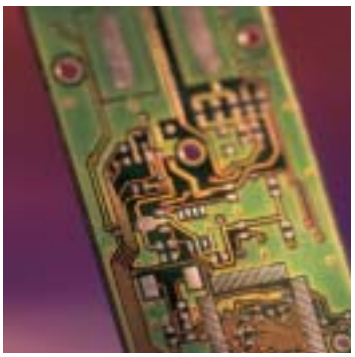
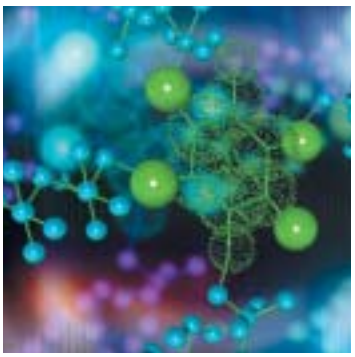
World Intellectual Property Organization

WIPO PATENT REPORT

Statistics on Worldwide Patent Activities

2007

WIPO PATENT REPORT

Statistics on Worldwide Patent Activities

2007 Edition

World Intellectual Property Organization

FOREWORD

Good quality empirical information is key to understanding current developments in the international patent system. This 2007 edition of the WIPO Patent Report aims to make a contribution to that understanding by providing a range of statistics on patent activity for as many countries as possible.

Since the 2006 Edition of this report, WIPO has spent considerable time improving the quality of statistics in the WIPO Statistics Database, in particular to improve the quality of historical statistics. Sections have also been added to show activity by fields of technology, and improvements have been made to statistics on patent processing and patent life cycles.

Trends in patent activity are a reflection of the transition currently occurring in worldwide industrial activity. Very high growth rates in the use of the patent system can be observed in North East Asian countries, particularly the Republic of Korea and China. This growth is from patent filings by applicants from those countries and, at the same time, from foreign patent applicants, reflecting the increasing integration of those countries into worldwide industrial activity. It is clear that this is a process that is ongoing. While patent filings by residents of North East Asian countries have been growing at high rates for more than ten years, filings abroad by residents of those countries have only started to appear in significant numbers in recent years. This can be seen in filings of PCT international applications, where filings from the Republic of Korea and China have grown significantly since 2002, to the point where China, Japan and the Republic of Korea are now all within the top ten countries of origin of PCT international applications.

Although much attention is given to the high growth rates in patenting in the North East Asian region, other industrializing countries and countries in transition are also showing steady increases in their use of the patent system. Patent applicants from countries such as Brazil, India, Israel and South Africa are all increasing their patent filings abroad - a sign of the increasing internationalization and diversity of the patent system.

However, the increase in patent filings from newly industrialized countries does not yet translate into ownership of patent rights internationally by applicants from those countries. Of the approximately 5.6 million patents in force in 2005, 49% were owned by applicants from two established industrialized countries - Japan and the United States of America. The major European countries are also strongly represented in ownership of patent rights. As the increase in patent filings flows through the system into patent grants over the coming years, we can expect to see this proportion change and the ownership of patent rights worldwide become more diversified.

These changes do not come without a cost. The workload at certain patent offices has increased faster than the capacity to examine patent applications. The United States of America had more than 900,000 patents pending in 2005. The Japanese Patent Office also had more than 800,000 patents pending in 2005, although it must be noted that this is largely due to changes in the time limit for request for examination, which has created a temporary increase in the examination workload in Japan.

Among the questions raised by this increase in workload is the extent of duplication of effort within the system. Worldwide, 38% of patent applications are by non-resident applicants. These appli-

cations are usually preceded by prior applications in the country of residence of the applicant and, often, by parallel applications in other countries. Each of these applications may be subject to a separate search and examination in each patent office.

This 2007 Edition of the WIPO Patent Report contains much more information on trends in patent filings and granting, more detailed analyses of the European and PCT procedures, and more information on patent life cycles. The report is supported by detailed datasets which are available from the WIPO web site. We trust that these resources will be of value to those wishing to understand the evolving dynamics of the international patent system.

PREFACE

Statistical Sources

The statistics in this report are based on information supplied to WIPO by patent offices in annual surveys. Each year, WIPO requests statistics from national patent offices, including the numbers of patents filed, granted and in force, broken down by country of origin, date and a number of other criteria. The statistics are often provided to WIPO six months or more after the end of the year concerned and must then be processed by WIPO and formatted for publication. This means that statistics for 2005 are published on the Internet at the end of 2006 and in the present report in 2007.

Other sources of statistics in this report are the PATSTAT database created by the EPO from its documentation databases (used in this report for patent family statistics) and economic indicators from the World Bank and UNESCO.

Where data are missing for a given office or period of time and when it is possible, WIPO estimates the missing data from the available data. The estimates of individual data items are not published, but they are included in aggregate totals.

The statistics in this report identify patent activity by residents and by non-residents separately. Resident patent applications are those for which the first-named applicant or assignee is a resident of the State or region concerned. Non-resident patent applications are from applicants outside the relevant State or region. In the case of regional offices such as the European Patent Office, a resident is an applicant from any of the member States of the regional patent convention. Some offices (notably the United States of America) use the residence of the inventor rather than that of the applicant to classify resident and non-resident filings. Unless otherwise stated, statistics on the number of resident and non-resident patent applications include those filed via the PCT system as PCT national/regional phase entries.

Patent Applications as Indicators of Inventive Activity

Studies have shown that around 80% of resident patent applications filed are for new inventions (first filings having no priority claims). Therefore, although resident filings overestimate the number of new inventions, they are a reliable indicator of underlying inventive activity. Depending on commercial considerations, applicants later decide whether or not to file a patent application for the same invention in foreign countries. Patent filings by non-residents thus reflect the internationalization of technology and markets.

Some of the major considerations relating to the use of patent indicators as a means of measuring inventive activity are:

- Not all inventions are patented. Companies may choose alternative methods of intellectual property protection, such as trade secrecy or marketing techniques. The choice may vary according to the technology in question.

- The number of patent applications can vary between different countries due to the differences in patent systems (see below).

- Since an invention may be the subject of several patent applications in the country of origin and in foreign countries, there can be multiple counting of the same invention.

- The place and time of filing of a patent application may not correspond to the place and time of the inventive activity. Research and development may be conducted in one country and a patent filed in a different country. The patent filing may also take place some time after the research and development activity.

Differences in National Patent Systems

There are notable differences in the numbers of resident patent applications in each office relative to the size of the country and in the proportion of resident and non-resident patent filings in different offices. To some degree, the differences reflect the different stages of industrial development in different countries – developed countries tend to have more resident patent applications than developing countries. Differences in the proportion of non-resident applications are partly accounted for by differences in international trade and investment patterns.

The legal and administrative differences between national or regional patent systems also have a significant impact on the number of patents filed. Although there is a tendency towards convergence in the different national and regional systems due to international treaties and agreements, there is still flexibility to adjust national systems to national requirements.

To aid the interpretation of patent statistics, WIPO has published information on the characteristics of different national patent systems (WIPO Index of Patent Systems, available at: *http://www.wipo.int/ipstats/en/resources/patent_systems.html*). The following characteristics are notable:

- Alternatives to standard patent applications, such as provisional applications, utility models or design patents, may result in fewer standard patent applications being filed than would otherwise be the case.

- Although requirements are becoming more harmonized, differences in rules regarding patent claims mean that the same invention may be drafted as a single patent application in one country and as two or more patent applications in another country.

- In some cases, a patent application is automatically the subject of search and/or examination, while in other cases search and examination are requested separately and several years after the patent application filing. This means that an applicant can file a patent application less expensively at some offices and decide later whether or not to commit to the additional cost of search and examination and eventual granting. Finally, there are differences in patentable subject matter in different countries. For example, business methods are patentable in some countries, but not in others.

Improvements in patent indicators are the subject of ongoing studies by WIPO and other organizations working in the field of patent statistics.

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A HIGHLIGHTS

> **Growth in Patent Activity.** Worldwide filings of patent applications have grown at an average annual rate of 4.7% since 1995 to a total of more than 1.6 million in 2005. The growth rate is comparable to the overall increase in economic activity over the same period. Patents granted worldwide have increased at an average annual rate of 3.6% to about 600,000 in 2005. At the end of 2005, there were approximately 5.6 million patents in force worldwide.

> **Increasing Internationalization.** The use of the patent system internationally has increased markedly in recent years. This can be seen in the growth rate of total patent filings by non-residents (+7.6% over 2004) and in the increase in non-resident patent filings in countries such as China, India, Mexico, the Republic of Korea and the Russian Federation. However, the use of the patent system remains highly concentrated with only five patent offices (China, Japan, the European Patent Office, the Republic of Korea and the United States of America) accounting for 77% of all patents filed and 74% of all patents granted.

> **Increased use of the Patent Cooperation Treaty (PCT).** The PCT, which provides a simplified system for international patent filing, has become the major route for international patent filing. The number of PCT international applications increased by 7.9% from 2005 to 2006 to reach 147,500. PCT national phase entries account for 48% of worldwide non-resident patent filings.

> **Processing of Patent Applications.** Increasing demand has led to increases in workload in some patent offices, although the number of patent applications pending examination differs significantly from one office to another. The United States of America had more than 900,000 pending applications in 2005, with Japan having the next largest number of pending applications (according to available data).

> **Increasing Patent Filings in the Technical Field of Electricity and Electronics.** Patent applications filed in the field of electricity and electronics represented 35% of worldwide patent filings between 2000 and 2005. Patent filings in this technology field are concentrated in the patent offices of Japan and the United States of America followed by the Republic of Korea, the European Patent Office and China.

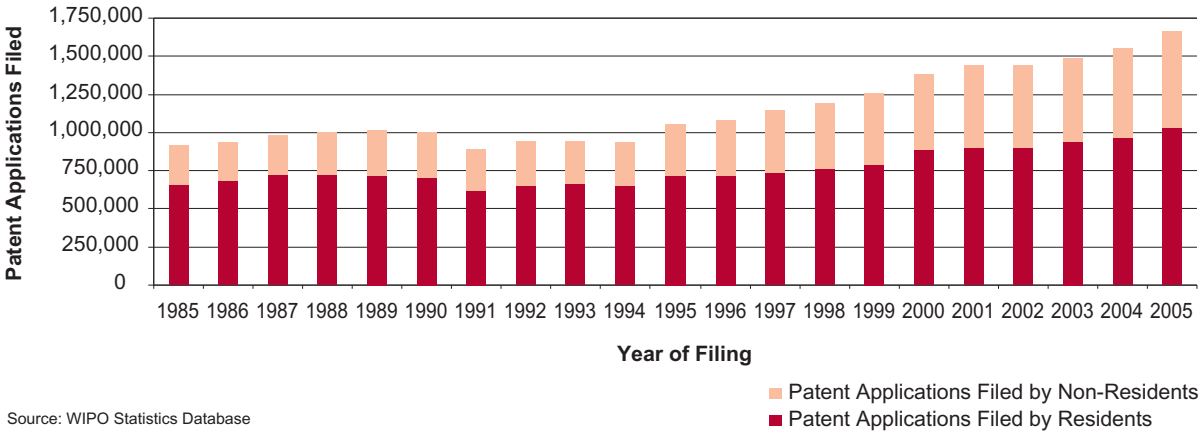
B WORLDWIDE PATENT FILINGS

This section presents an overview of the trends in worldwide patent filings. The total number of patent applications filed around the world has increased steadily, particularly since 1995. There has been a continuous increase in the number of filings by patent applicants in their country of residence, but most of the increase in total patent filings is accounted for by non-resident patent filings.

The distribution of patent filings worldwide is very uneven. A small number of countries account for the majority of patent filings both by residents and non-residents. Patent offices of Japan and the United States of America receive the largest amount of patent applications followed by North East Asian emerging States, namely China and the Republic of Korea and large industrialized European States. The distribution of patent filings by office has changed in recent years, particularly as China and the Republic of Korea are becoming major industrial economies and their use of the patent system is expanding.

B.1 Worldwide Patent Filings by Year of Filing

The chart below shows the number of patent applications filed by residents and non-residents worldwide by year of filing.



Source: WIPO Statistics Database

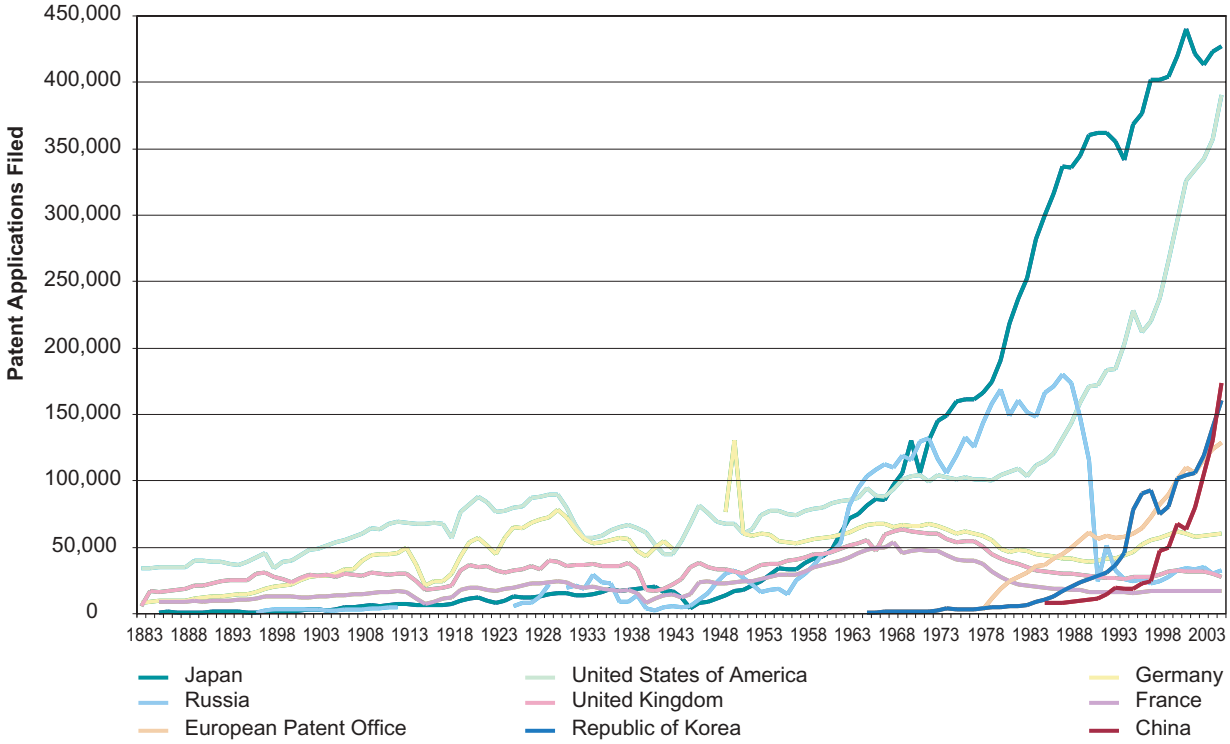
> In 2005, about 1,660,000 patent applications were filed worldwide, which is an increase of 7% over 2004.

> The average annual rate of increase in total patent filings since 1995 is 4.7%.

> Patent filings by residents increased at an average annual rate of 6.6% and by non-residents at 7.6%.

B.2 Evolution of Worldwide Patent Filings

The chart shows the number of patent applications filed at nine patent offices from 1883 (date of the signature of the Paris Convention for the Protection of Industrial Property) to 2005.



Source: WIPO Statistics Database

> Until 1960, growth in worldwide patent activities was very modest with an average annual growth rate of 1.99% from 1883 to 1959. During this period, patenting activity was concentrated in four countries – the United States of America, Germany, the United Kingdom and France.

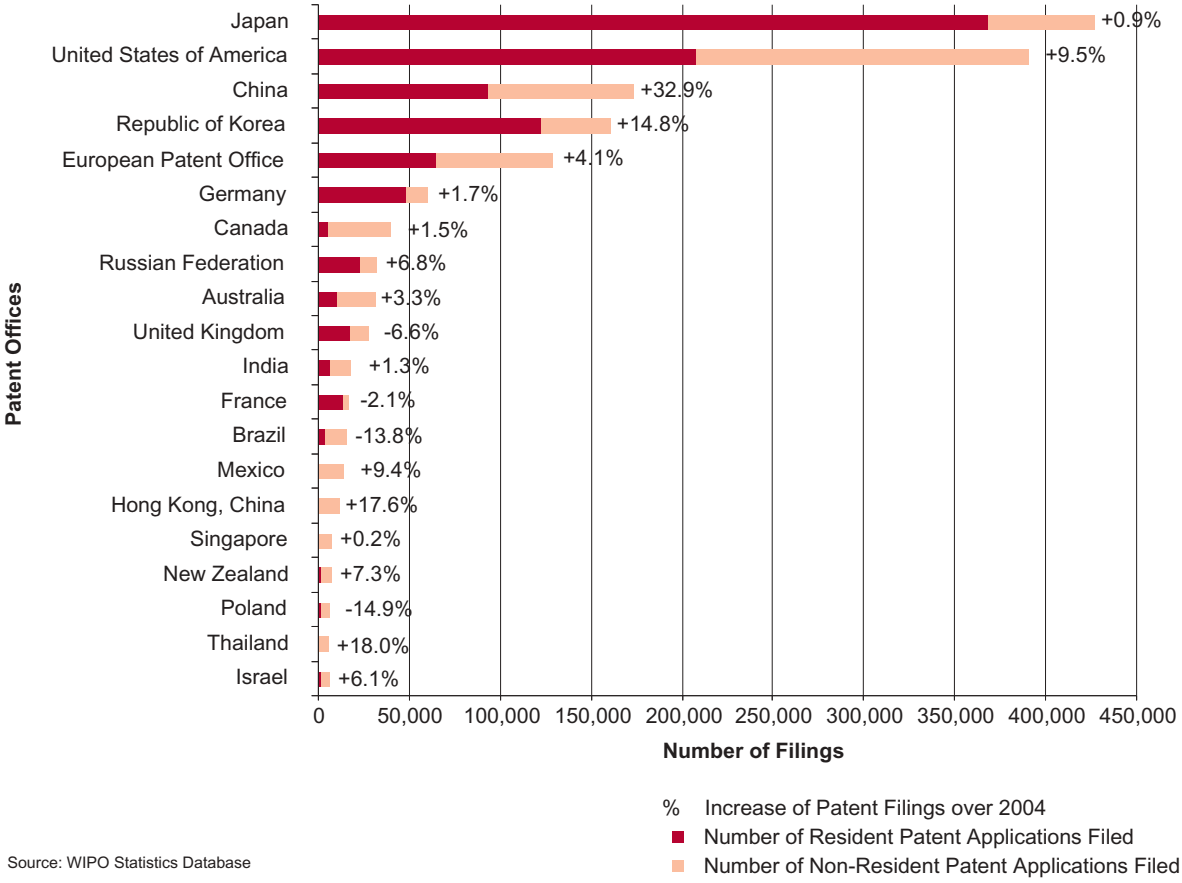
> From 1960, usage of the patent system accelerated due to the emergence of users from new States or regions. Filings of patent applications in Japan and inventor's certificates in the Soviet Union increased noticeably during this period.

> Since 1980, the patent offices of the United States of America followed by the European Patent Office, the Republic of Korea and China have all experienced significant growth rates in filings. At the nine offices shown above, the average annual growth rate from 1960 to 2005 was 3.35%.

> Note that the European Patent Convention entered into force in 1977. From that date, filings at European national offices (Germany, France and United Kingdom in the chart above) declined because, while some applicants continued to use the national route, many chose the newly available regional route. More information on patent filings in the European region is given in Section G of this report.

B.3 Top 20 Offices of Filing

The chart shows the top 20 patent offices according to the total number of patent filings in 2005.



Source: WIPO Statistics Database

> The patent offices of Japan and the United States of America are the largest recipients of patent filings followed by China, the Republic of Korea and the European Patent Office.

> These five patent offices account for 77% of all patents filed in 2005, which represents an increase of 2% over 2004 (75%).

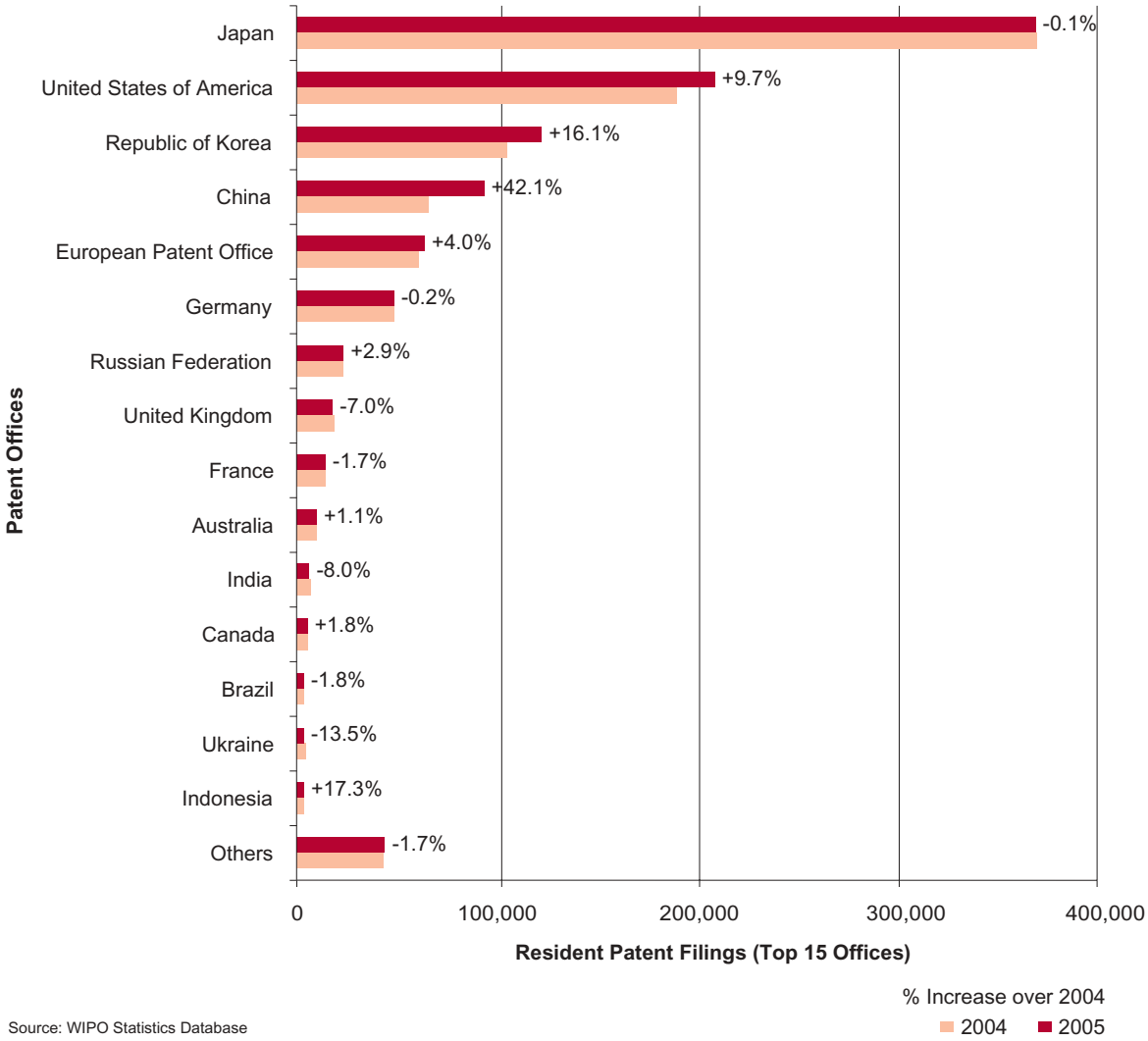
> With an increase of almost 33% over 2004, the patent office of China became the third largest recipient of patent filings (up one place) in 2005.

C PATENT FILINGS BY RESIDENTS AND BY NON-RESIDENTS

From 2004 to 2005, there was steady growth in patent filings by applicants in their country of residence (+6.6%), but patent filings by non-residents have grown at a faster rate (+7.6%). During the same period, the most notable increases can be seen at patent offices of emerging States. The patent office of China has the highest growth rate for resident (+42.1%) and non-resident (+23.6%) filings.

C.1 Resident Filings by Office

The chart shows the number of resident patent applications filed at the top 15 patent offices in 2004 and 2005.



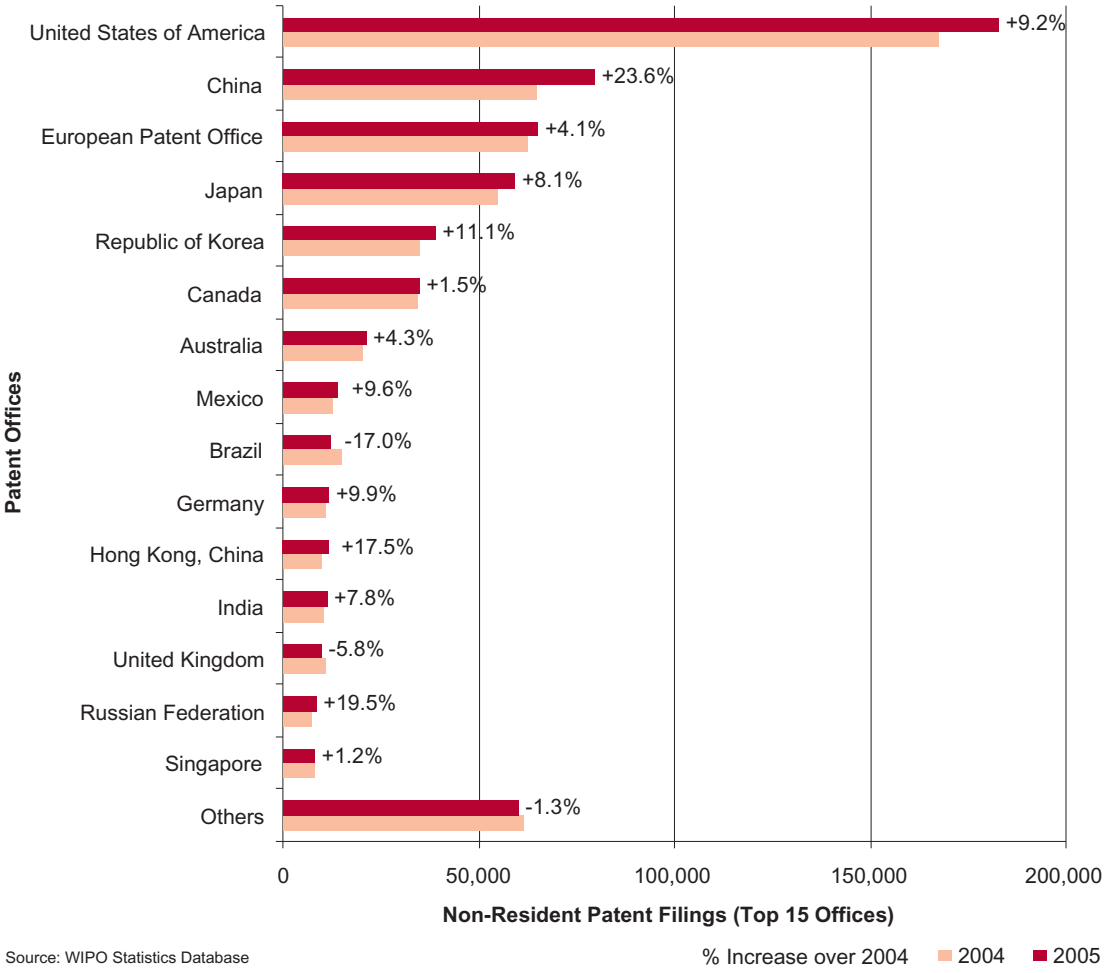
Source: WIPO Statistics Database

> Resident patent filings increased by 6.6% from 2004 to 2005.

> The number of patent applications filed by residents at the Japan Patent Office remained almost the same as in 2004, whereas the number of resident filings in the next 4 offices increased at rates between 42% in China and 4% at the European Patent Office.

C.2 Non-Resident Filings by Office

The chart shows the number of non-resident patent applications filed at the top 15 patent offices in 2004 and 2005.

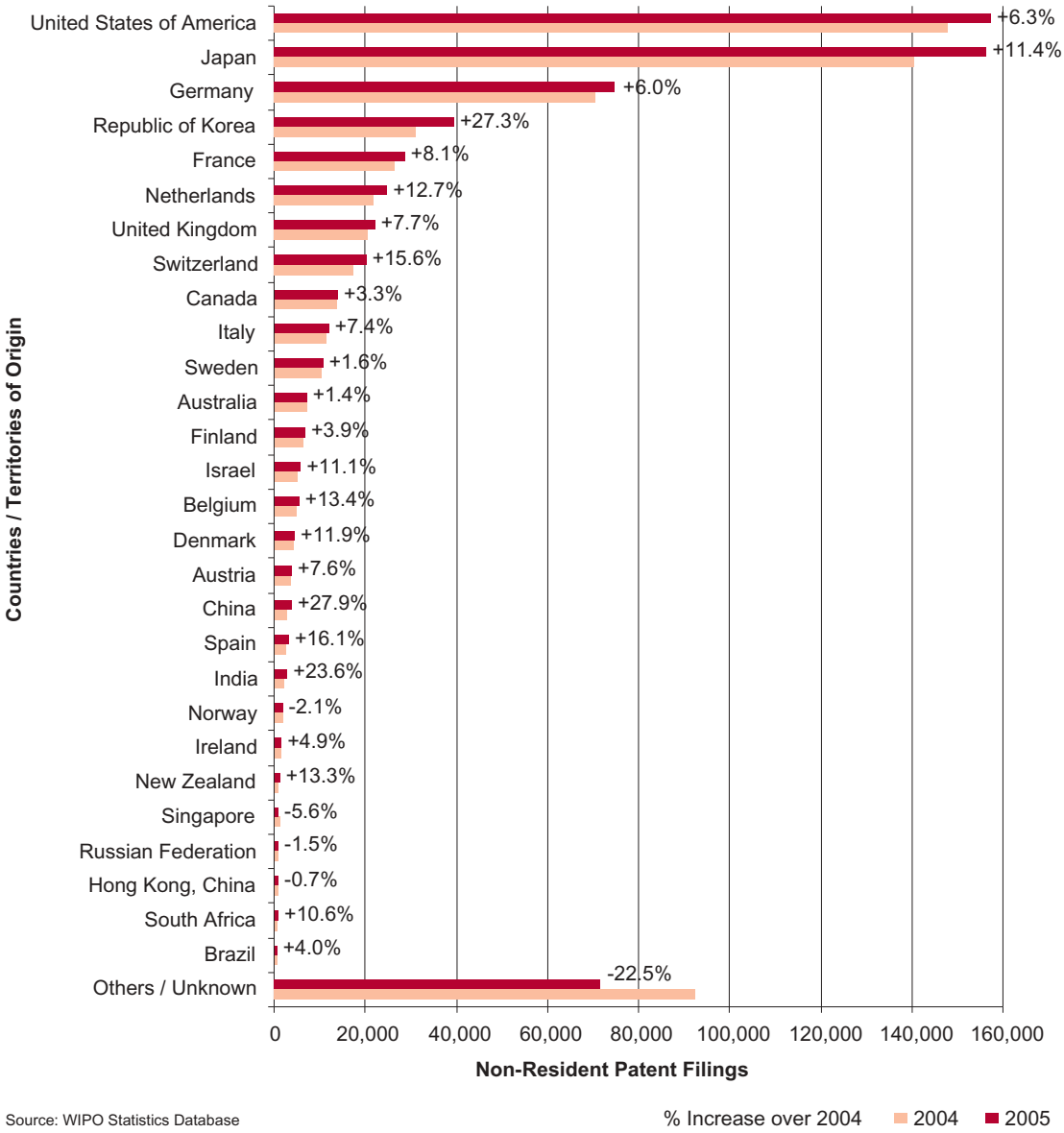


Source: WIPO Statistics Database

> There was an increase in non-resident patenting of 7.6% from 2004 to 2005.

C.3 Non-Resident Filings by Country of Origin

The chart shows the country of residence of non-resident patent filings worldwide.



Source: WIPO Statistics Database

> Patent applicants from the United States of America, Japan and Germany are the largest filers of patent applications in other countries. The United States of America and Japan each account for 23% of non-resident patent filings worldwide, while Germany accounts for 11%. Together, these three countries of origin account for 57% of worldwide patent filings by non-residents.

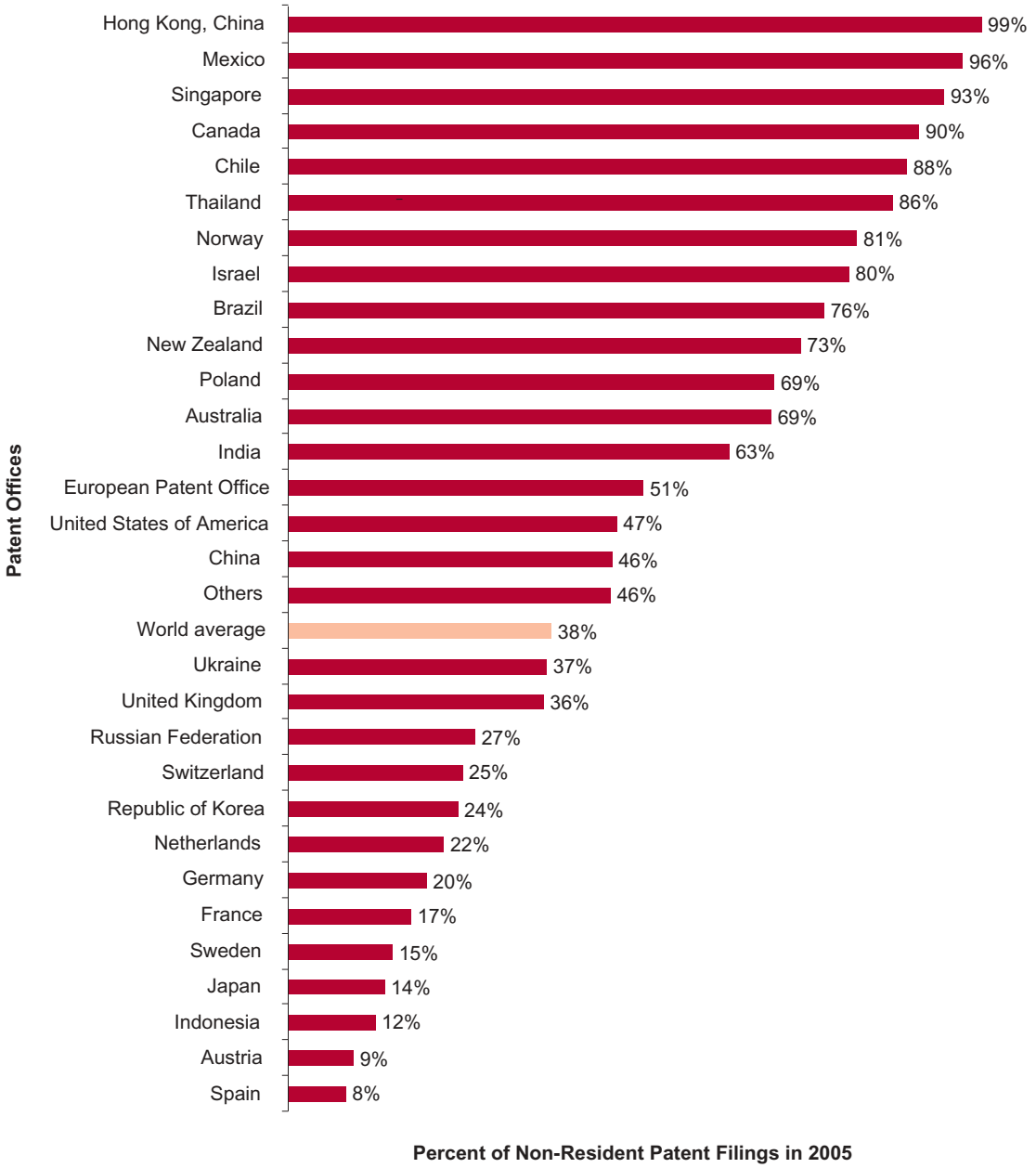
> Patent applicants from the Republic of Korea, China and India are all rapidly increasing the numbers of patent applications that they are filing abroad and, thus, extending the coverage of the protection of inventions originating in those countries. These three countries of origin had the highest increase in non-resident filings over 2004: +27.3% for the Republic of Korea, +27.9% for China and +23.6% for India.

> The increase over 2004 was also notable for Israel (+11.1%), New Zealand (+13.3%) and South Africa (+10.6).

> Additional data received by WIPO since the previous edition corrected 2004 statistics. Comparisons between countries may not be accurate due to the high number of unknown origins.

C.4 Non-Resident Filings as a Percentage of Total Filings by Office

The chart shows non-resident patent filings as a percentage of total filings by office in 2005. This shows the countries which have the highest proportions of foreign patent applications.



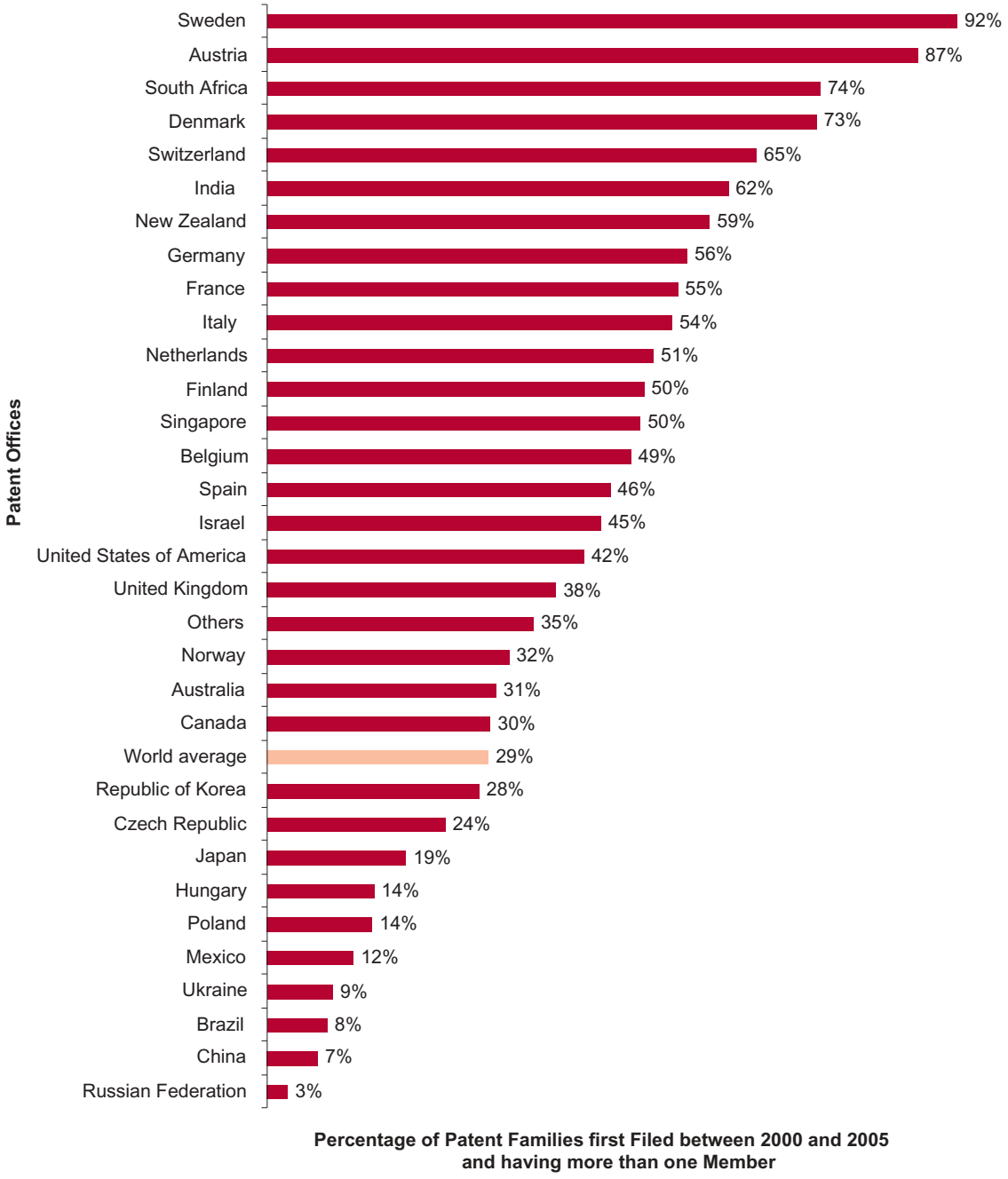
Source: WIPO Statistics Database

> Note that most European national offices have a below average percentage of non-resident application filings since many applicants from outside the European region file at the European Patent Office rather than at the European national offices.

C.5 Multiple Patent Applications

The chart below indicates the tendency to file multiple patent applications for the same invention, organised by the office of first filing. This is an indicator of the propensity for patent applicants from certain countries to file internationally.

It shows the percentage of patent families that are first filed in each office, which are followed by subsequent patent applications for the same invention. A patent family is a set of patents (members) filed in multiple countries to protect the same invention. The period covered is 2000 to 2005.



Source: WIPO Statistics Database

> Over 80% of patent families first filed in Sweden (92%) and Austria (87%) are followed by one or more subsequent patent applications for the same invention.

D INDICATORS OF PATENT INTENSITY

This section presents a small number of indicators that compare patent filings with other indicators, namely population, Gross Domestic Product (GDP) and research and development (R&D) expenditures. This analysis allows for more meaningful cross-country comparisons by weighting the number of patents by different measures of country size and economic activity.

As previously noted, differences in the use of the patent system across countries will account for some of the differences in the numbers of patent filings. Therefore, differences in patent filings per population, GDP or research and development expenditures do not necessarily mean that one country is more inventive than another or more efficient in its allocation of resources.

ECONOMIC INDICATORS USED IN THIS REPORT

This report uses three economic indicators from the World Bank's World Development Indicators series. They are:

1. Population – the total resident population of each country.

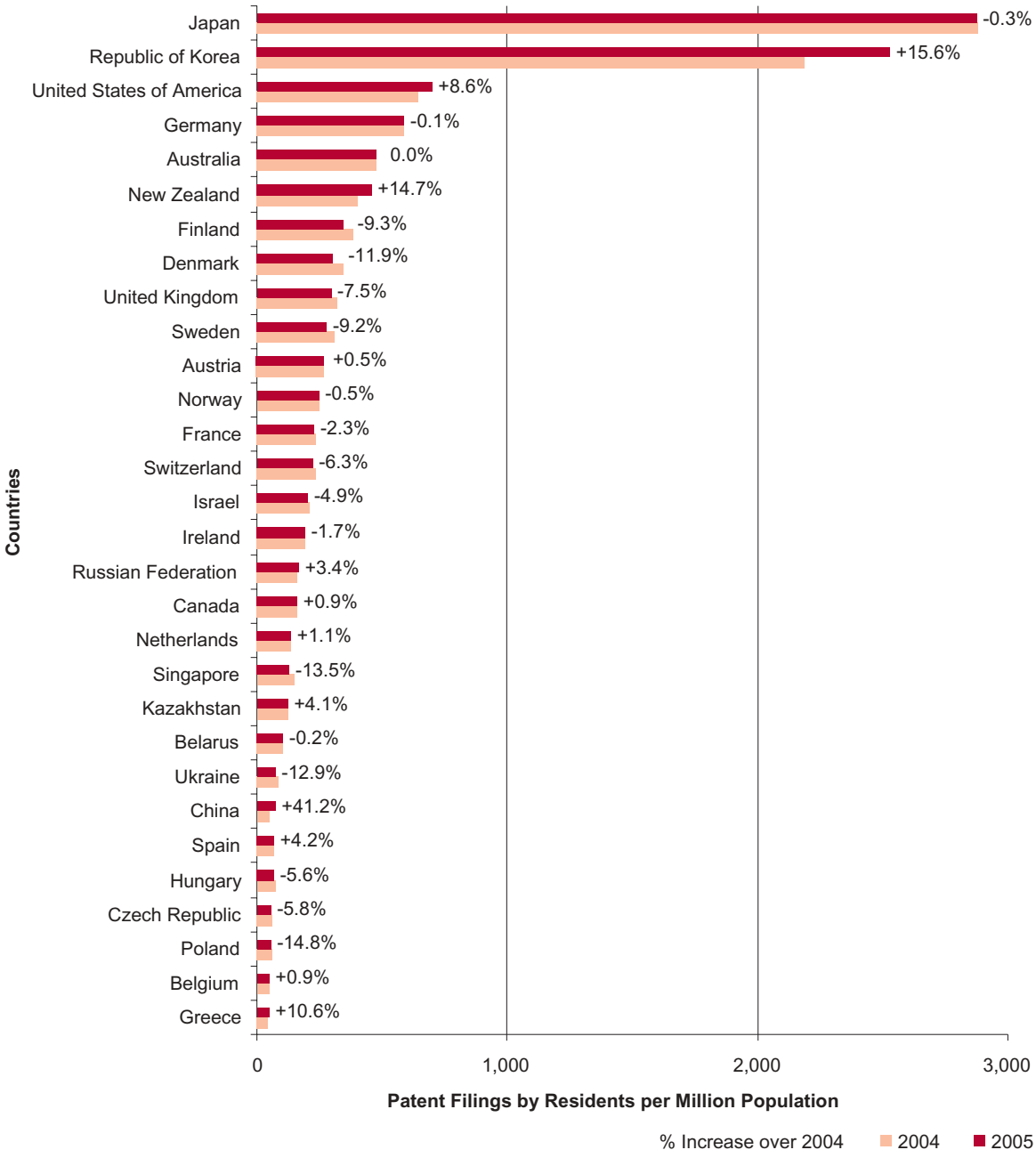
2. GDP – the gross domestic product of each country. To make cross-country comparisons more meaningful, we use GDP in constant year 2000 US dollars adjusted for purchasing power parity. The constant year 2000 figure corrects for the effect of inflation on measures of GDP. The purchasing power parity adjustment takes into consideration the different price levels in different countries that may not be reflected in simple exchange rate differences.

3. Research and Development – total gross spending on research and development (i.e. not separated into government or business spending) in constant year 2000 US dollars at purchasing power parity (source: UNESCO Institute for Statistics). In the case of research and development, a one year lag is introduced – i.e. patent filings in 2005 are compared with R&D spending in 2004. Note that when the 2004 R&D figure was not available for a specific country, the latest available figure has been used.

The indicators in this section are not shown for all countries. Where a country is omitted from one of the charts in this section, this is either because the statistics are not available or because the number of patents is very low and the indicators are therefore not meaningful.

D.1 Resident Filings per Million Population

The chart shows the number of resident patent applications per million inhabitants.

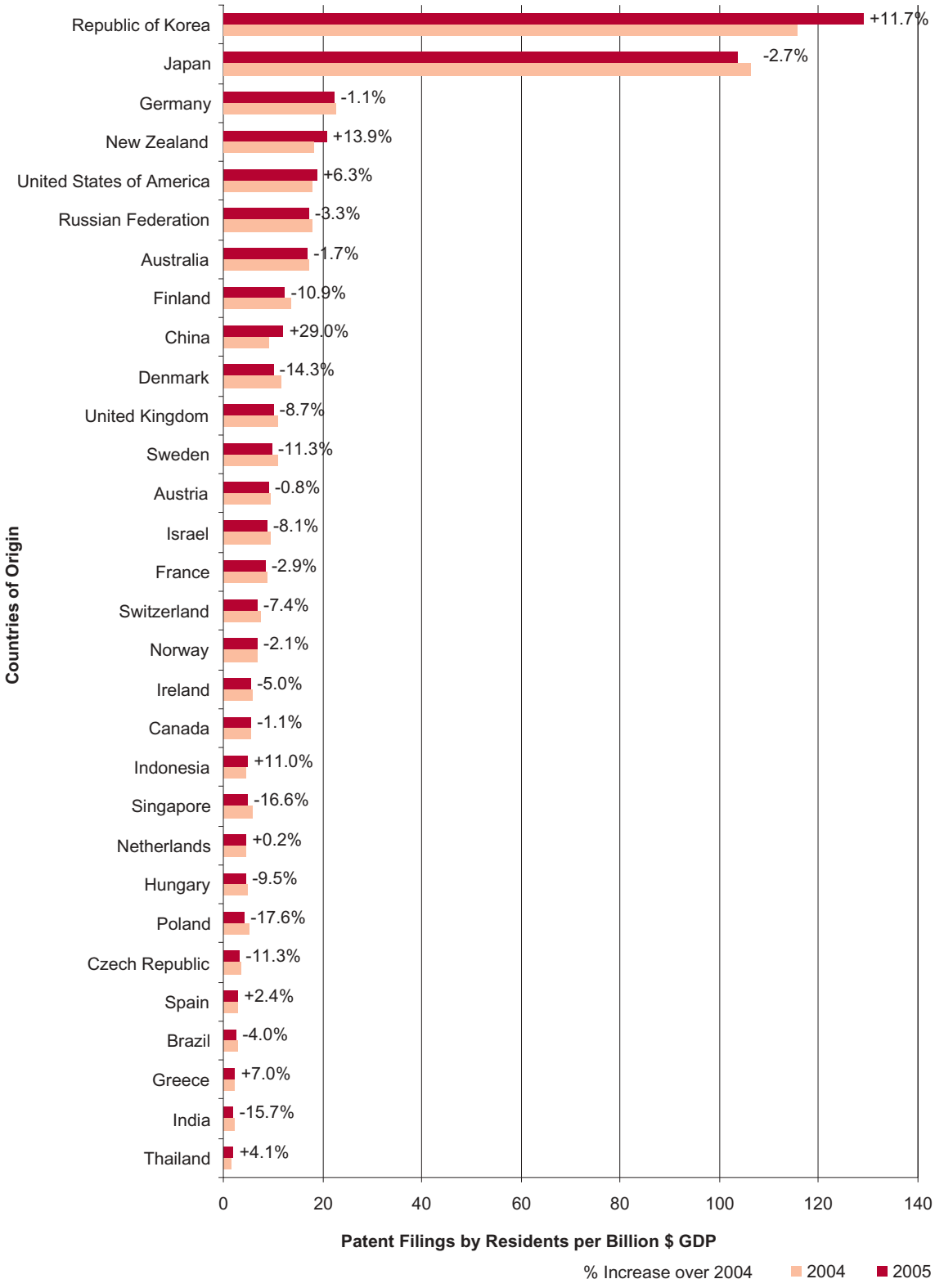


Source: WIPO Statistics Database and World Bank - World Development Indicators

> Japan and the Republic of Korea have the highest rate of resident patent applications per capita at 2,876 and 2,530 patent applications per million inhabitants.

D.2 Resident Filings per Gross Domestic Product

The chart shows the number of resident patent applications filed per billion dollars of GDP, where GDP is measured in constant year 2000 US dollars at purchasing power parity.

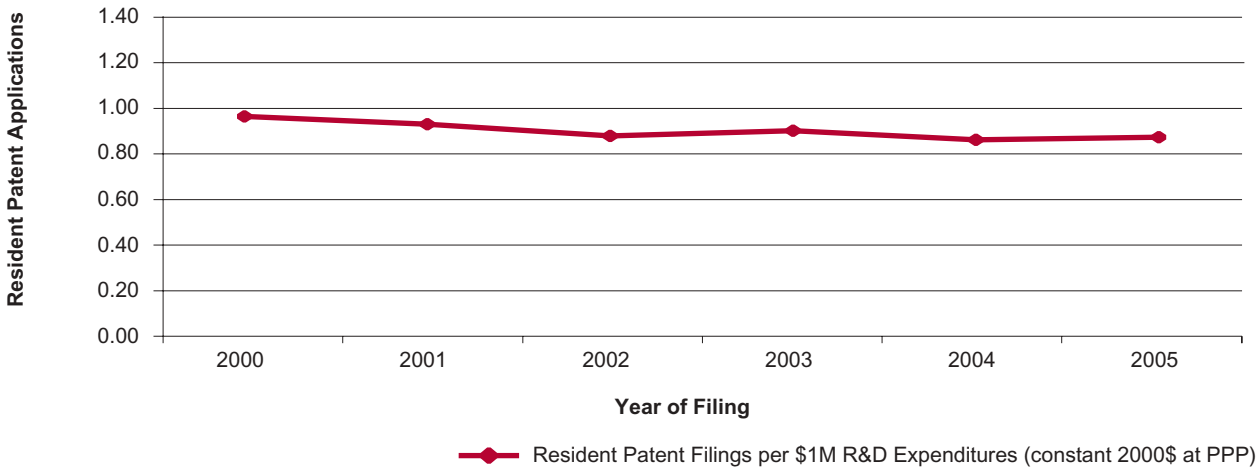


Source: WIPO Statistics Database and World Bank - World Development Indicators

> The Republic of Korea and Japan have the highest rates of resident patent applications per GDP.

D.3 Resident Filings per Research & Development Expenditures by year

The chart shows the number of resident patent applications filed per million dollars of research and development (R&D) expenditures measured in constant year 2000 US dollars at purchasing power parity (PPP).

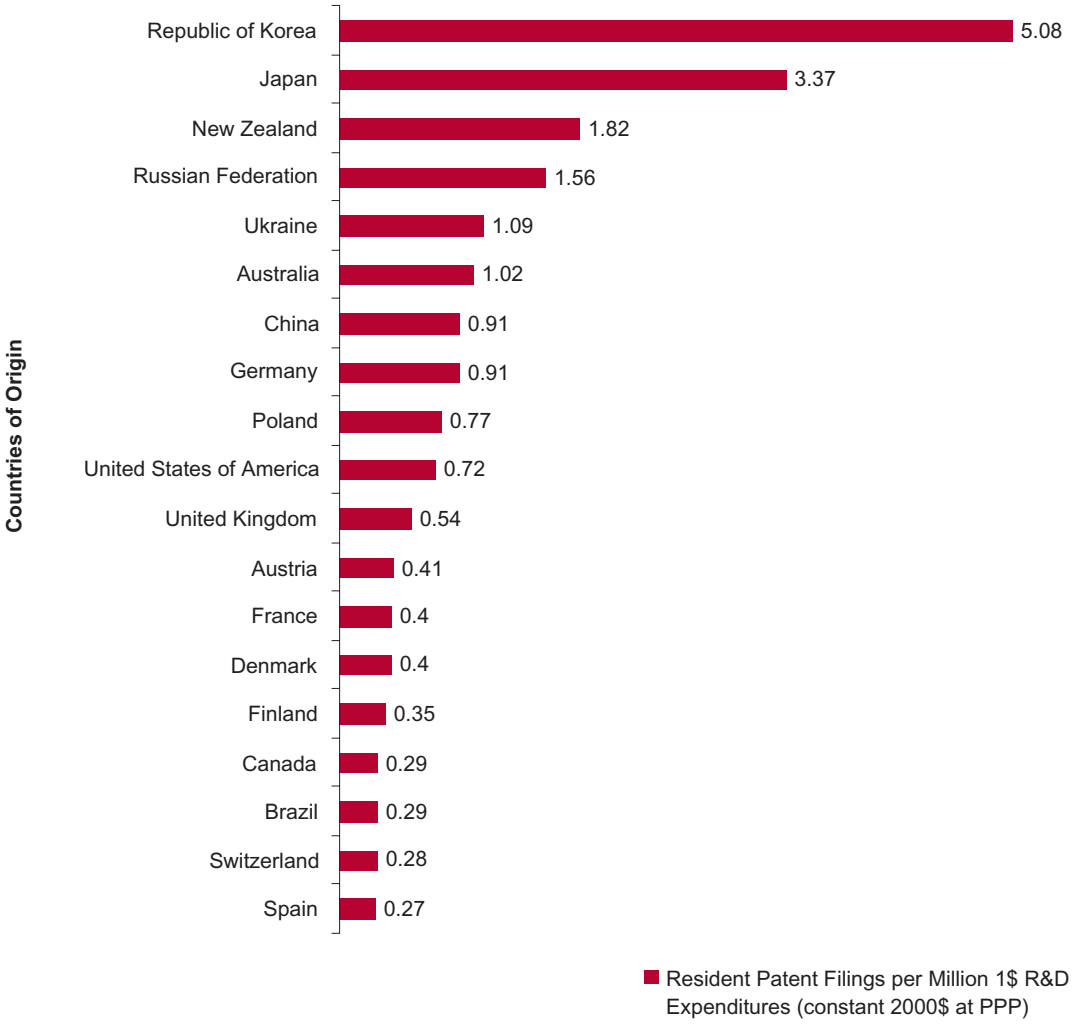


Source: WIPO Statistics Database, World Bank - World Development Indicators, UNESCO Institute for Statistics

> Globally, the number of patent applications by residents per million dollars of research and development expenditures has changed very little since year 2000.

D.4 Resident Filings per Research & Development Expenditures by Country of Origin

The chart shows the number of resident patent applications filed per million dollars of research and development (R&D) expenditures measured in constant year 2000 US dollars at purchasing power parity (PPP).



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

> The differences in patent filings between countries are less pronounced when weighted by research and development expenditures.

E FIELDS OF TECHNOLOGY

Patent applications are classified according to the International Patent Classification (IPC), which can be aggregated into 30 fields[1]. The most active technology fields are electricity and electronics and the highest rates of activity in these fields are in the patent offices of the United States of America and Japan. As a PCT international application can be counted in more than one technical field, the total of applications by technical field differs from the total of applications filed.

E.1 Technical Fields by Year of Filing

The table below shows the technical fields of patent applications filed from 2000 to 2004 (data for 2004 adjusted for missing values).

	Technical field	Year of Filing					Change compared with 2000
		2000	2001	2002	2003	2004*	
I	**Electricity - Electronics**						
1	Electrical devices, electrical engineering, electrical energy	113,432	117,374	112,553	113,902	127,969	12.8%
2	Audio-visual technology	87,479	94,220	89,349	94,986	112,197	28.3%
3	Telecommunications	102,720	112,365	104,513	106,696	115,494	12.4%
4	Information technology	110,701	125,036	115,272	118,572	141,357	27.7%
5	Semiconductors	64,049	71,367	68,082	67,271	78,483	22.5%
II	**Instruments**						
6	Optics	71,697	80,569	78,809	79,411	89,022	24.2%
7	Analysis, measurement, control technology	102,120	110,412	107,852	114,188	122,083	19.5%
8	Medical technology	55,813	59,415	61,569	72,229	73,789	32.2%
9	Nuclear engineering	5,920	5,922	5,820	6,029	6,752	14.1%
III	**Chemistry - Pharmaceuticals**						
10	Organic fine chemistry	36,625	36,137	37,447	37,574	34,790	-5.0%
11	Macromolecular chemistry, polymers	46,698	46,728	43,918	44,073	42,244	-9.5%
12	Pharmaceuticals, cosmetics	64,704	69,223	73,673	78,772	75,613	16.9%
13	Biotechnology	41,063	42,580	47,208	48,065	40,545	-1.3%
14	Agriculture and food	19,857	20,822	22,873	24,187	22,237	12.0%
15	Chemical and petrol industry, basic materials chemistry	36,893	36,841	36,389	35,353	33,657	-8.8%
16	Surface technology, coating	35,215	37,917	37,343	38,490	40,505	15.0%
17	Materials, metallurgy	38,087	39,985	36,625	37,100	35,891	-5.8%
IV	**Process engineering**						
18	Chemical engineering	50,339	50,347	48,810	49,362	46,731	-7.2%
19	Materials processing, textiles, paper	54,826	55,865	52,651	50,082	48,667	-11.2%
20	Handling, printing	77,756	77,910	75,529	77,089	84,159	8.2%
21	Agricultural and food processing, machinery and apparatus	20,740	20,587	21,093	21,059	21,707	4.7%
22	Environmental technology	20,016	20,218	19,248	18,773	18,864	-5.8%
V	**Machinery - Mechanics - Transport**						
23	Machine tools	38,454	39,563	35,664	34,834	36,435	-5.2%
24	Engines, pumps, turbines	38,682	41,554	40,733	42,488	46,090	19.2%
25	Thermal processes and apparatus	27,005	27,382	26,196	26,066	26,943	-0.2%
26	Mechanical Components	52,608	53,708	51,479	52,764	56,552	7.5%
27	Transport	68,833	70,112	67,185	72,146	79,781	15.9%
28	Space technology and weapons	5,418	5,414	5,370	5,811	5,351	-1.2%
VI	**Consumer goods - Civil engineering**						
29	Consumer goods and equipment	84,889	87,505	85,395	88,112	95,193	12.1%
30	Civil engineering, building, mining	59,601	59,056	56,412	57,319	59,239	-0.6%

* adjusted data

Source: WIPO Statistics Database

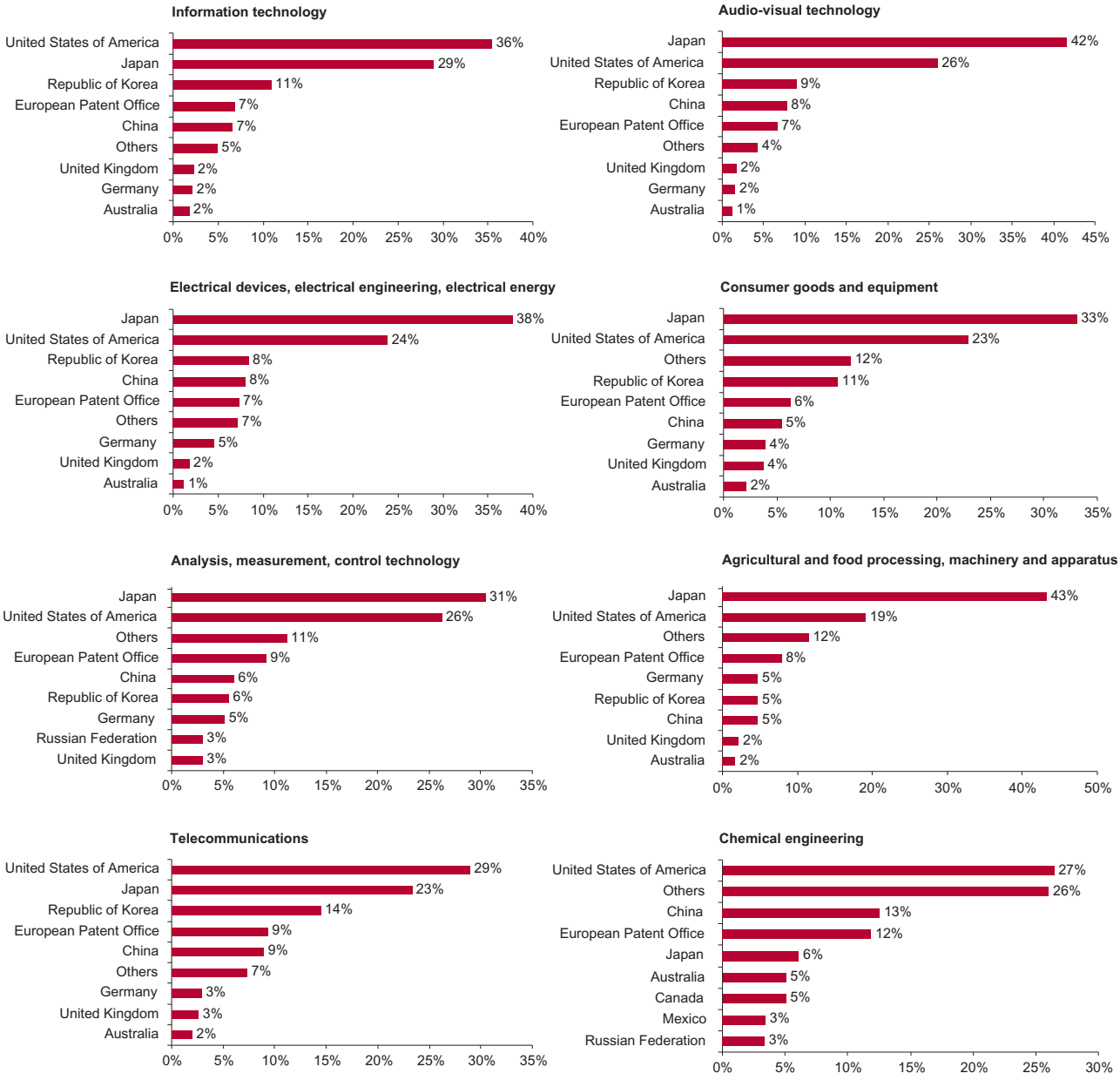
> Patent applications filed in the field of electricity and electronics represent 32% of the total.

> The three fastest growing technical fields from 2000 to 2004 were medical technology (+32.2%), audio-visual technology (+28.3%) and information technology (+27.7%).

[1] Created by OST-INPI/FhG-ISI. Further details at: *http://www.obs-ost.fr/*

E.2 Technical Fields by Office

The charts show the distribution of patent applications filed for a selection of technical fields by patent office over the years from 2000 to 2004[2].



Sources: WIPO Statistics Database

> The patent offices of Japan and the United States of America have high rates of activity in these selected fields.

> The distribution of patent filings in chemical engineering is noticeably different from the other technical fields.

[2] Data for 2004 have been adjusted for missing values.

F THE INTERNATIONAL ROUTE: THE PATENT COOPERATION TREATY

The Patent Cooperation Treaty (PCT) system for international patent filing has been in place since 1978 and use of the system has increased rapidly since then. During the 1990s, several changes resulted in the maturing of the PCT system as a major route for international patent filing.

> The number of member States of the PCT increased from 105 in January 2000 to 136 in December 2006.

> The number of PCT international applications increased from 93,237 in 2000 to 147,500 in 2006, reflecting an average annual increase of 7.9%.

> The average annual increase of worldwide PCT national phase entries was 9.3% from 2000 to 2005.

THE PATENT COOPERATION TREATY (PCT)

The PCT provides an international system for filing patent applications. The PCT procedure consists of an international phase followed by a national or regional phase.

In the international phase, an applicant files a PCT international application and designates the States for which it wishes to eventually seek patent protection. Since 2004, all eligible States are automatically designated in every PCT international application. Prior to 2004, more than 80% of applications would already designate all possible States at the time of international filing. In the international phase, the application is searched and published and, optionally, an international preliminary examination is conducted.

In the national (or regional) phase, the applicant requests national processing of the PCT international application, pays additional fees and initiates the national search, examination and granting procedure. PCT international applications lead only to a national patent grant – there is no international patent.

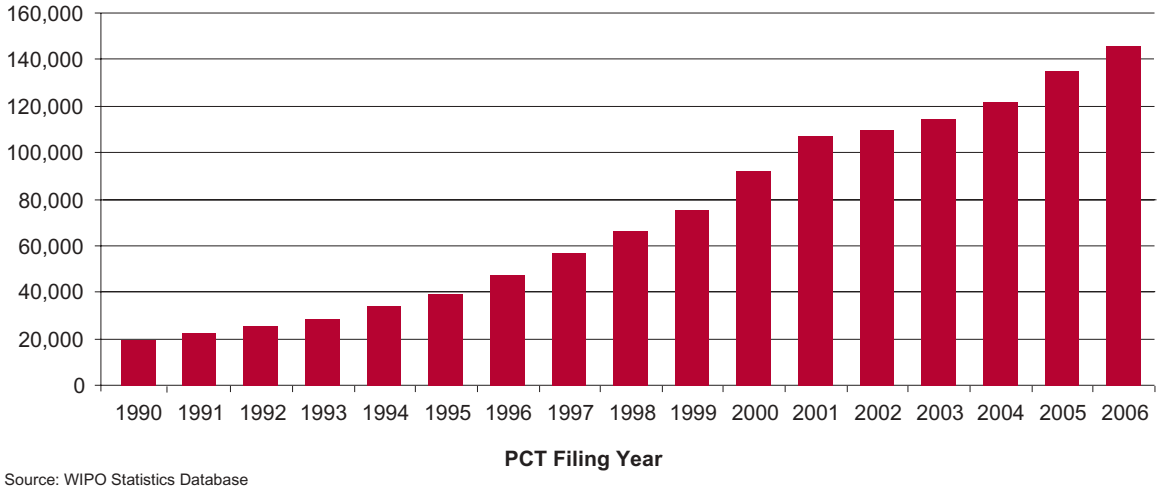
The national/regional phase processing must usually be initiated within 30 months from the priority date, although extensions to this time limit are available in many offices.

In this report, PCT national phase entries, rather than PCT designations or PCT international applications, are used to represent resident and non-resident patent filings via the PCT system. This is because the national phase filing represents an action on the part of the applicant to actively seek patent protection for a given territory, whereas international filings and designations, while they represent a legal right, do not accurately reflect where patent protection is eventually sought.

More information on the PCT procedure is available on the internet at the address *http://www.wipo.int/pct.*

F.1 PCT International Applications by Year of Filing

The chart shows the total number of PCT international applications filed worldwide from 1990 to 2006.



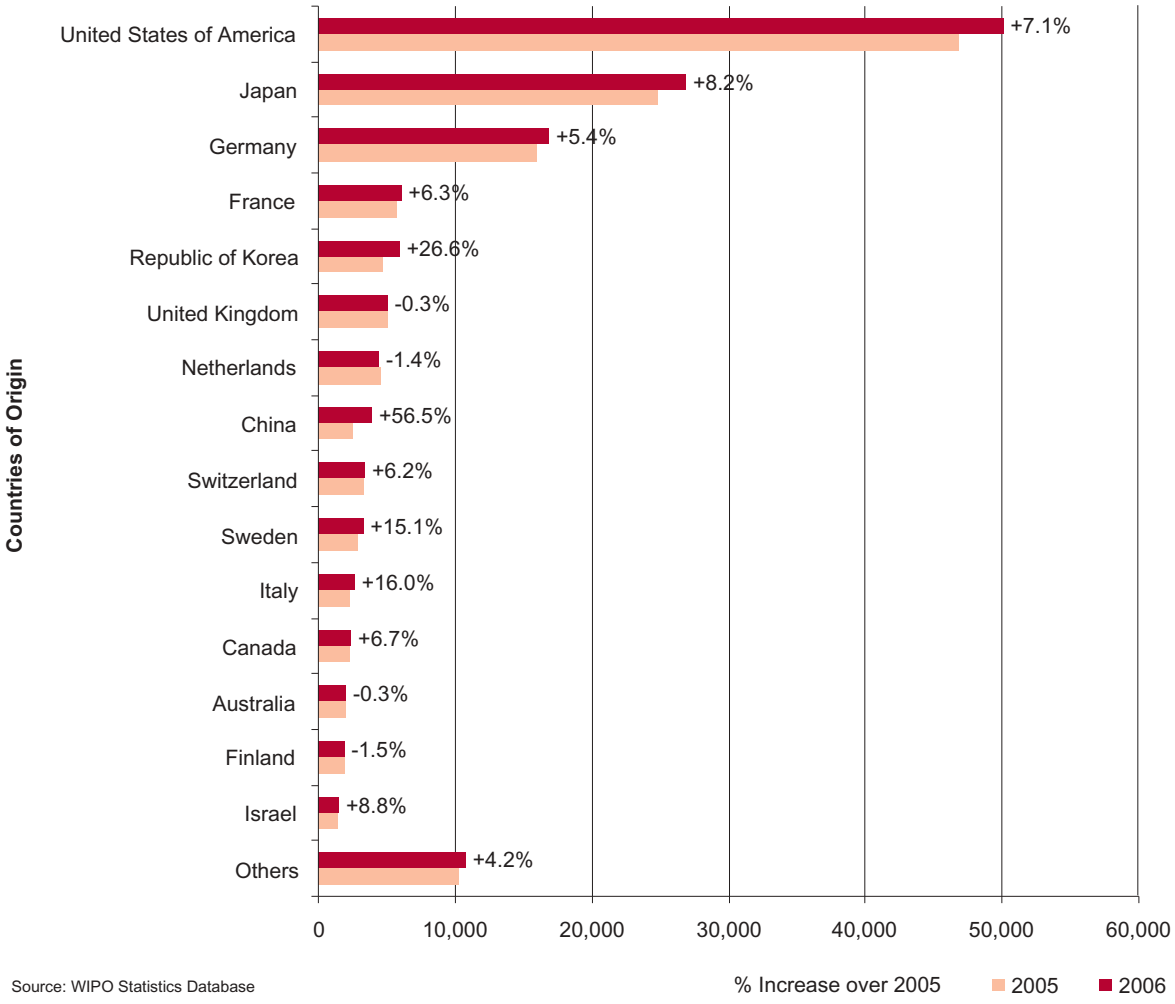
Source: WIPO Statistics Database

> The number of PCT international applications increased by 7.9% from 2005 to 2006.

> The number of PCT international applications increased from 93,237 in 2000 to 147,500 in 2006, an average annual increase of 7.9%.

F.2 PCT International Applications by Country of Origin

The chart shows the number of PCT international applications filed in 2005 and 2006 by country of origin.



Source: WIPO Statistics Database

> Applicants from the United States of America are the largest filers of PCT international applications, followed by applicants from Japan and Germany.

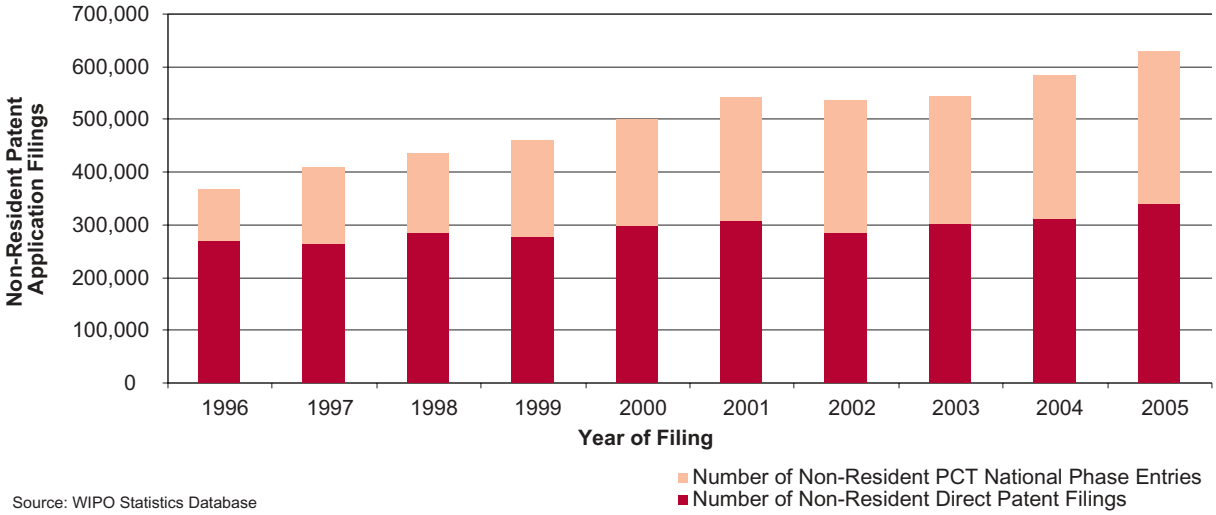
> The number of PCT filings from Northeast Asian countries is increasing rapidly. Filings from the Republic of Korea and China increased by 26.6% and 56.5%, respectively, from 2005 to 2006.

> All together, the European Patent Office Member States account for 50,016 PCT international applications, which represented an increase of 5.6% from 2005.

F.3 Non-Resident Direct Filings and PCT National Phase Entries by Year of Filing

Patent applicants have a choice of two procedures for filing patent applications outside their country of residence. They can file an application directly at the foreign patent office, while claiming priority of their earlier application according to the criteria of the Paris Convention, or they can file a PCT international application, also claiming priority, and then later request national or regional phase processing of the PCT international application.

The chart shows the number of non-resident patent filings worldwide. Patent applications filed directly at national or regional patent offices are compared to those filed as PCT national or regional phase entries via the PCT system.



Source: WIPO Statistics Database

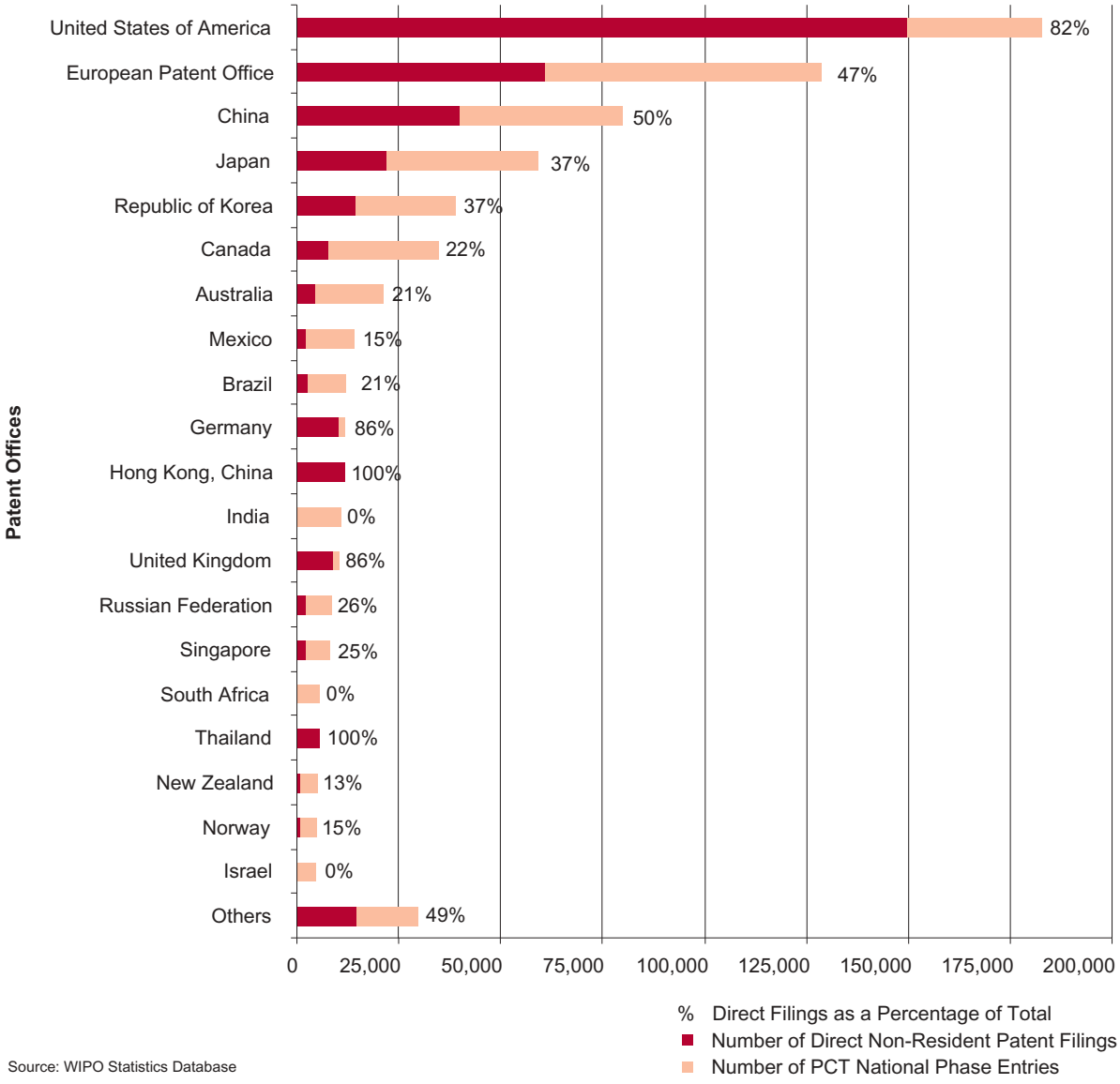
> Non-resident patent filings using the PCT route represented 48% of the total number of non-resident filings worldwide in 2005.

> The number of worldwide PCT national phase entries increased by 6.1% from 2004 to 2005.

> The number of non-resident patent filings filed directly at national or regional offices increased by 8.9% from 2004 to 2005.

F.4 Non-Resident Direct Filings and PCT National Phase Entries by Office

The chart shows the number of non-resident patent applications filed directly at each office and the number of PCT national or regional phase entries via the PCT system by office.



Source: WIPO Statistics Database

> The proportion of PCT national phase entries relative to direct non-resident filings varies from one office to another. While some offices such as Australia, Brazil, Canada, Japan, Mexico and the Republic of Korea receive the majority of their non-resident filings via the PCT system, others such as the United States of America and certain European offices receive more direct international filings than PCT national phase entries.

> Non-resident patent filings using the PCT route represented 48% of the total number of non-resident filings worldwide in 2005.

F.5 PCT International Applications published by Technical Field

The table below shows the technical fields of PCT international applications published in 2006 and compares each total with the corresponding total for previous years. In this table, PCT international applications are classified according to 30 classifications[3] based on the International Patent Classification (IPC) system. As an international application can be counted in more than one technical field, the total of applications by technical field is higher than that of applications published.

	Technical field	Year of Publication					Change compared with 2005
		2002	2003	2004	2005	2006	
I	**Electricity – Electronics**						
1	Electrical devices, electrical engineering, electrical energy	6,973	7,365	7,569	8,774	9,847	12%
2	Audio-visual technology	5,391	6,057	6,075	6,718	7,322	9%
3	Telecommunications	11,167	10,821	10,441	11,674	13,478	15%
4	Information technology	11,096	9,916	9,535	11,026	13,428	22%
5	Semiconductors	3,612	4,051	4,109	4,727	6,034	28%
II	**Instruments**						
6	Optics	2,408	2,616	2,562	3,216	3,725	16%
7	Analysis, measurement, control technology	10,767	11,449	10,869	11,881	12,780	8%
8	Medical technology	7,360	8,601	8,878	9,568	11,009	15%
9	Nuclear engineering	448	517	496	499	561	12%
III	**Chemistry – Pharmaceuticals**						
10	Organic fine chemistry	4,537	5,225	5,653	6,116	6,236	2%
11	Macromolecular chemistry, polymers	3,894	3,984	4,002	4,534	5,390	19%
12	Pharmaceuticals, cosmetics	9,654	9,976	9,437	11,101	13,470	21%
13	Biotechnology	9,001	8,601	7,611	7,320	7,026	-4%
14	Agriculture and food	1,522	1,660	1,839	1,950	2,290	17%
15	Chemical and petrol industry, basic materials chemistry	3,646	3,879	3,703	4,264	4,739	11%
16	Surface technology, coating	2,912	3,293	3,327	3,649	4,297	18%
17	Materials, metallurgy	2,909	3,037	3,032	3,256	3,764	16%
IV	**Process engineering**						
18	Chemical engineering	4,767	5,365	4,908	4,917	5,567	13%
19	Materials processing, textiles, paper	4,159	4,780	4,284	4,764	5,406	13%
20	Handling, printing	3,947	4,540	4,556	5,406	6,120	13%
21	Agricultural and food processing, machinery and apparatus	1,133	1,274	1,334	1,525	1,479	-3%
22	Environmental technology	1,230	1,314	1,250	1,383	1,541	11%
V	**Machinery – Mechanics – Transport**						
23	Machine tools	2,369	2,485	2,324	2,774	2,963	7%
24	Engines, pumps, turbines	2,583	2,820	2,975	3,205	3,666	14%
25	Thermal processes and apparatus	1,390	1,580	1,542	1,825	2,031	11%
26	Mechanical Components	3,229	3,567	3,720	4,113	4,657	13%
27	Transport	3,944	4,597	4,881	5,545	6,012	8%
28	Space technology and weapons	448	494	436	536	498	-7%
VI	**Consumer goods – Civil engineering**						
29	Consumer goods and equipment	4,952	5,757	6,040	7,244	8,182	13%
30	Civil engineering, building, mining	3,132	3,461	3,848	3,914	4,362	11%

Source: WIPO Statistics Database

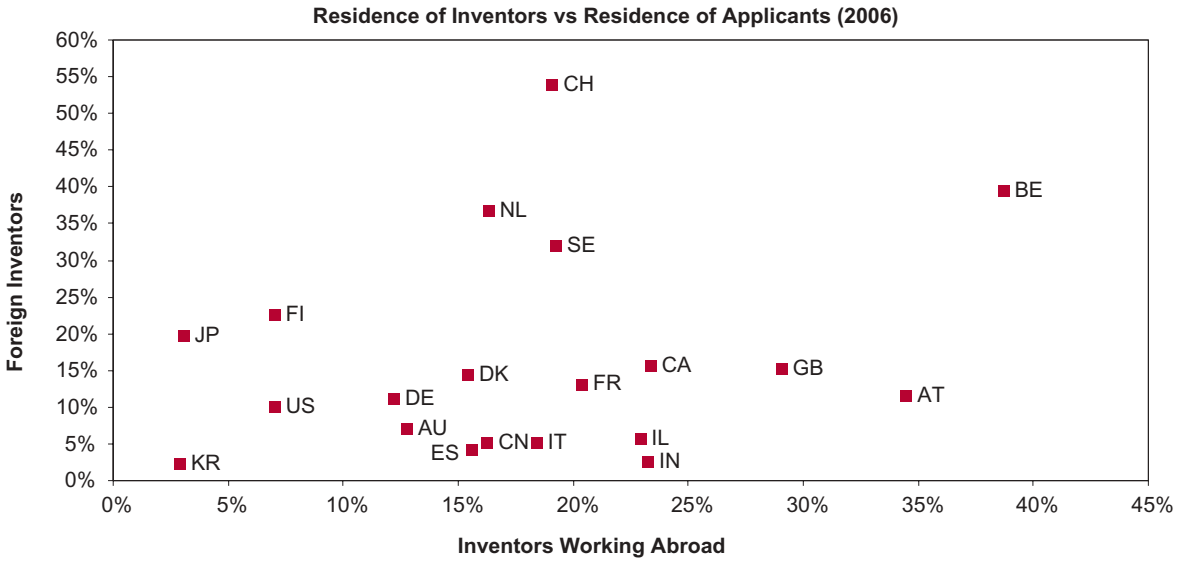
> In 2006, 23% of published PCT international applications were classified in three technical fields, namely telecommunications, pharmaceuticals and cosmetics, and information technology.

> PCT international applications published in the field of semiconductors saw an increase of 28%, making this the fastest growing technical field in 2006, followed by information technology (+22%) and pharmaceuticals and cosmetics (+21%).

[3] Created by OST-INPI/FhG-ISI. Further details at: *http://www.obs-ost.fr/*

F.6 Residence of Inventors compared with Residence of Applicants within PCT International Filings

The chart shows the percentage and composition of foreign inventors in PCT international applications. The Y-axis shows the percentage of foreign inventors in PCT international applications filed by applicants (i.e. companies) of the country concerned. It indicates the probability of employing foreign researchers. The X-axis shows the percentage of inventors who are presented in the PCT international application filed by foreign applicants. It also indicates the probability of inventors working for the foreign applicants. Note that the statistical tables at the end of the report include country codes and names.



Source: WIPO Statistics Database

> Companies of Switzerland, the Netherlands, Belgium and Sweden have more foreign inventors than average.

> Researchers from Belgium, Austria, Great Britain, Canada, Israel and India constituted the largest percentage of inventors working in foreign companies.

G PATENT FILINGS IN THE EUROPEAN REGION

A complete measure of patent filings in the European region needs to take into account the European Patent Convention (EPC) and the fact that patent protection can be sought by filing either at national offices of the EPC member States or at the European Patent Office (EPO).

Other factors influencing patent activity in Europe are the European common market and common currency, which are leading to a high degree of integration of the European economies. This creates an incentive for European patent applicants to seek patent protection in multiple EPC member States, therefore, non-resident patent filings by Europeans in other EPC member State offices and at the EPO have become common.

This section presents several statistics to show the patterns of filing in the European region. There are three different categories of patent filings in this section:

1. Patent filings by residents of EPC member States at the national office of their State of residence.

2. Intra-regional filings, including filings by residents of EPC member States at other EPC member State offices and at the EPO.

3. Extra-regional filings, including filings at EPC member State offices and at the EPO by residents of countries outside the EPC member States.

PATENT FILINGS IN THE EUROPEAN PATENT CONVENTION REGION

To seek patent protection in the European region, patent applicants have a choice of two routes: they may apply for patents at the national offices of each European State, or they may apply for a European patent via the European Patent Office (EPO). The EPO grants patents on behalf of the member States of the European Patent Convention (EPC), the membership of which is larger than that of the European Union as some EPC member States are not members of the European Union.

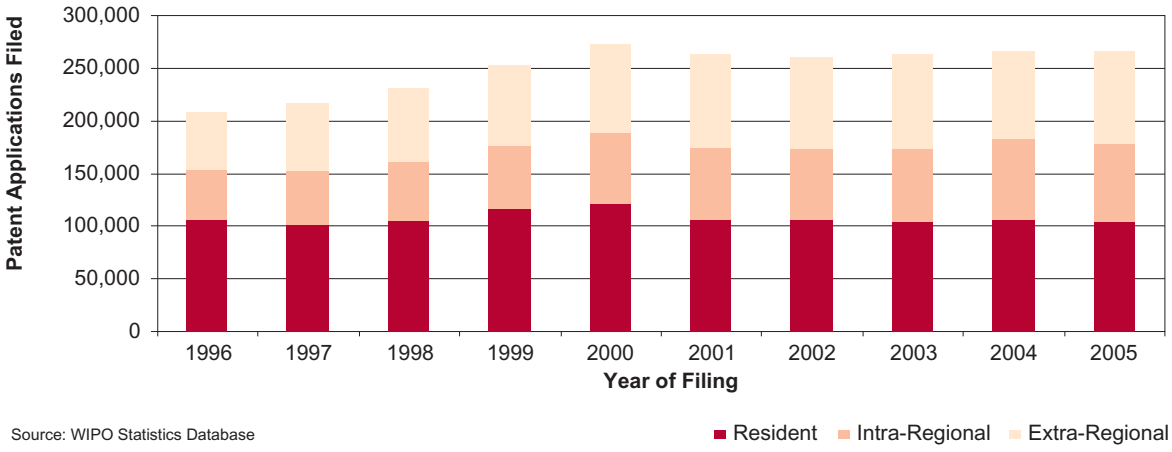
A European patent application can designate one or more EPC member States and, once granted by the EPO, must be separately validated in each of those States.

This dual system means that patent applications with effect in Europe may be filed at the national office or the EPO and explains why the number of filings at some European national offices are lower than might otherwise be expected.

The statistics in this report show activity in the European Patent Office (code EP) and the offices of member States separately. For the purposes of this report, the European region refers to the member States of the European Patent Convention, not the European Union.

G.1 Patent Filings in the European Region by Year of Filing

The chart shows the total number of patent applications filed at EPC (European Patent Convention) member States by year of filing. The chart is broken down into resident applications (European residents filing at their home offices), intra-regional applications (European residents filing at other EPC member State offices and at the EPO) and extra-regional applications (from applicants residing in countries that are not EPC member States).



Source: WIPO Statistics Database

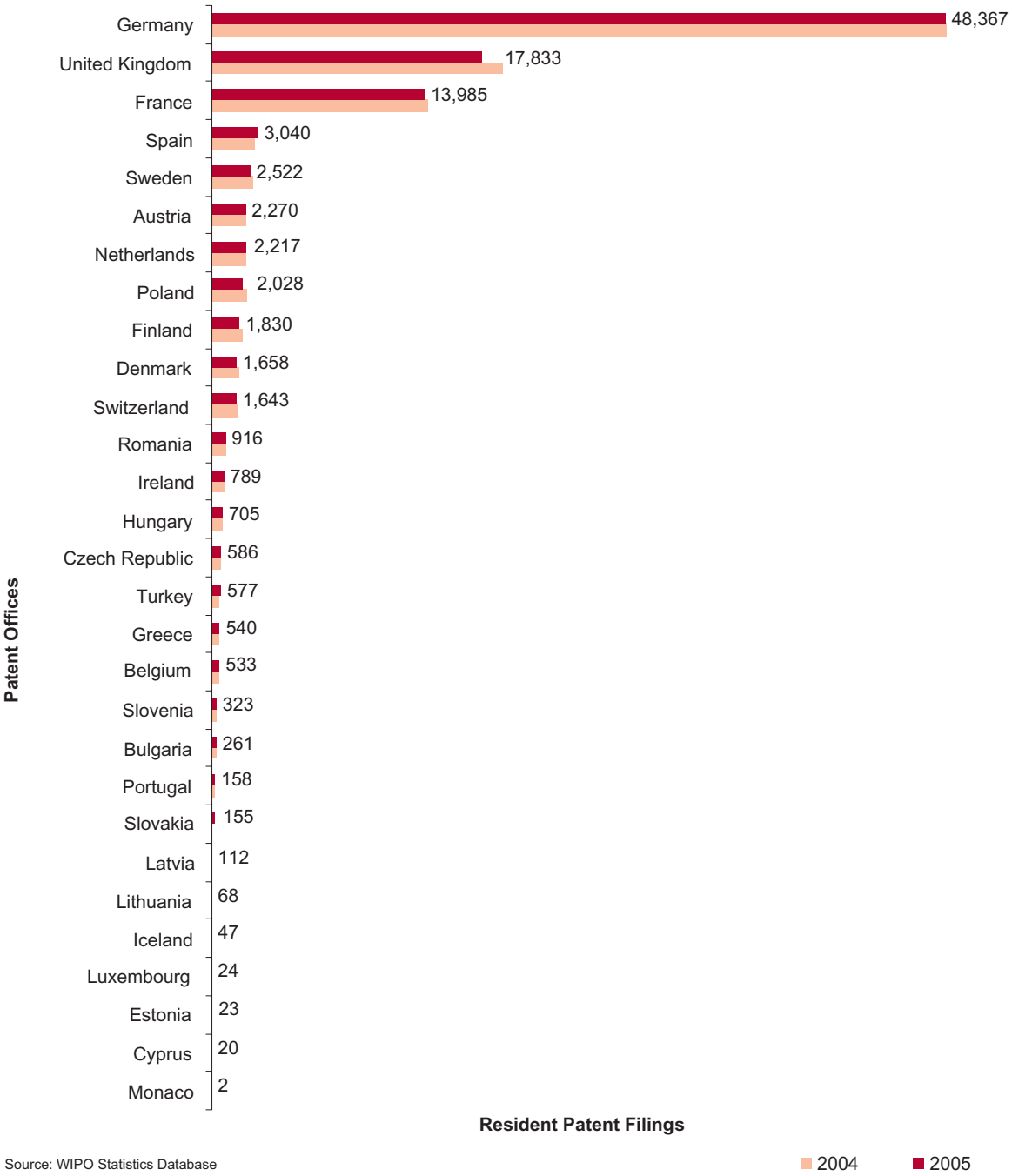
- The number of resident patent filings in the European region has been relatively static since 1996, whereas intra-regional filings have grown at an average annual rate of 4.7% and extra-regional filings at an average annual rate of 4.8%.

- In 2005, the number of resident and intra-regional filings both decreased by 2% from 2004, while the number of extra-regional filings increased by 5%.

- Resident patent filings make up 39% of patent filings in the European region in 2005, whereas intra-regional filings constitute 28% and extra-regional filings account for 33%.

G.2 Resident Filings at EPC Member States by Office

The chart shows the number of resident patent applications filed at EPC (European Patent Convention) member States by office.

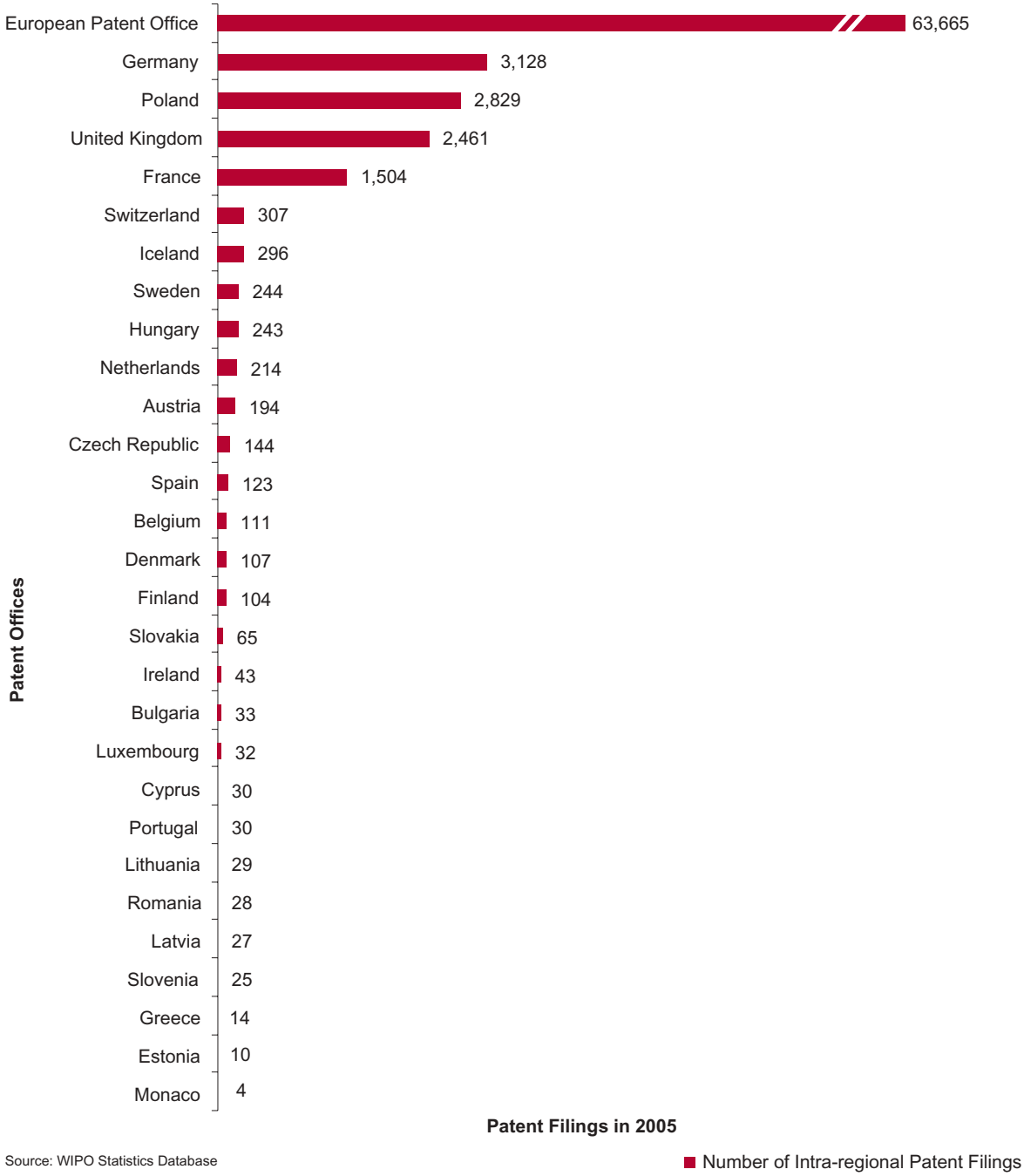


Source: WIPO Statistics Database

> Residents of Germany are the biggest filers of patent applications at their national patent office, followed by the United Kingdom and France.

G.3 European Intra-Regional Filings by Office

The chart shows the number of intra-regional patent filings by residents of EPC member States at other EPC member State offices and at the EPO.



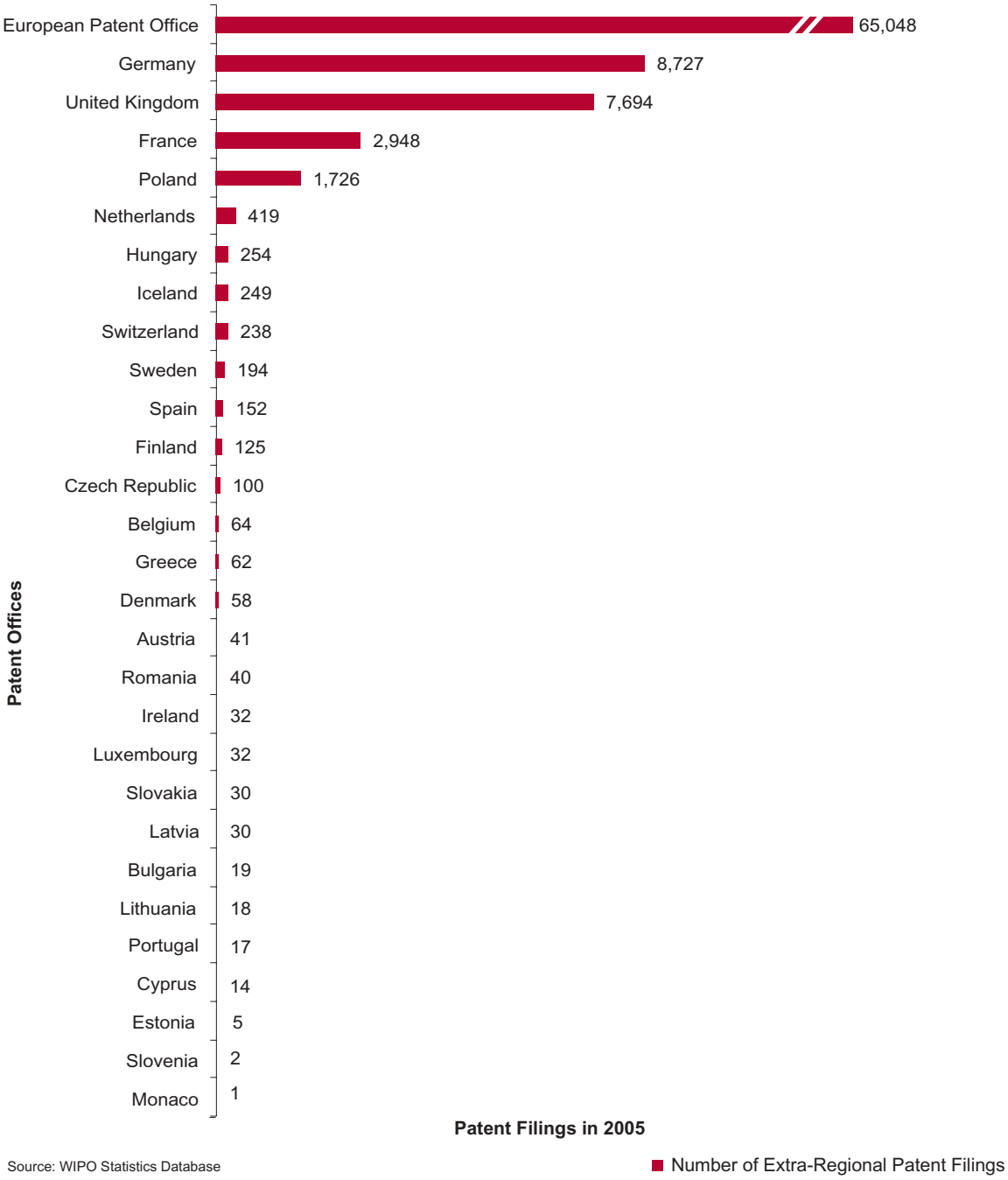
Source: WIPO Statistics Database

> The EPO accounts for 84% of intra-regional patent applications filed.

> Most European national offices receive relatively few patent applications from residents of other EPC member States.

G.4 European Extra-Regional Filings by Office

The chart shows the number of patents filed by residents of non-EPC member States at EPC member State offices and at the EPO.



Source: WIPO Statistics Database

> Patent applicants from non-EPC member States tend to file at the European Patent Office. The EPO receives 74% of all extra-regional applications.

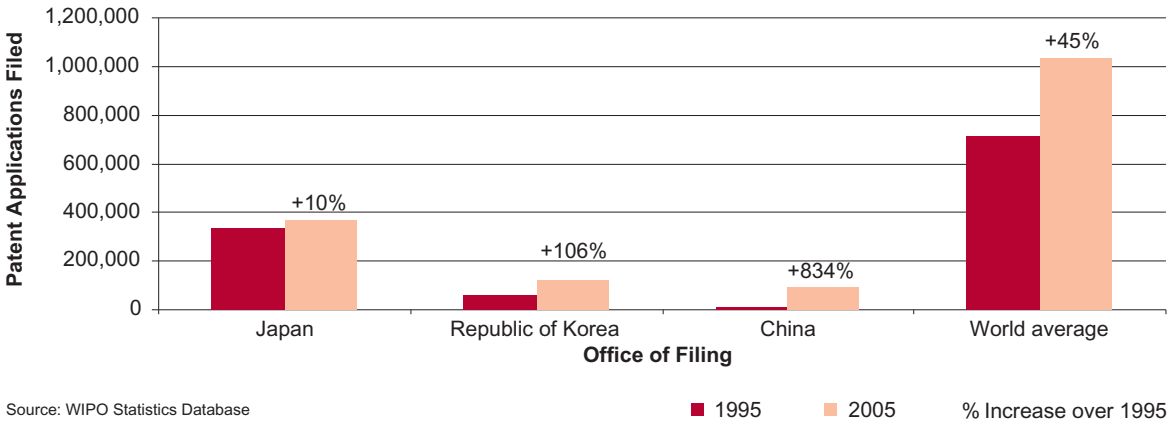
> The patent offices of Germany and the United Kingdom receive a significant number of patent filings from extra-regional residents.

> Note that the PCT national phase route is closed for France, Italy, the Netherlands and several other EPC member States. A PCT applicant seeking protection in those countries must do so by designating the EPO and entering the PCT regional phase at the EPO. This partially accounts for relatively low numbers of non-resident filings at the above-mentioned patent offices.

H PATENT FILINGS IN THE NORTH EAST ASIAN REGION

In the past decade, the North East Asian region has significantly increased its share of worldwide patenting, both as a source of patent applications and as a target of non-resident patent applications from outside the region.

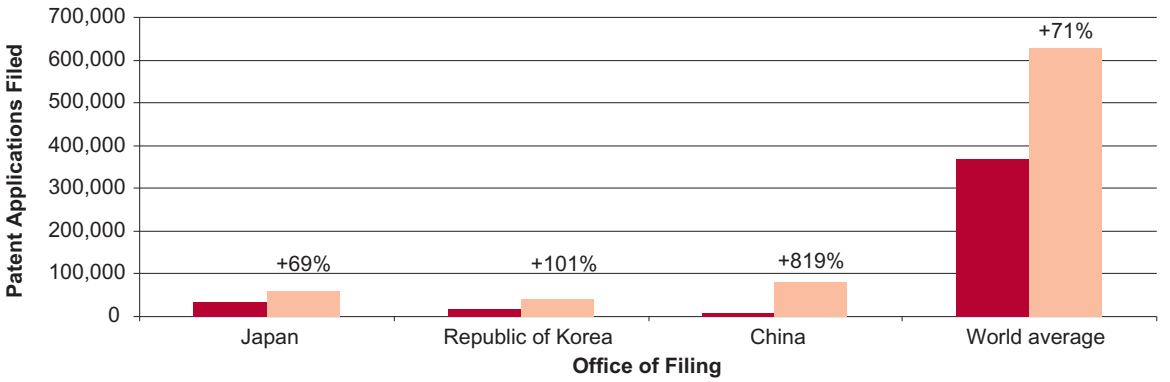
H.1 Resident Filings in North East Asia by Year of Filing



Source: WIPO Statistics Database

> Patent filings by residents doubled in the Republic of Korea and increased by more than eight times in China between 1995 and 2005.

H.2 Non-Resident Filings in North East Asia by Year of Filing



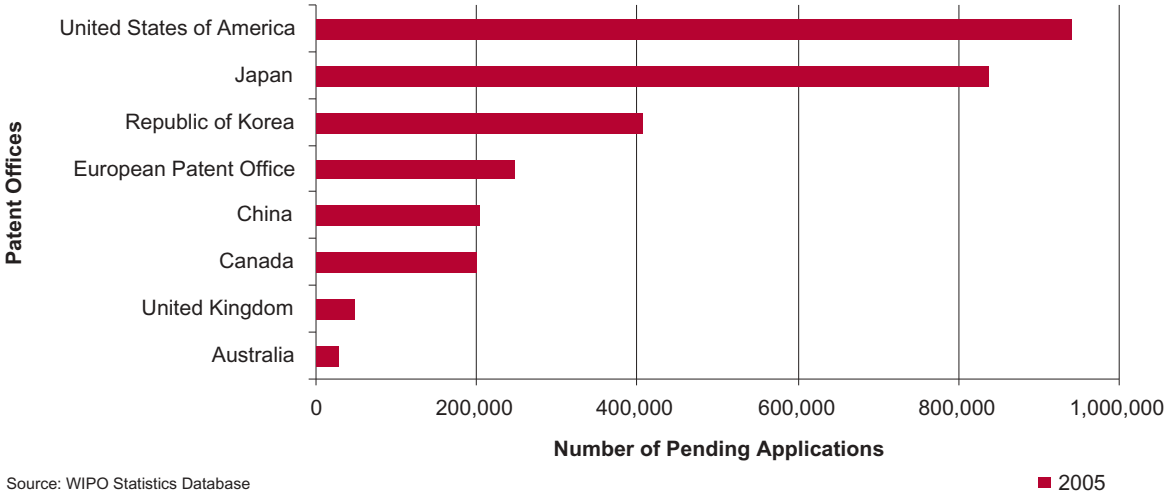
Source: WIPO Statistics Database

> Patent filings by non-residents doubled in the Republic of Korea and increased by more than eight times in China between 1995 and 2005.

I PROCESSING OF PATENT APPLICATIONS

I.1 Pending Applications by Office

The chart below shows the number of patent applications pending examination in 2005 for offices for which data is available.



Source: WIPO Statistics Database

> Note that the number of pending applications at the Japan Patent Office is significantly affected by a change in the request for examination period from seven years to three years, which came into effect in 2004. The impact of this change is that a large number of applications filed before 2004, which had a maximum seven year period from filing to request for examination, are due for examination at the same time as many applications filed since 2004. Over time, this dual workload will be reduced and the number of applications pending examination at the Japan Patent Office is expected to decrease significantly.

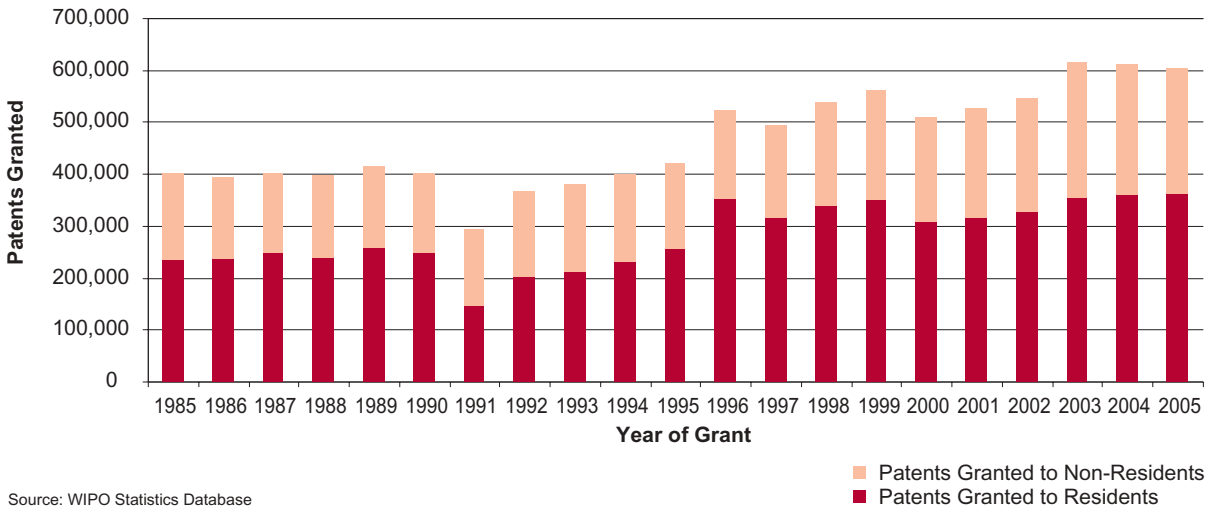
J PATENTS GRANTED

After filing, a patent application is subject to search and/or examination procedure at the patent office. The patent application is usually published before granting and third parties may have the opportunity to file oppositions to the patent before or after granting. The search and examination procedure usually starts soon after filing, but in some offices search and examination are requested separately from the patent application and may be delayed until several years after the application. In some cases, applications may be abandoned by the applicant before they are examined or granted.

The number of patents granted therefore represents the number of patent rights established each year. However, the timing of the patent grant and the success rate at different offices can vary widely and therefore comparisons over time need to be made with caution. In particular, changes in the number of patents granted can be due to the changing capacity of patent offices to examine and grant patents or to changes in time limits or examination practices, rather than an underlying trend in inventive activity.

J.1 Patents Granted Worldwide by Year of Grants

The chart below shows the number of patents granted worldwide by year of grant.



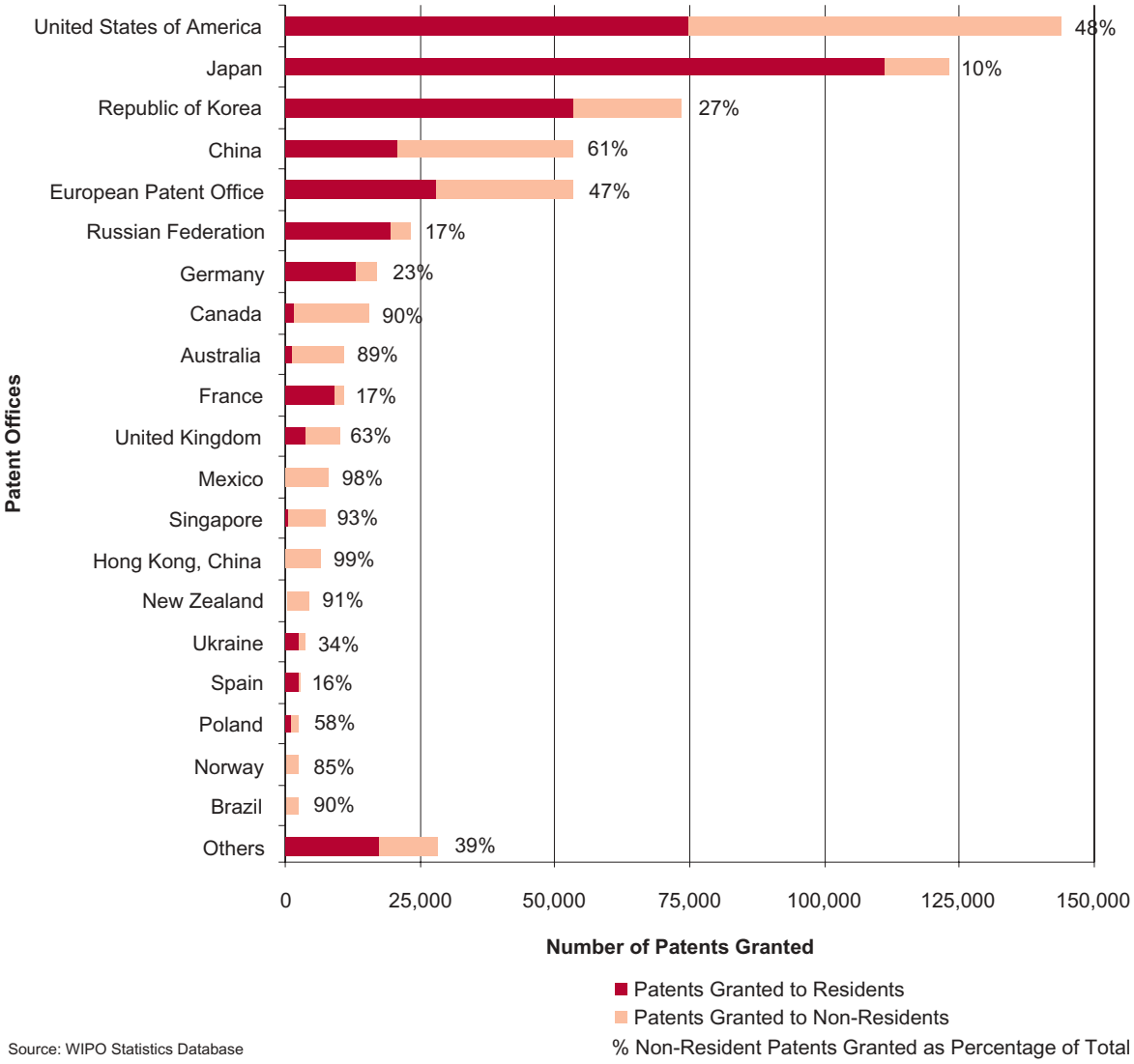
Source: WIPO Statistics Database

> The number of patents granted worldwide in 2005 has remained almost stable from 2004 with about 600,000 patents granted.

> The average annual growth rate of patents granted between 1995 and 2005 was 3.6%. However, the growth rate has been very uneven and there have been periods of negative growth.

J.2 Patents Granted by Office

The chart shows the number of patents granted by office in 2005.



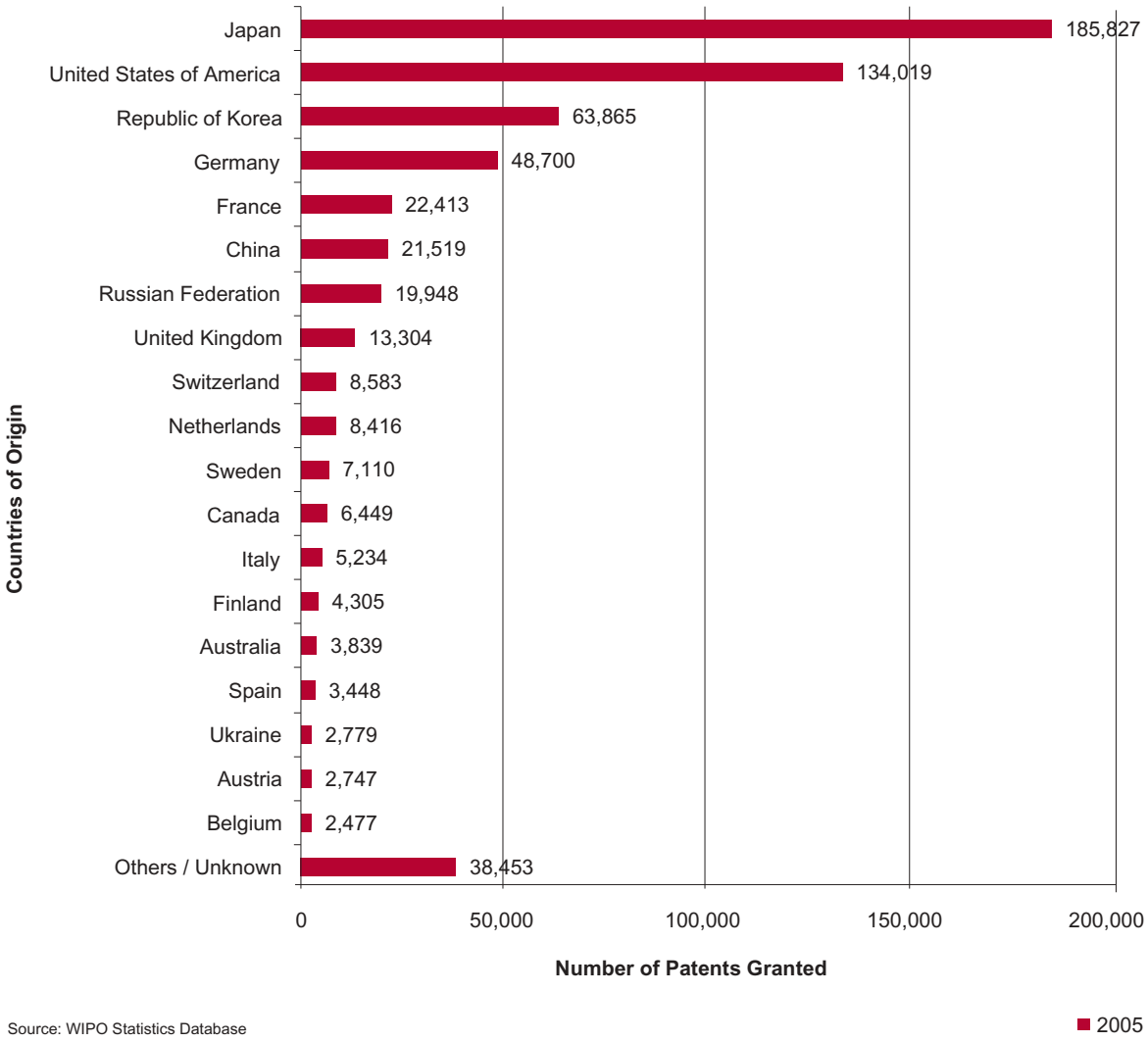
Source: WIPO Statistics Database

> The United States Patent Office granted the largest number of patents followed by the offices of Japan, the Republic of Korea (up 2 places from 2004), China (up 1 place from 2004) and the EPO.

> These five offices account for 74% of patents granted worldwide in 2005.

J.3 Patents Granted by Country of Origin

The chart shows the number of patents granted worldwide by country of origin of the applicants in 2005.



Source: WIPO Statistics Database

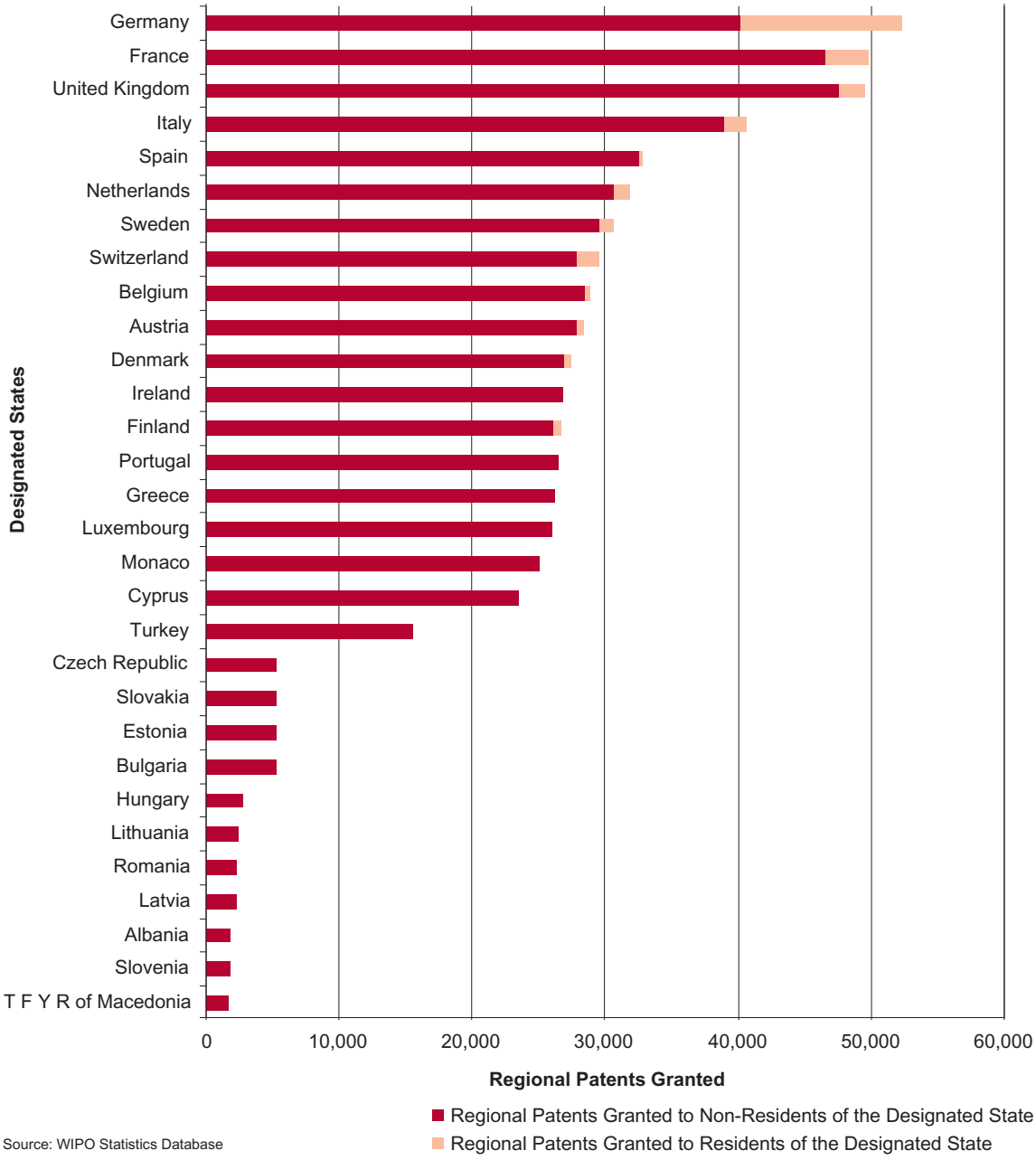
> The largest number of patents granted worldwide originate from residents of Japan, followed by those of the United States of America, the Republic of Korea, Germany and France.

> These five countries of origin account for 74% of patents granted worldwide in 2005.

J.4 Regional Patents Granted by Designated State

Patents granted by the European Patent Office designate one or more of the member States of the European Patent Convention (EPC) and, subject to validation in each of those designated States, enter into force in those States. The total number of patents granted for a member of the EPC is therefore the sum of the patents granted by the national office and the patents granted by the EPO.

The following chart shows the number of patents granted by the EPO in 2005 in each designated State. Note, as above, that these patents are subject to the validation procedure in each member State after granting by the EPO.



Source: WIPO Statistics Database

> The office of Germany, followed by those of France and the United Kingdom, were the most commonly designated offices in regional patent grants.

> Most regional grants originate from non-resident applicants.

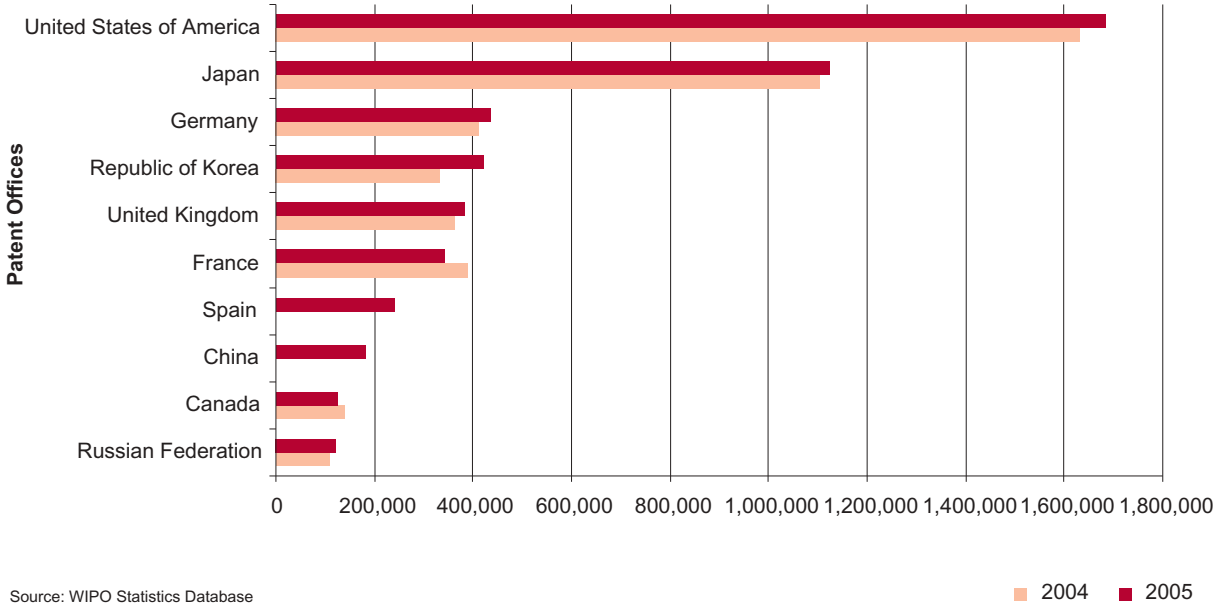
K PATENTS IN FORCE

The standard international rule provides that a patent may remain in force for up to twenty years, although extensions beyond twenty years are possible in some circumstances. Most offices require a payment of regular maintenance fees in order to maintain the validity of a patent and many patents are maintained for less time than the maximum twenty-year period.

Note that information on patents in force is not available for several offices, including Brazil, India and some European offices.

K.1 Patents in Force by Office

The chart shows the total number of patents in force by office in 2004 and 2005 for which data is available.



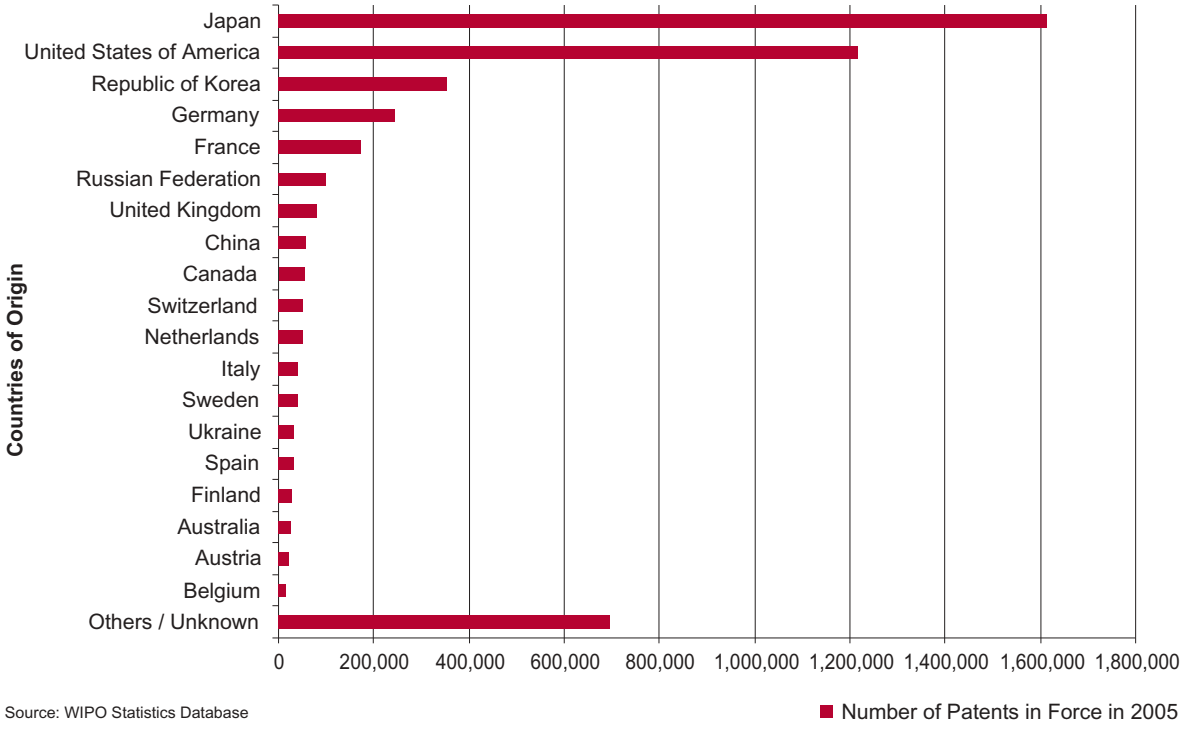
Source: WIPO Statistics Database

> There were a total of about 5.6 million patents in force worldwide in 2005, which is an increase of 2% from 2004.

> Of this total, 90% are accounted for by the ten offices shown above.

K.2 Patents in Force by Country of Origin

The chart shows the number of patents in force in 2005 according to the country of origin of the patent applicant.

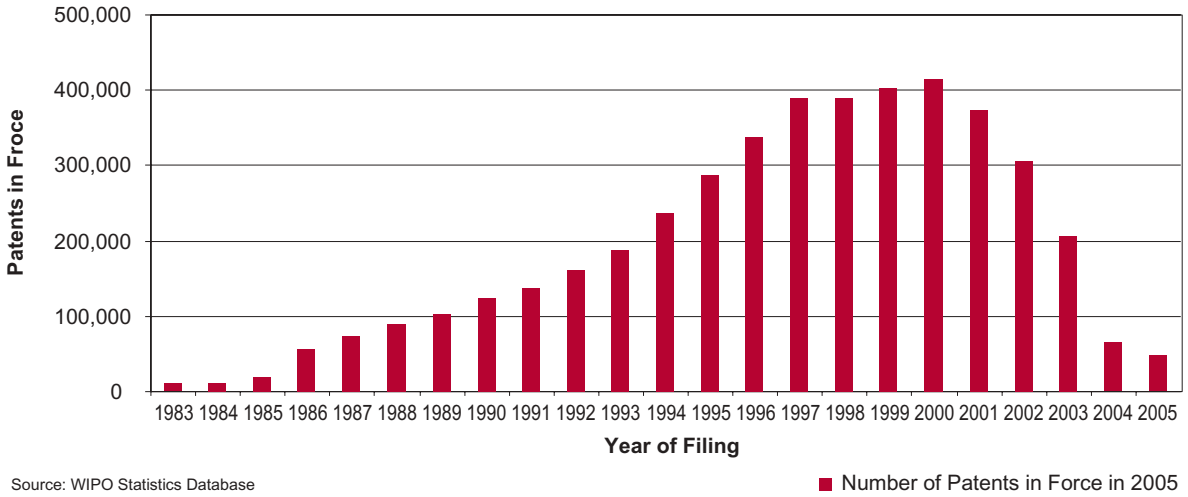


Source: WIPO Statistics Database

> Applicants from Japan and the United States of America owned 28% and 21%, respectively, of patents in force worldwide in 2005.

K.3 Age Profile of Patents in Force

The chart shows the number of patents in force in 2005 according to the year of filing of the original patent application. As previously noted, a patent may be maintained in force for up to twenty years from the original filing date, but maintenance is subject to payment of maintenance fees at regular intervals to the patent office.



Source: WIPO Statistics Database

> About 50% of patents in force in 2005 were patents filed in 1998 or later.

> Only 27.5% of the patents in force in 2005 were filed before 1995.

L STATISTICAL TABLES

Table 1. Patent Filings and Grants by Office

Code	Office	Resident Direct Filings 2005*	Non-Resident Direct Filings 2005*	PCT National Phase Entries** 2005*	PCT International Applications 2006	Grants to Residents 2005*	Grants to Non-Residents 2005*
OA	African Intellectual Property Organization				1		
AP	African Regional Intellectual Property Organization						*210*
DZ	Algeria		24	431	4		
AM	Armenia	206	1	1	7	118	8
AU	Australia	8,630	4,583	17,979	2,010	1,163	9,816
AT	Austria	1,904	200	401	543	771	167
AZ	Azerbaijan	281		6	6		
BY	Belarus	*1,060*	*50*	*230*	11	*930*	*140*
BE	Belgium	533	175		138	533	175
BA	Bosnia and Herzegovina	66	306	*40*	7	10	36
BR	Brazil	3,821	2,560	*9,730*	314	249	2,190
BG	Bulgaria	261	13	39	21	80	233
CA	Canada	3,942	7,577	28,369	2,156	1,511	14,005
CL	Chile	361	2,646			19	292
CN	China	93,172	40,022	40,133	3,826	20,705	32,600
CO	Colombia	*40*					
CR	Costa Rica				7		
HR	Croatia	355	27	630	44	16	124
CU	Cuba	94	5	186	20	34	30
CY	Cyprus	20	44		3	6	62
CZ	Czech Republic	586	99	145	96	349	1,202
KP	Democratic People's Republic of Korea				3		
DK	Denmark	1,655	151	17	827	106	283
EC	Ecuador	11	151	429	9		
EG	Egypt	428	123	885	41	49	98
EE	Estonia	23	6	9	11	75	6
EA	Eurasian Patent Organization	*150*	438	1,502	20		1,201
EP	European Patent Office	33,410	27,355	67,948	23,546	28,034	25,224
FI	Finland	1,827	156	76	1,014	1,130	627
FR	France	*13,990*	*2,950*		3,854	*9,070*	*1,890*
GE	Georgia	225	22	*190*	8	190	125
DE	Germany	47,537	10,214	2,471	2,337	13,084	3,979
GR	Greece	*540*	*60*		69	*350*	*50*
GT	Guatemala	*10*	*290*				
HK	Hong Kong, China	156	11,607			87	6,431
HU	Hungary	697	59	446	131	130	996
IS	Iceland	39	10	543	24	11	90
IN	India	6,610		*11,090*	503	*750*	*1,090*
ID	Indonesia	234	533	3,536	7		
IE	Ireland	789	75		144	*300*	*210*
IL	Israel	*1,080*		5,124	1,512	*290*	*1,240*
IT	Italy				883		
JM	Jamaica	10	59				
JP	Japan	359,382	22,120	45,576	26,420	111,088	11,856
KZ	Kazakhstan	*1,920*	*20*	*50*	16	*1,210*	
KE	Kenya				3		
KG	Kyrgyzstan	*130*				*70*	
LV	Latvia	112	17	40	12	86	36
LT	Lithuania	68	10	37	10	74	42
LU	Luxembourg	24	22	42		14	15

* Estimated data are in italics

** Includes Resident and Non-Resident PCT National Phase Entries

Code	Office	Resident Direct Filings 2005*	Non-Resident Direct Filings 2005*	PCT National Phase Entries** 2005*	PCT International Applications 2006	Grants to Residents 2005*	Grants to Non-Residents 2005*
MO	Macau	3	119				5
MG	Madagascar		*2*	*10*		9	23
MY	Malaysia				34		
MT	Malta		*480*				*390*
MX	Mexico	549	2,134	11,753	154	131	7,967
MC	Monaco	2	5			6	3
MN	Mongolia	100	2	85	6	114	83
MA	Morocco	139	66	455	5	45	511
NL	Netherlands	2,217	633		997	1,804	569
NZ	New Zealand	1,856	672	4,477	343	391	3,798
NO	Norway	1,143	706	4,137	503	*380*	*2,130*
PE	Peru	27	993			5	383
PH	Philippines	*150*		1,731	19		
PL	Poland	2,028	199	4,356	96	1,054	1,468
PT	Portugal	158	30	17	32	145	86
KR	Republic of Korea	121,942	14,218	24,761	5,919	53,419	20,093
MD	Republic of Moldova	377	2	9	7	261	8
RO	Romania	916	30	38	28	522	237
RU	Russian Federation	23,588	2,250	6,415	654	19,447	3,943
SM	San Marino				1		
YU	Serbia and Montenegro (formerly Yugoslavia)		*880*		32		*100*
SG	Singapore	435	2,042	6,128	410	555	6,975
SK	Slovakia	154	39	57	25	52	508
SI	Slovenia	323	27		40	259	26
ZA	South Africa			5,554	137		
ES	Spain	3,027	236	90	919	2,327	442
SD	Sudan				3		
SE	Sweden	2,512	378	70	2,123	1,504	407
CH	Switzerland	1,643	455	*90*	741	*460*	*450*
SY	Syrian Arab Republic				6		
MK	T F Y R of Macedonia	*40*	*80*	*350*	2	*40*	*80*
TH	Thailand	891	5,449			62	491
TN	Tunisia	56	282		2		
TR	Turkey	*530*		*50*	75		*1,720*
UA	Ukraine	3,535	307	1,750	75	2,464	1,255
GB	United Kingdom	17,488	8,704	1,796	5,237	3,751	6,408
US	United States of America	202,776	149,661	38,296	49,439	74,637	69,169
UY	Uruguay		*510*				*50*
UZ	Uzbekistan	264	12	168	1	254	153
VN	Viet Nam				9		

* Estimated data are in italics
** Includes Resident and Non-Resident PCT National Phase Entries

Table 2. Patent Filings, Grants and Patents in Force by Country and Territory of Origin

Code	Country/Territory of Origin	Non-Resident Direct Filings 2005	PCT National Phase Entries 2005	PCT International Applications 2006	Grants to Non-Residents 2005	Patents in Force 2005
AF	Afganistan	1				
AL	Albania	1		1		1
DZ	Algeria		4	3		3
AD	Andorra	8	2	3	6	36
AI	Anguilla					1
AG	Antigua and Barbuda	2				3
AR	Argentina	188	30	20	66	677
AM	Armenia	8		7	1	139
AW	Aruba		2			2
AU	Australia	2,910	5,525	1,989	2,676	24,288
AT	Austria	2,231	2,159	917	1,976	21,413
AZ	Azerbaijan	5		10	5	31
BS	Bahamas	29	10	19	22	106
BH	Bahrain	1	1			1
BD	Bangladesh		1			2
BB	Barbados	73	262	59	150	11
BY	Belarus	121	11	18	93	491
BE	Belgium	2,977	2,692	1,023	1,944	15,661
BZ	Belize			1	4	2
BJ	Benin	1	1	1		
BM	Bermuda	55	73	5	28	76
BO	Bolivia	2	1			4
BA	Bosnia and Herzegovina	3	1	8		25
BW	Botswana		1			
BR	Brazil	349	453	330	278	5,500
BN	Brunei Darussalam	2		1		
BG	Bulgaria	57	59	24	23	536
BI	Burundi	1		2		
CM	Cameroon	2		1		
CA	Canada	9,880	5,431	2,470	4,938	55,977
KY	Cayman Islands	19	37	9	21	40
CL	Chile	71	8	12	17	134
CN	China	2,561	1,721	3,910	814	59,087
CO	Colombia	18	12	29	9	68
CK	Cook Islands	1			3	3
CR	Costa Rica	31	2	7	5	35
CI	Côte d'Ivoire					1
HR	Croatia	31	64	72	32	387
CU	Cuba	16	79	21	22	78
CY	Cyprus	34	47	50	34	49
CZ	Czech Republic	187	171	103	126	2,364
KP	Democratic People's Republic of Korea	1	2	4		2
CD	Democratic Republic of Congo	1				
DK	Denmark	1,470	3,138	1,138	1,904	14,233
DM	Dominica				1	3
DO	Dominican Republic	6			2	7
EC	Ecuador	6	1	7	2	20
EG	Egypt	19	5	44	8	42
SV	El Salvador	1			1	7
GQ	Equatorial Guinea			1		
EE	Estonia	16	10	16	11	101
ET	Ethiopia		1			4
FO	Faroe Islands					1
FJ	Fiji					5
FI	Finland	2,610	4,288	1,863	3,175	28,771

Code	Country/Territory of Origin	Non-Resident Direct Filings 2005	PCT National Phase Entries 2005	PCT International Applications 2006	Grants to Non-Residents 2005	Patents in Force 2005
FR	France	13,787	14,836	6,109	13,339	172,912
GE	Georgia	4	6	8	3	415
DE	Germany	37,339	38,258	16,866	35,616	245,403
GH	Ghana	3	1	1		4
GI	Gibraltar	11	12		6	4
GR	Greece	84	152	87	67	465
GT	Guatemala	2			2	11
GY	Guyana					1
HT	Haiti					1
HN	Honduras	2				10
HK	Hong Kong, China	850	34	1	303	1,932
HU	Hungary	167	351	143	266	3,360
IS	Iceland	42	53	45	42	156
IN	India	1,524	1,432	823	727	2,682
ID	Indonesia	14	3,538	8	13	60
IR	Iran (Islamic Republic of)	19		2	3	10
IE	Ireland	815	910	407	572	2,882
IL	Israel	3,181	2,915	1,584	1,731	11,771
IT	Italy	6,529	5,624	2,721	5,234	43,049
JM	Jamaica	5		1	1	45
JP	Japan	111,182	52,660	26,906	74,739	1,613,776
JO	Jordan	10	1	6	2	14
KZ	Kazakhstan	35	9	17	27	213
KE	Kenya	5		5	9	31
KW	Kuwait	17	2	1	3	44
KG	Kyrgyzstan	4	4		2	25
LV	Latvia	15	5	16	6	488
LB	Lebanon	10	4	4	3	19
LI	Liechtenstein	385	178	83	365	1,828
LT	Lithuania	6	1	10	4	301
LU	Luxembourg	236	463	119	341	2,006
MO	Macau	5			1	3
MG	Madagascar					68
MY	Malaysia	339	24	60	105	420
ML	Mali	2				
MT	Malta	26	1	13	4	18
MU	Mauritius	4	11	6	2	2
MX	Mexico	200	122	175	150	1,978
MC	Monaco	19	24	12	29	218
MN	Mongolia			6		13,082
MA	Morocco	2	5	9	1	1,992
NA	Namibia		1	1		
NL	Netherlands	8,237	16,590	4,452	6,612	49,962
AN	Netherlands Antilles	84	60	10	51	87
NZ	New Zealand	455	865	349	504	5,484
NI	Nicaragua					2
NG	Nigeria	3	1	1		14
NO	Norway	682	1,313	607	1,051	6,282
OM	Oman	3	2		1	1
PK	Pakistan	7		3	3	16
PW	Palau					1
PA	Panama	14	11	17	14	43
PG	Papua New Guinea					1
PY	Paraguay					2
PE	Peru	6		1	3	85
PH	Philippines	56	12	23	18	121
PL	Poland	189	188	101	75	4,775
PT	Portugal	104	81	68	58	858

Code	Country/Territory of Origin	Non-Resident Direct Filings 2005	PCT National Phase Entries 2005	PCT International Applications 2006	Grants to Non-Residents 2005	Patents in Force 2005
QA	Qatar	5				1
KR	Republic of Korea	33,873	5,740	5,935	10,446	353,251
MD	Republic of Moldova	6		7	6	1,004
RO	Romania	22	23	26	18	4,432
RU	Russian Federation	526	529	644	501	99,819
SH	Saint Helena	2				
KN	Saint Kitts and Nevis			1	1	7
VC	Saint Vincent and the Grenadines		2			1
WS	Samoa	2		1		
SM	San Marino	4		4	3	1
SA	Saudi Arabia	62	25	52	31	146
SN	Senegal			3		1
YU	Serbia and Montenegro (formerly Yugoslavia)	3	9	24	8	64
SC	Seychelles	7	6	10	5	
SL	Sierra Leone	1		2	1	16
SG	Singapore	850	393	457	402	2,619
SK	Slovakia	53	52	31	32	452
SI	Slovenia	83	103	79	52	152
ZA	South Africa	248	576	422	363	2,486
ES	Spain	1,569	1,580	1,184	1,121	31,310
LK	Sri Lanka	6		3	1	5
SD	Sudan			3		
SR	Suriname					3
SZ	Swaziland			1		3
SE	Sweden	3,509	7,129	3,312	5,606	40,331
CH	Switzerland	8,993	11,186	3,488	8,124	52,754
SY	Syrian Arab Republic	4		7		9
MK	T F Y R of Macedonia	1		2		1
TJ	Tajikistan	1				
TH	Thailand	88	5	13	22	161
TT	Trinidad and Tobago	2	2	3		10
TN	Tunisia	1	3	2	1	9
TR	Turkey	77	154	267	64	228
TC	Turks and Caicos Islands	1			8	12
UG	Uganda					3
UA	Ukraine	365	28	77	315	32,566
AE	United Arab Emirates	14	10	14	3	27
GB	United Kingdom	8,166	14,348	5,064	9,553	79,855
TZ	United Republic of Tanzania					2
US	United States of America	51,921	105,367	50,089	59,382	1,214,556
UY	Uruguay	23	5	3	4	23
UZ	Uzbekistan			1	1	689
VU	Vanuatu	2	3		1	
VE	Venezuela	44		2	17	306
VN	Viet Nam	2	1	10	2	6
VG	Virgin Islands (British)	98	71	15	104	86
YE	Yemen					1
ZW	Zimbabwe	1			1	6

Table 3. Patent Filings by Population, GDP and R&D Expenditures

Code	Country/Territory	Resident Filings per Million Population 2005	Resident Filings per $Billion GDP 2005	Patent Filings per $Million R&D Expenditures 2005
AM	Armenia	68.30	15.52	7.08
AU	Australia	479.51	16.95	1.02
AT	Austria	276.45	9.20	0.41
AZ	Azerbaijan	33.50	7.51	3.16
BY	Belarus	108.23	15.36	2.71
BE	Belgium	50.90	1.78	0.09
BA	Bosnia and Herzegovina	16.89		
BR	Brazil	20.50	2.74	0.29
BG	Bulgaria	33.72	4.20	0.87
CA	Canada	160.61	5.40	0.29
CL	Chile	22.15	2.07	0.36
CN	China	71.66	11.92	0.91
CO	Colombia	0.90	0.14	0.09
HR	Croatia	81.67	7.04	0.64
CU	Cuba	9.32		
CY	Cyprus	23.94		0.36
CZ	Czech Republic	57.47	3.13	0.26
DK	Denmark	306.00	10.13	0.40
EC	Ecuador	0.83	0.22	0.32
EG	Egypt	5.78	1.50	0.83
EE	Estonia	17.10	1.24	0.15
FI	Finland	348.90	12.19	0.35
FR	France	230.23	8.50	0.40
GE	Georgia	50.29	16.80	6.33
DE	Germany	586.37	22.38	0.91
GR	Greece	48.70	2.34	0.42
GT	Guatemala	0.56	0.14	
HK	Hong Kong, China	22.47	0.72	0.13
HU	Hungary	69.89	4.39	0.52
IS	Iceland	159.26	4.88	0.17
IN	India	6.04	1.97	0.25
ID	Indonesia	17.09	5.00	10.56
IE	Ireland	190.09	5.54	0.48
IL	Israel	202.06	8.76	0.21
JM	Jamaica	3.76	0.99	1.44
JP	Japan	2,875.68	103.53	3.37
KZ	Kazakhstan	126.77	18.14	9.04
KG	Kyrgyzstan	24.24	14.18	7.05
LV	Latvia	48.70	4.01	1.05
LT	Lithuania	19.91	1.54	0.22
LU	Luxembourg	52.55	0.98	0.06
MO	Macau	6.52	0.20	
MX	Mexico	5.67	0.59	0.15
MC	Monaco	59.88		
MN	Mongolia	39.15	20.88	7.92
MA	Morocco	4.64	1.15	0.19
NL	Netherlands	135.77	4.67	0.26
NZ	New Zealand	460.58	20.77	1.82
NO	Norway	247.49	6.71	0.39
PE	Peru	0.97	0.18	0.19
PH	Philippines	1.82	0.40	0.38
PL	Poland	53.14	4.31	0.77
PT	Portugal	14.97	0.82	0.11
KR	Republic of Korea	2,530.08	129.10	5.08
MD	Republic of Moldova	89.64	47.98	

Code	Country/Territory	Resident Filings per Million Population 2005	Resident Filings per $Billion GDP 2005	Patent Filings per $Million R&D Expenditures 2005
RO	Romania	42.34		
RU	Russian Federation	165.17	17.12	1.56
SG	Singapore	130.76	4.97	0.23
SK	Slovakia	28.77	2.04	0.41
SI	Slovenia	161.65	8.15	0.53
ES	Spain	70.06	2.90	0.27
SE	Sweden	279.48	9.66	0.27
CH	Switzerland	220.81	6.97	0.28
MK	T F Y R of Macedonia	20.16	3.15	1.26
TH	Thailand	13.87	1.80	0.72
TN	Tunisia	5.59	0.75	0.12
TR	Turkey	7.94	1.07	0.17
UA	Ukraine	75.10	12.34	1.09
GB	United Kingdom	296.22	10.01	0.54
US	United States of America	701.08	18.82	0.72
UZ	Uzbekistan	9.93	5.50	

Table 4. Total Patent Filings and Grants

Year	Total Resident Direct Filings*	Total Non-Resident Direct Filings*	PCT National Phases Entries*	PCT International Applications Filed	Total Grants to Residents*	Total Grants to Non-Residents*
1996	701,300	263,100	109,400	48,217	350,000	173,400
1997	721,100	260,400	146,900	57,064	307,800	176,300
1998	736,300	278,400	158,800	67,062	332,500	197,100
1999	775,100	272,400	195,900	76,358	349,500	212,400
2000	855,900	293,400	225,400	93,239	307,000	199,200
2001	861,200	295,200	271,400	108,230	309,400	208,800
2002	859,600	274,500	292,300	110,392	321,700	212,700
2003	892,800	290,900	287,000	115,199	349,400	252,700
2004	918,500	298,200	326,700	122,628	354,100	251,400
2005	975,200	326,400	351,000	136,663	356,800	246,700
2006				147,500		

* Rounded due to estimated statistics

M GLOSSARY

Country of Origin. The country of residence of the first-named applicant or assignee of a patent application. In some cases (notably that of the United States of America) the country of residence of the inventor is used rather than that of the applicant.

Designated Office / State. An office or State which is designated for protection in a PCT international application or a regional patent application. Also a State which is designated for protection by a regional patent grant. Although an office or State may be designated at the time of filing or grant of a patent, the patent protection is often not pursued in all designated States/offices.

European Patent Convention (EPC). An international treaty which permits the applicant to file a single application at the European Patent Office (EPO) and to designate any of the participating European countries. The EPO examines and grants patents on behalf of the designated States.

European Patent Office (EPO). The patent office which searches, examines and grants patents in the context of the European Patent Convention. The EPO also acts as an international searching authority for the PCT and performs searches on behalf of some national offices.

Extra-Regional Filings. Patent filings by non-residents of a member State of a region (such as the EPC) in offices of that region.

Gross Domestic Product (GDP). Standard economic measure of total economic output of a country or region. In this report, GDP is measured in constant year 2000 US dollars at purchasing power parity. This is to make cross-country comparisons more meaningful.

Intra-Regional Filings. Patent filings by residents of the member States of a region (such as the EPC) at other offices of the same region.

Maintenance. The process by which patent protection is maintained after granting. Usually this consists of paying maintenance fees to the patent office at regular intervals. If maintenance fees are not paid, patent protection may lapse.

Non-Resident. An applicant who is a non-resident of the State or region concerned. In patent statistics, the residence of the first applicant or assignee of a patent application is usually used to determine the State of residence. In some cases, notably that of the United States of America, the residence of the inventor is used instead of the applicant/assignee.

Paris Convention. International treaty agreed in 1883, which establishes common rules for industrial property rights among member States. In particular, the Paris Convention establishes the "right of priority" which enables a patent application to claim priority of an application filed up to 12 months earlier in another country.

Patent. A patent is an exclusive right granted for an invention, which is a product or a process that provides, in general, a new way of doing something, or offers a new technical solution to a problem. In order to be patentable, the invention must fulfil certain conditions.

Patent Family. A patent family is a set of inter-related patent applications filed in one or more countries to protect the same invention.

Patent Filing / Application. The procedure for requesting patent protection at a patent office. A patent application normally consists of a form containing information related to the patent applicant, the inventor and to the application, and a specification of the invention which must meet certain formal requirements.

Patent Grant. The act of granting or issuing a patent. Once granted, a patent becomes a legal property right, enforceable by law.

Patent In Force. A patent which has been granted and which is still in force. To remain in force, maintenance fees must usually be paid up to the maximum period of 20 years from the original filing date in most countries.

Patent Cooperation Treaty (PCT). A treaty establishing a system for international patent filing which allows for a single international patent application to have effect in multiple designated States, international search, international publication and optional preliminary examination. The PCT system is a patent filing system and not an international patent granting system. Patents are granted at the national level.

PCT International Application. An application filed under the Patent Cooperation Treaty.

PCT National Phase Entry. A PCT international application which has entered the national/regional phase. The national phase must usually be initiated within 30 months from the priority date of the application (longer time periods are allowed in some offices) and usually requires an explicit action from the applicant and/or payment of fees.

Research and Development (R&D). Standard economic measure of spending on research and development activities. In this report total R&D is measured in constant year 2000 US dollars at purchasing power parity. This is to make cross-country comparisons more meaningful.

Regional Application / Grant. A patent application or granted patent which is filed at or granted by a regional patent office. There are currently four regional patent offices in operation: African Regional Intellectual Property Organization (ARIPO), the Eurasian Patent Office (EAPO), the European Patent Office (EPO), and the African Intellectual Property Organization (OAPI).

Resident. An applicant who is a resident of the State or region concerned. In patent statistics, the residence of the first applicant or assignee of a patent application is usually used to determine the State of residence. In some cases, notably that of the United States of America, the residence of the inventor is used instead of the applicant/assignee.

Validation. Procedure by which patent protection is validated after grant at the offices designated in a EPO patent grant. The procedure is different at different European offices but usually consists of a translation into the national language and/or a payment of fees.

World Intellectual Property Organization (WIPO). The World Intellectual Property Organization (WIPO) is a specialized agency of the United Nations. WIPO was established by the WIPO Convention in 1967 with a mandate from its member States to promote the protection of IP throughout the world through cooperation among States and in collaboration with other international organizations.

N WIPO PATENT RESOURCES

The following patent resources are available on the WIPO Internet.

Statistics on Patents and the PCT System
http://www.wipo.int/ipstats/en/

PatentScope Portal – WIPO's portal for information on Patents and the PCT System
http://www.wipo.int/patentscope/en/

Information on the PCT System
http://www.wipo.int/pct/en/

WIPO Index of Patent Systems – A survey of the differences between national patent systems intended to aid in understanding the differences in patent activity across countries.
http://www.wipo.int/ipstats/en/resources/patent_systems.html

PatentScope Search – Search PCT International Applications and view/download complete patent specifications and related documentation.
http://www.wipo.int/pctdb/en/

Law of Patents, including current and emerging issues related to patents, information on WIPO-administered treaties, access to national/regional patent laws and patent law harmonization.
http://www.wipo.int/patent/law/en/

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