



Fifth Advanced Research Forum on Intellectual Property Rights:

Selected Topics on the Balance of Intellectual Property

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Intellectual Property in 20 and 21st Century

- Protection of IPRs dates back to the 19th Century
- IPRs used be business of a few high-income countries / firms not gathering too much attention (handful of countries)
- IP laws shaped mainly by latter – variable geometry
- Then 21st Century: new IP-era and IP surge
- ✓ Progressively global, uniform IP laws (TRIPS) – scope / reach
- Rise of debates relating to IP system (national & international)
 - ✓ National: Backlog, Strategic behavior, Patent quality...
 - ✓ International: Effects on development.....

Two opposing forces?



- Belief that IPRs are good for business, benefit the public at large and act as catalysts for technical progress.



- Belief that IPRs are likely to cripple the development of local industry and technology, will harm the local population and benefit none but the developed world.



Strategic realignment within WIPO

Economic Studies, Statistics, and Analysis Division *WIPO Chief Economist*

IP Statistics Section



Economic Studies Section



Economics and Statistics Outputs

- Statistics and data reports, World Intellectual Property Indicators Report.
 - Methodological meetings and nomenclatures
- Production of Global Innovation Index
- Production of annual economic report
- Projects for the Committee on IP and Development (3)
- Economic Seminars and conference contributions
 - Conference on Intangible Assets with US conference board, White House, OECD, etc. (May 2011)
- Policy advice
 - Hearing of the German Parliament on the Future of Copyright (similar exercise in US in early June)

WIPO STATISTICS

World Intellectual Property Indicators

WORLD INTELLECTUAL PROPERTY INDICATORS



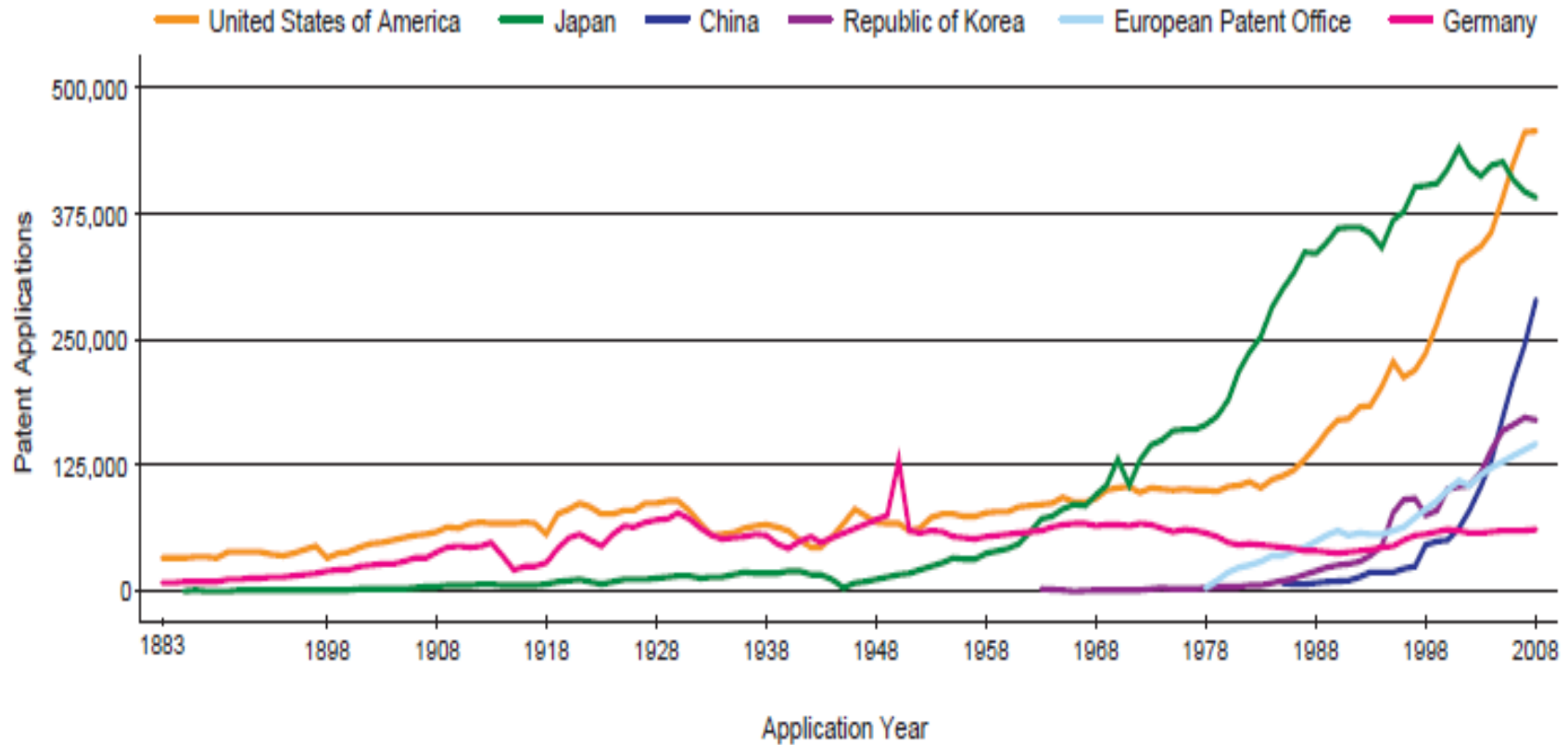
2010



WIPI 2010 at:

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

Historical perspective: World patent applications

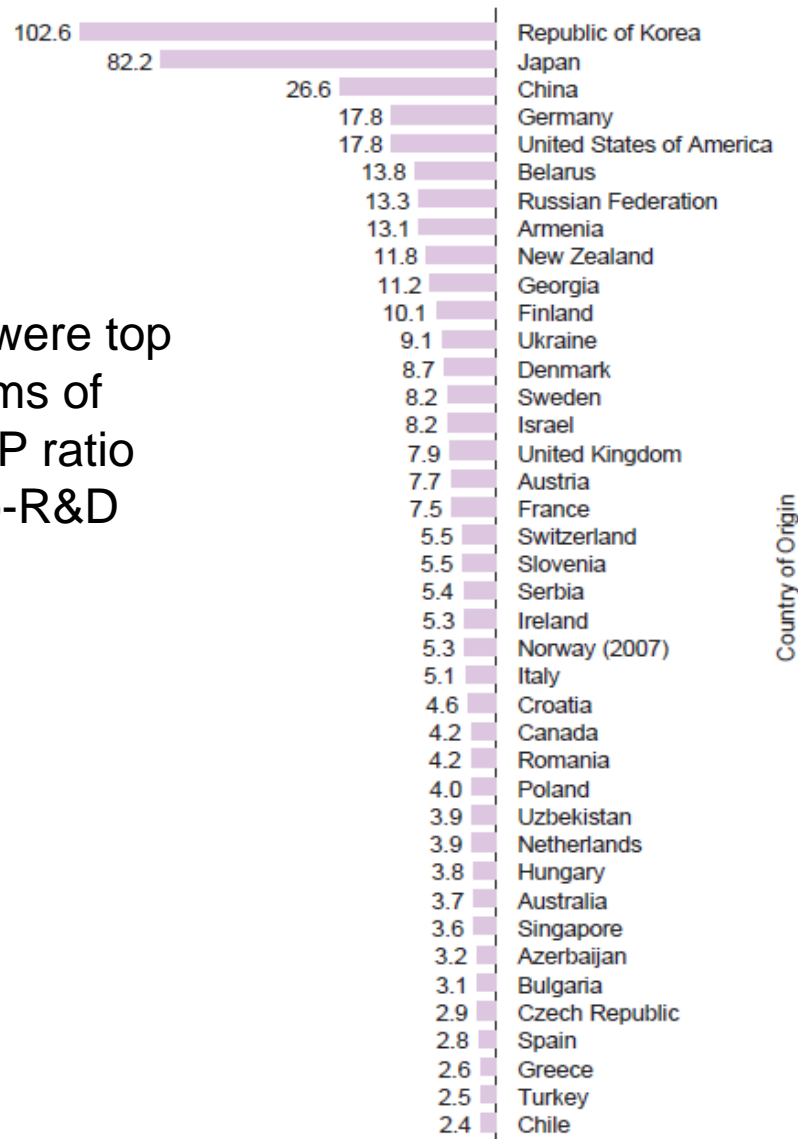


Source: WIPO Statistical Database

IP intensity

Figure A.8 Intensity of patent activity, 2008

Resident patent applications per \$billion GDP



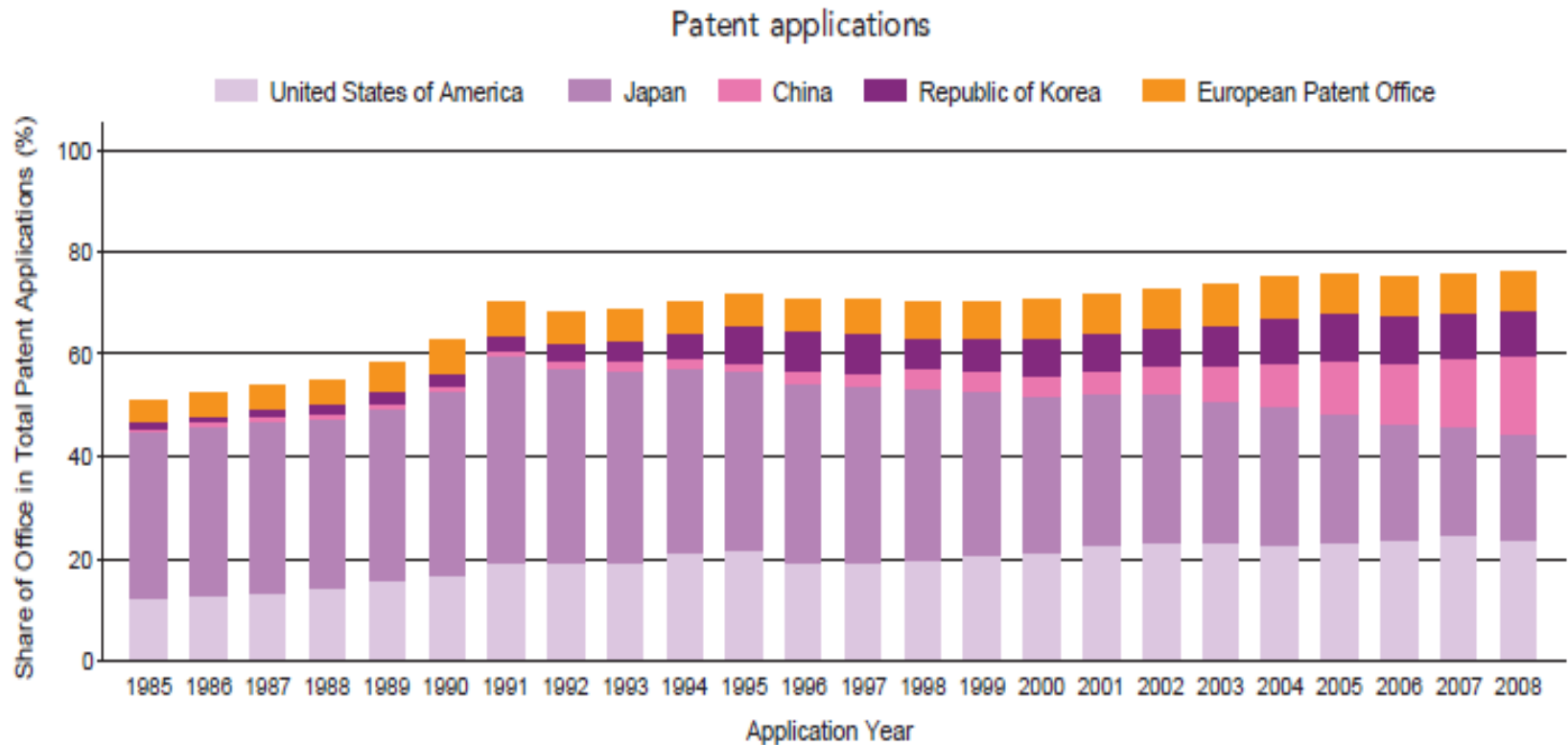
Korea, Japan and China were top ranked countries in terms of resident patents-to-GDP ratio and resident patents-to-R&D ratio.

Drivers of the IP surge

- Growing R&D and growing privatisation of R&D
- IPRs holders seeking broader geographical coverage, leading to 'duplication'
- Greater propensity to apply for protection?
- Increasingly, universities seek patents for inventions arising from publicly funded research (key legislation in the US: Bayh-Dole Act of 1980)
- New actors such as Rep. of Korea, China, and to some lesser extent India [from 3 to 5 countries?]

Still rather concentrated.....

Figure A.2.1b Share of top 5 offices in total patent applications

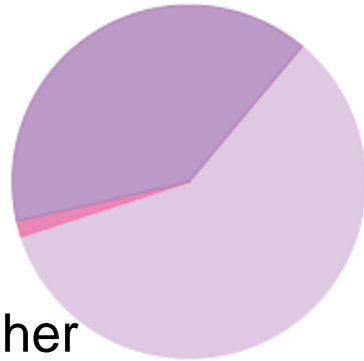


Source: WIPO Statistics Database, June 2010

Figure A.2.3b GDP and patent share by income group, 2008

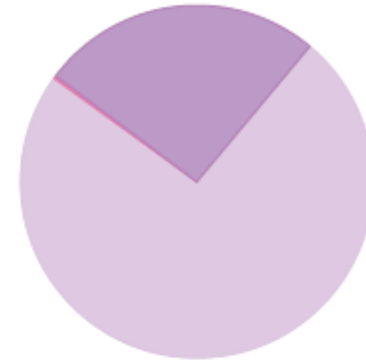
GDP share (%)

High-Income: 58.7%
 Middle-Income: 40%
 Low-Income: 1.3%



Patent applications share (%)

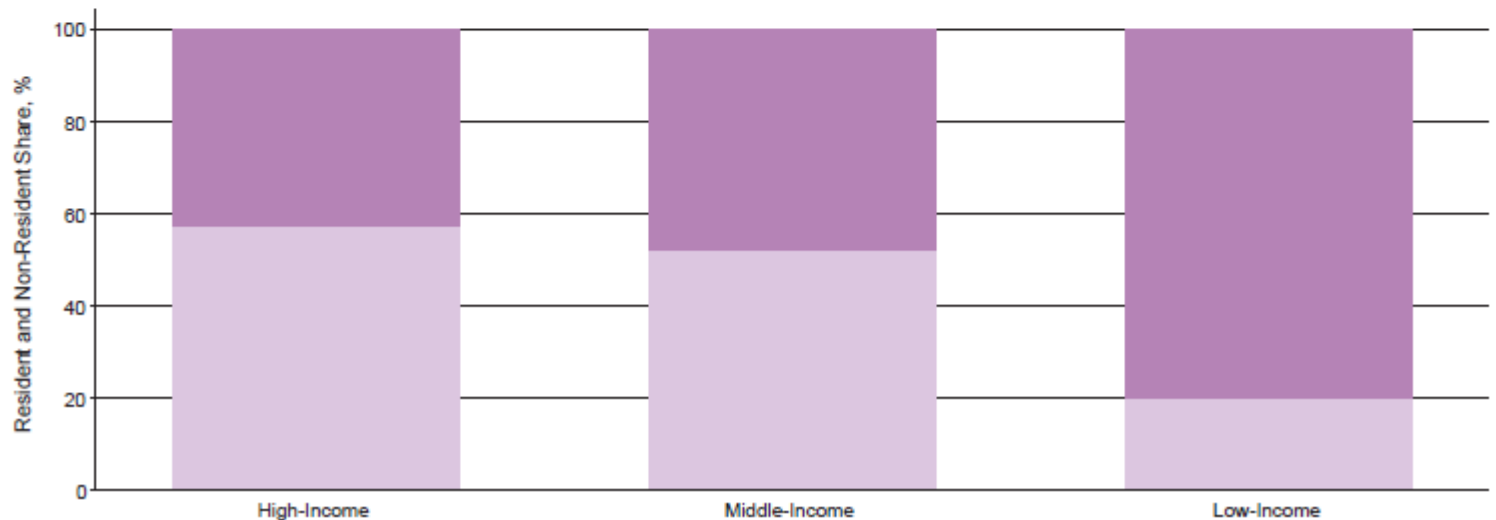
High-Income: 74.1%
 Middle-Income: 25.7%
 Low-Income: 0.2%



The share of high-income economies in total patent applications (74.1%) is 15.4 percentage points higher than their gross domestic product (GDP) share (58.7%).

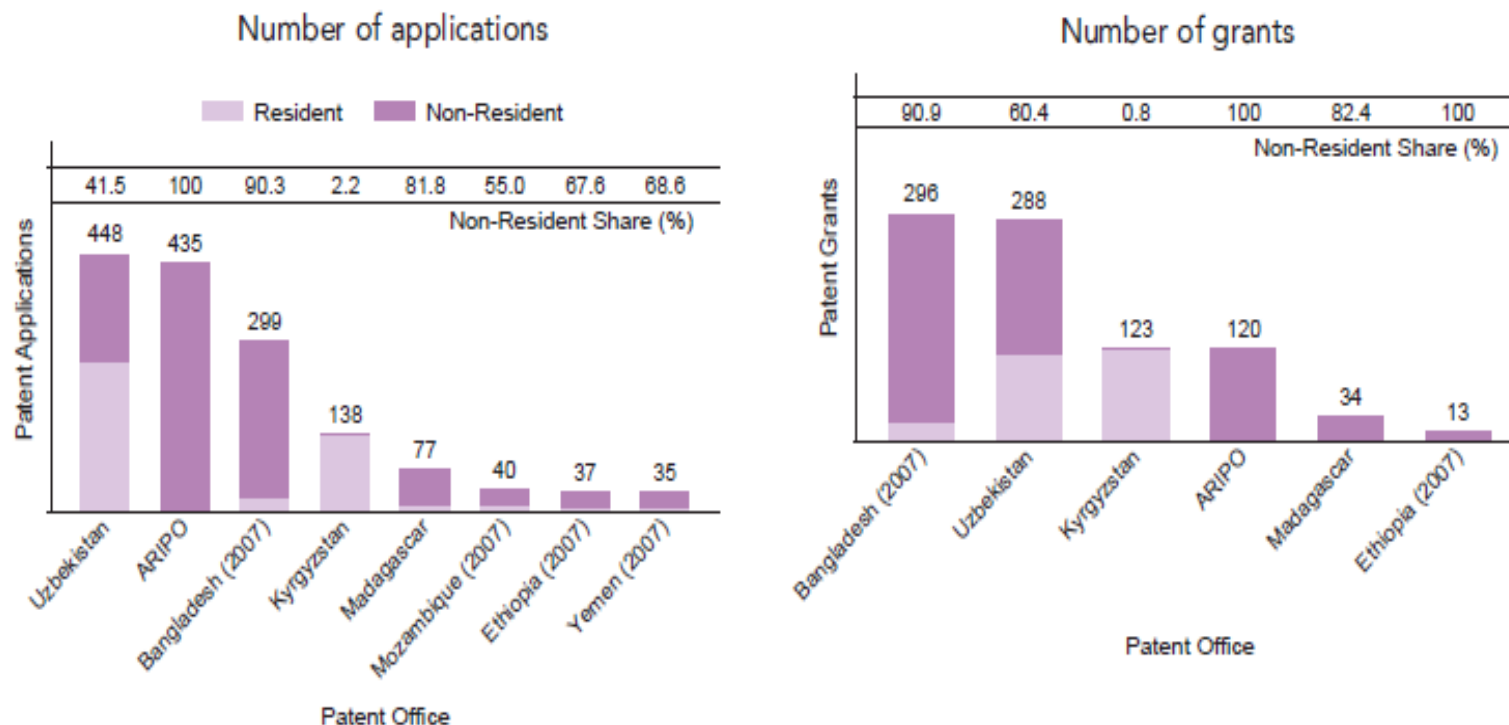
Resident and non-resident patent applications (%)

Resident Non-Resident



Patents in low income countries

Figure A.2.5b Patent applications and patents granted in selected low-income economies by patent office, 2008

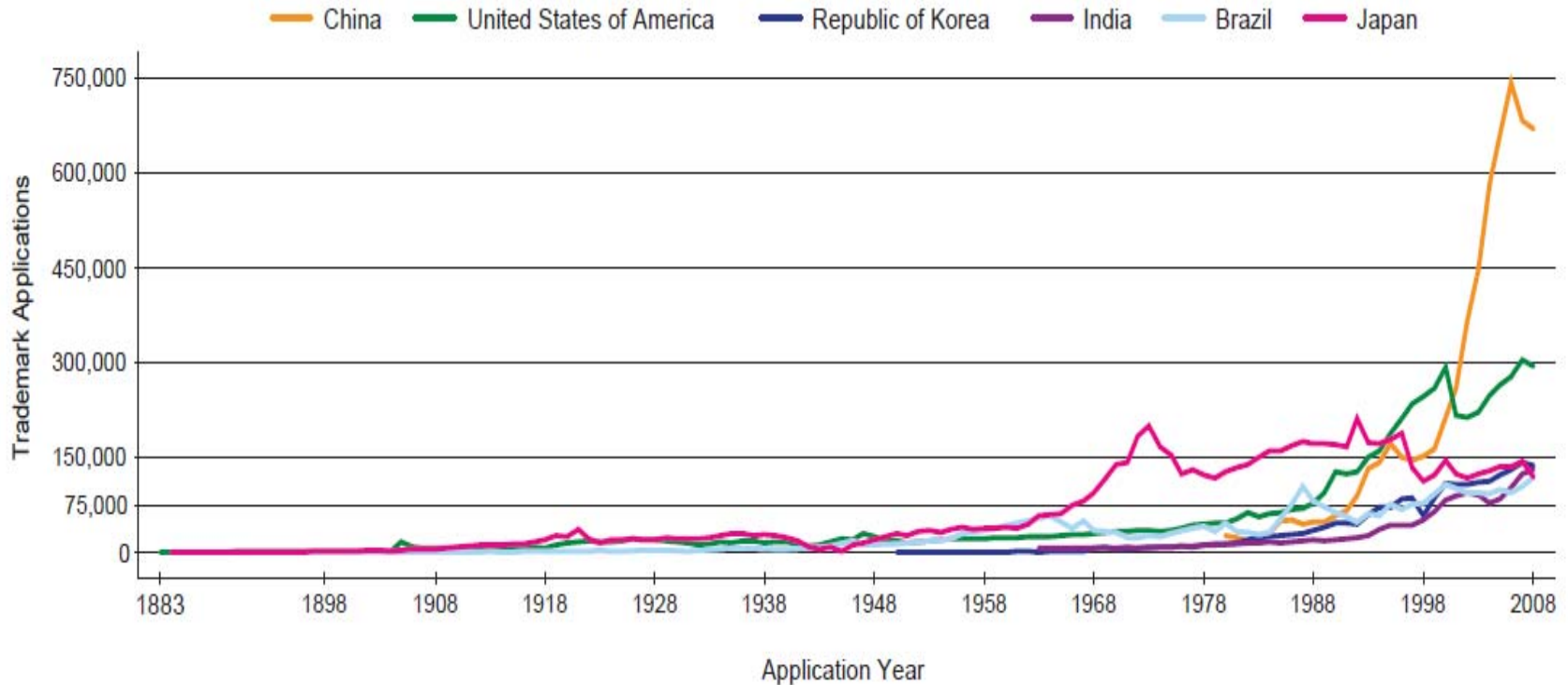


Note: Patent applications and patents granted by ARIPO are considered non-resident applications and grants, respectively. Therefore, the share of non-resident patents granted by the ARIPO is, by definition, 100%.

Source: WIPO Statistics Database, June 2010

Other forms of IP: Broader than patents

Figure B.2.1 Trend in trademark applications at selected IP offices



An estimated 3.30 million trademark applications were filed across the world in 2008

WIPO ECONOMICS

First WIPO Economic Flagship Publication: World XXXX Report, 2011

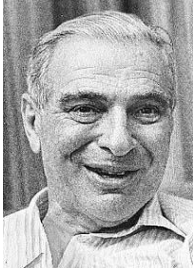
- The changing role of innovation and the role of intellectual property
- Chapter 1
- Chapter 2
- Chapter 3
- Chapter 4

Changing nature of innovation

1. Privatisation of R&D
2. Rise of the BRICS economies in scientific and technological fields
3. Significant foreign direct investment and R&D globalisation
4. More performance of R&D in services
5. Non-technological innovation
6. Collaboration, open innovation and Internet
7. Knowledge markets – IPR as the currency of exchange
8. Rise of new actors, such as philanthropies or users

Trade-off between incentives (creation and diffusion) and monopoly

- Intellectual property is a **nonrival** good: can be used simultaneously by many people without diminishing value (Kenneth Arrow)
 - Non-rival in consumption
 - Creators (inventors) cannot appropriate new information (knowledge)
- Cost of reproducing a nonrival good is **zero**, the marginal cost of such a good is zero.
- Economics tells us that resources are allocated efficiently when prices are equated to marginal costs.



Trade-off between incentives (creation and diffusion) and monopoly

- BUT: Weak property rights for nonrival goods (***non-excludability***) will result in provision below efficient level
- If left to the market, would be few resources devoted to the production of information, as competitors could take a free ride

Costs and benefits of a patent system in a developing country

	Potential costs	Potential benefits
Short-term (static) effects	<ul style="list-style-type: none"> • Welfare loss as cost of patented products and knowledge goes up • The cost for imitation and the payment of royalties increase • Employment and output losses in imitative industries • Costs associated with the establishment of a patent system 	<ul style="list-style-type: none"> • Unilateral trade sections are avoided and entry into the WTO attainable. • Initial increase in trade • Increased access to knowledge and technology generated abroad • Increased inventive activities aimed at the local market
Mid-to long-term (dynamic) effects	<ul style="list-style-type: none"> • Increased prices and reduced access to technologies via imitation • Crowding out of imitative or other local industries • Rise of anti-competitive behaviour of rights holders • Costs associated with maintaining the patent system, its enforcement and competition policies 	<ul style="list-style-type: none"> • Participation in global production and innovation networks • Increased access to technology through imports, technology-rich FDI and licensing • Learning and spillovers leading to increased domestic innovative activities and entrepreneurship

Assessment of additional dynamic effects on learning and spillovers

- Net result is often dependent on the country's level of technological capacity & ability to absorb knowledge.
- Some country-specific studies show no impact of patents or FDI on entrepreneurship or innovation, in particular in poorer developing countries.
 - Domestic patents stay in the hands of foreign entities.
- Other studies however confirm spillovers and the fact that further development might actually go hand in hand with stronger intellectual property protection.

Observations and discussion