

Government-funded R&D is on a Diet

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LEE, Byung-jae

Deputy Director of Information Planning Div.
Korean Intellectual Property Office (KIPO)



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information

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I. Background

1. Introduction

- Patent data guide R&D policy makers and evaluate R&D performances
- Empirical case of Korea in accommodating the use of patent information to make R&D more efficient
the activities of to raise efficiency of R D



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I. Background

2. Current trends of IPRs

- Global PCT applications are on the rise

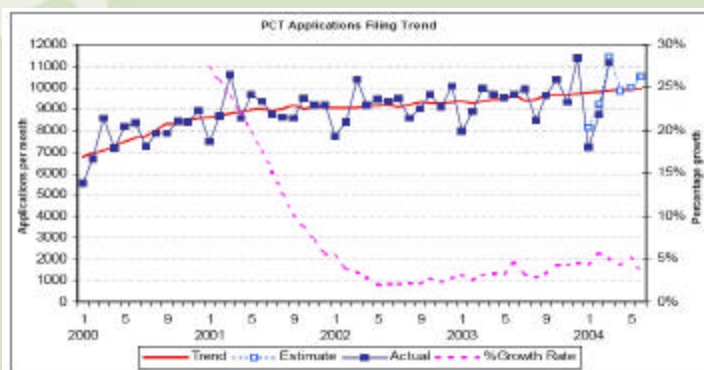


Figure 1. Global PCT filing trends

Source: WIPO, Status report on PCT and patent statistics activities 2004



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I. Background

2. Current trends of IPRs

- Rank 4th in the volume of IPR applications in 2002
- Sustain 10th place in the number of PCT application

Table 1. PCT international applications by country of origin

	2000	2001	2002	2003	2003 (percent)	2003 (growth)	2004 (to date)
EPC States	36,003	40,383	42,430	43,113	37.5%	1.6%	17,026
United States of America	38,008	42,891	41,298	40,984	35.7%	-0.8%	12,463
Japan	9,567	11,757	14,061	17,360	15.1%	23.5%	8,703
Germany	12,582	13,932	14,325	14,653	12.8%	2.3%	5,588
United Kingdom	4,795	5,462	5,370	5,215	4.5%	-2.9%	2,363
France	4,138	4,684	5,088	5,167	4.5%	1.6%	1,300
Netherlands	2,928	3,372	3,879	4,430	3.9%	11.3%	1,697
Sweden	3,091	3,412	2,991	2,620	2.3%	-12.4%	1,238
Switzerland	1,989	2,333	2,754	2,831	2.5%	2.8%	1,201
Republic of Korea	1,579	2,305	2,522	2,953	2.6%	17.1%	1,341
Canada	1,801	2,104	2,259	2,271	2.0%	0.5%	857
Italy	1,394	1,603	1,984	2,165	1.9%	9.1%	882
Australia	1,376	1,646	1,761	1,685	1.5%	-4.3%	832
Finland	1,578	1,691	1,761	1,556	1.4%	-11.6%	729
China	784	1,689	1,017	1,288	1.1%	26.6%	632

Source: WIPO, Status report on PCT and patent statistics activities 2004



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I. Background

3. Needs for the way of utilizing patent information

- Technology trade deficit due to lack of core technology
 - Technology export : US\$ 0.6 billion in 2002
 - Technology import : US\$ 2.7 billion in 2002

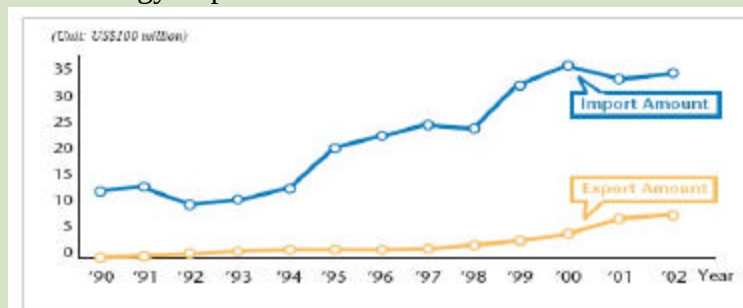


Figure 2. Korea's technology trade

Source: Korean Intellectual Property Office (KIPO), 2004



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I. Background

3. Needs for the way of utilizing patent information

- The number of Korean IPR applications filed at USPTO is increased
- However, registration ratio of Korean applications 46% is lower than that of average registration ratio 59%

Table 2. Registration ratio of Korean IPR applications at USPTO

Source: Canada, OST 2001/ patent applications from 1965 to 1999



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II. Institutionalization on the use of patent information

1. Current status of R&D efficiency

- R&D funds are wasted on duplicated inventions
 - In Europe, US\$ 2 billion goes down the drain every year simply because of the lack of information (EPO)
 - In Japan, insufficient prior art search at the point of R&D is one of the reasons that makes US\$ 47 billion useless (JPO)



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II. Institutionalization on the use of patent information

2. R&D of Korea

- In Korea, R&D expenditure has continued to increase
 - from 2.6% in 1998 to 3% of GDP in 2002

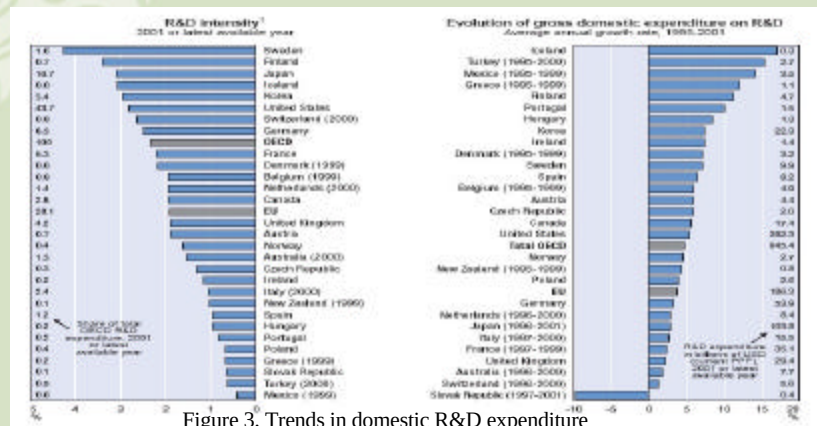


Figure 3. Trends in domestic R&D expenditure

Source: OECD Science, Technology and Industry Scoreboard 2003



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II. Institutionalization on the use of patent information

2. R&D of Korea

- Some of Government-funded R&D re-invent existing inventions
 - Analyze 311 R&D projects belong to 3 government branches
 - Classify each invention as "new", "duplication", "duplication in some part" and "non-searchable"
 - A few cases of inventions duplicated with existing inventions due to the lack of prior art search



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II. Institutionalization on the use of patent information

3. Cooperation with the National Science & Technology Council (NSTC)

- Propose the plan on the use and dissemination of patent information
 - Promoting the use of patent information for planning and evaluating the government funded R D project
 - Establishing the feedback system of patent information
 - Encouraging dissemination of patent information
 - Supplying educational programs and infrastructure for utilizing patent information



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II. Institutionalization on the use of patent information

3. Cooperation with the National Science & Technology Council (NSTC)

- NSTC establishes and coordinates policies and R&D budget for science and technology

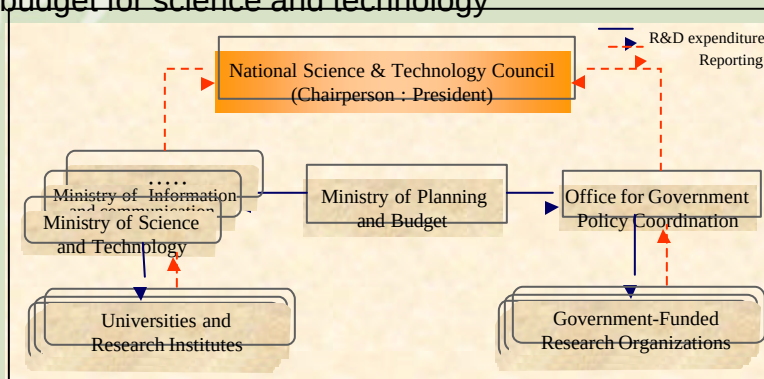


Figure 4. Diagram of R&D budget flow



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II. Institutionalization on the use of patent information

4. Recent developments

- Institutionalizing the use of patent information in R&D planning by amending relevant regulations
- Raising awareness on patent information by supplying comprehensive patent statistics and reports
- Laying foundation on patent statistics by enhancing material and institutional infrastructure



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III. Conclusion

- Enhance cooperation further with NSTC and other government branches
- Strengthen the infrastructure of patent statistics applicable to policy-making and technical evaluation
- Train human resources specialized in patents and science and technology



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