

Innovation Policy and Developing Countries

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DIE, Bonn, December 4 and 5, 2008

Inno vs DB?

- Innovation? What? How?
- Indicators
- What is innovation policy?
- Implementing innovation policy in developing countries

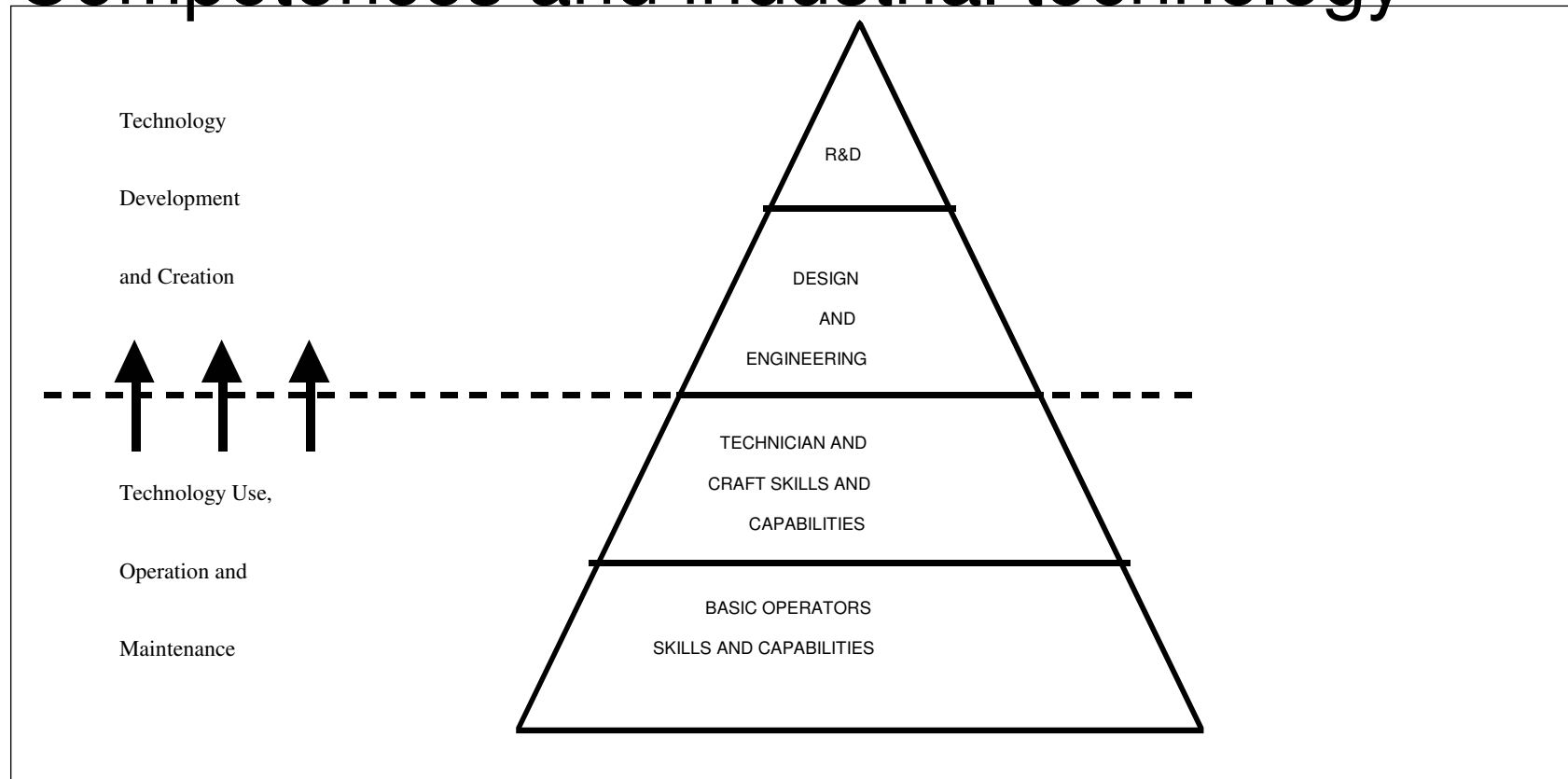
What is innovation? Something new in a given context (not in absolute terms)

A « new » product, process, practice, activity...

- Which provides jobs, improves living conditions, generates wealth, etc
- Which diffuses broadly in the economy and society (if not, it remains only an « invention »)
- Which results from the meeting of entrepreneurship (« opportunity entrepreneurs ») and knowledge (local and global)
- **Innovation precedes research!** (notably in developing countries)

Industrial Technology

Competences and industrial technology



Source: WBI Staff

What it takes to build a tourism industry: Mauritania

- Stimulated by a demand from Europe and North America at a time when other desert destinations appeared less safe
- A favorable national context : good business investment climate, telecom reforms, and development of air and road infrastructures.
- Making use of indigenous knowledge (nomads) and basic one (English speaking unemployed youth)
- Entrepreneurs with 4/4 drive cars, garage repair shops, nice hotels with internet

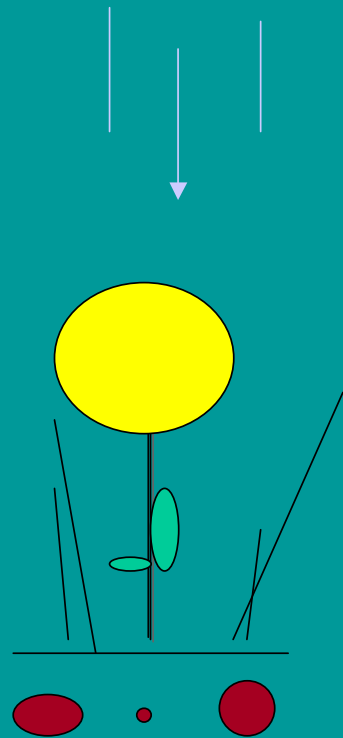
Innovation-related Indicators

- Not in DB – some in ICA (Enterprise Surveys?)
- Monitoring vs Ranking
- Inputs (RD, patents, etc): LICs vs OECD?
- Outputs: Innovation surveys in OECD countries transferable in LICs. GIS? Need for tracking diffusion and use of new technologies, new practices, new businesses (opportunity entrepreneurs)
- DB-style indicators of universal value? Yes if we can measure trust for instance (quality of judicial perceived as most significant factor for growth in correlation tests!)

What innovation policy is made of?

- Not an appendix to S&T policy
- Need for:
 - Supporting innovators (funding +real services)
 - Removing obstacles to innovation (specifics)
 - Providing knowledge and technology (in tapping world wide)
- Need for both efficient central agencies and local structures close to local needs and entrepreneurs

GOVERNMENT ROLE GARDENING INNOVATION



Watering (finance,
support to innovation
projects)

Removing weeds
(competition,
deregulation)

Nurturing soil (research,
education, information)

Key instruments

- Dissemination, awareness raising mechanisms
- Consultations, foresight, etc
- Audits (institutional, technological)
- Matching funds, to respond to market demands, entrepreneur projects, community needs, city initiatives... (with co-financing, competitive allocation and closely monitored)
- Managed by flexible entities (playing with the different instruments as needed)

Linkages with other policies

(through institutional structures and funding mechanisms mentioned above)

- (Higher) education, research policies
- Business development services, FDI agencies
- Trade, customs, finance, banking, tax,...
- Telecoms...
- Sector policies: health, agriculture...

In order to orient reforms, remove regulations and other obstacles deterrent for innovation...

+ Special focal points: IPR, Standards, Metrology, ICT, excellence centers...

Innovation Policy climates in developing countries

- Bad conditions of governance, poor infrastructure, lack of financial resources, etc; so need to focus on selected sectors, areas, etc where these constraints are being lessened
- Crowded institutional settings (FDI, SME, export agencies, etc); bias towards R&D and university centers ; need to create appropriate structures but not isolated from the others
- Key innovative groups include: the entrepreneur, local supporters, national godfather, foreign go-between: need to play with these groups without creating rent situations

What it takes to fight Malaria in Mali

- Very serious issue (affects the whole population, strong handicap, affects productivity...)
- A center (MRTC) created by highly educated specialists from the diaspora (France, US)...in 1992, 40 persons today, supported at 90 per cent by foreign resources (self financed)
- Plugged into global centers of excellence (NIH) and working closely with traditional healers
- Contributed to reduce significantly rate of infection and made world science discoveries (transmission from mother to baby)

Support to innovative projects should come in package

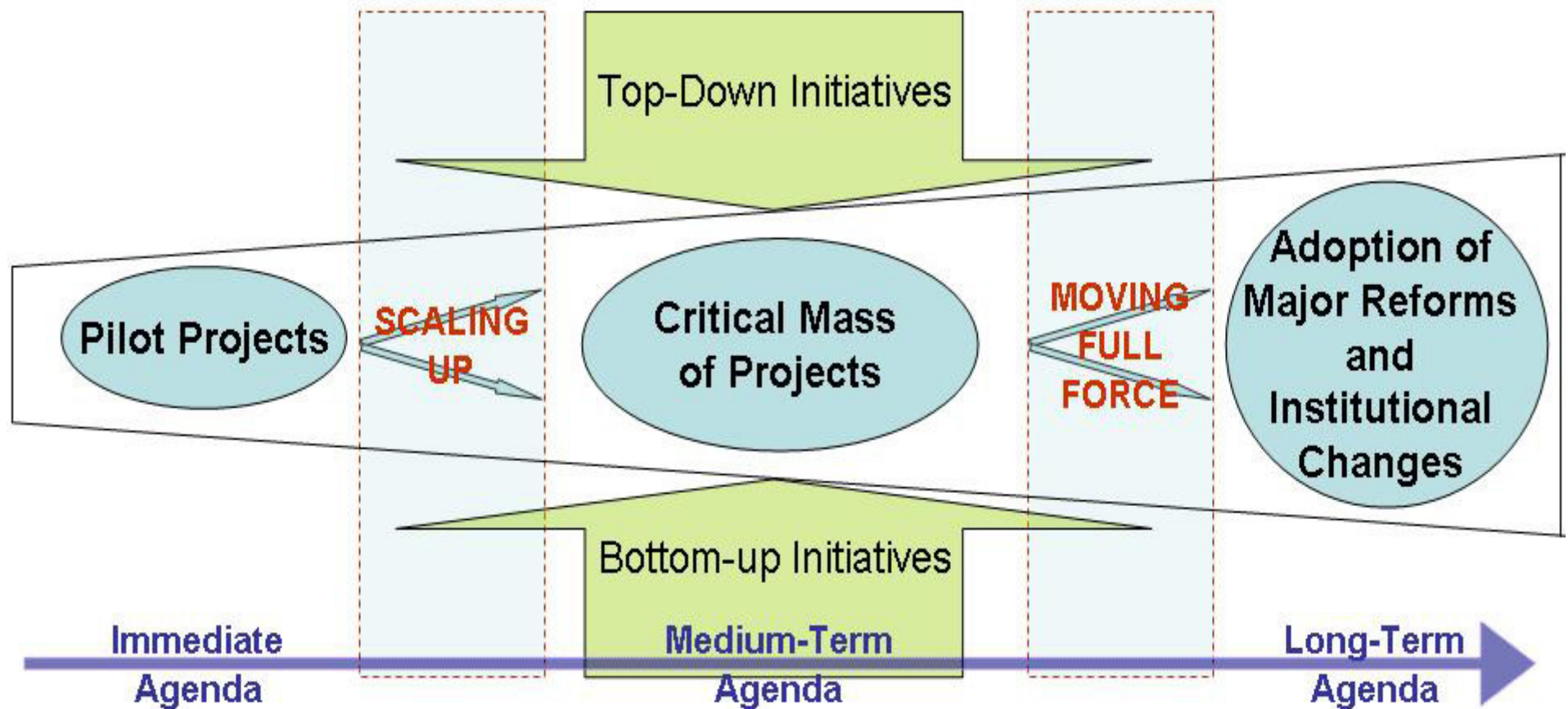
- All needed support (technical/financial/marketing, regulatory, etc) in a single package
- Examples:
 - SEZ in China, minimal infrastructure platforms in Africa well functioning telecom connections, training facilities, easy customs
 - Fundacion Chile in the development of world competitive resource-based industries (salmon, wine, etc)
 - Aid to artisans : a US NGO providing support to artisans world wide for design, trade, business management, etc...

Innovation climates – a rough typology with entry points

| | Good business environment | Bad business environment |
|-----------|-----------------------------------------------------------------------------|------------------------------------------------------------------|
| Strong ST | Developed economies Fine tuning | Transition economies – Exploit pockets of innovation |
| Low ST | Numerous MIC, a few LIC -- use export industries as springboard | Most low income countries Demonstration projects |

Innovation policy as driver to broader reforms (China role model)

TIME-SEQUENCING AND SCALING UP



Political Economy Issues

- Creation of « durable » rent situations
- Risk of « durable » enclaves without leverage effects on the whole reform process (+ critical mass problem)
- Instability of the overall political/economic system

Innovation work at WB

- Key pillar of WBI program knowledge for development program
 - See Flagship report “Building Knowledge Economies”
 - A course/book in preparation
- Analytical studies in Networks (e.g. PREM and STI coordination)
- Projects (e.g. in India, LAC)

Thank You!

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