

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



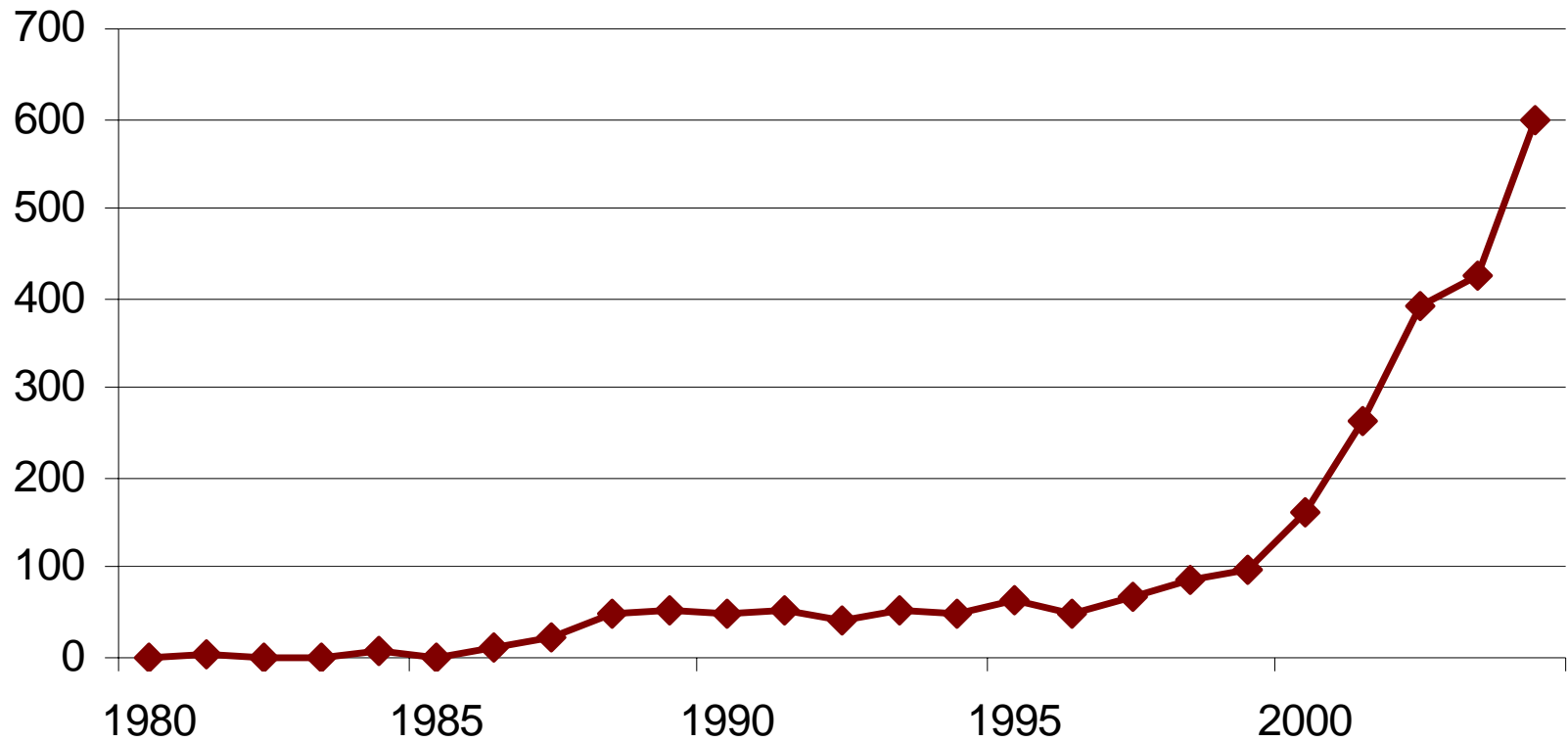
Other stakeholders

	Counterfeits
Government	Showing willing to enforce protection, but implementation may be difficult at the local level
Consumers	Support crackdowns for safety concerns; seeking accountability & after-sales services
Strategies	External institutions: patents and brand names, lawsuits, education, etc.

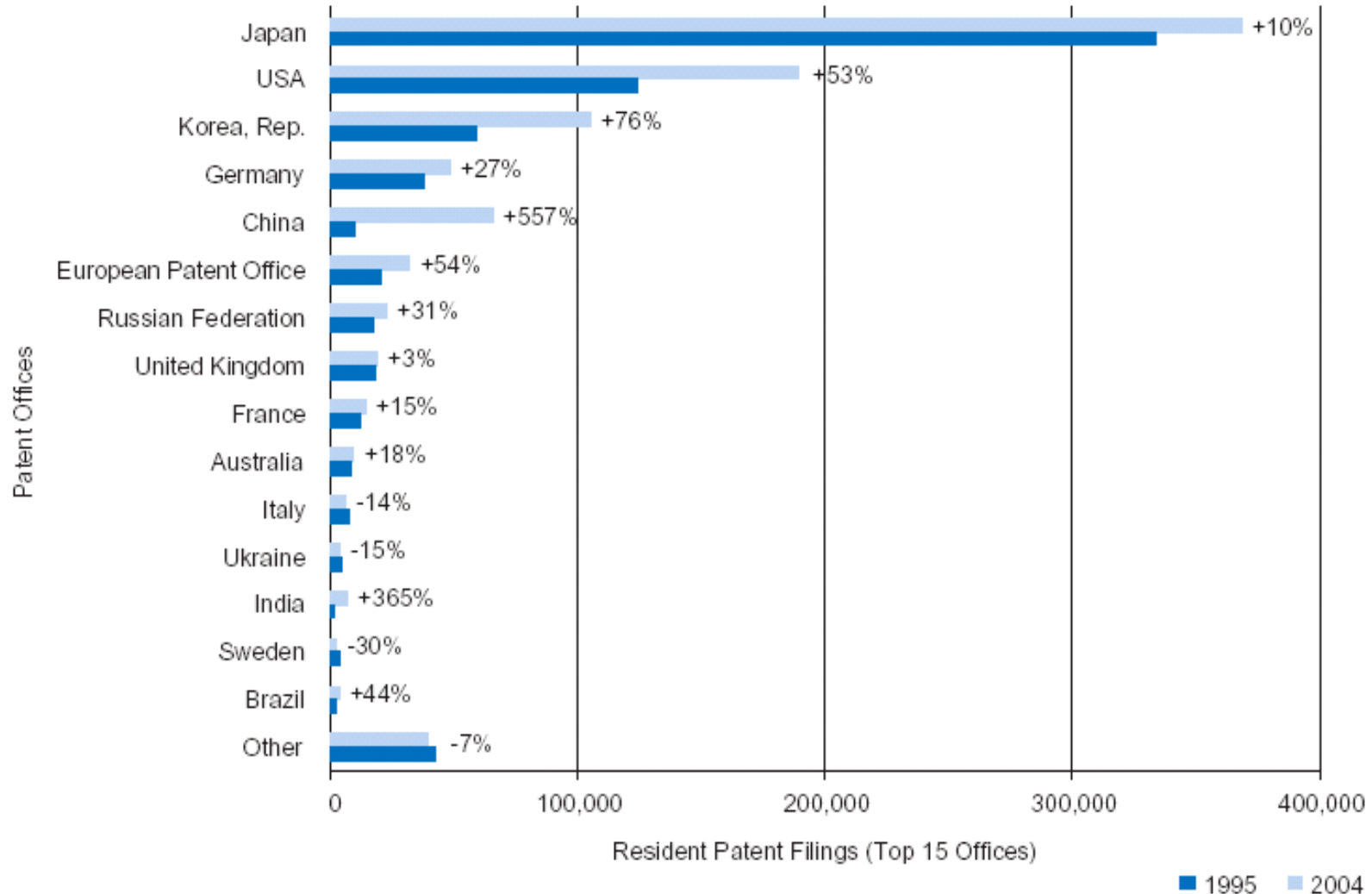
Other stakeholders

	Counterfeits	Knowledge spillover
Government	Showing willing to enforce protection, but implementation may be difficult at the local level	Eager to promote independent R&D capabilities in China; turning a blind eye to infringement in many cases
Consumers	Support crackdowns for safety concerns; seeking accountability & after-sales services	May perceive enforcement as attempts to “corner” the market; happy to see lower prices with competition
Strategies	External institutions: patents and brand names, lawsuits, education, etc.	Internal organization: strategic design of information flow & control

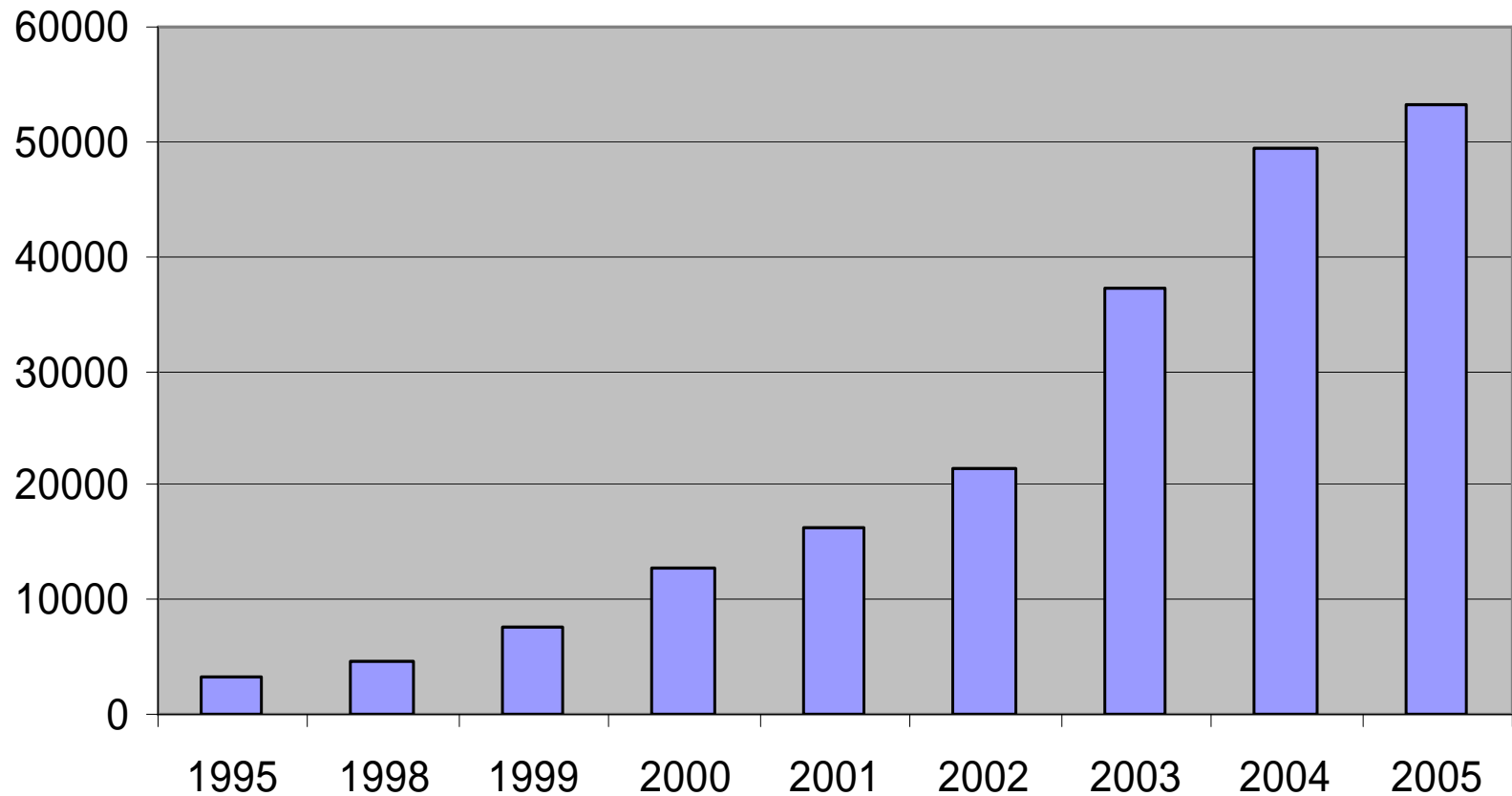
U.S. patents invented in China



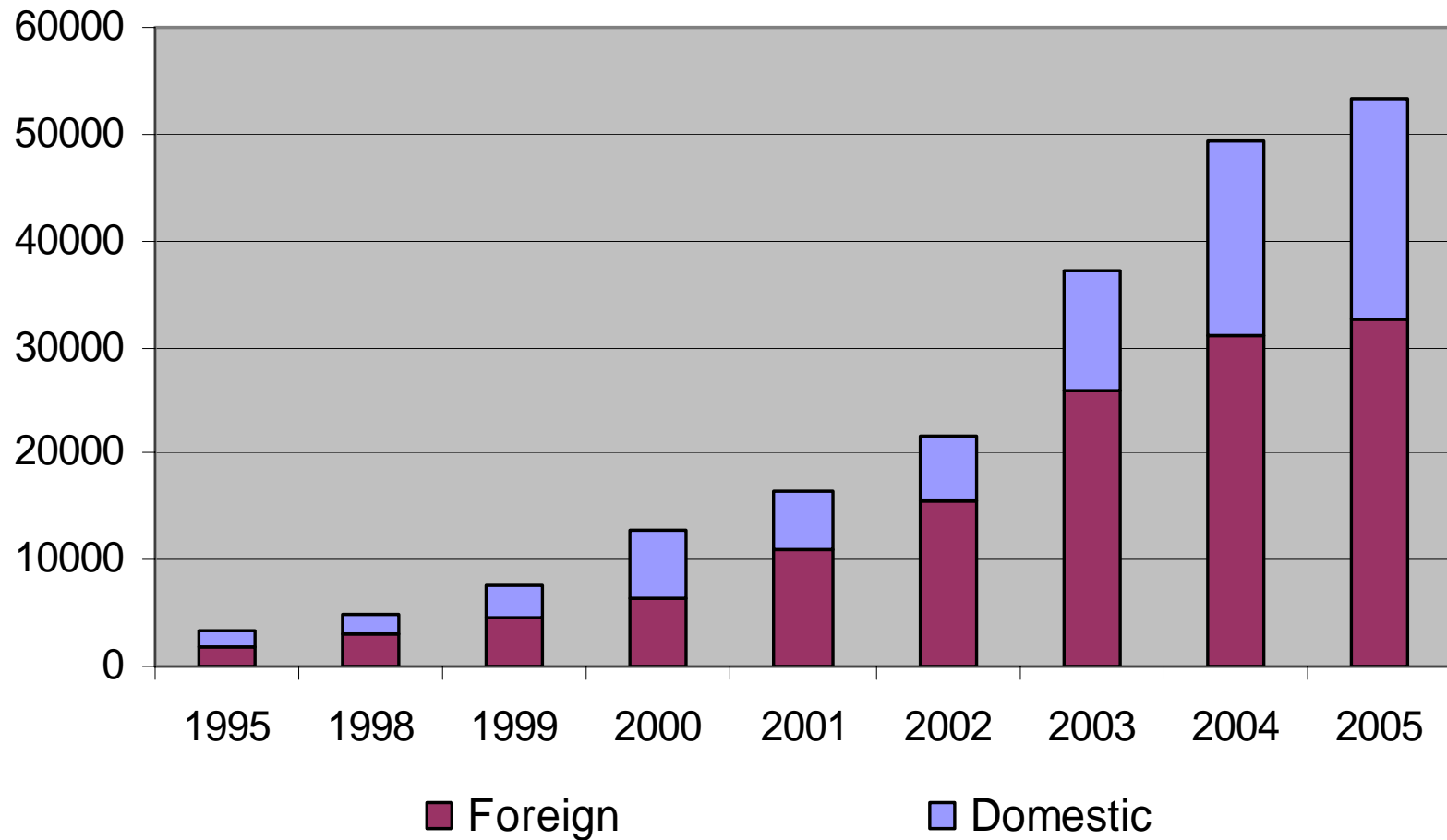
Resident Patent Filings (WIPO)



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

Origin	patents (1985-2005)
<i>Europe</i>	331
Volkswagen	236
<i>US</i>	113
GM	77
Ford	36
<i>Asia</i>	> 4500
Honda	2473
Toyota	788
Hyundai	376

Joint ventures	patents (1985-2005)
Shanghai VW	9
Shanghai GM	0
Beijing Jeep	1
Beijing Hyundai	4
Guangzhou Honda	0
Tianjin Toyota	0

Source: Intellectual Property Bureau of China

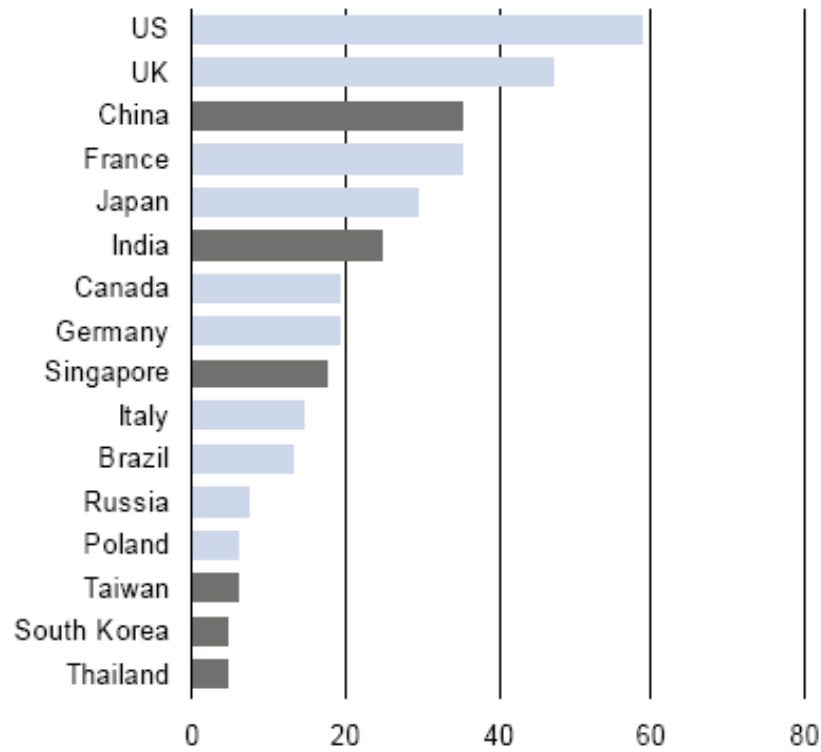
Move beyond the “world factory”

- ❑ 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



Source: UNCTAD WIR 2005

Beyond Localization



ALCATEL SHANGHAI BELL:

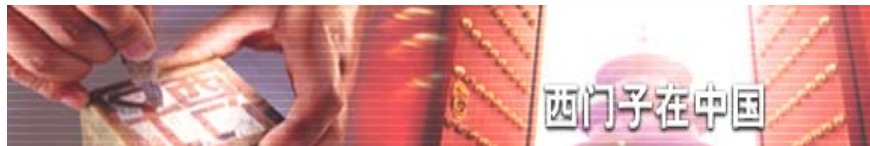
A NEW LEADER IN CHINA

中国研究中心

Intel China Research Center

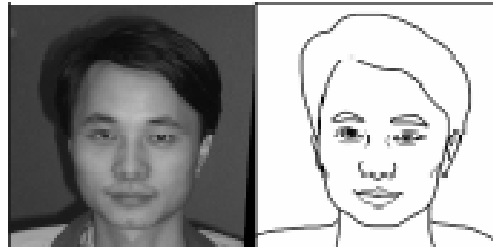


GE China Technology Center

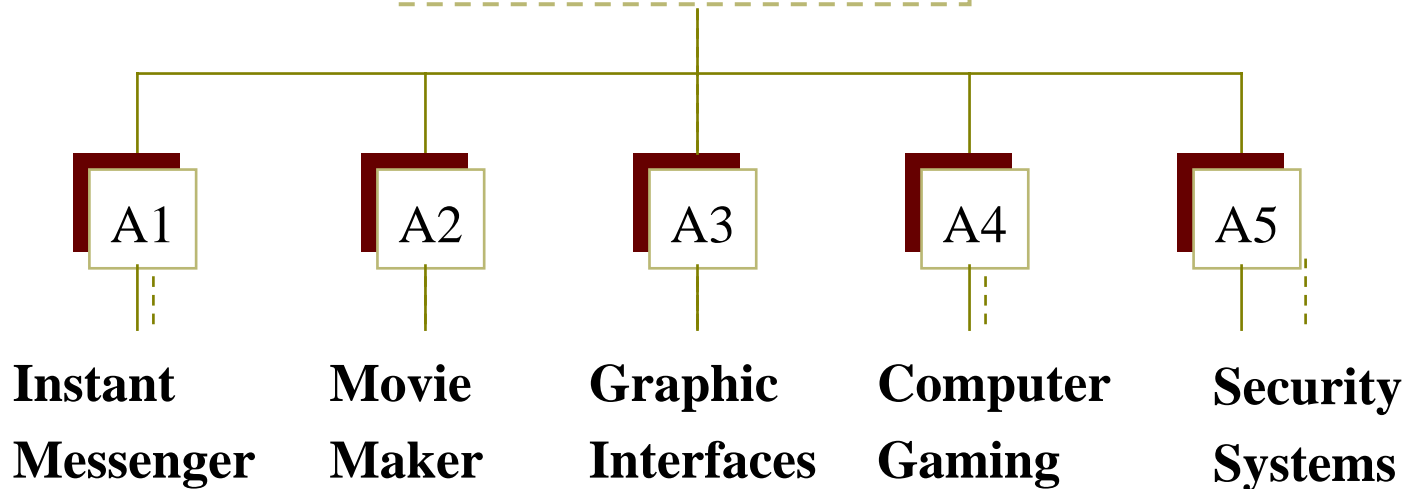


- Large scale
- Frontier research
- Strong internal linkages
 - communication and collaboration with HQs
 - technology integration on a global basis

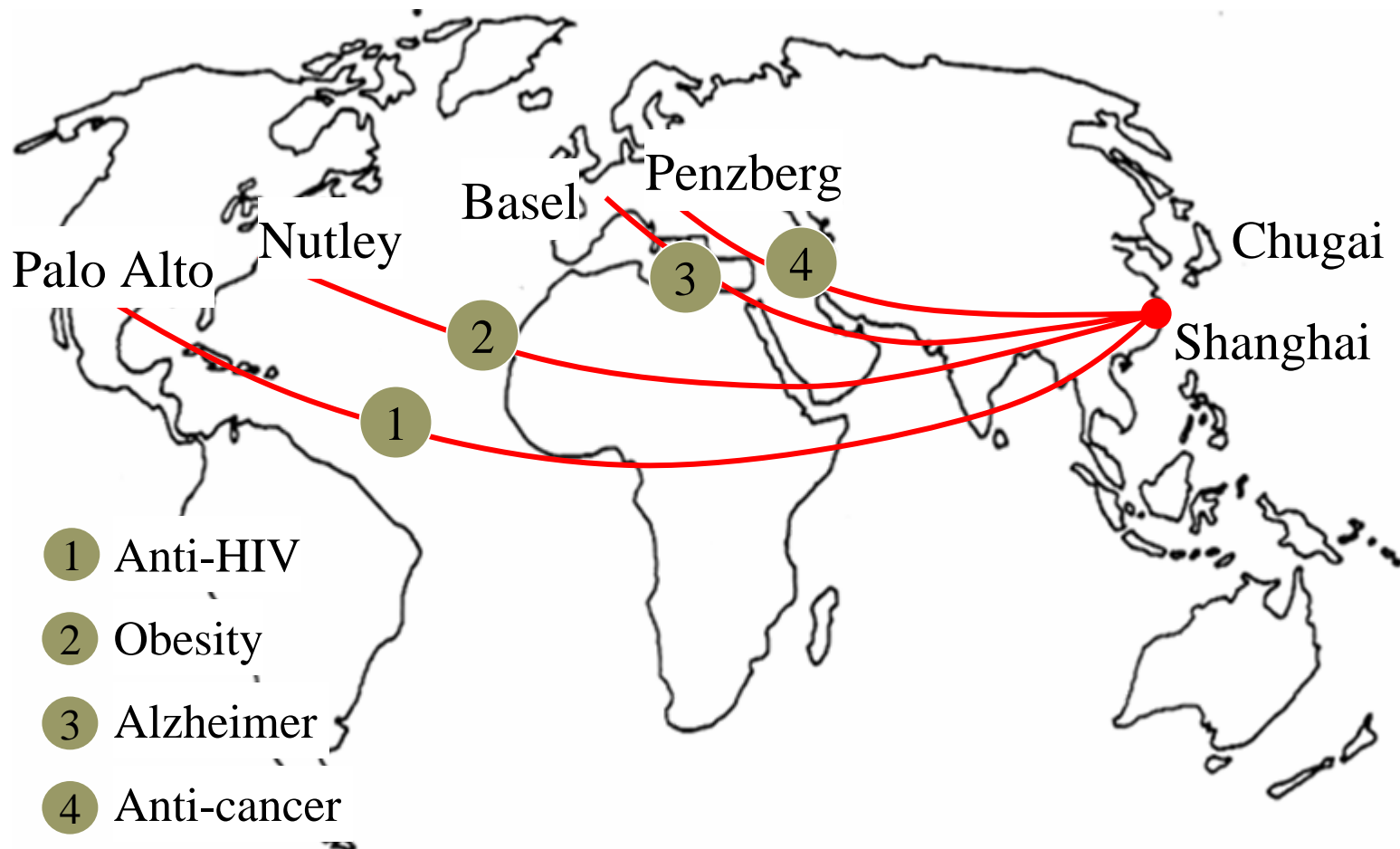
An Illustration



Visual Computing



A “Global R&D Center”



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!