

STI as a Sustainable Development Goal

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Economic importance of STI and participation for development

- There are significant learning opportunities from technology transfer (trade in ideas).
- Direct effects and spillover gains from tech transfer help spur economic transformation.
- Countries with reasonable capacities in science and R&D are in the best position to benefit from these externalities.
- Emphasizing human capital and participation in knowledge creation is an important source of future growth.
- Technological solutions are among the best means of addressing public goods and sustainability issues.

Some stylized (economic) facts

- IPR reforms do matter for technology transfer and diffusion. ITT flows:
 - Positive impacts on high-technology trade (2-way) and FDI.
 - Shifts incentives from FDI (internalization) to licensing and JVs (externalization).
 - Local enterprise capacities in R&D are critical.
 - No evidence of such outcomes in poor and small economies, where IPR has little impact on tech transfer.
- Structural:
 - Seems to help build technology markets.
 - IPR help sort out complex rights-sharing arrangements in multi-actor projects.

Some stylized (economic) facts

- IPRs are hardly the main factor.
 - Economic climate and governance.
 - National participation in S&T.
 - Openness to technology via trade, etc.
 - Importance of skilled labor mobility.
 - Many others....

Further observations

- On public goods and sustainability:
 - IPR reforms have helped in some dimensions.
 - But incentives are still inadequate for R&D and dissemination in areas of common concern.
 - Importance of finding localized solutions.
- Emergence of global innovation and research networks bears real promise for R&D and learning.
- But to date they do not involve much participation by poor countries.

Support for STI

- All of this favors broad focus on STI to improve sustainability and learning through tech transfer, dissemination, and participation.
- Consistent with idea for an “Affirmative Declaration on Technology Transfer” for development and public needs:
 - Maximize public access to patent information.
 - Explore potential for differentiated patent terms and buyouts.
 - Public funding for local use and adaptation with peer review.
 - Encourage licensing of key technologies on concessional (free) terms.
 - WIPO agreement on permissible uses of copyrighted materials.
 - Expand access to visas for longer-term mobility of skilled labor.
 - More funding for targeted R&D, dissemination and adaptation.
 - Open research grants to participation by scientists in developing countries.
 - Establish open access to data and results from publicly funded research.

Short-term implementation of facilitation mechanism

- OWG documents already anticipate much of this kind of thinking.
- The main enabling condition is improved governance and policies in DCS.
- Also important will be national investments in STI infrastructure.
- Some thoughts on what might be implemented with positive outcomes in short term:
 - Technology and information bank;
 - Better and more harmonized STI and NIS data collection and reporting;
 - Global public access to all patent information;
 - Develop public/private fund(s) for adaptation needs (prizes, peer review, patent buyouts);

Longer-term ideas

- Begin discussions of (GATS?) agreement on skilled-labor visas (plurilateral “innovation zones”).
- Consider adding research services as a sector for potential liberalization to improve global contacts.
- Work toward an agreement (WIPO/UN/WTO) on open access to publicly funded research.
 - “Inputs”: access to grants, international science teams.
 - “Outputs”:
 - Open-access for data and research findings.
 - Pools and/or concessional licensing of patented results.
 - Requires additional grant funding from other countries to offset opposition in US, EU, etc.
 - Argument for a “Global NSF”?