

International Symposium  
**Intellectual Property Rights and East Asian Renaissance**

Hosted by: Institute of Economic Research, Kyoto University and Research Institute of Economy, Trade and Industry (RIETI) at Tokyo International Forum, January 28, 2008

**Globalization and East Asian Renaissance**

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RIETI/Konan University/Kyoto University

# Globalization and Intellectual Renaissance since the end of 20<sup>th</sup> Century

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Revolutionary development in transportation technology  
and information/communication technology

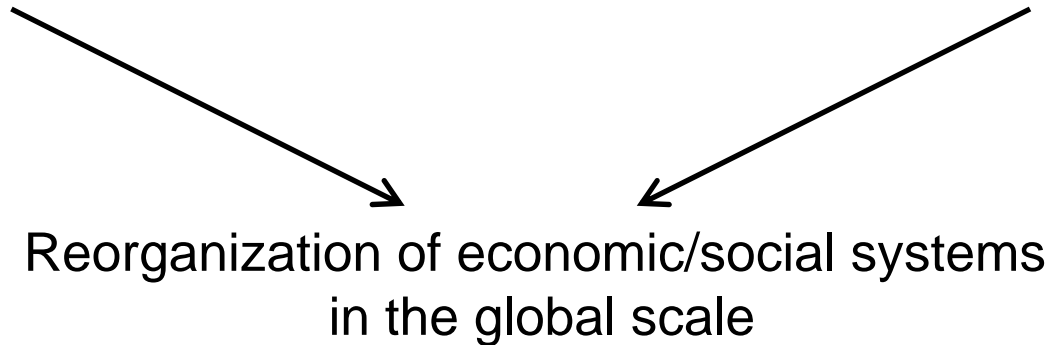


**Acceleration of  
Globalization**



**Intellectual Renaissance**

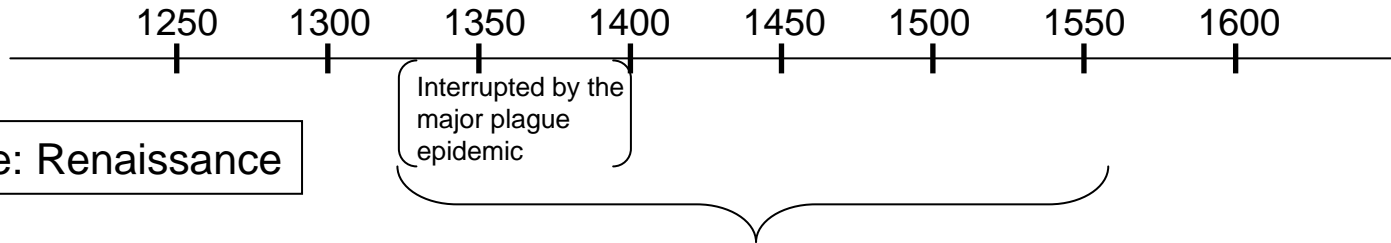
Promotion of **Brain Power Society** led by  
knowledge-creating activities



Reorganization of economic/social systems  
in the global scale

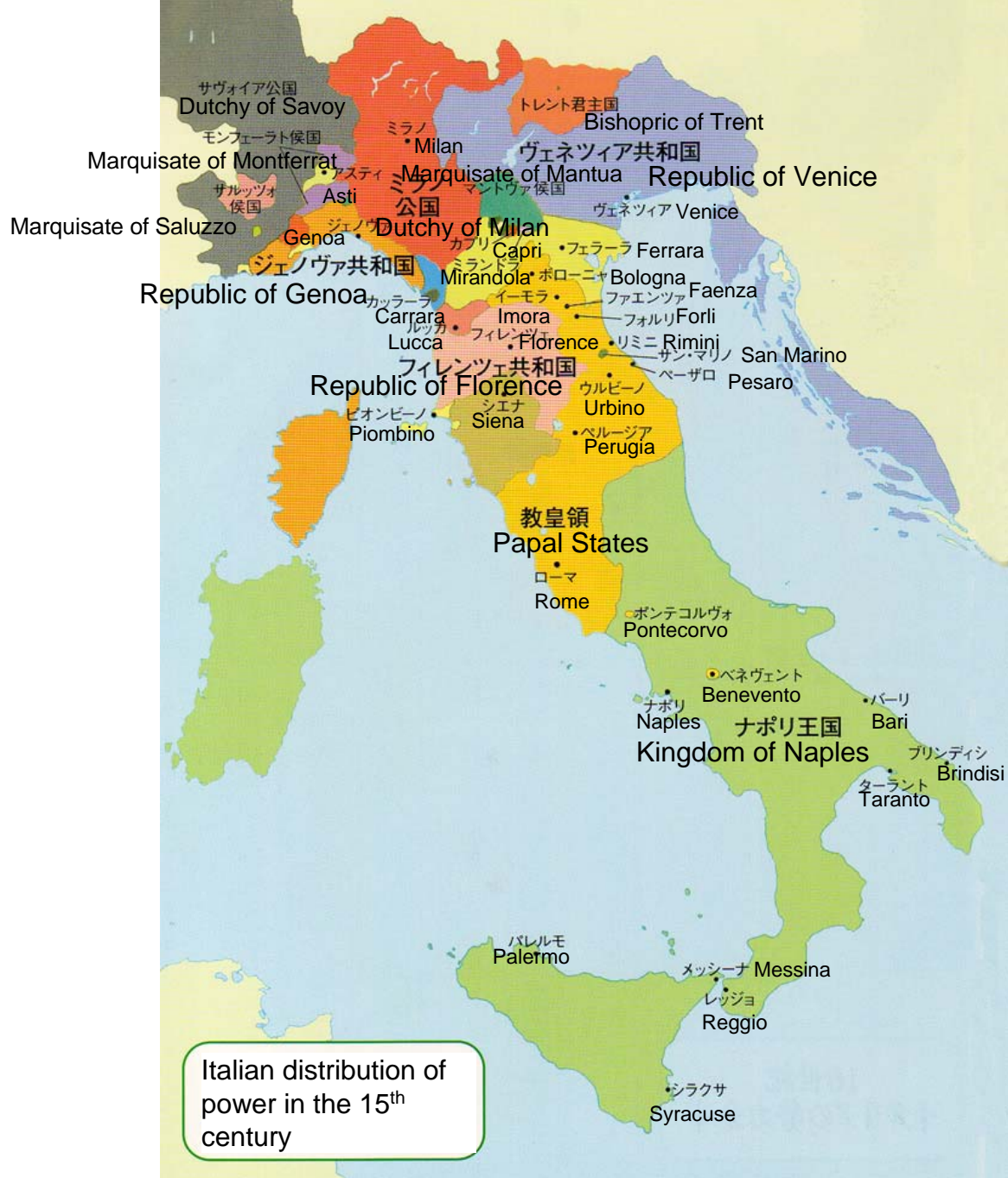
(Globalization, Regional integration,  
Localization (**creating intellectual hubs**) , Networking)

# European (Italian) Renaissance

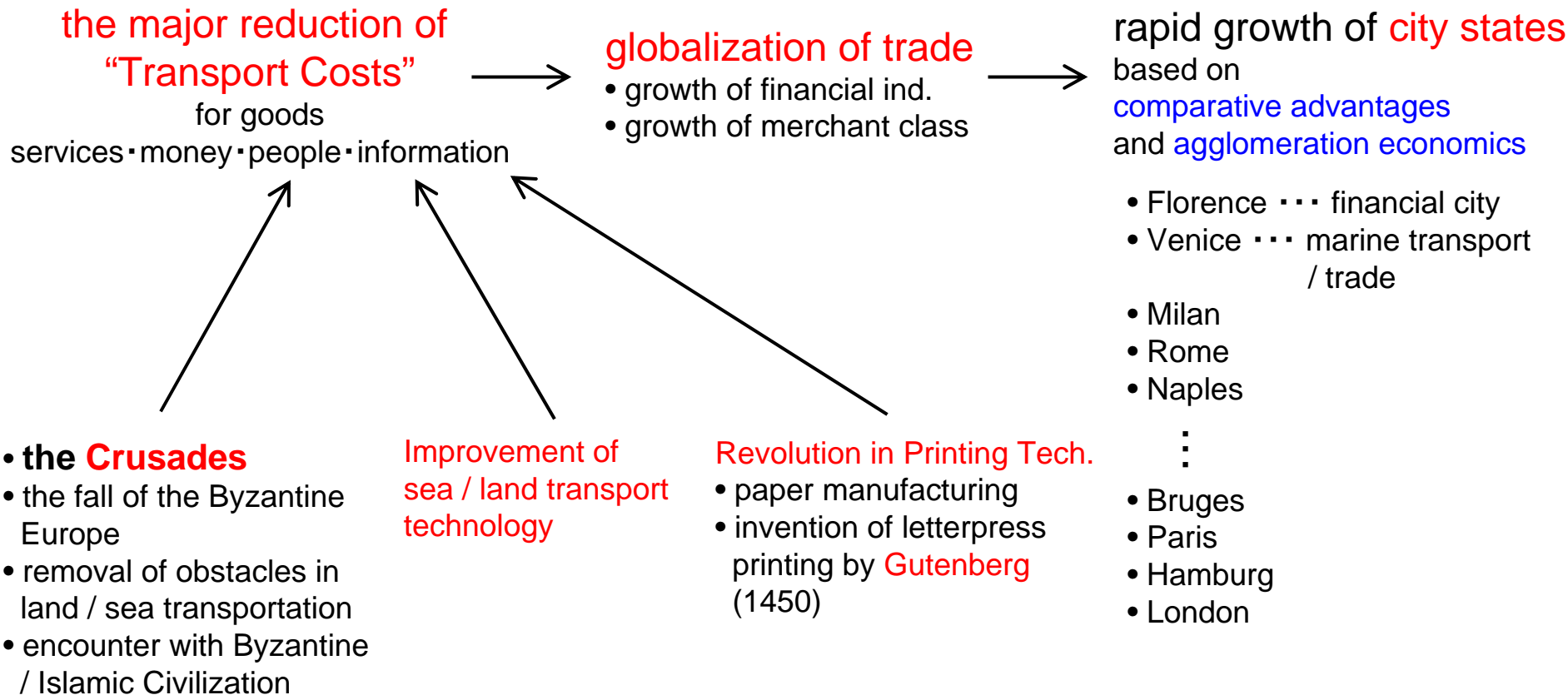


**Explosion in Creativity**  
 centered around Italian **city states**  
 covering most fields

literature classics, philosophy	geniuses	painting	sculpture architecture	science engineering	exploring
Dante (Literature)	Leon Battista Alberti	Giotto	Cambio	<b>Gutenberg</b>	Marco Polo
Boccaccio (Literature)	<b>Leonardo da Vinci</b>	Paolo Uccello	Donatello	Galileo	Columbus
Leonardo Bruni (Classics)	<b>Michelangelo</b>	Fra Angelico	Robbia	Copernicus	Vasco da Gama
Poggio Bracciolini (Classics)	⋮	Piero della Francesca	Verrocchio	Kepler	Amerigo Vespucci
⋮		⋮	⋮	⋮	⋮
		Botticelli			
		Raphael			
		⋮			



# European Renaissance



→ **Competition among city states:** Developed through the synergy due to competitions in politics, economics, business, art and culture.

City State = **Creative city**: collective of political, economic, business, educational, human resource development, art and cultural activities

Nanami Shiono *What was the Renaissance?*

**City State** = **Agglomeration of brain power**, created by people who did not have land properties but brains.

Art in each city: Developed through competition among **studios**

**Studio** = Multi-talented manufacturing group based on a master and artisans

- Emphasis on both art and business
- Place for creating new idea one after the other
- Training institute for teaching various techniques, which spun off one after the other

Example: **Florence** in the late 15<sup>th</sup> Century

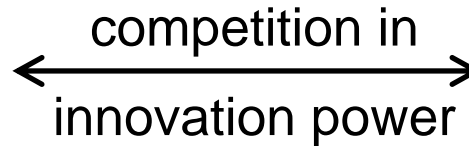
Painting studios: approx. 40    Mason studios: 54  
Wood working studios: 84    Metal working studios: 44

Development of the **Brain Power Society** since the late 20th century

Revolutionary development in **ICT**  
and Transport Technology



**globalization of**  
the world economy

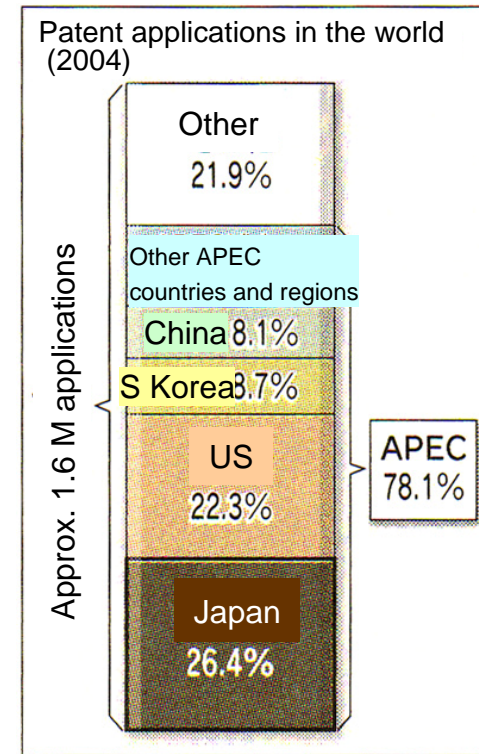
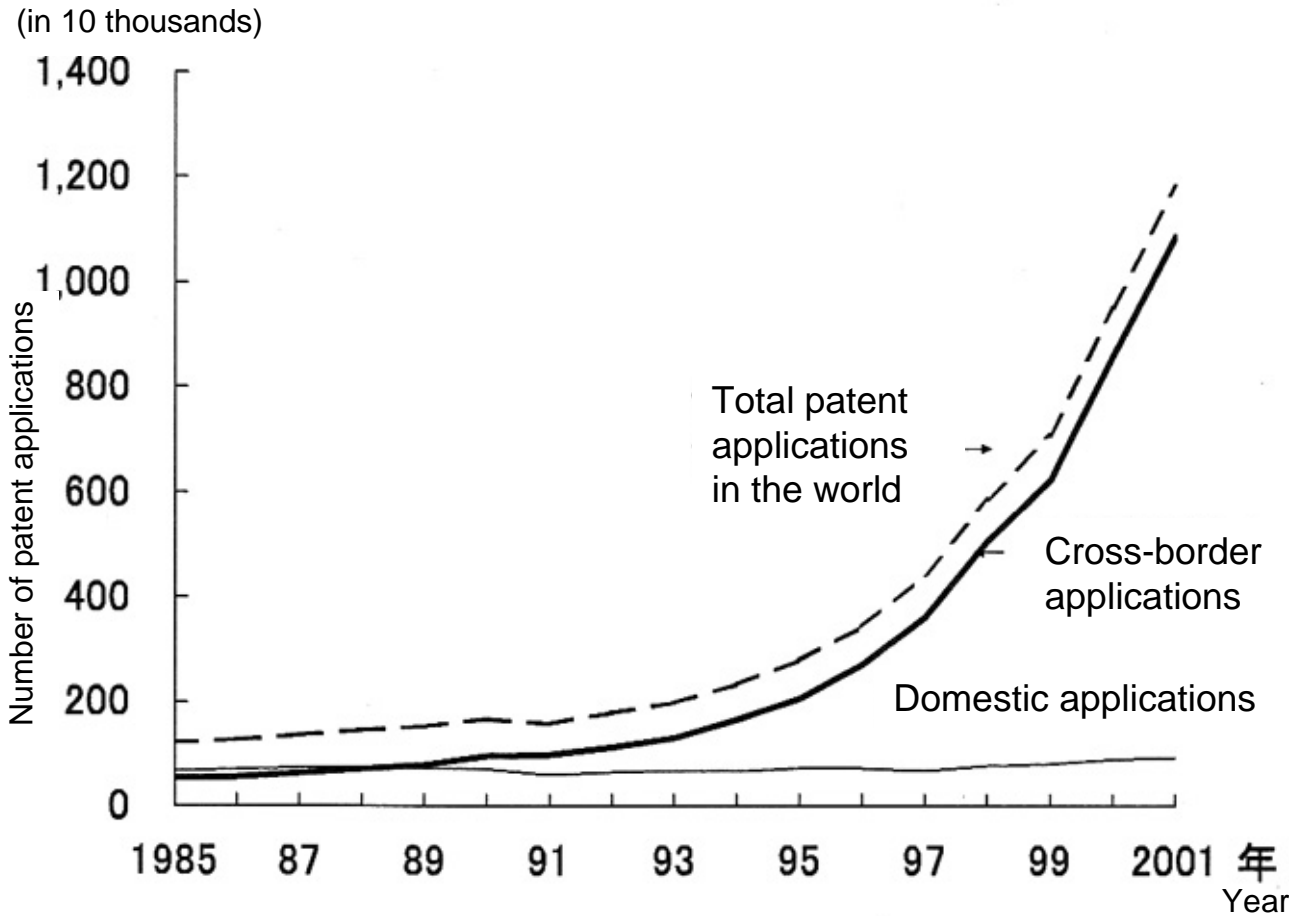


Development of  
**Brain Power Society**



The major reorganization of  
Global economic • political • social systems  
(**globalization** / **localization**)

# Fig. 7.2.1. Transition in the number of patent applications in the world



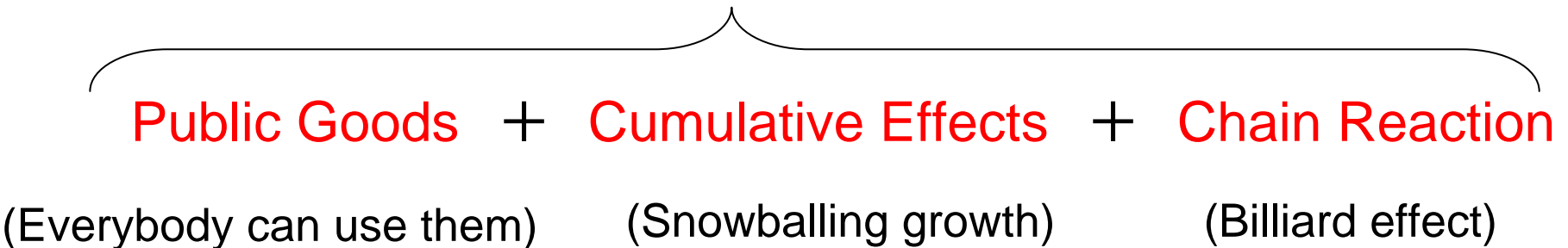
Nihon Keizai Shimbun  
Evening edition dated  
September 4, 2007

Source: Japan's Patent Office and WIPO data for the figures before 1993.  
*Industrial Property Statistics from 1994 to 2001* by WIPO for the figures after 1993.  
Ref: Table 7.2.1

Source: *Science and Technology Trends* (ed. 2004), National Institute of Science and Technology,  
Ministry of Education, Culture, Sports, Science and Technology

- (Ordinary) Goods = **Private Goods**
- New **Idea, Technology, and Knowledge**

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# Toward Intellectual Renaissance in East Asia

World Factory

East Asian Renaissance



World Innovation Center

**Brain Power Society**

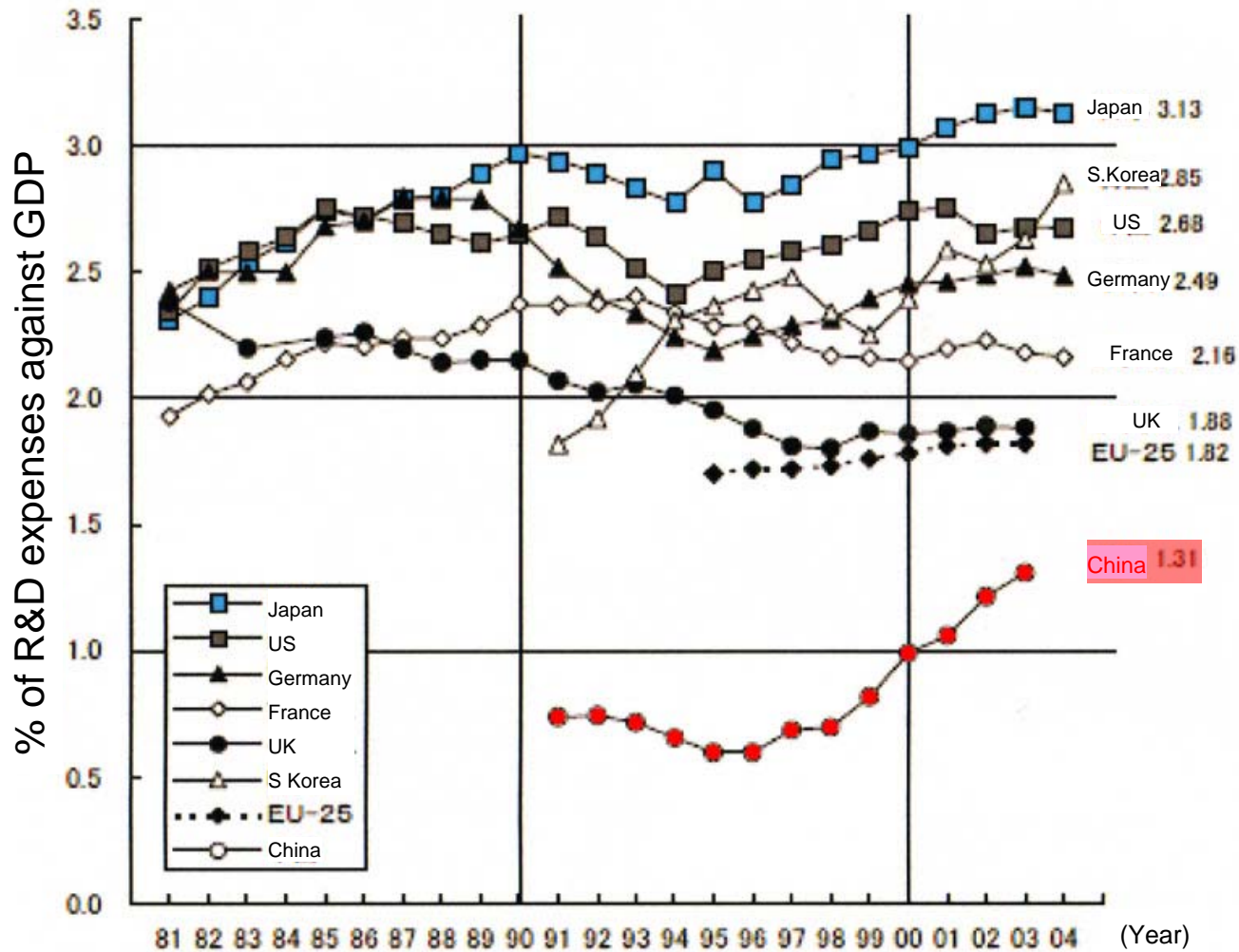
# China: National Plan for Scientific and Technology Development Announced in February, 2006

By 2020: Advanced Country in Science and Technology

With the base science and cutting-edge technological researches, the country aims to provide great contributions to the world (An innovation-driven nation)

By 2050: World Center in Science and Technology

Fig. 2.3.3. Transition in the proportion of R&D expenses against GDP in major countries



Source: *Main Science and Technology Indicators* by OECD

Note 1: R&D expenses are the total amount used for domestic R&D in each country. GDP amounts are nominal.

R&D expenses and GDP amounts for all countries, with the exception for EU-25, are converted from the original currencies to Japanese yen using the purchasing power parity provided by OECD.

Note 2: Latest figures shown on the graph are the figures of 2004 for Japan, South Korea, US, Germany and France.

Those for UK, EU-25 and China are the figures of 2003.

#### National targets towards innovation-country

- 国家中长期科技发展规划提出创新型国家的目标

	中国现状	2020年目标
<b>R&amp;D/GDP</b>	<b>1.4%</b>	<b>&gt;2.5%</b>
对外技术依存度	<b>40%—50%</b>	<b>&lt;30%</b>
技术进步贡献率	<b>30%-40%</b>	<b>60%</b>
本国发明专利授权	申请量世界第 <b>5</b>	世界前 <b>5</b> 位
国际科学论文被引用数	数量多，被引用少	世界前 <b>5</b> 位

major policies and measures for the development of science and technology

- 重要政策和措施

- ❖ 加大科技投入，加强科技基础条件平台建设

- ❖ 实施激励企业技术创新的财税政策

- ❖ 加强对引进技术的消化、吸收和再创新

- ❖ 政府采购鼓励和促进创新

- ❖ 实施知识产权战略和技术标准战略 Strategy on intellectual property rights and technology standard

- ❖ 实施促进创新创业的金融政策

- ❖ 速高新技术产业化和先进适用技术的推广

- ❖ 完善军民结合机制

- ❖ 提高全民族科学文化素质，营造有利于科技创新的社会环境

- ❖ 扩大国际和地区科技合作与交流 Promotion of international and regional cooperation and exchanges in science & technology

# Intellectual Renaissance based on in East Asia



# Importance of Diversity in Brain Power (Knowledge-creating) Society

Most critical resources in knowledge-creating society

- Individual human resource and **brain power**  
(Brain = Only the resource that expands with use)
- **Diversity in Brains** = Synergy created by the diversity of people and human resources

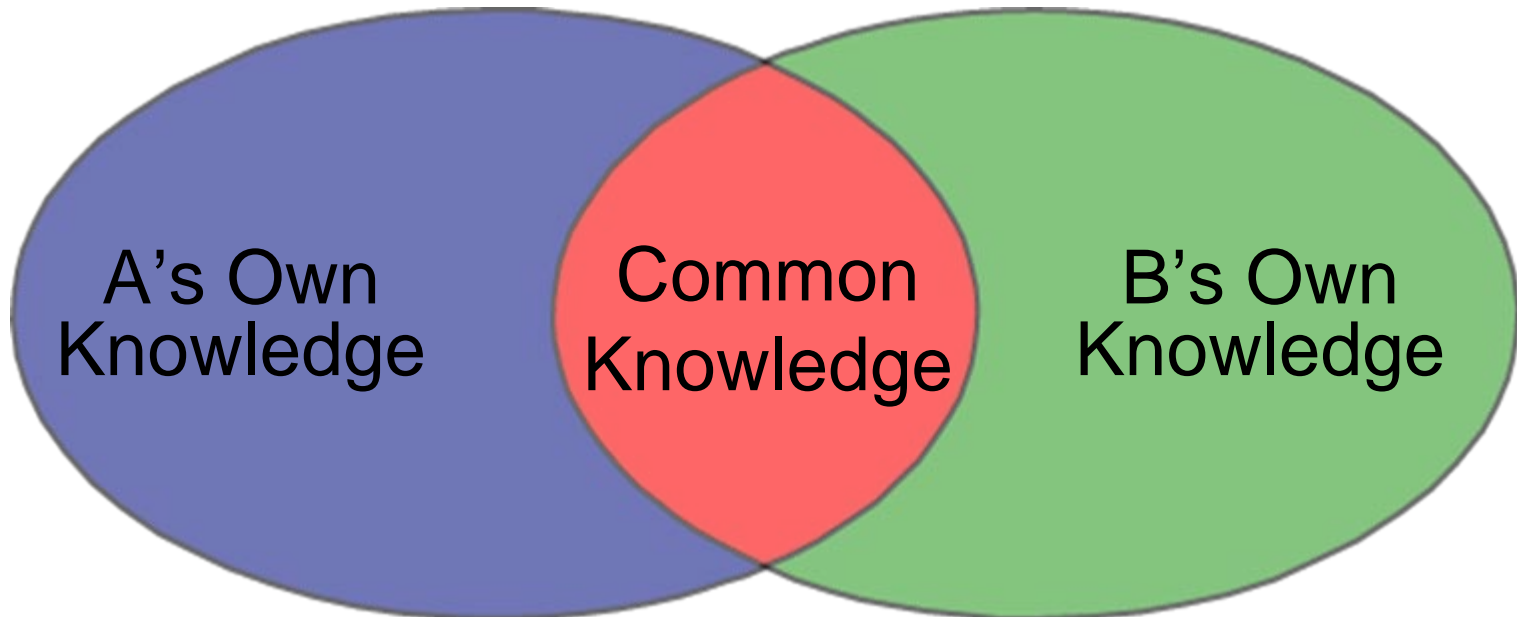
# Synergy in Knowledge Creation through the Collaboration of Heterogeneity Brains

“三个臭皮匠、抵个诸葛亮”

“Out of the counsel of three comes wisdom”

Total knowledge of A

Total knowledge of B

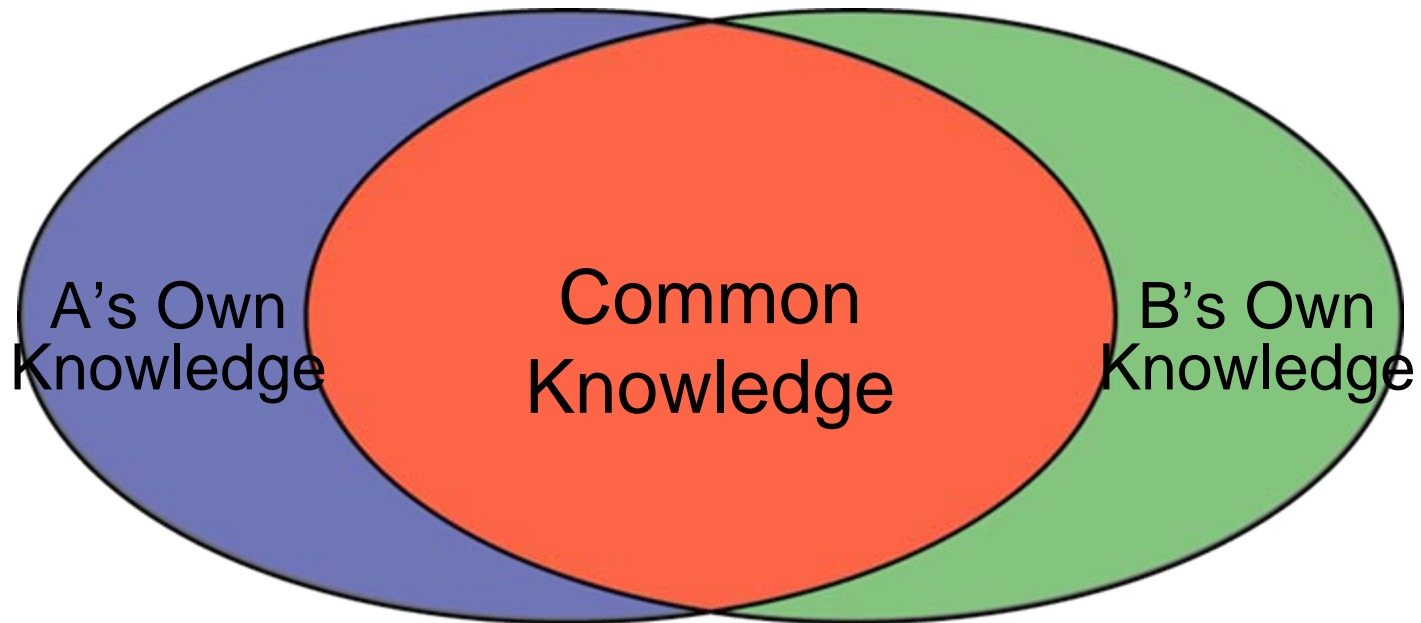


“Out of the counsel of three comes wisdom”

Is it true in the long-run as well?

Total Knowledge of A

Total Knowledge of B

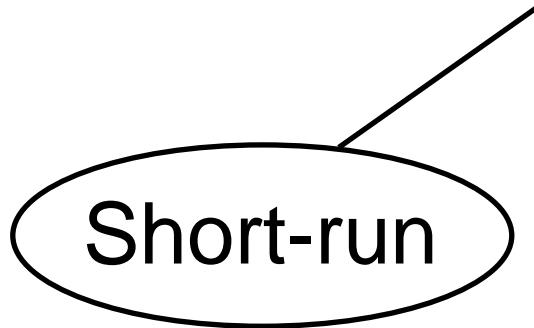


“After the three years, it is just knowledge”

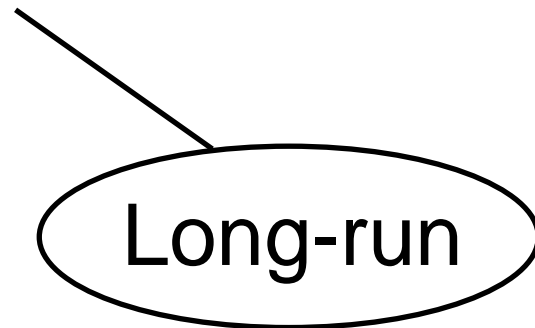
# Polarized concentration of knowledge workers



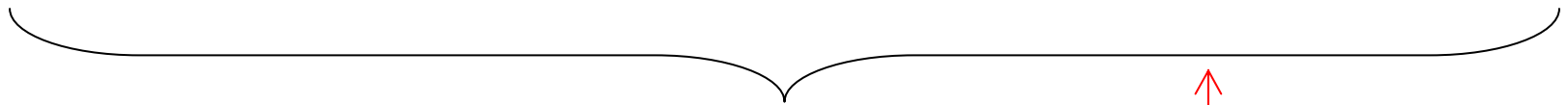
Antinomy



Increased knowledge externality  
due to close communication among  
various people



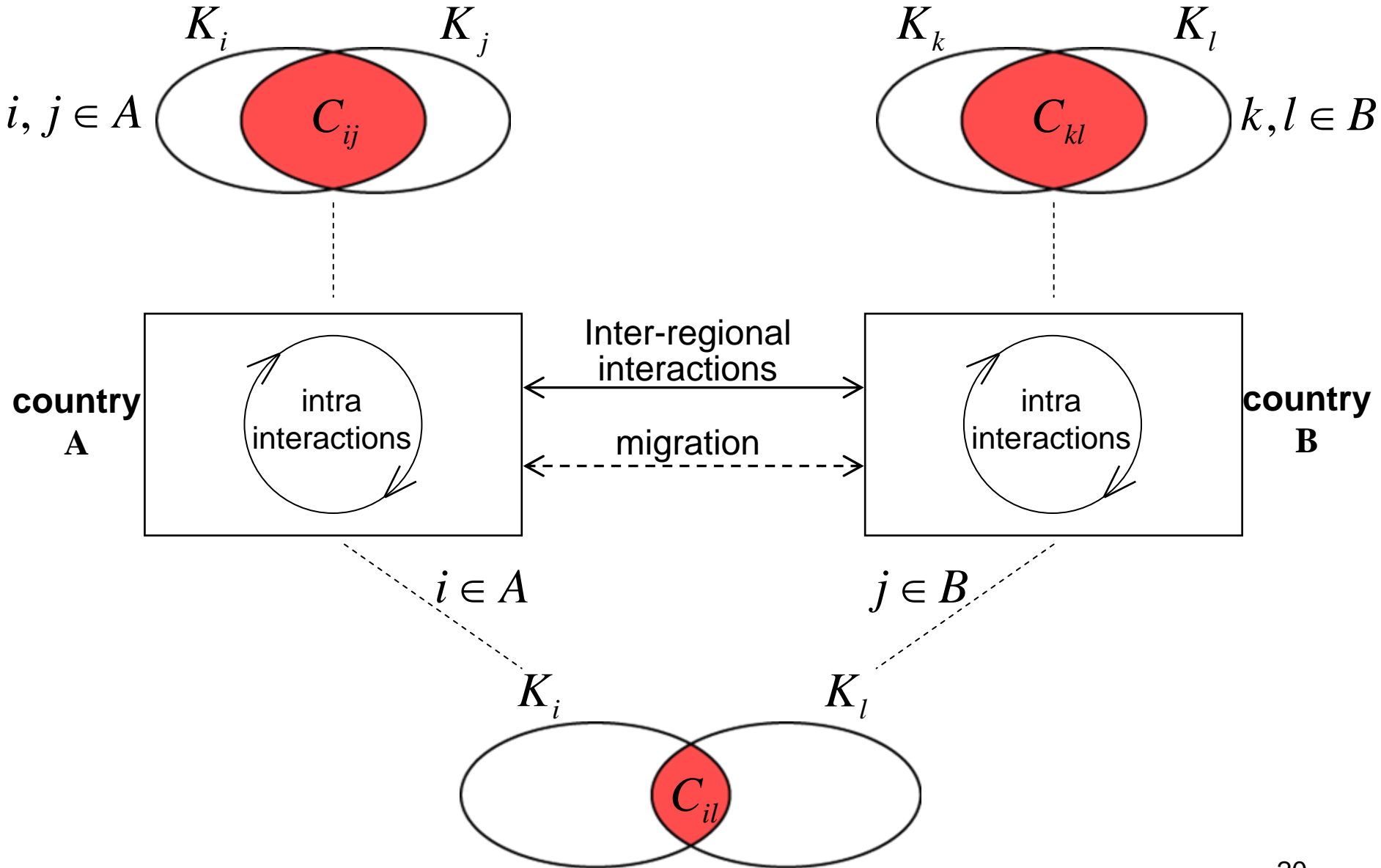
Decreased diversity  
due to expanded common  
Knowledge (like cookie-cutter)



To prevent this,

**Exchange** and **flow** of human resources and people **in** and **among** organizations, cities and regions

# Two-country case



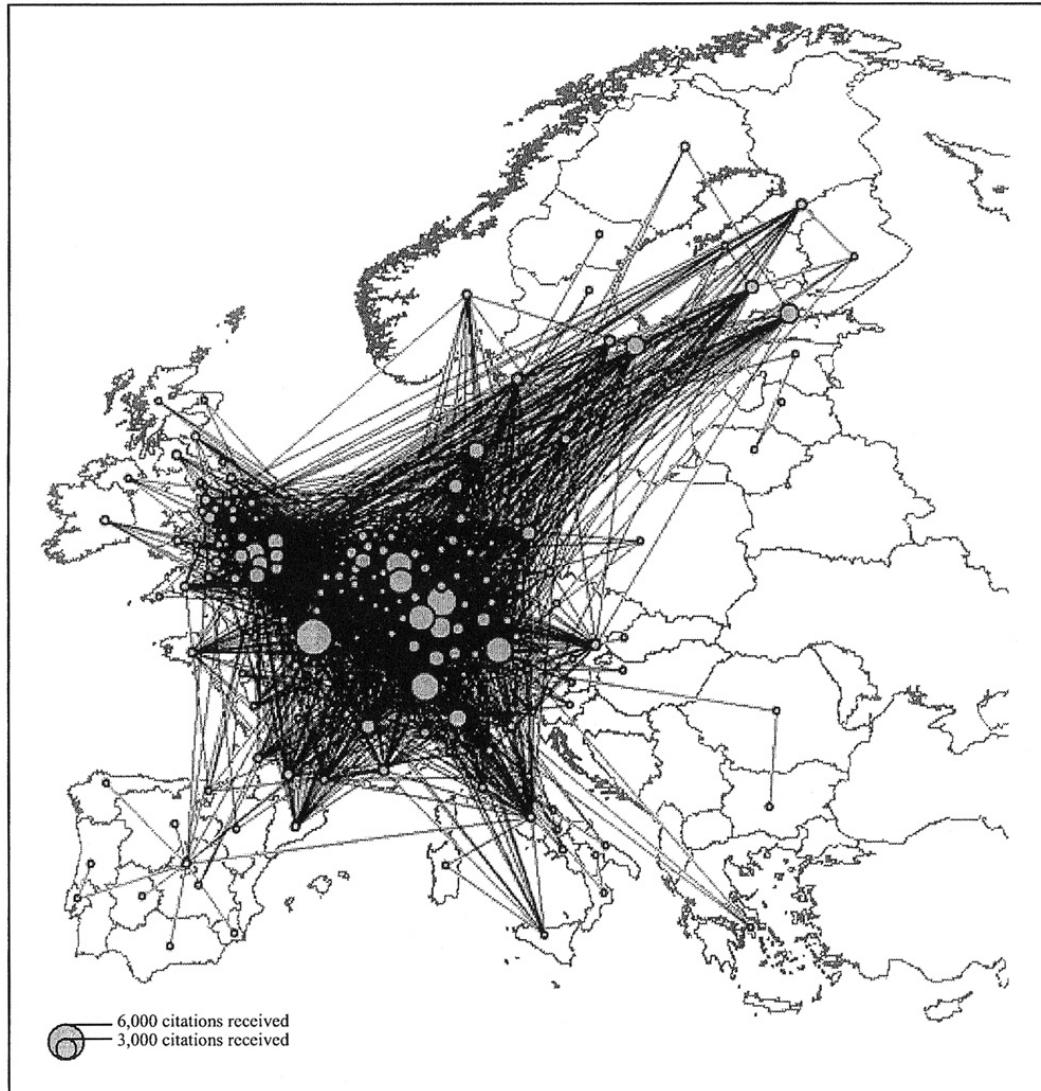
●レオナルド生涯の足跡

the footmarks of Leonardo da Vinci



# Intellectual Exchange among European Cities (1985-2002)

– Based on the number of citations from registered patents among hi-tech companies –

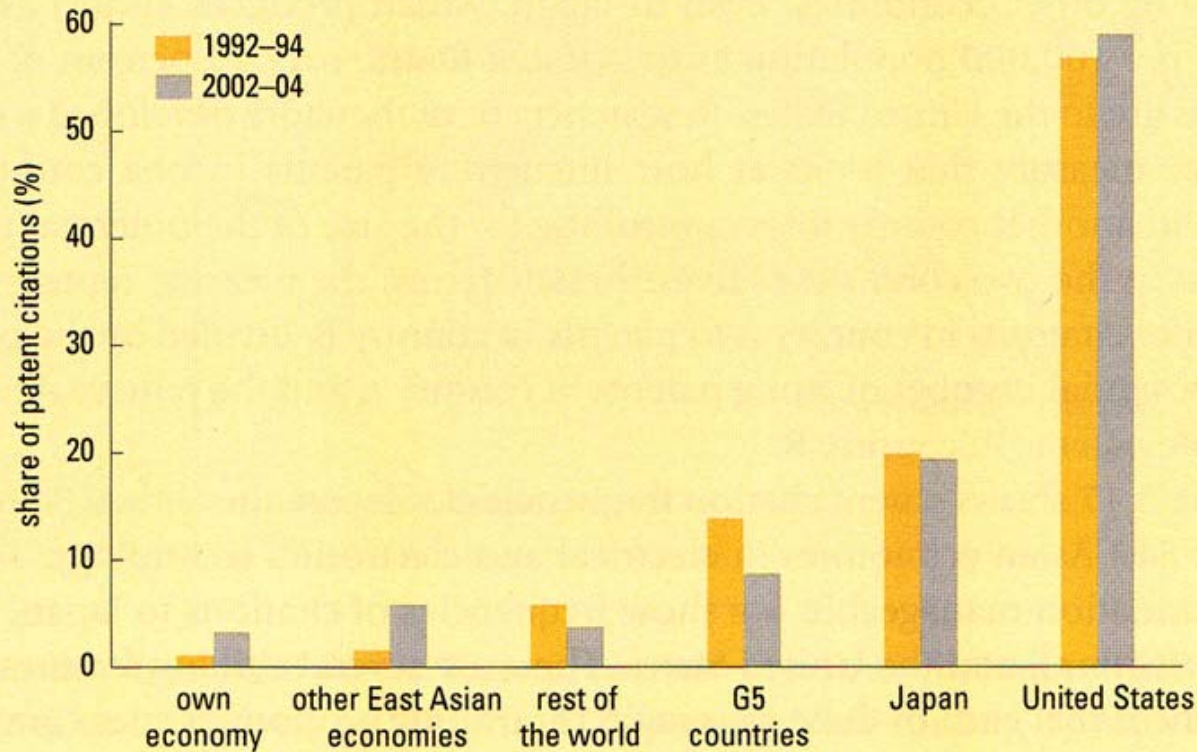


Data Source: European Patent Office; Visualisation Tool: Borgatti, Everett and Freeman (1999)

Source: M.M. Fisher et. al. (2005)

# Patent Citations in East Asia

FIGURE 3.15 Japan and the United States Account for Most Patent Citations in East Asia



Source: Data of the USPTO.

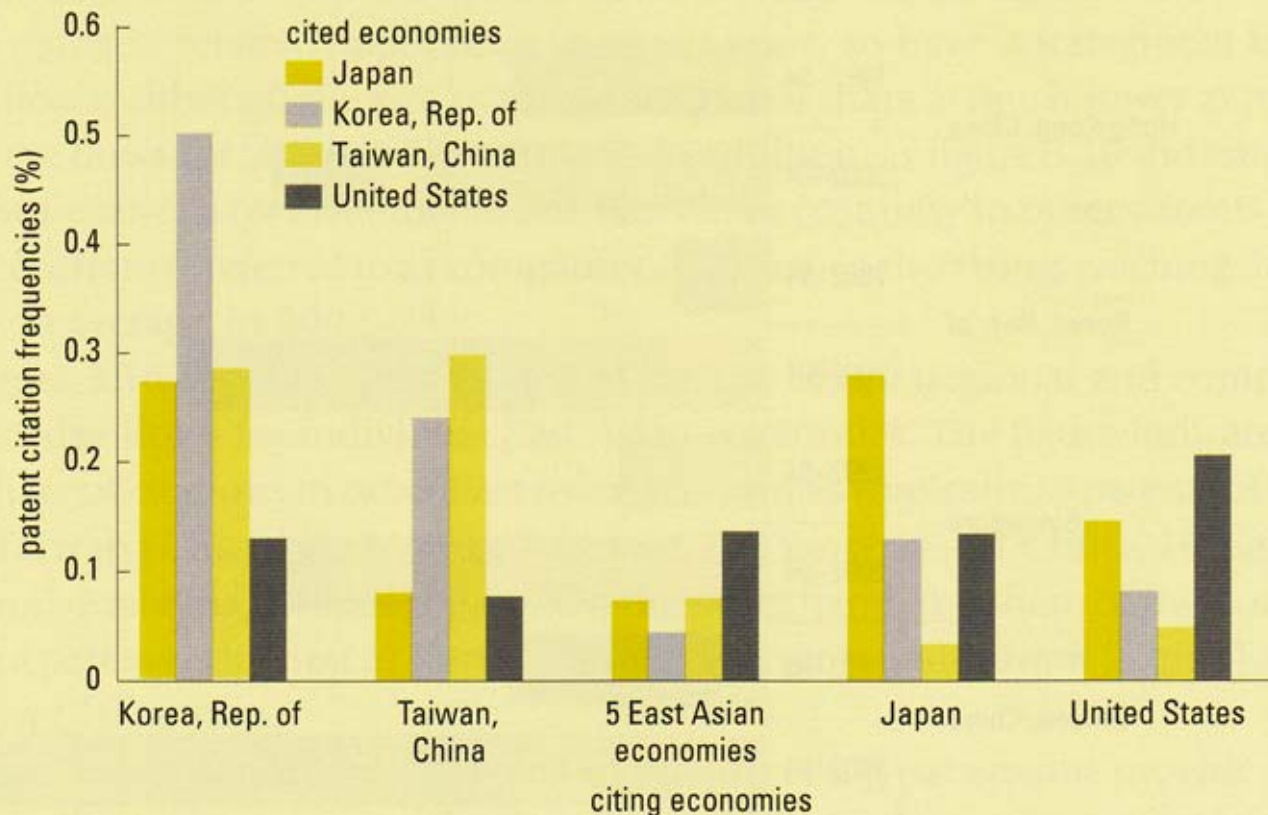
Note: G-5 = Canada, France, Germany, Italy, and the United Kingdom.

The World Bank, *An East Asian Renaissance*, 2007, p.163

Seven East Asian economies = Korea, China, Taiwan, Hong Kong, Malaysia, Singapore and Thailand

# Patent Citations in the Electronic Industry

■ FIGURE 3.17 **Geographical Proximity Increases Knowledge Exchanges**



Source: Hu 2006.

Note: The figure shows the case of electrical and electronics patents, where East Asia is active. The normalized citation frequency index is measured relative to the citation frequency among U.S. patents to other U.S. patents, which is set equal to 1. For a more detailed explanation, see the text. The five East Asian economies are China, Hong Kong (China), Malaysia, Singapore, and Thailand.

# TIME



## Japan's Open Door

2/17  
¥840 (¥3,750)

4910201231270  
00800



# Chasing the Japanese Dream

Growing numbers of Chinese are migrating to Japan to attend university, work as professionals, or launch businesses—in the process transforming the face of their adopted land

BY HANNAH BEECH/TOKYO

**W**U TONGTONG HAD AN URGENT NEED TO LEARN Japanese. Growing up in the grimy northeastern Chinese city of Shenyang, his biggest passion was video games. But amping up the onscreen action required Wu to master Japanese commands. Japan's brutal wartime occupation of Shenyang and other parts of China, which continues to stoke Chinese anger today, mattered little in the face of achieving total domination in his favorite video game. Both the computer and linguistic skills have since paid off. Today, Wu, 27, works in Tokyo as a software consultant, part of an influx of highly skilled Chinese labor that is transforming Japan. "Success can come in many places," he says, quietly noting that his overseas salary far outstrips those of his friends back home. "I can live a modern Chinese dream in Japan."

For centuries, East Asia's two great powers took turns trading regional supremacy, each thriving only when the other was at its weakest. More recently, China and Japan have been locked in a political deep freeze, seemingly unable to overcome the legacy of a devastating war more than six decades ago. Yet today, the two countries are both economic juggernauts—and their futures are inextricably linked. Upwards of 20,000 Japanese now live in Shanghai alone. The flood the other way is even more impressive: at half a million strong, Chinese legal immigrants now make up the largest group of recently arrived foreigners in Japan—and, no, they're not just stirring woks or taking the graveyard shift at convenience stores. More than 80,000 Chinese students are studying at Japanese universities, two-thirds of Japan's total foreign college-student population. Upon graduation, they are

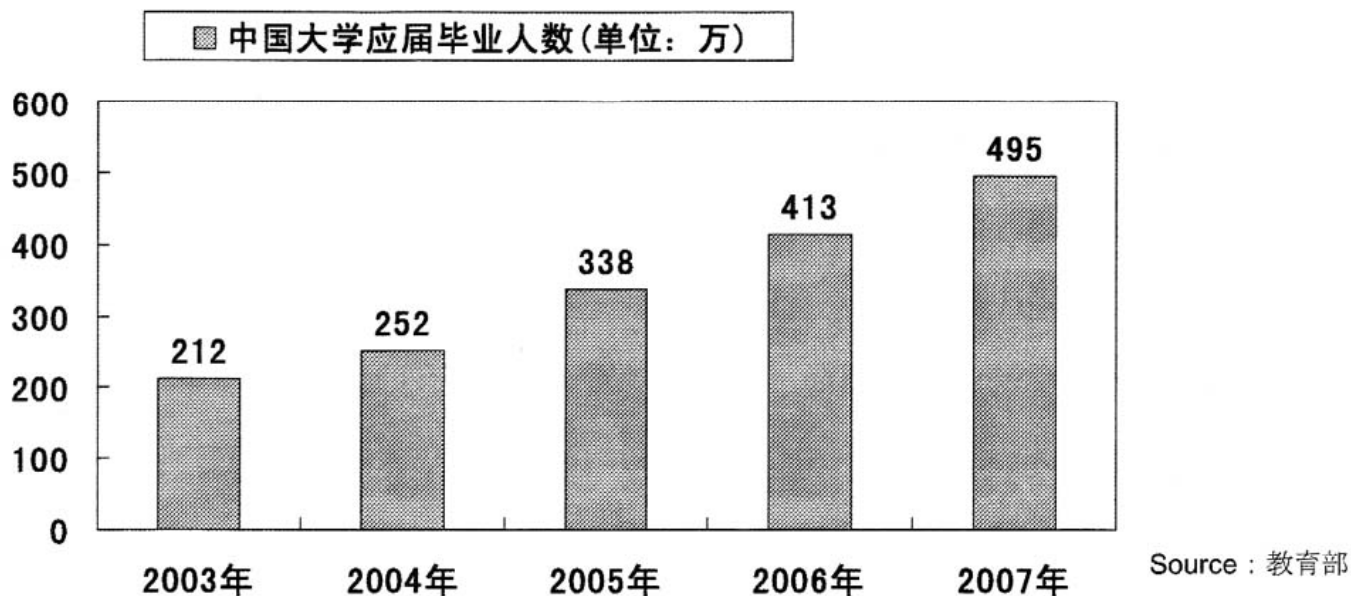
Illustration for *TIME* by Brian Cronin



# the number of college graduates in China

## 丰富的科技人才资源

- 中国科技人力资源总量约为3500万人，居世界第1位；
- 大学毕业生数逐年增长，07年达到495万，其中约33%为工科专业  
33% in Technology • Science  
人员。





# Gay Asia: Tolerance Pays

## ALSO IN THIS SPECIAL REPORT

### Gays and the State

- Gay lives: A flight to sexual freedom 54
- How the law stands across the region 56

### The Pink Dollar

- In search of an elusive currency 58

### Building Communities

- How the Internet changed everything 60
- Gay lives: Welcome to my Web site 61
- The tomboys find a home from home 62
- Meet the Fruits in Suits 63

### Souls of Discretion

- Unspoken Acceptance 64
- Gay lives: Shamed by faith 65

## Choose Singapore



PARTY TIME:  
Nation guests  
dance the  
night away



For many, the journey has yet to begin, but a growing number of Asian gay men and women are finally on the road to winning social and legal acceptance.

Some are benefiting from the belief that open societies equal stronger economies; others are finding the courage to stand up for themselves as they find—often through the Net—that they are not alone.

In this special report, we examine the changing lives of Asia's gays. We begin in Singapore, a state where contradictions abound, but where one message has hit home: Gay rights make economic sense

By Gordon Fairclough/SINGAPORE



ON A HOT TROPICAL NIGHT, around 8,000 gay men are dancing to pulsing house music. Laser lights play across sweaty bodies. Many of the men have whipped off their shirts. Some are down to just their Speedos.

Welcome to Singapore.

Sean Ho, a 33-year-old information-technology consultant surveys the scene. He's wearing a T-shirt that proclaims "Choose Sin" in large, red letters. Below, in smaller type, is "gapore." "Singapore's become much more tolerant and open," says Ho. "They are giving us a lot more space."

The annual gay Nation party, held to coincide with Singapore's National Day in August, is an event the city-state's conservative founders would probably never have imagined. But stodgy Singapore has recently witnessed a flowering of gay culture. Gay bars, dance clubs and about a half-dozen both houses have sprung up. The national art museum even featured an exhibit of homoerotic photos this summer.

The driving force behind this liberalization appears to be economic. One consideration: Earning "pink dollars" from gay tourists (see page 58). Organizers estimate that Nation and related events pulled in about 2,500 foreign visitors and nearly \$6 million. But Singapore's more relaxed attitude towards homosexuality is also part of a broader government strategy to transform the city into a creative, ideas-driven economy. That, Singapore's mandarins realize, will require some loosening-up, as well as a serious effort to change the world's perception of Singapore as a rigid, authoritarian place.

Even so, when it comes to gay people, the government remains ambivalent. Despite then-Prime Minister Goh Chok Tong's pronouncement in an interview last year that gays "are like you and me" and shouldn't face discrimination ▶▶

# Godon Fairclugh, “Gay Asia: Tolerance Pays”

(*Far Eastern Economic Review*, October 28, 2004)

Singapore’s more relaxed attitude  
towards **homosexuality**



a broader govt. strategy  
to transform the city into  
**a creative idea-driven economy**

# Establishment and Promotion of **Desirable System of Intellectual Property Rights** to Foster East Asian Renaissance

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Copyright

Patent right

Design right

Trademark right

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- Measures against counterfeits and pirated goods
- **The desired system of intellectual property rights to promote knowledge-creation and innovation**

(Avoid “the worse cure than the disease”)

achieving **East Asian Renaissance** together  
based on diversity



contributing to the World Development

謝謝

Thanks