External Institutions and Internal Organization: Strategic Protection of Intellectual Property Rights in China

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The Nation of Copycat?

- *Frost & Sullivan*: Revenues of counterfeit vehicle parts and components in China reached $11.53B in 2004, and is estimated to reach $44.74B in 2011.

- *Commercial Times*: 56% of vehicle users in China have found counterfeit parts on their vehicles.
It does not help to complain.
So what’s the problem?

- Counterfeiting/imitation vs. technology spillover
- External institutions vs. internal organization
- IP strategies vs. innovation strategies
- Set the expectations right, and view the environment as both a challenge and an opportunity.
Imitation of different natures

- Counterfeiting:
  - Diluting sales; damaging reputation
  - The consolations:
    - They are always one step behind;
    - The Chinese 1st tier suppliers are affected as much and become more active in the enforcement of brand names, etc.

- Knowledge spillover
  - Low returns on R&D investment
  - More serious problem in the long run
    - Stronger local competitors
    - More intangible & harder to enforce
## Other stakeholders

<table>
<thead>
<tr>
<th></th>
<th>Counterfeits</th>
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<tbody>
<tr>
<td>Government</td>
<td>Showing willing to enforce protection, but implementation may be difficult at the local level</td>
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<td>Support crackdowns for safety concerns; seeking accountability &amp; after-sales services</td>
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<td><strong>Government</strong></td>
<td>Showing willing to enforce protection, but implementation may be difficult at the local level</td>
<td>Eager to promote independent R&amp;D capabilities in China; turning a blind eye to infringement in many cases</td>
</tr>
<tr>
<td><strong>Consumers</strong></td>
<td>Support crackdowns for safety concerns; seeking accountability &amp; after-sales services</td>
<td>May perceive enforcement as attempts to “corner” the market; happy to see lower prices with competition</td>
</tr>
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<td><strong>Strategies</strong></td>
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<td>Internal organization: strategic design of information flow &amp; control</td>
</tr>
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</table>
U.S. patents invented in China
Resident Patent Filings (WIPO)

Source: WIPO Statistics Database
Invention patents granted in China
Driven by foreign entries …
What is “Invented in China” anyway?

- High-tech exports from China grew at 42% per year since 2000; MNEs account for 88%.

- State Intellectual Property Office of China (SIPOC): By the end of 2005, only 0.03% of Chinese firms have independent IP as their core technologies.

- In the auto industry, most companies are still in the stage of copying, at most “inventing around”.

Invention patents filed in China

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<tr>
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</thead>
<tbody>
<tr>
<td>Europe</td>
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<td>Volkswagen</td>
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<tr>
<td>Hyundai</td>
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Source: Intellectual Property Bureau of China
Move beyond the “world factory”

- Ministry of Science and Technology: Three pillars of S&T strategies: human capital, patents and standards
- Campaign for an “innovation-driven economy”
  - Spending on R&D is to increase to 2.5% of GDP by 2020.
  - The number was 0.57% in 1996 (with a much lower GDP).
  - 2005 fiscal allocation for S&T: 133.5 billion yuan
- The OECD announced that China's PPP-adjusted spending on R&D for 2006 tops $136 billion.
  - It surpasses that of Japan, at $130 billion, for the first time and is second only to the U.S.'s $330 billion.
Hotbed of multinational R&D

Locations of foreign R&D efforts (based on a survey of the world’s largest R&D spenders)

% of all the world’s largest R&D spenders

<table>
<thead>
<tr>
<th>Country</th>
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<tbody>
<tr>
<td>US</td>
<td>60%</td>
</tr>
<tr>
<td>UK</td>
<td>40%</td>
</tr>
<tr>
<td>China</td>
<td>30%</td>
</tr>
<tr>
<td>France</td>
<td>20%</td>
</tr>
<tr>
<td>Japan</td>
<td>15%</td>
</tr>
<tr>
<td>India</td>
<td>10%</td>
</tr>
<tr>
<td>Canada</td>
<td>5%</td>
</tr>
<tr>
<td>Germany</td>
<td>3%</td>
</tr>
<tr>
<td>Singapore</td>
<td>2%</td>
</tr>
<tr>
<td>Italy</td>
<td>1%</td>
</tr>
<tr>
<td>Brazil</td>
<td>1%</td>
</tr>
<tr>
<td>Russia</td>
<td>0.5%</td>
</tr>
<tr>
<td>Poland</td>
<td>0.5%</td>
</tr>
<tr>
<td>Taiwan</td>
<td>0.1%</td>
</tr>
<tr>
<td>South Korea</td>
<td>0.1%</td>
</tr>
<tr>
<td>Thailand</td>
<td>0.1%</td>
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Source: UNCTAD WIR 2005
Beyond Localization

- Large scale
- Frontier research
- Strong internal linkages
  - communication and collaboration with HQs
  - technology integration on a global basis
An Illustration

Visual Computing

A1
Instant Messenger

A2
Movie Maker

A3
Graphic Interfaces

A4
Computer Gaming

A5
Security Systems
A “Global R&D Center”

1. Anti-HIV
2. Obesity
3. Alzheimer
4. Anti-cancer
Organization: Put the Pieces Together
A Case for Arbitrage

- Poor intellectual property rights protection
- Low R&D investment; Underpriced human capital
- Using organizational strategies to substitute for legal enforcement
- MNEs able to appropriate value from underpriced resources

Challenge for auto: fast changes in local market, short life-cycle
Opportunity for auto: fast changes in local market, short life-cycle
对症下药

Symptoms
- Counterfeiting
- Spillover

Tools
- External institutions
- Internal organization

Remedies
- IP Management
- Innovation Strategies

Do not complain!