



building KNOWLEDGE ECONOMIES

ADVANCED STRATEGIES FOR DEVELOPMENT

WORLD BANK INSTITUTE

Promoting knowledge and learning for a better world

What this report is about

- **Placing knowledge and innovation-related policies at the heart of development strategies for countries at all levels of development**

OUTLINE of Presentation

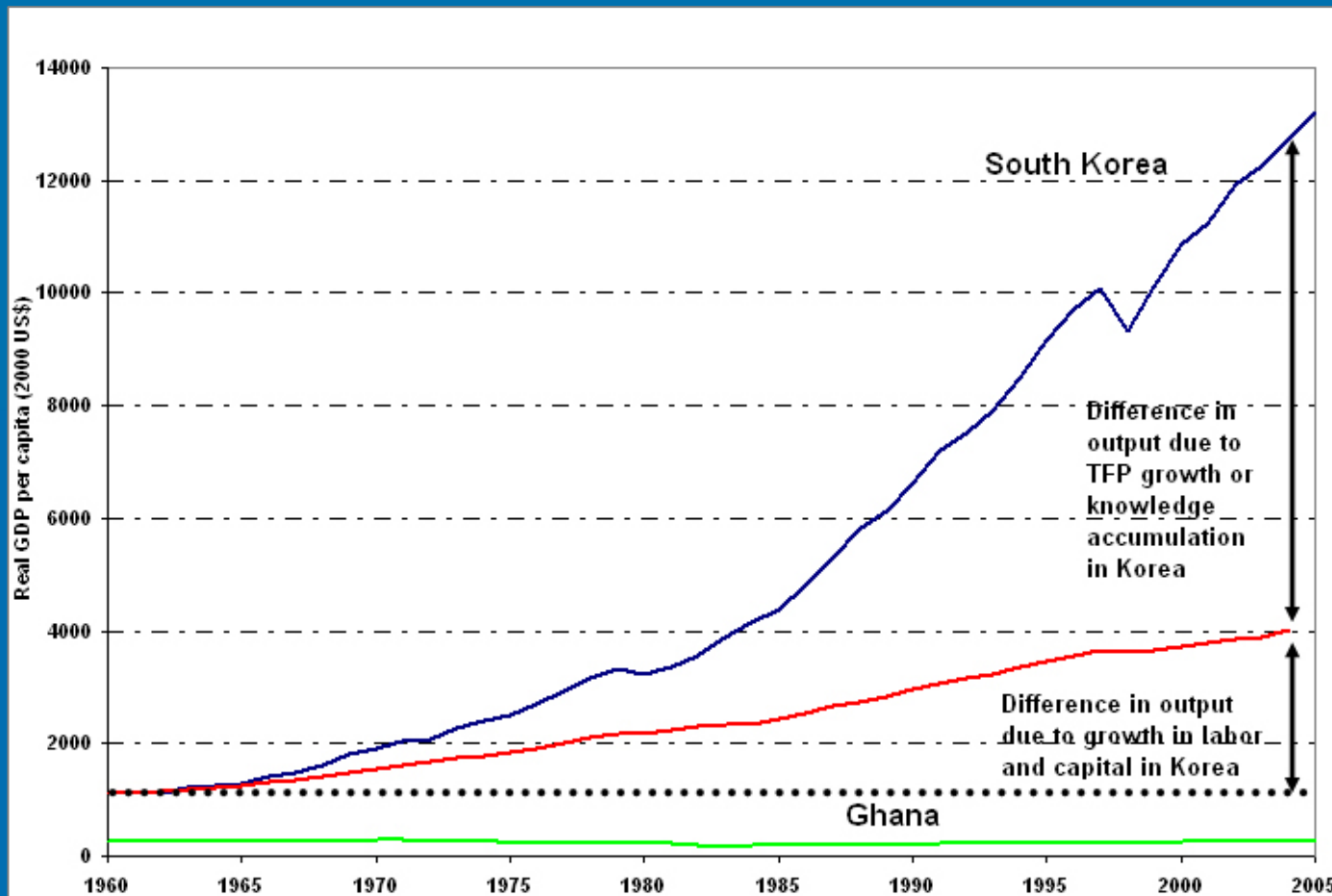
- I. MOTIVATION FOR THE REPORT
- II. THE KNOWLEDGE ECONOMY FRAMEWORK
- III. AT A GLANCE: WHAT TO DO
- IV. AT A GLANCE: HOW TO DO IT
- V. KEY POLICY MESSAGES

I. MOTIVATION FOR THE REPORT

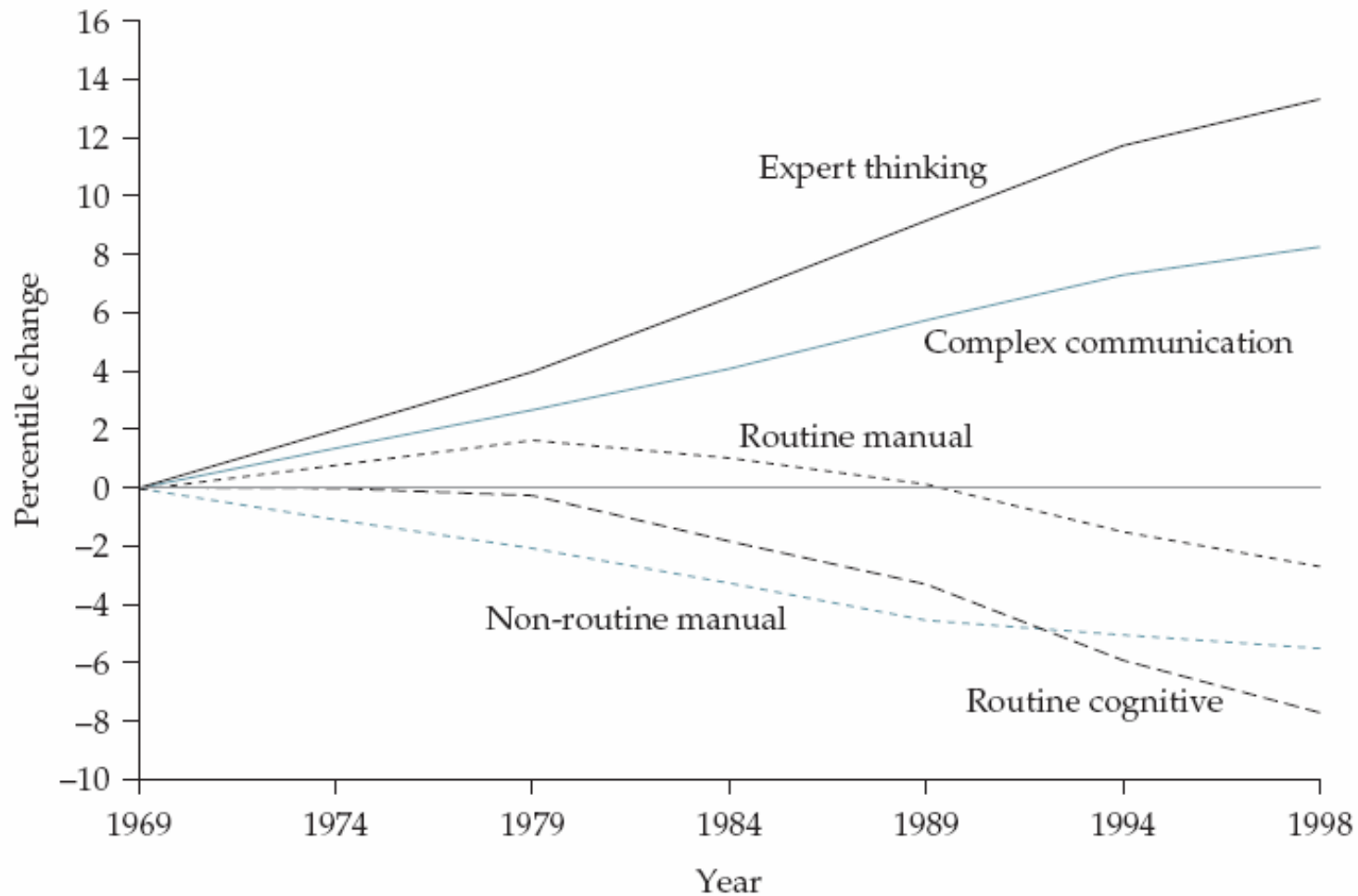
A DRAMATICALLY CHANGING GLOBAL CONTEXT

- Knowledge and innovation-based policies are spurring growth and competitiveness around the globe. There is a need to think of the future under a KE heading for all countries
- Risk of a “knowledge divide” between developing and developed countries

GDP GROWTH (per capita) SOUTH KOREA, GHANA



BRAIN vs. BRAWN: THE PATH OF THE FUTURE



THE WBI K4D EXPERIENCE (1)

- 1998-99 WDR “**Knowledge for Development**”
- Since 1999, the **Knowledge for Development Program (K4D)** has been working with client countries to elaborate Knowledge and innovation-related strategies.
- “***Building Knowledge Economies – Advanced Strategies for Development***” is a synthesis of 7 years research and operational work on building Knowledge Economies by the K4D program

THE WBI K4D EXPERIENCE (2)

- Country studies
 - In-depth Assessments: China, India, Korea, ...
 - Surveys (CEM): Tanzania, Senegal, Brazil,...
- Conferences and Workshops
 - ECA, MNA, AFRICA
 - GDLN-based Policy Dialogues
- Fostering and Support of Networks
 - Diasporas (Latin America)
 - Academics (AUF Africa)

STRUCTURE OF THE REPORT

- **Chapters 1, 2, and 3** set the scene, explain the theoretical framework used, and give a few elements on how to embark on a KE strategy
- **Chapters 4 to 7** are a detailed description of policy measures, including many concrete examples, which can be implemented on each of the “four pillars” of the KE
- **Chapter 8** gives brief strategic analysis for certain country sets and groups

II. THE KNOWLEDGE ECONOMY FRAMEWORK

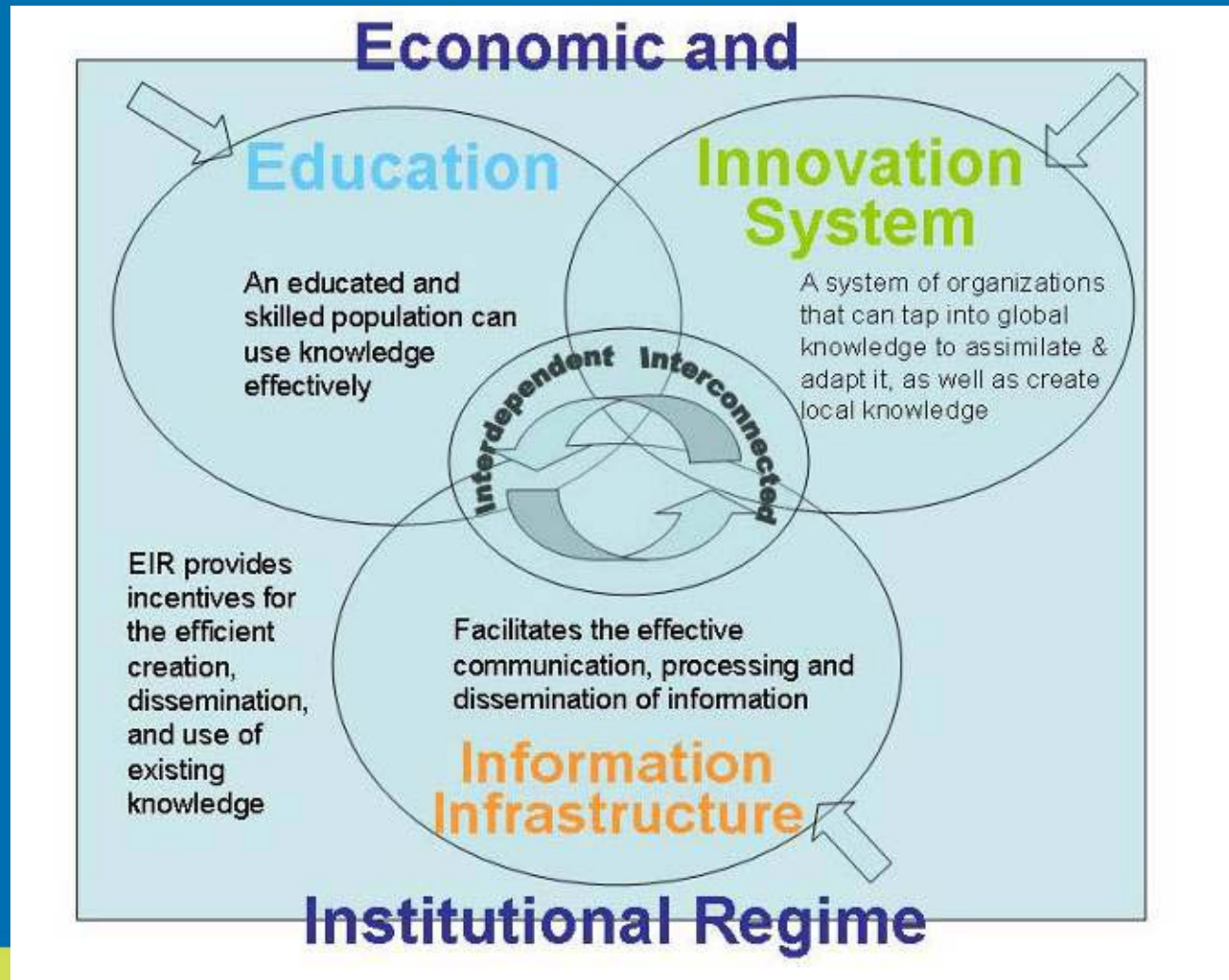
IN THE DESERT OF MAURITANIA... KNOWLEDGE DYNAMICS AT WORK

- A group of tourists, ...guided by young English-speaking graduates, who were formerly unemployed,
- Using the traditional knowledge of nomads,
- Stay in accommodations equipped with first rate Internet, thanks to exemplary telecom policy,
- Into a supportive business environment



Four KE pillars

THE REPORT IS BUILT ON A 4 PILLAR FRAMEWORK



Benchmarking the KE with basic variables and a database of 128 countries and 80 variables

Pillars

1

Business environment

- Tariff and non-tariff barriers
- Rule of law
- Regulatory quality

2

Education system

- Adult literacy
- Secondary enrollment
- Tertiary enrollment

3

Information infrastructure

- Telephone lines/capita
- Computers /capita
- Internet users /capita

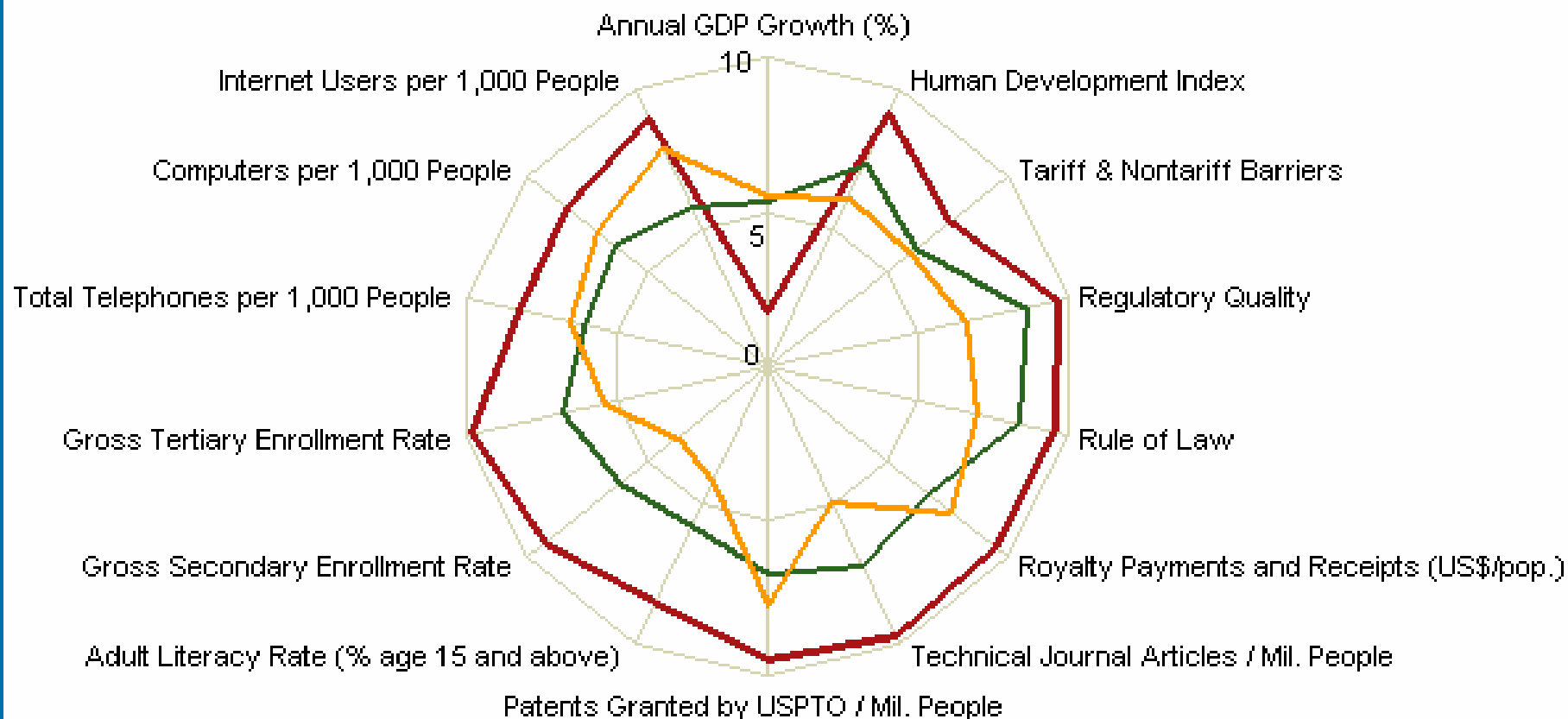
4

Innovation system

- Researchers in R&D/capita
- Patent applications/capita
- Scientific articles/capita

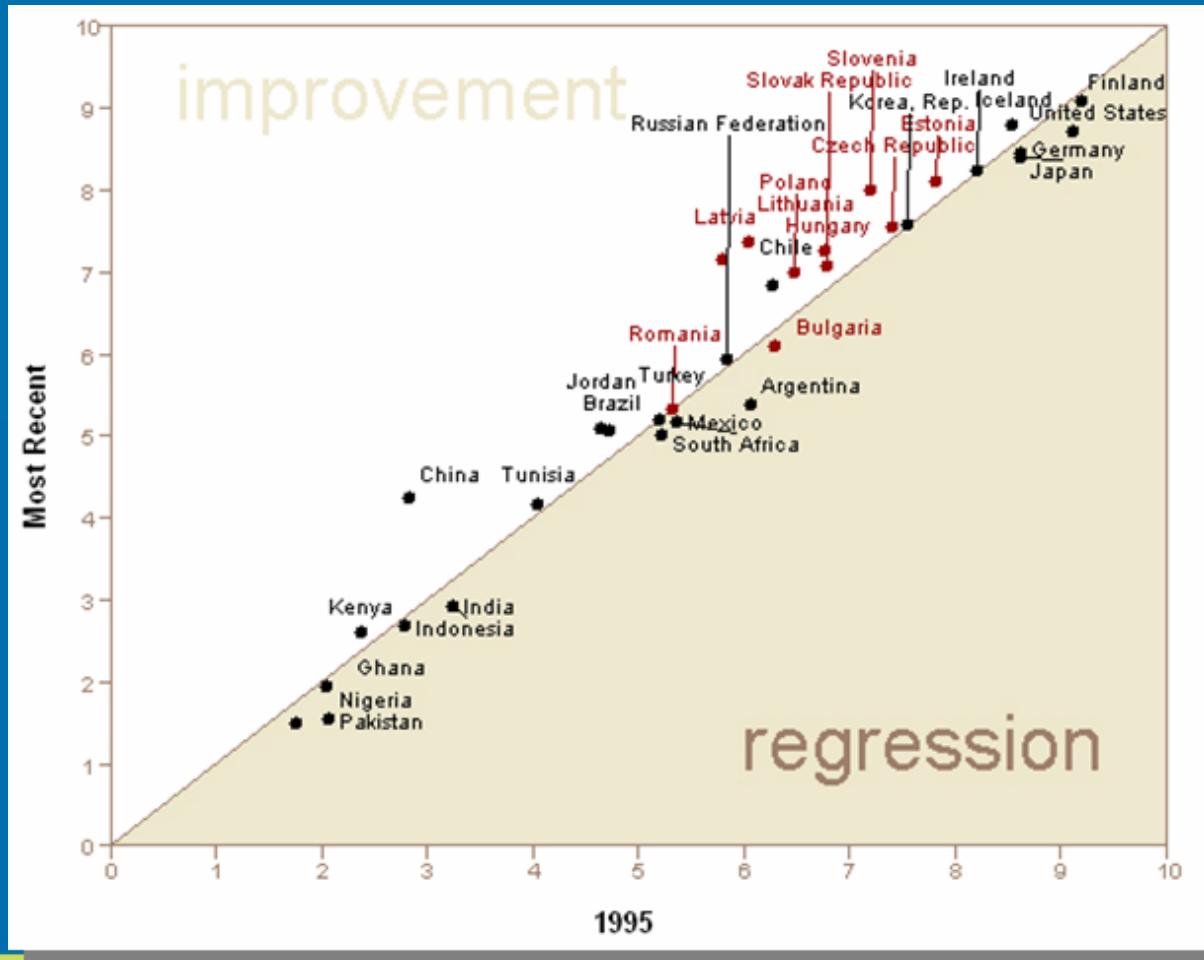
Basic Scorecard – Finland/Chile/Malaysia

Finland, Chile, Malaysia



KAM

- Benchmarking tool developed by the K4D team to measure countries' readiness for a KE



III. WHAT TO DO

Economic & Institutional Regime

Chapter 4

- A vibrant home-base for business from all over the world
- Broadening and deepening the service sector
- How do you foster entrepreneurship? Innovative SMEs?
- How do you start clusters?

Innovation (1) – Chapter 5

- KBE-boosting R&D (close links with both Global centers of excellence and local networks for application)
- Effective technology diffusion mechanisms (package support for basic technology diffusion)
- KBE-boosting FDI (supply chains)
- How do you attract the creative class? (including Diaspora)

Innovation (2)

MRTC: The Malaria Research & Training Center of Bamako University in Mali (p93)

- *Background:* vision and strategy, Diaspora input and return
- *Partnerships:* local authorities & traditional healers for local needs; international cooperation with universities, research centers ...
- *Results:* infant mortality from malaria has been significantly reduced (from 20-30% in 1997 to 5-7% in 2005)
- *International recognition and certification:* Center of excellence of AUF, and US National Institute of Health; Certification by the US Food and Drug Administration

ICT infrastructure

Chapter 6

- Wide-open, competitive telecom sector
- Minimum fixed line, and then broadband penetration
- ICT literacy and use is what's key
- E-government as catalyst



SRI-LANKA (p103)

Education

Chapter 7

- KBE-boosting education system (creativity, autonomy)
- Knowledge technologists and integrators
- Functional literacy and lifelong learning
- Smart, differentiated higher education setup



JORDAN (page 123)

IV. HOW TO DO IT?

Chapter 3 & Examples throughout

CHINA/INDIA

China

- Begin with small EIR improvement to leverage entrepreneurship (TVE)
- Attract foreign technology and knowledge, and also use domestic knowledge (SOE)
- Local dynamic spots, scale up (competition)
- Get confidence and move to higher level of reforms

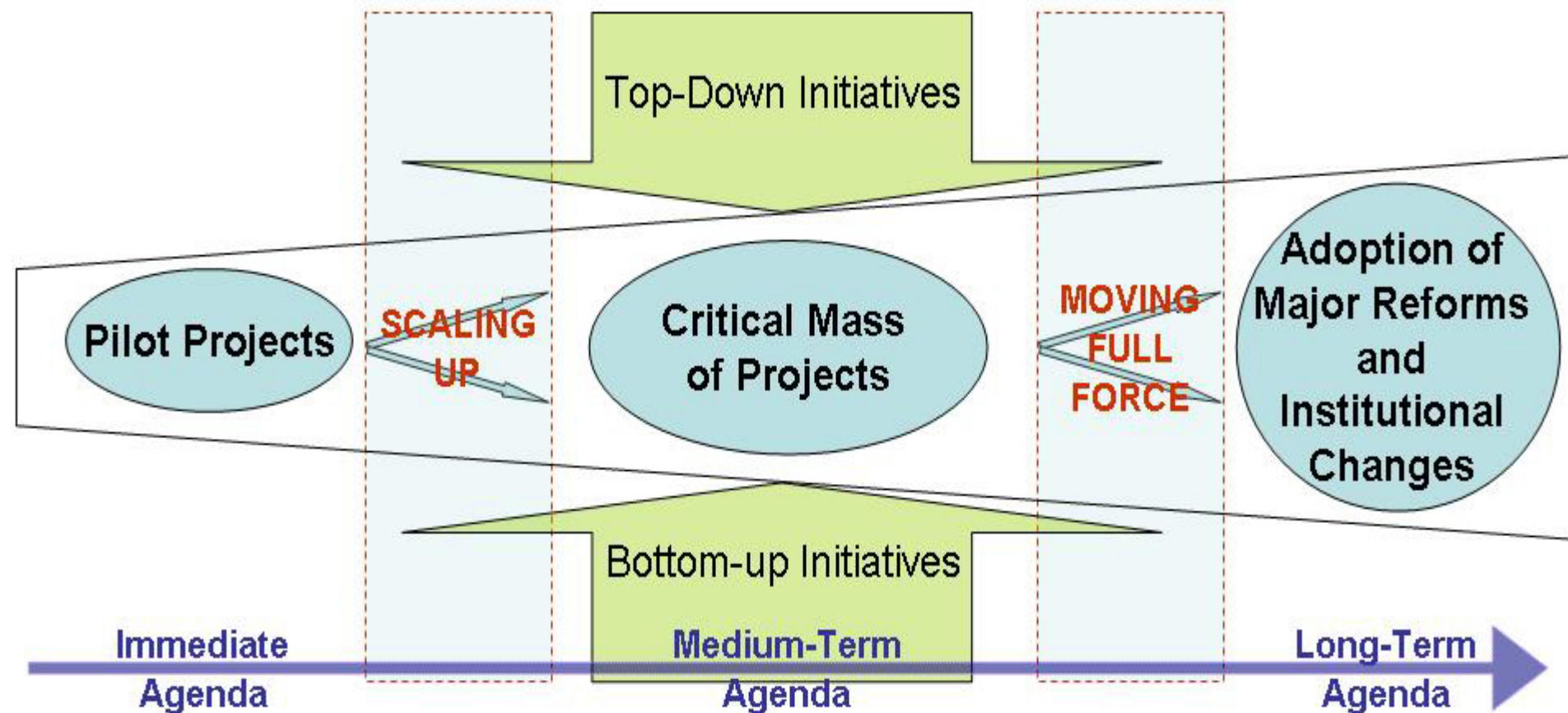
India

- Driving cities as entry points (Bangalore...)
- Investments in ICT infrastructure, EIR (including investments in basic infrastructure but also business climate)
- Create a national dynamic from local success

BOTH

- Combine top-down reforms with bottom-up initiatives
- Scale (critical mass) issue.

TIME-SEQUENCING AND SCALING UP: HOW TO CREATE A VIRTUOUS KE CYCLE?



Building a KBE advantage needs vision and implementation action more than reports

Think Practical

Examples of KBE processes:

Korea	Largest business newspaper (Maeil) started the effort. Then government-led 3 year action plan, with 5 working groups and 19 ministries involved. Education, broadband.
Dubai	Vision, and KBE attractors: Media Free Zone (Internet City, Media City, Knowledge Village), 19 free zones, 17000 firms.
Chile	Government outfits kick-starting new winning sectors, for example salmon, viticulture. Fundacion Chile.
Malaysia	Strong government-business synergies and partnerships, and ambitious ICT program. National Information Technology Council. 2002 Masterplan. TIGER program.

V. Key policy messages

Key messages (1)

It is urgent to:

- 1. Put KE at the heart of country development strategies**
 - Countries that are doing so are striding ahead
 - KE agendas cannot be disconnected from other reform agendas
- 2. Adapt KE to country specificities**
 - Achieving KE is a matter of will and determination – vision is important!
 - Priorities of action will vary with a country's development situation

Key messages (2)

(It is urgent to:)

3. Act ambitiously on the 4 KE pillars

- KE-based growth results from positive interaction between the 4 pillars: innovation, education, ICT, Economic infrastructure

4. Build vision and trust through a KE-based society

- Success stories are essential to building KEs
- Governments should act with pragmatism



Thank you!

www.worldbank.org/wbi/knowledgefordevelopment
www.worldbank.org/kam

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