



# Intellectual property rights and economic development

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## TRIPs – Trade-Related Intellectual Property Rights

Signed in 1994 as part of the Uruguay Round Agreement in the GATT (WTO).

Date of coming into force:

1996 for rich countries, 2000/2005 for developing countries and 2006 for the least developed countries.

Includes


- Patents – new scientific inventions and processes. 20 year protection period.
- Copyright © - books, music, software etc. Normally 70 year protection period.
- Trade marks™ – Nike, Carlsberg, Microsoft
- Geographical indications – Port, Sherry.
- Plant varieties – patents/*sui generis* systems
- Trade secrets, industrial design etc.

Changes in developing countries

Out of 98 dev. countries in GATT in 1994:

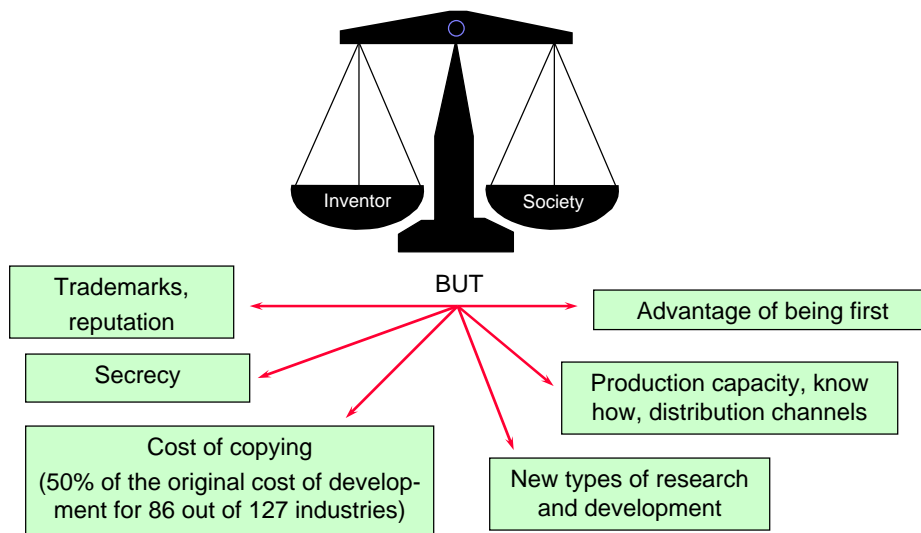
- 25 had no protection for pharmaceutical products;
- 13 had no protection for chemical products;
- 57 had no protection of computer software;
- 31 had no protection of plant varieties;
- 56 had terms of protection that did not comply with TRIPS (eg shorter than 20 years).

[Primo Braga, 1996].





## The economic rationale for patent protection



## The importance of patent protection

Industry	% not developed without patents
Pharmaceuticals	60
Chemicals	38
Petroleum	25
Machinery	17
Fabricated metal products	12
Electrical equipment	11
Primary metals, instruments	1
Office equip., Motor vehicles, Rubber, Textiles	0

100 companies from 12 industries.  
Source: Mansfield, 1986

Method	Effectiveness of protection of products
Patents to prevent duplication	4.33
Patents to secure royalties	3.75
Secrecy	3.57
Lead time	5.41
Moving down the learning curve	5.09
Sales and service efforts	5.59

650 replies from 130 industries  
Range 1-7  
1: Not at all effective  
7: Very effective  
Source: Levin et al., 1987





## Intellectual property rights, investments and growth

Do intellectual property rights lead to growth and investments?

Historical experiences  
Switzerland, Denmark,  
Japan, South Korea etc.

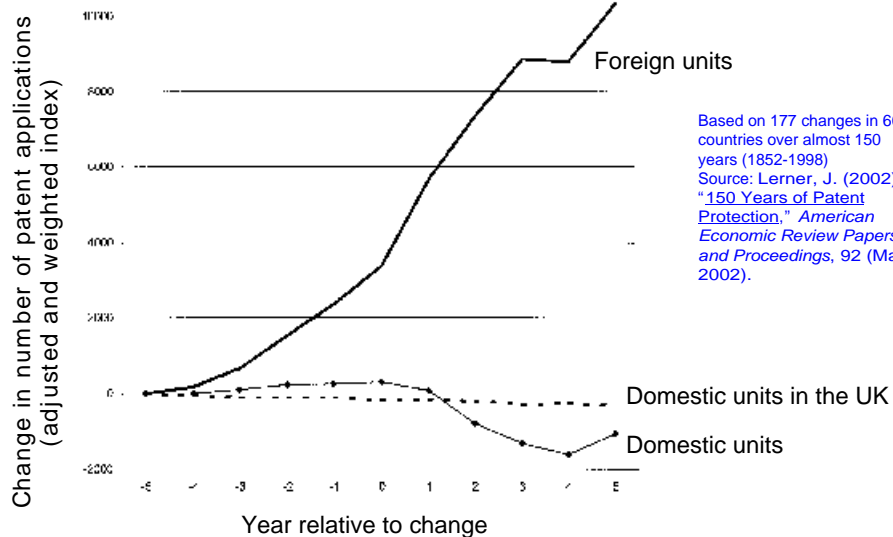
Effect on research  
Stronger rights – more research?  
The right to copy can be a form of  
"infant industry" protection  
Private versus public research

Distributional aspects  
97% of all patents are registered by  
rich people in rich countries  
Implementation costs  
Traditional knowledge not protected  
Higher prices – medicine, seeds

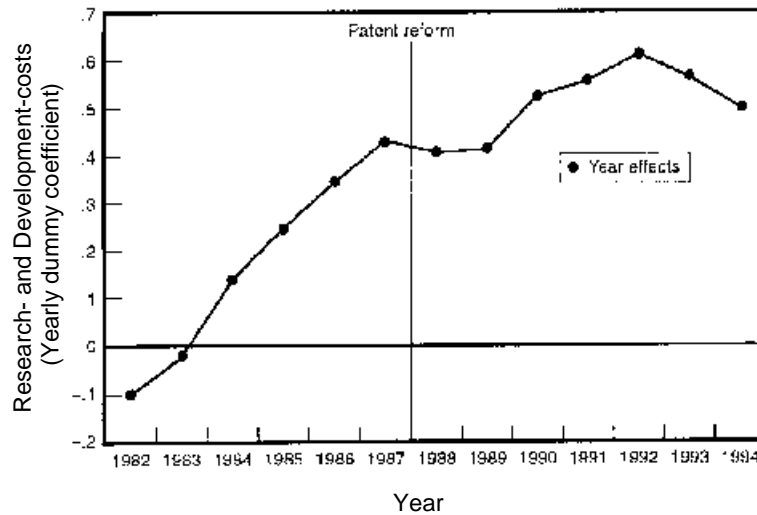
Market effects  
Patents lead to more market  
concentration  
Patents block for local production



## Patents and innovation

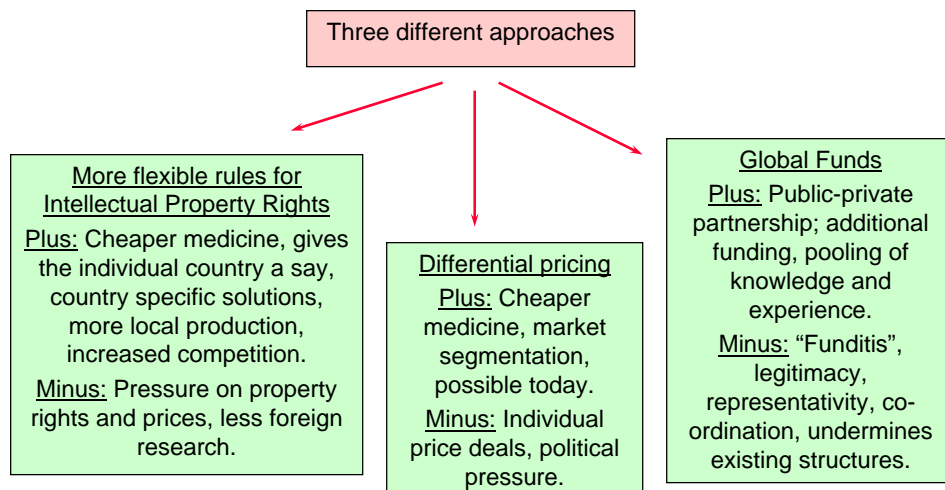


## Patents and research in Japan



Source: Sakakibara, M. and Branstetter, L. (2001). Do stronger patents induce more innovation? Evidence from the 1988 Japanese patent law reforms. RAND Journal of Economics, 32(1), pp. 77-100.

## Access to medicine - approaches





## Access to medicine?

Are the current exemptions sufficient?

### Article 7

... and in a manner conducive to social and economic welfare..

### Article 8

...adopt measures necessary to protect public health and nutrition... provided that such measures are consistent with the provisions of this Agreement.

### Article 31

- a) ...may be waived .. in case of a national emergency.. The public right holder shall ... be notified as soon as reasonable practicable..
- f) ...predominantly for the supply of the domestic market...
- h) ... the right holder shall be paid adequate remuneration..

Doha Declaration on the TRIPs Agreement and Public Health (2001)  
Implementation of paragraph 6 (2003)



## Broader distributional aspects

Net flows of royalties and licence fees, million US\$

Country	1990	1996
EU12	-4800	-6500
USA	13500	20600
Japan	-3200	-2900
Canada	-1	273
Australia	-665	-763
Mexico	-307	-217
Brasil	-58	-453
South Korea	-99	-2046
Malaysia, Indonesia, Thailand	-170	-630
India	-71	-81

Source: OECD, 1997





## Welfare effects of the TRIPs agreement

1988 mill. US\$	TRIPs licence	TRIPs monopoly	TRIPs total	UR trade, short run	UR total, short run
EU	-349	-5037	-5386	33117	27731
USA	4553	-682	3871	11185	15056
Canada	-1023	-1305	-2328	1088	-1240
Japan	-439	-2256	-2695	14220	11525
Australia	-22	-410	-432	1017	585
New Zealand	-54	-154	-208	336	128
India	-526	-2405	-2931	3130	199
South Korea	-326	-753	-1079	4036	2957
Brasil	-926	-2021	-2947	1215	-1732
Mexico	-444	-1023	-1467	129	-1338
Columbia	-77	-258	-335		
South Africa	-113	-453	-566		
Israel	-66	-176	-242		
<b>Total</b>	<b>188</b>	<b>-16933</b>	<b>-16745</b>	<b>80757</b>	

Source: McCalman, 1999; Harrison, Rutherford og Tarr, 1996



## Conclusion

- A world without intellectual property rights is not a world without inventions.
- The TRIPs agreement ignores that the incentive for research and development varies widely between different companies and sectors.
- The TRIPs agreement ignores, that countries have very different needs for protecting intellectual property rights depending on their economic development.
- The TRIPs agreement will in the short run lead to larger global inequality and higher prices on products like medicin, seeds, and agricultural technology in developing countries.
- The long term effects of the TRIPs agreement on growth and investments are uncertain