Hastening catching up by harnessing ICTs: Are we missing the new avenues?

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The analytical context

• ICT- the GPT of the new millennium
• ICT – Globalization interface
• Key to fostering inclusive development through collaboration at different levels
• But the failure could accentuate inequality
• Empirical evidence of declining digital divide viewed in the narrow sense of access
• However this might conceal more than what is revealed
Exclusion explored: different dimensions

Extent of exclusion
Full exclusion: Not having access to ICT at all
Partial exclusion: Having access either directly or indirectly but not having the capability to make effective use

Cause of exclusion (Amartya Sen 2000)
(i) Active exclusion in ICT: Happens when exclusion come about through policies directly aimed at that result;
(ii) Passive exclusion in ICT: Result from policies that have not been devised to bring about that result but nevertheless have such consequences

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Exclusion: Different dimension

In terms of the outcome (Amartya Sen 2000)

(i) Constitutive exclusion: Happens when being excluded is in itself a deprivation which can be of intrinsic importance on its own

(ii) Instrumental exclusion: Refers exclusions that may not be depriving by themselves, but can lead to deprivation through consequences of great instrumental importance
Exclusion: different dimensions

- **Based on nature of exclusion**
- **Unequal inclusion** – included but could perpetuate dependence – this could result from
  (a) neglect of the benefit of ICT production and focus only on use
  (b) the strategies wherein the developing countries are placed in a situation of perpetual *attente* – waiting for the transfers of technology from the North and focusing their attention on the need to attract transnational corporations to their shore (Mytelka and Ohiorhenuan 2000).
- **Illusive inclusion**: included but doesn’t help addressing the issues confronted
Catching up and leapfrogging

- Given the complex digital world of multiple divides and exclusion, development through catching up and leapfrogging calls for learning, innovation and competence building systems at the sectoral, regional, national and international levels wherein collaboration plays an important role.

- But if innovation is at the key to development, to foster inclusive development the underlying innovation system has to be inclusive.
On collaboration

• Historically, the north-south collaboration has played significant role in catching up in many of the countries
• But as Nelson and Winter, (1982) observed “when only a spare set of clues is available regarding the solution to be recreated, efficient imitation requires more or less the same type of capabilities than innovation” (p124).
under collaboration the buyer always get a less complete information set that what the producer has and..
On Collaboration…

- It has also been shown that
- “If the cultural environment of a user is very different from that of the producer, it will be costly to establish a channel of information and to develop a common code. Not only will different national languages impair the communication, differences in culture will be reflected in different interpretations of identical signals. Codes of conduct, mutual trust and responsibility will typically be easier to establish between parties with a common cultural background.” (Lundvall, 1985: 25)
On collaboration

• Sussex manifesto states “what seems to be widely accepted is that development processes need substantially more than importing knowledge and technology.

• Further

• “The World Plan of Action for the application of science and technology to development starts with the premise that the developing countries must have their own scientific and technological capability.” (Singer et al, 1970: 1)
New avenues for collaboration

- **A few stylized facts**
- Unlike earlier GPTs, in case of ICTs substantial capabilities exist in the South
- ICT priorities for the North is different from that of the South
- The strategy of promoting ICT use by neglecting its ICT production has the potential danger of perpetuating technological dependence

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ICT solutions from south addressing southern issues

- Hardware innovations, like simputer developed by the Indian Institute of Science, Bangalore - highly relevant in addressing the issues of affordability and illiteracy faced by developing countries

- CorDECT Wirless in Local Loop Technology developed in India by the Indian Institute of Technology Chennai- addressing issue of last mile connectivity

- In the sphere of software applications, there are over 50 ICT projects in operation in India alone addressing various issues specific to rural economy developing countries

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Commodity markets & ICTs
Case of e-auction in cardamom

• Cardamom – an export oriented commodity with wide variation in quality
• Marketing through the auction system
• Earlier - the outcry method and price variation of the order of over 100 per cent between the small and large holders
• A typical case of exclusion of small holders from the efficient marketing system
• Introduction of e-auction in 2009
• Analysis of price variation using data from 1300000 lots sold has shown that price variation is only of the order of less than 10%
Summing up the current context

<table>
<thead>
<tr>
<th>Problems for which IT solutions suitable for southern conditions exist</th>
<th>Problems for which IT solutions have been found in the North</th>
<th>Problems for which IT based solutions have not been searched or found in North</th>
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<tr>
<td>Problems for which IT solutions for Southern conditions do not exist</td>
<td>The large number of IT solutions acquired through Technology transfer</td>
<td>Sothern IT solutions developed for southern problems</td>
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<tr>
<td>“Cannonical” solutions exists, but for different reasons there are not suitable for the southern conditions</td>
<td>IT Solutions yet to be found</td>
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South-south collaboration:

- Not a substitute for but a complement to north-south collaboration
- S-S cooperation could be
  - Vertical and/or
  - Horizontal (eg IBSA, BRICS)
Initiatives in vertical S-S collaboration: e-ASEAN framework agreement

- To address the development divide between old and New ASEAN member countries
- Strategy: Trade liberalization and capacity building
- Approach: ASEAN help ASEAN
- Limits to e ASEAN
- The need for more broad based approach by harnessing southern innovation system to hasten the catching up
- Such initiatives need to be viewed as complement rather than as substitute to the on going north–south partnerships
An e-south framework agreement?

- Time is appropriate to thin in terms of an e-south framework agreement
- *interalia* involving
- trade liberalization,
- capacity building
- Promotion of both production & use of ICT and
- free mobility of labour (especially skilled labour)
- such that ICT do not act as an instrument of deprivation but a means of fostering inclusive growth
• Thank you for your kind attention