Expert Group Meeting on Science, Technology and Innovation for Structural Economic Transformation of the LLDCs

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What is innovation today?

The Global Innovation Index 2018, developed by WIPO in collaboration with Cornell University and INSEAD University, adopts a broad notion of innovation:

“An innovation is the implementation of a new or significantly improved product (good or service), a new process, a new marketing method, or a new organizational method in business practices, workplace organization, or external relations”
The role of innovation

Innovation is often at the root of structural transformation, which affects economy’s productivity through a variety of channels:

- It can **change the face of industries**, leading to the exit of some firms and the entry of others

- Can unleash a **reorganization of supply chains**

- **Gives rise to new economic activity**, and prompts the decline of older activity.
The evolving role of IP

- Intellectual property (IP) plays a critical role for innovation and economic growth and development

- World Intellectual Property Report 2015 on “Breakthrough Innovation and Economic Growth” explores the linkages between innovation, IP, and growth in six areas of innovation

- IP incentivizes innovation

- Enables technology markets

- IP can facilitate mobilizing resources for innovation projects

- IP system is an important source of technical information for producing innovations in important fields
The Global Innovation Index 2018: Energizing the World with Innovation, World Intellectual Property Organization (WIPO)

To download the full report visit: www.globalinnovationindex.org
The Global Innovation Index 2018: Energizing the World with Innovation, WIPO

- 126 country/economy profiles, including data, ranks, and strengths and weaknesses

- 80 data tables for indicators from over 30 international public and private sources, of which 57 are hard data, 18 composite indicators, and 5 survey questions

- A transparent computation methodology including 90% confidence intervals for each index ranking (GII, output and input sub-indices)
The Global Innovation Index 2018: Energizing the World with Innovation, WIPO

- The GII 2018 is calculated as the average of two sub-indices.

- **Innovation Input Sub-Index:** Consists of five input pillars: (1) Institutions, (2) Human capital and research, (3) Infrastructure, (4) Market sophistication, and (5) Business sophistication.

- **The Innovation Output Sub-Index** divided in two pillars: (6) Knowledge and technology outputs and (7) Creative outputs.

- **The Overall GII Score** is the simple average of the Input and Output Sub-Indices.
Situation of Innovation in LLDCs

In the Global innovation Index 2018

- 9 LLDCs are ranked between 100-130
- 8 between 70-100
- 2 between 40-70
- 13 LLDCs were not included in the ranking due to the lack of required country data.
The key challenges and areas of importance for LLDCs

The **Innovation Input Sub-Index**

<table>
<thead>
<tr>
<th>Institutions</th>
<th>Human capital and research</th>
<th>Infrastructure</th>
<th>Market Sophistication</th>
<th>Business Sophistication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public service effectiveness</td>
<td>Education</td>
<td>Access and Use of ICT</td>
<td>Domestic credit to private sector</td>
<td>Knowledge creation</td>
</tr>
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<td>Expenditure on R&amp;D</td>
<td></td>
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**Institutions**
- Public service effectiveness
- Regulatory Environment
- Regulatory quality
- Rule of Law

**Human capital and research**
- Education
- Tertiary education
- Number of researchers
- Expenditure on R&D

**Infrastructure**
- Access and Use of ICT
- General infrastructure
- Ecological sustainability

**Market Sophistication**
- Domestic credit to private sector
- Intensity of local competition
- Domestic market scale
- Applied tariff

**Business Sophistication**
- Knowledge creation
- Innovation linkages
- Knowledge absorption
Key challenges and areas of importance for LLDCs

Innovation Output Sub-Index

<table>
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<tr>
<th>Knowledge and Technology Outputs</th>
<th>Creative outputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge creation</td>
<td>Intangible assets</td>
</tr>
<tr>
<td>Knowledge impact</td>
<td>Creative goods and services</td>
</tr>
<tr>
<td>Knowledge diffusion</td>
<td>Online creativity</td>
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</tbody>
</table>
Innovation, technology transfer and technological capacity building as a contributing factor for the development of LLDCs

The key areas of importance for LLDCs:

- Innovation-friendly legal framework, policies, regulations and institutions
- Higher investment into R&D
- Cross-sectoral linkages
- Effective partnerships between institutions of higher learning and research institutions with public and private sector
- Skills and human capital base able to deal with technologies and contribute to domestic innovation
- Access to credit and support structure for private sector
- Infrastructure, ICT, logistics, transport, energy etc.
WIPO’s support for fostering Innovation and Use of IP for Development

- Intellectual Property and Innovation Policies and Strategies
- Skills Development and Technological Capacity Building based on needs assessment (Incl. Transfer of Appropriate Technology for Development)
- Access to Knowledge and Strengthened Knowledge Infrastructure
- Establishment of Technology and Innovation Support Centers
- Strategic Use of Branding
- Enhanced Support for Documentation, Digitization, Protection and Commercialization of Intellectual Property Assets including Traditional Knowledge, Traditional Cultural Expressions and Genetic Resources