Measuring and Modeling Trans-Boarder Patent Rewards

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Overview

- Reconceiving Worldwide Patent Incentives
- Using Patent Data to Study International Production of Inventions
- Visualizing Comparative Efficiencies in Invention Production
- Regression Studies of Factors Influencing Invention Production
- Implications
Misplaced Emphasis on Developing Country Standards

- Some Commentators Assert That Improved Patent Standards and Enforcement in Developing Countries will Spur Inventions
- Developing Country Laws Will Produce Weak Patent Rewards
- Big Ticket Rewards are in Large Economies
- Developing Country Strategies Should Focus Primarily on Large Economies
Weaknesses of Developing Country Patent Rewards

- Even Strong Patent Laws Strongly Enforced Produce Rewards Limited By Local Economy Size
- Limits on Patentable Subject Matter
- Limits on Proof of Infringement
- Limits on Execution of Remedies
- Value of Local Patents Discounted by Accumulated Effect of These Factors
Advantages of Looking to US and Other Strong Economies

- Large Markets Imply Large Potential Rewards from One Patented Advance
- Broad Patentable Subject Matters
- Established Legal Infrastructure
- Strong Enforcement of Remedies
Analyses in this Study

- Data: 3.2 Million US Patents for Years 1975 to 2002 Grouped by Application Year
- Coded in Six Technology Categories
- Evaluations of Foreign Inventor Patenting
  - Visualization Studies of Invention Efficiency per GDP Dollar
  - Regression Studies of Factors Affecting Invention Volumes
Total Patents Per GDP 1975
Total Patents Per GDP 2002
Patents Per GDP History
Chemical Patents Per GDP History
Computer Patents Per GDP 2002
Computer Patents Per GDP History
Drug Patents Per GDP 2002
Drug Patents Per GDP History
Electrical Patents Per GDP 2002
Electrical Patents Per GDP History
Mechanical Patents Per GDP History
Other Tech Patents Per GDP 2002
Other Tech Patents Per GDP History
Regression Findings: Factors Influencing Invention Volumes

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<th>Technology (Betas)</th>
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<th>Computer</th>
<th>Drugs</th>
<th>Electrical</th>
<th>Mech.</th>
<th>Other</th>
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Implications

- Developing Countries Can Look to US and Other Large Economies for Innovation Incentives
- Potential for Local Specialization and Expertise Generation with Worldwide Payoffs
- Factors Influencing Past Foreign Suppliers of New Inventions May Guide Developing Countries
- Basis for Comparative Studies of Foreign Inventor Patenting Elsewhere
- Potential Indicators of Factors Promoting Regional Innovation Expansion