sustain high rates of growth
- to advance in global value chains
- to escape from “Middle-income trap”
- to shift from accumulation-led growth to productivity-led growth
- to develop industry and services sector



Stories of success

- US
- Japan
- Republic of Korea
- Singapore



US

- world leader in leveraging innovation to achieve broader economic aims
- consistently invested heavily in research and development (R&D), higher education, and information and communication technology (ICT)



Japan

- importing advanced capital goods,
- licensing foreign technology,
- encouraging international tertiary education
- investment in commercially oriented R&D
- focus on exports of manufactured products
- high value-added sectors



Republic of Korea

Measures to built a human capital base for knowledge economy:

- rapid industrialization process based on labor-intensive exports
- import of capital goods and licensed technology
- public advanced research institutions for basic and applied research
- rise of R&D as a percentage of gross domestic product (GDP)
- explicit investment in the ICT industry
- coordination across 17 ministries for R&D and the ICT sector
- strong education reforms
- links between tertiary and employer-based training
- government incentives through fiscal and trade policies
- support of private small and medium-sized R&D



Singapore

- 1960–1969 labor-intensive growth,
- 1970–1979 skill-intensive growth,
- 1980–1989 capital intensive growth,
- 1990–1999 technology-intensive growth, and
- 2000 onward knowledge and innovation economy-based growth

Key lessons to learn:

- building R&D capability;
- creating a deeper stock of human capital;
- enhancing competitiveness of knowledge-intensive sectors;
- involving private sector
- government role in the early stages of KBE processes
- improving education systems;
- investments in telecom and ICT infrastructure

Education and Skill Development

- quality employment in knowledge-intensive industries
- “competence” rather than just certified qualifications
- mix of “hard” and “soft” skills
- need for more flexible and responsive programs for market needs
- need for a variety of higher-order vocational and polytechnic degrees and applied degrees
- developing “ecosystems” of technoparks
- linking ICT with education
- The role of tertiary institutions



“Ecosystems” of technoparks

Colocation of high-quality technical universities

Links with KBE stakeholders

- *consumers of technologies,*
- *R&D collaborators,*
- *venture investors,*
- *technology transfer intermediaries,*
- *knowledge-based service providers (branding and advertising)*

Global research collaboration

Mastering in particular areas



Tertiary institutions

- commercial incubators of technology and innovation
- financial and strategic support to student and alumni entrepreneurs
- training to undergraduate and graduate students to conduct research
- effective and efficient use of research and development (R&D)
- venture capital investing experience and mentoring



ICT and human resource development

ICT in education

tools for bringing about improvements in quality, relevance, equity, and transformational pedagogy
game-based and simulation-based learning
massive open on-line courses (MOOCs)

ICT infrastructure and network connectivity

Digital literacy programs

generic ICT skills
higher-order and targeted skills for the ICT sector

Affordable applications for the mobile phones

High-speed broadband in rural areas



Recommendations for APEC agenda 2015

to review progress made by APEC on inclusive growth agenda

to organize cross-fora meeting (HRDWG, TELWG, SMEWG, PPSTI, PPWE etc.)

- *to focus the activities and best practices*
- *to outline challenges and barriers*
- *to set objectives and goals*

? APEC INCLUSIVE DEVELOPMENT STRATEGY?



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THANK YOU!