

An International Perspective on Brazilian Patenting

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Viewing Brazilian patenting in an international context sheds some light on the extent to which Brazil is entering global markets in technology intensive goods and services.

Two perspectives:

- Brazilian patenting in developed countries, esp. the United States
- Domestic patenting in comparison with other countries

Compared with China, India, and Israel, let alone Korea, Taiwan, and Singapore, Brazilian patenting in the United States has not increased – remains on a par with Russia's and South Africa's...

U.S. Issued Patents By Country of Origin

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Brazil	74	91	98	110	96	130	106	77	121	90
China	72	90	119	195	289	297	404	402	661	772
India	85	112	131	178	249	342	363	384	481	546
Israel	754	743	783	970	1040	1193	1028	924	1218	1107
Russia	189	181	183	234	200	203	169	148	172	188
South Africa	115	110	111	120	113	112	100	87	109	82

Source: US PTO

In terms of patent applications filed in the United States, the Brazilian record is improving but still not in the same league as China, India, and Israel...

U.S. Patent Applications By Country of Origin

	2001	2002	2003	2004	2005	2006	2007
Brazil	219	243	259	287	295	341	375
China	626	888	1034	1655	2127	3768	3903
India	643	919	1164	1303	1463	1923	2387
Israel	2710	2645	2539	2693	3157	3657	4410
Russia	433	377	341	334	366	412	444
South Africa	231	241	224	246	197	231	252

U.S. Patents of Brazilian Origin 2003-2007

Assignees with > 10 Patents

■ Individuals	85	
■ EMBRACO	40	
■ PETROBRAS	40	
■ MULTIBRAS S/A ELETRODOMESTICOS	14	
■ DANA INDUSTRIAL S/A		12
■ SMAR RESEARCH CORP	12	

Source: US PTO

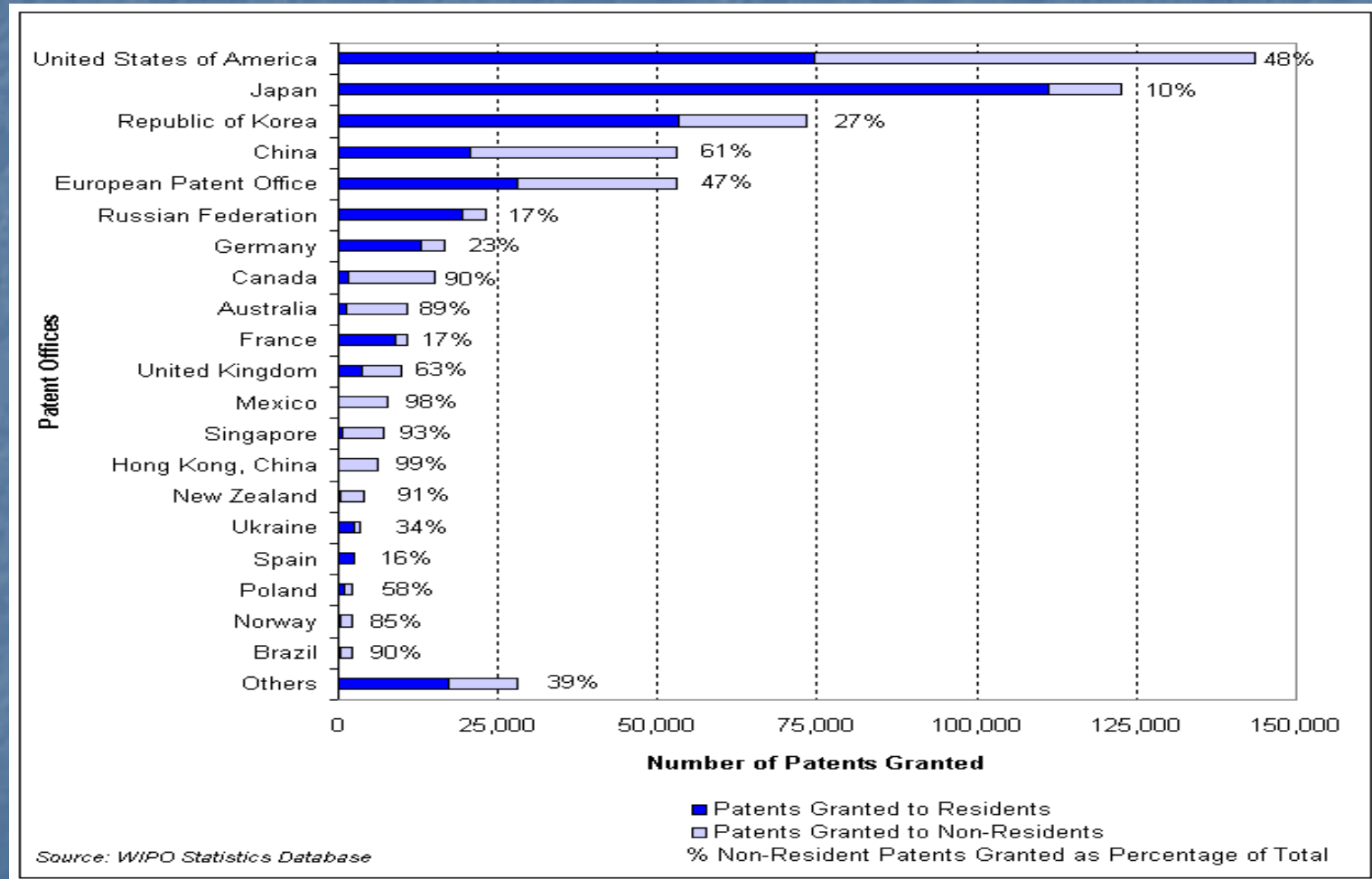
U.S. Patents of Brazilian Origin By Technology Class 2003-2007

Drug, Bio- Affecting and Body Treating Compositions (includes Class 514)	33
Pumps	23
Refrigeration	16
Joints and Connections	13
Wells (shafts or deep borings in the Earth, e.g. for oil and gas)	12
Paper Making and Fiber Liberation	11
Chemistry: Molecular Biology and Microbiology	11
Fluid Handling	10
Organic Compounds (includes Classes 532-570)	10

Source: US PTO

What about patenting in Brazil in comparison with patenting in other countries? Brazil's is the 20th most active patent office in the world. On the other hand, 90 percent of Brazilian patents are issued to nonresidents – a pattern typical in most emerging economies. (This may underestimate domestic inventive activity to some degree because “resident” vs. nonresident” is determined on the basis of the first listed inventor, excluding collaborators.)

Patents Granted by Office in 2005



Source: WIPO

The World Intellectual Property Organization (WIPO) compares countries "patent intensity" – resident filings by population, GDP, and R&D expenditure. Although these ratios are highly variable across countries, Brazil compares more favorably with some other relatively advanced countries

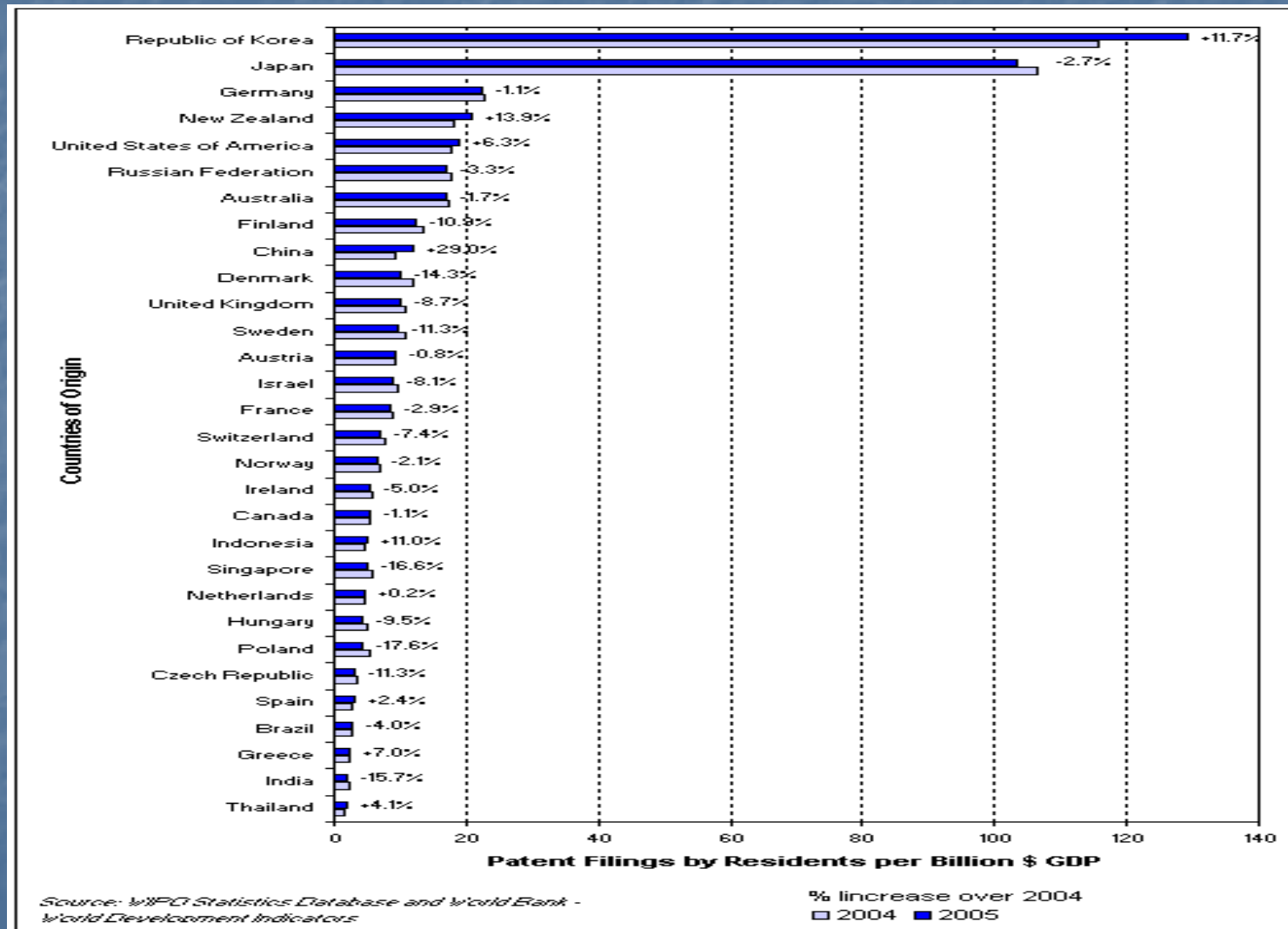
- with some Southern and Eastern European countries and India on patents per GDP
- with Denmark, Canada, Finland, and Switzerland on patents per R&D expenditure

Resident Patent Filings in National Offices in 2005

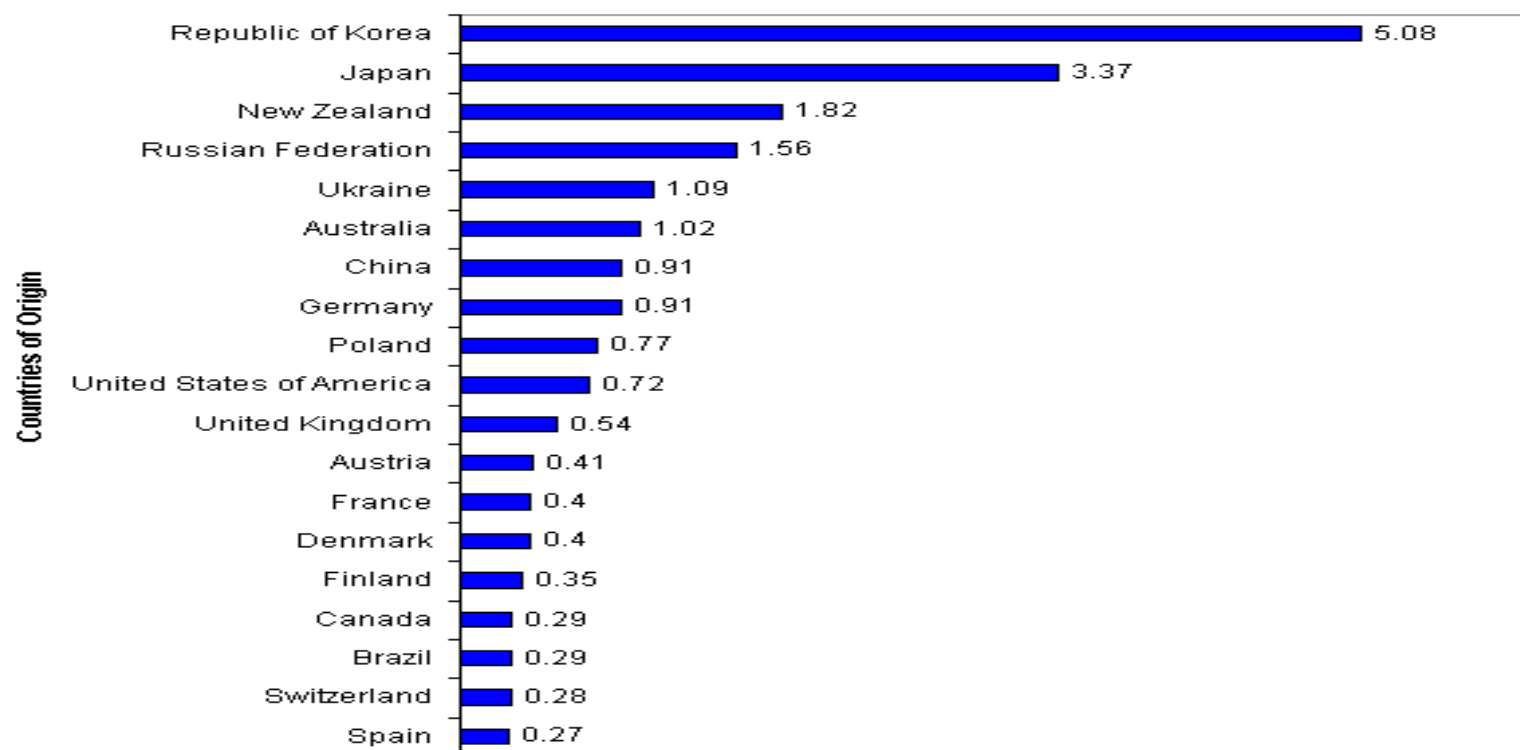
Country	Per 1,000,000 Population	Per \$1 Billion GDP	Per \$1 Million R&D Spending
Brazil	20.50	2.74	0.29
China	71.66	11.92	0.91
India	6.04	1.97	0.25
Israel	202.06	8.76	0.21
Russia	165.17	17.12	1.56

Source: WIPO

Resident Patent Filings \$ Billion GDP in 2005



Resident Filings per R&D Expenditures in 2000



Source: WIPO Statistics Database, World Bank - World Development Indicators, UNESCO Institute for Statistics

■ Resident Patent Filings per Million 1\$ R&D Expenditures (constant 2000\$ at PPP)

Conclusion

By the indicator of patent counts, Brazil is showing some progress in becoming a participant in global technology markets but still lags well behind other emerging economies.