How Developing Countries Can Excel in Knowledge-Based Industries

Stephen Ezell
VP, Global Innovation Policy
ITIF

March 23, 2017
Develop a National Innovation Strategy

Charles River Associates, Policies That Encourage Innovation in Middle-Income Countries
Key Factors for Developing Countries

1. Strengthen intellectual property rights protections.
2. Implement an attractive environment for FDI.
3. Provide enterprises access to large markets.
4. Invest in R&D, science, knowledge, and education.
5. Get tax policy for knowledge-based industries right.
IPRs Deliver Five Key Benefits, As They:

1. Create incentives for domestic innovation.
2. Induce knowledge spillovers that help others innovate.
3. Ensure companies can focus on innovating; not on having to protect their IP.
4. Promote the international diffusion of technology, innovation, and knowhow.
5. Boost domestic levels of exports, R&D, and FDI.
Stronger IPRs Lead to Increased Exports, R&D, and FDI

- Strengthened trademark and copyright protections have a “statistically significant” association in relation to export turnover, sales, and total assets.

- A 1% ↑ in: copyright protection = 3.3% ↑ in domestic R&D
  trademark protection = 1.4% ↑ in domestic R&D
  patent protection = 0.7% ↑ in domestic R&D

- A 1% ↑ in: copyright protection = 6.8% ↑ in FDI
  trademark protection = 3.8% ↑ in FDI
  patent protection = 2.8% ↑ in FDI

Source: OECD: Policy Complements to the Strengthening of IPRs in Developing Countries
Strong IPRs Benefit Developing Countries

“The results point to a tendency for IPR reform to deliver positive economic results, for developed and developing nations alike.”
Ryan: “Patents provided incentives for biomedical technology entrepreneurs to make risky investments into innovation in Brazil.”

Ache Laboratorios Farmaceuticos
PeleNova Biotechnologia
Genoa Biotechnologia
Recepta Biopharma
“For countries which seek to develop an innovative biopharmaceutical industry, intellectual property is a necessary building block.”

MIC countries like Colombia and Malaysia that have fallen behind peers in biotech innovation have done so because they “lack a consistent system for securing intellectual property rights.”
Leadership in Biotechnological Innovation Requires Robust IP Protection

Source: Global Intellectual Property Center, *IP - A Global Navigation System for the Knowledge Economy*
FDI Key to Diffusion of Technology & Knowhow

- Trade and FDI the main market-mediated channels by which ideas & intangible assets are disseminated internationally.
- Dahlman: “Higher rates of FDI helps explain the relatively higher technological growth rates in East Asian countries.”
- “The volume of FDI and level of capital formation have significant positive effect on changes in real GDP.”
  - Study of FDI impact on Bangladesh, 2011.
Costa Rica FDI Case Study

- Since 1990 has “progressively shifted its export composition from primary products to high-tech manufacturing and services, thanks to targeted actions to attract FDI.”

- Costa Rica is the world’s fourth-most intensive high-tech exporter per capita. FDI has led to increased exports in knowledge-intensive sectors.

- FDI-supported enterprises accounted for 22% of formal private-sector employment in 2016.

- FDI inflows regularly equivalent to 6-7% of GDP.
Openness to FDI Matters Greatly

FDI Restrictiveness Index, 2015

Source: OECD *FDI Restrictiveness Index, 2015*
Expand Access to Markets of Scale

Source: The Economist; Moody's Analytics/Economy.com
Increase National/Regional R&D Intensity

R&D Investment as Share of GDP

Source: World Bank, 2014 or most recent available year
Leverage Tax Policy to Spur Knowledge-Based Innovation

✓ Generous R&D tax credits (e.g., Brazil, China, India, Malaysia).
✓ Robust collaborative R&D tax credits (Chile, Thailand, Turkey).
✓ Patent boxes (China, Hungary).

Sources: ITIF, We’re #27: The United States Lags Far Behind in R&D Tax Incentive Generosity
ITIF, Creating a Collaborative R&D Tax Credit,
Join The Global Trade and Innovation Policy Alliance

- C.D. Howe Institute (Canada)
- The Center for Global Enterprise (U.S.)
- Center for Social and Economic Research (Poland)
- Competere (Italy)
- Fundación Idea (Mexico)
- Geneva Network (UK)
- ICRIER (India)
- ITIF (U.S.)
- The Legatum Institute (UK)
- The Lisbon Council (Belgium)
- Shanghai Institute of Science and Technology Policy (China)
- Swedish Agency for Growth Policy Analysis (Sweden)
- Tic Tac de la CCIT (Colombia)
Thank You!

Stephen Ezell  |  sezell@itif.org  |  202.465.2984