UIBE Study Visit to WIPO
IP and Economic Development

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Outline

**Aim:** Give economic insights into how IP links to economic development

- What does IP activity in China look like?
- What can researchers tell us?
- How theory meets practice in the case of China?
Global growth in filings

- Global growth in patent (4.5%) and trademark (6.0%) filings in 2014
  - China leads the growth, particularly from local residents (12.5% and 18.2% respectively)

- Industrial design fell by first time in 20 years by 8.1%
  - Chinese industrial design applications fell by 14.4% from 2013
## Highlights from WIPI 2015

<table>
<thead>
<tr>
<th></th>
<th>Patent</th>
<th>Trademark</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Resident</td>
<td>Non-resident</td>
</tr>
<tr>
<td>World</td>
<td>1,800,300</td>
<td>880,600</td>
</tr>
<tr>
<td>China</td>
<td>801,135 (44.5%)</td>
<td>127,042 (14.4%)</td>
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<tr>
<td>United States of America</td>
<td>285,096 (15.8%)</td>
<td>293,706 (33.4%)</td>
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<tr>
<td>Japan</td>
<td>265,959 (14.8%)</td>
<td>60,030 (6.8%)</td>
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Increasing IP use translates into...

Productivity?  
Innovation?  
Technology transfer  
Economic growth?  
Creative outputs?  
Start-ups?  
Competition?  
Trade?  
Investments?  
Licensing?
IPR instruments

- Stimulate innovative and creative activities
  - Patents, utility models, copyrights, industrial design, plant breeders’ rights, trade secrets

- Address asymmetry of information issue
  - Trademark, geographical indication

- IP protection provides exclusive right to the IP owner over the use and exploitation of the protected intellectual creation over a period of time, subject to the IP instrument
Basic incentive effects of IP protection should work everywhere,
Market failure exists;
Initial conditions across countries vary

Study of economic growth process suggests that technological progress is key for long-term growth

By fostering innovation and technology transfer, IP protection can stimulate economic growth, given the right conditions
Right conditions

- National innovative system
- Sound investment climate
- Infrastructure quality
- Macroeconomic and political stability
- Good governance
- Quality education, e.g. science and engineering schools
- Etc.

- Absorptive and innovative capacities
  - Ability to learn and produce innovative/creative outputs
Shapes innovation incentives

- Exclusive rights grants market power to IP holders
  - Recoup initial investment costs

- Plays a role in cumulative innovation
  - Disclosure of problem-solving information
  - Enables licensing of patented intellectual assets

- Facilitates firm specialization

- Mobilize resources for risky innovation
Channels of IP impact

- Productivity
- Creativity
- Innovation
- Technology Transfer, licensing
- Trade
- Preserving competition
- Promoting investments into risky innovative projects
  - Start-ups
Issue 1: Apples and oranges comparison

Countries are different:
- Legal and political stability;
- Macroeconomics stability;
- Capacities to innovate

Countries with varying income levels tend to respond to IP protection strengths differently.

Innovation and GDP per capita
GII 2014
(bubble size: population)

Moving to become an innovation leader/learner

Leaders

Learners

Low performers (relative to GDP)

Efficient

Inefficient

GDP per capita in PPP$ (In scale)
Patent filing and grants in China

The ratio of resident to non-resident filings/grants are those expected for countries with high innovative capacities

Begs the question: how does patent filing/grant affect the Chinese economy?
What we are learning

Hu and Jeffersen (2009): A great wall of patents: What is behind China's recent patent explosion?

- R&D activities
- Increase in foreign competition
- Amendments to patent law that favors local innovative activities

Also find:

- Promotion at the local level to encourage innovation (public subsidies and administrative support)
Chinese users of patent system

- Increasingly use patent to protect their invention for commercialization reasons:
  - To prevent others from imitating their work
    - Prevent imitation (62.4%)
    - Secure market share and expand market (60.8%)
    - Stockpile technologies (49.9%)
    - Build product image (48.6%), and set standards (36%)

- As a business strategy
  - Bargaining chip or exchange (12.4%)
  - Block competitors (17.6%)

Source: CDIP Country Study on China
Conclusion

- IP has potential on the economic growth and development, but its impact varies according to:
  - Local investment climate
  - National innovative systems (absorptive and innovative capacities)

- Caveats:
  - IP instruments are second best policies – they may create distortive effects on the economy
    - Too weak IP may discourage new inventions
    - Too strong IP may stifle follow on innovation
THANK YOU FOR LISTENING

http://www.wipo.int/ipstats/en/

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Patent Filings vs. Patent Grants
Count of patent applications in China
Count of Patent Grant in China