INNOVATION AND INCLUSIVE DEVELOPMENT

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Cape Town, South Africa  
November 21, 2012
Defining Innovation for Inclusive Development
Inclusive Development and the Role of Innovation

- **Inclusive development** = **key priority** for governments not only in emerging and developing countries

- Growth process has often not helped lower-income groups
  - *Majority of the world poor live in middle income countries.*

- "Trickle-down dynamics" are not automatic - poverty reduction affected by the distribution of incomes, by type of sectors where growth is taking place, etc.

- **Innovation** matters for growth but it is not "neutral" in impacts on inequalities in opportunities and policy will play a role = focus of discussions today.
Innovation relates to inequality in 3 ways:

1. **Direct impacts** on income distribution (innovation favours the highly skilled and risk takers)

2. Provides solutions for improving the welfare of lower and middle income groups ("frugal innovation")

3. Innovations by lower-income groups themselves, *i.e.* grassroots and informal sector activities, may lead to solutions
Not only traditional R&D-based innovation but also social and “business model” innovations.

Relevant innovations are often incremental (e.g. ICT-based applications for lower-income markets) & difficult to measure (!)

Types of innovations by lower-income groups are inclusive in that entry barriers are low and all can participate:

- No access to capital and skills for technology-based innovations

Raising educational levels will create more opportunities for lower-income groups to contribute to and benefit from more “complex” innovations
Income inequalities are wider in emerging and developing countries than in OECD countries and result in poverty of large groups.
Substantial Income Inequalities and Their Impacts on Development

Source: OECD (2011), Divided We Stand, OECD, Paris.
Substantial Income Inequalities and Their Impacts on Development

• Income inequalities are wider in emerging and developing countries than in OECD countries and result in poverty of large groups

• Income inequalities reduce opportunities for the poor and their contribution to the economy, hindering development process.
Innovation and Productivity Gaps: Evidence and Causes and Their Importance
In many emerging countries “islands of excellence” – innovative world-leading businesses, sectors, regions and research institutions or universities ...
## “Islands of Excellence”

<table>
<thead>
<tr>
<th>Firm</th>
<th>Sector of activity</th>
<th>Economy</th>
<th>R&amp;D investment (million USD)</th>
<th>Employment (thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Huawei Technologies</td>
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<td>China</td>
<td>2392</td>
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<td>2 PetroChina</td>
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<td>3 China Railway Construction</td>
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<td>China</td>
<td>1407</td>
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<td>5 ZTE</td>
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<td>1188</td>
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<tr>
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<td>Semiconductors (9576)</td>
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<td>8 Vale</td>
<td>Mining (177)</td>
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<td>9 MediaTek</td>
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<tr>
<td>12 HTC</td>
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<tr>
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<td>Automobiles &amp; parts (335)</td>
<td>India</td>
<td>413</td>
<td>n.a.</td>
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<tr>
<td>14 CSR China</td>
<td>Commercial vehicles &amp; trucks (2753)</td>
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<tr>
<td>15 Wistron</td>
<td>Computer hardware (9572)</td>
<td>Chinese Taipei</td>
<td>335</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

“Islands of Excellence”

• In many emerging countries “islands of excellence” – very innovative world-leading businesses, sectors, regions and research institutions or universities ...

• ... but coexist with a large group of low-productivity firms and a substantial informal economy.

• → Productivity gaps across firms, even within narrowly defined economic activities, are much larger than in developed countries.
• A substantial informal sector and high levels of underemployment imply that competition alone will not close these gaps.

• Explanations (I) - Lack of production factors (lack of skills and managerial capabilities, financing, information, institutional weaknesses, lack of suitable business conditions)

• Explanations (II) - Structural Factors (related to the sector of activity, related to foreign participation, scale of production and available labour capacity)
Transition Dynamics Play a Role

- Development process = transition towards modern sectors, firms or activities, more innovation-based and competitive, more “disruptive” growth scenarios
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... may lead to **transitory or longer-term (?) increases in inequality** depending on skills, financial resources, speed of destruction and redeployment of resources, sectoral dimensions ...

→ Policies have to strike a balance between approaches aimed at supporting first “islands of excellence” and those favouring wider diffusion of knowledge.
Innovation for and by Low- and Middle-Income Groups
Frugal Innovations Can Be Successful if Demand Challenges Are Addressed

- Innovative products (esp. food, health and basic livelihood) can improve the welfare of lower-income groups

- To serve lower-income markets, demand-side characteristics beyond high sensitivity to price, also have to be addressed:
  - Need to adjust products to specific user contexts (e.g. lack of electricity)
  - Providing information about use and benefit (reflecting e.g. the low human capital of most poor)
  - Community involvement
  - Demand may reflect short-but not long-term needs

- Not-for-profit actors have supported many initiatives, not only financially
Entrepreneurs have used innovative approaches to serve lower-income markets:

- *Pricing and financing strategies* - pay-as-you go, chain financing, tiered-pricing (Table 3.1)
- *Business process innovations* - no frills, standardisation, soft networks, value chain inclusion (Table 3.2)

Some multinationals are targeting middle-income groups as a way of entering growing markets.

Not all “inclusive innovations” reflect a new innovation concept with some being part of product cycle dynamics (e.g. mobile phones)
Potential and Constraints of Grassroots Innovations

• Examples demonstrate that grassroots innovations (innovation by the poor) can be beneficial, particularly for empowering lower-income communities.

• Initiatives/ networks have helped support for greater impact!

• However, for moving up the social ladder more substantive and human capital intensive innovation is needed.
Information and Communication Technologies
Infrastructure improvements and uptake have been substantial and have connected an increasingly broad group of users to information and communication technologies (ICTs).

In particular, uptake of mobile telephony has connected previously unserved communities supporting the “inclusive development” agenda!
Success Is Still Limited in Scale

- A variety of ICT-based applications – a set of “inclusive innovations” – developed in support of agriculture and fishing, health and education and mobile banking have successfully improved conditions for the lower-income groups they have reached.

- However, their scale is often still too small to improve living conditions more widely.
  - Due to lack of profitable business models but also regulation, platform development, skills, ...
Businesses in developing countries have also taken up ICTs, with positive impacts on their innovation and productivity performance.

Quantitative evidence shows that smaller firms and businesses in small cities – a group that is rarely among the leading firms – benefited as much as large businesses in capitals and large agglomerations. ICTs did not increase the gap between lagging and leading firms, contrary to what tenants of the “digital divide” might have expected.
Innovation relates to inequality in 3 ways:

1. **Direct impacts** on income distribution,

2. Provides solutions ("frugal innovation"); and

3. Innovations by lower-income groups themselves, *i.e.* grassroots and informal sector activities
Questions Rather Than Conclusions

• Do innovation and the resulting technological change necessarily lead to increased inequalities?
• What are the approaches taken by national innovation policies to develop frontier sectors and activities? Do these increase performance gaps across firms?
• What policies are in place to foster dissemination and innovation performance of laggard businesses? Are any targeting the informal sector?
• To what extent can innovation be mobilised to improve the life conditions of the lower income groups (“inclusive innovation”)?
• Is there a need for innovation policy to change in any way for more inclusive development?