WIPO Economics & Statistics Series

2012

World Intellectual Property Indicators

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FOREWORD

Against the background of a world economy in turmoil, last year's *World Intellectual Property Indicators* reported a strong rebound, in 2010, in intellectual property (IP) filings worldwide. This year's Report paints a remarkably similar picture: while the global economy continued to underperform, IP filing growth persisted in 2011.

Patent filings worldwide passed the 2 million mark in 2011, showing significant growth of 7.8 percent over 2010 and exceeding 7 percent growth for the second year in a row. Similarly, trademark filings increased by 13.3 percent, the very same growth rate as in 2010. As I pointed out last year, this performance bodes well for the future of the world economy, as it signals that companies continue to innovate.

World Intellectual Property Indicators 2012 also contains important news. For the first time in 2011, more patents were filed at the patent office of China than at any other office in the world. In the 100 years before 2011, only three patent offices had occupied this position – those of Germany, Japan and the United States. China had already become the top recipient of trademark filings (in 2001) and design filings (in 1999). Even though caution is required in directly comparing IP filing figures across countries, these trends nevertheless reflect how the geography of innovation has shifted.

As in the past, we provide statistical information and analysis on many other important IP trends. This year's special theme focuses on industrial designs – a form of IP that has recently featured prominently in disputes among information technology (IT) companies. After discussing the growing importance of design in innovation, we describe how different countries and industries make use of the industrial design system.

In addition, *World Intellectual Property Indicators 2012* includes – for the first time – statistics on the use of plant variety protection systems.

I would like to thank our Member States and national and regional IP offices for sharing their annual statistics with WIPO, and look forward to our continued cooperation.

Francis GURRY
Director General

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HIGHLIGHTS

For the first time in 2011, China had the top-ranked offices for each of the four forms of IP – patents, utility models, trademarks and industrial designs

The intellectual property (IP) offices of China became the largest in the world, as measured by the number of applications received for patents, utility models (UMs), trademarks and industrial designs. China's patent office overtook the United States Patent and Trademark Office (USPTO) in 2011 to become the largest in the world, after having surpassed the Japan Patent Office (JPO) in 2010. In terms of trademarks, application class count data show that the trademark office of China has been the largest in the world since the early 2000s. Similarly, according to industrial design count data, China has received the largest volumes of filings since the late 1990s.

Between 2008 and 2011, the share of China in world totals considerably increased for each of these forms of IP. In contrast, other larger offices - except the Office for Harmonization in the Internal Market (OHIM), in relation to trademarks - saw decreases in their shares of world totals. For example, the share of China's State Intellectual Property Office (SIPO) in total patent filings increased from 15.1% in 2008 to 24.6% in 2011. Conversely, the European Patent Office (EPO), the JPO, the Korean Intellectual Property Office (KIPO) and the USPTO saw decreases in their shares of world totals. Trademark and industrial design filings followed a similar trend.

Between 2008 and 2011, both SIPO and the USPTO saw filing growth in patents, trademarks and industrial designs. However, filings at SIPO increased at a faster rate than at the USPTO. OHIM saw growth in trademark and industrial design filings. Meanwhile, the JPO saw declines in application numbers for these three types of IP.

High-income countries accounted for the majority of patent filings. However, offices of upper middle-income countries accounted for around 60% of design filings worldwide – most of them in China. Offices of high-income and upper middle-income countries received similar shares of total trademark applications (about 45%). Again, China received the most trademark filings among middle-income countries, although its share was smaller than those for patents and industrial designs.

IP filings by office and income group

	Share in world total (%)						Average annual growth (%)		
	2008	2011	2008	2011	2008	2011	2008-2011		
Office and Income Group	Patents		Marks (class count)		Designs (design count)		Patents	Marks	Designs
China	15.1	24.6	12.8	22.8	43.6	53.1	22.0	26.6	18.6
European Patent Office	7.6	6.7	n.a.	n.a.	n.a.	n.a.	-0.8	n.a.	n.a.
Japan	20.4	16.0	3.7	3.0	4.7	3.1	-4.3	-2.1	-2.8
OHIM	n.a.	n.a.	4.6	4.9	11.3	8.9	n.a.	6.7	2.4
Republic of Korea	8.9	8.4	3.7	2.8	8.2	6.0	1.6	-4.8	-0.2
United States of America	23.8	23.5	7.3	6.6	3.9	3.1	3.3	0.9	3.1
World	100.0	100.0	100.0	100.0	100.0	100.0	3.8	4.3	11.0
High-income	74.8	67.0	52.8	45.1	44.9	37.2	-0.3	-1.0	4.2
Upper middle-income	22.2	29.8	35.5	43.9	52.0	59.5	14.2	12.1	16.0
Lower middle-income	3.0	3.2	10.4	9.9	2.8	3.1	5.2	2.7	15.9
Low-income	0.1	0.0	1.3	1.0	0.3	0.2	-38.5	-2.4	-7.4
World	100.0	100.0	100.0	100.0	100.0	100.0	3.8	4.3	11.0

Note: OHIM = Office for Harmonization in the Internal Market; Trademark data refer to class counts, i.e., the number of classes specified in applications. Industrial design data refer to design counts, i.e., the number of designs contained in applications; n.a. = not applicable

Source: WIPO Statistics Database, October 2012

Patents & utility models

More than two million patent applications filed worldwide in 2011

For the first time in 2011, the total number of patent applications filed worldwide exceeded the 2 million mark. The 2.14 million applications filed consisted of 1.36 million resident and 0.78 million non-resident applications. Following a drop of 3.6% in 2009, patent applications rebounded strongly in 2010 with growth of 7.5%, and continued to grow by 7.8% in 2011.

International patent filings set a new record in 2011

International filings through the Patent Cooperation Treaty (PCT) set a new record in 2011, with 182,354 applications. The 11% growth in 2011 was the fastest since 2005. China, Japan and the US accounted for 82% of this growth.

In 2011, China overtook the US to become the largest patent office in the world

In 2011, China received 526,412 applications compared to 503,582 for the US and 342,610 for Japan. The growth in patent filings in China was mostly due to substantial growth in resident filings. Between 2010 and 2011, Chinese resident filings grew by 41.9%, while the Republic of Korea and the US saw resident filings grow by 4.7%, and 2.4%, respectively.

Continuing shift in the geography of patent filings

Between 2009 and 2011, patent filings worldwide grew by 293,900. SIPO was the main contributor to growth in applications worldwide – accounting for 72% of total growth. China's contribution to overall growth has increased in recent years while that of the other top five offices has declined.

The majority of the top 20 offices saw growth in filings in 2011

Between 2010 and 2011, the majority of the top 20 offices saw growth in patent applications. China experienced the largest growth (34.6%), followed by China Hong Kong, SAR (15.3%) and South Africa (13.5%). Despite this growth, the majority of offices received fewer applications in 2011 than at the pre-crisis peak in 2008.

Filing behavior at middle-income offices showed mixed trends. The patent offices of Algeria (+11.3%) and Madagascar (+41.9%) saw double-digit growth in 2011, mainly due to growth in non-resident filings. In contrast, filings at the patent offices of Guatemala (-13.1%), Jamaica (-27.6%) and Jordan (-15.6%) saw substantial declines in filings, mainly due to decreases in non-resident filings.

Patent filings for digital communication technologies grew by 8%

Filings for digital communication technologies saw the highest average annual growth rates (+8.1%) between 2006 and 2010, while filings for pharmaceuticals have continuously declined since 2007. Filings for computer technology accounted for the largest number of applications filed worldwide, with 126,897.[1]

Since 1995, growth in patent filings for complex technologies (e.g., smartphones) has been consistently faster than that for discrete technologies (e.g., pharmaceuticals). Between 1995 and 2010, the number of applications for complex technologies worldwide increased 2.4-fold, compared to 1.9-fold for discrete technologies.

1 Technology data are a combination of those taken from the WIPO Statistics Database and the PATSTAT database of the EPO (using the April 2012 edition of the PATSTAT database). The PATSTAT database has a time lag, hence 2010 is the latest year for which data are available.

Continuous growth in applications for energy-related technologies

The total number of patent applications for four energy-related technologies – fuel cells, geothermal, solar and wind - increased by 8% in 2010 compared to 2009. The total number of applications in these categories amounted to 34,873 in 2010. Residents of Japan filed the largest number of applications relating to solar energy and fuel cell technologies, while residents of Germany and the US had the largest numbers of applications relating to geothermal and wind energy, respectively.

Patents granted worldwide approached 1 million in 2011

In 2011, the estimated number of patents granted approached the 1 million mark, with 606,800 issued to residents and 390,000 to non-residents. Grants worldwide grew by 9.7% in 2011, following growth of 12.3% in 2010. The JPO (with 238,323) granted the largest number of patents, followed by the USPTO (224,505). The majority of the top 20 offices granted more patents in 2011 than in 2010. Among the top five offices, KIPO and SIPO saw the fastest growth – with 37.6% and 27.4% respectively.

Around 7.88 million patents in force worldwide in 2011

The total number of patents in force grew by 6.9% in 2011 to an estimated 7.88 million. This estimate is based on data from 81 offices. The USPTO had the largest number of patents in force – in excess of 2.1 million. The JPO also had a substantial number of patents in force (more than 1.5 million). The number of patents in force at SIPO was less than half that of the JPO or the USPTO, but it has seen considerable growth over the past few years. In contrast, the patent offices of India and the Russian Federation had fewer patents in force in 2011 than in 2010.

Continued decrease in pending applications

The total number of potentially pending applications worldwide – defined as all unprocessed applications at any stage in the applications process – declined by 4.9% in 2011, following a 3.3% decrease in 2010. A decline in potentially pending applications at the JPO was the main contributor to this trend. The number of potentially pending applications worldwide stood at 4.8 million in 2011. This estimate is based on 76 offices. The USPTO (with 1.2 million) had the largest number of potentially pending applications, followed by the JPO (1.1 million).

The number of applications undergoing examination worldwide – and indeed, in most of the top offices – also fell substantially in 2011. Chiefly, the JPO had 38.9% fewer pending applications undergoing examination in 2011 than in 2010.

Substantial growth in utility model filings

In 2011, an estimated 670,700 UM applications were filed across the world, corresponding to a 35% increase on 2010. This growth was driven by the high numbers of applications received by SIPO. Residents of Japan and the US filed the largest numbers of UM applications abroad, of which a large proportion were destined for SIPO.

Middle-income countries opt for utility models more frequently than patents

Residents of middle-income countries tend to use the UM system more intensively than the patent system. For example, Ukrainian residents filed about four times more UM applications than patent applications in 2011. Residents of the Philippines, China Hong Kong (SAR), China and Thailand also showed high ratios of UM of patent applications.

Trademarks

Record number of trademark applications filed in 2011

Between 1995 and 2011, the number of trademark applications filed worldwide doubled from around 2 million to 4.2 million. In 2011, 6.2 million classes were specified in these 4.2 million applications. Of the 6.2 million application class counts, 4.5 million were attributed to resident and 1.7 million to non-resident applications.

Applications (class counts) grew by 9.6% in 2011, following the 9% growth recorded in 2010. Rapid growth in filings in China has been the main contributor to growth worldwide in recent years. In 2011, China accounted for 61.8% of total growth.

International registrations returned to pre-crisis high

International registrations – via the Madrid system – saw a continuation of the growth witnessed in 2010. Madrid registrations increased by 8.5% in 2011, with a total of 40,711, almost returning to the pre-crisis peak reached in 2008.

Nearly half of all trademark applications received by offices arrived via the Madrid system

Since 2004, applications received in the form of Madrid designations have accounted for around half off all non-resident applications filed globally. This share is higher when confining the data to Madrid members only. In particular, 64% of all non-resident applications received by Madrid system member offices in 2011 arrived in the form of a Madrid designation.

One-third of all applications were for "service" marks

Together, the 11 service-related classes accounted for one-third of all classes specified in applications filed in 2011. This is up by 3.5 percentage points on 2004, demonstrating the continued importance applicants place on protecting their brands in service-oriented industries.

Shift in the geography of trademark filings towards Asia

Between 2007 and 2011, Asia saw its share of trademark applications increase by nearly nine percentage points, while the share of Europe fell by an almost equal amount. Asia surpassed Europe as the largest receiver of filings in 2009, and in 2011 received 44% of applications worldwide. Latin America and the Caribbean accounted for nearly 10% of filings worldwide, which is a percentage point higher than in 2007.

Middle- and low-income countries account for majority of trademark filings globally

More than half of all trademark filing activity occurred at the offices of middle- and low-income countries. These offices accounted for 55% of filings worldwide in 2011, 7.8 percentage points higher than in 2008.

Most of the top 20 offices saw growth in filings in 2011

The majority of the top 20 offices saw growth in filings in 2011 (based on class count data), with China (31.2%), Brazil (21.6%), the United Kingdom (16.4%) and China Hong Kong, SAR (16.1%) recording the fastest growth. The IP office of India has also seen considerable growth over the past few years. In fact, India surpassed Japan and the Republic of Korea in 2011. Growth at eight of the top 20 offices was mostly due to growth in non-resident applications, most notably at the IP offices of Australia, Canada, China Hong Kong (SAR) and Switzerland.

German applicants filed more than 2.1 million applications worldwide

German applicants filed more than 2.1 million equivalent applications worldwide in 2011 – based on class counts and regional filings. Residents of China (1.4 million), the US (1.3 million) and France (1.0 million) were the only three other origins to have filed more than a million applications each. The bulk of Chinese filings were filed domestically. In contrast, the majority of the applications originating in Germany, France and the US were filed abroad – partly reflecting the broad country coverage of the Community Trade Mark. Most filings of middle- and low-income origin were domestic filings.

Trademark registrations worldwide decreased by 7.1%

In 2011, there were an estimated 3 million trademarks registered across the world, for which 4.5 million classes were specified. This represents a 7.1% decrease on 2010, largely reflecting a substantial decrease in registrations issued by the IP office of China (-23.7%). Despite this, the IP office of China issued more than 1 million trademarks in 2011. Of the top 20 offices, the IP office of India saw the fastest growth in registrations in 2011, during which registrations more than doubled, while registrations in Italy fell by around 40%.

More than 20 million trademarks in force across the world

In 2011, around 23 million trademarks were in force at 70 IP offices worldwide. More than 5.5 million – or 24% of these trademarks – were in force at SIPO, which saw 20% growth on 2010. The JPO and the USPTO each had more than 1.7 million trademarks in force. For the top 20 IP offices, OHIM saw the fastest growth (24.2%), while Italy experienced a 6.8% decrease.

Industrial designs

Record number of design applications filed in 2011

Industrial design applications worldwide grew strongly over the last two years. In 2011, design filings increased by 16%, following 13.9% growth in 2010. This considerable growth was mostly due to strong growth in China. SIPO accounted for 90% of total growth from 2009 to 2011. The 775,700 industrial design applications filed worldwide in 2011 consisted of 691,200 resident and 84,500 non-resident applications.

Substantial increases in applications at offices of middle-income countries

Unlike patents, the list of top 20 offices includes 9 offices located in middle-income countries. China (521,468) – a middle-income country – received the largest number of design applications in 2011. Turkey, another middle-income country, received 41,218 filings, which is larger than the number of filings at the JPO or the USPTO. Between 2010 and 2011, the IP offices of China (23.8%), India (16.7%), Mexico (17.2%), Turkey (17.6%) and Ukraine (17.5%) each saw substantial growth in filings.

Residents of China and Germany filed the largest numbers of applications across the world

Residents of China and Germany filed similar numbers of design applications in 2011, with a combined total of around 1.1 million (based on equivalent design count data). Applications filed by residents of China have grown rapidly over the past few years, with China surpassing Germany to become the top origin in 2011. Most of the top 20 origins saw growth in filings in 2011, with Bulgaria (+42.8%) recording the fastest growth.

More than 2.5 million designs in force worldwide in 2011

In 2011, more than 2.5 million industrial designs were in force at 77 offices, including all larger offices except Brazil, France and Italy. SIPO had the largest number of designs in force in 2011 (37% of the total). The share of SIPO is of similar magnitude to the combined share of the JPO, KIPO, OHIM and the USPTO – the four largest offices after SIPO. The IP offices of Malaysia and Mexico saw the fastest growth in the number of designs in force.

DATA DESCRIPTION

Data sources

The IP data published in this report are taken from the WIPO Statistics Database, primarily based on WIPO's Annual IP Survey (see below) and data compiled by WIPO in the processing of international applications/registrations through the PCT, Madrid and Hague systems. Data are available for downloading from WIPO's Statistics Data Center at: *www.wipo.int/ipstats/*.

Patent family and technology data are a combination of those taken from the WIPO Statistics Database and the PATSTAT database of the European Patent Office (using the April 2012 edition of the PATSTAT database).

GDP and population data were obtained from the World Development Indicators Database maintained by the World Bank. R&D expenditure data are those from the UNESCO Institute for Statistics.

This publication uses the World Bank income classification. Economies are divided according to 2011 gross national income per capita, calculated using the World Bank Atlas method. The groups are: low-income ($1,025 or less); lower middle-income ($1,026-$4,035); upper middle-income ($4,036-$12,475); and high-income ($12,476 or more).[1]

The report uses the UN definition of regions and subregions. The geographical terms used by WIPO may differ slightly than those defined by the UN. However, the composition of regions and subregions is identical.[2]

WIPO's annual IP statistical survey

WIPO collects data from national and regional IP offices around the world through annual questionnaires and enters these in the WIPO Statistics Database. In cases where offices do not provide data but data are published on their websites or in annual reports, these data, where possible, are used to supplement the survey responses. A continuing effort is made to improve the quality and availability of IP statistics and to obtain data for as many offices and countries as possible. The annual IP questionnaires can be downloaded at: *www.wipo.int/ipstats/en/data_collection/questionnaire/*.[3]

The data are broken down by office, origin, applications abroad, resident and non-resident applications, class counts, design counts, etc. Refer to the Glossary for the definitions of key concepts contained in this publication.

Estimation procedure for world totals

World totals for applications and grants/registrations for patents, utility models, trademarks, industrial designs and plant varieties are WIPO estimates. Data are not available for all offices for every year. Missing data are estimated using methods such as linear extrapolation and averaging adjacent data points. The estimation method used depends on the year and the office in question. Data are available for the majority of the larger offices. Only small shares of world totals are estimated. The table below shows data availability by IP type and data coverage.

Application data availability (based on 2011 statistics collection)

IP type	Estimated world totals based on:	Data available for:	Data coverage
Patents	125 offices	91 offices	98%
Utility models	74 offices	49 offices	99%
Trademarks	151 offices	121 offices	95%
Industrial designs	133 offices	108 offices	99%
Plant varieties	66 offices	59 offices	98%

1 For further details on World Bank classification, see *http://data.worldbank.org/about/country-classifications*.
2 For further details on UN classification, see *http://unstats.un.org/unsd/methods/m49/m49regin.htm*.
3 All questionnaires are available in English, French and Spanish.

Where an office provides data that are not broken down by origin, WIPO estimates the resident and non-resident counts using the historical shares at that office.

National and international data

Application and grant/registration data include both direct filings and filings via the international systems (where applicable). This publication employs the following terms: patent applications and grants; utility model applications and grants; trademark applications and application class counts, and registrations and registration class counts; industrial design applications and application design counts, and registrations and registration design counts; and plant variety applications and grants. In the case of patents and utility models, data include direct filings at national patent offices and PCT national phase entries. For trademarks, data include filings at national and regional offices and designations received by relevant offices via the Madrid system. Data for industrial designs include national and regional applications combined with designations received by relevant offices via the Hague system.

International comparability of indicators

Every effort has been made to compile IP statistics based on the same definitions and to facilitate international comparability. As mentioned above, the data are collected from offices using WIPO's harmonized annual IP questionnaires. However, it must be kept in mind that national laws and regulations for filing IP applications or for issuing IP rights, as well as statistical reporting practices, may differ across jurisdictions.

Please note that due to the continual updating of data and the revision of historical statistics, data provided in this publication may differ from previously published figures and from the data available on WIPO's web pages.

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SPECIAL SECTION
THE RISE OF DESIGN IN INNOVATION AND INTELLECTUAL PROPERTY - DEFINITIONAL AND MEASUREMENT ISSUES

Introduction

Intellectual Property (IP)-related disputes among companies in the high-technology industry have drawn significant attention to design in 2012.

Frequently, these disputes focus on the infringement of patents and the underlying technological inventions.[1] Yet some of the highest profile conflicts relating to smartphones and tablet computers have centered on product designs. Courts worldwide are making decisive judgments on which designs can be protected and what constitutes infringement of a design right.

Design plays an increasingly important role in the world economy. Industrial design filings worldwide have seen continued growth over the last decade, often at double-digit rates, notwithstanding the global economic downturn. The look and feel of devices – their design – helps drive consumer choice, as it determines the ease of use and influences consumer experience of a product. Design enables firms to differentiate their products and foster a particular brand image, ultimately establishing a competitive edge in the marketplace. Firms are therefore sensitive to the copying of their designs, as it may lead consumers to purchase other products and result in a loss of market share.

This special section discusses the importance of design in innovation and as a form of IP. It first explores key conceptual and measurement questions, and then provides a global statistical overview of the formal use of industrial design protection.

1 WIPO (2012a)

Quantifying the importance of design: conceptual and measurement challenges

Historically, innovation studies and efforts to analyze the impact of IP have focused on other forms of IP – especially patents. Yet today, evidence on the role of design as a source of innovation and economic growth is slowly emerging.[2]

An increasing, albeit still limited, number of analytical studies and policy discussions assert the importance of design in the innovation process.[3] The fact that firms' design efforts are a growing and sizeable investment in their intangible assets is well established in high-income countries.[4] In innovation studies, design is sometimes treated on the same footing as a firm's expenditure on research and development (R&D), software, training and other knowledge-based investments. As a result of this emerging evidence and the above-mentioned court cases, policymakers have shown greater interest in "industrial designs" as a form of IP.

2 See the following studies, mostly from the United Kingdom (UK), in particular with the support of the UK Design Council or the UK Intellectual Property Office: DTI (2005), HM Treasury (2005), Design Council (2005), European Commission (2009), BIS (2010), Design Council (2010), Pesole *et al.* (2011), Thompson *et al.* (2012) and OECD (2012a). The Barcelona Design Centre is considering a new project on "Measuring Design: Developing Strategies for Improving the Evidence Base", see BCD (2012).

3 Ibid.

4 Awano et al. (2010), Hargreaves (2011) and WIPO (2011), Box 1.6. According to Gil and Haskell (2008), for instance, estimates for the UK put spending on new engineering and architectural design at GBP 44 billion, or 30 percent of all intangible investments. This represents one and a half times firms' expenditure on training and five times their spending on R&D.

Analyzing the economic role of design involves non-trivial conceptual and measurement challenges. First, no official statistical definition exists for the term "design". The professional design community's definition of design has not been fully integrated into contemporary innovation metrics and concepts. It is also significantly broader than the legal definition of an "industrial design" (see Box 1 for both definitions), which raises important questions on how best to measure design activity.

Box 1: Contrasting definitions of design

Designers' definition

According to the International Council of Societies of Industrial Design (ICSID), *"Design is a creative activity whose aim is to establish the multi-faceted qualities of objects, processes, services and their systems in whole life cycles. Therefore, design is the central factor of innovative humanization of technologies and the crucial factor of cultural and economic exchange."*

"Thus, design is an activity involving a wide spectrum of professions in which products, services, graphics, interiors and architecture all take part. [...] Therefore, the term designer refers to an individual who practices an intellectual profession, and not simply a trade or a service for enterprises."[5]

A paper for the UK Design Council defines design as *"the bridge between the consumer questing for the experiential and the company trying to meet that appetite with an offer that presents the new in a user-friendly and innovative way."*[6]

Industrial Design rights: a legal perspective

According to WIPO, *"an industrial design is the ornamental or aesthetic aspect of an article. The design may consist of three-dimensional features, such as the shape or surface of an article, or of two-dimensional features, such as patterns, lines or color."*[7]

In most countries, an industrial design must be registered in order to be protected under industrial design law. As a general rule, to be registrable the design must be "new" or "original". Once a design is registered, the term of protection is generally five years, with the possibility of further periods of renewal for up to, in most cases, 15 years. In most countries, protecting a product design is relatively inexpensive and easier to obtain than a patent.

5 International Council of Societies of Industrial Design definition at: *www.icsid.org/about/about/articles31.htm*
6 Design Council (2010)
7 "Industrial Designs - What is an Industrial Design?" *www.wipo.int/designs/en/*

The design community's definition covers an ever-growing array of economic and social aspects. Although often associated with the 'look" and physical design of goods, for the design profession the concept of design is much broader.[8] Design involves not only aesthetic elements but also functional ones, as well as considerations such as ease of manufacture sustainability reliability and quality, and business processes themselves.[9]

Design is not preoccupied solely with the physical aspects of goods. In the case of high-technology products, for instance, it increasingly also relates to the design of graphical user interfaces, such as the form of icons on tablet computer screens and other intangible attributes of high-technology products. Furthermore, design is not only relevant for goods; it also matters to services and processes within firms, governments and other entities – in fields as diverse as the check-in at hotels, online ordering in supermarkets, design of electoral systems and polling processes.

8 European Commission (2009)
9 DTI (2005)

Accordingly, the task of the designer relates to aesthetics and functional product features, but also to improving industrial processes and systems, overall quality of life and environmental protection.[10] The definition on Wikipedia specifies that, "industrial design is the use of a combination of applied art and applied science to improve the aesthetics, ergonomics, functionality and usability of a product, but it may also be used to improve the product's marketability and production. The role of an industrial designer is to create and execute design solutions for problems of form, usability, physical ergonomics, marketing, brand development, and sales."[11]

However, this broad understanding of design has not yet been fully integrated into internationally agreed innovation metrics and concepts. The latter would need to clearly set out how design relates to products, processes and other forms of innovation; what its main inputs and outputs are; and its impact on firm performance and innovation more broadly.

This does not imply that the economic value of designs has not been recognized. International measurement efforts in the area of R&D and innovation already perceive design as an integral part of R&D and the development and implementation of product innovations.[12] Yet, the definitions used in the two key international measurement manuals – the Frascati Manual and the Oslo Manual – are not aligned, and the international guidelines currently do not propose a unified measurement framework for design.[13] Work is ongoing in this field, however, within the relevant international statistical bodies, at the national level and in the design community.[14]

Turning to design as a form of IP, there is an important difference between the broad design concept and what is protected by an "industrial design" from a strictly legal point of view. Specifically, industrial designs are only afforded legal protection for the aesthetic aspect of a product (see Box 1 for the legal definition). Contrary to the broader design concept, an industrial design does not protect any technical or functional features of the product to which it is applied.

10 See, on the role of design for sustainability, "The Contribution of Design to Sustainable Development", Francis Gurry, Director General, WIPO, July 6, 2011, on the occasion of World IP Day, *uncsd.iisd.org/guest-articles/the-contribution-of-design-to-sustainable-development/*

11 *http://en.wikipedia.org/wiki/Industrial_design* Following these broad definitions, various national studies have sought to better define what constitutes the "design industry" and the "design profession", aiming to identify the industry and profession in official industry and employment classifications. See Thompson and Montgomery (2012), Gertler and Vinodrai (2004) and the other studies mentioned in footnote 2.

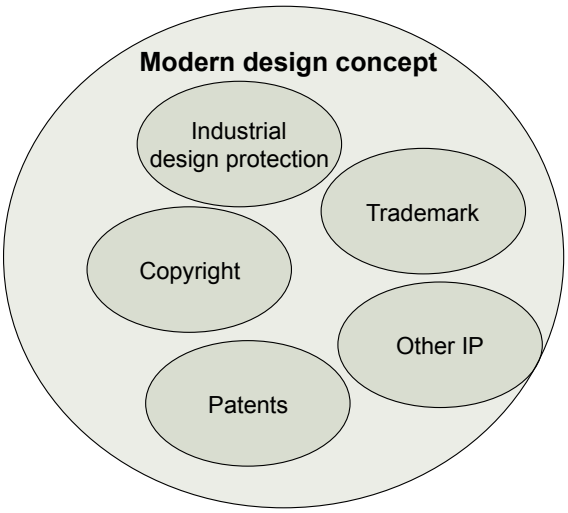
12 See the *Frascati Manual* – the standard reference tool for R&D statistics – and the *Oslo Manual* – the standard reference tool for developing innovation surveys. See also OECD (2012a).

13 The *Frascati Manual* describes the scope of design as a specific activity within R&D. In this context, design is limited to the creation of plans or drawings aimed at defining mainly "functional" issues. The *Oslo Manual* describes design as part of the development and implementation of product innovation, limited to aesthetic/form elements and as part of marketing innovation.

14 The competent body for revising the international definitions as they relate to innovation and R&D is the OECD National Experts on Science and Technology Indicators. The design community has also started complementary work in this field. See, for example, BCD (2012) and the work of the UK Design Council. The BCD analyzes and defines the conceptual framework of design in the economic context, in order to measure it as a tool for user-centered innovation and as an economic factor of production. The initiative is part of the first Action Plan of the European Design Innovation Initiative to exploit the potential of design for innovation and to reinforce the links between design, innovation and competitiveness.

Hence, industrial design rights only cover a subset of the designs falling within the modern design concept. Other forms of IP play an equally important role. Technical or functional design features may be eligible for patent, utility model or trade secret protection. If designs distinctively identify products or companies, they may also qualify for trademark protection. Finally, copyright law may protect certain designs as works of art. Figure 1 illustrates how different forms of IP can represent a subset of the professional community's broad design definition. Table 1 similarly shows that a design can be protected by various IP rights, but also illustrates that certain types of knowledge investment may lead to industrial design protection.

Figure 1: The broad design concept and different forms of intellectual property rights



Note: The graph illustrates that the modern design concept is broader than the collection of different IP rights. It also illustrates that one and the same design can be protected by different IP forms at the same time. For instance, design rights could protect the ornamental aspects while patents protect the functional aspects of a design.

Source: WIPO

Table 1: Knowledge investment and different forms of intellectual property rights

Investment type	Patent	Copyright	Industrial design	Trademark
R&D	X		X	
Software development	X	X	X	
Design	X	X	X	X
Creative outputs		X	X	
Market research & advertising		X		X

Note: The shading indicates: (i) the types of knowledge investment that can be protected by industrial design rights; and (ii) the different forms of IP that can be used to protect designs according to the broader design concept.

Source: Adapted from Gill and Haskel (2008)

Due to the complex interrelationship between different knowledge investments and forms of IP, it is difficult to accurately capture the level of design activity. Also, the interaction between design activity and the formal protection of designs by different forms of IP is hard to quantify.[15] For instance, there are no data on the share of designs covered by industrial design rights. Differences across countries in the propensity to file for industrial design rights often seem to reflect institutional, legal and cultural differences. Furthermore, the extent to which the existence of narrower industrial design rights spurs investment in better design in the broad sense and enables firms to protect market share have not been studied.[16]

Putting figures on the uptake of industrial design protection

To help improve our understanding of design activity, this section reviews the statistics on global industrial design filings. It complements Section C of this report.

15 WIPO (2011)
16 Ibid.

As discussed above, statistics on industrial design filings do not capture the broad understanding of design.[17] Yet, these data are the only pertinent and internationally comparable source of information when it comes to identifying how active firms, individuals or others are in seeking formal IP protection for designs.

WIPO collects aggregate industrial design data through its annual IP questionnaires. A few key challenges relating to data availability and comparability complicate the interpretation of statistics on industrial design filings worldwide (see Box 2).

The data presented below refer to industrial design application data, excluding registration data.[18] Time series analysis is based on application counts as there are insufficient historical design count data (see Box 2).

Application trend worldwide by income group

The total number of industrial design applications filed worldwide increased from around 344,700 in 2004 to 775,700 in 2011. Table 2 presents the shares of global industrial design applications by income group. For comparison, the equivalent patent and trademark shares are also shown.

Designs are the only form of IP for which offices of high-income countries do not account for the largest share of IP filings. Upper middle-income countries accounted for the majority of industrial design filings, followed by high-income countries and a small share of lower middle- and low-income countries. However, if one excludes China, the upper middle-income countries accounted for only around 4% of design filings. Compared to other forms of IP, the increased share of the State Intellectual Property Office of the People's Republic of China (SIPO) was particularly pronounced, accounting for 68% of design filings worldwide in 2011. The rapid growth of Chinese filings also explains the marked decrease in the overall share of high-income countries – from 52.5% in 2004 to 24.5% in 2011. The lower middle-income and low-income groups accounted for less than 4% of all applications, and their combined share declined between 2004 and 2011.

The pattern for the income groups described above holds true where the analysis is based on available design count data. However, design count data are not available for a number of offices, mostly from middle- and low-income groups, hence their true shares are bound to be higher. The 2011 design count data (Table 2, last column) show that upper middle-income countries accounted for 59.6% of total design count filings reported – a lower share than for application count data (72%). High-income countries accounted for around 37% of the 2011 reported total, which is higher than for application count data (24.9%). The difference between application and design count data shares can be explained by the fact that China – the office receiving the largest number of applications – allows only one design per application while IP offices in a large number of high-income countries permit applications to contain more than one design.

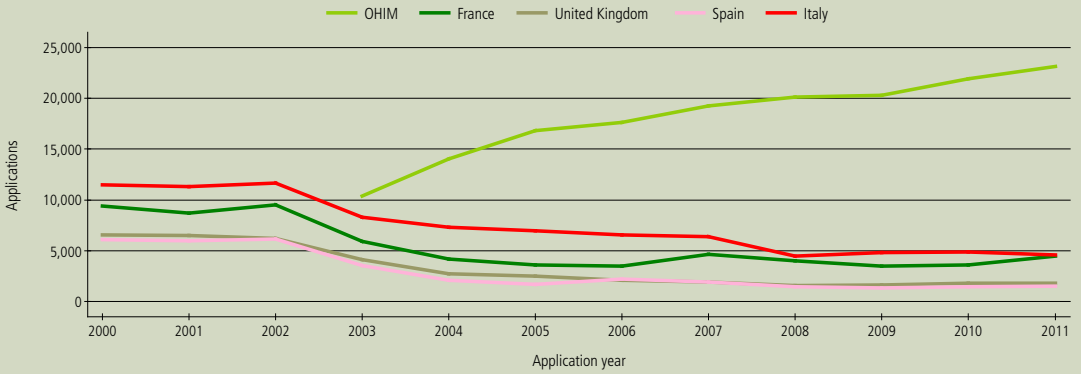
17 The single existing effort to compile a representative index on countries' different design capacities shows that industrial designs, though important, are only one among many variables. See Moultrie and Livesey (2009).

18 Application data are most often used to measure the level of IP activity. Statistics for industrial design registrations tend to mirror those for applications, since, at many offices, registration of an industrial design involves only a formality examination.

Box 2 – Challenges in interpreting global industrial design statistics

The four following key data challenges complicate the interpretation of industrial design statistics:

Figure 2: Industrial design applications for selected offices



Note: OHIM = Office for Harmonization in the Internal Market

Source: WIPO Statistics Database, October 2012

(i) Institutional differences: To protect industrial designs, some offices permit only one design per application (e.g., the IP office of China), while other offices allow applications to contain more than one design for the same product or same class (e.g., the IP office of Germany). To enable better cross-country comparability, industrial design indicators should report the number of designs contained in applications (i.e., design counts) rather than the number of applications.[19] WIPO has made substantial progress in recent years in improving design count data coverage. For 2011, design count data were available for 55 offices. However, design counts for a significant number of countries are only available from 2008 onwards, rendering long-term historical comparison difficult.

(ii) Regional office data: In 2003, the Office for Harmonization in the Internal Market (OHIM) of the European Union (EU) began issuing the Registered Community Design (RCD). This procedure enables applicants to file a single application for protection across all EU member states. Since the introduction of the RCD, a number of European IP offices have experienced decreases in applications received (see Figure 2). This clearly indicates changes in applicant behavior, with applicants preferring to use the OHIM system to seek protection for their designs across all EU countries rather than filing separate applications with all or even some national offices. The downward trend in filings at national offices in Europe therefore reflects institutional changes rather than a decrease in the demand for design rights. This factor should be taken into consideration when compiling data for residents of EU countries.

(iii) Absence of fully representative data on international registrations: In patent and trademark studies, researchers can rely on data from international IP systems such as the Patent Cooperation Treaty (PCT system) and the Madrid System for the International Registration of Marks (Madrid system). Membership and use of the PCT and, increasingly, the Madrid system have attained wide coverage. The data available from these WIPO systems are representative and meaningful for statistical and economic analysis.[20] In the case of designs, however, the international IP registration system is only now reaching the level of the PCT and Madrid systems. Presently, the volume of design filings through the WIPO-administered Hague System for the International Registration of Industrial Designs is growing strongly but remains limited. This is due to the fact that the Hague system has fewer members than the PCT and Madrid systems. In 2011, the Hague system comprised 60 members, mostly from Europe. Thus, the underlying statistics are not sufficiently representative to be used for detailed analysis, and researchers must rely mainly on national/regional IP filing data. The coming years are likely to see significant expansion of the Hague system's membership – a welcome statistical development. Countries such as China, Japan, the Republic of Korea, the United States of America (US) and others are currently considering joining the Hague system. Hague system data will then become more meaningful for statistical analysis.

(iv) Lack of an industrial design unit record database with global coverage: WIPO's statistical database contains aggregate data collected from national and regional IP offices via annual questionnaires and individual application data (unit record data) for international registrations through the Hague system. At present, a database with global coverage containing individual applications filed at national IP offices is lacking.

19 See WIPO (2012b) and Section C of this report.

20 It is often argued that IP data based on WIPO registration systems are more reliable than national IP data. The latter are impacted by country-specific institutional differences, such as single- versus multi-class systems for trademarks, making comparison across countries tricky. In contrast, international IP data from the PCT and Madrid systems are comparable across member countries without caveat. Consequently, key IP- or innovation-related publications rely heavily on data on patents filed under the PCT system in analyzing patenting behavior across countries. See, for instance, OECD (2012b).

Table 2: Shares of global IP applications by income group

Income group	Patents (applications)		Trademarks (class count)		Designs (applications)		Designs (design count)
	2004	2011	2004	2011	2004	2011	2011
High-income	82.7	67.0	55.5	45.1	52.5	24.9	37.1
Upper middle-income	14.9	29.8	34.2	43.9	42.4	72.0	59.6
… China	*8.3*	*24.6*	*13.4*	*22.8*	*33.4*	*68.1*	*53.2*
Lower middle-income	2.3	3.2	9.2	9.9	4.6	2.9	3.2
Low-income	0.1	0.0	1.1	1.0	0.6	0.3	0.2

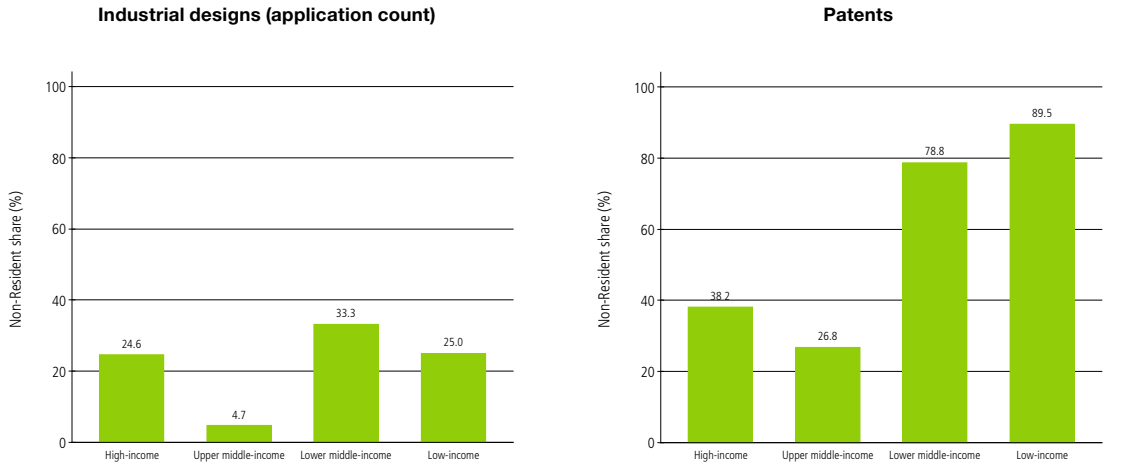
Note: Design count data for 2004 are not available. The design count share of middle- and low-income countries shows a downward bias due to a lack of data for a number of offices.

Source: WIPO Statistics Database, October 2012

In all income groups, resident applicants accounted for the majority of industrial design applications filed in 2011. For the high-income group, the non-resident share of total applications was 24.6%. The upper middle-income group had the lowest non-resident share (4.7%); however, excluding China yields a share of around 41%. Moreover, non-resident share by income group masks the differences across offices (see Table 3).

The distribution of resident versus non-resident applications for industrial designs differed markedly from that of patents. In particular, for all income groups the non-resident share of industrial design applications was smaller than the non-resident share of patent applications. In addition, for low- and lower middle-income countries, non-residents accounted for a minority of industrial design applications, whereas they accounted for a majority of patent applications (Figure 3).

Figure 3: Comparison of non-resident shares in total applications for industrial designs and patents (%), 2011



Note: Office coverage of industrial design and patent data is not identical across income groups. Despite this, the resulting bias is likely to be limited as all the major offices are included.

Source: WIPO Statistics Database, October 2012

Rapid increase in filings in recent years

Applications by office

Industrial design filings have increased each year from 2000 to 2011 (see Section C, Figure C.1.1.1). In 2000, roughly 290,800 applications were filed. By 2011, the number of applications filed in a single year increased to around 775,700, representing 16% growth on 2010. Figure 4 shows industrial design application counts for selected offices from 1965 to 2011. Except for Japan, all offices saw modest growth until the mid-1990s, after which growth picked up considerably. Applications received by SIPO and the IP offices of Turkey, Bangladesh and Thailand increased by 23.6%, 11.8%, 9.4% and 9.3% per year, respectively, between 1995 and 2011. OHIM saw 10.5% growth between 2003 and 2011.[21]

Table 3 presents data on the number of designs contained in applications for all national and regional offices for which data are available. SIPO, with 521,468 designs, received by far the largest number of applications in 2011, most of which were filed by resident applicants. Non-resident applicants accounted for only 2.7% of the total. Of all the reported offices, SIPO, along with the offices of Cyprus, Spain and Portugal had the lowest non-resident shares.

OHIM received the second highest number of design filings in 2011, with 87,225 designs contained in applications. This represents a 5.4% increase over 2010. Its non-resident share was around 26.2%. The possibility to seek protection throughout the EU via a single application at OHIM meant its non-resident share was above that of most high-volume European offices. As can be seen, France, Italy and Spain each had low shares of non-resident filings. By contrast, Germany, with 23.3%, had a relatively high share of non-resident designs contained in applications. Of the top 10 offices, the US had the largest non-resident share (42.5%) in 2011.

Apart from SIPO, a number of middle- and low-income offices received a large number of designs contained in applications. For example, Turkey's design count was 41,218, which is considerably higher than that of Japan or the US. The share of non-resident applications varied widely, however, for the majority of the reported offices, with non-resident applicants accounting for the largest share of applications at many middle- and low-income offices. However, for offices of middle-income countries with high design counts, such as Brazil, China, India, Morocco and Turkey, resident applicants accounted for the largest shares of total applications. The table shows that the use of the design system varies widely within and across income groups.

21 Growth rate refers to average annual growth.

Figure 4: Trend in industrial design applications (application count) for selected offices, 1965-2011

Note: OHIM = Office for Harmonization in the Internal Market

Source: WIPO Statistics Database, October 2012

Table 3: Number of designs contained in applications (design counts) by office, 2011

Office	Resident	Non-Resident	Total	Growth rate (%): 2010-11	Non-Resident Share (%)	Income Group
China	507,538	13,930	521,468	23.8	2.7	UM
OHIM	64,343	22,882	87,225	5.4	26.2	H
Republic of Korea	54,300	4,271	58,571	-1.1	7.3	H
Germany	41,441	12,600	54,041	6.2	23.3	H
Turkey	35,488	5,730	41,218	17.6	13.9	UM
Japan	26,658	4,147	30,805	-3.0	13.5	H
United States of America	17,443	13,024	30,467	4.8	42.7	H
Italy	28,306	968	29,274	-9.8	3.3	H
Spain	18,540	454	18,994	24.3	2.4	H
France	14,795	1,411	16,206	-11.1	8.7	H
India	5,156	3,060	8,216	16.7	37.2	LM
Ukraine	3,444	3,291	6,735	17.5	48.9	LM
Russian Federation	2,887	3,190	6,077	8.2	52.5	UM
Australia	2,664	3,302	5,966	1.8	55.3	H
Brazil (2)	3,863	1,638	5,501	3.9	29.8	UM
Morocco	3,457	1,937	5,394	-10.4	35.9	LM
China, Hong Kong SAR	1,818	3,021	4,839	14.0	62.4	H
Mexico	1,909	2,240	4,149	17.2	54.0	UM
Singapore	663	3,322	3,985	3.9	83.4	H
Croatia	622	2,101	2,723	-8.3	77.2	H
Viet Nam	1,367	737	2,104	7.1	35.0	LM
Greece (2)	1,526	415	1,941	-23.6	21.4	H
Republic of Moldova	936	918	1,854	42.5	49.5	LM
Argentina (2)	..	..	1,676	18.7	..	UM
Portugal	1,598	25	1,623	1.4	1.5	H
Monaco	29	1,562	1,591	-10.3	98.2	H
T F Y R of Macedonia	87	1,372	1,459	7.5	94.0	UM
Egypt (1)	..	1,445	1,445	5.6	..	LM
New Zealand (2)	449	849	1,298	0.0	65.4	H
Liechtenstein (1)	24	1,256	1,280	-11.1	..	H
Czech Republic	1,189	49	1,238	-15.2	4.0	H
Serbia	107	1,109	1,216	43.6	91.2	UM
Romania	1,030	134	1,164	-14.5	11.5	UM
Georgia	206	943	1,149	-3.4	82.1	LM
Bosnia and Herzegovina	25	1,069	1,094	18.7	97.7	UM
Montenegro	14	1,037	1,051	4.6	98.7	UM
Hungary	755	138	893	12.0	15.5	H
Albania	16	832	848	11.6	98.1	LM
Armenia	27	791	818	23.2	96.7	LM
Algeria	699	104	803	0.0	13.0	UM
Mongolia	182	583	765	-25.2	76.2	LM

Office	Resident	Non-Resident	Total	Growth rate (%): 2010-11	Non-Resident Share (%)	Income Group
Saudi Arabia	246	506	752	0.0	67.3	H
Oman (1)	..	697	697	-6.1	..	H
Bulgaria	614	50	664	19.2	7.5	UM
Azerbaijan	27	605	632	790.1	95.7	UM
Sweden	583	23	606	-25.0	3.8	H
OAPI (1)	..	595	595	132.4	..	L
Belarus	236	337	573	81.9	58.8	UM
Slovenia (2)	..	..	566	26.3	..	H
Lithuania	61	472	533	16.6	88.6	UM
Belize (1)	..	450	450	-7.2	..	LM
Slovakia	362	54	416	-29.4	13.0	H
Colombia	147	237	384	-4.0	61.7	UM
Peru	86	248	334	-11.4	74.3	UM
Uzbekistan	301	26	327	22.0	8.0	LM
Iceland	52	274	326	-4.1	84.0	H
D. P. R. of Korea (1)	..	311	311	51.0	..	L
Denmark	209	102	311	-15.7	32.8	H
Finland	258	51	309	-4.9	16.5	H
Guatemala	35	205	240	6.2	85.4	LM
Cyprus	206	0	206	0.0	0.0	H
Syrian Arab Republic (1)	..	200	200	3.6	..	LM
Latvia	117	77	194	-14.5	39.7	UM
Namibia (1)	..	168	168	75.0	..	UM
Botswana (1)	..	166	166	104.9	..	UM
Ecuador (2)	52	110	162	28.6	67.9	UM
China, Macao SAR	7	151	158	116.4	95.6	H
Ghana (1)	..	139	139	139.7	..	LM
Suriname (1)	..	125	125	247.2	..	UM
Ireland (2)	110	14	124	0.0	11.3	H
Gabon (1)	..	89	89	43.5	..	UM
Mali (1)	..	85	85	66.7	..	L
Niger (1)	..	85	85	97.7	..	L
Sao Tome and Principe (1)	..	83	83	118.4	..	LM
Benin (1)	..	79	79	364.7	..	L
Dominican Republic (2)	..	..	79	0.0	..	UM
Senegal (1)	..	79	79	17.9	..	LM
Jordan	9	68	77	-26.0	88.3	UM
Panama	0	70	70	0.0	100.0	UM
Costa Rica (2)	10	57	67	0.0	85.1	UM
Côte d'Ivoire (1)	..	51	51	-27.1	..	LM
Rwanda (1)	..	5	5	0.0	..	L
Tajikistan	0	5	5	0.0	100.0	L

Note: ".." = not available; OHIM = Office for Harmonization in the Internal Market; OAPI = African Intellectual Property Organization; D.P.R. of Korea = Democratic People's Republic of Korea; H = High-income; UM = Upper middle-income; LM = Lower middle-income and L = Low-income. (1) = Only Hague designation data are available; therefore, data on application design count by office may be incomplete; (2) = 2010 data; and growth rate refers to 2009-10.

Source: WIPO Statistics Database, October 2012

As mentioned above, not all offices report design count data. Table 4 provides industrial design application data (application counts) for offices for which data on the number of designs contained in applications (design counts) are unavailable. A number of middle- and low-income offices received a large number of applications in 2011. For example, the offices of Indonesia (4,196), Thailand (3,749), South Africa (2,044) and Malaysia (1,871) received large numbers of applications in 2011. Resident applicants accounted for the bulk of applications in Thailand. In contrast, the majority of the applications filed at the offices of Malaysia and South Africa came from non-resident applicants. This reflects intensive use of the design system at offices in middle-income countries. However, the resident and non-resident breakdown shows that at some offices residents accounted for a high share of total applications, while in others the opposite holds true. The majority of the reported offices saw growth in applications in 2011 compared to the previous year.

Table 4: Number of industrial design applications (application counts) by office, 2011

Office	Resident	Non-Resident	Total	Growth rate (%): 2010-11	Non-Resident Share (%)	Income Group
Canada	790	4,437	5,227	1.7	84.9	H
United Kingdom	4,290	221	4,511	25.2	4.9	H
Indonesia	..	..	4,196	3.2	..	LM
Thailand	2,905	844	3,749	3.7	22.5	UM
Switzerland	1,114	1,411	2,525	0.4	55.9	H
South Africa	853	1,191	2,044	17.0	58.3	UM
Malaysia	743	1,128	1,871	11.6	60.3	UM
Poland	1,548	31	1,579	-10.0	2.0	H
Israel	1,030	481	1,511	-6.6	31.8	H
Barbados	142	1,229	1,371	14.6	89.6	H
Bangladesh	1,155	142	1,297	44.8	10.9	L
Philippines	533	579	1,112	31.3	52.1	LM
Benelux	917	170	1,087	-16.7	15.6	H
Norway	288	772	1,060	11.0	72.8	H
Pakistan	755	159	914	66.5	17.4	LM
Austria	494	243	737	-24.9	33.0	H
Chile	57	472	529	7.3	89.2	UM
Madagascar	307	2	309	8.0	0.6	L
Sri Lanka (2)	233	51	284	-9.3	18.0	LM
Paraguay (2)	121	150	271	-11.4	55.4	LM
Kyrgyzstan	17	150	167	12.1	89.8	L
Kyrgyzstan	17	150	167	12.1	89.8	L
Uruguay	46	64	110	1.9	58.2	UM
Lebanon	..	..	109	-3.5	..	UM
Kenya (2)	69	7	76	-15.6	9.2	L
Estonia	51	20	71	-24.5	28.2	H
Jamaica	41	23	64	45.5	35.9	UM
Bahrain (1)	..	53	53	..	..	H
Honduras	11	33	44	..	75.0	LM
Tunisia (1,2)	..	20	20	..	..	UM
Yemen	13	4	17	-72.6	23.5	LM
Cuba	8	5	13	..	38.5	UM
Netherlands Antilles (1,2)	..	10	10	..	..	H
Malta	7	1	8	100.0	12.5	H
Mauritius (2)	..	..	7	-30.0	..	UM
San Marino	..	..	6	-25.0	..	H
Burkina Faso (2)	4	0	4	..	0.0	L

Note: See note for Table 3.

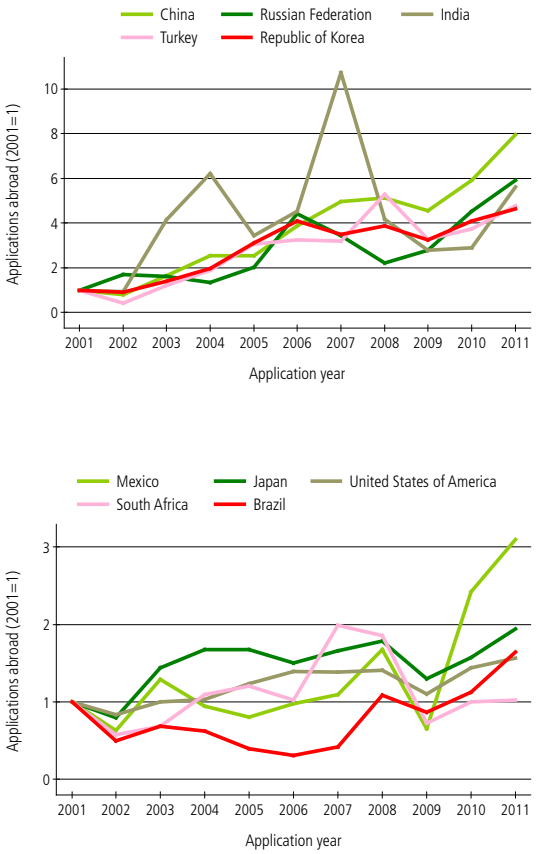
Source: WIPO Statistics Database, October 2012

Applications abroad

Figure 5 shows growth in applications abroad for selected origins. Data are based on application counts rather than equivalent application counts.[22] In terms of absolute numbers, residents of the US (15,593) filed the largest number of applications abroad in 2011, followed by residents of Japan (14,384) and the Republic of Korea (4,388).

However, the numbers of applications filed abroad by residents of China, India and the Russian Federation – all middle-income countries – have grown at faster rates than those of Japan and the US. Despite substantial growth, residents of these origins filed only a small proportion of their applications abroad. Figure 6 shows applications abroad as a percentage of resident applications. For example, Chinese residents filed 0.5% of their applications abroad. In contrast, around 90% of US resident applications were filed abroad.

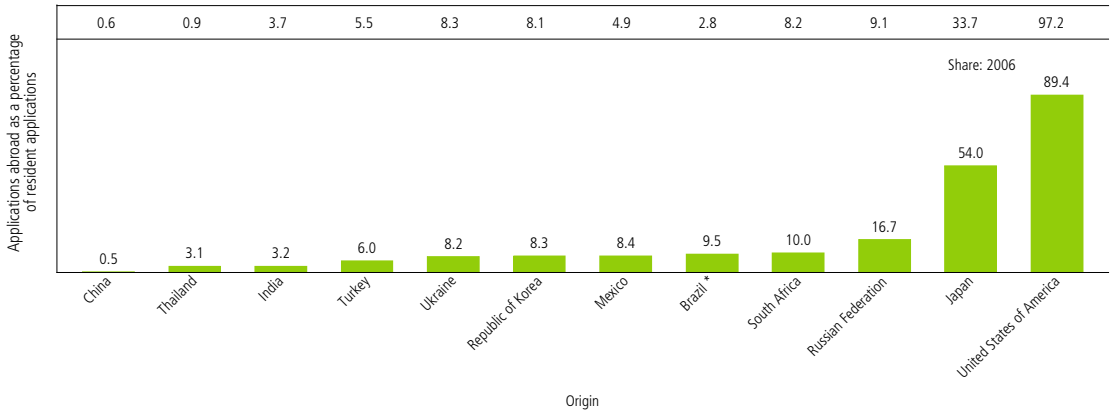
Figure 5: Applications abroad (application count with no regional multiplier) for selected origins, 2001-11



Source: WIPO Statistics Database, October 2012

22 To derive equivalent count data, applications filed at regional offices, such as OHIM, are multiplied by the number of member states party to the regional system. See the Glossary of this publication for the definition of equivalent counts.

Figure 6: Applications abroad as a percentage of resident applications (application count with no regional multiplier) for selected origins, 2011 (%)



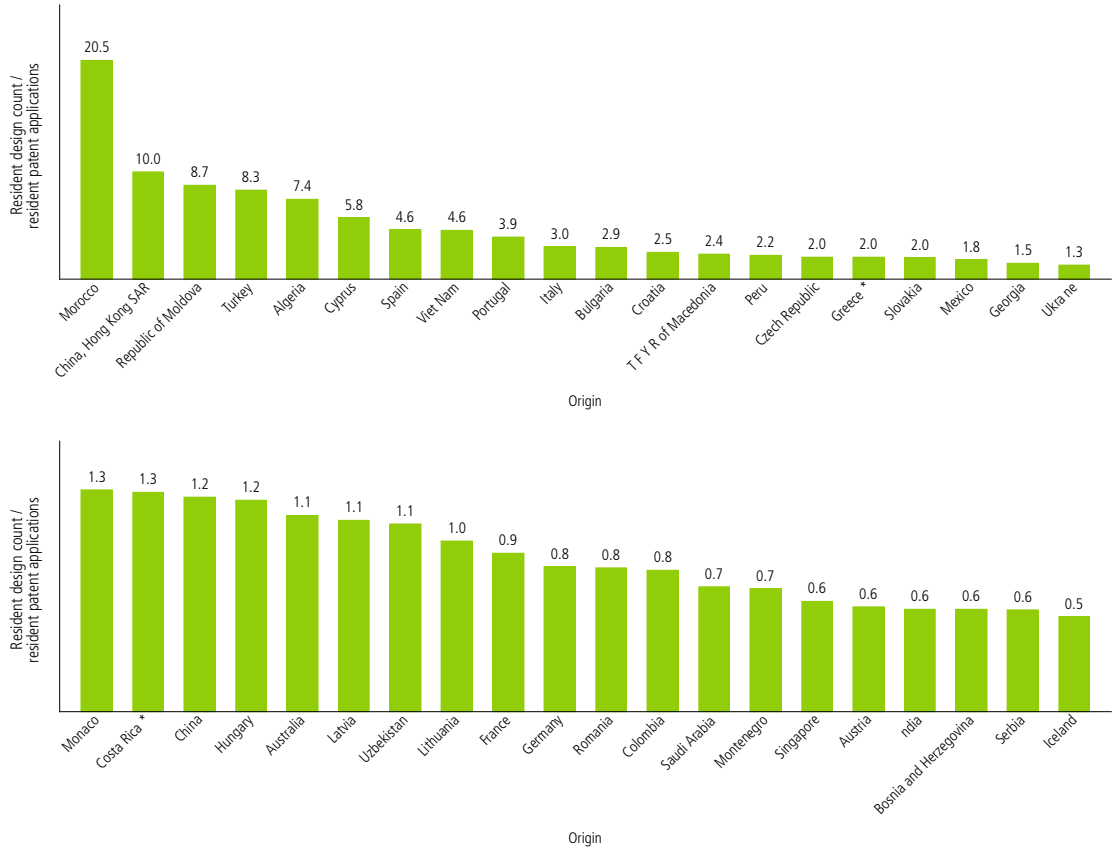
Note: *2010 data

Source: WIPO Statistics Database, October 2012

Comparison of resident design counts and resident patent applications

Figure 7 shows the ratio of design count for resident applications to number of resident patent applications for the top origins. Origins with resident design counts that are higher than resident patent applications will have a ratio greater than 1. The list includes high- and middle- as well as low-income origins. Of the reported origins, residents of Morocco filed 20 times more designs (design counts) than patents in 2011. Large high-income origins – such as France, Germany, Japan, and the US – had lower resident design counts than resident patents.

Figure 7: Resident application design count to resident patent application ratios for selected origins, 2011



Note: *2010 data. Origins with a design count or with patent applications of less than 10 are not shown in this figure.

Source: WIPO Statistics Database, October 2012

Top industrial design applicants at selected major offices

Table 5 shows the list of the top 10 industrial design applicants in 2011 for eight selected offices in high-income countries and in China. In the case of the United States Patent and Trademark Office (USPTO), data refer to the number of industrial designs registered in 2011.

The electronics and the information and communication technology (ICT) industries featured prominently in most of these rankings. At all the offices experiencing intense filing behavior listed in Table 5, firms such as Samsung (Republic of Korea), LG (Republic of Korea), Research in Motion (Canada), Panasonic (Japan), Sony (Japan), Electrolux (Sweden), Philips (Netherlands), Microsoft (US) and Foxconn (Taiwan, Province of China) consistently emerged as the top users in the electronics, ICT and software industries. Apple (US) ranks 21st at the USPTO and 13th at OHIM.

The other prominent sectors in the top filer lists are the automotive industry, clothing and fashion (including shoes and sportswear), interior design and decoration (including lighting) and – to a lesser extent - firms in the consumer product industry, namely Procter & Gamble (US) and Colgate-Palmolive (US). In the automotive sector, Kia (Republic of Korea), Honda (Japan), Goodyear (US), Toyota (Japan) and firms such as Nissan (Japan), mainly Asian firms, made the top 10 list at these IP offices. In the clothing and fashion industry, top filers included Nike (US), Sketchers (US) and Rieker (Germany), all three being shoe manufacturers, and firms in the fashion industry.

However, differences exist across offices with respect to sector affiliation in the top 10 rankings for these offices. In the Asian offices covered (China, Japan and the Republic of Korea), firms in the electronics and ICT industries - and to some extent the automotive industry – ranked among the most intensive users of the industrial design system. Singapore was the exception among the Asian offices, with jewelry companies being their most active filers. In the case of China, for the most part foreign firms occupied the top 10 ranks. Interestingly, the only entity of Chinese origin in these rankings is a university.

For OHIM, a mix of mainly electronics and textile and fashion industry firms were among the top 10 filers. In France, however, firms belonging to the fashion industry emerged as the top users of the design system. In the US, Canada and Singapore, the top user lists reflected a more diverse mix of industries.

A look at the top 30 list shows the presence of firms in the apparel and tools and the tobacco industries – sectors that do not feature in the top 10 lists – in particular for OHIM, the USPTO, SIPO and the Korean Intellectual Property Office (KIPO). The use of the design system considerably varies across sectors and countries (see Section C of this report for further details).

Table 5: Top 10 industrial design applicants for selected offices, 2011

Rank	Name	Applications
Office: Canada		
1	THE PROCTER & GAMBLE COMPANY	253
2	MICROSOFT CORPORATION	158
3	PHILIPS ELECTRONICS LTD.	106
4	NIKE INTERNATIONAL, LTD.	60
5	RESEARCH IN MONTION LIMITED	55
6	SPIN MASTER LTD.	54
7	COLGATE-PALMOLIVE COMPANY	52
8	HONDA MOTOR CO., LTD.	48
9	VICTAULIC COMPANY	41
10	LG ELECTRONICS INC.	40
Office: China		
1	PANASONIC	3,634
2	SAMSUNG	3,335
3	LG ELECTRONIC	2,844
4	JIANGNAN UNIVERSITY	2,074
5	HONDA INDUSTRIAL	2,041
6	TOYOTA AUTOMOBILE	1,695
7	SONY CORP.	1,549
8	SANYO ELECTRIC., LTD	1,494
9	PHILIPS ELECTRONICS	1,314
10	NISSAN AUTOMOBILE	1,172
Office: France		
1	THE KOOPLES PRODUCTION	585
2	CREATION NELSON	522
3	COLINE DIFFUSION	271
4	CARVEN SAS	256
5	SIMOENS	156
6	SWAMEE SARL	149
7	OLIVIER DE SAINT LOUP	114
8	SOCIETE INNOVATION DU BATIMENT	113
9	COTON BLANC	100
10	SOCIETE M COLLECTIONS	95
Office: OHIM		
1	RIEKER SCHUH AG	947
2	MICROSOFT CORPORATION	644
3	ELECTROLUX HOME PRODUCTS CORPORATION N.V.	500
4	SONY CORPORATION	485
5	EGLO LEUCHTEN GMBH	476
6	PIERRE BALMAIN, SOCIETE ANONYME	437
7	CREATION NELSON	403
8	SAMSUNG ELECTRONICS CO., LTD.	350
9	NIKE INTERNATIONAL LTD.	319
10	KONINKLIJKE PHILIPS ELECTRONICS N.V.	318

Rank	Name	Applications
Office: Republic of Korea		
1	CJ CORP.	833
2	SAMSUNG ELECTRONICS CO., LTD.	804
3	LG ELECTRONICS INC.	791
4	AMOREPACIFIC CORPORATION	526
5	LG HAUSYS, LTD.	293
6	DECO TRADE CO.,LTD	224
7	ALUTEK CO., LTD.	205
8	LG HOUSEHOLD & HEALTH CARE LTD.	201
9	DAE AN TEXTILE., LTD	194
10	KIA MOTORS CORPORATION	182
Office: Singapore		
1	SK JEWELLEY SINGAPORE PTE LTD	175
2	ASPIAL-LEE HWA JEWELLERY SINGAPORE PTE LTD	99
3	SOO KEE JEWELLERY	85
4	ELECOM CO, LTD	54
5	LOVE & CO	52
6	TOYOTA JIDOSHA KABUSHIKI KAISHA	42
7	SONY COMPUTER ENTERTAINMENT INC	28
8	DAIKIN INDUSTRIES LTD	27
9	HONDA MOTOR CO, LTD	27
10	EITAGOLD MANUFACTURERS SDN BHD	26
Office: United Kingdom		
1	AVIRUTH SACHDEV	64
2	SHOFOO LTD	56
3	BAILEY WOOD LIMITED	55
4	AHMET EROL	53
5	SUSAN HARDING	44
6	REGISTERED DESIGNS LIMITED (SUTTON COLDFIELD)	43
7	DG INTERNATIONAL HOLDINGS LTD	40
8	YANWEI SHOU	32
9	ADNAAN SOLOMON	31
10	RUBBERATKINS LTD	28
Office: United States of America		
1	SAMSUNG ELECTRONICS CO., LTD.	328
2	PROCTER + GAMBLE COMPANY	270
3	LG ELECTRONICS INC.	236
4	MICROSOFT CORPORATION	182
5	KONINKLIJKE PHILIPS ELECTRONICS N.V.	148
6	CHENG UEI PRECISION INDUSTRY CO., LTD.	130
7	APPLE, INC	122
8	NIKE, INC.	120
9	HON HAI PRECISION IND. CO., LTD. (FOXCONN)	114
10	HONDA MOTOR CO., LTD.	107

Note: For all offices, except the USPTO, data refer to applications filed. USPTO data refer to the number of registrations in 2011. OHIM = Office for Harmonization in the Internal Market

Source: Data were obtained from the respective national/regional IP offices.

Conclusion

Today, design accounts for a substantial share of firms' investments in intangible assets and innovation. There has been marked growth in the use of IP to protect product designs. Product designs and electronic user-interfaces are also at the center of legal disputes in the high-technology industry.

As a result, policymakers have shown greater interest in better understanding the role of design in innovation and economic growth. This special section has discussed a number of the conceptual and definitional challenges that exist on this front. For a start, there is need to agree on a statistical definition of design for the purposes of innovation measurement; such a definition would need to capture the economic relevance of design activity. New measurement tools could then be developed based on that definition.

Despite the absence of adequate definitions and metrics, IP statistics can nevertheless provide valuable information on design activity, even if this information is invariably partial. The data presented here show that the bulk of design filing activity occurs in the offices of middle-income countries. In particular, China has seen tremendous growth in design applications over the past few years. Offices of other middle-income countries, such as Bangladesh, India, Mexico, Pakistan, the Philippines and Turkey, have also seen strong filing growth. However, there are considerable differences across offices in the use of the design system by resident and non-resident applicants. For the majority of offices, non-resident applicants accounted for the largest share of total applications at many middle- and low-income offices. However, for offices of middle-income countries with high design counts, such as Brazil, China, India, Morocco and Turkey, resident applicants accounted for the largest share of total applications. In the future, it would be instructive to undertake a detailed analysis – data permitting – of why use of the system differs so much across countries.

Although the numbers of design applications abroad have increased over time, resident applications constitute the vast majority of total applications at the global level. Residents of high-income countries tend to file high shares of their total applications abroad. However, applications filed abroad by residents of middle-income countries, such as China, the Russian Federation and India, have grown at faster rates than those of Japan and the US. Despite substantial growth, residents of these origins filed only a small proportion of their applications abroad.

The data presented on the top applicants show that the electronics and ICT, automotive, clothing and fashion, interior design and decoration industries and – to a lesser extent - firms in the consumer product industries use the industrial design system most intensively. Due to a lack of data, it is not yet possible to investigate sectoral differences (smartphones versus handicrafts, etc.) across developed and developing countries.

In order to deepen our understanding of the use of the design system and shed light on how its use affects innovation and economic growth, a better data infrastructure is needed. In particular, the creation of unit record design rights databases would enable refined analysis and new insights into the behavior of applicants and their economic performance. It would also reveal how industrial design activity, in the legal sense, and the design activity undertaken by firms relate to one another.

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OVERVIEW OF IP ACTIVITIES

Table 1: Overview of total IP activity (resident activity plus activity abroad) by origin, 2011

Origin	Patents	Marks	Designs
China	2	2	1
Germany	5	1	2
United States of America	3	3	6
France (5)(7)	6	4	4
Japan (5)(7)	1	10	8
United Kingdom (6)	7	5	7
Italy	11	6	3
Switzerland (6)	8	8	5
Republic of Korea	4	17	10
Netherlands	9	9	13
Spain	21	7	9
Austria (5)(6)	18	11	12
Sweden	13	13	16
Poland (6)	25	12	11
Belgium	17	18	15
Turkey	24	15	14
Denmark	15	22	17
Canada (6)	12	19	23
India	14	16	25
Russian Federation	10	14	31
Finland	16	23	20
Australia	19	20	22
Brazil (1)(2)(3)	27	21	29
Czech Republic	36	24	19
Luxembourg	32	27	24
Ireland (3)(5)	28	30	27
Portugal	46	25	18
China, Hong Kong SAR	39	29	21
Israel (6)	20	45	26
Norway (5)(6)	23	40	32
Ukraine	29	34	38
Romania	40	28	35
New Zealand (3)	30	42	33
Mexico	34	26	46
Singapore	26	38	43
Hungary	38	36	34
Bulgaria	53	31	28
Greece (1)(3)(5)	41	35	37
Slovenia (1)(2)(6)	45	39	30
Slovakia	50	43	36
Liechtenstein (4)(5)(6)	42	49	39
Cyprus	56	33	42
Malaysia (6)	33	50	49
South Africa (6)	37	44	51
Thailand (6)	43	41	58
Viet Nam	59	37	47
Croatia	55	56	44
Morocco (2)	70	47	40
Latvia	58	60	41
Estonia (6)	63	51	45

Origin	Patents	Marks	Designs
Belarus (5)	31	74	59
Colombia	54	46	71
United Arab Emirates (4)(5)(6)	68	52	56
Malta (6)	64	53	60
Chile (6)	48	32	100
Lithuania	75	58	48
Monaco	75	54	54
Saudi Arabia (5)	44	77	64
Iceland	57	76	53
Serbia	66	64	57
Republic of Moldova	69	73	50
Egypt (5)(6)	47	92	55
Uzbekistan	61	72	62
Sri Lanka (1)(2)(6)	65	69	63
Bermuda (4)(5)(6)	73	67	60
Barbados (6)	52	82	69
Argentina (4)(5)(6)	60	62	82
Peru (2)	86	48	75
Kazakhstan (5)(6)	35	97	78
Algeria	81	80	52
Philippines (2)(6)	62	57	95
Indonesia (5)(6)	49	88	77
Bahamas (4)(5)(6)	78	70	67
Paraguay (1)(2)(6)	94	55	..
Panama	88	63	76
Mongolia (1)(2)	80	81	72
Venezuela (Bolivarian Republic of)(6)	83	59	91
Georgia	72	95	68
Uruguay (6)	90	68	..
Armenia	67	83	88
Seychelles (4)(6)	84	96	65
Azerbaijan (5)	51	112	86
Ecuador (1)(2)(3)	108	61	81
San Marino (4)(5)(6)	89	78	86
Jordan	86	75	95
Lebanon (4)(5)(6)	92	90	74
Bangladesh (6)	97	65	95
Costa Rica (3)	97	66	95
Andorra (4)(6)	101	88	70
Cuba (6)	73	100	..
T F Y R of Macedonia (5)	94	104	65
D.P.R. of Korea (1)(5)(6)	22	144	100
Iran (Islamic Republic of)(4)(5)(6)	79	87	103
Bosnia and Herzegovina	92	105	73
Mauritius (4)(5)(6)	94	86	..
Tunisia (4)(5)(6)	108	79	88
Guatemala (2)	124	71	84
Qatar (4)(5)(6)	101	85	..
Pakistan (5)(6)	77	110	..
Kyrgyzstan (1)(6)	71	118	..

Note: The rankings are based on total number of applications by origin. Patent data refer to the number of equivalent patent applications. Trademark data refer to the number of equivalent trademark applications based on class count (i.e., the number of classes specified in applications). Industrial design data refer to the number of equivalent industrial design applications based on design count (i.e., the number of designs contained in applications). D.P.R. of Korea = Democratic People's Republic of Korea. The table reports origins for which at least two types of IP data are available.

(1) 2010 patent data.
(2) 2010 trademark data.
(3) 2010 industrial design data.
(4) Data on patent applications at the national IP office are not available; however, applications at regional IP offices are included.
(5) Data on trademark applications at the national IP office are not available; however, applications at regional IP offices are included.
(6) Data on industrial design applications at the national IP office are not available; however, applications at regional IP offices are included.
(7) Trademark data are estimated.
'..' not available

Source: WIPO Statistics Database, October 2012

Table 2: Overview of resident IP activity by origin, 2011

Origin	Patents	Marks	Designs
China	1	1	1
Germany	5	4	2
United States of America	3	2	9
Japan (5)(7)	2	8	6
Republic of Korea	4	9	3
France (5)(7)	7	3	8
Italy	9	10	4
India	10	5	11
Turkey	17	6	5
United Kingdom (6)	8	11	10
Russian Federation	6	7	16
Spain	15	13	7
Canada (6)	16	14	..
Brazil (1)(2)(3)	22	12	12
Netherlands	11	17	20
Switzerland (6)	13	21	18
Poland (6)	18	19	15
Australia	25	16	17
Ukraine	23	23	14
Sweden	14	25	22
Mexico	34	15	24
Czech Republic	36	22	23
Belgium	24	30	28
Portugal	41	24	19
Austria (5)(6)	19	46	21
Denmark	20	39	27
Romania	30	26	30
Finland	21	36	31
Thailand (6)	37	27	..
Viet Nam	48	20	29
Chile (6)	47	18	..
New Zealand (3)	28	35	39
South Africa (6)	40	29	..
Morocco (2)	61	32	13
Malaysia (6)	33	38	..
Belarus (5)	26	..	45
China, Hong Kong SAR	60	28	25
Hungary	39	42	33
Bulgaria	50	34	34
Singapore	35	48	36

Origin	Patents	Marks	Designs
Norway (5)(6)	27	..	58
Slovakia	51	43	38
Ireland (3)(5)	32	63	40
Israel (6)	31	59	..
Saudi Arabia (5)	46	..	44
Luxembourg	45	50	41
Greece (1)(3)(5)	38	74	26
Slovenia (1)(2)(6)	43	49	46
Croatia	52	51	37
Colombia	59	31	50
Uzbekistan	49	52	42
Philippines (2)(6)	57	40	..
Republic of Moldova	66	61	32
Sri Lanka (1)(2)(6)	53	55	..
Algeria	69	58	35
Peru (2)	78	33	55
Latvia	56	64	47
Serbia	58	62	51
Mongolia (1)(2)	65	60	49
Azerbaijan (5)	55	..	61
Lithuania	66	57	52
Venezuela (Bolivarian Republic of)(6)	80	41	..
Georgia	63	73	48
Cyprus	74	68	43
Paraguay (1)(2)(6)	87	37	..
Estonia (6)	70	66	53
Bangladesh (6)	81	45	..
Ecuador (1)(2)(3)	92	44	56
Armenia	64	69	61
Iceland	68	72	56
T F Y R of Macedonia (5)	79	..	54
Costa Rica (3)	88	47	68
Panama	83	53	..
Liechtenstein (4)(5)(6)	54	87	64
Uruguay (6)	84	54	..
Guatemala (2)	92	56	59
Jordan	77	65	69
Monaco	82	70	60
Kyrgyzstan (1)(6)	62	83	..
Bosnia and Herzegovina	75	80	63

Note: The rankings are based on the number of resident applications by origin. Patent data refer to the number of equivalent patent applications. Trademark data refer to the number of equivalent trademark applications based on class count (i.e., the number of classes specified in applications). Industrial design data refer to the number of equivalent industrial design applications based on design count (i.e., the number of designs contained in applications). The table reports origins for which at least two types of IP data are available.

(1) 2010 patent data.
(2) 2010 trademark data.
(3) 2010 industrial design data.
(4) Data on patent applications at the national IP office are not available; however, applications at regional IP offices are included.
(5) Data on trademark applications at the national IP office are not available; however, applications at regional IP offices are included.
(6) Data on industrial design applications at the national IP office are not available; however, applications at regional IP offices are included.
(7) Trademark data are estimated.
'.. ' not available

Source: WIPO Statistics Database, October 2012

SECTION A
PATENTS, UTILITY MODELS AND MICROORGANISMS

Over the past two decades, the patent system has undergone important changes worldwide. As a result, patent legislation and patenting behavior have become prominent public policy themes. Similarly, use of the utility model (UM) system for protecting inventions has risen in certain countries.

This section provides an overview of patent and UM activity worldwide to enable users to analyze and monitor the latest trends. It presents a wide range of indicators that offer insights into the functioning and use of the patent and UM systems.

Disclosure of an invention is a generally recognized requirement for the granting of a patent. Where an invention involves microorganisms, national laws in most countries require that the applicant deposit a sample at a designated International Depositary Authority (IDA). This section also provides data on microorganisms.

The first subsection on patents describes the trend in patent activity worldwide and provides analysis of filings by office and origin, patent families, PCT international applications, international collaboration, filings by field of technology, intensity of patent activity, patents in force, oppositions to patents granted, pending patents, pendency times, and use of patent prosecution highways. The second subsection on UMs explores trends and activity at certain offices. The microorganism subsection focuses on global deposits, followed by a breakdown of these at each IDA, where data are available.

The Patent System

A patent confers, by law, a set of exclusive rights to applicants for inventions that meet the standards of novelty, non-obviousness and industrial applicability. It is valid for a limited period of time (generally 20 years), during which patent holders can commercially exploit their inventions on an exclusive basis. In return, applicants are obliged to disclose their inventions to the public so that others, skilled in the art, may replicate them. The patent system is designed to encourage innovation by providing innovators with time-limited exclusive legal rights, thus enabling them to appropriate the returns of their innovative activity.

The procedures for acquiring patent rights are governed by the rules and regulations of national and regional patent offices. These offices are responsible for issuing patents, and the rights are limited to the jurisdiction of the issuing authority. To obtain patent rights, applicants must file an application describing the invention with a national or regional office.

They can also file an “international application” through the Patent Cooperation Treaty (PCT), an international treaty administered by WIPO, that facilitates the acquisition of patent rights in multiple jurisdictions. The PCT system simplifies the process of multiple national patent filings by delaying the requirement to file a separate application in each jurisdiction in which protection is sought. However, the decision of whether or not to grant patents remains the prerogative of national or regional patent offices, and patent rights are limited to the jurisdiction of the patent granting authority.

The PCT international application process starts with the international phase, during which an international search and optional preliminary examination and supplementary international search are performed, and concludes with the national phase, during which national (or regional) patent offices decide on the patentability of an invention according to national law. For further details about the PCT system, refer to: *www.wipo.int/pct/en/.*

The Utility Model System

Like a patent, a UM confers a set of rights for an invention for a limited period of time, during which UM holders can commercially exploit their inventions on an exclusive basis. The terms and conditions for granting UMs are different from those for "traditional" patents. For example, UMs are issued for a shorter duration (7 to 10 years) and, at most offices, applications are granted without substantive examination. Like patents, the procedures for granting UM rights are governed by the rules and regulations of national intellectual property (IP) offices, and rights are limited to the jurisdiction of the issuing authority.

Around 60 countries provide protection for UMs. In this report, the UM terminology refers to UMs and other types of protection similar to UMs. For example, "innovation patents" in Australia and short-term patents in Ireland are considered equivalent to UMs.

Microorganisms under the Budapest Treaty

The Budapest Treaty on the International Recognition of the Deposit of Microorganisms for the Purposes of Patent Procedure plays an important role in the field of biotechnological inventions. Disclosure of an invention is a generally recognized requirement for the granting of a patent.

To eliminate the need to deposit a microorganism in each country in which patent protection is sought, the Budapest Treaty provides that the deposit of a microorganism with any IDA suffices for the purposes of patent procedure at national patent offices of all contracting states, and before any regional patent office that recognizes the effects of the treaty. An IDA is a scientific institution – typically a "culture collection" – capable of storing microorganisms. Presently, there are 40 such authorities. Further details about the Budapest Treaty are available at: *www.wipo.int/treaties/en/registration/budapest/.*

A.1

PATENT APPLICATIONS AND GRANTS WORLDWIDE

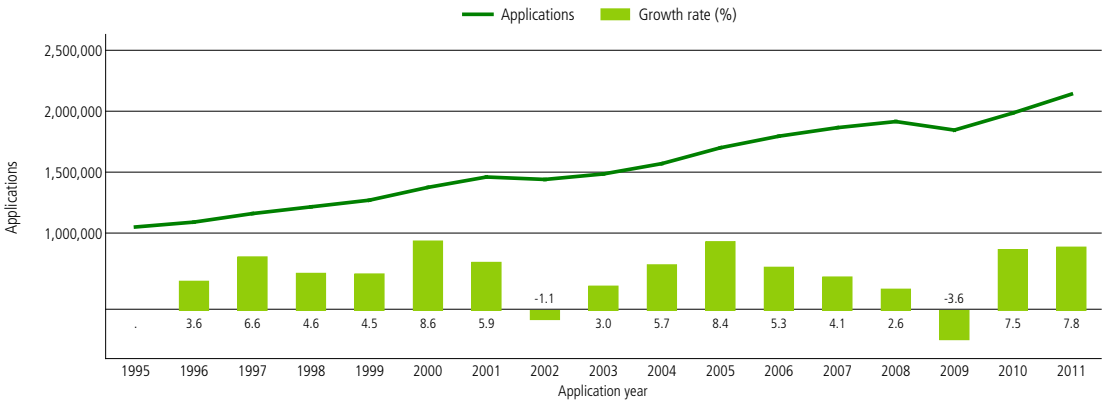
A.1.1 Applications worldwide

Figures A.1.1.1 to A.1.1.3 depict the total number of patent applications worldwide between 1995 and 2011.[1] World totals are WIPO estimates covering around 125 offices, which include both direct national and regional applications and international applications filed through the PCT that subsequently entered the national or regional phase.

For the first time, in 2011, the total number of patent applications filed worldwide exceeded the two million mark. Following a drop in 2009 (-3.6%), patent applications rebounded strongly in 2010 and 2011. For the first time since 1995, the growth rate has exceeded seven percent for two consecutive years (Figure A.1.1.1) – this is noteworthy considering the fragility of the world economy.

The long-term trend shows continuous growth in applications, except for declines in 2002 and 2009. Patent applications worldwide doubled from approximately 1.05 million in 1995 to around 2.14 million by 2011. This is mostly due to rapid growth in applications filed in China and the United States of America (US).

Figure A.1.1.1 Trend in patent applications worldwide

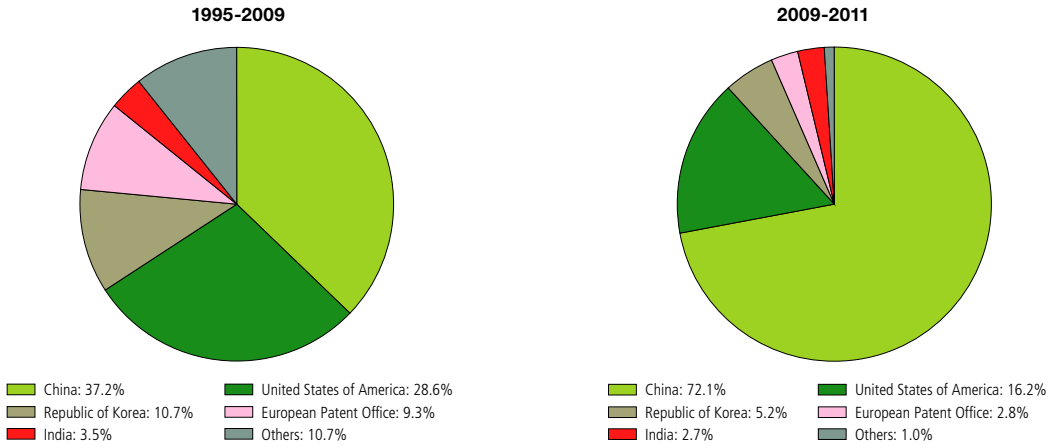


Note: World totals are WIPO estimates covering around 125 patent offices (see Data Description). These estimates include direct applications and PCT national phase entry data.

Source: WIPO Statistics Database, October 2012

1 Throughout this publication, "patents" refers to patents for invention.

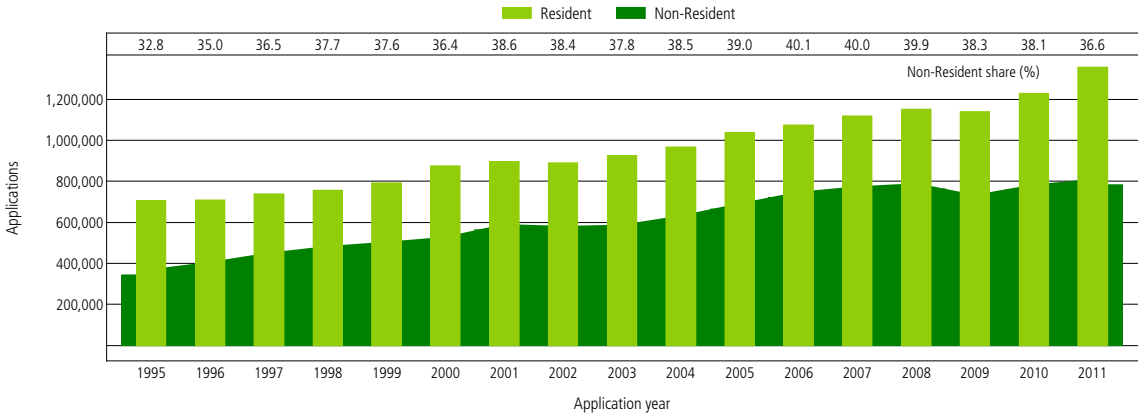
Figure A.1.1.2 Contribution of offices to growth in patent applications worldwide



Note: The Japan Patent Office (JPO) – third largest in the world – is not included in this figure, as it did not account for any growth in worldwide patent applications. Since 2005, the total number of patent applications at the JPO has continuously declined (see Figure A.2.1.1).

Source: WIPO Statistics Database, October 2012

Figure A.1.1.3 Resident and non-resident patent applicants worldwide



Note: See note for Figure A.1.1.1.

Source: WIPO Statistics Database, October 2012

To determine the source of growth in applications worldwide, Figure A.1.1.2 breaks down application growth by office for the 1995-2009 and 2009-2011 periods. Two-thirds of the growth in applications between 1995 and 2009 can be attributed to the patent offices of China and the US.[2] However, the patent office of China was the main contributor to growth in worldwide applications from 2009 to 2011 - accounting for 72% of total growth.

The contribution of China to total growth in applications has increased in recent years while that of other major offices has declined. This reflects the shift in the geography of patent applications from the US and Europe towards China.

2 For simplicity, country names rather than office names are used to label graphs. As an example, the patent office of China is referred to as "China" rather than the "State Intellectual Property Office of the People's Republic of China".

Figure A.1.1.3 provides a breakdown of patent applications worldwide by residency of the applicant. A resident application is defined as an application filed with a patent office by an applicant residing in the country in which that office has jurisdiction. For example, a patent application filed with the Japan Patent Office (JPO) by a resident of Japan is considered a resident application for the JPO. A non-resident application is an application filed with the patent office of a given country by an applicant residing in another country. For example, a patent application filed with the United States Patent and Trademark Office (USPTO) by an applicant residing in France is considered a non-resident application for the USPTO. In this report, regional patent office application data are divided into resident and non-resident applications. An application at a regional office is considered a resident application if the applicant is a resident of one of its member states; and it is considered a non-resident application if the applicant is not a resident of one of its member states.[3]

The 2.14 million applications filed in 2011 consist of 1.36 million resident and 0.78 million non-resident applications (Figure A.1.1.3). Compared to 2010, both resident and non-resident applications grew in 2011; however, resident applications grew at a faster rate (10.4%) than non-resident applications (3.7%). Growth in resident applications in China accounted for around 96% of the growth in resident applications worldwide. Growth in non-resident applications in China and the US accounted for 70% of growth in non-resident applications worldwide.

In 2011, non-resident applications accounted for 36.6% of applications worldwide. However, the non-resident share in total applications has followed a downward trend since its peak of 40.1% in 2006. This downward trend, despite growth in non-resident applications, is due to the substantial growth in resident applications in China. Compared to other types of IP rights, patent applications exhibited the highest non-resident share.[4]

A.1.2 Grants worldwide

The total numbers of patents granted worldwide have recorded uninterrupted growth since 2001 (Figure A.1.2.1). In 2011, grants worldwide approached the one million mark, with 606,800 resident and 390,000 non-resident grants.[5] Patent grants grew by 12.3% in 2010 and 9.7% in 2011. For both years, growth in resident grants accounted for around two-thirds of total growth.

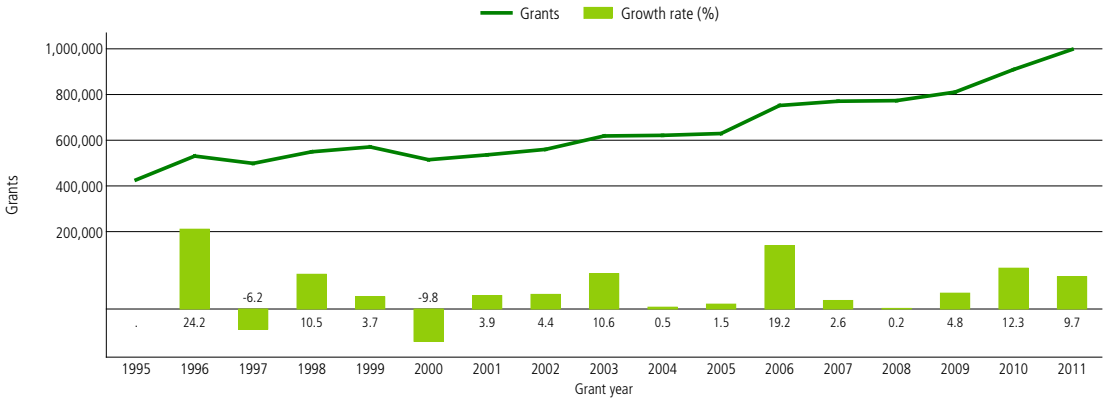
Figure A.1.2.2 provides a breakdown of the growth of patent grants worldwide for the periods 1995-2009 and 2009-2011. From 2009 to 2011, the number of grants issued worldwide increased by 23.9%. The US accounted for 30.4% of total growth, followed by Japan (23.9%), China (23.3%) and the Republic of Korea (20.2%). This is in contrast to patent application data, according to which China accounted for 72.1% of the growth in applications worldwide (Figure A.1.1.2). The substantial increase in the number of grants combined with a drop in the number of applications at the JPO has resulted in a significant decrease in the number of pending applications undergoing examination at the JPO (Figure A.11.3).

3 Resident and non-resident applications are also known as domestic and foreign applications.

4 The non-resident share for patents was 36.6%, compared to 27.1% for trademarks and 10.9% for industrial designs.

5 The distribution of resident and non-resident grants is 61% and 39%, respectively. The non-resident share in total grants is slightly higher than the non-resident share in total applications (see Figure A.1.1.3).

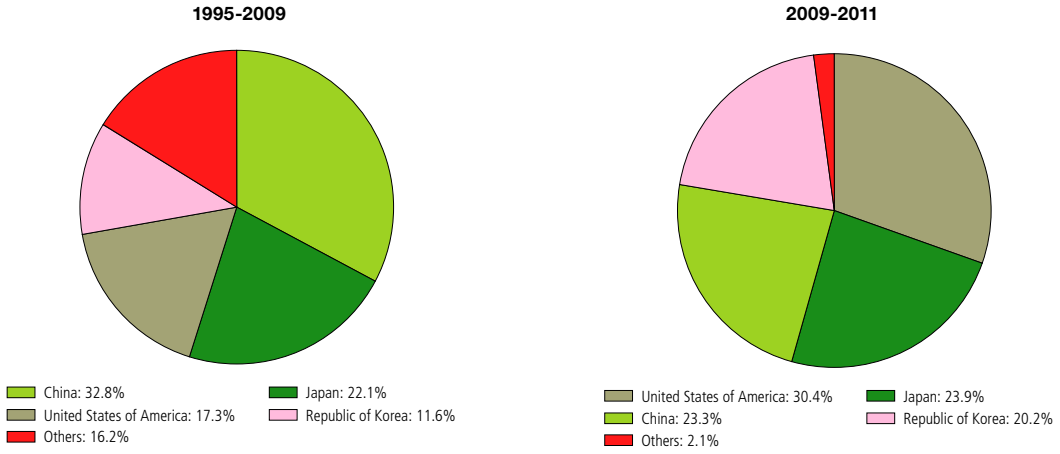
Figure A.1.2.1 Trend in patents granted worldwide



Note: World totals are WIPO estimates covering around 115 patent offices (see Data Description). These estimates include patent grants based on direct applications and PCT national phase entry data.

Source: WIPO Statistics Database, October 2012

Figure A.1.2.2 Contribution of offices to growth in patents granted worldwide



Source: WIPO Statistics Database, October 2012

A.2

Patent applications and grants by office

This subsection provides detailed data on patent applications and grants by office - national or regional. For presentational purposes, country names (rather than office names) are used to label graphs for national offices. For example, patent data for China are labeled "China" rather than the "State Intellectual Property Office of the People's Republic of China" (SIPO).

A.2.1 Applications by office

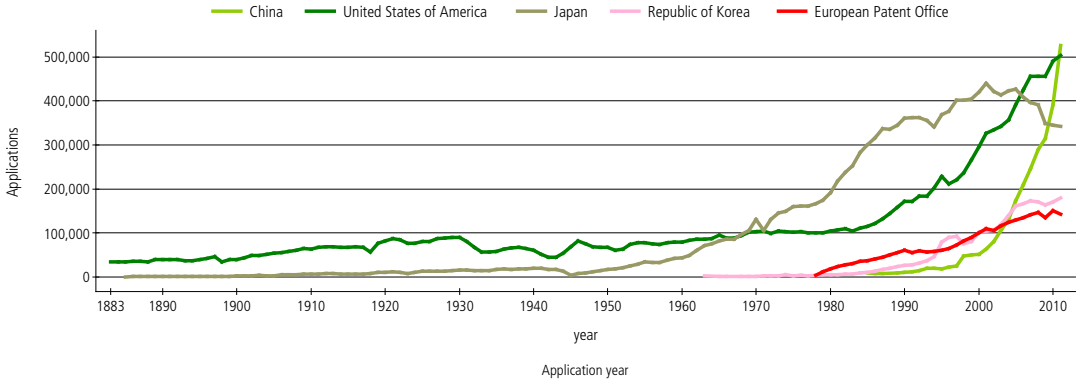
Figure A.2.1.1 shows the long-term trend in total number of applications for the top five offices. These offices were selected according to their 2011 totals.[6] Application numbers were stable until the early 1970s when the JPO started seeing rapid growth in applications, a pattern that was also observed for the USPTO from the 1980s onwards. From 1883 to 1967, the USPTO was the leading office in the world by filings. The JPO surpassed the USPTO in 1968 and maintained the top position until 2005. However, since 2005, the number of applications received by the JPO has followed a downward trend

Both the European Patent Office (EPO) and the Korean Intellectual Property Office (KIPO) have seen increases in the numbers of applications received since the early 1980s. The volumes received by these offices are of similar magnitude, but far below those of the JPO and the USPTO.

SIPO has seen rapid growth in applications since 1985, leading it to surpass both the EPO and KIPO in 2005. Furthermore, in the past two years, SIPO has experienced substantial growth in applications.[7] As a result, SIPO overtook the JPO in 2010 and the USPTO in 2011 to become the largest patent office in the world.

Figure A.2.1.2 depicts the long-term trend of patent applications for five additional selected offices. Compared to the top five offices mentioned earlier, these offices received lower volumes of applications, but experienced strong growth in applications over the past 10 years. For example, the number of applications received by the patent office of India increased from approximately 11,000 in 2002 to around 42,000 in 2011. Similarly, the patent office of the Russian Federation received around 8,000 more applications in 2011 than in 2002.

Figure A.2.1.1 Trend in patent applications for the top five offices

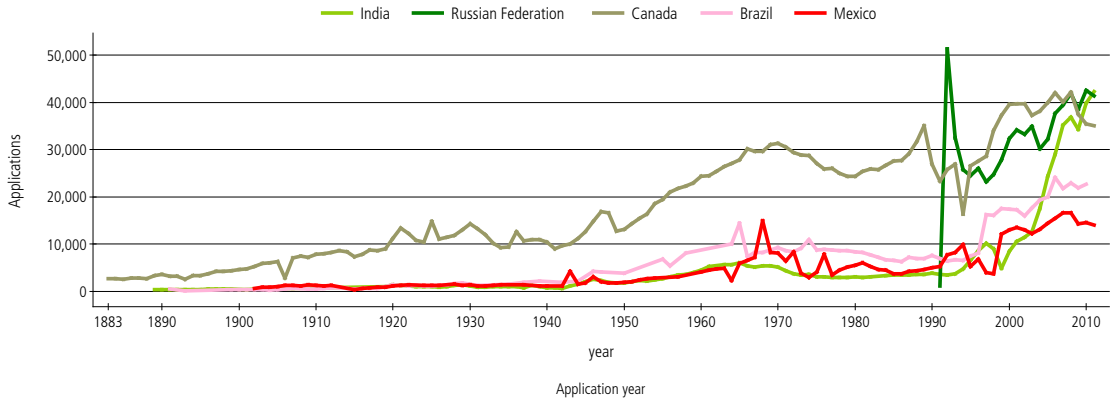


Source: WIPO Statistics Database, October 2012

6 State Intellectual Property Office of China (SIPO), United States Patent and Trademark Office (USPTO), Japan Patent Office (JPO), Korean Intellectual Property Office (KIPO) and European Patent Office (EPO).

7 Patent applications at SIPO grew by 24.3% in 2010 and 34.6% in 2011.

Figure A.2.1.2 Trend in patent applications for selected offices



Source: WIPO Statistics Database, October 2012

Figure A.2.1.3 shows the number of patent applications broken down by resident and non-resident applications for the top 20 offices. As mentioned above, SIPO (with 526,412 applications) overtook the USPTO (503,582) in 2011 to become the largest office in the world - in terms of applications received. This is due to substantial growth in resident applications over the past few years. The JPO (with 342,610), KIPO (178,924) and the EPO (142,793) also received considerable numbers of applications. Together, the top five offices accounted for around four-fifths of the world total, and their combined share has increased over the last decade – from 69.5% in 1998 to 79% in 2011.[8]

The list of the top 20 offices consists mostly of those located in high-income countries, but there are also a few in middle-income countries (e.g., China and India). The patent offices of India and the Russian Federation each received more than 40,000 applications in 2011. Brazil and Mexico also received a large number of applications, the bulk of which were from non-resident applicants.

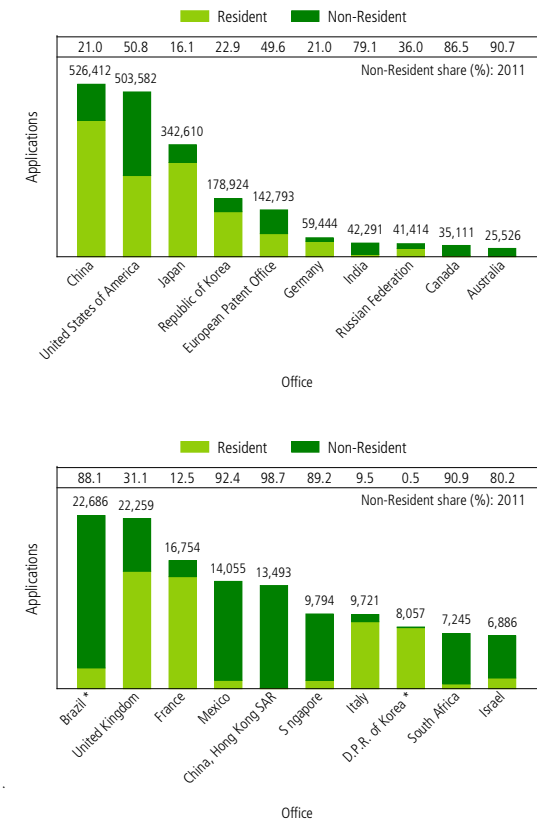
At the global level, the non-resident share of total applications filed was 36.6% (Figure A.1.1.3), but this differs significantly among offices. The non-resident share ranged from 98.7% (China, Hong Kong SAR) to 0.5% (Democratic People's Republic of Korea) in 2011. For 8 of the top 20 offices, non-resident applications accounted for more than four-fifths of total applications. The distribution of resident and non-resident applications was almost equal at the EPO and the USPTO. In contrast, resident applications accounted for the bulk of total applications received by KIPO, the JPO and SIPO. Among the reported offices, SIPO had the largest drop in its non-resident share in 2011 compared to 2010.[9] The Russian Federation and South Africa, however, had the largest increases in non-resident shares.[10]

8 The 2011 shares held by the top five offices are: SIPO (24.6%), the USPTO (23.5%), the JPO (16%), KIPO (8.4%) and the EPO (6.7%).

9 SIPO saw growth in both resident and non-resident applications, but growth in resident applications outpaced growth in non-resident applications, resulting in a decline in the non-resident share of total applications for this office.

10 The patent offices of the Russian Federation and South Africa saw drops in resident applications and growth in non-resident applications, resulting in an increase in the non-resident share of total applications for these offices.

Figure A.2.1.3 Patent applications for the top 20 offices, 2011



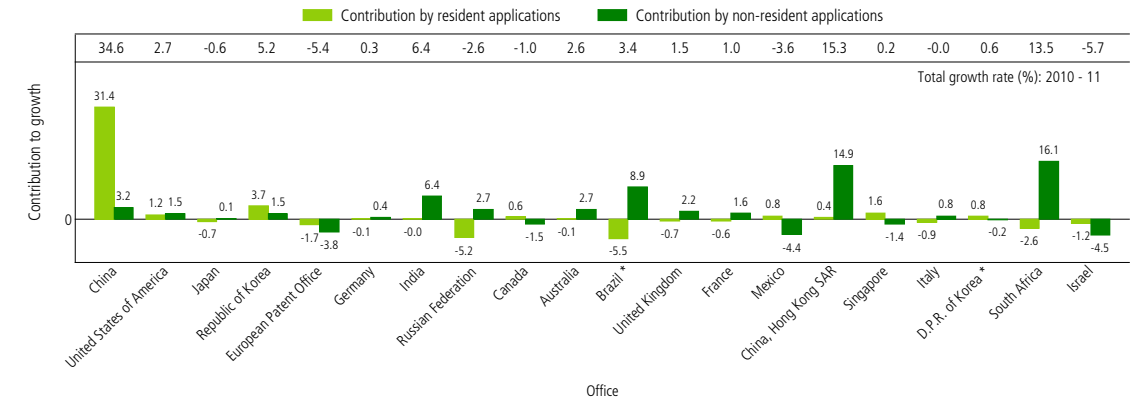
Note: *2010 data; D.P.R. of Korea = Democratic People's Republic of Korea

Source: WIPO Statistics Database, October 2012

Between 2010 and 2011, the majority of the offices listed saw growth in applications. China had the largest growth (34.6%), while the EPO (-5.4%) and Israel (-5.7%) saw the largest declines in applications. To identify the source of growth, Figure A.2.1.4 provides a breakdown of total growth by resident and non-resident applications. Growth in resident applications is the main factor behind the growth in total applications in China and the Republic of Korea. For example, growth in resident applications accounted for 31.4 percentage points of the 34.6% increase in applications in China.

Growth in both resident and non-resident applications contributed to the overall growth in the US. For a number of offices (e.g., Australia and South Africa), growth in non-resident applications was the main contributor to total growth.

Figure A.2.1.4 Contribution of resident and non-resident applications to total growth for the top 20 offices, 2010-11

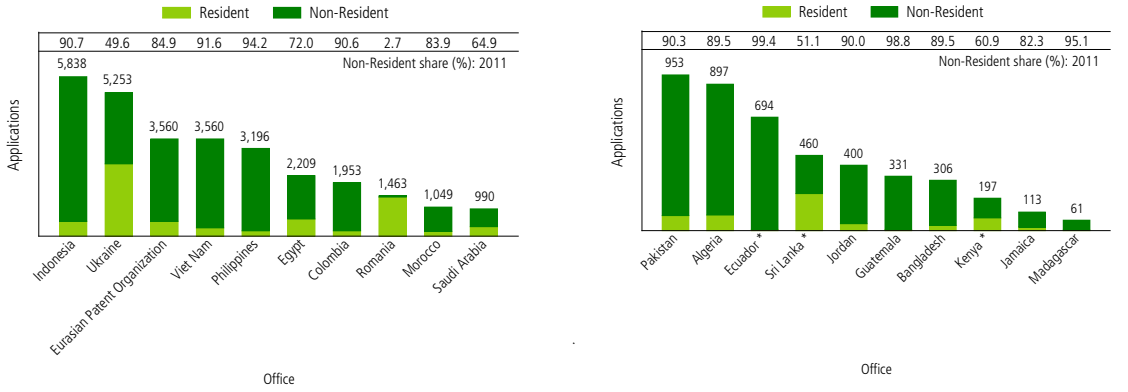


Note: *Growth rate refers to 2009-2010; D.P.R. of Korea = Democratic People's Republic of Korea

Source: WIPO Statistics Database, October 2012

High-income countries are prominent in the list of top 20 offices (Figure A.2.1.3). However, a considerable amount of IP activity also occurs in the offices of middle- and low-income countries. Figure A.2.1.5 depicts patent application data for selected middle- and low-income countries.[11] The patent offices of Indonesia and Ukraine each received more than 5,200 applications in 2011. The Eurasian Patent Organization (EAPO) and the offices of Viet Nam and the Philippines also received large numbers of applications. In all offices listed, except Ukraine and Romania, non-resident applications accounted for the bulk of total applications. For example, non-resident applications accounted for almost all applications filed in Ecuador and Guatemala. However, for a number of these offices, the contribution of resident applications to overall growth outweighed that of non-resident applications (Figure A.2.1.6). For example, growth in resident applications accounted for more than half of the 4.3% overall growth in Colombia.

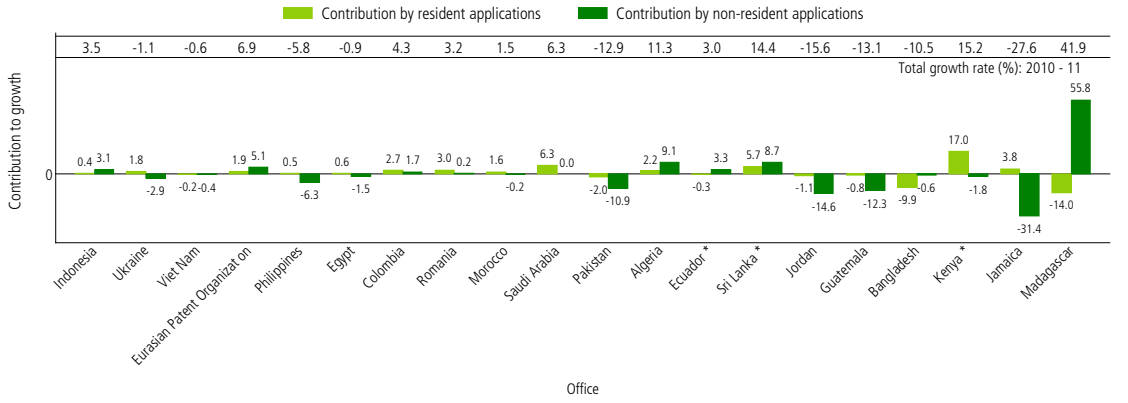
Figure A.2.1.5 Patent applications for offices of selected middle- and low-income countries, 2011



Note: *2010 data

Source: WIPO Statistics Database, October 2012

Figure A.2.1.6 Contribution of resident and non-resident applications to total growth for offices of selected middle- and low-income countries, 2010-11



Note: *Growth rate refers to 2009-2010.

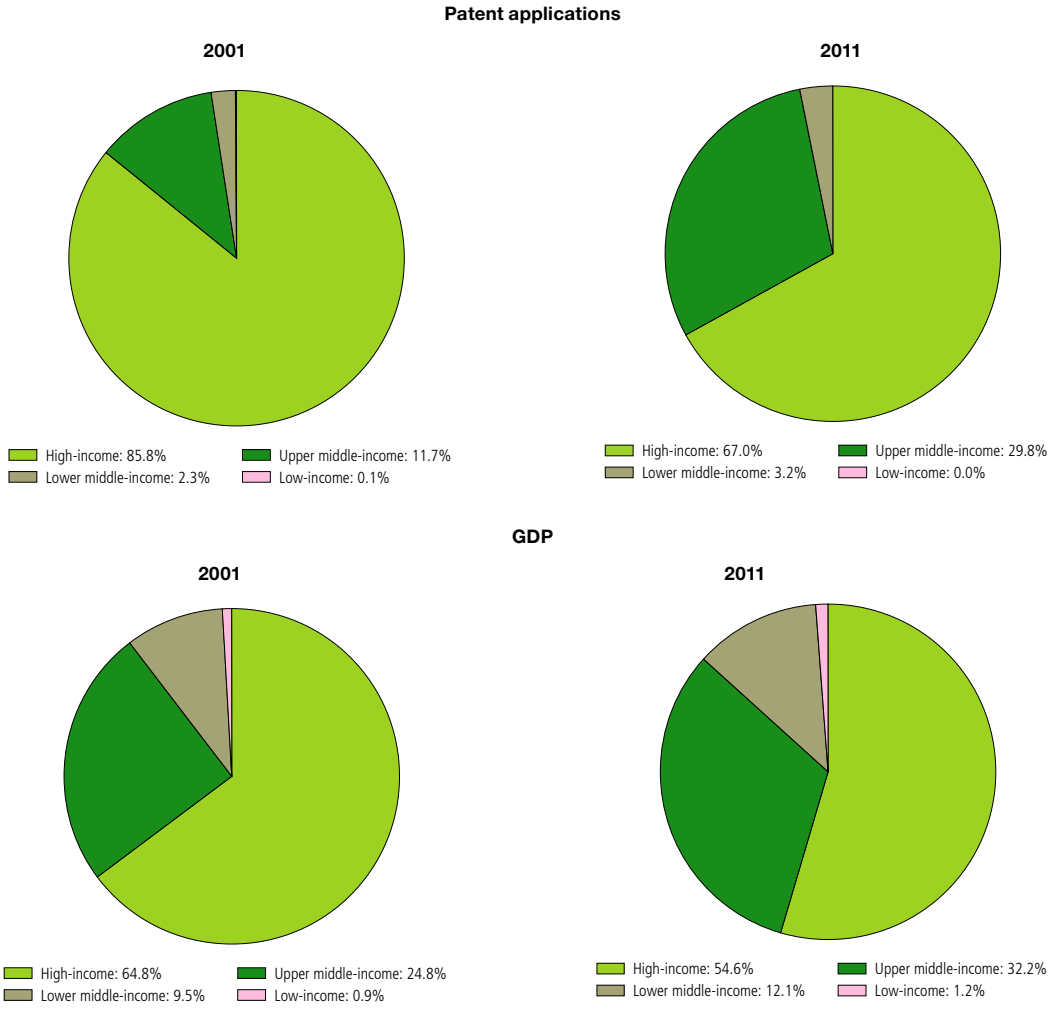
Source: WIPO Statistics Database, October 2012

11 The selected offices are from different world regions. Data for all available offices are presented in the statistical annex.

Figure A.2.1.7 shows the distribution of patent applications worldwide and that of gross domestic product (GDP) by income group.[12] The share of high-income countries in patent applications worldwide declined from 85.8% in 2001 to 67% in 2011. Despite the decline, they accounted for two-thirds of the world total, which is substantially higher than their GDP share (54.6%).

Over the past decade, China saw rapid growth in both patent applications and GDP. This resulted in a considerable increase in the share of upper middle-income countries in the world total for both patents and GDP. Furthermore, patent applications grew more rapidly than did economic output in China, so that the gap between patent applications and GDP shares of the upper middle-income countries narrowed considerably between 2001 and 2011.

Figure A.2.1.7 Patent applications and GDP share by income group



Source: WIPO Statistics Database and World Bank, October 2012

12 The income groups correspond to those used by the Word Bank. Economies are divided according to 2011 gross national income (GNI) per capita, calculated using the World Bank Atlas method. The groups are: low-income (US$1,025 or less); lower middle-income (US$1,026-$4,035); upper middle-income (US$4,036-$12,475); and high-income (US$12,476 or more).

Figure A.2.1.8 Resident and non-resident patent applications worldwide by income, 2011

Source: WIPO Statistics Database, October 2012

In both high-income and upper middle-income countries, resident applications accounted for the majority of total applications (Figure A.2.1.8). In contrast, resident applications accounted for around one-fifth of total applications in lower middle-income countries. For high-income countries, the non-resident share increased from around 35% in 2001 to 38% in 2011, while that of upper middle-income countries declined from 60% to 26.8%. This is due to the substantial growth in resident applications in China. Excluding data for China, the non-resident share for upper middle-income countries was around 65% in 2001 and 58% in 2011.

A.2.2 Grants by office

The JPO (238,323) issued the largest number of patents in 2011, followed by the USPTO (224,505). The number of patents granted by SIPO grew considerably in absolute terms (+37,003) in 2011, but its rank in third position did not change.[13] Brazil, one of the top 20 offices in terms of applications, does not, however, appear in the top 20 list for grants. Of the top 20 offices, India showed the largest difference between its numbers of applications and grants. In contrast, application and grant numbers for Mexico were of similar magnitude.[14]

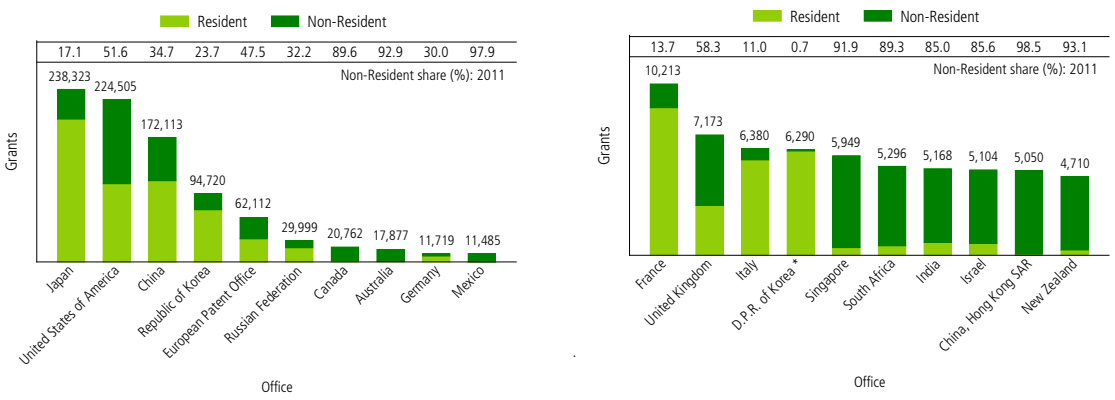
The combined shares of the top five offices for applications and grants worldwide were nearly equal (around 79%). However, when looking at the JPO's and SIPO's shares in total applications and grants worldwide, large differences emerge. SIPO accounted for 24.6% of applications but only 17.3% of grants worldwide, but the JPO witnessed an opposite trend, with 16% of applications and 24% of grants worldwide.

The non-resident share ranged from 0.7% in the Democratic People's Republic of Korea to 98.5% in China, Hong Kong SAR. For a number of offices, the non-resident share exceeded 80%. However, for most offices, non-resident application and grant shares (Figure A.2.1.3) were of similar magnitude. Exceptions include China, Germany and the United Kingdom (UK), which all have higher non-resident shares for grants than for applications.

13 In absolute numbers, SIPO had the largest increase in patent grants (+37,003), followed by KIPO (+25,877) and the JPO (+15,630).

14 In 2011, the patent office of India received 42,291 applications and issued 5,168 patents, while the patent office of Mexico received 14,055 applications and issued 11,485 patents. However, care should be exercised in making direct comparisons between application and grant data, due to the time lag between application and grant dates.

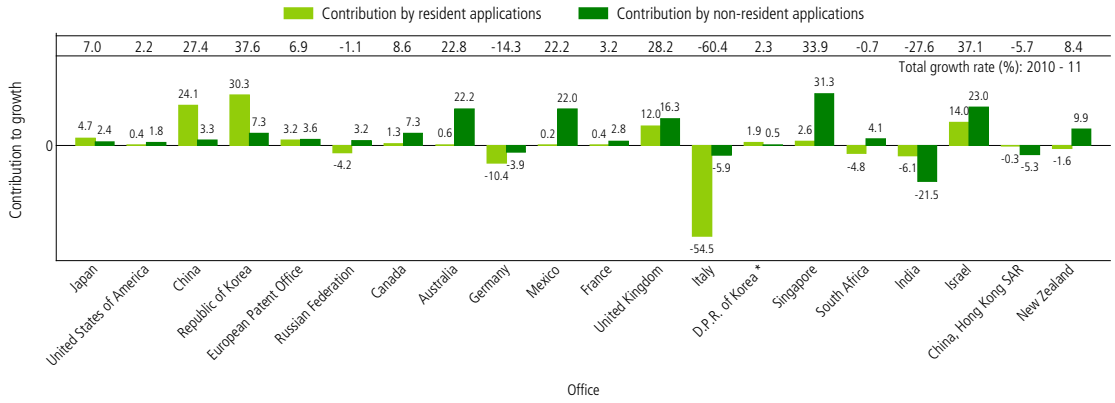
Figure A.2.2.1 Patent grants for the top 20 offices, 2011



Note: *2010 data; D.P.R. of Korea = Democratic People's Republic of Korea

Source: WIPO Statistics Database, October 2012

Figure A.2.2.2 Contribution of resident and non-resident patent grants to total growth for the top 20 offices, 2010-11



Note: *2010 data

Source: WIPO Statistics Database, October 2012

The majority of the top 20 offices issued more patents in 2011 than in 2010 (Figure A.2.2.2). In percentage terms, KIPO had the highest growth rate (37.6%), followed by Israel (37.1%) and Singapore (33.9%).[15]

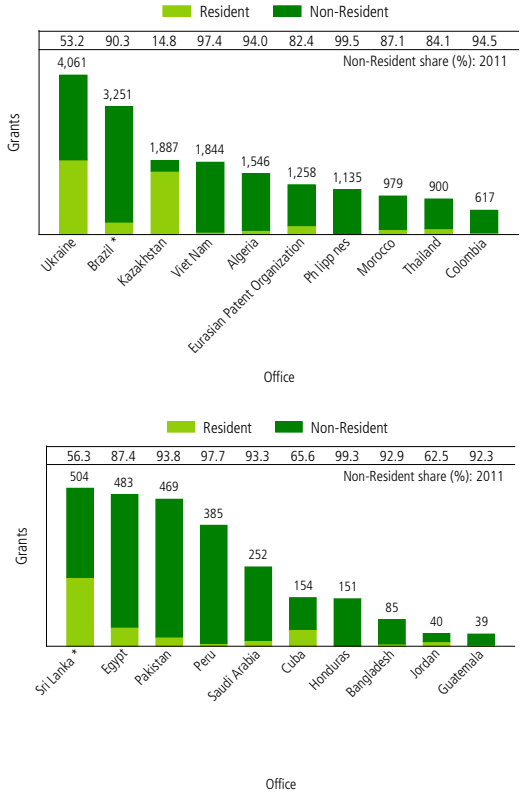
For all offices, except the JPO, KIPO and SIPO, the increase in non-resident grants was the main contributor to each office's growth. For example, the increases in Australia, Mexico and Singapore were almost entirely driven by growth in non-resident grants. Italy saw a substantial drop in patent grants (-60.4%) in 2011. India also issued fewer patents in 2011 than in 2010 (-27.6%), due to declines in both resident and non-resident grants.

Figure A.2.2.1 illustrates that high-income countries are prominent in the list of top 20 offices for patent grants. Figure A.2.2.3 presents grant data for offices of selected middle- and low-income countries.[16] Among these countries, Ukraine issued the largest number of patents, followed by Brazil, Kazakhstan and Viet Nam. In all offices, except Kazakhstan, non-resident grants accounted for the largest share in total grants. The majority of reported offices issued more patents in 2011 than in 2010.

15 For absolute numbers, see footnote 13.

16 The selected offices are from different world regions. Data for all available offices are presented in the statistical annex.

Figure A.2.2.3 Patent grants for offices of selected middle- and low-income countries, 2011



Note: *2010 data

Source: WIPO Statistics Database, October 2012

A.3

Patent applications and grants by origin

Patent application counts based on the applicant's origin complement the picture of patent activity worldwide. Patent activity by origin includes resident applications and applications abroad.[17] The origin of a patent application is determined based on the residency of the first-named applicant. As some offices do not provide data broken down by origin, the number of applications and grants by origin reported here is likely to be lower than the actual number.

Applications at regional offices are equivalent to multiple applications in the respective states members of those offices. This subsection reports figures based on an equivalent applications or grants concept. For instance, to calculate the number of equivalent applications or grants for the EAPO or the African Intellectual Property Organization (OAPI), each application is multiplied by the corresponding number of member states. By contrast, the EPO and the African Regional Intellectual Property Organization (ARIPO) do not issue patents with automatic region-wide applicability. Thus, for these two offices, each application is counted as one application abroad if the applicant does not reside in a member state; or as one resident and one application abroad if the applicant resides in a member state. This method might underestimate the number of applications at the EPO or ARIPO, as applications at these offices may lead to protection in more than one jurisdiction. Uncertainty and lack of data on designations or validations in member states are the main reasons for limiting the number of applications abroad to one for these two offices.

17 See Glossary for the definition of resident application and application abroad.

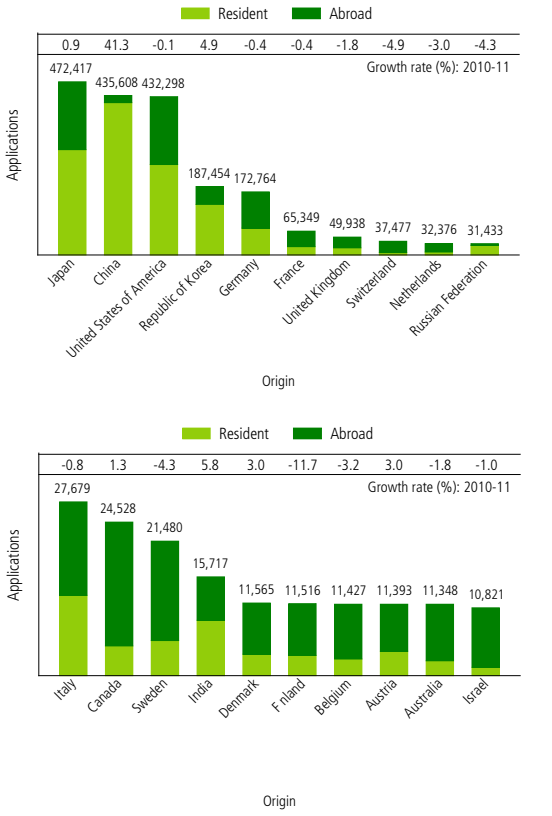
A.3.1 Applications and grants by origin

Figure A.3.1.1 presents equivalent patent application data for the top 20 origins. Residents of Japan filed the largest number of applications across the world (472,417) in 2011.[18] China, which saw a 41.3% increase in 2011, overtook the US to become the second largest country for origin counts.[19] The ranking of the top three origins is different than that for offices. In terms of offices, China ranked first, but it ranked second for origin data. In contrast, Japan ranked third for office data, but first for origin data. Large differences in the numbers of applications abroad for China and Japan partly explain the differences in the ranking between office and origin data (See Figure A.3.2.1). The majority of origins filed fewer than 50,000 applications in 2011. China, India and the Russian Federation are the only three middle-income origins in the top 20 list.

Residents of China filed fewer than 20,000 applications abroad (i.e., 4.5% of all applications worldwide). In contrast, Japan and the US each filed around 184,000 applications abroad. All European countries, Australia, Canada, and Israel filed a high proportion of their total applications abroad.[20]

Among the top 20 origins, most countries saw growth in applications between 2010 and 2011. China was the only country with double-digit growth, due mostly to growth in resident applications. Finland and Switzerland saw considerable declines in applications. In the case of Finland, the drop in applications abroad was the main contributor to the overall decline. As for Switzerland, the fall in resident applications was the main factor for the overall decrease.

Figure A.3.1.1 Equivalent patent applications for the top 20 origins, 2011



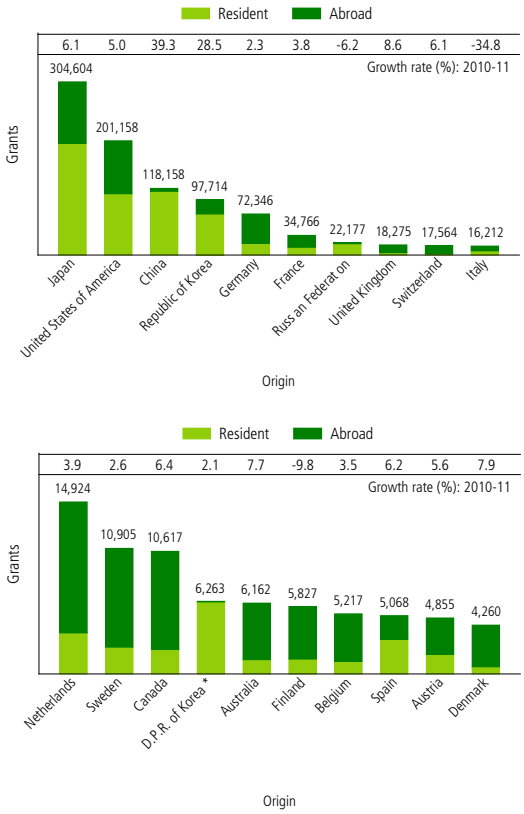
Source: WIPO Statistics Database, October 2012

18 The sum of resident applications and applications abroad.

19 If the present trend continues, China will soon overtake Japan to become the top origin.

20 For these offices, shares of applications filed abroad ranged from 87% for Israel to 57% for Germany.

Figure A.3.1.2 Equivalent patent grants for the top 20 origins, 2011



Note: *2010 data; D.P.R. of Korea = Democratic People's Republic of Korea

Source: WIPO Statistics Database, October 2012

For the majority of origins, equivalent patent grants show similar trends to those for equivalent applications. However, the applications and grants profiles of China and the US differ significantly. These two origins had similar numbers of applications (Figure A.3.1.1), but there was a substantial difference in their numbers of grants received. Residents of China received 118,185 equivalent grants in 2011, compared to 201,158 for US residents. However, care should be exercised when comparing application and grant data as it takes time (several years) to process applications. Furthermore, in recent years there has been substantial growth in applications filed by residents of China. Once those applications are processed, China's grant total will increase.

For all origins reported – except Finland, Italy and the Russian Federation – the number of equivalent grants increased between 2010 and 2011.[21] Thirteen of these 20 origins were granted the majority of their patents by foreign patent offices.[22] Residents of Denmark and Switzerland obtained more than four-fifths of their total patents from offices other than their national patent office.

A.3.2 Applications abroad by origin

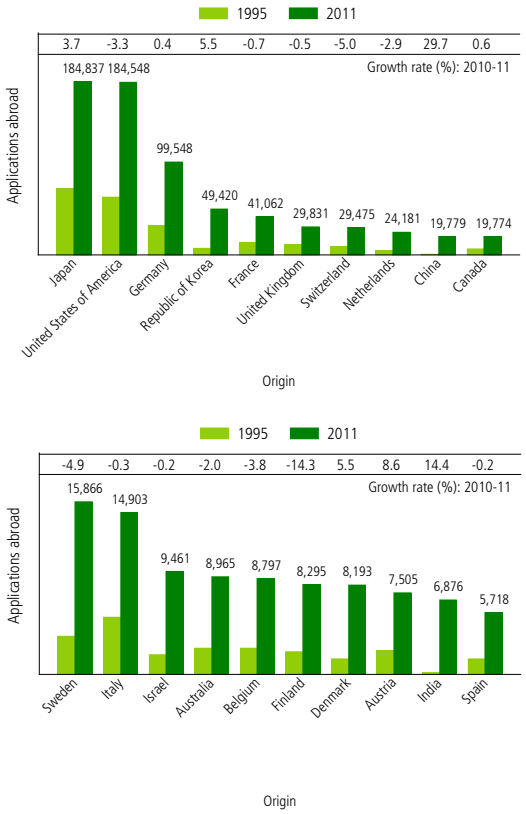
The volume of filings abroad reflects, to some extent, the impact of globalization on IP protection strategies. Companies that expand operations to foreign countries might have a business need to seek IP protection in those countries.[23] Therefore, patent applications abroad provide some indication of how companies are expanding their businesses into overseas markets. Japan and the US, by far, filed the largest number of applications abroad – each filing more than 184,000 applications in 2011.

21 These three origins saw drops in equivalent applications and grants in 2011.

22 Eleven of the 13 origins are members of the EPO – a regional office. Patents granted by the EPO are counted as grants abroad, hence EPO members have a high share in total grants abroad.

23 It goes without saying that expanding operations abroad does not necessarily mean that companies will seek additional patent rights. For example, companies might rely on other types of IP protection, or IP protection might not be necessary at all due to the nature of the business activity.

Figure A.3.2.1 Applications abroad for the top origins



Source: WIPO Statistics Database, October 2012

For the resident applications measure, China ranked first; however, for the applications abroad measure it ranked below Japan, the Republic of Korea, the US and several larger European countries. All reported countries saw substantial growth in applications abroad between 1995 and 2011. However, a closer look at the data for 2009 to 2011 reveals the negative impact of the economic downturn. All top origins, except Austria and China, saw decreases in applications abroad at the start of the economic downturn in 2008. For example, between 2008 and 2009, applications abroad for Japan, the US and Germany – the top three origins – declined by 6.4%, 12.3% and 6.9%, respectively. However, the 2011 data show that there are signs of recovery. The top five origins, except the US, filed more applications abroad in 2011 than in 2008 (2008 being the peak year).

A.3.3 Applications by office and origin

To provide a detailed picture of patent flows across countries, Tables A.3.3.1 and A.3.3.2 present a breakdown of patent application data by origin (source) and office (destination). Data are reported for top offices and top origins.[24] When deciding where to seek patent protection, applicants consider factors such as market size and geographical proximity. At larger patent offices (e.g., China, Germany, Japan and the Republic of Korea), resident applicants accounted for more than three-quarters of total applications. The US is an exception, where there was an equal distribution between resident and non-resident applications.

Excluding resident filings, applications of US origin accounted for the largest shares of total patent applications in all reported offices, except China, France and the Republic of Korea. At the patent offices of China and the Republic of Korea, the largest shares belonged to residents of Japan, while in France, German residents accounted for the largest share. In a number of offices, residents of the US filed more applications than domestic applicants. For example, at the patent office of India, residents of the US accounted for a larger share of total applications than residents of India. A similar profile is visible at the offices of Australia, Canada, Mexico and Singapore. Residents of Japan accounted for the largest share of non-resident applications at the patent offices of China, the Republic of Korea and the US. The share of China at most offices was less than 2%, reflecting the relatively small number of applications that residents of China file abroad.

24 "Origin data" refers to simple application count rather than equivalent application count as presented in Figure A.3.1.1.

Table A.3.3.1 Number of patent applications by office and origin: top offices and origins, 2011

Origin	Office														
	CN	US	JP	KR	EP	DE	IN	RU	CA	AU	GB	FR	MX	HK	SG
Australia	621	3,767	464	167	837	16	341	70	462	2,383	109	8	123	172	188
Austria	598	1,849	288	190	1,734	836	269	195	243	212	35	17	62	54	34
Belgium	592	2,115	457	263	1,994	53	323	192	324	281	241	76	180	162	88
Canada	1,033	11,975	751	466	2,346	35	583	197	4,754	548	203	8	278	353	126
China	415,829	10,545	1,401	752	2,548	91	976	393	352	383	118	71	203	544	167
Denmark	781	1,974	418	187	1,798	24	411	149	312	287	76	8	169	124	75
Finland	964	2,551	319	334	1,571	116	451	225	273	172	52	4	62	75	40
France	3,973	10,563	3,447	1,753	9,632	230	1,669	1,033	1,793	806	127	14,655	546	312	422
Germany	11,422	27,935	6,773	3,598	26,230	46,986	4,097	2,302	2,723	1,698	372	590	1,252	931	667
India	202	4,548	170	109	473	12	8,841	56	141	169	24	2	80	50	55
Israel	532	5,436	413	212	1,053	15	330	97	308	240	96	3	88	118	83
Italy	1,245	4,282	753	358	3,982	109	700	409	498	298	29	61	241	196	99
Japan	39,231	85,184	287,580	15,234	20,568	3,001	5,048	1,931	1,794	1,691	616	128	759	1,729	1269
Netherlands	2,999	4,418	2,374	1,045	5,610	65	1,513	989	666	606	203	20	445	188	173
Republic of Korea	8,129	27,289	5,007	138,034	4,889	999	737	318	338	339	143	39	183	86	105
Russian Federation	120	719	38	31	168	39	55	26,495	47	16	4	18	13	23	8
Sweden	1,730	4,140	1,342	573	3,610	232	854	340	472	441	77	21	206	243	149
Switzerland	2,665	4,086	2,139	1,073	6,405	853	1,652	803	1,326	1,111	242	213	820	732	516
United Kingdom	1,876	11,279	1,739	737	4,764	111	1,142	404	1,286	1,214	15,343	69	403	450	388
United States of America	28,457	247,750	23,414	12,139	34,987	4,499	10,575	3,707	15,342	11,002	2,525	417	6,182	5,901	3594
Other / Unknown	3413	31177	3323	1669	7594	1122	1724	1109	1657	1629	1624	326	1760	1050	1548
Total	526,412	503,582	342,610	178,924	142,793	59,444	42,291	41,414	35,111	25,526	22,259	16,754	14,055	13,493	9,794

Note: CN (China), US (United States of America), JP (Japan), KR (Republic of Korea), EP (European Patent Office), DE (Germany), IN (India), RU (Russian Federation), CA (Canada), AU (Australia), GB (United Kingdom), FR (France), MX (Mexico), HK (China, Hong Kong (SAR)) and SG (Singapore)

Source: WIPO Statistics Database, October 2012

Table A.3.3.2 Distribution of patent applications by office and origin: top offices and top origins, 2011

Origin	Office														
	CN	US	JP	KR	EP	DE	IN	RU	CA	AU	GB	FR	MX	HK	SG
Australia	0.1	0.7	0.1	0.1	0.6	0.0	0.8	0.2	1.3	9.3	0.5	0.0	0.9	1.3	1.9
Austria	0.1	0.4	0.1	0.1	1.2	1.4	0.6	0.5	0.7	0.8	0.2	0.1	0.4	0.4	0.3
Belgium	0.1	0.4	0.1	0.1	1.4	0.1	0.8	0.5	0.9	1.1	1.1	0.5	1.3	1.2	0.9
Canada	0.2	2.4	0.2	0.3	1.6	0.1	1.4	0.5	13.5	2.1	0.9	0.0	2.0	2.6	1.3
China	79.0	2.1	0.4	0.4	1.8	0.2	2.3	0.9	1.0	1.5	0.5	0.4	1.4	4.0	1.7
Denmark	0.1	0.4	0.1	0.1	1.3	0.0	1.0	0.4	0.9	1.1	0.3	0.0	1.2	0.9	0.8
Finland	0.2	0.5	0.1	0.2	1.1	0.2	1.1	0.5	0.8	0.7	0.2	0.0	0.4	0.6	0.4
France	0.8	2.1	1.0	1.0	6.7	0.4	3.9	2.5	5.1	3.2	0.6	87.5	3.9	2.3	4.3
Germany	2.2	5.5	2.0	2.0	18.4	79.0	9.7	5.6	7.8	6.7	1.7	3.5	8.9	6.9	6.8
India	0.0	0.9	0.0	0.1	0.3	0.0	20.9	0.1	0.4	0.7	0.1	0.0	0.6	0.4	0.6
Israel	0.1	1.1	0.1	0.1	0.7	0.0	0.8	0.2	0.9	0.9	0.4	0.0	0.6	0.9	0.8
Italy	0.2	0.9	0.2	0.2	2.8	0.2	1.7	1.0	1.4	1.2	0.1	0.4	1.7	1.5	1.0
Japan	7.5	16.9	83.9	8.5	14.4	5.0	11.9	4.7	5.1	6.6	2.8	0.8	5.4	12.8	13.0
Netherlands	0.6	0.9	0.7	0.6	3.9	0.1	3.6	2.4	1.9	2.4	0.9	0.1	3.2	1.4	1.8
Republic of Korea	1.5	5.4	1.5	77.1	3.4	1.7	1.7	0.8	1.0	1.3	0.6	0.2	1.3	0.6	1.1
Russian Federation	0.0	0.1	0.0	0.0	0.1	0.1	0.1	64.0	0.1	0.1	0.0	0.1	0.1	0.2	0.1
Sweden	0.3	0.8	0.4	0.3	2.5	0.4	2.0	0.8	1.3	1.7	0.3	0.1	1.5	1.8	1.5
Switzerland	0.5	0.8	0.6	0.6	4.5	1.4	3.9	1.9	3.8	4.4	1.1	1.3	5.8	5.4	5.3
United Kingdom	0.4	2.2	0.5	0.4	3.3	0.2	2.7	1.0	3.7	4.8	68.9	0.4	2.9	3.3	4.0
United States of America	5.4	49.2	6.8	6.8	24.5	7.6	25.0	9.0	43.7	43.1	11.3	2.5	44.0	43.7	36.7
Other / Unknown	0.6	6.2	1.0	0.9	5.3	1.9	4.1	2.7	4.7	6.4	7.3	1.9	12.5	7.8	15.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: See note for Table A.3.3.1

Source: WIPO Statistics Database, October 2012

A.4

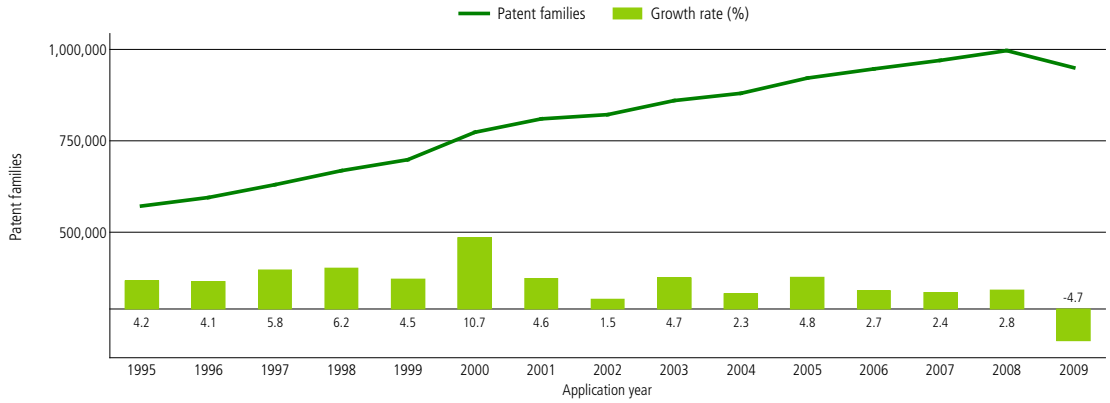
Patent Families

Applicants often file patent applications in multiple jurisdictions, leading to some inventions being counted more than once in patent counts. To account for this, WIPO has developed indicators related to so-called patent families, defined as a set of patent applications interlinked by – or by a combination of – priority claim, PCT national phase entry, continuation, continuation-in-part, internal priority, addition or division.[25] A special subset of patent families consists of foreign-oriented patent families, which include only patent families having at least one filing office that is different from the office of the applicant's country of origin.[26] By contrast, domestic patent families are patent families having only one filing office that is the same as the office of the first-named applicant's country of origin.

A.4.1 Patent families

Figure A.4.1.1 shows the number of patent families worldwide for 1995-2009.[27] Between 1995 and 2008, the total number of patent families continuously increased, followed by a 4.7% drop in 2009. The drop in the total number of patent families in 2009 coincided with the economic downturn, and was consistent with the drop in patent applications worldwide (Figure A.1.1.1).

Figure A.4.1.1 Trends in patent families



Note: The patent family dataset includes only published patent applications. Unpublished patent applications (e.g., patent applications withdrawn before publication) and provisional applications are not included in the patent family count. WIPO's patent family dataset has the following features: (1) each "first-filed" patent application forms a patent family; all subsequent patent filings are added to that family; (2) one patent application may belong to more than one patent family due to the existence of multiple priority claims. "Patent family" is defined as a set of patent applications interlinked by – or by a combination of – priority claim, PCT national phase entry, continuation, continuation-in-part, addition or division. "Foreign-oriented patent family" is defined as a patent family having at least one filing office that is different from the office of the first-named applicant's country of origin.

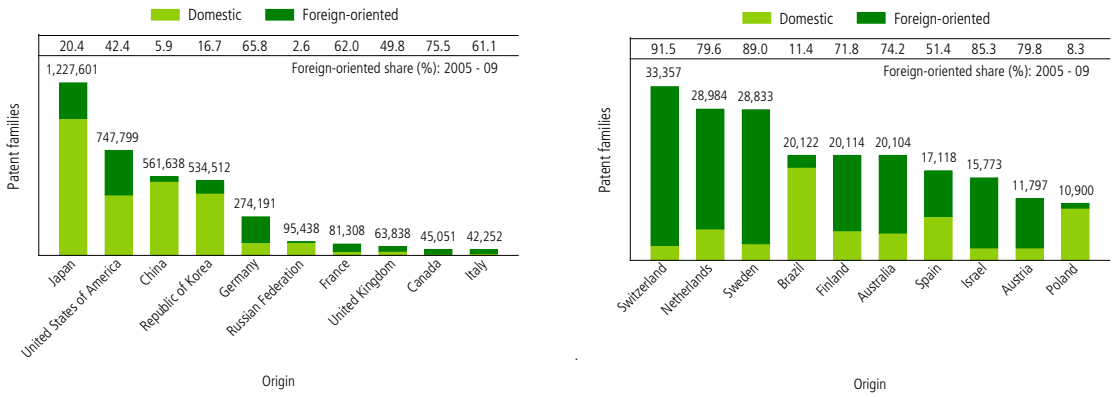
Sources: WIPO Statistics Database and EPO PATSTAT Database, October 2012

25 In this publication, patent families include only those families associated with patent applications for inventions and exclude families associated with utility model applications.

26 Some foreign-related patent families contain only one filing office, as applicants may choose to file directly with a foreign office. For example, if a Canadian applicant files a patent application directly with the USPTO (without previously filing with the patent office of Canada), that application, and applications filed subsequently with the USPTO, form a foreign-oriented patent family.

27 Patent family data are based on published applications. There is a minimum delay of 18 months between the application and publication dates. For this reason, 2009 is the latest available year for which complete patent family data exist.

Figure A.4.1.2 Domestic and foreign-oriented patent families for the top origins, 2005-09



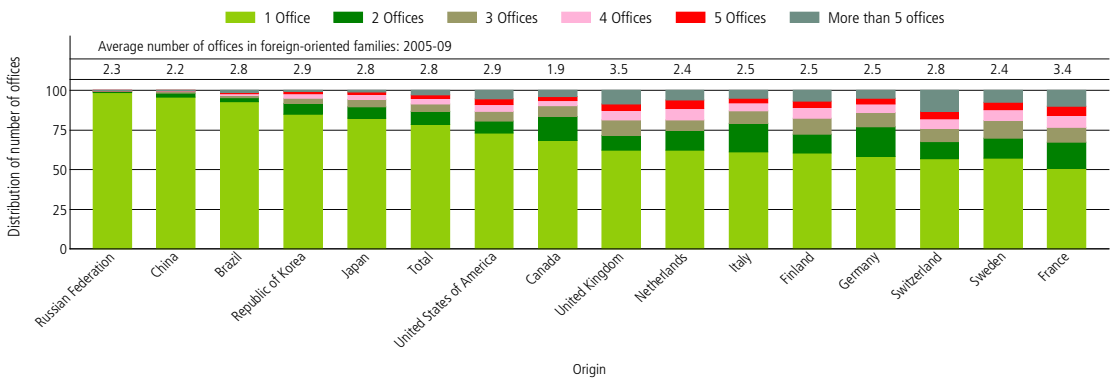
Sources: WIPO Statistics Database and EPO PATSTAT Database, October 2012

Figure A.4.1.2 presents the number of domestic and foreign-oriented patent families for the top origins for 2005-2009. Between 2005 and 2009, the largest number of patent families originated in Japan – the only origin with more than 1.2 million families – followed by the US, China and the Republic of Korea. However, for these origins, the distribution of domestic and foreign-oriented families differed considerably. More than 40% of total patent families originating in the US were foreign-oriented. In contrast, less than 6% of all patent families originating in China were foreign-oriented. Patent families originating in Switzerland (91.5%), Sweden (89%) and Israel (85.3%) were predominantly foreign-oriented.

A.4.2 Patent families by office and origin

Figure A.4.2.1 shows the distribution of total patent families by number of offices for selected origins. The majority of patent families contain only one office, most often the national patent office of the applicant. On average, 22.6% of patent families created worldwide between 2005 and 2009 included at least two patent offices. However, there was considerable variation among the top origins. A small fraction of total patent families originating in Brazil (1.7%), China (4.8%) and the Russian Federation (8.5%) included at least two patent offices. In contrast, large shares of patent families originating in European countries, such as France (49.5%) and Sweden (45.3%), included at least two patent offices.

Figure A.4.2.1 Distribution of total patent families by number of offices, 2005-09



Note: The definition of a patent family is explained in the note for Figure A.4.1.1.

Sources: WIPO Statistics Database and EPO PATSTAT Database, October 2012

Table A.4.2.2 illustrates the flow of patent filings from source countries to destination offices. Data reported in this table give lower numbers than the applications abroad data reported in subsection A.3 due to data consolidation – that is, repeated filings at the same office within the same patent family are counted only once.

The USPTO is the most popular destination for foreign-oriented patent families – around 67% of foreign-oriented patent families from non-US residents included at least one filing at the USPTO. More than four-fifths of foreign-oriented patent families originating in Japan and the Republic of Korea included filings at the USPTO. About 38% of foreign-oriented families from non-EPC members contained applications at the EPO, whereas 60% of those owned by EPC members had EPO filings. The percentage of foreign-oriented families by non-resident applicants that had filings at SIPO was around 35%. Japan and the Republic of Korea had a high tendency to file at SIPO – more than two-fifths of total foreign-oriented families from these origins included filings at SIPO. A small proportion of foreign-oriented patent families by non-resident applicants included filings at the patent offices of Brazil, Israel and New Zealand.[28]

Table A.4.2.2 Foreign-oriented patent families for selected offices and origins, 2005-09

Origin	Office															
	Australia	Brazil	Canada	China	European Patent Office	France	Germany	Israel	Japan	Mexico	New Zealand	Republic of Korea	Russian Federation	United Kingdom	United States of America	Total families
Australia	5,080	442	2,741	4,146	4,434	14	96	354	2,448	512	2,349	1,749	435	573	8,077	14,909
Austria	590	189	864	1,709	5,899	97	3,256	123	1,170	230	109	690	640	85	3,432	9,415
Belgium	1,053	352	1,321	2,207	5,131	333	255	347	1,621	562	342	1,189	450	1,046	3,726	8,859
Canada	2,405	485	11,603	5,457	9,146	65	245	377	3,082	1,107	478	2,817	645	1,007	24,756	34,000
China	1,167	310	1,306	22,583	9,284	298	632	125	4,777	257	134	2,681	983	572	24,947	33,239
Finland	928	395	1,433	4,520	7,470	32	517	154	1,683	449	85	2,369	1,145	386	8,637	14,450
France	3,380	2,388	8,416	15,069	39,272	32,742	1,075	1,464	14,151	2,633	784	7,281	3,933	602	28,565	50,397
Germany	6,136	3,850	11,667	42,230	100,596	2,504	83,860	1,903	63,186	4,506	1,293	17,210	8,616	1,944	83,756	180,303
Israel	1,143	259	1,685	2,422	4,677	13	128	3,278	1,931	446	141	1,599	359	378	9,983	13,449
Italy	1,494	1,119	2,555	5,498	18,838	241	494	579	3,016	979	338	1,690	1,589	289	10,935	25,813
Japan	5,529	1,644	5,898	106,400	68,739	1,405	12,644	455	209,886	1,236	414	51,100	3,112	2,339	199,513	250,004
Netherlands	1,549	535	1,976	7,166	10,967	91	447	360	5,935	635	475	3,442	1,409	763	11,807	23,057
Republic of Korea	1,844	746	1,623	35,835	20,767	396	3,365	116	25,394	1,095	109	79,869	1,838	805	75,140	89,080
Singapore	373	47	203	1,650	1,276	4	504	66	1,190	72	58	773	68	334	4,632	6,774
Spain	702	383	1,091	1,485	5,635	257	179	294	974	750	153	473	570	193	3,413	8,797
Sweden	1,853	897	2,363	7,984	13,372	146	1,155	493	5,026	1,061	509	2,923	1,573	572	13,518	25,650
Switzerland	3,928	1,536	5,161	9,106	16,377	361	3,847	1,328	7,014	2,786	1,097	4,939	2,677	1,490	12,884	30,519
United Kingdom	5,788	1,059	6,348	7,998	20,904	158	418	1,293	8,158	1,874	1,501	3,489	1,601	20,450	22,886	31,808
United States of America	45,602	14,532	81,315	125,256	150,139	1,382	16,110	11,049	98,014	29,233	9,201	67,309	15,090	16,203	159,816	317,340
Others	21,116	7,140	26,568	104,719	128,128	2,614	9,218	6,268	140,048	10,501	6,223	64,138	15,554	7,146	201,762	268,189
Total families	111,660	38,308	176,137	513,440	641,051	43,153	138,445	30,426	598,704	60,924	25,793	317,730	62,287	57,177	912,185	1,436,052

Note: For the definition of a patent family, refer to the note for Figure A.4.1.1.

Sources: WIPO Statistics Database and EPO PATSTAT Database, October 2012

28 Similarly, a small proportion of foreign-oriented families included filings at the patent offices of France, Germany and the UK. This can be explained by the fact that applicants have the option of filing at the EPO, which later (after the granting process) reaches the national patent offices of EPC member states.

A.5

Patent applications filed through the Patent Cooperation Treaty

The PCT, an international treaty administered by WIPO, offers patent applicants an advantageous route for seeking patent protection internationally. It serves as an alternative to the Paris Convention for the Protection of Industrial Property (the Paris Convention) for pursuing the acquisition of patent rights in different countries. The main advantages of the PCT are that applicants and patent offices of PCT contracting states benefit from uniform formality requirements, international search, optional supplementary international search and preliminary examination reports, and centralized international publication. This can lead to time and cost savings for applicants. Starting with only 18 members in 1978, there were 144 PCT members in 2011.

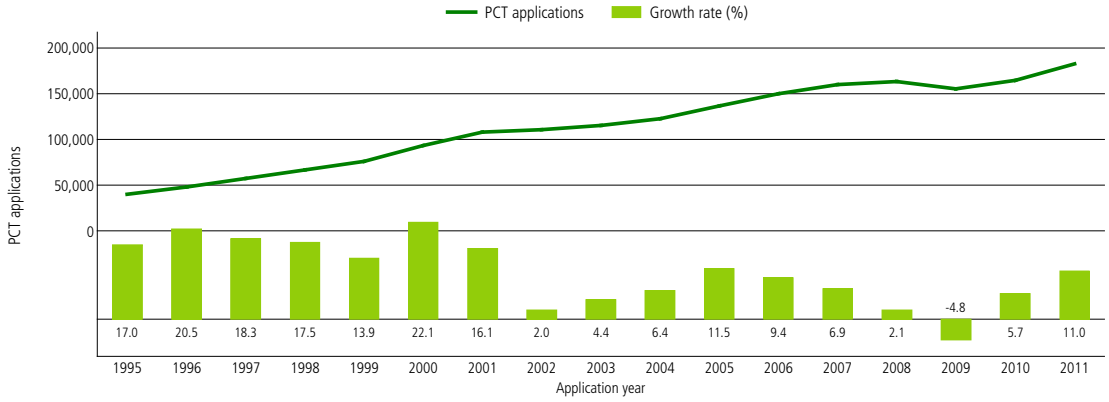
PCT application data presented in A.5.1 and A.5.2 refer to the international phase of the PCT procedure, while data presented in A.5.3 refer to PCT national phase entries.

A.5.1 PCT applications

Figure A.5.1.1 depicts the total number of PCT applications filed between 1995 and 2011. Despite difficult economic conditions, PCT applications set a new record in 2011 with 182,354 applications. This represents an 11% increase on 2010 and the fastest growth since 2005. Patent applications originating in China, Japan and the US accounted for 82% of total growth.

The long-term trend shows that the number of PCT applications grew at a double-digit rate until 2001, followed by a slowdown in growth between 2002 and 2004.[29] Since the system's establishment, 2009 was the only year in which there was a drop in applications; however, PCT applications have rebounded strongly in the past two years.

Figure A.5.1.1 Trend in PCT applications



Note: Data refer to the international phase of the PCT system. Counts are based on the international application date.

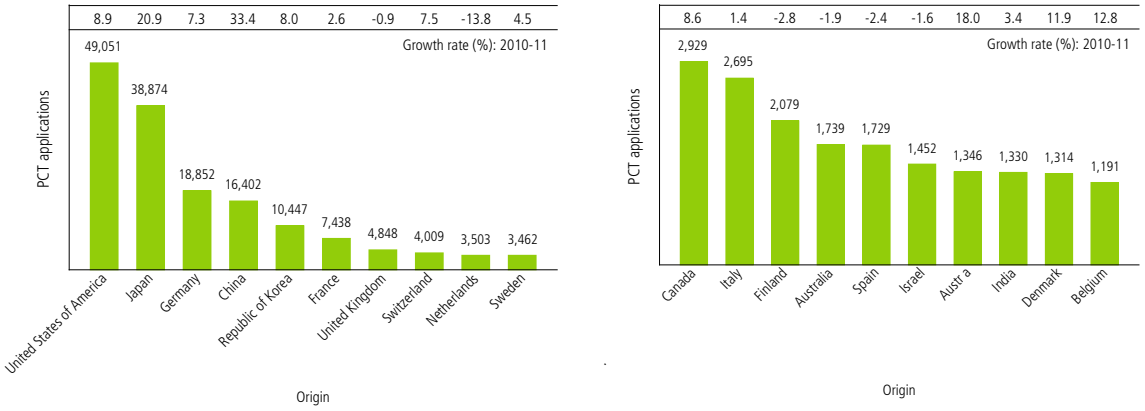
Source: WIPO Statistics Database, October 2012

29 The double-digit growth in PCT applications during this period was partly due to an increase in the use of the PCT system, as well as expanded PCT membership.

Figure A.5.1.2 provides a breakdown of PCT applications by country of origin. The list of top 20 origins consists mostly of high-income countries – China and India being the exceptions.[30] The US, with 49,051 applications, was the largest user of the PCT system in 2011, followed by Japan (38,874), Germany (18,852) and China (16,402). Among the top four origins, the US and Japan each had more than twice as many applications as Germany or China.

For the top 20 origins, China (+33.4%) saw the fastest growth in applications in 2011, followed by Japan (+20.9%) and Austria (+18%). Four countries – three of which are European – saw decreases in applications in 2011, with the Netherlands recording the largest drop.[31] Following three consecutive years of decline, applications filed by the US grew by 8.9% in 2011. However, the number of applications filed in 2011 was still below the pre-crisis peak reached in 2007.

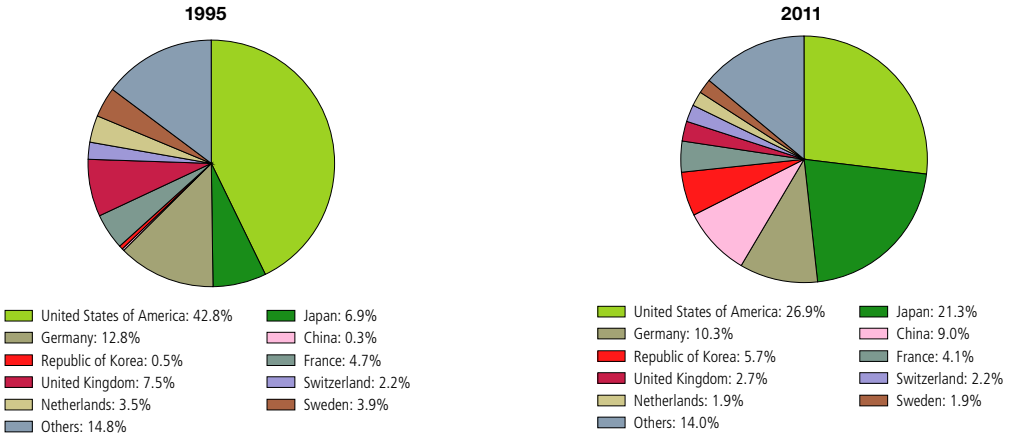
Figure A.5.1.2 PCT applications for the top 20 origins, 2011



Note: Data refer to the international phase of the PCT system. Counts are based on residency of the first-named applicant and the international application date.

Source: WIPO Statistics Database, October 2012

Figure A.5.1.3 Country share in total PCT applications



Note: See note for Figure A.5.1.2

Source: WIPO Statistics Database, October 2012

30 The share of high-income countries in total PCT applications was around 88%.

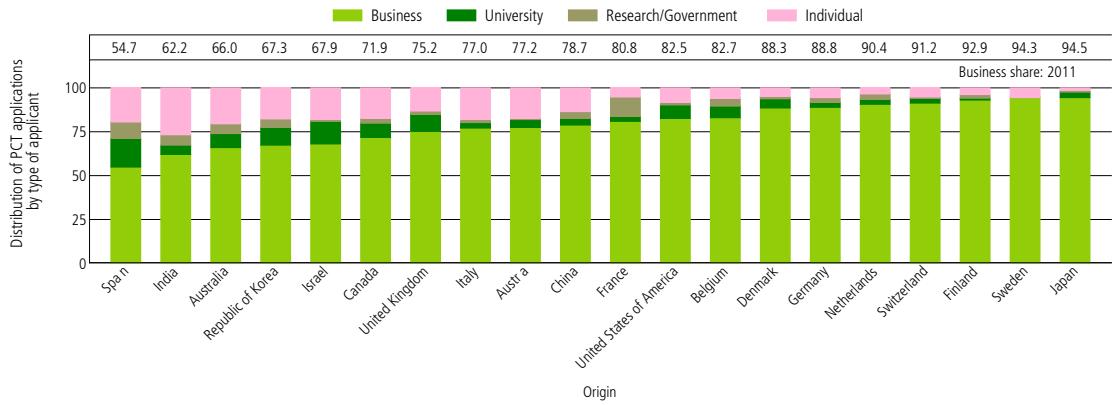
31 Over the past two years, the Netherlands saw a considerable drop in PCT applications (-8.9% in 2010 and -13.8% in 2011).

Figure A.5.1.3 depicts the country share in total PCT applications for the top 10 origins for 1995 and 2011. The combined share of China, Japan and the Republic of Korea in total PCT applications grew by 28 percentage points between 1995 and 2011. In contrast, the US share declined by 16 percentage points. For all European countries, except Switzerland, the 2011 share was lower than the 1995 share. This reflects the shift in geography of PCT applications from the US and Europe towards Asia.

A.5.2 PCT applications by type of applicant

Figure A.5.2.1 presents the distribution of PCT applications for the top 20 origins broken down by four types of applicants – business, university, government and research institution, and individual. Overall, the business sector accounted for more than 80% of total applications. However, the share of the business sector varied across origins. For the top 20 origins, shares ranged from 54.7% for Spain to 94.5% for Japan. For all origins, except China, the business sector share remained more or less stable between 2006 and 2011. For China, the share increased from 58% to 78.7% over the same period. Universities accounted for a large share of total applications for Spain (16.3%), Israel (13.1%) and the Republic of Korea (10%). France and Spain had a high share of applications from government and research institutions – around 10%.

Figure A.5.2.1 PCT applications by type of applicant for the top 20 origins, 2011



Note: Data refer to the international phase of the PCT system. Due to confidentiality requirements, counts are based on publication date.

Source: WIPO Statistics Database, October 2012

Table A.5.2.2 lists the top 50 PCT applicants, based on the residency of the first-named applicant and publication date. It shows that in 2011, ZTE Corporation of China, with 2,826 published applications, overtook Panasonic Corporation of Japan, which ranked first in 2010. Between 2009 and 2011, applications from ZTE Corporation increased five-fold, leading the company to surge from 20th position to the top spot. Sharp Kabushiki Kaisha of Japan ranked fourth, also seeing considerable growth in published applications over the same period.

The top five applicants saw considerable growth in published applications in 2011. Qualcomm Incorporated, the highest ranked US applicant, and Koninklijke Philips Electronics of the Netherlands recorded the largest declines in 2011. Japan, with 21 different applicants, had the largest number of applicants ranked among the top 50. China, with the highest ranked applicants, has only three different applicants in the top 50 list.

Table A.5.2.2 Top PCT applicants

Rank	Applicant's Name	Origin	PCT applications			Change compared to 2010
			2009	2010	2011	
1	ZTE CORPORATION	China	517	1,868	2,826	958
2	PANASONIC CORPORATION	Japan	1,891	2,153	2,463	310
3	HUAWEI TECHNOLOGIES CO., LTD.	China	1,847	1,527	1,831	304
4	SHARP KABUSHIKI KAISHA	Japan	997	1,286	1,755	469
5	ROBERT BOSCH CORPORATION	Germany	1,588	1,301	1,518	217
6	QUALCOMM INCORPORATED	United States of America	1,280	1,675	1,494	-181
7	TOYOTA JIDOSHA KABUSHIKI KAISHA	Japan	1,068	1,095	1,417	322
8	LG ELECTRONICS INC.	Republic of Korea	1,090	1,297	1,336	39
9	KONINKLIJKE PHILIPS ELECTRONICS N.V.	Netherlands	1,295	1,433	1,148	-285
10	TELEFONAKTIEBOLAGET LM ERICSSON (PUBL)	Sweden	1,241	1,147	1,116	-31
11	NEC CORPORATION	Japan	1,069	1,106	1,056	-50
12	SIEMENS AKTIENGESELLSCHAFT	Germany	932	830	1,039	209
13	MITSUBISHI ELECTRIC CORPORATION	Japan	569	726	834	108
14	BASF SE	Germany	739	817	773	-44
15	SAMSUNG ELECTRONICS CO., LTD.	Republic of Korea	596	574	757	183
16	NOKIA CORPORATION	Finland	663	632	698	66
17	INTERNATIONAL BUSINESS MACHINES CORPORATION	United States of America	401	416	661	245
18	HEWLETT-PACKARD DEVELOPMENT COMPANY, L.P.	United States of America	554	564	591	27
19	3M INNOVATIVE PROPERTIES COMPANY	United States of America	688	586	563	-23
20	HITACHI, LTD.	Japan	190	372	547	175
21	KABUSHIKI KAISHA TOSHIBA	Japan	327	319	517	198
22	CANON KABUSHIKI KAISHA	Japan	401	379	499	120
23	FUJITSU LIMITED	Japan	817	475	494	19
24	PROCTER & GAMBLE COMPANY	United States of America	341	359	488	129
25	MITSUBISHI HEAVY INDUSTRIES, LTD.	Japan	373	391	480	89
26	SONY CORPORATION	Japan	328	347	471	124
27	MICROSOFT CORPORATION	United States of America	644	470	446	-24
27	SUMITOMO CHEMICAL COMPANY, LIMITED	Japan	353	323	446	123
29	E.I. DUPONT DE NEMOURS AND COMPANY	United States of America	509	452	424	-28
30	SCHAEFFLER TECHNOLOGIES GMBH & CO. KG	Germany		167	422	255
31	BOSCH-SIEMENS HAUSGERATE GMBH	Germany	413	371	421	50
32	HONDA MOTOR CO., LTD.	Japan	318	309	418	109
33	FUJIFILM CORPORATION	Japan	264	275	414	139
34	DOW GLOBAL TECHNOLOGIES INC.	United States of America	304	288	399	111
35	SEMICONDUCTOR ENERGY LABORATORY CO., LTD.	Japan	45	76	382	306
36	KYOCERA CORPORATION	Japan	362	279	356	77
37	PANASONIC ELECTRIC WORKS CO., LTD.	Japan	235	206	353	147
38	BAKER HUGHES INCORPORATED	United States of America	375	307	336	29
39	NOKIA SIEMENS NETWORKS OY	Finland	313	345	332	-13
40	HUAWEI DEVICE CO., LTD.	China		164	327	163
41	NTT DOCOMO, INC.	Japan	249	298	323	25
42	MURATA MANUFACTURING CO., LTD.	Japan	254	305	318	13
43	INTEL CORPORATION	United States of America	176	201	309	108
44	APPLIED MATERIALS, INC.	United States of America	296	313	308	-5
45	THOMSON LICENSING	France	359	311	303	-8
46	ASAHI GLASS COMPANY, LIMITED	Japan	177	180	291	111
46	GENERAL ELECTRIC COMPANY	United States of America	307	274	291	17
48	ALCATEL LUCENT	France	283	275	287	12
49	SANYO ELECTRIC CO., LTD.	Japan	142	129	285	156
50	UNIVERSITY OF CALIFORNIA	United States of America	321	304	277	-27

Note: Data refer to the international phase of the PCT system. Due to confidentiality requirements, counts are based on publication date. Top applicants are selected according to the 2011 total.

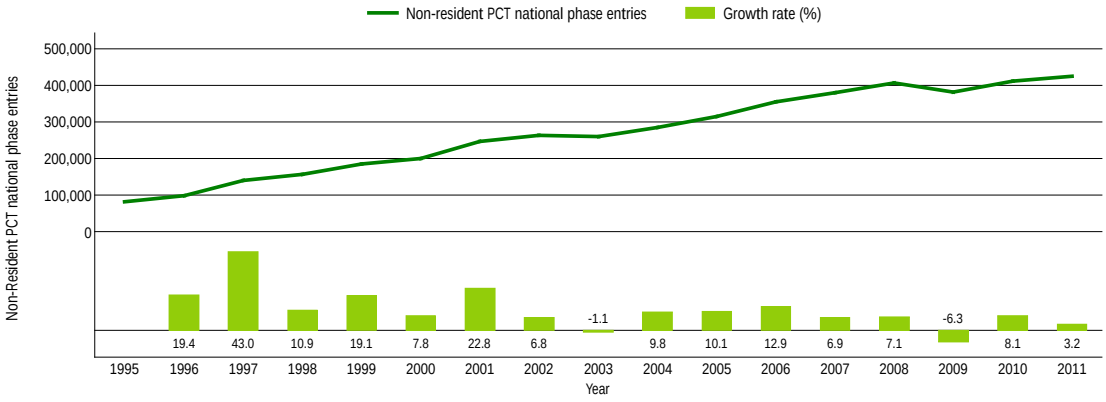
Source: WIPO Statistics Database, October 2012

A.5.3 PCT national phase entries

The PCT application process starts with the international phase and concludes with the national phase. The national or regional patent office at which the applicant enters the PCT national phase initiates the granting procedure according to prevailing national law. PCT national phase entry (NPE) statistics shed light on international patenting strategies. The NPE data presented here refer only to non-resident applications – that is, resident application data for the national phase are excluded.[32] For example, if a PCT application filed by a resident of China enters the national phase procedure at SIPO, it is excluded from the statistics reported here.

32 The share of resident PCT NPEs out of total NPEs stood at around 15% in 2011.

Figure A.5.3.1 Trend in non-resident PCT national phase entries



Note: WIPO estimates

Source: WIPO Statistics Database, October 2012

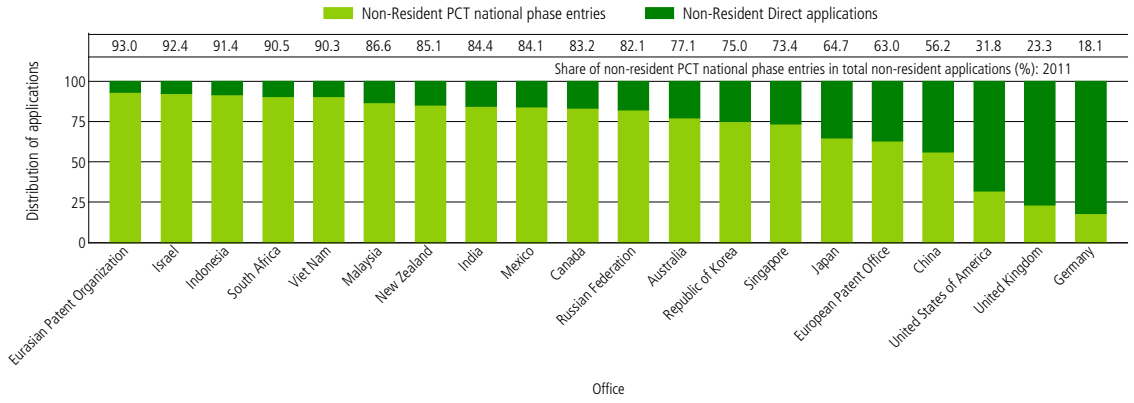
Table A.5.3.2 PCT national phase entries by office and origin for top offices and origins, 2011

Origin	Office														
	US	EP	CN	JP	KR	IN	CA	AU	RU	MX	SG	ZA	IL	MY	NZ
Australia	1,731	704	507	347	158	329	430	996	67	108	134	57	67	108	335
Austria	856	726	479	210	172	239	201	175	162	56	29	195	12	19	16
Belgium	1,165	704	481	361	256	316	298	249	139	155	75	108	3	58	66
Canada	1,642	1,206	801	562	403	516	1,506	422	185	229	88	117	55	47	92
China	3,455	2,008	2,289	954	585	915	307	342	369	184	147	120	61	109	40
Denmark	1,182	874	600	314	171	384	303	236	136	149	66	88	31	42	76
Finland	925	1,156	766	234	320	374	251	156	195	58	32	101	18	22	11
France	6,017	5,189	3,058	2,761	1,512	1,429	1,528	695	906	496	327	357	162	281	165
Germany	12,766	11,621	7,483	4,982	3,055	3,372	2,284	1,432	1,960	1,106	515	723	22	462	328
India	801	373	202	154	104	216	136	149	52	76	51	103	33	58	54
Israel	1,525	802	428	283	190	308	254	173	87	79	56	54	418	1	31
Italy	2,232	1,774	961	524	296	538	386	247	325	215	59	90	15	47	56
Japan	25,938	12,052	16,591	15,897	8,992	3,727	1,565	1,255	1,471	649	865	291	214	766	186
Netherlands	2,688	2,927	2,307	1,883	946	1,472	630	545	937	409	117	155	48	156	101
Republic of Korea	4,304	2,082	2,850	1,972	363	621	313	290	266	162	71	37	32	151	31
Spain	760	682	337	198	112	178	200	148	127	164	34	57	19	23	41
Sweden	2,470	2,489	1,434	1,076	492	828	458	399	329	186	114	154	51	99	112
Switzerland	1,899	2,622	1,786	1,524	931	1,359	1,233	920	696	743	444	419	12	288	212
United Kingdom	5,303	3,146	1,694	1,336	707	1,084	1,192	1,048	369	368	279	506	211	263	274
United States of America	16,120	23,903	17,324	14,627	10,526	9,120	12,129	7,950	3,040	4,883	2,651	1,905	2,345	1,375	1,550
Others / Unknown	3,782	3,235	2,108	1,320	748	1,131	1,155	1,020	469	525	572	503	1,696	312	268
Total	97,561	80,275	64,486	51,519	31,039	28,456	26,759	18,847	12,287	11,000	6,726	6,140	5,525	4,687	4,045

Note: Data include both resident and non-resident NPEs. US (United States of America), EP (European Patent Office), CN (China), JP (Japan), KR (Republic of Korea), IN (India), CA (Canada), AU (Australia), RU (Russian Federation), MX (Mexico), SG (Singapore), ZA (South Africa), IL (Israel), MY (Malaysia) and NZ (New Zealand)

Source: WIPO Statistics Database, October 2012

Figure A.5.3.3 Share of PCT non-resident national phase entries in total non-resident applications for selected offices, 2011



Source: WIPO Statistics Database, October 2012

In 2011, the number of non-resident PCT NPEs totaled 424,800, representing a 3.2% increase on 2010 (Figure A.5.3.1).[33] The USPTO received the largest number of PCT NPEs in 2011 (19% of the total), followed by SIPO (14.6%) and the EPO (10.5%). Offices of middle-income countries, such as India, Mexico and South Africa, also received large numbers of NPEs.

The long-term trend shows strong year-on-year growth in non-resident NPEs for all years, except 2003 and 2009. Growth in NPEs partly reflects the increasing trend of protecting inventions abroad, as well as increasing PCT membership which has made the PCT system more attractive to its users.

Table A.5.3.2 presents PCT NPE data broken down by the top offices and top origins. It provides information on the "flow of patent applications" across countries, as facilitated by the PCT system. Note that this table includes all PCT NPE data – that is, resident and non-resident NPEs.

The USPTO was the most preferred office by destination in 2011, with 97,561 NPEs. Residents of Germany and Japan accounted for around 40% of all NPEs at the USPTO. The EPO, SIPO and JPO each received more than 50,000 NPEs in 2011. At the EPO and SIPO, the largest number of NPEs originated in the US, while at the JPO, residents of Japan accounted for the largest share of total NPEs. The US was the main source of NPEs at all reported offices, except the JPO and the USPTO.

Figure A.5.3.3 depicts the distribution of total non-resident applications by filing route (PCT NPEs and direct applications, also known as the Paris route) for selected offices. At the global level, the share of PCT NPEs in total non-resident applications was around 54%, but it varied across individual offices. Use of the PCT system is popular for filing applications in offices of middle-income countries. For example, the PCT NPE shares at the patent offices of Indonesia, South Africa and Viet Nam were above 90%.

33 The total number of PCT NPEs – resident plus non-resident – amounted to around 500,400 in 2011.

Among the five largest offices, KIPO had the highest share of PCT NPEs in total non-resident applications.[34] In contrast, PCT NPEs accounted for less than one-third of all non-resident applications at the USPTO.[35] However, there was a considerable increase in the share of PCT NPEs at the USPTO – from 20% in 2007 to 31.8% in 2011.[36]

34 The EPO, the JPO, KIPO, SIPO and the USPTO are the top five offices in terms of number of non-resident PCT NPEs (Table A.5.3.2).

35 The low share of PCT NPEs at the USPTO does not accurately reflect usage of the PCT system at that office, as many PCT applicants took advantage of a special legal provision in US patent law allowing PCT applications to proceed directly to the USPTO (the so-called "by-pass route"). In such cases, the PCT application is converted into a continuation or continuation-in-part application, which is counted as a direct filing.

36 National offices in European countries exhibited low shares of PCT NPEs, as PCT applicants often enter the national phase at the EPO instead of at national offices.

A.6

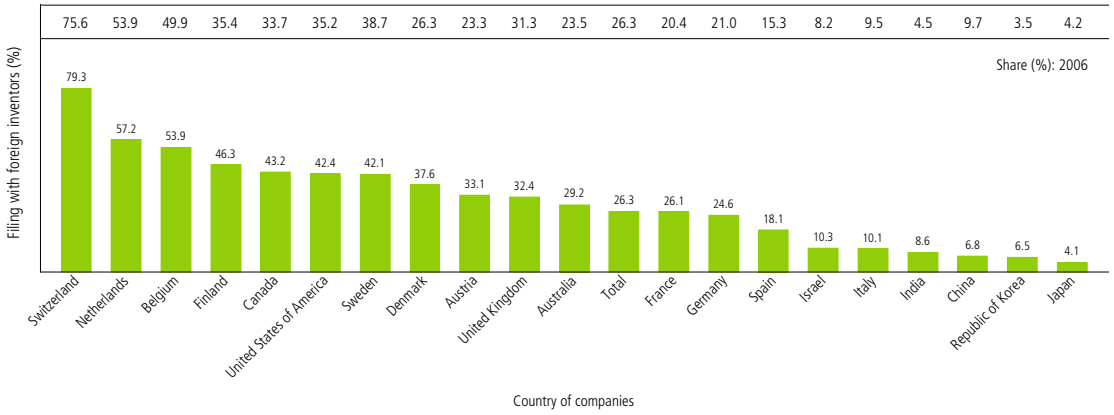
International collaboration

Developing modern technology is an increasingly complex undertaking. Very often, it requires collaboration across countries. Such collaboration involves joint research among institutions across countries, and employing scientists and engineers from foreign countries. This subsection presents two indicators of cross-country collaboration based on published PCT applications.

Figure A.6.1 illustrates the share of published PCT applications with foreign inventors (i.e., residency in a foreign country) for the top 20 applicants' countries of origin. On average, 26% of PCT applications included at least one foreign inventor in 2011. However, the level of cross-border collaboration varied across countries. In 2011, around four-fifths of applications filed by Swiss companies included at least one foreign inventor. In contrast, less than 10 percent of PCT applications originating in China, India, Japan and the Republic of Korea included foreign inventors. Medium-sized European countries (such as the Netherlands and Finland) and North American countries had a high rate of collaboration with foreign inventors, compared to larger European countries. Between 2006 and 2011, all reported origins except China saw increases in the share of PCT applications with at least one foreign inventor.

Another way to look at cross-border collaboration is to ask how many inventors from around the world reside in a country different from that of the PCT applicant. Figure A.6.2 also depicts the percentage of PCT applications having at least one foreign inventor, but here the data are broken down by the top 20 inventors' origins. Around two-thirds of Indian inventors named in PCT applications were associated with foreign PCT applications. The share of inventors associated with foreign PCT applications was also high for Belgium, Canada and the UK. In contrast, fewer than 10 percent of inventors from Japan, the Republic of Korea and the US contributed to foreign PCT applications.

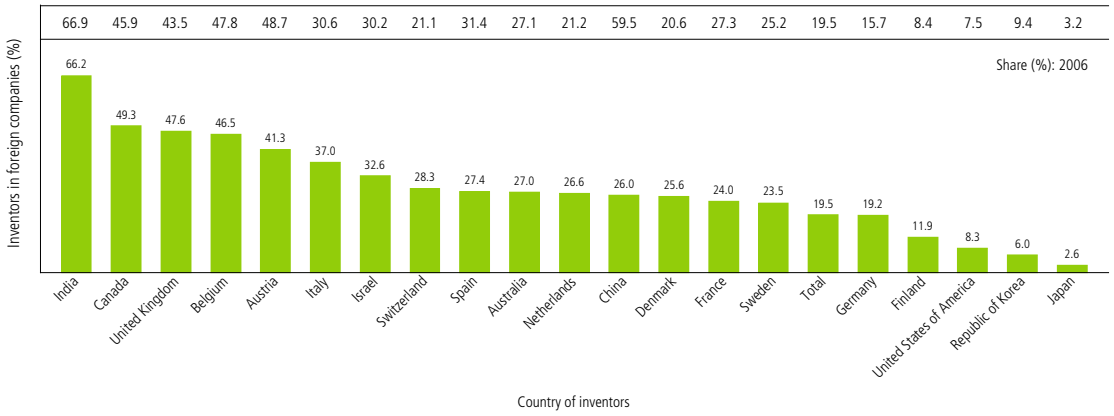
Figure A.6.1 Share of PCT applications with at least one foreign inventor for the top 20, 2011



Note: Counts are based on corporate applicants only (thus excluding natural persons). Due to confidentiality requirements, PCT data are based on the publication date.

Source: WIPO Statistics Database, October 2012

Figure A.6.2 Inventors in foreign-owned PCT applications, 2011



Note: See note for Figure A.6.1

Source: WIPO Statistics Database, October 2012

A.7

Patents by field of technology

Patent applications span a wide range of technologies. Furthermore, the tendency to file patent applications differs across technologies, as some technologies depend more heavily on the patent system than others. To understand activity patterns and trends across technologies, this section presents data by field of technology.

Every patent application is assigned one or more International Patent Classification (IPC) symbols. WIPO has developed a concordance table to link these IPC symbols to corresponding field(s) of technology (see *www.wipo.int/ipstats/en*). The data presented here are based on this concordance table. Where a patent application relates to multiple fields of technology, it is divided into equal shares, each representing one field of technology (so-called "fractional counting"). Applications with no IPC symbol are not considered. All the data reported in this subsection relate to published patent applications. There is a minimum delay of 18 months between the application and publication dates. For this reason, 2010 is the latest available year for statistics on patents by technology field.

A.7.1 Applications by field of technology

Patent data can be broadly categorized as complex or discrete technologies. Complex technologies are usually defined as those for which the resulting products or processes consist of numerous separately patentable elements and for which patent ownership is typically widespread. Discrete technologies, in turn, describe products or processes that consist of a single or relatively few patentable elements and for which patent ownership is more concentrated. For example, smartphones fall into the category of complex technologies, whereas pharmaceuticals are considered a discrete technology.[37] Figure A.7.1.1 shows the application trends for these two categories for the world total and the top five origins. Data for the latest available year, 2010, are partial and incomplete. This could partly explain the downward trend for some origins. Since 1995, growth in patent applications for complex technologies has been consistently faster than that for discrete technologies (since 2003 for China).[38] At the global level, the volume of applications for complex technologies increased by 2.4-fold between 1995 and 2010, compared to 1.9-fold for discrete technologies. All reported origins showed similar trends.

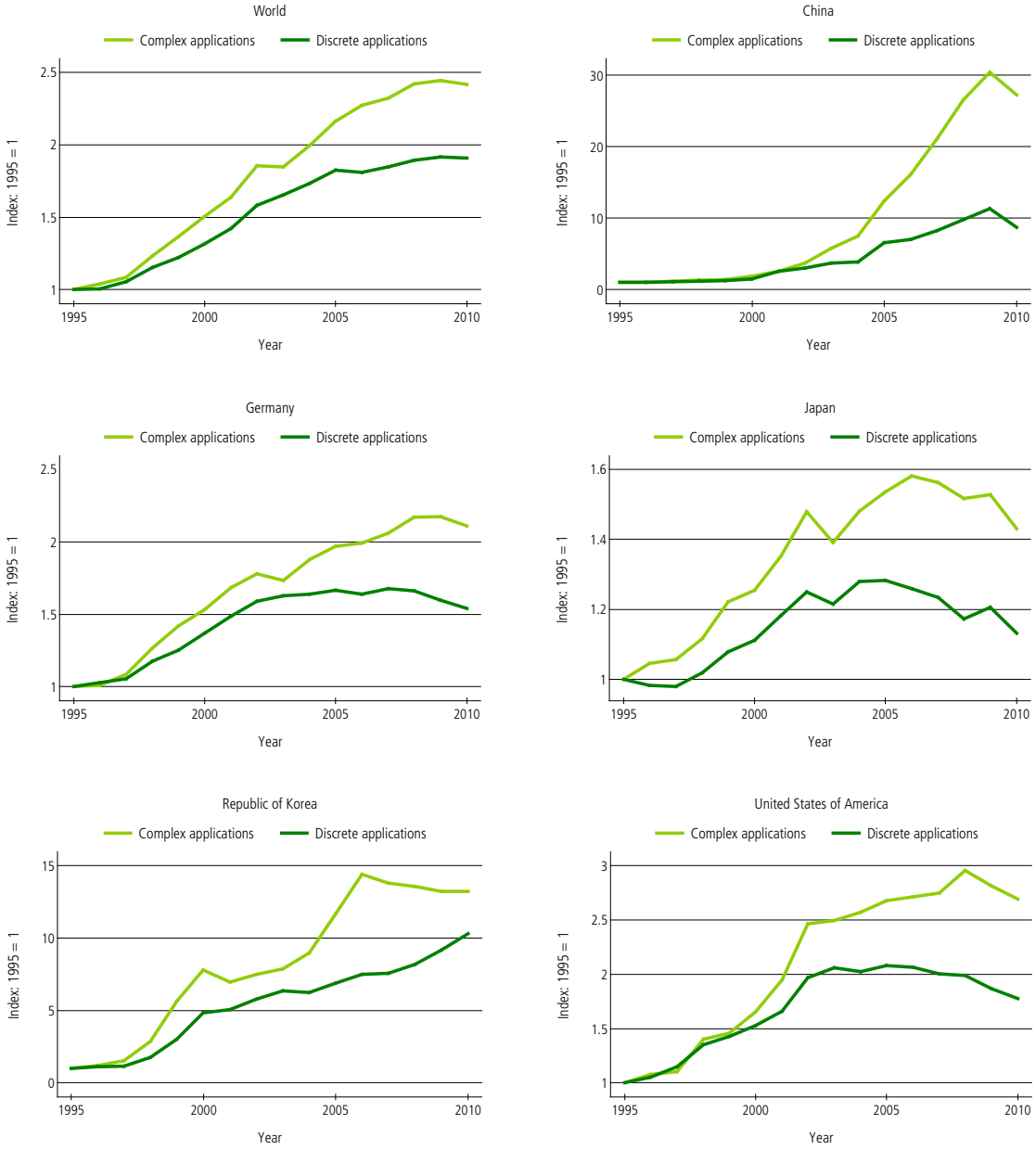
Table A.7.1.2 shows the number of patent applications worldwide by field of technology. In 2010, computer technology (126,897) and electrical machinery (112,896) accounted for the largest numbers of applications. Digital communication recorded the highest annual growth rates between 2006 and 2010, while telecommunications and audio-visual technology both experienced declines during the same period, reflecting the shift towards widespread use of digital technologies.[39] Pharmaceutical patent applications have continuously declined since 2007.

37 For a definition of complex and discrete technologies, refer to annex A of *World Intellectual Property Indicators*, 2011 edition, available at: *www.wipo.int/ipstats/en/wipi/*

38 The distribution of complex and discrete technologies for the 1995-2009 period is: World (69% complex, 31% discrete), China (59%, 41%), Germany (65%, 35%), Japan (77%, 23%), the Republic of Korea (84%, 16%) and the US (65%, 35%).

39 The micro-structural and nano-technology field saw the highest growth (11%) in 2011, but it accounted for only a low number of applications. The number of applications for digital communications grew by 19,054 while that for micro-structural and nano-technology grew by only 988.

Figure A.7.1.1 Trend in complex and discrete technology patent applications for the top five origins



Note: For a definition of complex and discrete technologies, refer to annex A of World Intellectual Property Indicators, 2011 edition, available at: *www.wipo.int/ipstats/en/wipi/*. The data refer to published patent applications. Data for the latest available year, 2010, are partial and incomplete. This could partly explain the downward trend for some origins.

Sources: WIPO Statistics Database and EPO PATSTAT Database, October 2012

Table A.7.1.2 Patent applications worldwide by field of technology

Field of Technology	Publication Year					Growth Rate 2006-10 (%)
	2006	2007	2008	2009	2010	
Electrical engineering						
Electrical machinery, apparatus, energy	96,308	98,889	102,947	109,288	112,896	4.1
Audio-visual technology	94,227	90,504	88,905	83,071	78,637	-4.4
Telecommunications	69,290	67,506	68,419	59,161	54,416	-5.9
Digital communication	52,445	55,471	61,604	66,167	71,499	8.1
Basic communication processes	16,723	16,650	17,096	16,542	15,919	-1.2
Computer technology	117,471	120,999	131,533	129,952	126,897	1.9
IT methods for management	18,789	18,810	21,087	24,354	22,633	4.8
Semiconductors	73,709	74,893	78,978	76,273	75,213	0.5
Instruments						
Optics	73,284	73,937	72,815	67,833	62,385	-3.9
Measurement	61,089	63,950	69,242	73,627	73,905	4.9
Analysis of biological materials	10,189	10,431	10,495	11,045	10,553	0.9
Control	26,069	26,696	27,977	28,422	27,986	1.8
Medical technology	65,841	70,779	72,560	73,353	72,630	2.5
Chemistry						
Organic fine chemistry	50,499	49,271	50,178	49,480	49,055	-0.7
Biotechnology	32,311	32,242	33,564	35,802	36,362	3.0
Pharmaceuticals	68,289	69,207	68,649	66,981	63,992	-1.6
Macromolecular chemistry, polymers	25,516	26,323	26,820	27,284	27,309	1.7
Food chemistry	20,003	21,137	22,807	26,587	26,840	7.6
Basic materials chemistry	35,158	37,205	39,351	40,522	41,746	4.4
Materials, metallurgy	27,650	29,313	32,568	33,904	35,651	6.6
Surface technology, coating	27,972	28,437	29,777	31,871	32,222	3.6
Micro-structural and nano-technology	1,893	2,147	2,281	2,648	2,881	11.1
Chemical engineering	30,991	31,802	33,650	34,539	35,123	3.2
Environmental technology	20,286	21,186	22,030	23,706	24,810	5.2
Mechanical engineering						
Handling	41,295	41,624	41,515	41,464	41,099	-0.1
Machine tools	35,472	35,653	37,264	39,662	42,165	4.4
Engines, pumps, turbines	38,912	40,910	42,315	46,979	47,033	4.9
Textile and paper machines	36,177	34,914	32,706	31,348	29,739	-4.8
Other special machines	43,182	42,720	44,511	46,320	47,320	2.3
Thermal processes and apparatus	24,298	24,797	25,213	26,829	28,875	4.4
Mechanical elements	41,126	42,989	46,316	46,032	45,143	2.4
Transport	62,678	63,876	66,049	68,948	65,305	1.0
Other fields						
Furniture, games	43,192	43,670	44,085	43,020	41,722	-0.9
Other consumer goods	32,049	31,083	31,145	31,425	31,302	-0.6
Civil engineering	51,645	52,089	51,722	54,228	55,049	1.6

Note: The IPC-technology concordance table (available at: *www.wipo.int/ipstats/en*) was used to convert IPC symbols into 35 corresponding fields of technology. The data refer to published patent applications.

Sources: WIPO Statistics Database and EPO PATSTAT Database, October 2012

The aggregate data reported in Table A.7.1.2 provide an overview of applications by field of technology. However, they do not provide any insight into the innovative strength of countries in relation to different technology fields. Table A.7.1.3 reports patent application data by field of technology for the top origins.

For a number of origins, applications are concentrated in the fields of computer technology, digital communications, and telecommunications. For example, telecommunications accounted for the largest share of all applications originating in Canada and the US. For Finland and Sweden, digital telecommunications constituted the largest share. Switzerland and the UK tended to file large numbers of applications for pharmaceuticals.

Table A.7.1.3 Patent applications by field of technology and for the top origins, 2006-10

Field of Technology	Origin															
	AU	CA	CH	CN	DE	FI	FR	GB	IT	JP	KR	NL	RU	SE	US	Others
Electrical engineering																
Electrical machinery, apparatus, energy	1,016	3,723	7,214	39,158	59,646	1,805	15,832	7,455	4,661	192,766	61,066	8,061	3,860	2,243	75,511	63,718
Audio-visual technology	888	2,612	2,506	25,838	20,975	2,467	12,310	4,751	929	183,468	70,297	14,966	851	2,630	54,372	48,144
Telecommunications	905	4,967	1,249	29,921	14,447	6,530	9,152	4,431	1,163	91,761	57,046	3,779	1,413	8,353	68,690	26,082
Digital communication	657	8,228	1,554	60,273	16,598	11,655	15,300	5,609	1,755	50,637	31,782	5,460	430	13,933	81,701	20,539
Basic communication processes	122	817	654	4,116	6,276	726	2,463	1,206	396	26,357	7,644	2,544	894	1,088	20,743	10,278
Computer technology	2,891	9,799	4,110	40,283	33,565	6,255	14,444	9,915	2,315	156,855	58,339	11,579	1,325	5,490	223,694	64,031
IT methods for management	1,185	1,886	1,135	4,545	4,077	595	1,630	2,060	358	17,880	18,568	703	275	646	40,160	13,109
Semiconductors	444	683	1,298	14,638	24,102	464	5,541	1,950	1,065	147,908	77,636	6,414	775	471	61,347	41,582
Instruments																
Optics	708	1,178	1,721	14,793	15,173	586	5,271	2,823	1,049	191,867	46,079	7,475	879	973	38,123	29,349
Measurement	1,731	3,739	10,408	33,987	45,059	1,918	12,623	8,844	3,009	96,125	18,003	8,832	8,007	3,305	70,201	40,487
Analysis of biological materials	652	1,020	2,236	3,712	5,404	330	2,592	2,643	560	7,354	2,026	1,393	1,789	972	18,358	7,155
Control	1,064	1,571	2,288	11,725	16,023	572	4,513	3,479	1,612	38,090	9,223	1,756	1,587	1,335	32,693	18,756
Medical technology	4,225	4,399	15,805	13,206	35,251	996	10,485	11,095	4,661	50,829	13,215	7,698	9,374	6,335	145,420	47,403
Chemistry																
Organic fine chemistry	942	2,705	15,811	18,730	37,794	550	19,488	11,740	4,323	36,941	9,504	5,807	2,007	5,277	73,308	42,537
Biotechnology	2,413	3,225	6,586	16,163	16,232	769	7,208	6,661	2,161	20,210	8,229	4,903	1,754	1,713	62,881	27,269
Pharmaceuticals	3,485	6,137	21,478	43,967	30,781	909	16,911	14,854	7,069	27,743	8,654	5,904	5,344	7,433	118,744	67,124
Macromolecular chemistry, polymers	368	759	3,199	10,733	18,848	2,281	3,952	1,597	2,375	44,887	7,394	4,284	886	296	28,988	14,639
Food chemistry	906	1,056	4,243	20,180	5,144	393	2,459	2,283	1,074	13,267	11,028	6,058	13,484	332	19,211	23,926
Basic materials chemistry	985	1,888	6,385	24,854	33,583	786	5,568	6,450	1,494	41,648	10,433	6,738	3,234	643	45,944	26,595
Materials, metallurgy	1,764	1,562	1,928	29,455	15,966	1,601	5,995	2,227	1,461	43,091	11,047	1,703	7,430	1,421	18,639	25,735
Surface technology, coating	717	1,315	2,336	11,239	15,290	1,002	4,467	2,365	1,586	52,075	9,085	1,805	1,700	1,210	34,817	17,245
Micro-structural and nano-technology	100	92	132	1,375	1,291	105	550	129	89	2,401	2,168	198	367	110	2,066	1,296
Chemical engineering	1,392	2,138	4,064	16,148	24,386	1,792	6,816	5,207	2,810	32,561	11,855	4,630	4,220	2,165	37,869	25,297
Environmental technology	797	1,452	1,464	13,211	13,132	758	4,608	2,608	1,414	27,430	12,305	2,216	2,178	1,025	18,397	17,372
Mechanical engineering																
Handling	1,745	2,316	9,830	9,219	27,487	2,751	8,695	6,043	7,299	58,572	11,481	4,534	1,639	2,267	40,821	31,484
Machine tools	1,136	1,980	3,401	17,622	32,113	1,022	5,262	2,747	3,706	48,140	13,147	1,490	4,280	3,550	31,695	32,449
Engines, pumps, turbines	1,038	2,511	3,017	11,859	43,358	498	12,093	5,375	3,135	67,864	13,194	1,211	4,773	2,214	37,580	24,789
Textile and paper machines	2,794	567	4,435	10,827	22,597	2,772	3,083	1,995	2,763	73,057	8,878	2,362	632	990	20,834	16,504
Other special machines	2,010	4,021	4,419	18,103	28,399	1,494	9,341	4,676	5,464	52,611	16,680	5,316	6,614	2,407	40,184	41,020
Thermal processes and apparatus	813	1,377	1,861	15,361	15,628	885	3,926	2,000	2,652	36,098	19,303	1,466	2,297	1,504	14,704	19,761
Mechanical elements	1,635	2,098	3,072	12,301	51,797	821	10,636	5,555	3,962	68,069	12,438	2,064	3,185	3,974	34,338	26,989
Transport	1,491	3,705	2,665	12,965	70,171	746	25,817	6,331	5,736	102,613	31,383	2,950	4,557	6,051	45,770	32,981
Other fields																
Furniture, games	2,440	3,032	3,733	10,512	15,602	409	5,923	6,729	4,204	52,539	20,112	2,996	1,037	1,783	46,017	50,137
Other consumer goods	1,301	1,833	4,158	11,340	18,393	407	6,810	5,284	3,892	30,176	24,954	2,128	1,572	1,135	29,254	27,089
Civil engineering	3,883	6,476	3,542	22,845	29,187	1,792	11,513	9,448	5,538	42,090	31,358	7,880	7,755	3,902	46,797	57,872

Note: The IPC-technology concordance table (available at: *www.wipo.int/ipstats/en*) was used to convert IPC symbols into 35 corresponding fields of technology. Assigning a field of technology to a patent family is done based on all applications associated with that family rather than just first applications. The data refer to published patent applications. AU (Australia), CA (Canada), CH (Switzerland), CN (China), DE (Germany), FI (Finland), FR (France), GB (United Kingdom), IT (Italy), JP (Japan), KR (Republic of Korea), NL (Netherlands), RU (Russian Federation), SE (Sweden) and US (United States of America)

Sources: WIPO Statistics Database and EPO PATSTAT Database, October 2012

A.7.2 Applications in selected energy-related technologies

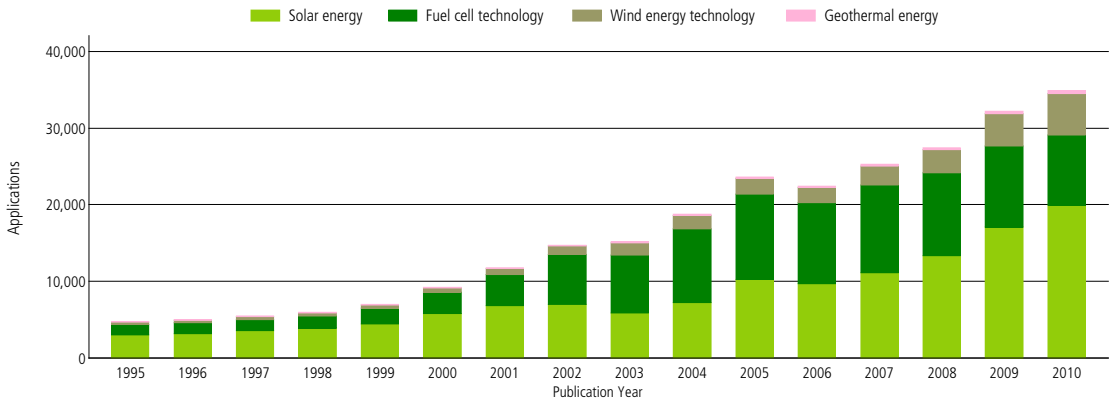
The development of energy-related technologies, such as those associated with renewable energy, plays an important role in tackling climate change. This subsection presents statistics on patent activity for selected energy-related technologies – namely, fuel cells, geothermal, solar and wind energy. Annex A provides definitions of these technologies according to IPC symbols.[40]

The total number of patent applications in the four energy-related fields grew continuously between 1995 and 2010, except for a small drop in 2006. Solar, geothermal and wind energy showed upward trends in applications, while fuel cell technology grew only until 2007; whereafter it has declined each year.

In 2011, the total number of patent applications for these four categories amounted to 34,873, representing 8 percent growth on 2009. Applications related to solar energy accounted for the largest share (57%), followed by fuel cell technology (26%) and wind energy (15%). The number of applications for geothermal energy was low.

Figure A.7.2.2 shows the source of energy-related patent applications for the 2006-2010 period. Japan had the highest share of applications related to solar energy (29.2%), followed by the Republic of Korea (17.2%) and the US (14.3%). Japan accounted for more than half of all patent applications for fuel cell technology; the US also filed a substantial number of applications in this field. Germany and the US were the two top origins for wind and geothermal energy patent applications. Compared to fuel cell technology, patent applications for wind and geothermal technologies were more evenly distributed among several origins.

Figure A.7.2.1 Patent applications in energy-related technologies

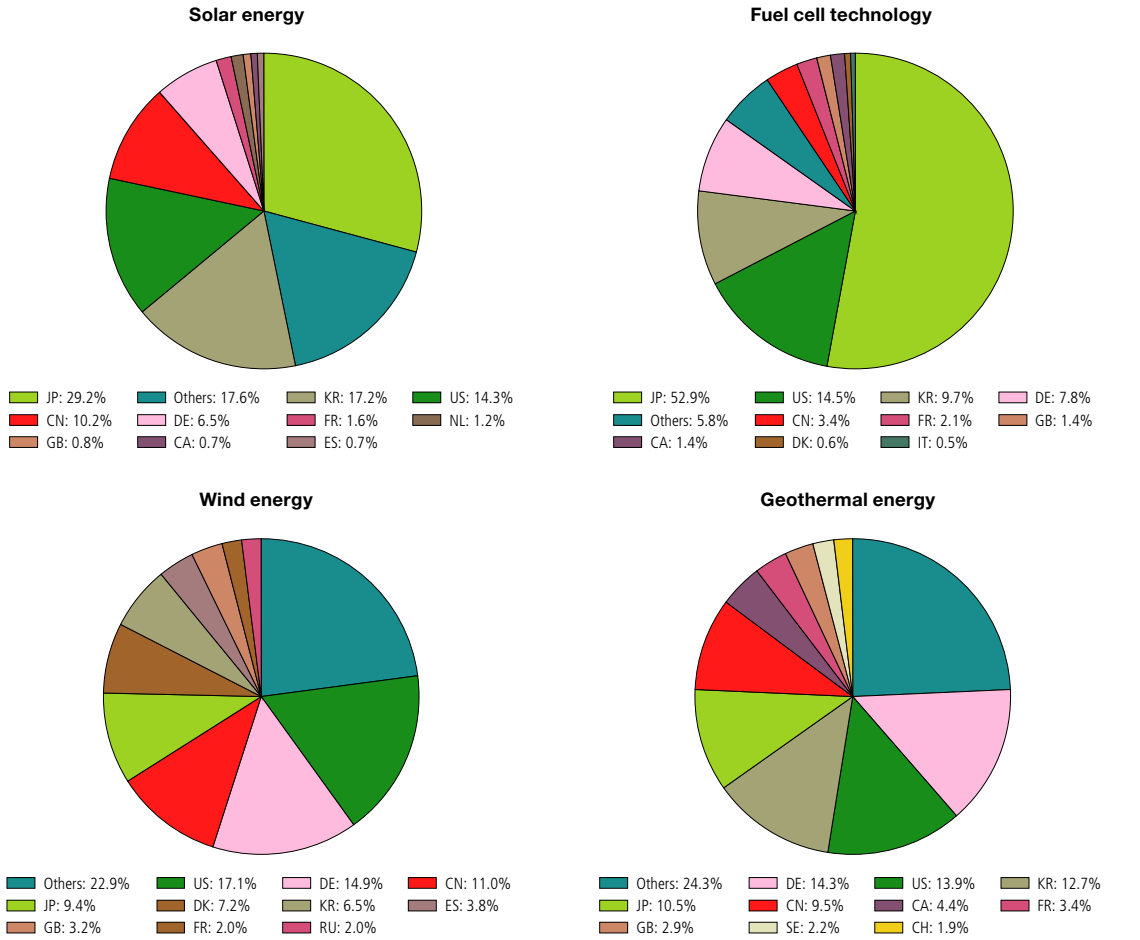


Note: For definitions of the technologies, refer to Annex A.

Sources: WIPO Statistics Database and EPO PATSTAT Database, October 2012

40 The correspondence between IPC symbols and technology fields is not always clear-cut (i.e., there is no one-to-one relationship). It is therefore difficult to capture all patents in a specific technology field. Nonetheless, the IPC-based definitions of the four energy-related technologies employed here are likely to capture the vast majority of patents in these areas.

Figure A.7.2.2 Share of patent applications in energy-related technologies for the top origins, 2006-10



Note: For definitions of the technologies, refer to Annex A. Country codes: CA (Canada), CH (Switzerland), CN (China), DE (Germany), DK (Denmark), ES (Spain), FR (France), GB (United Kingdom), IT (Italy), JP (Japan), KR (Republic of Korea), NL (Netherlands), RU (Russian Federation), SE (Sweden) and US (United States of America)

Sources: WIPO Statistics Database and EPO PATSTAT Database, October 2012

A.8

Patents per GDP and R&D expenditure

Differences in patent activity across economies reflect their size and level of development. For purposes of cross-country comparison, it is instructive to express patent applications relative to GDP and business sector research and development (R&D) expenditure.[41] Both indicators are frequently referred to as "patent activity intensity" indicators.

Figure A.8.1 shows the trend in resident patent applications, GDP and R&D expenditure (left-hand graph) and resident patents per GDP and per R&D (right-hand graph). Since the mid-2000s, business sector R&D expenditure has grown at a faster rate than have resident patents, with the result that the number of resident applications per R&D dollar (R&D productivity) has followed a downward trend since 2007. Both resident applications and GDP have increased at a similar rate; however, starting in 2009, resident patent growth has since outpaced GDP growth. As a result, the patent application per GDP ratio has increased for the past two years.

Figure A.8.2 shows R&D productivity for the top five origins. For these origins, R&D productivity was more or less stable until 2002, followed by a sharp upward trend for China, the Republic of Korea (until 2006) and the US (until 2007). In contrast, Germany and Japan have seen persistent declines in R&D productivity.[42]

The global patent applications per GDP and per R&D expenditure ratios (20.3 and 1.7, respectively) mask considerable variation across origins. For the top 20 origins, patents per GDP varied from around 100 for the Republic of Korea to 8 for Armenia (Figure A.8.3). The majority of origins tended to file 20 or fewer resident patents per billion GDP. Switzerland (26.6) and Germany (26) were the two highest ranked European countries. China recorded the largest increase in patent application-to-GDP ratio between 2006 and 2011 – jumping from 20.2 to 41.6. In contrast, Japan saw a considerable decline during the same period – from 87.7 to 73.4.[43]

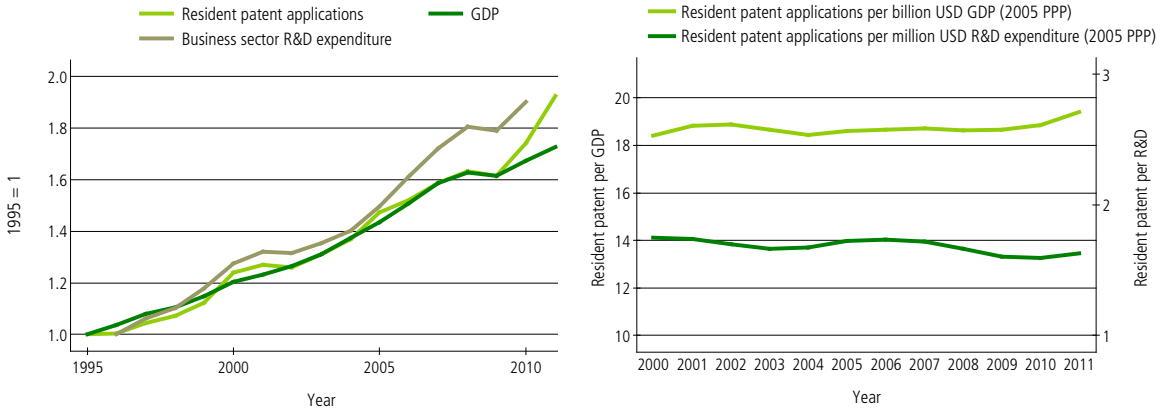
The Republic of Korea, with 3.7 resident patents per million R&D expenditure, had the highest patent-to-R&D expenditure ratio (Figure A.8.4). China filed more patents per R&D expenditure than Japan, which was not the case for the patent-to-GDP ratio. For both indicators, China, Japan and the Republic of Korea ranked higher than European countries and the US. R&D expenditure in the US was more than double that of China, but the patent-to-R&D ratio of the US was considerably lower than for China. Between 2006 and 2011, the patent-to-R&D expenditure ratio for reported European countries and the US remained more or less stable. The ratios for China and Poland increased, while they declined for Japan and the Republic of Korea.

41 Both GDP and business sector R&D expenditure are in constant 2005 PPP dollars.

42 Of the top five origins, China is the only origin for which R&D productivity continuously increased between 2003 and 2011.

43 Between 2006 and 2011, the patent-to-GDP ratio for China increased from 20.2 to 41.8 due to substantial growth in resident applications. Japan saw a considerable drop in resident applications which caused the patent-to-GDP ratio to fall from 87.7 to 73.4.

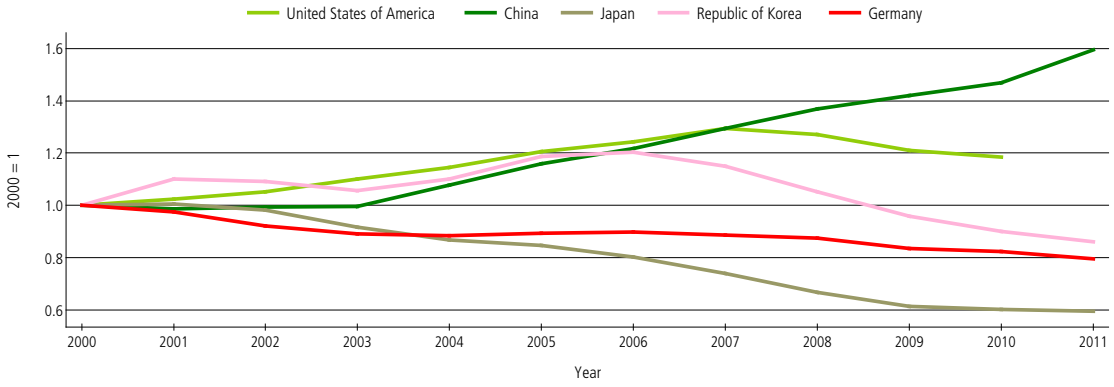
Figure A.8.1 Trend in resident patent applications worldwide per GDP and R&D expenditure



Note: GDP and R&D expenditure are in constant 2005 purchasing power parity (PPP) dollars. R&D data are lagged by one year to derive the patent-to-R&D ratio. Patent-to-GDP and patent-to-R&D ratios are presented as a three-year moving average.

Sources: WIPO Statistics Database, UNESCO Institute for Statistics and World Bank, October 2012

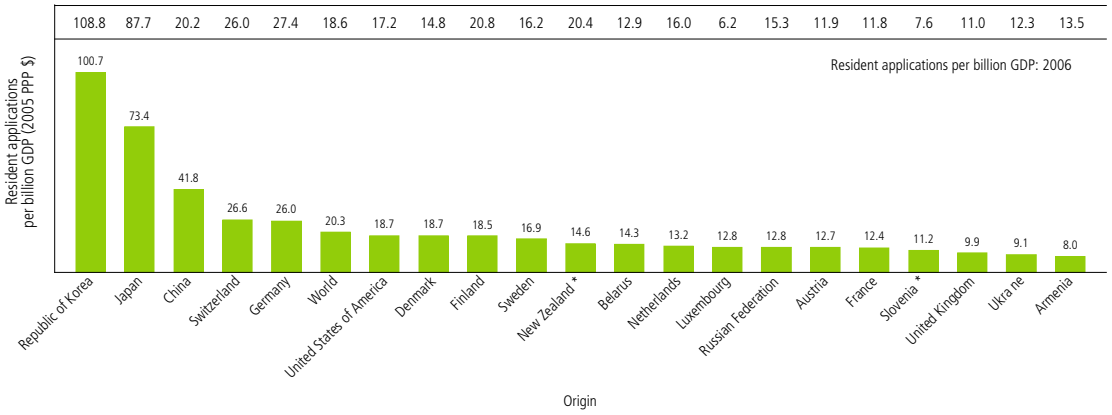
Figure A.8.2 Trend in resident patent applications per R&D expenditure for the top five origins



Note: R&D expenditure is in constant 2005 PPP dollars. R&D data are lagged by one year to derive the patent-to-R&D ratio, which is presented as a three-year moving average.

Sources: WIPO Statistics Database and UNESCO Institute for Statistics, October 2012

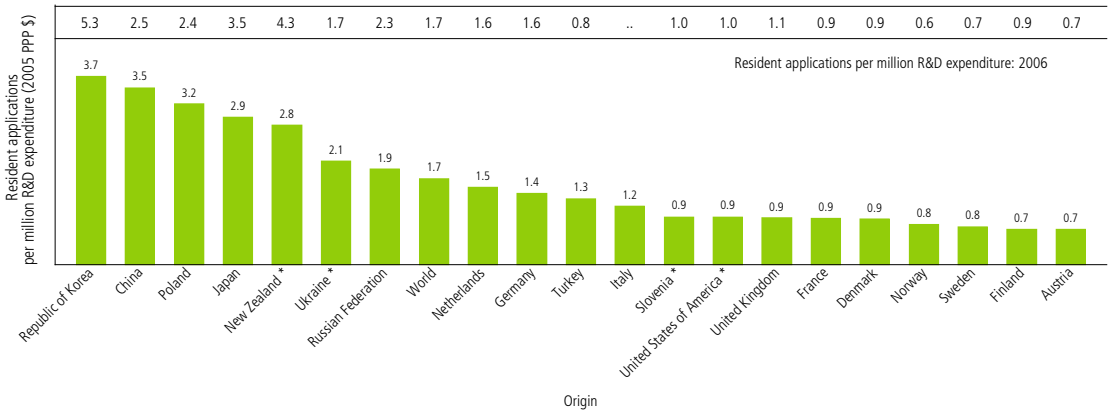
Figure A.8.3 Resident patent applications per GDP for selected origins, 2011



Note: *2010 data. GDP data are in constant 2005 PPP dollars. For the resident patent-per-GDP indicator, countries were selected if they had a GDP greater than 15 billion PPP dollars and more than 100 resident patent applications. However, not all countries that fulfill these criteria are included in the graphs due to space constraints.

Sources: WIPO Statistics Database and World Bank, October 2012

Figure A.8.4 Resident patent applications per R&D expenditure for selected origins, 2011



Note: *2010 data; '..' not available; R&D expenditure is in constant 2005 PPP dollars. For the resident patent-per-R&D expenditure indicator, countries were selected if they had R&D expenditure greater than 500 million PPP dollars and more than 100 resident patents. R&D data are lagged by one year to derive the patent-to-R&D expenditure ratio. However, not all countries that fulfill these criteria are included in the graphs due to space constraints.

Sources: WIPO Statistics Database and UNESCO Institute for Statistics, October 2012

A.9

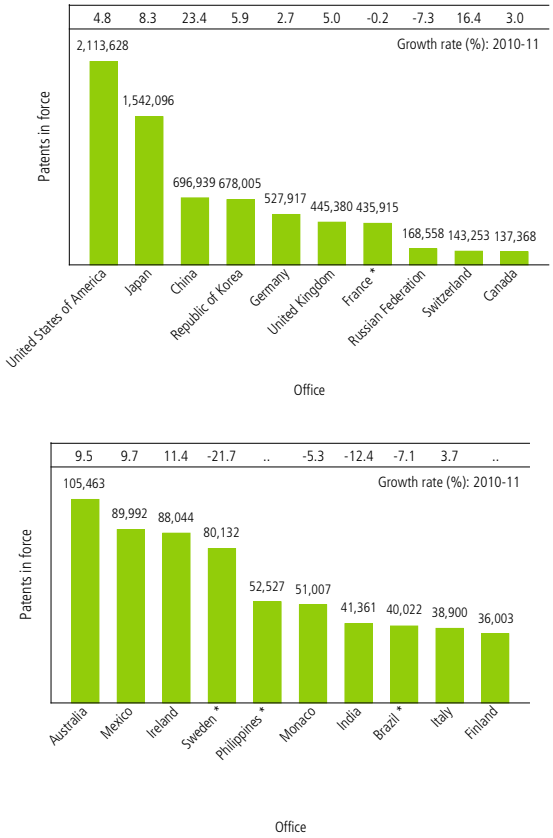
Patents in force

Patent rights last for a limited period – generally 20 years from the date of filing. Patents-in-force indicators provide information on the volume of patents currently valid as well as the historical "patent life cycle".

The estimated number of patents in force worldwide increased from 6.88 million in 2008 to 7.88 million in 2011.[44] Figure A.9.1.1 depicts the number of patents in force by office for the top 20 offices. The USPTO had the largest number of patents in force – in excess of 2.1 million patents. The JPO also had a substantial number of patents in force (1.54 million). The number of patents in force at SIPO has increased rapidly over the past few years and, in 2011, it surpassed that of the Republic of Korea.[45] Residents owned the bulk of patents in force at the JPO (87%). In contrast, patents in force at SIPO and the USPTO were almost equally distributed among resident and non-resident holders.

Apart from China, Ireland and Switzerland were the only two offices listed to see double-digit growth between 2010 and 2011. In contrast, India, Monaco and the Russian Federation recorded declines in patents in force for the same period.[46]

Figure A.9.1.1 Patents in force by office for the top 20 offices, 2011



Note: *2010 data; '..' not available; Growth rate refers to 2009-2010.

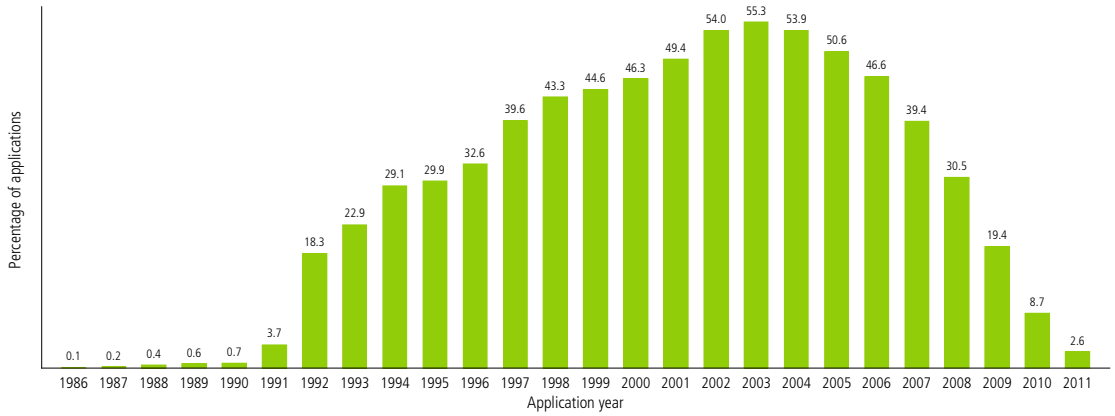
Source: WIPO Statistics Database, October 2012

44 The global number of patents in force is a WIPO estimate based on data from 81 offices. These estimates, which cover data from the same offices, are 7.18 million for 2009 and 7.37 million for 2010.

45 Between 2005 and 2011, patents in force in China grew by around 25% a year, which is far above the growth rates of Japan, the Republic of Korea and the US.

46 The number of patents in force also fell in Brazil, France and Sweden, but the data refer to 2009-2010.

Figure A.9.1.2 Patents in force in 2011 as a percentage of total applications



Note: Percentages are calculated as follows: number of patent applications filed in year t and in force in 2011 divided by the total number of patent applications filed in year t. The graph is based on data from 65 offices.

Source: WIPO Statistics Database, October 2012

Patent holders must pay maintenance fees to keep their patents valid. Depending on technological and commercial considerations, patent holders may opt to let a patent lapse before the end of the full protection term. Figure A.9.1.2 depicts the distribution of patents in force in 2011 as a percentage of total applications in the year of filing. Unfortunately, not all offices provide these data. However, the data available show that more than half of the applications for which patents were eventually granted remained in force at least eight years after the application date. Around 18% of these lasted the full 20-year patent term.

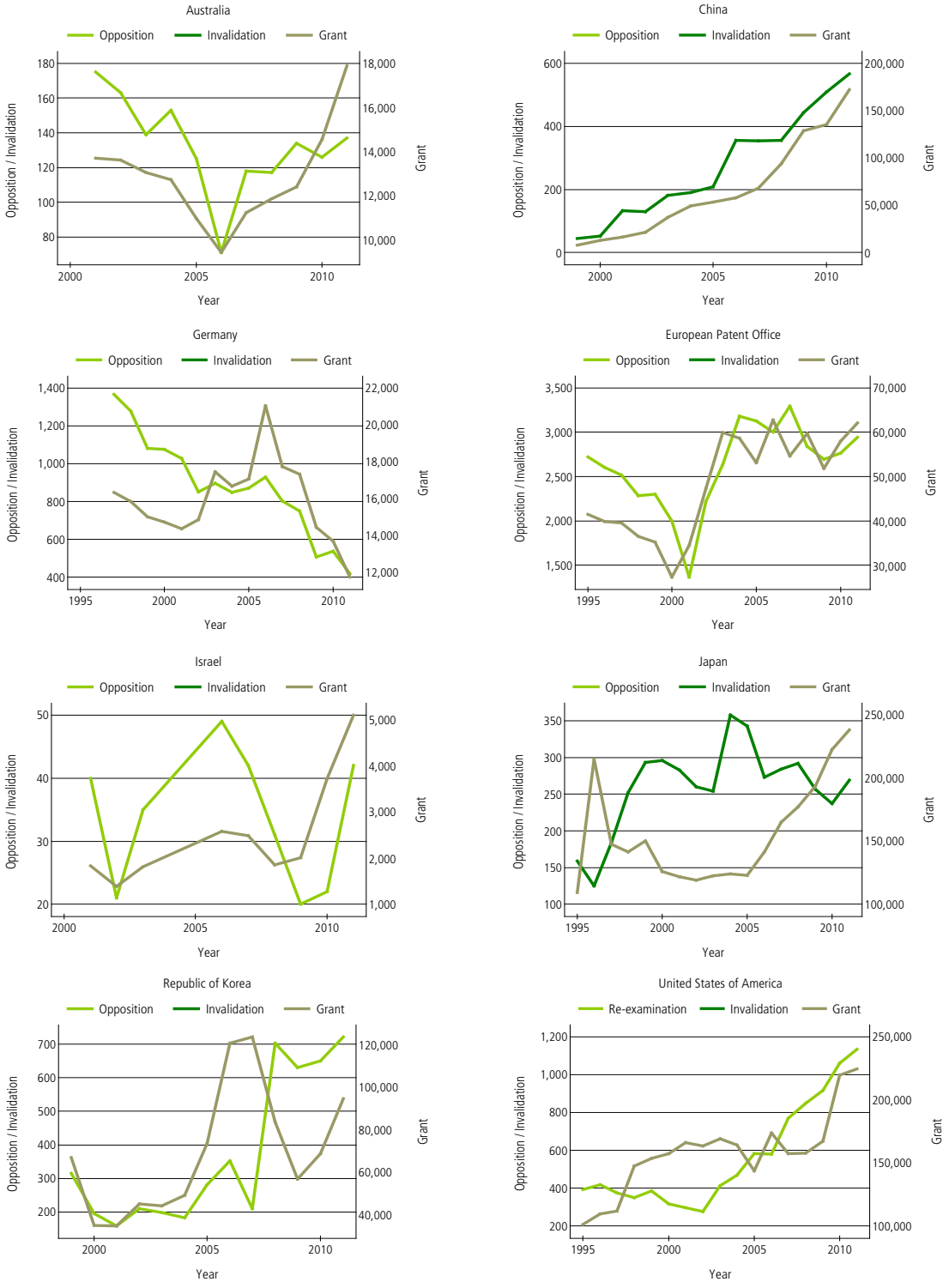
A.10

Opposition and invalidation of patents granted

The purpose of opposition procedures is to provide third parties with the possibility to oppose the grant of a patent. This also provides an alternative to potentially lengthy and costly judicial proceedings. Requests for opposition provide an important avenue to ensure patent quality. The exact legal mechanism for achieving this differs from office to office. For example, the USPTO uses a re-examination system, whereby third parties can present evidence of prior art and request that a patent be re-examined by the office. The EPO utilizes a post-grant opposition system whereby any party can contest a patent granted not only on prior art grounds of patentability but also on other substantive grounds.[47] Differences in opposition procedures make it difficult to directly compare opposition-related statistics across patent offices, so data are comparable over time only within a particular office.

47 According to Article 100 of the European Patent Convention (EPC), grounds for opposition include: the subject matter of the patent not being patentable; the invention not being sufficiently disclosed to allow a person skilled in the art to carry it out; and the content of the patent extending beyond the content of the application filed.

Figure A.10.1 Opposition and invalidation of patents granted



Note: Different procedures exist across patent offices for opposing or invalidating patent granting decisions. At the EPO and the patent offices of Germany and India, the procedure is called “opposition”. At the USPTO, it is referred to as “re-examination”. At SIPO and the JPO, the procedures are called “invalidation requests” and “trials for invalidation”, respectively.

Source: WIPO Statistics Database, October 2012

Figure A.10.1 presents data on opposition and invalidation requests for selected offices and compares them to the number of patents granted. The number of oppositions or requests for re-examination (or invalidation) appears small compared to total patents granted. For example, at the EPO, 4.7% of patents granted were opposed in 2011. Similarly, at the USPTO, the re-examination ratio – requests for re-examination divided by the number of patents granted – stood at 0.5% in 2011.[48] This ratio was similar to that for SIPO, where the number of invalidation requests to patents granted stood at around 0.3%.

The number of opposition and invalidation requests usually correlates positively with the number of patents granted. However, there are a few exceptions. At the USPTO, there has been an upward trend in the re-examinations-to-patents granted ratio since 2002. Similarly, the opposition-to-grant ratio at KIPO has increased since 2007.[49] In other words, there has been an increase in the tendency of third parties to challenge patents granted by KIPO and the USPTO. JPO is another exception in that, since 2004, it has witnessed a decline in patent invalidation requests, while the number of patents granted has been increasing.[50]

48 The opposition- and re-examination-to-grant ratios presented here are rough approximations, because the numerator and denominator do not cover the same period. For example, the 4.7% opposition ratio at the EPO was derived by dividing the number of oppositions filed in 2011 by the number of patents granted in 2011. Patents granted by the EPO can be opposed within nine months of the publication of the grant of the European patent in the European Patent Bulletin. Therefore, the number of oppositions filed in 2011 could refer to patents granted in 2010 and 2011.

49 There was a change in the opposition procedure at KIPO in 2006. Since July 2007, post-grant opposition has been integrated into the invalidation procedure and applies to all patents granted after June 2007.

50 From 1994 to 2004, the JPO had a dual opposition/invalidation system in which only certain parties could file an appeal. Since 2004, the JPO has maintained a single opposition procedure that allows anyone to file an appeal for revocation of a patent.

A.11

Pending patent applications

The processing of patents is time- and resource-intensive. Patent offices need to carefully assess whether the claims described in patent applications meet the standards of novelty, non-obviousness and industrial applicability as set out in national laws. For operational planning and to assess the effectiveness of the patent system more broadly, it is important to know how many patent applications are pending.

Unfortunately, differences in procedures across patent offices complicate the measurement of pending applications (see Box 1). In some offices, such as the USPTO, patent applications automatically proceed to the examination stage unless applicants withdraw them. In contrast, patent applications filed at other offices do not proceed to the examination stage unless applicants file a separate request for examination. For example, in the case of the JPO, applicants have up to three years to file such a request.

For offices that automatically examine all patent applications, it seems appropriate to count as pending all applications that await a final decision. However, where offices require separate examination requests, it may be more fitting to consider pending applications to be those for which the applicant has requested examination.

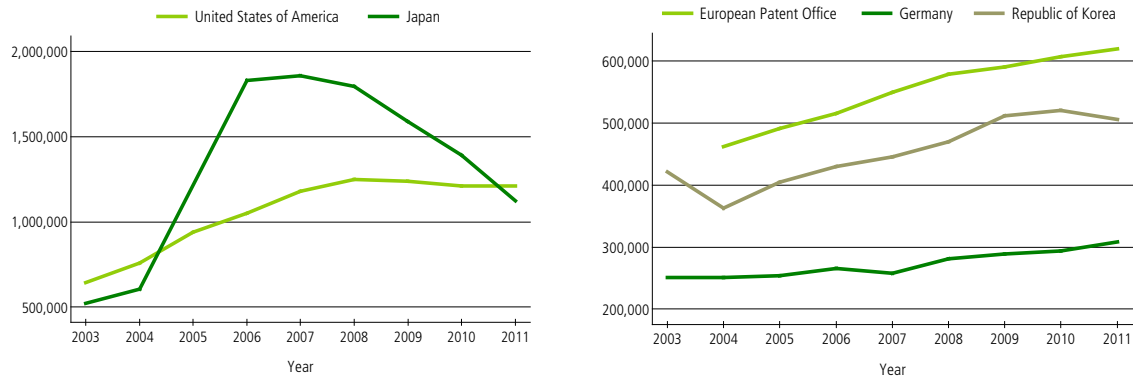
To take account of this procedural difference, pending application data for both definitions of pendency are presented below. In particular, statistics on potentially pending applications include all patent applications, at any stage in the process, that await a final decision by the patent office, including those applications for which applicants have not filed a request for examination (where applicable). Statistics on pending patent applications undergoing examination include only those applications for which the applicant has requested examination (where such separate requests are necessary).

Since the early 2000s, a number of offices have seen a rise in the number of pending applications. However, growth in the number of pending applications has varied across offices. Figure A.11.1 presents potentially pending application data for the top five offices.[51] The JPO saw a dramatic increase until 2006, followed by a decline from 2008 onwards. The drop was due to decreases in the number of new applications received and an increase in the number of applications processed. The USPTO saw a substantial increase until 2008, and the number of potentially pending applications has since remained more or less stable. The EPO, Germany and KIPO each witnessed upward trends.

The total number of potentially pending applications across the world declined from 5.1 million in 2010 to 4.8 million in 2011. Japan accounted for almost the entire drop in backlogs. The world total is based on data from 76 patent offices, which include the top 20 offices except those of China, the Democratic People's Republic of Korea and India.

In absolute terms, the US had the largest number of potentially pending applications in 2011 (Figure A.11.2). Japan saw a 19% drop in 2011, but still had a backlog of more than 1.1 million applications. The majority of top 20 offices had fewer potentially pending applications in 2011 than in 2010, notable exceptions being Viet Nam (+13%) and Germany (+4.9%).

Figure A.11.1 Trend in potentially pending applications for the top five offices

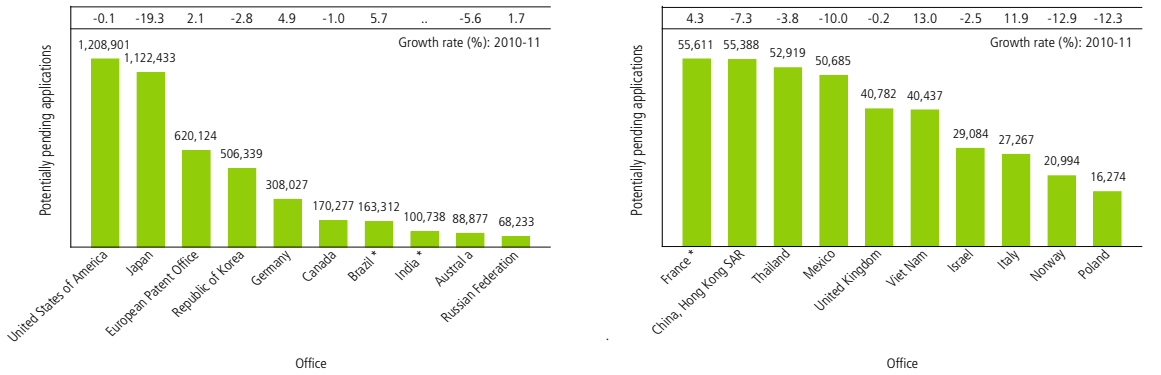


Note: Potential pending applications include all patent applications, at any stage in the process, awaiting a final decision by the patent office, including those applications for which applicants have not filed a request for examination (where applicable).

Source: WIPO Statistics Database, October 2012

51 SIPO, the largest office in terms of patent applications, is not included due to data unavailability.

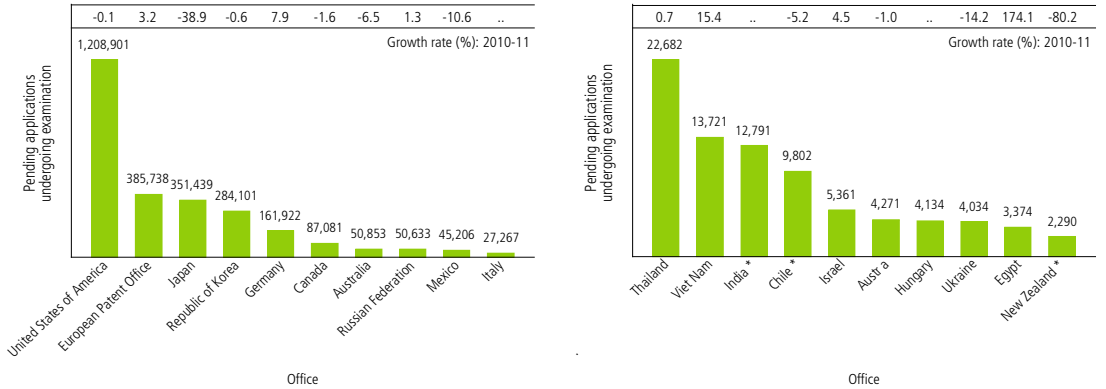
Figure A.11.2 Potentially pending applications, 2011



Note: *2010 data; '..' not available; Growth rate refers to 2009-2010. Potentially pending applications include all patent applications, at any stage in the process, that await a final decision by the patent office, including those applications for which applicants have not filed a request for examination (where applicable).

Source: WIPO Statistics Database, October 2012

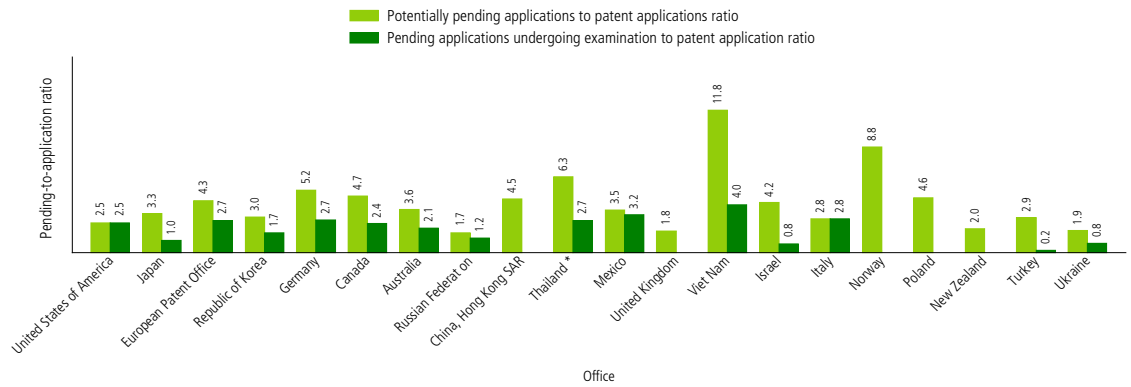
Figure A.11.3 Pending applications undergoing examination, 2011



Note: *2010 data; '..' not available; Growth rate refers to 2009-2010.

Source: WIPO Statistics Database, October 2012

Figure A.11.4 Pending applications undergoing examination ratio, 2011



Note: The 2011 ratio is calculated using applications pending in 2011 divided by the average number of applications received by the office during 2009-2011. The average number of applications for Thailand refers to 2007-2009. This is due to its recent membership in the PCT, following which the number of applications received declined temporarily as non-resident applicants switched from using the Paris route to the PCT system.

Source: WIPO Statistics Database, October 2012

The number of pending applications undergoing examination shows a trend similar to that of potentially pending applications. The majority of reported offices had fewer applications undergoing examination in 2011 than in 2010. For example, applications undergoing examination in Japan declined by around 224,000.

Figure A.11.4 depicts the number of pending applications relative to incoming applications. The patent offices of Thailand, Norway and Viet Nam showed small absolute numbers of potentially pending applications. However, these offices had a high ratio of potentially pending applications to total patent applications.[52] For example, at the patent office of Viet Nam, the number of potentially pending applications (40,437) was 11.8 times higher than the average number of patent applications (3,428) received between 2009 and 2011. The number of potentially pending applications in Germany was far below that of Japan and the US, but of all of these offices, Germany had the highest potential pending applications-to-patents ratio.

52 The potentially pending applications to patent applications ratio is high for Norway. Norway became a member of the EPO in January 2008, which prompted a sharp fall in applications received by the national patent office as users switched to using the EPO route. The fall in application numbers resulted in a high ratio for Norway. The total numbers of patent applications filed at the patent office of Norway were: 5,430 (2008), 3,604 (2009), 1,813 (2010) and 1,776 (2011).

Box 1: Measuring patent backlogs: A new framework for cross-country comparison[53]

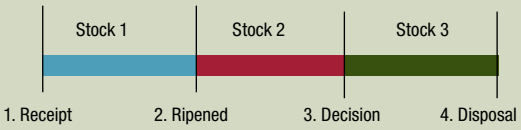
National offices tend to think about patent backlogs differently, owing to different rules and processes employed in making patenting decisions. In the US, the backlog is typically defined as the quantity of unexamined applications, while in the UK the backlog is generally considered to be the number of applications that remain unexamined after a certain time period. Each of these definitions has its own reasonable logic but, to date, the lack of standardization in measurement has led to an inability to compare backlogs, as well as misunderstanding of their causes and consequences. Similar problems arise in comparing examination pendency across offices.

The UK Intellectual Property Office (UKIPO) and the USPTO have jointly conducted a study on patent application backlogs. As part of that study – and with input from WIPO's Patent Economists Group[54] – the offices have developed a framework to facilitate cross-country comparison of backlogs. The framework identifies four milestones in the examination process common to most patent systems. These milestones divide the overall patent application inventory into three distinct stocks, or inventories, of applications (see Figure A). Within each of these stocks, it is possible to further distinguish those applications awaiting a patent office action and those awaiting an applicant response.

This taxonomy not only facilitates cross-country comparison, but also aids in highlighting the relationship between application stocks and examination pendency. By utilizing detailed information on measured stocks, offices can more precisely estimate pendency at any phase of the examination process. Further, the joint UKIPO-USPTO study shows that changes in the different stocks have differential impacts on patent pendency and on abandonment rates. Understanding these relationships is critical for better evidence-based policymaking.

Results of the UKIPO-USPTO backlog study will be made available in early 2013 at: *www uspto.gov/ip/officechiefecon/index.jsp* and *www.ipo.gov.uk/pro-ipresearch.htm*

Figure A: Stocks of patent backlogs



53 WIPO is grateful to the UKIPO and USPTO for providing the content in Box 1.

54 See *www.wipo.int/econ_stat/en/news/2010/news_0001.html.*

A.12

Patent prosecution highway

As described earlier, there has been an increase in the number of cross-border applications – i.e., a patent application for the same invention filed in multiple jurisdictions. In such situations, the same application is examined multiple times by different patent offices. Although there are substantial differences among national patent laws, the criteria for granting patents are similar: novelty, inventive step and industrial applicability. Therefore the same set of questions – whether the invention is new, whether it is obvious and whether one can make industrial use of it – is asked multiple times.

With the increasing number of applications and limited resources, patent offices may find it difficult to process applications in a timely manner. This is reflected by the large stock of pending applications across the world (See A.11).

To avoid unnecessary duplication of work and improve the efficiency of the examination process, patent offices increasingly seek to make use of the search and examination results of other offices. So-called Patent Prosecution Highways (PPH) have institutionalized such cooperation between offices. A PPH refers to a bilateral agreement between two offices that enables applicants to request a fast-track examination procedure whereby patent examiners can make use of the work of the other office. This includes positive search and examination results from the office of first filing. It can also include the positive results of a written opinion by the International Searching Authority (ISA), the written opinion of the International Preliminary Examining Authority (IPEA) or the international preliminary examination report issued within the framework of the PCT – a practice referred to as PCT-PPH. Since offices handling subsequent filings would use the work done earlier by other offices, they can shorten processing time and contribute to better examination quality.

This section presents statistics relating to the use of the PPH system at several offices.[55] Table A.12.1 shows the number of PPH requests made up to the end of December 2011 (cumulative total from the date on which PPH became operational).

The largest number of PPH requests occurred between the JPO and the USPTO. In particular, the JPO received 6,817 applications for which applicants subsequently filed a PPH request; the USPTO received the largest number of those requests (4,703 or 69%), followed by KIPO (1,025 or 15%). As for applications filed at the USPTO, the Canadian patent office received the largest number of PPH requests (44%), followed by the JPO (33%). The Canadian office, the JPO, KIPO and the USPTO accounted for 88% of total PPH requests (13,272). The majority of offices received a low number of PPH requests (Table A.12.1). PCT-PPH requests showed a similar trend. The JPO and the USPTO received 95% of all PCT-PPH requests (Table A.12.2).

55 For further information and a definition of PPH statistics refer to: *www.jpo.go.jp/cgi/cgi-bin/ppph-portal/statistics/statistics.cgi*

Statistics on examination procedures can shed some light on how PPHs affect office performance. Table A.12.3 presents grant percentage and average pendency time figures. Due to significant differences in examination procedures and legislation across offices, the data presented here do not allow for direct cross-office comparisons. The grant percentages for applications having made use of PPH and PCT-PPH procedures were higher than for those using the normal examination procedure. This may be at least partly due to the requirement that, in order to benefit from PPH acceleration, applications filed at the office of second filing may only contain claims that correspond to those claims which have already been found to be patentable by the office of first filing. For example, the grant percentage when requesting the PPH procedure is 87% (excluding PCT-PPH) at the USPTO, compared to 49% for all applications (PPH and non-PPH). For all reported offices, the grant rate for PCT-PPH applications is higher than "regular" PPH applications. Similarly, and for related reasons, the average pendency – both first office action and final decision – for applications using PPH and PCT-PPH procedures is significantly shorter than average pendency for all applications.

Table A.12.1 Number of PPH requests, cumulative total up to the end of December 2011

		Office of subsequent filing																						
		Australia	Austria	Canada	China	Denmark	European Patent Office	Finland	Germany	Hungary	Iceland	Israel	Japan	Mexico	Norway	Others	Portugal	Republic of Korea	Russian Federation	Singapore	Spain	United Kingdom	United States of America	Total
Office of first filing	Australia	n/a																					109	109
	Austria		n/a					0		0			1										0	1
	Canada			n/a		0		1	0				2					1			0		107	111
	China				n/a								1										0	1
	Denmark			1		n/a							7					4					90	102
	European Patent Office						n/a						40										191	231
	Finland		0	1				n/a		0			5					0	0		0		19	25
	Germany			11					n/a				80					13					65	169
	Hungary		0					0		n/a			2										3	5
	Iceland										n/a		0										0	0
	Israel											n/a											1	1
	Japan		0	73	53	2	394	1	495	0	0		n/a	1	0			1,025	42	8	0	20	4,703	6,817
	Mexico												0	n/a							0		0	0
	Norway												0		n/a								0	0
	Others															n/a							0	0
	Portugal																n/a				0			0
	Republic of Korea			5		0		0	1				160					n/a	0		1	4	851	1,022
	Russian Federation							0					3					0	n/a		0		8	11
	Singapore												0							n/a			2	2
	Spain			0				0					0				0	0	0		n/a		0	0
	United Kingdom												52					19	1			n/a	205	277
	United States of America	146	0	1,922	0	1	254	1	40	1	0	0	1,438	15	2	39		475	9	9	0	36	n/a	4,388
	Total	146	0	2,013	53	3	648	3	536	1	0	0	1,791	16	2	39	0	1,537	52	17	1	60	6,354	13,272

Note: For a definition of PPH statistics refer to: *www.jpo.go.jp/cgi/cgi-bin/ppph-portal/statistics/statistics.cgi*

Source: WIPO, based on data from the JPO, October 2012

Table A.12.2 Number of PCT-PPH requests, cumulative total up to the end of December 2011

ISA or IPEA	Office of filing																							
		Australia	Austria	Canada	China	Denmark	European Patent Office	Finland	Iceland	Japan	Mexico	Nordic Patent Institution	Norway	Republic of Korea	Russian Federation	Spain	Sweden	United States of America	Total	Singapore	Spain	United Kingdom	United States of America	Total
	Australia	3																88	91				109	109
	Austria						0											8	8				0	1
	Canada			20														3	23		0		107	111
	China									0								2	2				0	1
	Denmark																		0				90	102
	European Patent Office									338								814	1,152				191	231
	Finland		0					0		0					0			35	35		0		19	25
	Iceland																		0				65	169
	Japan				7	0	188	0	0	765	0					0	0	537	1,498				3	5
	Mexico																		0				0	0
	Nordic Patent Institution									0								3	3				1	1
	Norway																		0	8	0	20	4,703	6,817
	Republic of Korea													12				963	975		0		0	0
	Russian Federation		0				0											7	7				0	0
	Spain						0	0		0								4	4				0	0
	Sweden									5							1	21	27		0			0
	United States of America	5	0		0	0	11	0	0	10				8	1	0	0	137	172		1	4	851	1,022
	Total	8	0	20	7	0	199	0	0	1,118	0	0	0	20	2	0	1	2,622	3,997		0		8	11

Note: For a definition of PPH statistics refer to: *www.jpo.go.jp/cgi/cgi-bin/ppph-portal/statistics/statistics.cgi*

Source: WIPO, based on data from the JPO, October 2012

Table A.12.3 Grant rate and pendency time for patents filed using the PPH procedure, July – December 2011

	PPH procedure, excluding PCT-PPH														PCT-PPH							
	Office of subsequent filing														Office of subsequent filing							
	Australia	Canada	Finland	Germany	Hungary	Japan	Mexico	Others	Republic of Korea	Russian Federation	Singapore	Spain	United Kingdom	United States of America	Australia	Canada	Japan	Republic of Korea	Russian Federation	United States of America	United States of America	Total
Grant Rate {%}	100	91	100			76.6	81.8	100	90.3	95	100		97.6	87	100	100	95.4			91	109	109
	(-)	-64	(-)	(-)	-24.4	-58.9	(-)	-57	-66.3	-80.2	(-)	(-)	(-)	-49	(-)	-64	-58.9	-66.3	-74	-49	0	1
First Action Allowance Rate {%}	44.4	42	66		0	22.9	81.8	87.5	27.1	50	100	100	4.8	26	33.3	75	58			19	107	111
	(-)	-4.9	(-)	(-)	-9.7	-11.2	(-)	-9.2	-10.1	-12.3	(-)	-35	(-)	-14	(-)	-4.9	-11.2	-10.1	-8.5	-14	0	1
Average Pendency from PPH Request to First Office Action {months}	0.5	1.6	1	5.6	1	1.8	0.83	1.1	1.8	1.7		3.5	1.8	6.1	0.5	1	1.9	2.2	1.3	4.3	90	102
	(-)	-22.2	-8.5	(-)	-76.1	-26.3	(-)	-41.1	-16.8	-10.9	(-)	-23	(-)	-23.6	(-)	-22.2	-26.3	-16.8	-11	-23.6	191	231
Average Pendency from PPH Request to Final Decision {months}	1.5	5.5	6			7.1	0.83	1.2	4.9	6.8			4.8	11.6	1.7	2.5	3.5			7	19	25
	(-)	-40.5	-60	(-)	-71.7	-32.4	(-)	-45.7	-22.8	-18	(-)	-33	(-)	-33.8	(-)	-40.5	-32.4	-22.8	-25	-33.8	65	169
Average Number of Office Actions	0.55	0.7	1			1.06	0	0.13		0.6	0.17		1.14	2.3	0.66	0.3	0.46			1.6	3	5
	(-)	-1.6	(-)	(-)	-0.7	-1.1	(-)	-0.94	(-)	-1.65	(-)	-2	(-)	-2.6	(-)	-1.6	-1.1	(-)	-2.6	-2.6	0	0

Note: For a definition of PPH statistics refer to: *www.jpo.go.jp/cgi/cgi-bin/ppph-portal/statistics/statistics.cgi.* The numbers in brackets refer to all applications (i.e., PPH and non-PPH data).

Source: WIPO, based on data from the JPO, October 2012

A.13

Utility models

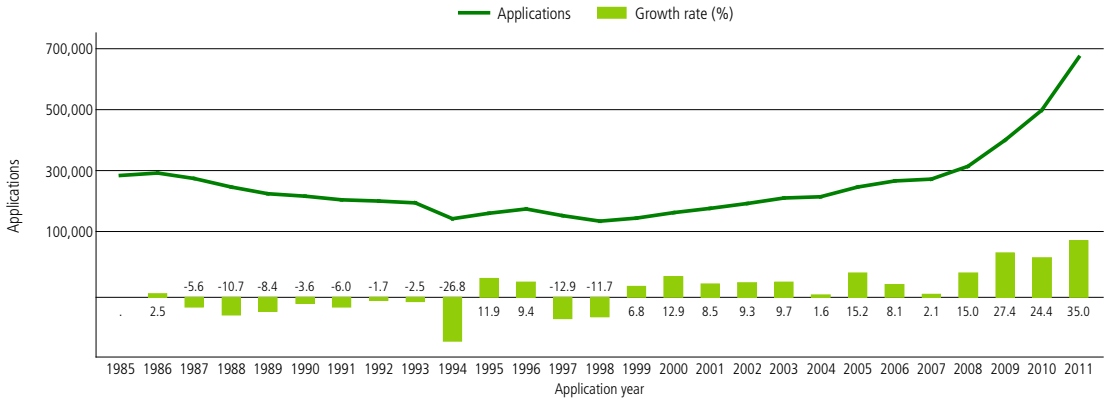
A.13.1 Utility model applications

Figure A.13.1.1 shows data on the total number of utility model (UM) applications filed across the world from 1985 to 2011. World totals are WIPO estimates covering around 60 offices, which include direct national and regional applications and international applications filed through the PCT that subsequently entered the national or regional phase. Between 1985 and 1998, UM applications worldwide followed a downward path. This was due to considerable declines at the JPO, where applications fell from around 204,800 in 1985 to 10,900 in 1998. Since 1998, UM applications have continuously increased, mainly reflecting sustained growth in filings at SIPO. During this period, the IP offices of the Russian Federation and Ukraine also saw growth, while the number of applications fell in those of Germany and the Republic of Korea.

From 2008 to 2011, there was substantial growth in applications worldwide. The latest year, 2011, saw an estimated 670,700 UM applications filed worldwide, corresponding to a 35% increase on 2010. Growth in applications has been entirely due to an increase in applications received by SIPO. Excluding Chinese office data, the world total actually showed a decrease of 1.7% in 2010 and 2% in 2011.

Figure A.13.1.2 depicts the number of UM applications for the top 20 offices. SIPO received 585,467 applications – or 87% of the world total – in 2011, corresponding to 42.9% growth on 2010. Since 1997, it has been the largest office in terms of applications. In 2011, the second largest office, Germany, received around 16,000 applications – only a fraction of the number received in China. Apart from the top five offices, each of the other offices received fewer than 8,000 applications.

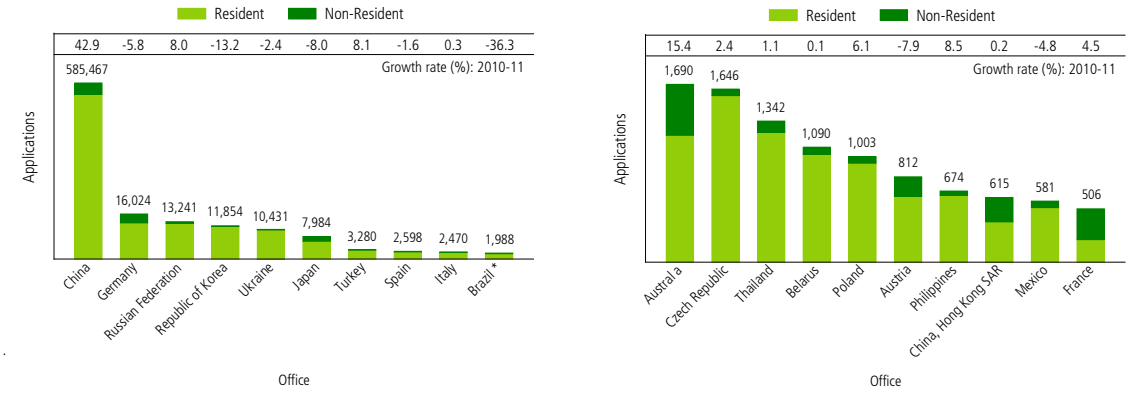
Figure A.13.1.1 Trend in utility model applications worldwide



Note: World totals are WIPO estimates covering around 60 patent offices (see Data Description). These estimates include direct applications and PCT national phase entries.

Source: WIPO Statistics Database, October 2012

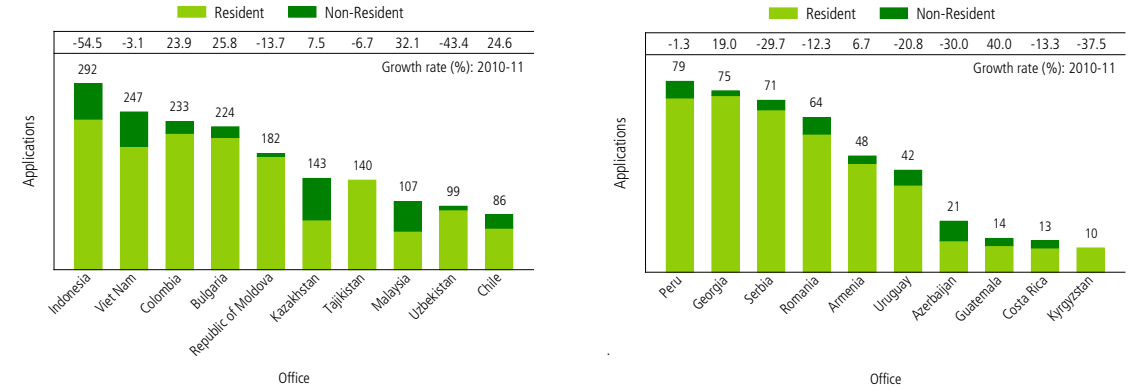
Figure A.13.1.2 Utility model applications for the top 20 offices, 2011



Note: *2010 data; Growth rate refers to 2009-2010.

Source: WIPO Statistics Database, October 2012

Figure A.13.1.3 Utility model applications for offices of selected middle- and low-income countries, 2011



Source: WIPO Statistics Database, October 2012

Unlike patents, UMs are primarily used by resident applicants to protect inventions at their respective national patent offices. In 2011, resident applicants accounted for 98% of the world total, a share that has remained relatively constant over the past 25 years. For the top 20 offices, France is the only one where non-resident applicants accounted for the majority of applications. The non-resident share in total applications at SIPO was less than one percent in 2011. However, in absolute terms, SIPO (with 4,164) received the largest number of non-resident UM applications in 2011, considerably higher than the 1995 level (354 applications). The majority of non-resident applications filed at SIPO originated in Japan and the US.

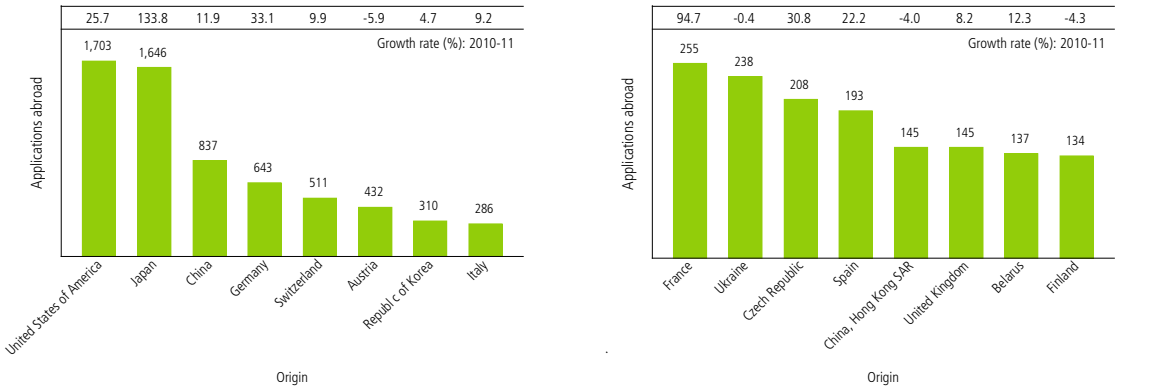
SIPO is the only office with considerable growth in UM applications in 2011. It received 175,631 more applications than in 2010. This exceeds twice the amount of applications received by all other offices combined in 2011. Between 2010 and 2011, the IP offices of Australia, the Russian Federation, the Philippines and Turkey recorded high growth, while Austria, the Republic of Korea and Japan experienced considerable declines.

Figure A.13.1.3 shows the numbers of UM applications received by offices of selected middle- and low- income countries. Similar to the trend observed for the top 20 offices (Figure A.13.1.2), resident applications accounted for the largest share of total applications. Resident shares varied from 55% in Kazakhstan to 100% in Kyrgyzstan and Tajikistan. The majority of these offices received fewer applications in 2011 than in 2010.

Even though the UM system is mostly used by local residents, some applicants seek UM protection abroad. Figure A.13.1.4 presents the total number of applications filed abroad for selected origins. Residents of the US (1,703) and Japan (1,646) filed the largest numbers of UM applications abroad, a large proportion of which were destined for SIPO. Table A.13.1.5 shows the breakdown of Japanese and US applications abroad at SIPO and at other IP offices. The use of UMs by Japanese and US applicants to seek protection in China has considerably increased. In 2000, residents of the US filed 128 UM applications (or 23.7% all applications abroad) at SIPO; by 2011, this number stood at 1,076, constituting 63% of all US applications abroad. Applications abroad data for Japan exhibit a similar trend.

China had the largest number of resident applications (582,140) by origin, of which 581,303 were filed at SIPO and only 837 were filed abroad.

Figure A.13.1.4 Utility model applications filed abroad for selected origins, 2011



Note: The actual numbers of UM applications by origin might be higher than those reported due to incomplete data, and/or because a detailed breakdown by origin is not supplied by some offices.

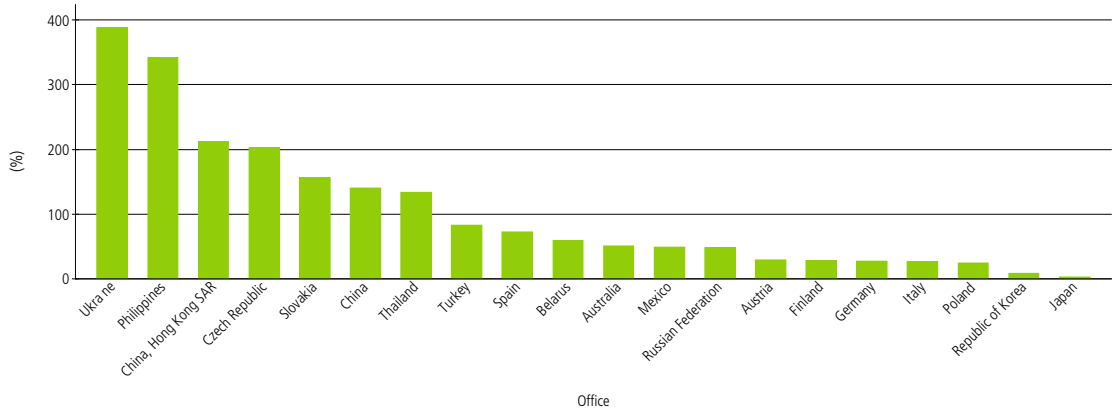
Source: WIPO Statistics Database, October 2012

Table A.13.1.5 Utility model applications filed abroad by residents of Japan and the US

	Origin: Japan						Origin: United States of America					
	UM applications			UM applications (%)			UM applications			UM applications (%)		
Office	2000	2005	2011	2000	2005	2011	2000	2005	2011	2000	2005	2011
China	87	566	1,465	46.8	95.4	89.0	128	360	1,076	23.7	49.0	63.2
Others	99	27	181	53.2	4.6	11.0	412	374	627	76.3	51.0	36.8
Total	186	593	1,646	100.0	100.0	100.0	540	734	1,703	100.0	100.0	100.0

Source: WIPO Statistics Database, October 2012

Figure A.13.1.6 Resident utility model applications as a percentage of resident patent applications, 2011



Source: WIPO Statistics Database, October 2012

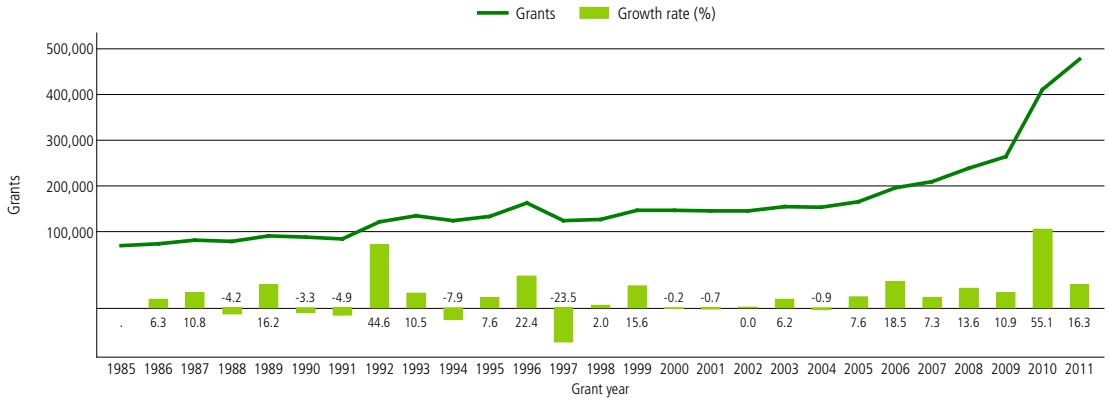
To illustrate the use of the UM system, Figure A.13.1.6 shows resident UM applications relative to resident patent applications. Compared to the patent system, the UM system is used intensively by residents of Ukraine, the Philippines, China Hong Kong (SAR), the Czech Republic, Slovakia, China and Thailand. For example, Ukrainian residents filed about four times more UM applications than patent applications in 2011. Residents of middle-income countries tend to use the UM system more intensively than the patent system. In contrast, residents of high-income countries, such as Germany and Japan, use the patent system more frequently.

A.13.2 Utility model grants

Contrary to applications, UM grants worldwide showed a slight upward trend from the mid-1980s to the mid-2000s, followed by a steep increase from 2006 onwards. UM grants worldwide grew substantially in 1992 (44.6%) and 2010 (55.1%). The 1992 growth was mainly due to the large number of grants issued by the JPO, while the high growth in 2010 resulted from the many grants issued by SIPO. Indeed, the fast growth in grants worldwide since 2006 was almost entirely due to SIPO. The total number of grants worldwide is estimated at around 477,100 in 2011, corresponding to 16.3% growth on 2010. The world total, excluding SIPO data, shows more modest growth over the past two years (+8.2% in 2010 and +5.1% in 2011).

SIPO issued by far the largest number of grants (408,110) in 2011. It accounted for 85% of the world total which, however, is two percentage points below its share in applications worldwide. The IP offices of Germany, the Russian Federation and Ukraine each issued more than 10,000 grants in 2011. The resident and non-resident grant distribution for all reported offices is similar to that of the application distribution, with resident applicants receiving the bulk of total grants in 2011. The majority of the listed offices exhibited growth in grants between 2010 and 2011. However, Austria, Germany and Japan recorded falls in both applications (Figure A.13.1.2) and grants (A.13.2.2).

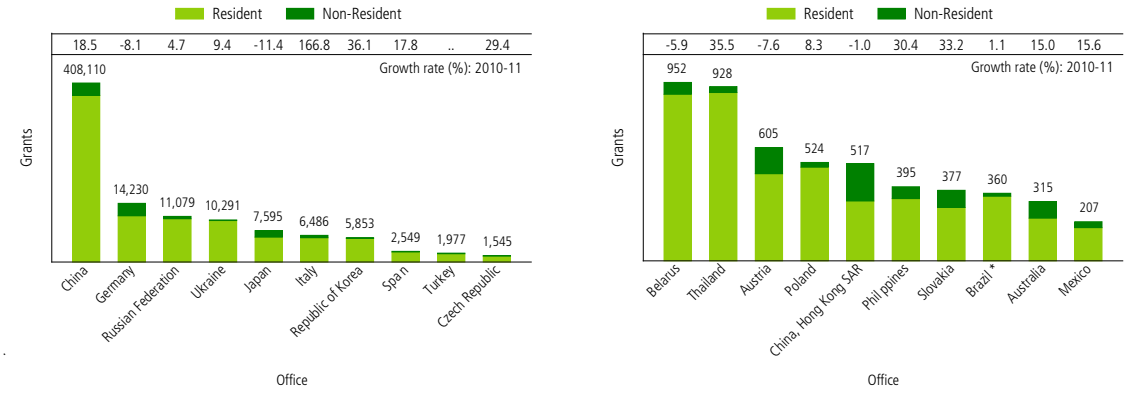
Figure A.13.2.1 Trend in utility model grants worldwide



Note: World totals are WIPO estimates covering around 60 patent offices (see Data Description). These estimates include UM grants based on direct applications and PCT national phase entries.

Source: WIPO Statistics Database, October 2012

Figure A.13.2.2 Utility model grants by office for the top 20 offices, 2011



Note: '..' not available; *2010 data; Growth rate refers to 2009-2010.

Source: WIPO Statistics Database, October 2012

A.14

Microorganisms

In 2011, there were a total of 75 contracting parties to the Budapest Treaty, hosting 40 International Depository Authorities (IDAs). Therefore, not all contracting parties have an IDA within their borders. In 2011, Chile and Morocco signed the treaty, and the Microbial Culture Collection (MCC) of India became an IDA.

Figure A.14.1 shows the long-term trend of total deposits made with all IDAs that receive and store microorganisms. As can be seen, deposits fell from about 3,300 in 2001 to around 2,700 in 2005. They then gradually increased until 2010. The high growth of 19.5% in 2010 can be attributed to increases in the numbers of deposits made in both IDAs located in China and in one located in the US. Together, these three IDAs accounted for 76% of the increase from 2009 to 2010. The 3,866 deposits in 2011 remained relatively unchanged from the previous year's level of 3,857.

Figure A.14.1.2 shows deposit activity from 2001 to 2011 for the top five IDAs, which were selected on the basis of total deposits made at IDAs since the Budapest Treaty became operational in 1981. The top five include authorities from China, Germany, Japan and the US. China's two IDAs included in this list – the China General Microbiological Culture Collection Center (CGMCC) and the China Center for Type Culture Collection (CCTCC) – had the highest five-year average annual growth rates from 2007 to 2011 with 32.8% and 25.6%, respectively. Germany's DSMZ saw more or less stable deposit activity over the same period. By contrast, deposits fell by 12% at Japan's International Patent Organism Depositary (IPOD) and by 1.6% at the US-based American Type Culture Collection (ATCC). Despite year-on-year growth of 7 to 17% from 2008 to 2010, the ATCC experienced a sharp decline in deposits (-30.6%) from 2010 to 2011.

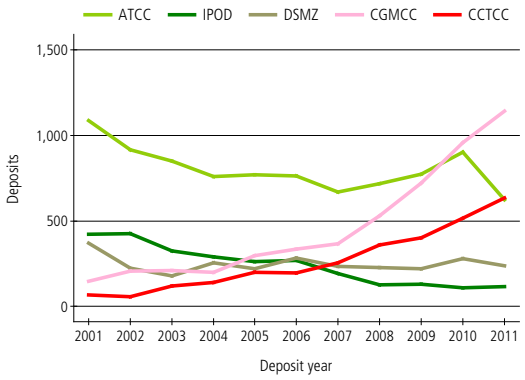
Figure A.14.1.3 presents the shares of the top 10 IDAs in the total number of deposits received in 2001 and 2011. Many of the same IDAs are listed for both years, but Japan's National Institute of Technology and Evaluation, Patent Microorganisms Depositary (NPMD) and the UK-based National Collections of Industrial, Food and Marine Bacteria (NCIMB) were new to the 2011 ranking, replacing the Korean Culture Center of Microorganisms (KCCM) and the European Collection of Cell Cultures (ECACC) of the UK.

Figure A.14.1 Trend in microorganism deposits worldwide

Source: WIPO Statistics Database, October 2012

The two pie charts show that ATCC received 33.1% of all microorganism deposits worldwide in 2001; however, its share in 2011 decreased by roughly half to 16.2%. The China-based CGMCC and CCTCC each increased their shares from 4.5% and 2.1%, respectively, in 2001 to 29.5% and 16.4% in 2011, thus becoming the top two IDAs in terms of deposits received for that year. Combined, they received 45.9% of all deposits in 2011 in contrast with the 20% received by the two US-based IDAs (ATCC and NRRL) and the 5.3% received by the two IDAs of Japan (IPOD and NPMD).

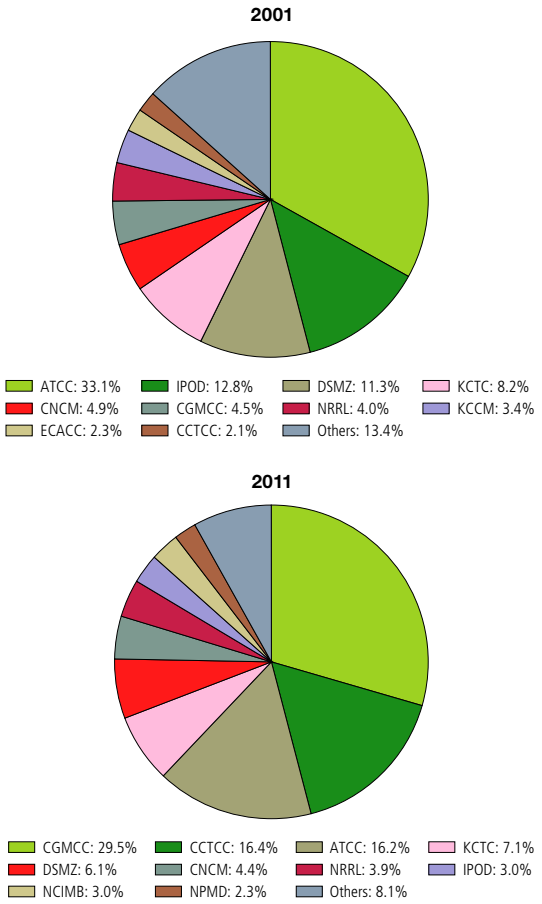
Figure A.14.2 Deposits for the top five IDAs



Note: ATCC (American Type Culture Collection, United States of America), CCTCC (China Center for Type Culture Collection), CGMCC (China General Microbiological Culture Collection Center), DSMZ (Deutsche Sammlung von Mikroorganismen und Zellkulturen GmbH, Germany), IPOD (International Patent Organism Depositary, Japan)

Source: WIPO Statistics Database, October 2012

Figure A.14.3 Share of IDAs in total deposits



Note: ATCC (American Type Culture Collection, United States of America), CCTCC (China Center for Type Culture Collection), CGMCC (China General Microbiological Culture Collection Center), CNCM (Collection nationale de cultures de micro-organismes, France), DSMZ (Deutsche Sammlung von Mikroorganismen und Zellkulturen GmbH, Germany), ECACC (European Collection of Cell Cultures, United Kingdom), IPOD (International Patent Organism Depositary, Japan), KCCM (Korean Culture Center of Microorganisms, Republic of Korea), KCTC (Korean Collection for Type Cultures, Republic of Korea), NCIMB (National Collections of Industrial, Food and Marine Bacteria, United Kingdom), NPMD (National Institute of Technology and Evaluation, Patent Microorganisms Depositary, Japan) and NRRL (Agricultural Research Service Culture Collection, United States of America)

Source: WIPO Statistics Database, October 2012

SECTION B
TRADEMARKS

This section provides an overview of trademark activity worldwide, for both goods and services, by using a range of indicators covering the following areas: a) trademark applications, b) trademark registrations, c) trademark applications by class and industry sector, d) international registrations and renewals through the WIPO-administered Madrid System for the International Registration of Marks (Madrid system), e) trademark filing intensity (trademark applications per gross domestic product (GDP) and million population) and f) trademarks in force.

Statistics contained in this section concern those reported by national and regional intellectual property (IP) offices from around the world and those resulting from use of the Madrid system. For better international comparison of trademark application activity across offices, this section takes differences in their filing systems into account.

Trademark System

A trademark is a distinctive sign that identifies certain goods or services as those produced or provided by a specific person or enterprise. Trademarks can be registered for goods and services. In the latter case, the term "service mark" is sometimes used. For the sake of simplicity, the term trademark is used in this publication regardless of whether or not the registration concerns goods or services. The holder of a registered trademark has the right to exclusively use the mark in relation to the products or services for which it is registered. The owner can prevent unauthorized use of the trademark, or a confusingly similar mark, so as to prevent consumers from being misled. Unlike patents, trademark registrations can be maintained indefinitely as long as the trademark holder pays the renewal fees.

The procedures for registering trademarks are governed by the rules and regulations of national and regional IP offices. Trademark rights are limited to the jurisdiction of the authority in which a trademark is registered. Trademark applicants can file an application with the relevant national or regional IP office(s), or an international application through the Madrid system. However, even in the latter case, the decision of whether or not to issue a trademark registration remains the prerogative of the national or regional IP office concerned, and trademark rights remain limited to the jurisdiction of the authority issuing that registration.

The Madrid system, established in 1891, is legally governed by the Madrid Agreement (1891) and the Madrid Protocol (1989), and is administered by WIPO. This system makes it possible for an applicant to apply for a trademark in a large number of countries by filing a single application at a national or regional IP office that is party to the Madrid system. It simplifies the process of multinational trademark registration by reducing the requirement to file an application at each IP office in which protection is sought. The system also simplifies the subsequent management of the mark, since it is possible to record further changes or to renew the registration through a single procedural step. A registration recorded in the International Register produces the same effect as a registration made directly with each designated contracting party (Madrid member) if no refusal was made by the competent authority of that jurisdiction within a specified time limit. For further details about the Madrid system, refer to: *www.wipo.int/madrid/en/.*

B.1

TRADEMARK APPLICATIONS AND REGISTRATIONS WORLDWIDE

B.1.1 Applications worldwide

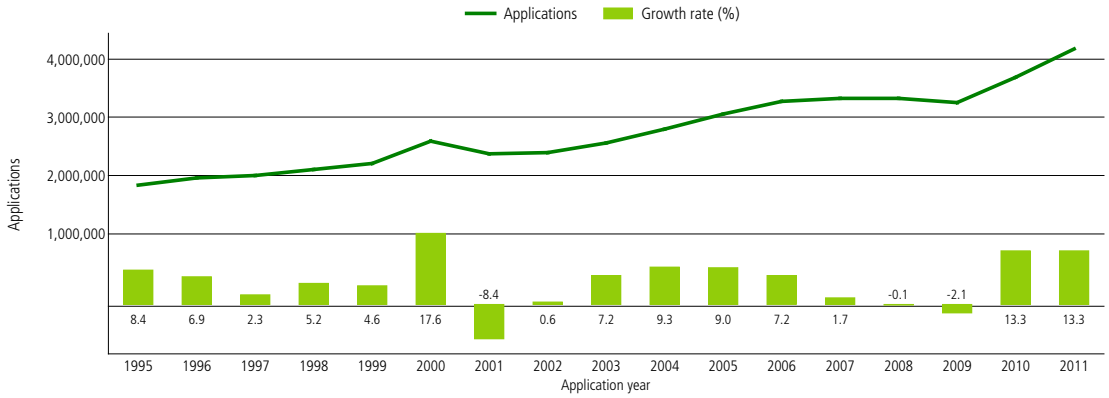
Figure B.1.1.1 shows the total numbers of trademark applications filed worldwide between 1995 and 2011. Totals are WIPO estimates covering around 150 offices, which include applications received directly by national and regional IP offices combined with the numbers of designations received by 87 of these offices via the WIPO-administered Madrid system. Worldwide totals do not take into account differences between single-class and multi-class filing systems across offices. These differences are later harmonized for international comparability in Figure B.1.1.2 and in all indicators referring to trademark applications thereafter.

Between 1995 and 2011, total applications doubled from around 2 to over 4 million. More precisely, there were an estimated 4.2 million applications for trademarks filed at offices worldwide in 2011.

All but three of the 17 years presented show positive year-on-year growth. After stagnating in 2007 and experiencing slight declines in 2008 and 2009 following the onset of the financial crisis, applications for trademarks rebounded to double-digit growth not seen since the peak of the so-called "dot-com boom" era in 2000 – which was followed by a sharp decline in 2001.

With a 13.3% increase, 2011 demonstrated a continuation of 2010's equally high growth in trademark applications. This was largely due to a rise (14.4%) in the numbers of applications filed by residents with their national or regional offices. The largest increases in resident applications from 2010 to 2011 occurred at the IP offices of China (+300,365), Turkey (+30,605) the United States of America (US) (+19,949), Indonesia (+7,384) and the Republic of Korea (+5,680).[1]

Figure B.1.1.1 Trend in trademark applications worldwide



Note: World totals are WIPO estimates consisting of data from around 150 IP offices (see Data Description). These totals include applications filed directly with national and regional offices (Paris route) and designations received by offices via the Madrid system (where applicable).

Source: WIPO Statistics Database, October 2012

1 In this section, the generic term "IP office" is used to refer to a national or regional office that receives trademark applications and issues registrations since not all are specifically named "trademark office". For simplicity, country names rather than office names are used to label graphs. For example, the IP office of China responsible for trademarks is referred to as "China" rather than by its name (Trademark Office of the State Administration for Industry & Commerce of the People's Republic of China).

Within the international trademark system, many offices have adopted the Nice Classification (NCL), an international classification of goods and services applied for the registration of trademarks and service marks. Applications received by these offices are classified according to one or more of the 45 Nice classes (see *www.wipo.int/classifications/en/*).

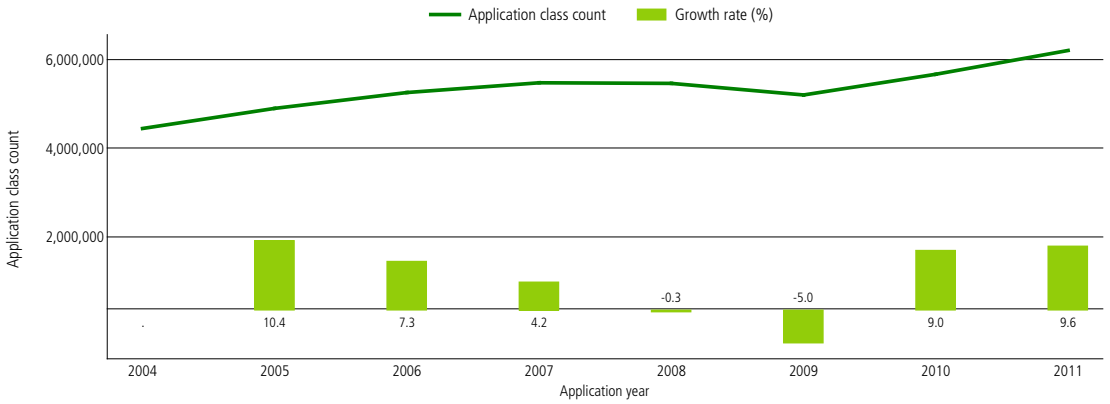
Some offices have a single-class filing system, which requires applicants to file a separate application for each class in which the goods or services for which the mark is applied are classified. Other offices follow a multi-class filing system, which enables applicants to file one application in which goods or services belonging to a number of classes can be specified. For better international comparison of trademark application activity across offices, this difference in filing systems must be taken into consideration. For example, the offices of Brazil, China and Colombia follow a single-class filing system. However, the offices of Japan, the Republic of Korea and the US, as well as many European offices, operate multi-class filing systems.

A single-class filing system can result in offices receiving much higher numbers of applications than those that allow multi-class applications. For instance, the number of applications received by the IP office of China in 2011 was nearly 13 times that received by the European Union's (EU) Office for Harmonization in the Internal Market (OHIM). However, class count-based trademark application data reduce this gap to about only 5 times that amount. To capture the differences between numbers of applications received, it is useful to compare application class counts across offices.

Distinct from B.1.1.1, Figure B.1.1.2 depicts the total number of classes specified in applications – referred to as class counts throughout this section. Since 2004, the first year for which complete class count data are available, the totals have increased from 4.5 to over 6 million in 2011, despite declines in 2008 and 2009. With growth approaching 10%, there were an estimated 6.2 million classes specified in the 4.2 million applications received by offices worldwide.

Following on with the concept of improving international comparability, application statistics for the remainder of this section are presented on the basis of class counts rather than the number of trademark applications. Statistics on the numbers of trademark applications filed at offices are available for download at WIPO's IP Statistics Data Center at *http://ipstatsdb.wipo.org/ipstats/trademarkSearch.*

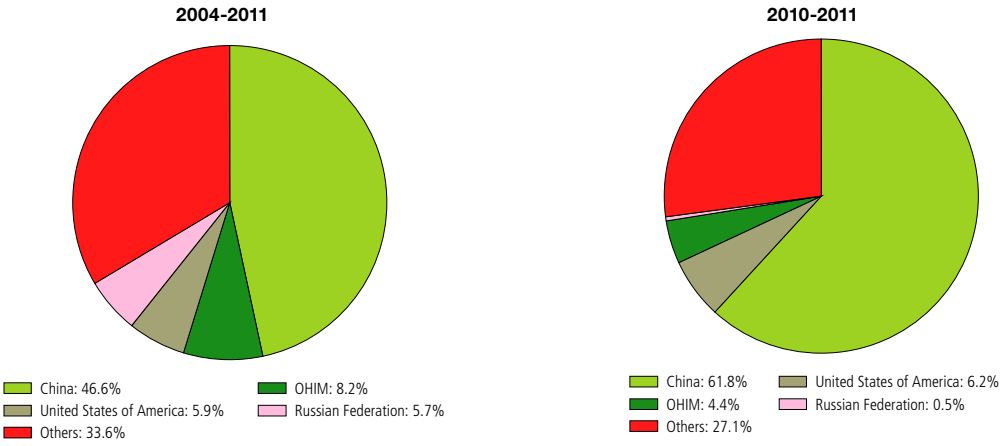
Figure B.1.1.2 Trend in trademark application class counts worldwide



Note: World totals are WIPO estimates consisting of data from around 150 IP offices (see Data Description). These totals include class counts in applications filed directly with national and regional offices (Paris route) and class counts in designations received by offices via the Madrid system (where applicable).

Source: WIPO Statistics Database, October 2012

Figure B.1.1.3 Contribution of offices to growth in applications worldwide



Note: OHIM = Office for Harmonization in the Internal Market

Source: WIPO Statistics Database, October 2012

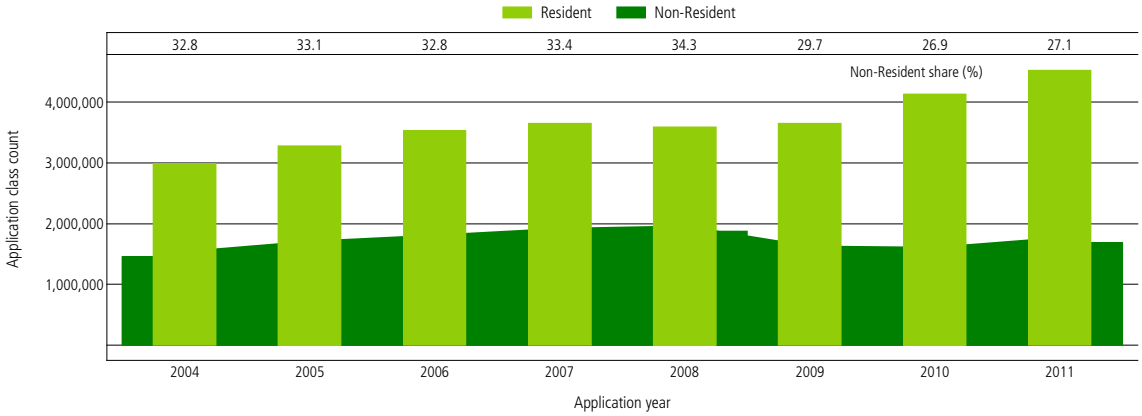
In order to better understand the different components of the growth in total applications, it is necessary to look at individual offices' contribution to the increases (Figure B.1.1.3). Application class count data between 2004 and 2011 show that the IP office of China accounted for nearly half (46.6%) of the overall growth over this eight-year period. Receiving rapidly increasing numbers of applications, this office contributed to 61.8% of the growth in applications worldwide from 2010 to 2011. The contribution of the United States Patent and Trademark Office (USPTO) to growth, however, remained relatively unchanged at around six percent over both periods mentioned. Although nearly doubling their application class counts between 2004 and 2011, OHIM and the IP office of the Russian Federation showed decreasing contributions toward overall growth as did the remaining offices (shown in the figure as "Others") when taken as a whole.

Resident applications refer to applications filed by applicants with the relevant national or regional IP office. For example, an application filed by an applicant residing in the US at the USPTO is considered a resident application from the perspective of the USPTO. Similarly, non-resident applications refer to applications filed by applicants at a foreign IP office. For example, an application filed with the IP office of Turkey by an applicant residing in the US is considered a non-resident application from the perspective of the Turkish office. Trademark applications filed by residents of EU countries at OHIM, a regional office, are considered resident trademark applications for this office. This is also the case for residents of Belgium, Luxembourg and the Netherlands who file their applications with the Benelux Office for Intellectual Property (BOIP). Conversely, an application received by a regional office is considered a non-resident application if the applicant is not a resident of one of its member states.

When totaled, an average of 31.1% of all trademark application class counts from 2004 to 2011 related to applications filed by non-residents. Figure B.1.1.4 shows a breakdown for each year over this period. From a peak of 34.3% in 2008, the non-resident share has decreased to 27.1% in 2011 due to the increasingly large numbers of resident trademark applications in China.

There were approximately 4.5 million resident application class counts in 2011, compared to nearly 1.7 million for non-residents. Resident class counts in 2011 were about 80,000 more than the sum of both resident (3 million) and non-resident (1.4 million) application class counts in 2004.

Figure B.1.1.4 Resident and non-resident trademark applications worldwide



Note: See note for Figure B.1.1.2

Source: WIPO Statistics Database, October 2012

B.1.2 Registrations worldwide

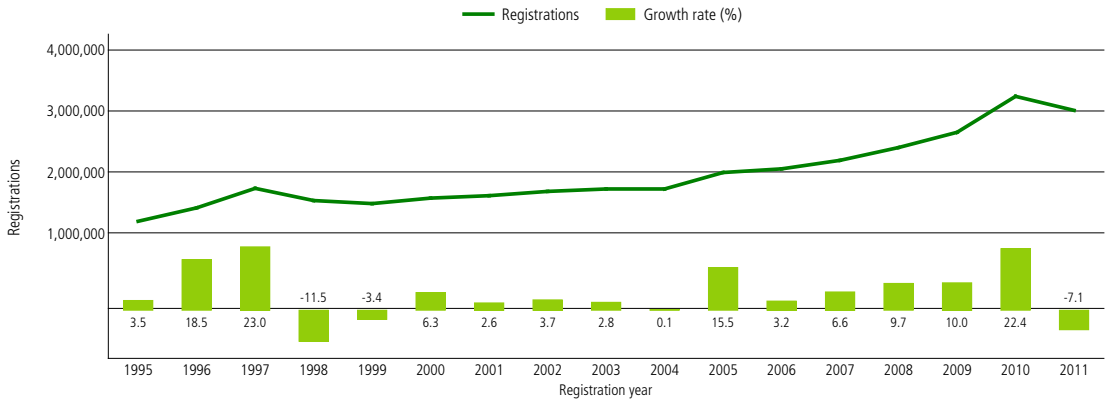
Figure B.1.2.1 shows combined totals of registrations issued by national and regional IP offices around the world. Like the applications presented in B.1.1.1, registration totals worldwide do not take into account differences between single-class and multi-class filing systems across offices. These differences are harmonized for international comparability in Figure B.1.2.2.

In contrast to applications, total trademark registrations showed positive year-on-year growth for all years between 2000 and 2010. This can be attributed to the high growth in registration activity at a number of IP offices, such as those of China and OHIM. However, the estimated 3 million trademark registrations issued worldwide in 2011 represents a decline of 7.1% from the previous year. This is largely due to a decrease of around 24% (-325,981) in registrations issued by the IP office of China. Since 2009, China's office has accounted for between 32 and 42 percent of all trademark registrations issued worldwide. Therefore, a significant change in registrations issued by this office has a large impact on the world growth rate. If China were excluded from the overall totals, the number of registrations issued worldwide in 2011 would have actually increased by 5.0%.

Similar to B.1.1.2, Figure B.1.2.2 enables better international comparison of trademark registration activity across offices by taking into account the multi-class filing systems used by many national and regional offices.

The growth rates of registration class counts are like those of registrations between 2005 and 2011, with 2009 and 2010 being the exceptions during which growth in registrations was significantly higher than that for class counts. For example, 2010 saw an increase of 22.4% in registrations issued, whereas the class counts increased by only 13.7% for the same year. In 2011, there were an estimated total of 4.5 million classes specified in the 3.0 million registrations issued by offices worldwide. Coincidentally, registration class counts fell in 2011 by the same 7.1% that simple registration numbers declined.

Figure B.1.2.1 Trend in trademark registrations worldwide



Note: World totals are WIPO estimates consisting of data from around 150 IP offices (see Data Description). These totals include registrations issued by national and regional offices for applications filed directly with offices (Paris route) and for designations received by offices via the Madrid system (where applicable).

Source: WIPO Statistics Database, October 2012

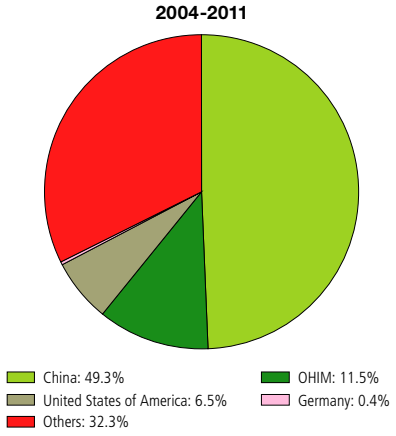
Figure B.1.2.2 Trend in trademark registration class counts worldwide

Note: World totals are WIPO estimates consisting of data from around 150 IP offices (see Data Description). These totals include registration class counts in registrations issued by national and regional offices for applications filed directly with offices (Paris route) and for designations received by offices via the Madrid system (where applicable).

Source: WIPO Statistics Database, October 2012

It is interesting to see the extent to which individual offices have contributed to the overall growth in registration class counts since 2004. Figure B.1.2.3 shows that registrations issued by the IP office of China contributed to 49.3% of the growth – from about 3 million registration class counts worldwide in 2004 to 4.5 million in 2011. OHIM and the USPTO contributed about 11.5% and 6.5%, respectively, to overall growth over the same period. Registration growth rate contributions for China, OHIM and the US are in line with those for applications, albeit slightly higher.

Figure B.1.2.3 Contribution of offices to growth in registrations worldwide



Note: OHIM = Office for Harmonization in the Internal Market

Source: WIPO Statistics Database, October 2012

B.1.3 Applications by geographical region, income group and Nice class

The concentration of trademark filing varies across the world's six main geographical regions.[2] Over the five-year period 2007-2011, Asia showed the largest shift with its share of applications increasing by nearly nine percentage points, whereas Europe's share fell by an almost equal amount of eight percentage points (Figure B.1.3.1). Asia surpassed Europe as the largest receiver of trademark applications in 2009, and in 2011 received 44% of all applications filed worldwide. The regions of North America, Oceania and Africa experienced slight decreases from 2007 to 2011, and countries located in the region of Latin America and the Caribbean added nearly a percentage point to their overall share.

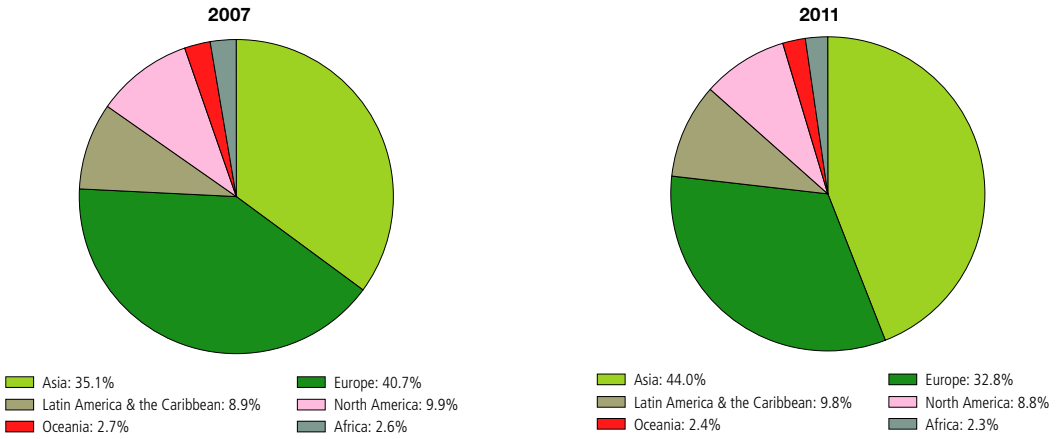
Similar to filing concentration by geographical region, Figure B.1.3.2 shows the distribution of applications by four income groups.[3] In 2007, offices of high-income economies accounted for the majority (54.3%) of all trademark class counts specified in applications worldwide. Since then, the percentage held by high-income countries has fallen to less than half (45.1%), in 2011, with upper middle-income countries accounting for a nearly equal share (43.9%). Lower middle-income and low-income countries accounted for small proportions of applications worldwide.

Many offices use the NCL to classify trademark applications into one or more of its 45 classes. The breakdown of applications by class offers insights into the relative importance of trademarks for different goods and services. The first 34 of the 45 classes indicate goods and the remaining 11 refer to services. At the 105 offices for which direct application and/or Madrid designation statistics broken down by class are available for 2011, the top 10 classes accounted for just over half of all classes specified in trademark applications (Table B.1.3.3). The top five classes combined accounted for one-third of the total. Three of the top 10 classes related to services and comprised 19% of all filings. Service class 35 (advertising, business management, business administration, and office functions) has occupied or shared the number one position since 2004, when complete class data became available. The highest ranked classes indicating goods were Class 25 (Clothing, footwear, headgear) and Class 9 (which includes, among other things, scientific, photographic, measuring instruments, recording equipment, computers and software). Class rankings differ across individual offices.

2 Regions are defined by the United Nations (UN); see *http://unstats.un.org/unsd/methods/m49/m49regin.htm.*

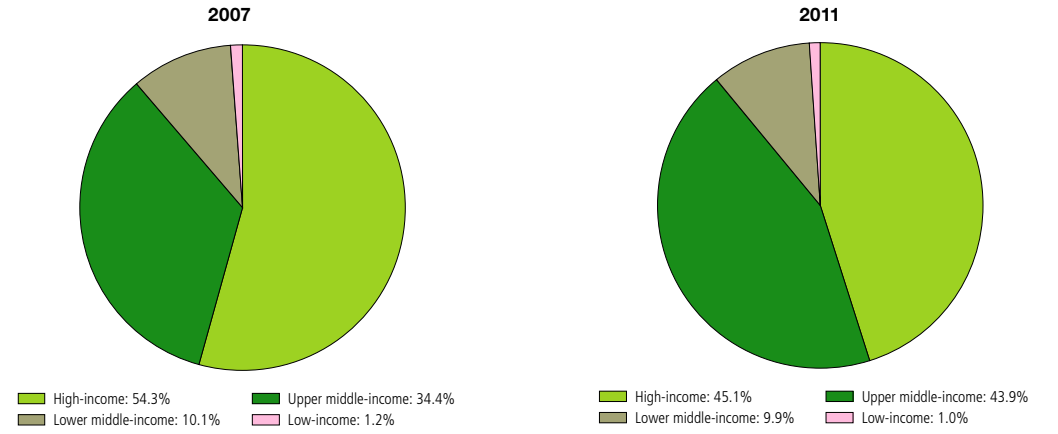
3 The income groups correspond to those used by the World Bank. Economies are divided according to 2011 gross national income (GNI) per capita, calculated using the World Bank Atlas method. The groups are: low-income ($1,025 or less); lower middle-income ($1,026-$4,035); upper middle-income ($4036-$12,475); and high-income ($12,476 or more).

Figure B.1.3.1 Trademark applications by geographical region



Source: WIPO Statistics Database, October 2012

Figure B.1.3.2 Trademark applications by income group



Source: WIPO Statistics Database, October 2012

Table B.1.3.3 Distribution of trademark applications by top Nice classes, 2011

Rank	Class*	Class share (%)
1	35 - Advertising and business management	9.3
2	25 - Clothing, footwear, headgear	6.9
3	9 - Scientific, photographic, measuring instruments; recording equipment; computers and software	
4	41 - Education, entertainment, and sporting activities	5.2
5	5 - Pharmaceutical preparations, baby food, dietary supplements for humans and animals, disinfectants, fungicides and herbicides	4.7
6	30 - Coffee, tea, cocoa, rice, flour, bread, pastry and confectionery, sugar, honey, yeast, salt, mustard; vinegar, sauces (condiments) and spices	4.1
7	42 - Scientific and technological services, design and development of computer hardware and software	4.1
8	16 - Paper, cardboard and goods made from these materials; printed matter, photographs, artists' materials, typewriters, and plastic materials for packaging	3.4
9	3 - Bleaching preparations and other substances for laundry use; cleaning and abrasive preparations; soaps, perfumery and cosmetics	3.4
10	29 - Meat, fish, poultry and game; preserved, frozen, dried and cooked fruits and vegetables; eggs, milk and milk products	2.9
	Thirty-five remaining classes	49.1

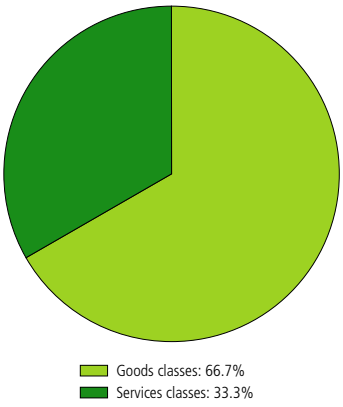
Note: These numbers are based on direct filing data from 70 offices - which include, for example, the Office for Harmonization in the Internal Market (OHIM) and the offices of Australia, China, France and the US – and on Madrid designation data from 87 offices, resulting in an aggregate total of 105 offices.

*Some classes listed are abbreviated. See Annex B for full definitions.

Source: WIPO Statistics Database, October 2012

As mentioned previously, the 45 classes of the NCL consist of those relating to either goods or services. Together, the 11 service-related classes accounted for one-third of all classes specified in applications filed in 2011 (Figure B.1.3.4). This is up by 3.5 percentage points from 2004, demonstrating the continued importance applicants place on protecting their brands in service-oriented industries.

Figure B.1.3.4 Trademark applications by goods and services classes, 2011



Source: WIPO Statistics Database, October 2012

Table B.1.3.5 breaks down the 45 Nice classes into 10 categories or groups based on their respective industry sectors for around 100 IP offices worldwide. These categories were developed by Edital®, a company specializing in trademark information. These class groups do not always contain the same number of classes. In addition, some class numbers could have been associated with several categories but, for the sake of simplicity, they have been assigned to only one. The class groups may consist of both goods and services classes.

This table depicts the distribution of trademark applications across various sectors of the economy. No specific category seems to largely dominate for trademark applications; however, there are a few, such as "chemicals" and "transportation and logistics", for which trademark protection is sought less frequently. Six of the 10 groups each comprise more than 10 percent of the total share of classes specified in applications, with agricultural products and services accounting for the highest share at over 15 percent of the aggregated total. Compared to 2007 and all other years since 2004, it is worth noting that there has been very little change in the distribution of trademark applications among the industries listed. Like class rankings, the shares of class groups differ across offices.

Table B.1.3.5 Trademark applications by industry sector

	Share (%)		
Industry sector	2007	2011	Change
Agricultural products and services	14.5	15.4	0.9
Textiles - Clothing and Accessories	12.9	14.2	1.3
Scientific research, Information technology, Communications	14.6	14.1	-0.5
Management, Communications, Real estate and Financial Services	11.4	11.7	0.3
Pharmaceuticals, Health, Cosmetics	11.4	11.1	-0.3
Leisure, Education, Training	12.3	10.9	-1.4
Construction, Infrastructure	7.6	7.0	-0.6
Household equipment	6.3	6.9	0.6
Transportation and Logistics	6.0	5.7	-0.3
Chemicals	3.1	3.0	-0.1

Note: 2007 figures are based on Nice class data for 94 offices, and those for 2011 are based on data for 105 offices. For definitions of the class groups, see Annex B for a complete list of the Nice Classification.

Sources: WIPO Statistics Database and Edital®, October 2012

B.2

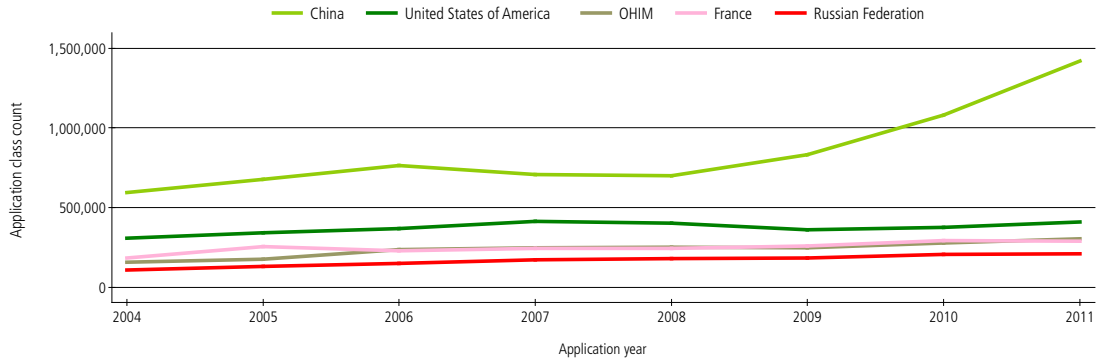
TRADEMARK APPLICATION AND REGISTRATION CLASS COUNTS BY OFFICE

B.2.1 Applications by office

This subsection provides detailed data on trademark applications and registrations by national or regional offices. Figure B.2.1.1 shows a selection of offices that received the highest volumes of trademark applications, taking into account the number of classes specified in these applications, where applicable. Despite allowing for China's single-class filing system – which reduces its gap with offices operating multi-class filing systems - China has consistently occupied the top position for trademark filing activity in recent years. The numbers for the other four offices – the US, OHIM, France and the Russian Federation – for all years spanning the period 2004-2011 were lower than those of China in 2004. However, large differences exist even among these four. For example, class counts at the USPTO were a multiple of between two and nearly three times those for the Russian Federation over the same period. In 2011, the IP office of China accounted for 23% of all trademark filing activity worldwide. When totaled, the top 10 offices received over half (58%) of the total share, and the top 20 offices received almost three-quarters (74%) of all applications.

Figure B.2.1.2 shows five additional offices with high filing activity in 2011. These offices all exhibited growth until 2007, after which Germany, Japan and the Republic of Korea followed a downward trend. In contrast, Brazil and India showed year-on-year increases for the entire 2004-2011 period. India's filing volume surpassed that of Brazil in 2006, Japan's and the Republic of Korea's in 2011. This graph shows a general trend toward convergence in filing activity over the period 2004-2011 for the offices presented.

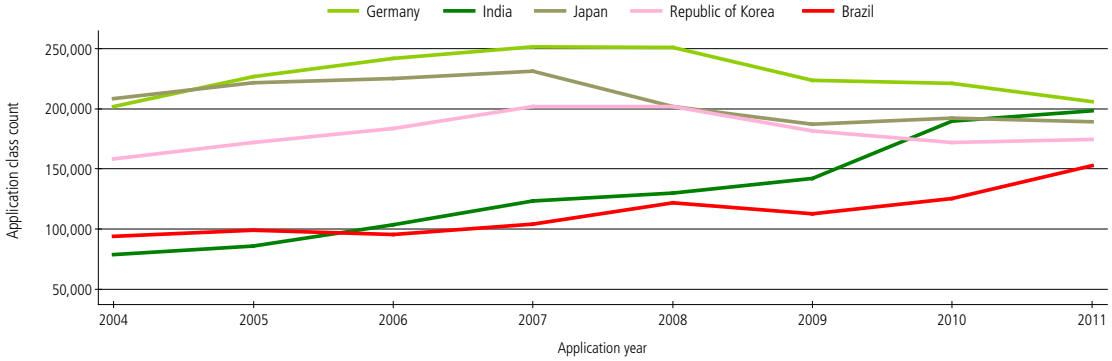
Figure B.2.1.1 Trend in trademark application class counts for the top 5 offices



Note: OHIM = Office for Harmonization in the Internal Market

Source: WIPO Statistics Database, October 2012

Figure B.2.1.2 Trend in trademark application class counts for selected offices



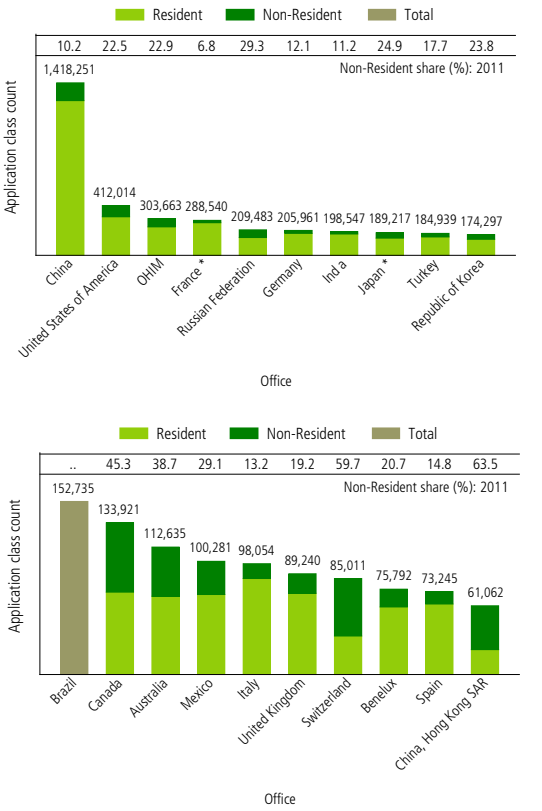
Source: WIPO Statistics Database, October 2012

Figure B.2.1.3 compares IP office application volumes across the top 20 offices by using class counts while showing the non-resident share of their totals. China's 1.4 million application class count is almost equal to the sum of those for the offices of the US, France, the Russian Federation, Germany and OHIM. About half of the top 20 offices are in Europe, and four are in Eastern Asia.

Large differences in non-resident shares exist between offices shown in this figure. For example, the non-resident share was only 10.2% for China, compared to 59.7% for Switzerland. Like the Swiss IP office, the office of China Hong Kong (SAR) received over half of its filing volume from non-resident applicants.

Low non-resident shares of application class counts for Germany (12.1%), India (11.2%) and Italy (13.2%) were similar to that for China, whereas non-residents accounted for between 20 to 30 percent at many larger offices such as the USPTO, OHIM, the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO) and that of the Russian Federation.

Figure B.2.1.3 Trademark application class counts for the top 20 offices, 2011



Note: *Resident applications are an estimate of direct application class count; '..' = not available; OHIM = Office for Harmonization in the Internal Market

Source: WIPO Statistics Database, October 2012

All but a few of the offices presented in Figure B.2.1.4 exhibited growth in 2011, with the offices of Brazil, China, the UK and China Hong Kong (SAR) experiencing the highest. However, the offices of Germany and Spain saw decreases from the previous year, with the German office exhibiting the greatest drop of seven percent as a result of receiving 15,400 fewer class counts. In fact, many offices of EU countries - including BOIP - have witnessed reductions in filing activity in recent years. This is partially due to residents opting to file with OHIM rather than with their respective national office in order to seek protection for trademarks not only within their own country but in the EU as a whole.

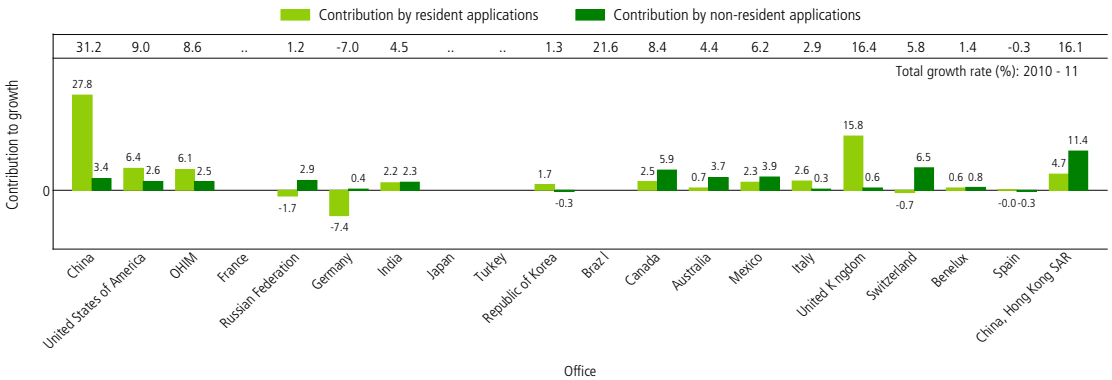
The driver of one-year growth – whether resident or non-resident – differs for each of the top 20 offices. For example, applications received in China grew from nearly 1.1 million in 2010 to 1.4 million in 2011, which can be largely attributed to the 1.27 million applications filed by applicants domiciled in China that contributed 27.8 percentage points to this office's total growth of 31.2%. Only 3.4 percentage points of China's application growth was associated with filings from outside of China. Residents of the UK also contributed significantly to the increase in application class count at their national IP office. However, growth at eight of these offices was primarily driven by foreign applications, most notably at the offices of Canada, China Hong Kong (SAR) and Switzerland.

Seventy percent of the top 20 offices are located in high-income economies (Figure B.2.1.3), and 30 percent are located in middle-income economies, with China occupying the number one spot. In fact, 55 percent of trademark activity worldwide in 2011 occurred in offices of middle- and low-income economies, as shown in Figure B.1.3.2. Figure B.2.1.5 shows the total number of classes specified in trademark applications received by offices of selected middle- and low-income economies in 2011 as well as their non-resident shares.[4]

The offices of Albania, Bahrain, Barbados, Cuba, Georgia, and Kyrgyzstan all had high non-resident shares (exceeding 85%) of total application class counts. In fact, about three-quarters of these 20 offices received at least half of their application class counts from non-residents.

In Bangladesh, Colombia, South Africa, Thailand, Venezuela (Bolivarian Republic of) and Viet Nam, the majority of trademark filing activity can be attributed to resident applicants, Bangladesh having the highest number with nearly three of every four applications filed domestically.

Figure B.2.1.4 Contribution of resident and non-resident application class counts to total growth for the top 20 offices, 2010-11

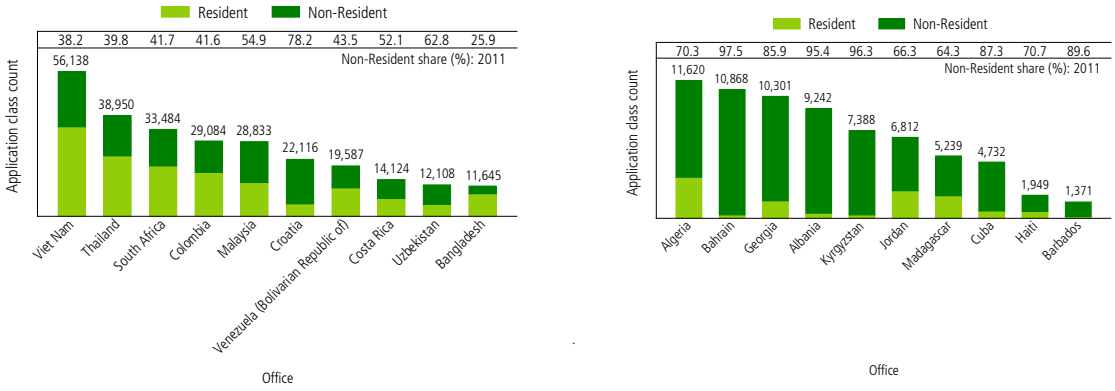


Note: '..' = not available; OHIM = Office for Harmonization in the Internal Market

Source: WIPO Statistics Database, October 2012

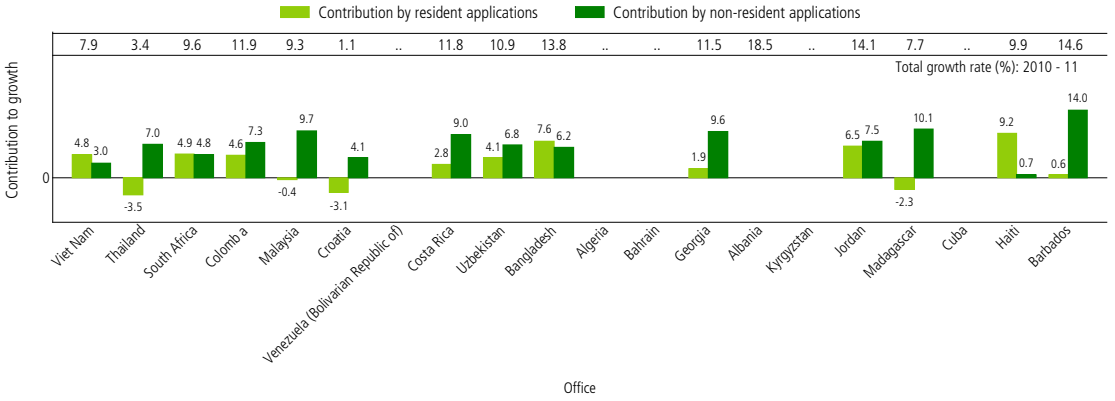
4 The selected offices are from different world regions. Data for all available offices are presented in the statistical annex.

Figure B.2.1.5 Trademark application class counts for offices of selected middle- and low-income countries, 2011



Source: WIPO Statistics Database, October 2012

Figure B.2.1.6 Contribution of resident and non-resident application class counts to total growth for offices of selected middle- and low-income countries, 2010-11



Note: '..' = not available

Source: WIPO Statistics Database, October 2012

About half of these offices of middle- and low-income countries had a growth rate of 10% or higher from 2010 to 2011 (Figure B.2.1.6). For a number of offices, growth in non-resident applications was the main contributor to overall growth. For example, all growth at the offices of Croatia, Madagascar, Malaysia and Thailand can be attributed to increases in non-resident filings.

B.2.2 Registrations by office

This subsection compares IP office registration volumes across the top offices by using class counts compared in the same manner as were application volumes in subsection B.2.1. Figure B.2.2.1 shows that, in 2011, the IP office of China issued registrations with a class count of just over 1 million, which is approximately 400,000 less than its application class count in the same year. This partially reflects the fact that not every application received by an office results in a registration. However, other factors, such as examination pendency, also influence these differences.

OHIM and the USPTO issued registrations with similar numbers of registration class counts in 2011 (about 270,000 and 250,000, respectively). The offices of Germany, India and Italy also had similar numbers, with around 140,000 to 165,000 each.

Similar to its share of total applications, China's office accounted for about 23% of all trademark registration activity worldwide. When totaled, the top 10 offices received over half (52%) of the total share, with the top 20 issuing 66% of all registrations worldwide.

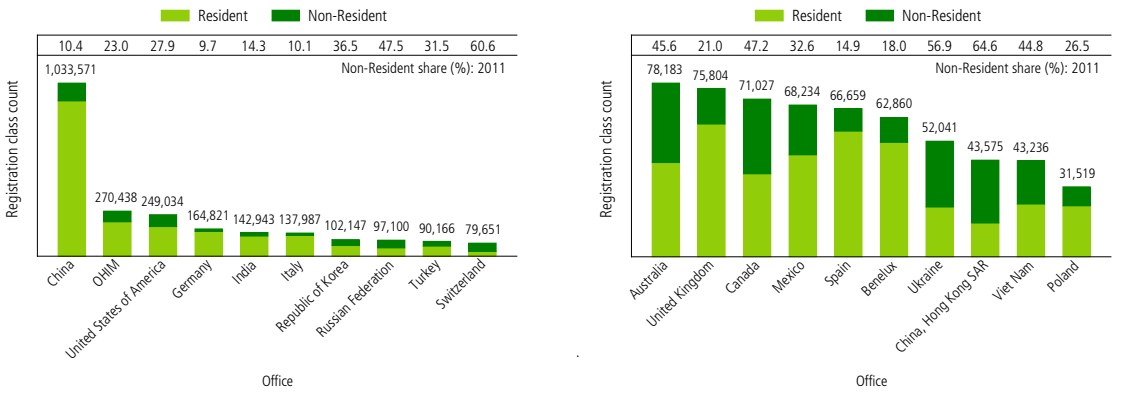
At the global level, 31.1% of total trademark registrations in 2011 were issued to non-residents. However, half of the top 20 offices issued a higher percentage of between 31.5% and 64.6% to non-residents.

The shares of class counts in registrations attributed to non-residents varied greatly among these offices – from 9.7% in Germany to over 60% at the Swiss and China Hong Kong (SAR) offices. However, these were similar to their corresponding non-resident shares for application class counts (see B.2.1.3). The exceptions include the Russian Federation, which had a non-resident registration class count share of 47.5% compared to a much lower share for application class counts of only 29.3%. The same holds true for the office of Turkey, with 31.5% for registrations versus 17.7% for applications.

The IP office of China issued, by far, the most registrations in 2011, although it witnessed a 23.7% decrease from the previous year (Figure B.2.2.2). This drop was largely due to a 21.1% decline in registrations issued to Chinese resident applicants. BOIP's growth of 2.1% over 2010 can be attributed to an increase in registrations issued to applicants from Belgium, Luxembourg and the Netherlands that was almost entirely offset by a drop in registrations for non-resident applications.

Of the offices listed, India's had the highest annual growth of 110.8%, followed by the Republic of Korea and Viet Nam with 36% and 26.6% each, whereas registration activity fell the most in Italy, by 40.2%.

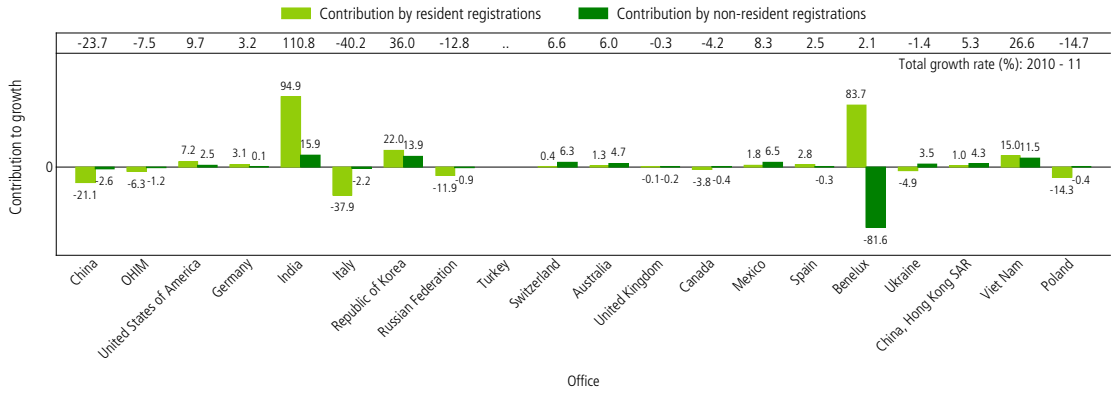
Figure B.2.2.1 Trademark registration class counts for the top 20 offices, 2011



Note: France and Japan are not included in the list of top 20 offices, as registration class count data are not available for these offices.

Source: WIPO Statistics Database, October 2012

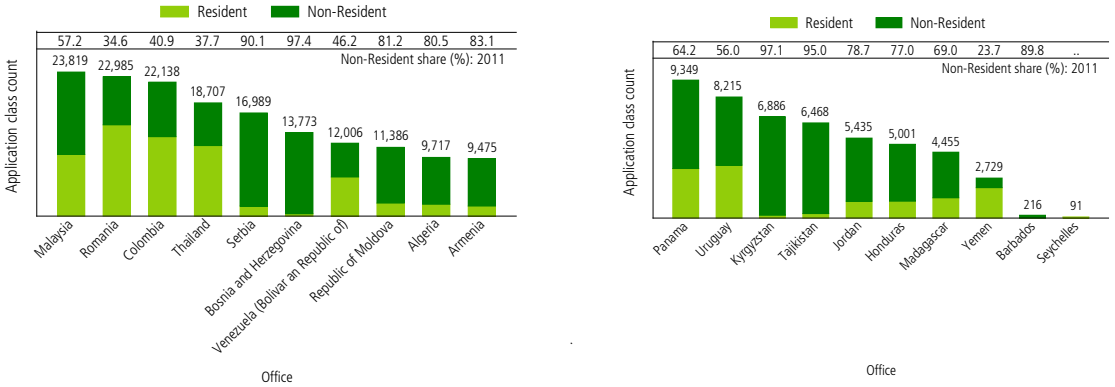
Figure B.2.2.2 Contribution of resident and non-resident registration class counts to total growth for the top 20 offices, 2010-11



Note: '..' = not available

Source: WIPO Statistics Database, October 2012

Figure B.2.2.3 Trademark registration class counts for offices of selected middle- and low-income countries, 2011



Note: '..' = not available

Source: WIPO Statistics Database, October 2012

Figure B.2.2.3 presents registration class counts for selected offices of middle- and low-income countries.[5] The registration class counts for these offices were generally smaller than their application class counts (Figure B.2.1.5). Like for the IP office of China, this partially reflects the fact that not every application received by an office results in a registration. However, other factors, such as examination pendency, also influence these differences.

Consistent with their application class counts, most of these offices' registration class counts were largely attributed to non-residents, with many having even higher non-resident shares. The offices of Colombia, Malaysia and Romania and issued similar numbers of registrations; however, Malaysia issued the majority (57.2%) of its registrations to non-residents.

5 The selected offices are from different world regions. Data for all available offices are presented in the statistical annex.

The offices of Panama (3,351) and Uruguay (3,611) issued almost the same number of registrations to their respective residents, but there were nearly 1,400 more registrations issued to non-residents in Panama than in Uruguay.

B.3

NICE CLASSES SPECIFIED IN TRADEMARK APPLICATIONS BY OFFICE

B.3.1 Industry sectors by office

As in subsection B.1.3, it is useful to analyze class data by grouping the NCL classes into different industry sectors. In particular, the 45 NCL classes can be grouped into 10 categories or groups (see Annex B for full definitions). The resulting indicators by class group for selected offices show the share of filings attributed to non-residents for each group, and how the concentration of filing within these categories differs across offices.

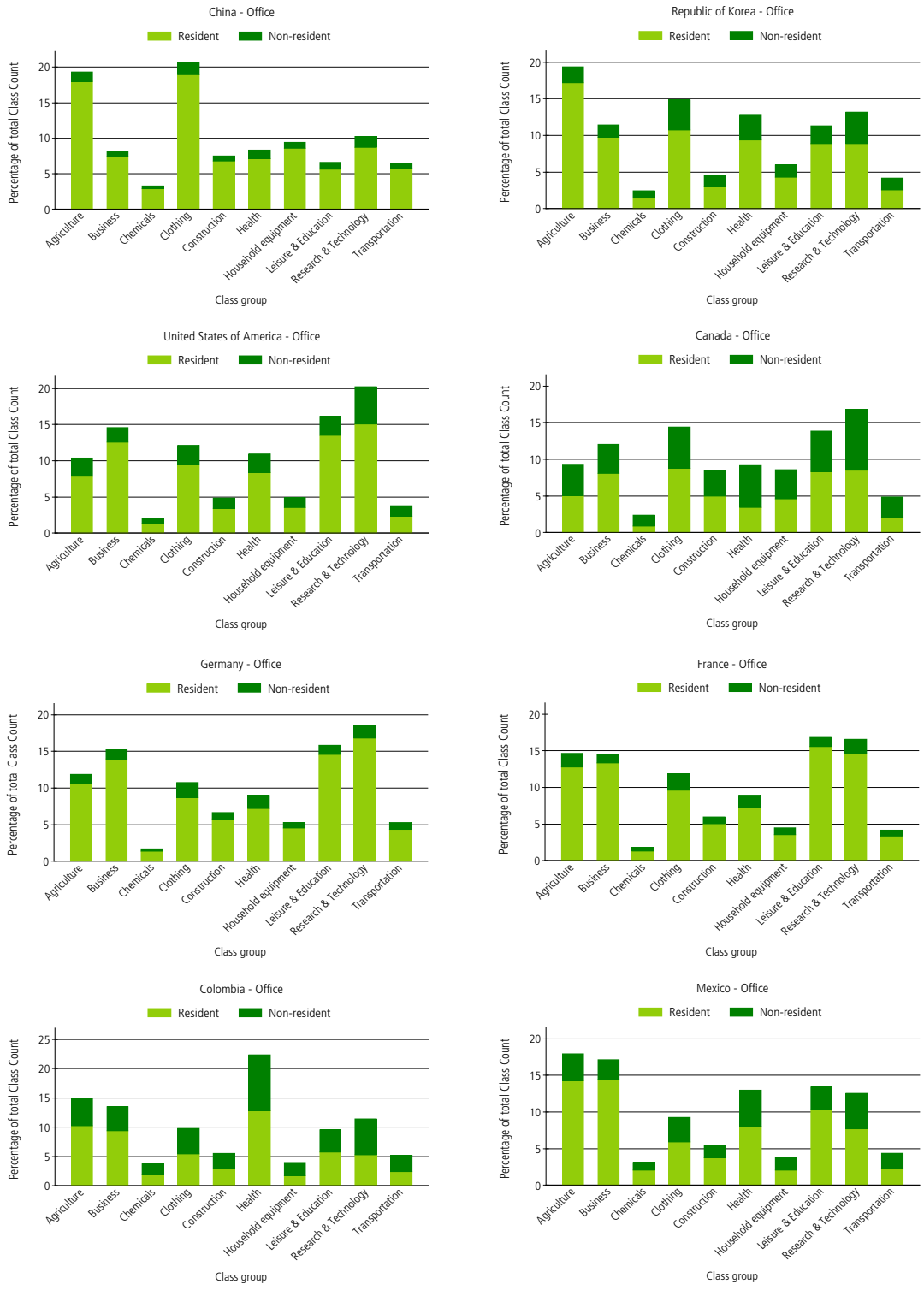
For instance, the IP office of China received the highest share of its applications in the clothing industry, followed by agriculture (Figure B.3.1). These two industries also accounted for the highest shares of applications in the Republic of Korea. Focusing on the clothing industry, the Republic of Korea received a considerable share of nonresident applications in this sector, the largest portion of which came from Japan and the US in similar amounts.

For the Research & Technology class group, applicants from Japan and the US also accounted for the largest shares of non-resident applications in the Republic of Korea; however, the US share was twice the Japanese share in this case. Conversely, the USPTO received most of its non-resident applications in this field in equal shares from the UK, Canada and Germany, with non-resident filings from the Republic of Korea in the number 10 position.

Canada and the US exhibited a similar distribution of trademark filings across sectors, each having a higher proportion of filings in the areas of Research & Technology and Leisure & Education, although Canada's shares of filings attributed to non-resident applicants were higher.

Consistent with Table B.1.3.5, most of these offices had lower shares of applications filed in the fields of chemicals and transportation. In Colombia and Mexico, there were even fewer trademarks filed for household equipment than in the transportation sector. Finally, the sectoral breakdowns of the French and German offices show marked similarities.

Figure B.3.1 Nice classes grouped in industry sectors for selected offices, 2011



Note: Class groups are those defined by Edital®. For a definition of the class groups, see Annex B for a complete list of the Nice Classification.

Agriculture = Agricultural products and services; Business = Management, Communications, Real estate and Financial services; Chemicals = Chemicals; Clothing = Textiles - Clothing and Accessories; Construction = Construction, Infrastructure; Health = Pharmaceuticals, Health, Cosmetics; Household equipment = Household equipment; Leisure & Education = Leisure, Education, Training; Research & Technology = Scientific research, Information and Communication technology; Transportation = Transportation and Logistics

Sources: WIPO Statistics Database and Edital®, October 2012

B.3.2 Goods and services classes by office

In Figure B.1.3.4, the shares of goods and services classes specified in trademark applications worldwide for 2011 were 66.7% and 33.3%, respectively. However, these shares differed considerably across offices (Figure B.3.2). The services classes shares of 40% and higher at almost half of the offices listed reflect applicants' demand for protecting marks in the service industry in different markets. Between 40 and 44 percent of trademark filing activity in Australia, Mexico, Turkey, the UK and the US was focused on the service sectors in these countries. The offices of France and Germany received over 45% of their applications for service classes; in the case of BOIP and the office of Spain, services accounted for the majority all filing activity.

Conversely, China (77.4%) had the highest percentage of applications falling into the goods classes, with the Asian offices of China Hong Kong (SAR), India and Viet Nam also displaying higher goods class shares.

Figure B.3.2 Goods and services classes for selected offices, 2011

Source: WIPO Statistics Database, October 2012

B.4

TRADEMARK APPLICATION CLASS COUNTS BY ORIGIN

B.4.1 Applications by origin

Trademark application counts based on the applicant's origin complement the picture of global trademark activity worldwide. Trademark activity by origin includes resident applications and applications abroad.[6] The origin of a trademark application is determined based on the residency of the applicant. The numbers of applications abroad presented are likely to be lower than the actual numbers, as some offices do not report detailed statistics pertaining to the origin of the applicant.

Applications at regional offices are equivalent to multiple applications in the states that are members of the organizations establishing these offices. This subsection reports figures based on an equivalent applications concept. For example, to calculate the number of equivalent applications for OHIM or BOIP, each application is multiplied by the corresponding number of member states. Thus, an application filed with OHIM by an applicant residing outside of the EU is counted as 27 applications abroad. An application filed with OHIM by an applicant residing in an EU country is counted as 1 resident application and 26 applications abroad.

This subsection compares application volumes according to the top origins by using the equivalent number of classes specified in applications. Using simple application counts, Chinese applicants are often ranked number one by origin due to high resident filing activity at their national office. However, taking into account the number of classes specified in applications and the existence of regional offices, Figure B.4.1.1 shows a much different ranking of the top origins.

Using equivalent application class counts, German applicants had the most filings worldwide.[7] This was due not only to their high filing activity at the German office and at many offices abroad, but also to their frequent use of OHIM – with its multiplying effect - in order to seek trademark protection within the entire EU. These factors together yielded over 2.1 million equivalent class counts for applications of German origin filed around the world in 2011. For the same reasons that apply to the high filing volume of German origin, application class counts are also high for other EU origins, as are their filings abroad.

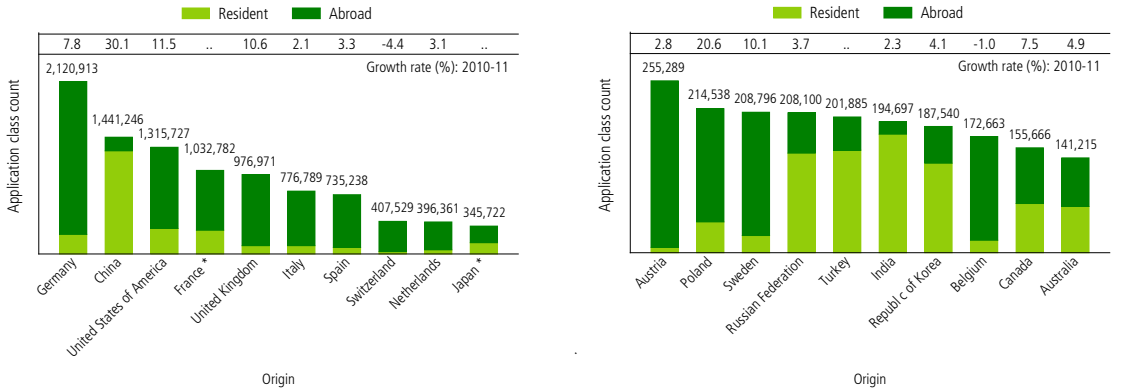
German applicants were followed by applicants residing in China and the US. In 2011, application class counts of Chinese origin (1.4 million) exceeded those from the US (1.3 million), whereas the opposite was true in 2010. Figure B.4.1.1 demonstrates that, for the majority of origins, a large share of application class counts can be attributed to filings abroad. However, residents of China, India, the Republic of Korea, the Russian Federation and Turkey were relatively more active in seeking protection for their trademarks in domestic markets.

Filing activity by applicants from China and Poland saw the highest year-on-year increases with 30.1% and 20.6%, respectively. In the case of China, this growth was both in resident applications (31%) and those filed abroad (25%). For Poland, the increase in applications filed abroad (24%) was the main contributor to growth. Switzerland and Belgium, in turn, were the only origins listed that saw declines in filing in 2011.

6 See Glossary for definitions of resident applications and applications abroad.

7 The sum of resident applications and applications abroad

Figure B.4.1.1 Equivalent trademark application class counts for the top 20 origins, 2011



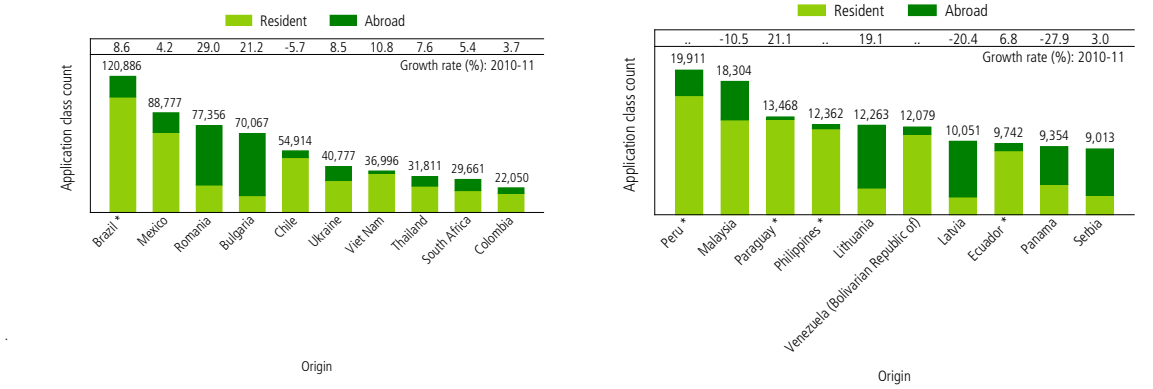
Note: '..' = not available; *Resident data are an estimate of direct application class counts.

Source: WIPO Statistics Database, October 2012

To give an idea of the varying filing volumes by applicants residing in middle- and low-income countries, the selected origins in Figure B.4.1.2 show, for example, that applications filed in Mexico by its residents were of the same magnitude as the total filing activity by Bulgarian and Romanian applicants worldwide. Another example shows that total applications filed in 2011 by residents of Lithuania and Venezuela (Bolivarian Republic of) were almost the same; however, residents of Lithuania filed a much higher proportion of their applications abroad. Origins of the middle-income countries listed that are members of the EU showed high proportions of filings abroad, similar to their counterparts shown in Figure B.4.1.1, which again can be attributed to their use of OHIM and this office's multiplying effect.

Most of these origins showed annual growth, with the exception of Chile, Latvia, Malaysia and Panama. Their declines from 2010 to 2011 can be explained by decreases of 20% and higher in the numbers of applications their residents filed abroad.

Figure B.4.1.2 Equivalent trademark application class counts for selected middle- and low-income country origins, 2011



Note: *2010 data; Growth rate refers to 2009-2010; '..' = not available

Source: WIPO Statistics Database, October 2012

To establish a detailed picture of trademark flows across countries, this subsection presents a breakdown of application count data by origin (source) and office (destination). Data are reported for a selection of offices based on their application volumes, geographical location and data availability. Like for patents, when deciding where to seek trademark protection, applicants consider such factors as market size and geographical proximity.

Table B.4.1.3 shows class counts by selected origins and offices, whereas Table B.4.1.4 presents the same flows expressed in percentage shares.[8] The highest percentage in each column represents the share of all application class counts received by a particular office from residents of the country it represents (if presented). This figure varies from 17.8% for the Singaporean office to approximately 88-90% for the offices of China and Germany. Applicants from Singapore and Switzerland filed the smallest shares of their applications at their respective domestic offices, suggesting that they file abroad proportionally more often than applicants residing in larger countries with larger markets. Ten of the 15 offices listed received over 70% of all application class counts from domestic applicants.

Application class counts of US origin accounted for the largest proportion received by the offices of neighboring Canada (22.6%) and Mexico (12.4%), percentages that varied only slightly from 2010. They also accounted for over 10% of total class counts at the offices of Australia, Singapore and South Africa. At the office of China, Japanese and US residents accounted for the highest percentages of non-resident filings, albeit their shares are quite low (1.6% and 2.1%, respectively). In about one-third of the offices listed, German applicants accounted for the highest percentages of non-resident filings, with 3.2% in the case of Poland and 16.7% in Switzerland.

Table B.4.1.3 Trademark application class counts by selected offices and origins, 2011

Origin	Office														
	CN	US	RU	DE	TR	KR	CA	AU	MX	GB	CH	ES	PL	SG	ZA
Australia	3,181	3,364	343	113	132	676	1,213	69,058	124	881	198	64	33	1,010	436
Brazil	494	581	42	15	40	62	123	62	344	32	27	21	2	52	49
Canada	1,630	9,776	338	37	136	323	73,192	780	445	319	180	4	4	127	143
China	1,273,827	3,732	2,464	1,652	1,192	2,385	1,790	1,838	620	1,204	1,002	1,016	730	1,702	607
France	8,461	6,539	4,340	1,694	2,362	2,859	3,574	2,191	1,338	1,391	5,960	1,897	882	1,994	870
Germany	11,312	9,487	8,070	181,118	6,001	3,586	4,011	3,469	1,837	1,458	14,237	1,159	1,564	2,344	1,369
India	581	749	174	17	46	27	256	130	182	129	35	-	1	211	146
Italy	6,930	4,462	3,720	519	2,274	1,944	1,560	1,623	792	380	3,037	472	314	1,252	316
Japan	22,962	5,278	1,923	457	868	7,246	2,168	2,247	1,093	458	1,250	230	105	3,464	668
Mexico	279	1,839	27	11	13	35	342	26	71,091	14	18	59	2	15	9
Poland	302	216	772	221	221	48	53	64	6	105	147	110	39,805	28	9
Republic of Korea	6,931	2,170	735	234	264	132,864	693	591	470	225	164	112	87	669	197
Russian Federation	1,464	776	148,192	1,048	672	291	200	259	85	684	507	707	716	196	32
Singapore	2,305	602	341	51	249	543	231	711	92	149	276	10	10	6,504	87
South Africa	371	245	13	26	11	16	116	130	21	88	7	2	-	20	19,522
Spain	2,125	1,829	796	194	568	481	602	452	1,345	173	483	62,410	82	305	189
Switzerland	5,859	5,185	3,898	3,506	2,512	2,291	2,029	2,297	1,801	1,195	34,264	975	684	1,932	885
Turkey	734	665	1,513	767	152,261	201	99	229	37	608	358	467	424	127	61
United Kingdom	7,441	9,311	2,175	647	1,281	1,578	3,294	3,347	1,150	72,109	1,466	243	117	1,328	1,430
United States of America	30,217	319,311	6,695	1,358	3,809	9,139	30,291	11,737	12,473	2,687	5,371	798	452	5,645	3,854
Others / Unknown	30,845	25,897	22,912	12,276	10,027	7,702	8,084	11,394	4,935	4,951	16,024	2,489	2,821	7,654	2,605
Total	1,418,251	412,014	209,483	205,961	184,939	174,297	133,921	112,635	100,281	89,240	85,011	73,245	48,835	36,579	33,484

Note: CN (China), US (United States of America), RU (Russian Federation), DE (Germany), TR (Turkey), KR (Republic of Korea), CA (Canada), AU (Australia), MX (Mexico), GB (United Kingdom), CH (Switzerland), ES (Spain), PL (Poland), SG (Singapore), ZA (South Africa)

Source: WIPO Statistics Database, October 2012

8 "Origin data" refers to simple application count rather than equivalent application count as presented in Figure B.4.1.1.

Table B.4.1.4 Distribution of trademark application class counts by selected offices and origins, 2011 (%)

Origin	Office														
	CN	US	RU	DE	TR	KR	CA	AU	MX	GB	CH	ES	PL	SG	ZA
Australia	0.2	0.8	0.2	0.1	0.1	0.4	0.9	61.3	0.1	1.0	0.2	0.1	0.1	2.8	1.3
Brazil	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.0	0.0	0.0	0.0	0.1	0.1
Canada	0.1	2.4	0.2	0.0	0.1	0.2	54.7	0.7	0.4	0.4	0.2	0.0	0.0	0.3	0.4
China	89.8	0.9	1.2	0.8	0.6	1.4	1.3	1.6	0.6	1.3	1.2	1.4	1.5	4.7	1.8
France	0.6	1.6	2.1	0.8	1.3	1.6	2.7	1.9	1.3	1.6	7.0	2.6	1.8	5.5	2.6
Germany	0.8	2.3	3.9	87.9	3.2	2.1	3.0	3.1	1.8	1.6	16.7	1.6	3.2	6.4	4.1
India	0.0	0.2	0.1	0.0	0.0	0.0	0.2	0.1	0.2	0.1	0.0	-	0.0	0.6	0.4
Italy	0.5	1.1	1.8	0.3	1.2	1.1	1.2	1.4	0.8	0.4	3.6	0.6	0.6	3.4	0.9
Japan	1.6	1.3	0.9	0.2	0.5	4.2	1.6	2.0	1.1	0.5	1.5	0.3	0.2	9.5	2.0
Mexico	0.0	0.4	0.0	0.0	0.0	0.0	0.3	0.0	70.9	0.0	0.0	0.1	0.0	0.0	0.0
Poland	0.0	0.1	0.4	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.2	0.2	81.5	0.1	0.0
Republic of Korea	0.5	0.5	0.4	0.1	0.1	76.2	0.5	0.5	0.5	0.3	0.2	0.2	0.2	1.8	0.6
Russian Federation	0.1	0.2	70.7	0.5	0.4	0.2	0.1	0.2	0.1	0.8	0.6	1.0	1.5	0.5	0.1
Singapore	0.2	0.1	0.2	0.0	0.1	0.3	0.2	0.6	0.1	0.2	0.3	0.0	0.0	17.8	0.3
South Africa	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0	-	0.1	58.3
Spain	0.1	0.4	0.4	0.1	0.3	0.3	0.4	0.4	1.3	0.2	0.6	85.2	0.2	0.8	0.6
Switzerland	0.4	1.3	1.9	1.7	1.4	1.3	1.5	2.0	1.8	1.3	40.3	1.3	1.4	5.3	2.6
Turkey	0.1	0.2	0.7	0.4	82.3	0.1	0.1	0.2	0.0	0.7	0.4	0.6	0.9	0.3	0.2
United Kingdom	0.5	2.3	1.0	0.3	0.7	0.9	2.5	3.0	1.1	80.8	1.7	0.3	0.2	3.6	4.3
United States of America	2.1	77.5	3.2	0.7	2.1	5.2	22.6	10.4	12.4	3.0	6.3	1.1	0.9	15.4	11.5
Others / Unknown	2.2	6.3	10.9	6.0	5.4	4.4	6.0	10.1	4.9	5.5	18.8	3.4	5.8	20.9	7.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: See note for Table B.4.1.3.

Source: WIPO Statistics Database, October 2012

B.5

NICE CLASSES SPECIFIED IN TRADEMARK APPLICATIONS BY ORIGIN

B.5.1 Industry sectors by origin

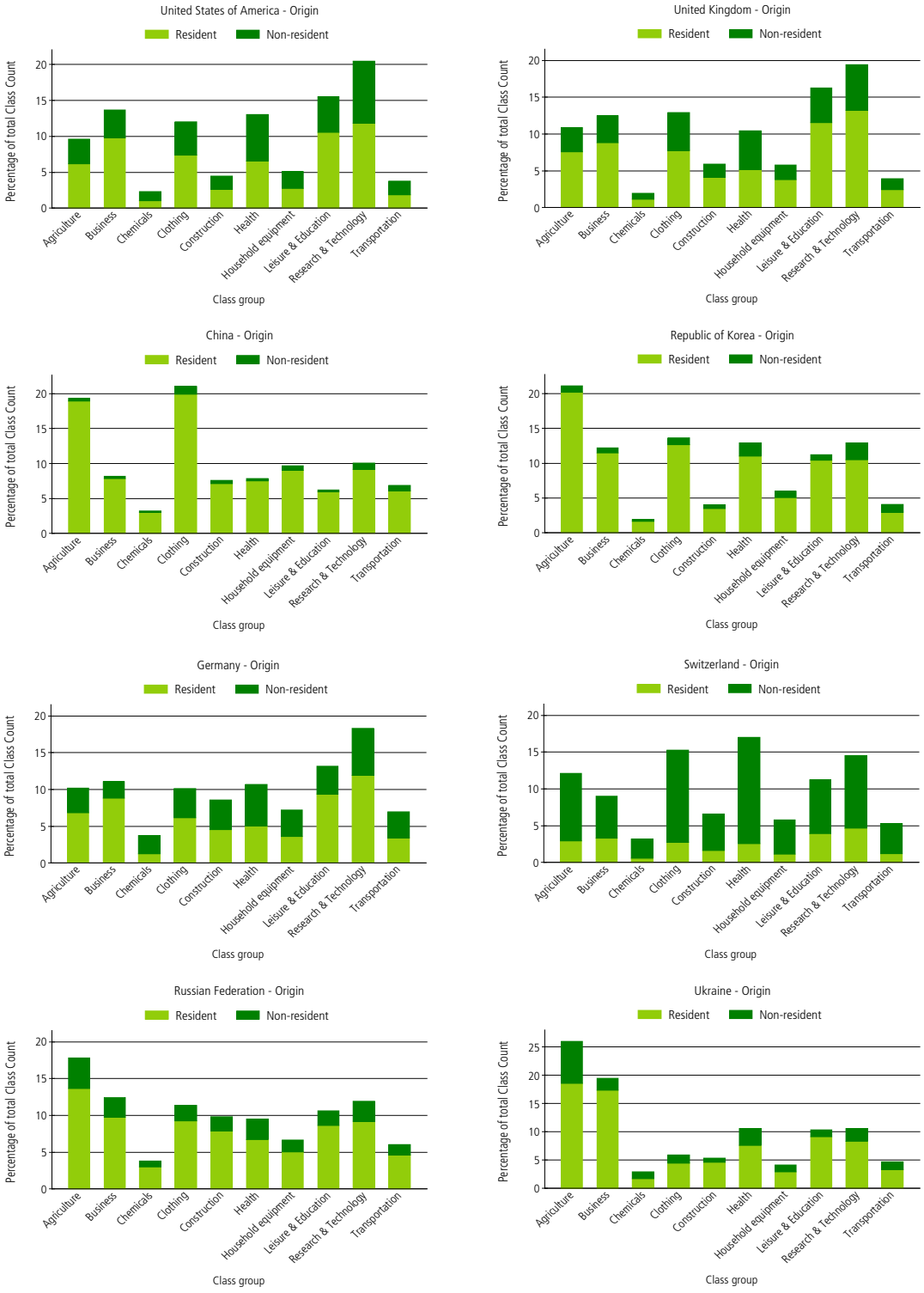
Like B.3.1, this subsection analyzes class data by grouping the classes into different industry sectors or class groups (see Annex B for full definitions). However, it breaks the application data down by origin rather than office. The resulting indicators show trademark filing activity in various sectors by origin, including shares for resident applications and for filings abroad.

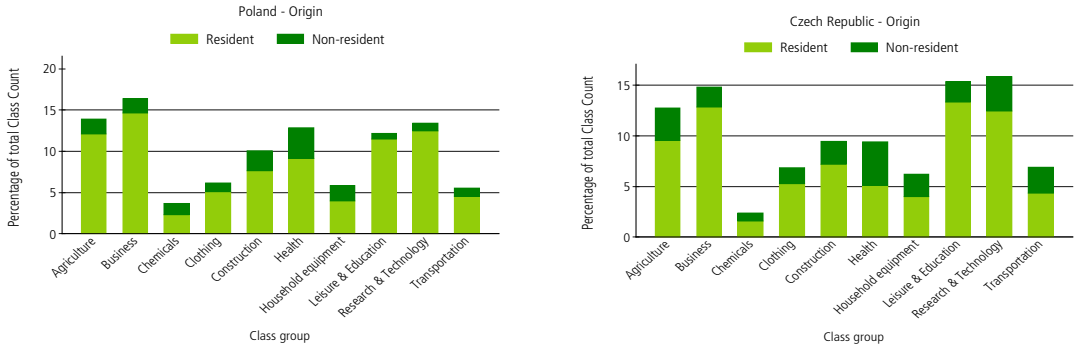
Applications of UK and US origin exhibited similar distributions across sectors, with a particular emphasis on trademark applications in the fields of Research & Technology and Leisure & Education (Figure B.5.1). Applications of Czech and German origin also had significant proportions of their application class counts in these two sectors.

Germany, the UK, the US and, in particular, Switzerland showed significant proportions of class counts abroad across all sectors, indicating relatively stronger demand for protection outside of their countries. This differed from the origins of China, Poland, the Republic of Korea, the Russian Federation and Ukraine, for which class counts were largely domestic.

For filings abroad, the Clothing and Research & Technology groups accounted for the largest shares of class counts for applicants in China. For applicants in Switzerland, the clothing sector also dominated, but the largest share of applications filed abroad was in the health sector. In contrast, the agricultural sector was the largest for Russian and Ukrainian applicants.

Figure B.5.1 Nice classes grouped in industry sectors for selected origins, 2011

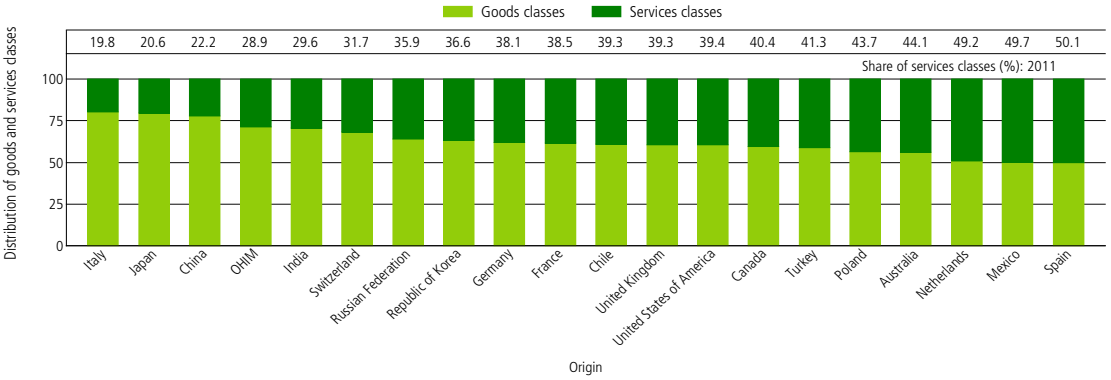




Note: Class groups are those defined by Edital® 2011. For a definition of the class groups, see Annex B for a complete list of the Nice Classification. Agriculture = Agricultural products and services; Business = Management, Communications, Real estate and Financial services; Chemicals = Chemicals; Clothing = Textiles - Clothing and Accessories; Construction = Construction, Infrastructure; Health = Pharmaceuticals, Health, Cosmetics; Household equipment = Household equipment; Leisure & Education = Leisure, Education, Training; Research & Technology = Scientific research, Information and Communication technology; Transportation = Transportation and Logistics

Sources: WIPO Statistics Database and Edital®, October 2012

Figure B.5.2 Nice goods and services classes for selected origins, 2011



Source: WIPO Statistics Database, October 2012

B.5.2 Goods and services classes by origin

As discussed earlier, two-thirds of all trademark applications worldwide were goods-related, and one-third services-related. Like for offices, these shares differed considerably across origins (Figure B.5.2). Of the origins listed, about four-fifths of the applications from China, Italy and Japan fell within the 34 goods classes of the NCL. Most of the origins listed had a service class share of over 30%, with applicants from the Netherlands, Mexico and Spain having shares of around 50%.

B.6

International trademark registrations and renewals through the Madrid System

In order to obtain trademark protection in multiple offices, an applicant can either file directly at each individual office or file an application for an international registration through the Madrid system. In 2011, this system made it possible to seek trademark protection in up to 87 countries by filing a single application.

Applicants wishing to use the Madrid system must apply for trademark protection at their national or a relevant regional IP office before seeking international protection. An international registration under this system produces the same effects as an application for registration of the

mark in each of the Madrid members designated by the applicant. If the office of a designated member does not refuse protection, the status of the mark is the same as if it had been registered by that office. Thereafter, the international registration can be maintained and renewed through a single procedure.

B.6.1 Madrid registrations and renewals

Figures B.6.1.1 and B.6.1.2 depict the trend in international trademark registrations and renewals from 2001 to 2011. For registrations, 2011 saw a continuation of the growth in 2010 after a decline in 2009, which followed the onset of the economic downturn. Madrid registrations increased by 8.5% in 2011 with a total of 40,711, almost returning to the pre-crisis high reached in 2008.

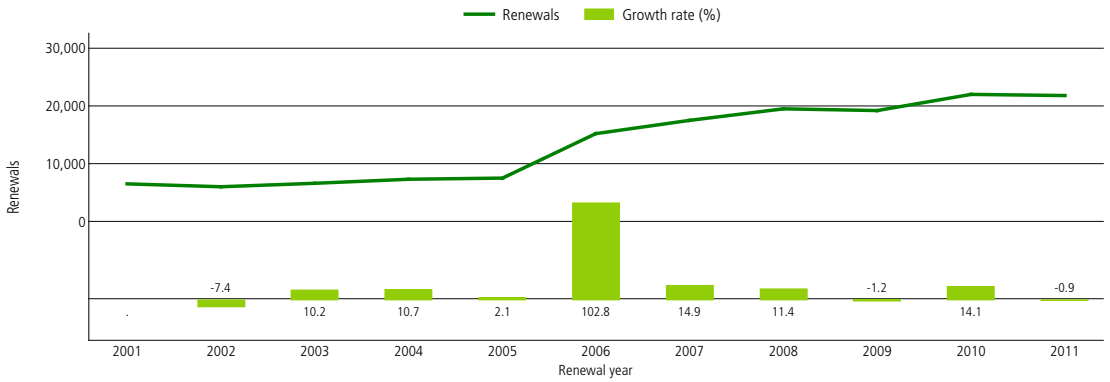
The number of international registrations issued through the Madrid system grew each year from 2004 to 2008. The exceptionally high growth in 2005, when international registrations increased by 41.9%, reflects the entry of the US and the EU into the Madrid system. For the EU, this made it possible for applicants of its member states to apply for international registrations via the regional office OHIM. Figure B.6.1.1 also illustrates the fact that international trademark registrations are sensitive to business cycles, with registrations dropping during or immediately following economic downturns.

After falling in 2002, renewals of Madrid international registrations followed an upward trend until 2008, and decreased slightly in both 2009 and 2011. The high growth in renewals seen in 2006 was due to the renewal period being changed from 20 years to 10 years in 1996.

Figure B.6.1.1 Trend in Madrid registrations

Source: WIPO Statistics Database, October 2012

Figure B.6.1.2 Trend in Madrid renewals



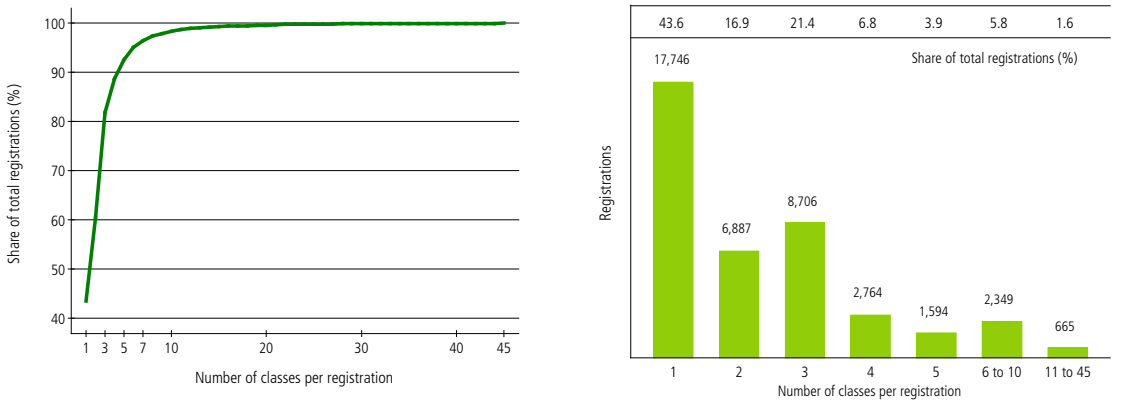
Source: WIPO Statistics Database, October 2012

Following the small drop in 2009, trademark renewals grew by 14% to about 22,000 in 2010, but fell by about 200 or 0.9% in 2011.

B.6.2 Number of classes and designations per Madrid registration

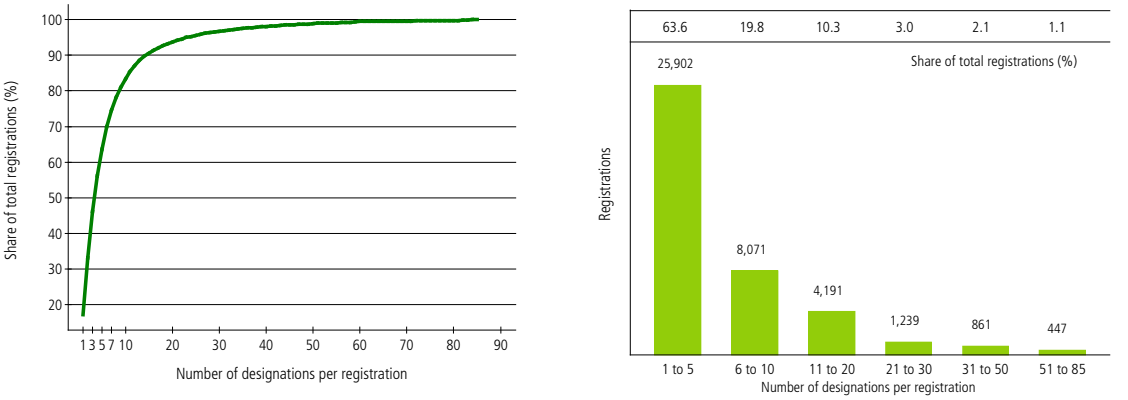
The Madrid system is a multi-class filing system that enables applicants to specify one or more classes in each international trademark application. An average of 2.6 classes were specified in all international registrations in 2011. Figure B.6.2.1 shows that, although it is a multi-class system, a high percentage (43.6%) of all international registrations specified only one class; 16.9% specified two classes; and 21.4% a total of three classes. Six or fewer classes were specified in 95 percent of the over 40,000 international registrations, and 13 or more classes were specified in only one percent of total registrations. When an international registration is issued, the applicant can choose to designate any of the Madrid member countries or jurisdictions in which to seek trademark protection. Figure B.6.2.2 depicts the number of designations made per international registration. In 2011, an average of almost seven Madrid members were designated per international registration. The majority (56%) of holders of these registrations chose to designate between one and four Madrid members, and 90% designated up to 15 Madrid members in each registration. Only one percent of international registrations filed in 2011 designated more than 50 of the over 80 Madrid members.

Figure B.6.2.1 Distribution of the number of classes per Madrid registration, 2011



Source: WIPO Statistics Database, October 2012

Figure B.6.2.2 Distribution of the number of designations per Madrid registration, 2011

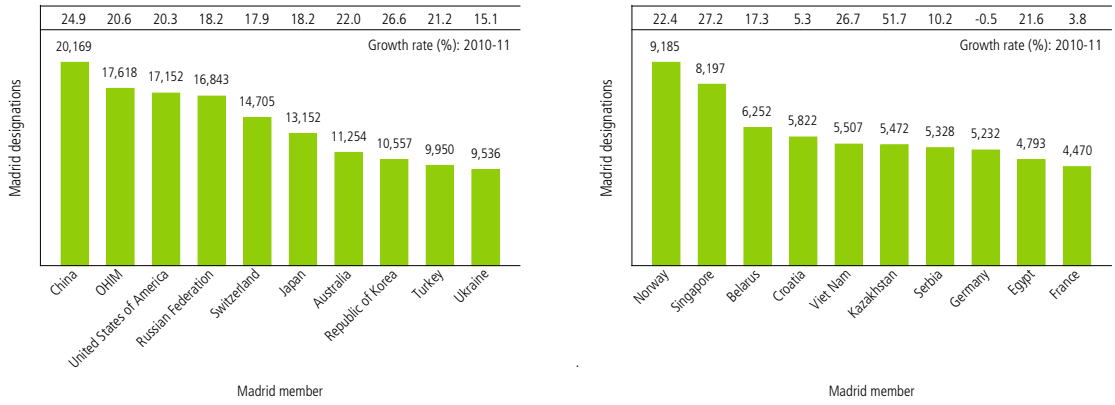


Source: WIPO Statistics Database, October 2012

B.6.3 Registrations and renewals by designated Madrid member

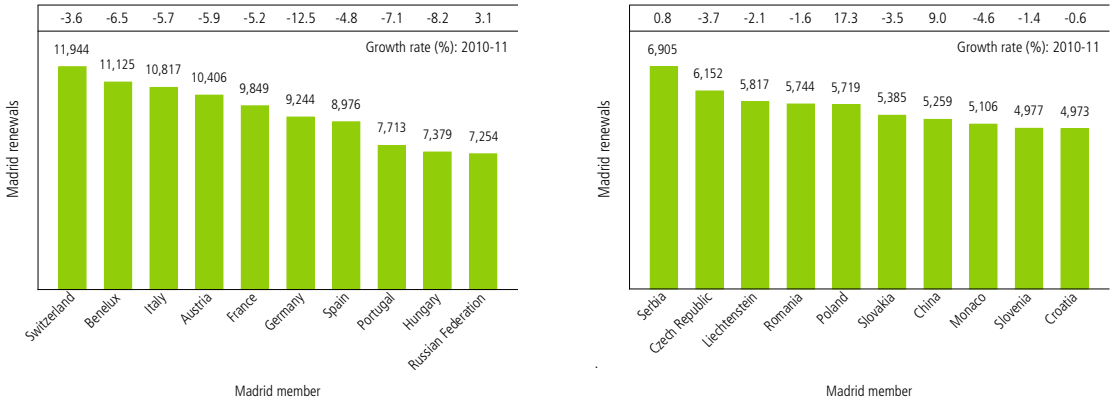
Figure B.6.3.1 shows the number of international registrations by designated Madrid member – that is, the office at which the owner of the international registration seeks trademark protection. China received the largest number of designations (20,169), followed by OHIM, the US and the Russian Federation, with between 16,800 and 18,000 designations each. Over half of the top 20 designated Madrid members saw annual growth of over 20 percent, with only Germany showing a slight decrease. The top 10 designated Madrid members in terms of renewals mostly comprised European countries that have had historically higher registration levels, such as Austria, France, Germany, Italy and Switzerland (Figure B.6.3.2). OHIM and the US are not included in this list, since they are recent members of the Madrid system, and many international registrations in effect at their offices do not yet require renewal after the initial registration period of 10 years. Most of the designated Madrid members listed saw declines in renewals in 2011 compared to 2010, China and Poland being the notable exceptions with growth rates of 9% and 17.3%, respectively.

Figure B.6.3.1 Registrations for the top 20 designated Madrid members, 2011



Source: WIPO Statistics Database, October 2012

Figure B.6.3.2 Renewals for the top 20 designated Madrid members, 2011



Source: WIPO Statistics Database, October 2012

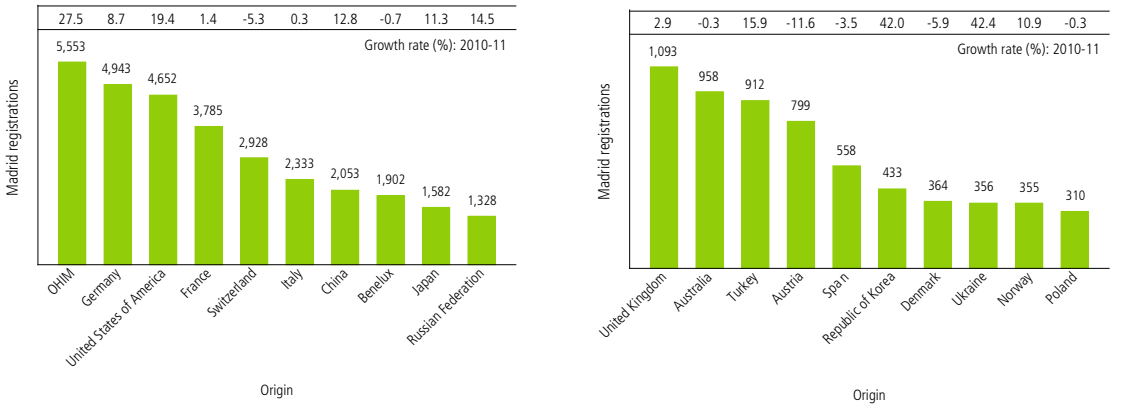
B.6.4 Registrations and renewals by origin

The top 10 origins of international registrations in 2011, shown in Figure B.6.4.1, remained the same as in the previous year; however, with a somewhat different ranking. OHIM's 27.5% growth with over 5,500 registrations led it to overtake Germany (approximately 5,000 registrations) to become the highest ranking origin, and China surpassed BOIP to take seventh position. The US continued to be the third largest user of the Madrid system with 19.4% growth in 2011.

International registrations originating in the Republic of Korea and Ukraine showed high year-on-year increases of over 40%, but their numbers of Madrid registrations remained relatively small (350 to 450).

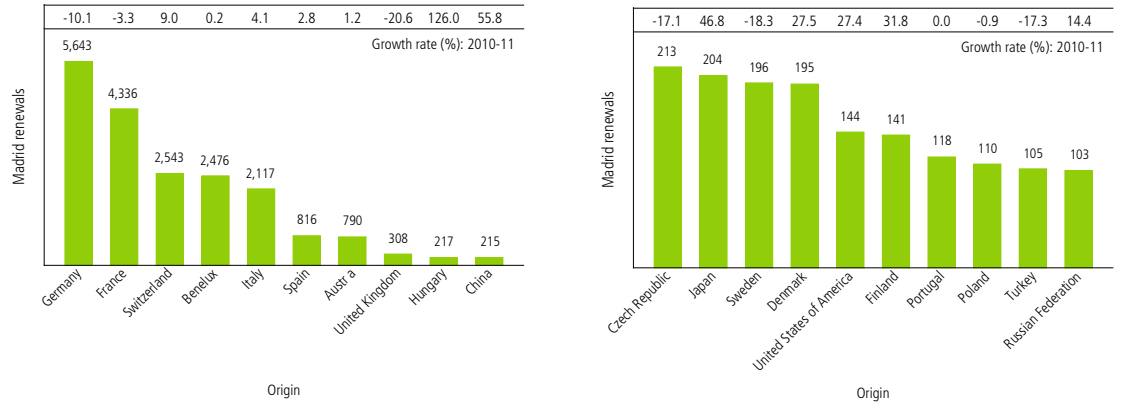
The rankings of origins in terms of international trademark renewals through the Madrid system differed from those for registrations. As Figure B.6.4.2 demonstrates, Germany and France had the largest numbers of renewals with 5,643 and 4,336, respectively. The low number of renewals for the US reflects its recent entry into the Madrid system.

Figure B.6.4.1 Registrations for the top 20 origins, 2011



Source: WIPO Statistics Database, October 2012

Figure B.6.4.2 Renewals for the top 20 origins, 2011



Source: WIPO Statistics Database, October 2012

9 Normally, the US should not show any renewals until 2013 – 10 years after it became a Madrid member. However, renewals are recorded by the contracting party of the holder, not by the office of origin of the international registration. Thus if a holder of an existing registration transfers it to a holder with US entitlement, it will appear in renewal statistics for the US.

B.6.5 Madrid applicants

Table B.6.5 presents the top 50 Madrid system applicants – ranked 1 to 30, as some filed identical numbers of applications. Pharmaceutical company Novartis AG, in Switzerland, was the largest applicant in 2011 with 125 applications, followed by tobacco company Phillip Morris, also in Switzerland, with 110 applications.

Pharmaceutical company Boehringer Ingelheim was the top German filer with 98 applications, placing third overall. Hungary's Richeter Gedeon Nyrt., another pharmaceutical company, occupied the fourth spot with its 89 international applications.

Nineteen of these top applicants were from Germany, whereas Switzerland and the US had seven applicants each, and five were domiciled in France.

Table B.6.5 Top Madrid applicants

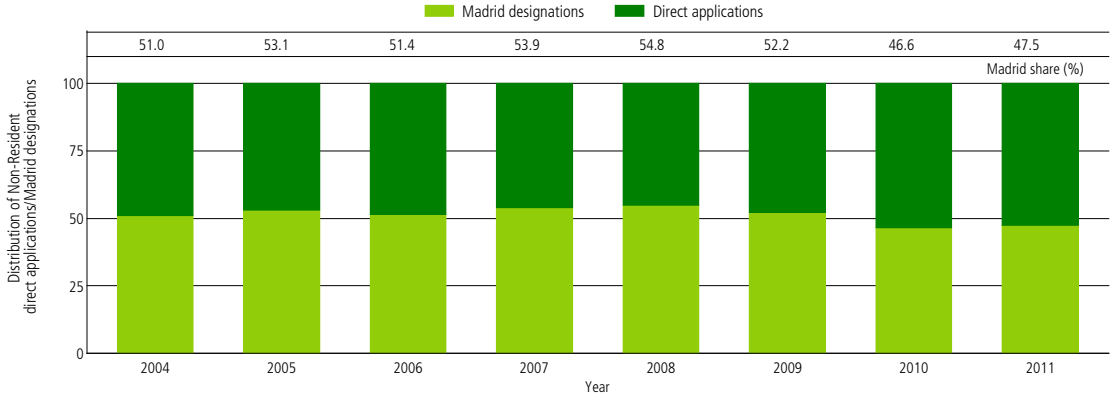
2011 Rank	Applicant's Name	Origin	Madrid International Applications		
			2009	2010	2011
1	NOVARTIS AG	Switzerland	136	118	125
2	PHILIP MORRIS BRANDS S.A.R.L.	Switzerland	47	137	110
3	BOEHRINGER INGELHEIM PHARMA GMBH & CO.	Germany	52	112	98
4	RICHTER GEDEON NYRT.	Hungary	70	8	89
5	SOCIÉTÉ DES PRODUITS NESTLÉ S.A.	Switzerland	51	68	80
6	KONINKLIJKE PHILIPS ELECTRONICS N.V.	Netherlands	38	76	92
7	BAYERISCHE MOTOREN WERKE AG (BMW)	Germany	-	42	75
8	BSH BOSCH UND SIEMENS HAUSGERÄTE GMBH	Germany	64	65	74
9	JANSSEN PHARMACEUTICA NV	Belgium	61	66	68
10	L'OREAL	France	67	43	67
11	ABERCROMBIE & FITCH EUROPE SA	Switzerland	..	22	59
12	EGIS GYÓGYSZERGYÁR	Hungary	64	53	57
13	SIEMENS AG	Germany	44	36	52
14	GLAXO GROUP LIMITED	United Kingdom	53	60	51
15	APPLE INC.	United States of America	13	49	50
16	TEMASEK HOLDINGS (PRIVATE) LIMITED	Singapore	-	5	48
16	KABUSHIKI KAISHA HBG	Japan	-	-	48
16	BAYER AG	Germany	54	23	48
17	SANOFI	France	69	18	47
18	HENKEL AG & CO. KGAA	Germany	98	78	46
19	AGILENT TECHNOLOGIES, INC.	United States of America	-	-	44
20	BAKOMA SP. Z O.O.	Poland	-	-	40
21	GTRC SERVICES, INC.	United States of America	-	-	38
22	ROYAL WINE CORP.	United States of America	-	-	34
22	RENAULT S.A.S.	France	17	11	34
22	OSRAM GMBH	Germany	19	31	34
22	DAIMLER AG	Germany	21	31	34
23	U.O. MERCHANDISE, INC.	United States of America	-	-	33
24	COTY GERMANY GMBH	Germany	11	19	32
24	DERMAPHARM AG	Germany	19	11	32
24	INTENSO GMBH	Germany	-	21	32
25	INTERSNACK GROUP GMBH & CO. KG	Germany	-	20	31
25	MIBE GMBH ARZNEIMITTEL	Germany	26	39	31
25	HÄFELE GMBH & CO KG	Germany	8	18	31
26	VELINOR AG	Switzerland	-	20	30
27	ZENTIVA, K.S.	Czech Republic	23	36	29
28	BARILLA G. E R. FRATELLI SPA	Italy	7	-	28
28	LIDL STIFTUNG & CO. KG	Germany	109	31	28
28	BASF SE	Germany	30	39	28
28	SYNGENTA PARTICIPATIONS AG	Switzerland	39	62	28
29	SAINT-GOBAIN ISOVER "LES MIROIRS"	France	22	7	27
29	VOLKSWAGEN AG	Germany	10	14	27
30	MILLENNIUM PHARMACEUTICALS, INC.	United States of America	-	-	26
30	CISCO TECHNOLOGY, INC.	United States of America	-	12	26
30	KRKA, TOVARNA ZDRAVIL, D.D., NOVO MESTO	Slovenia	-	80	26
30	LG INNOTEK CO., LTD.	Republic of Korea	-	-	26
30	ITM ENTREPRISES SOCIÉTÉ PAR ACTIONS SIMPLIFIÉE	France	38	32	26
30	MERCK KGAA	Germany	-	-	26
30	SCHNEIDER VERSAND GMBH	Germany	-	-	26
30	ABBOTT PRODUCTS OPERATIONS AG	Switzerland	-	-	26

Source: WIPO Statistics Database, October 2012

B.6.6 Non-resident applications by filing route

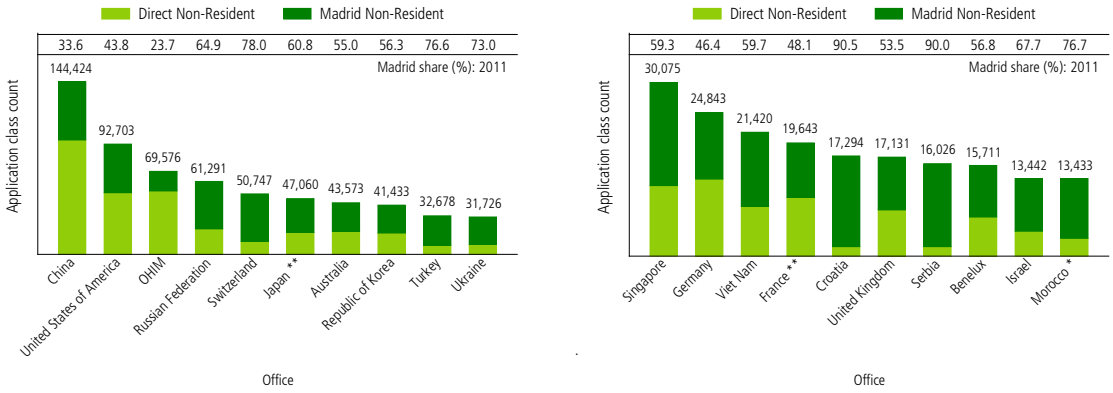
As pointed out before, non-resident trademark applications can be filed directly at national and regional IP offices (Paris route) or through the Madrid system. An application received by an office in the form of a designation via the Madrid system has the same effect as one received by an office directly from an applicant. Total non-resident filing activity in terms of application class counts increased by 10.5% from 2010 to 2011. When broken down by direct and Madrid system routes, growth was 8.8% and 12.6%, respectively. The larger growth in Madrid designations resulted in about a one percentage point increase (from 46.6% to 47.5%) in their share of total non-resident applications received by IP offices worldwide (Figure B.6.6.1). For all years listed, applications received in the form of Madrid designations represented around half off all non-resident applications filed globally. As not all offices are members of the Madrid system, this figure is higher when comparing only Madrid members. In 2011, 64% of all non-resident applications received by Madrid system member offices arrived in the form of a Madrid designation.

Figure B.6.6.1 Non-resident applications by direct and Madrid system routes



Source: WIPO Statistics Database, October 2012

Figure B.6.6.2 Non-resident applications by filing route for selected Madrid members, 2011



Note: *2010 data; Growth rate refers to 2009-2010. **Non-Resident applications are an estimate of direct application class count.

Source: WIPO Statistics Database, October 2012

Figure B.6.6.2 presents the share of Madrid designations in total non-resident application class counts for selected Madrid members. The share of non-resident application class counts resulting from designations via the Madrid system varies across offices. In 2011, 15 of the top 20 offices shown received more than half of their trademark filing activity from abroad through designations via the Madrid system, with some offices receiving upwards of 70 to 90 percent.

The top four offices in terms of non-resident application class counts – China, the US, OHIM and the Russian Federation – received between 24% and 65% of their non-resident applications via Madrid designations.

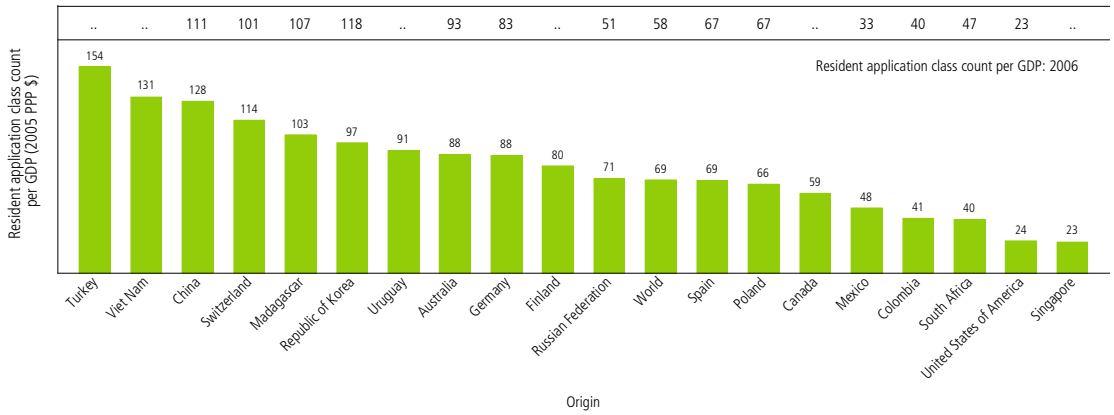
B.7

Trademark application class count per GDP and population

Differences in trademark activity across economies reflect, to a large extent, their size and level of development. For purposes of cross-country comparison, it is instructive to measure resident trademark activity by application class count relative to domestic GDP or population level. Figures B.7.1 and B.7.2 present the resulting trademark activity intensity indicators for selected countries.

When resident trademark applications are corrected for by equivalent class counts and adjusted by GDP, countries with lower numbers of resident applications (e.g., Madagascar and Uruguay) can rank higher than some countries that otherwise show higher numbers of resident applications (e.g., Germany and the US). Of these selected origins, Turkey, with 154, followed by Viet Nam, China and Switzerland (between 114 and 154), exhibited among the highest resident application class count-to-GDP ratios in 2011. For all other reported origins, the resident application class count-to-GDP ratio varied from 23 in Singapore to 103 in Madagascar, with the world average at 69 - up from 58 in 2006. In fact, the majority of the selected origins for which resident application class count data exist for 2006 and 2011, had higher ratios in 2011 than in 2006, the Russian Federation exhibiting the largest increase of 20. A notable exception is the Republic of Korea, with a ratio that decreased by 21 between 2006 and 2011.

Figure B.7.1 Resident trademark application class count per GDP for selected origins, 2011



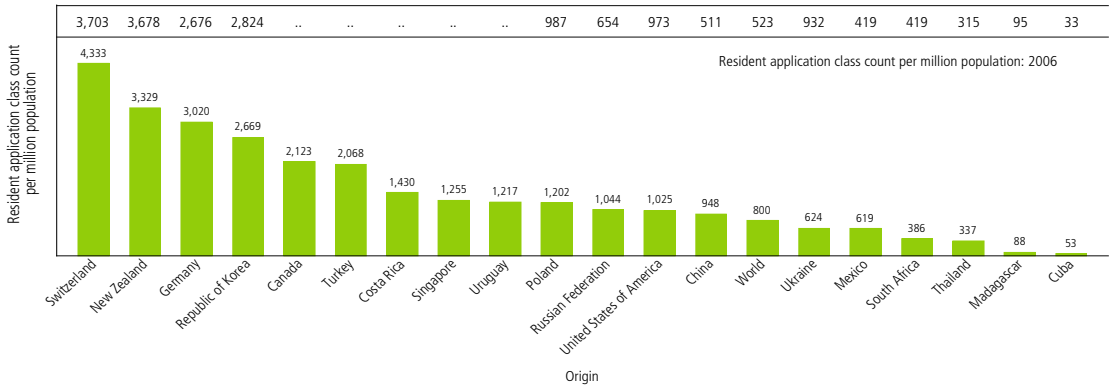
Note: '..' = not available; GDP data are in constant 2005 purchasing power parity (PPP) dollars. This graph does not provide an overall ranking of all origins, but a selection across geographical regions and income groups.

Source: WIPO Statistics Database, October 2012

Turning to the resident trademark applications per population indicator, a somewhat different picture emerges. With a population of 7.9 million, in 2011 the IP office of Switzerland reported 34,364 resident application class counts. Increasing by 630 over 2006 levels, the resulting 4,333 resident application class counts per million population made Switzerland one of the most intensive trademark filers according to this alternative indicator. New Zealand and Germany ranked high in terms of resident application class counts per million population with 3,329 and 3,020, respectively. Among these 20 selected origins, Canada and Turkey had nearly equal numbers of application class counts per million population, as was also the case for Singapore, Uruguay and Poland.

In 2011, the world average was 800 application class counts per million population compared to just 523 in 2006. Similar to the resident application class count-to-GDP ratio, the class count per million population ratios for two-thirds of the origins - for which 2006 and 2011 data are available - showed increases over this period. For instance, China's ratio increased from 511 applications filed per one million residents in 2006 to 948 in 2011 (an increase of 437). This was followed by increases for the Russian Federation (+390) and Germany (+344). In contrast, the ratios for the Republic of Korea and Ukraine fell by 155 and 308, respectively.

Figure B.7.2 Resident trademark application class counts per million population for selected origins, 2011



Note: '..' = not available; This graph does not provide an overall ranking of all origins, but a selection across geographical regions and income groups.

Source: WIPO Statistics Database, October 2012

B.8

Trademarks in force

This section presents statistics on trademarks in force, focusing on their breakdown by office, one-year growth (where available) and distribution by year of registration.

Due to data limitations and different reporting practices, it is not possible to estimate the total number of trademarks in force worldwide. However, there were a combined total of 22.9 million trademarks in force in 2011 for a sample of 70 IP offices for which these statistics are available.

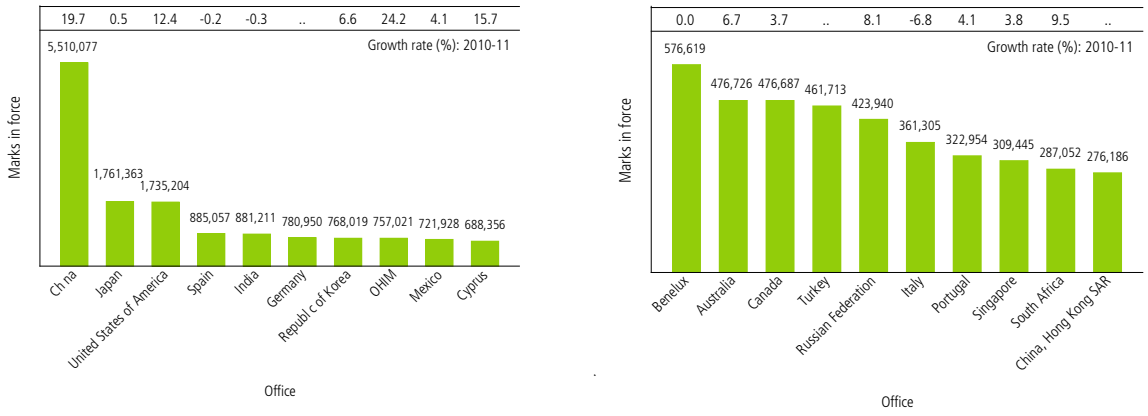
Figure B.8.1 presents the breakdown by offices that issue trademark registrations. Of the reported offices, China accounted for the largest number of trademarks in force (5.5 million) in 2011 – a nearly 20% increase on 2010 – followed by almost equivalent numbers at the JPO (1.76 million) and the USPTO (1.74 million). Most of the offices shown in this figure saw growth in 2011, with trademarks in force at OHIM growing the most (24.2%). The exceptions were India, Italy and Spain, each of which saw declines.

Figure B.8.2 depicts, for a total of 54 offices, the distribution of the approximately 12.4 million trademarks that were in force in 2011 according to the year in which they were originally registered. Data for several larger offices, such as Brazil, China, France and Japan, are not included in this graph, as their trademarks in force statistics are not broken down by year of registration.

This sample of offices shows that about 24% of trademarks registered in 1980 were still in force in 2011. These registrations, which have been valid for over 30 years, reflect the enduring value of certain marks. For trademarks registered in the 1990s, the percentage jumps to over 40%.

Of these 12.4 million registrations in force, about a quarter of them have a recent registration year of between 2009 and 2011.

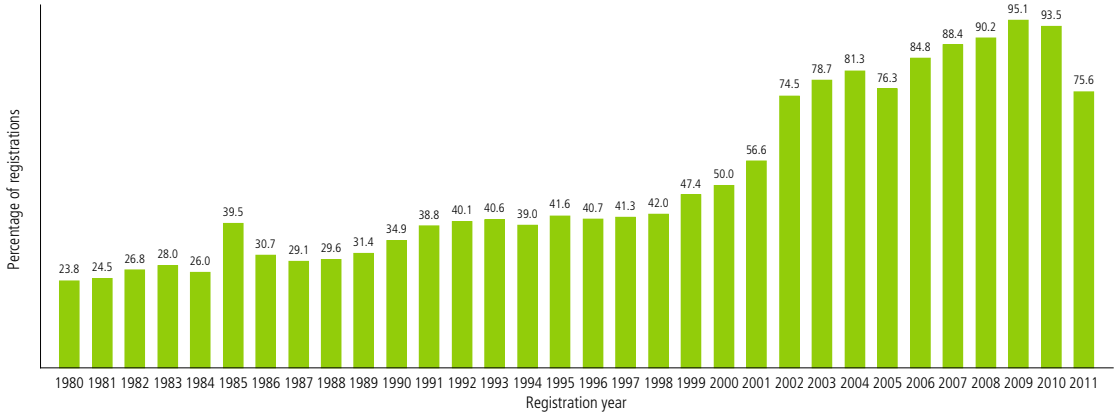
Figure B.8.1 Trademarks in force for selected offices, 2011



Note: '..' = not available; OHIM = Office for Harmonization in the Internal Market; Data refer to the number of registrations in force and are not equivalent to the number of classes specified in these registrations.

Source: WIPO Statistics Database, October 2012

Figure B.8.2 Trademarks in force in 2011 as a percentage of total registrations



Note: This graph is based on actual data received from 54 offices (including all larger offices except Brazil, China, France and Japan) that provide a breakdown of trademarks in force by year of registration.

Source: WIPO Statistics Database, October 2012

SECTION C
INDUSTRIAL DESIGNS

This section provides an overview of industrial design activity using a range of indicators and covering the following areas: a) industrial design applications, b) industrial design registrations, c) industrial design applications by class, d) international registrations of industrial designs through the WIPO-administered Hague System for the International Registration of Industrial Designs (Hague system) and e) industrial designs in force. It first gives statistics for applications and registrations, followed by statistics on design counts taking into consideration institutional differences across intellectual property (IP) offices. In particular, some offices allow applications to contain more than one design for the same product or within the same class, while other offices allow only one design per application.

Industrial designs are applied to a wide variety of industrial products and handicrafts.[1] They refer to the ornamental or aesthetic aspects of a useful article, including compositions of lines or colors or three-dimensional forms that give a special appearance to a product or handicraft. The holder of a registered industrial design has exclusive rights over the design and can prevent unauthorized copying or imitation of the design by third parties.

The procedures for registering industrial designs are governed by national or regional laws. An industrial design can be protected if it is new or original, and rights are limited to the jurisdiction of the issuing authority. Industrial design registrations can be obtained by filing an application with a relevant national or regional IP office, or by filing an international application through the Hague system. Once a design is registered, the term of protection is generally five years, and may be renewed for additional periods of five years up to, in most cases, 15 years. In a significant number of countries, industrial designs are protected through the delivery of a design patent rather than a design registration. For the sake of simplicity, this section refers to design applications and registrations, with "registration" covering, where applicable, design patents.

The Hague system consists of several international treaties – the London Act, the Hague Act and the Geneva Act.[2] The Hague system makes it possible for an applicant to register industrial designs in multiple countries by filing a single application with the International Bureau of WIPO. By allowing the filing of up to 100 different designs per application, the system offers significant opportunities for efficiency gains. Moreover, it simplifies the process of multinational registration by reducing the requirement to file separate applications with each IP office at which protection is sought. The system also streamlines the subsequent management of the industrial design registration, since it is possible to record changes or to renew the registration through a single procedural step. For further details about the Hague system, refer to: *www.wipo.int/hague/en/.*

1 From technical and medical instruments to watches, jewelry and other luxury items; house wares and electrical appliances to vehicles and construction elements; textile designs to leisure goods

2 The London Act has been frozen since January 2010.

C.1

Industrial design applications and registrations worldwide

Data reported in this subsection refer to numbers of applications and registrations (i.e., application/registration counts), but they do not take into consideration the number of designs contained in an application or registration (design counts). Subsections C.2 and C.3 report design count data.

C.1.1 Applications worldwide

Figure C.1.1.1 depicts the total number of industrial design applications filed worldwide from 2001 to 2011.[3] World totals are WIPO estimates covering around 133 offices, and include both direct national and regional applications and designations received via international registrations through the Hague system.[4]

The long-term trend shows continuous growth in industrial design applications over the past decade. The number of applications increased from around 290,800 in 2000 to 775,700 in 2011. After a slowdown in growth in 2008 and 2009, applications rebounded strongly in 2010 (+13.9%) and 2011 (+16%). This was mostly due to strong growth in applications in China – accounting for 90% of all growth from 2009 to 2011. The contribution of the State Intellectual Property Office of the People's Republic of China (SIPO) to the growth in applications worldwide was substantial – growth worldwide excluding SIPO was only 2.8% in 2011. Unlike other forms of IP, the recent economic downturn did not lead to a decline in applications worldwide.[5]

Figure C.1.1.2 provides a breakdown of industrial design applications worldwide by residency of the applicant. A resident application is defined as an application filed at an IP office by an applicant residing in the country in which that office has jurisdiction.[6] For example, an application filed at the office of Switzerland by a resident of Switzerland is considered a resident application for that office. Similarly, a resident registration is an industrial design registration based on a resident application. A non-resident application is defined as an application filed at an office of a given country or jurisdiction by an applicant residing in another country. For example, an application filed with the office of Australia by an applicant residing in Canada is considered a non-resident application for the Australian IP office. Similarly, a non-resident registration is an industrial design registration based on a non-resident application. An application at a regional office is considered a resident application if the applicant is a resident of one of that office's member states, and a non-resident application if the applicant does not reside in one of its member states.[7]

The 775,700 applications filed in 2011 consisted of 691,200 resident and 84,500 non-resident applications. Compared to 2010, the number of resident applications grew by almost 100,000 in 2011 (+16%), while non-resident applications grew by a more modest 7,900 (+10.3%). Residents of China accounted for nearly all the growth in resident applications worldwide.

3 Data differ from past editions due to a significant correction in data for the Office for Harmonization in the Internal Market (OHIM) of the European Union.

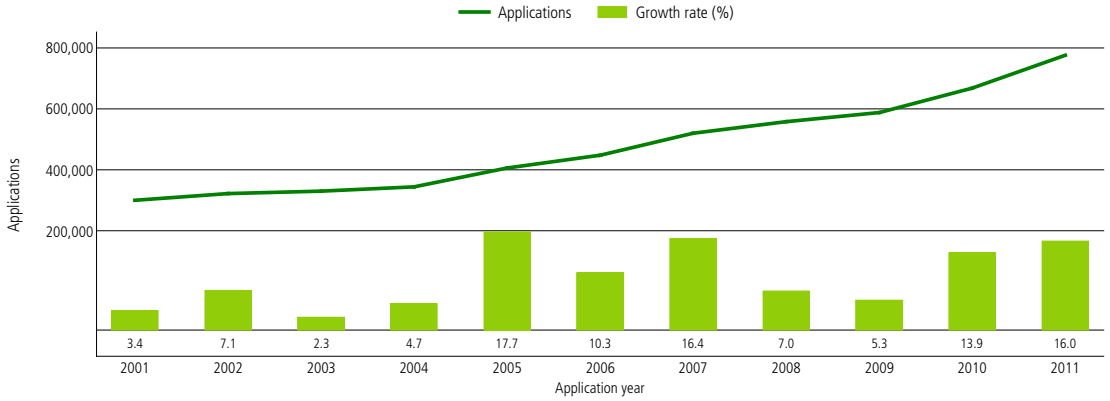
4 All indicators covered by this section include both direct national and regional applications and designations received via international registrations through the Hague system.

5 In 2009, patent and trademark applications worldwide declined by 3.6% and 2.1%, respectively.

6 In this section, the generic term "IP office" is used to refer to an office that receives industrial design applications and issues registrations.

7 Resident and non-resident applications (registrations) are also known as domestic and foreign applications (registrations).

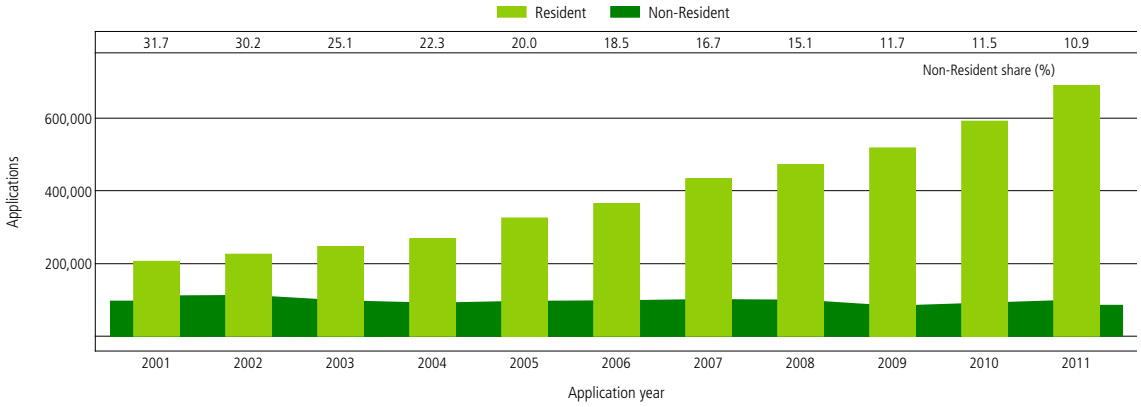
Figure C.1.1.1 Industrial design applications worldwide



Note: World totals are WIPO estimates covering around 133 offices (see Data Description). These estimates include direct national and regional applications and designations received via the Hague system.

Source: WIPO Statistics Database, October 2012

Figure C.1.1.2 Resident and non-resident industrial design applications worldwide



Note: See note for Figure C.1.1.1.

Source: WIPO Statistics Database, October 2012

At the global level, non-resident applications accounted for 10.9% of applications worldwide in 2011 (Figure C.1.1.2).[8] Compared to other types of IP rights, industrial design applications exhibit a low non-resident share. The graph shows a downward trend in the non-resident share since 2001, which can be explained by the substantial growth in Chinese resident applications.

Statistics concerning "Class" refer to the 32 classes of the International Classification for Industrial Designs under the Locarno Agreement (see *www.wipo.int/classifications/en/)*, henceforth referred to as the Locarno Classification. Table C.1.1.3 shows the distribution of industrial design applications by class covering data for 85 offices.[9] Unfortunately, application data broken down by class are not available for a number of larger offices (e.g., China, Japan, the Republic of Korea and the United

8 The non-resident share in total applications, excluding SIPO data, was around 28% in 2011. SIPO accounted for 67% of applications worldwide, hence it significantly affects the worldwide resident and non-resident distribution.

9 These numbers are based on direct filing data from 30 offices, Hague designation data from 32 offices, and both direct and Hague data from 23 offices.

States of America (US)); therefore the table provides only a partial picture of industrial design filing activity by class. For the offices for which data are available, class 6 (furnishing) was the largest class, accounting for 10.8% of total applications in 2011, followed by classes 5 (textiles, etc., 8%) and 9 (packages, etc., 7.7%).[10] Class 6 has been the largest class since 2008 with its share in total applications comprising around 10%.[11] The top 10 classes accounted for three-fifths of total applications in 2011.

Table C.1.1.3 Industrial design applications worldwide by class, 2011

Class number	Class name	Number of Applications	Total share
6	Furnishing	16,503	10.8%
5	Textile piecegoods, artificial and natural sheet material	12,099	8.0%
9	Packages and containers for the transport or handling of goods	11,697	7.7%
2	Articles of clothing and haberdashery	10,366	6.8%
12	Means of transport or hoisting	7,900	5.2%
11	Articles of adornment	7,722	5.1%
7	Household goods, not elsewhere specified	6,812	4.5%
32	Graphic symbols and logos, surface patterns, ornamentation	6,719	4.4%
26	Lighting apparatus	6,608	4.3%
14	Recording, communication or information retrieval equipment	6,555	4.3%
25	Building units and construction elements	6,196	4.1%
23	Fluid distribution equipment, sanitary, heating, ventilation and air-conditioning equipment, solid fuel	5,640	3.7%
10	Clocks and watches and other measuring instruments, checking and signalling instruments	5,319	3.5%
8	Tools and hardware	5,224	3.4%
19	Stationery and office equipment, artists' and teaching materials	4,821	3.2%
21	Games, toys, tents and sports goods	3,908	2.6%
3	Travel goods, cases, parasols and personal belongings, not elsewhere specified	3,780	2.5%
13	Equipment for production, distribution or transformation of electricity	3,294	2.2%
15	Machines, not elsewhere specified	2,905	1.9%
24	Medical and laboratory equipment	2,250	1.5%
20	Sales and advertising equipment, signs	1,969	1.3%
28	Pharmaceutical and cosmetic products, toilet articles and apparatus	1,762	1.2%
1	Foodstuffs	1,258	0.8%
4	Brushware	1,079	0.7%
16	Photographic, cinematographic and optical apparatus	788	0.5%
30	Articles for the care and handling of animals	724	0.5%
22	Arms, pyrotechnic articles, articles for hunting, fishing and pest killing	501	0.3%
31	Machines and appliances for preparing food or drink, not elsewhere specified	496	0.3%
18	Printing and office machinery	437	0.3%
27	Tobacco and smokers' supplies	368	0.2%
29	Devices and equipment against fire hazards, for accident prevention and for rescue	230	0.2%
17	Musical instruments	213	0.1%
--	Unknown	5,984	3.9%

Note: These numbers are based on data from 85 IP offices; however, for a number of larger offices (e.g., China, Japan, the Republic of Korea and the US) industrial design data broken down by class count are not available. Numbers consist of direct filing data from 30 offices, Hague designation data from 32 offices, and both direct and Hague data from 23 offices.

Source: WIPO Statistics Database, October 2012

10 Considerable variations exist across offices (see Table C.2.1.5).

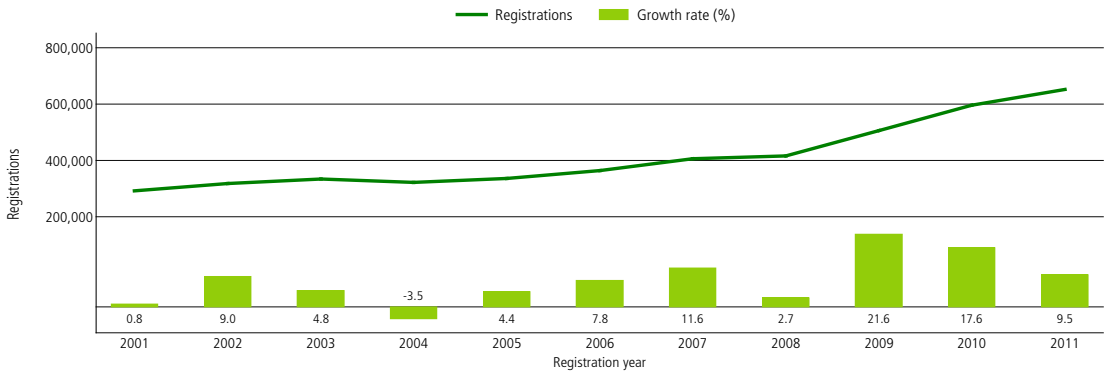
11 2008 is the first year for which complete industrial design application data broken down by class are available.

C.1.2 Registrations worldwide

Similar to applications, the number of registrations issued each year has markedly increased since 2001. The past three years saw considerable growth in registrations worldwide – from 416,500 in 2008 to 651,700 in 2011. The large increase is mostly due to strong growth at SIPO, which issued 238,689 more industrial designs in 2011 than in 2008.

Resident applicants accounted for the bulk of registrations worldwide. This reflects the fact that resident applicants file the majority of applications worldwide. The non-resident share in all registrations declined from 32.8% in 2001 to 11.5% in 2011 – a similar trend to the one for applications.[12] The decline in the non-resident share was due to considerable growth in Chinese resident registrations and a decline in non-resident registrations worldwide. The estimated numbers of resident and non-resident registrations in 2011 stood at around 576,500 and 75,200, respectively (Figure C.1.2.2).

Figure C.1.2.1 Industrial design registrations worldwide



Note: World totals are WIPO estimates covering around 108 offices (see Data Description). These estimates include registrations issued for direct applications and designations received via the Hague system.

Source: WIPO Statistics Database, October 2012

Figure C.1.2.2 Resident and non-resident industrial design registrations worldwide

Note: See note for Figure C.1.2.1.

Source: WIPO Statistics Database, October 2012

12 SIPO accounted for 58% of registrations worldwide; therefore, it greatly affects the worldwide resident and non-resident distribution. Excluding SIPO data, the non-resident share in total registrations was around 22% in 2011.

C.2

INDUSTRIAL DESIGN APPLICATIONS AND REGISTRATIONS BY OFFICE

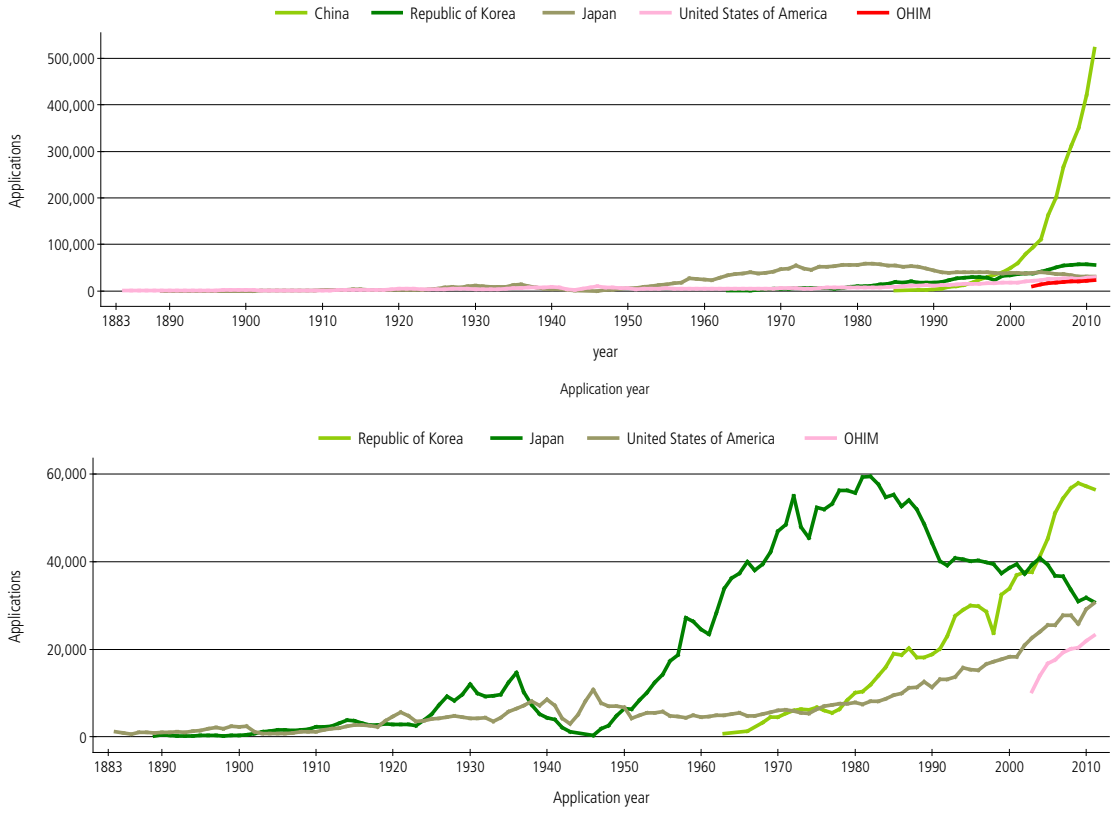
This subsection offers a detailed breakdown of industrial design applications and registrations by IP office. Comparing application and registration data provides some useful insights into the level of activity at offices. In principle, institutional differences limit the extent to which one can directly compare the data across countries. As mentioned earlier, some offices permit applications to contain more than one design for the same product or within the same class, while other offices allow only one design per application. Therefore, to enable better cross-country comparability, this subsection reports data – where available – on the number of designs contained in applications and registrations (i.e., design counts).

For simplicity, country names are used rather than office names to label graphs. As an example, industrial design data for China are labeled as "China" rather than "State Intellectual Property Office of the People's Republic of China".

C.2.1 Applications by office

Figure C.2.1.1 presents the long-term trend of applications received by the top five offices between 1883 and 2011. The data refer to application counts rather than

Figure C.2.1.1 Trend in industrial design applications for the top five offices



Note: OHIM = Office for Harmonization in the Internet Market

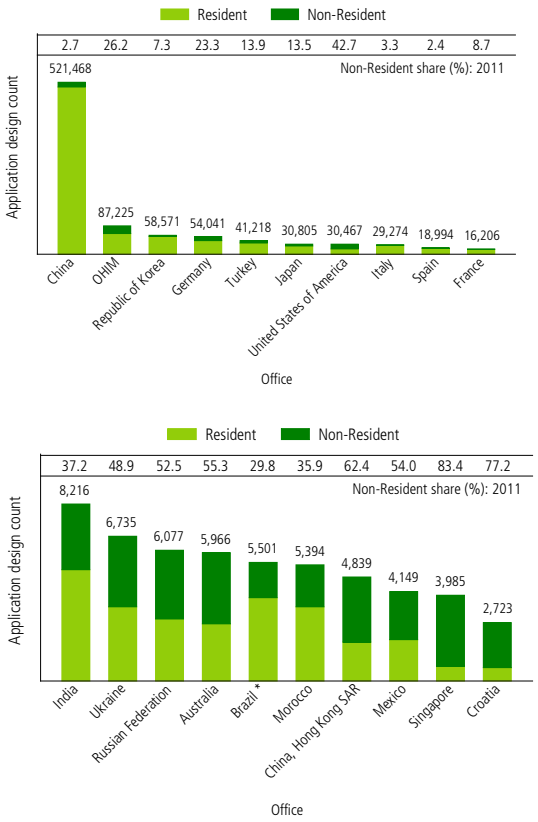
Source: WIPO Statistics Database, October 2012

design counts due to the unavailability of historical design count data. The Japan Patent Office (JPO) received the largest number of applications from the 1950s to the late 1990s, when it was surpassed by SIPO. Industrial design applications were first received at SIPO in 1985, and numbers grew at a modest pace until the early 2000s, after which they experienced exponential growth. Since the early 1980s, the number of applications received by the JPO has followed a downward trend. In contrast, the Korean Intellectual Property Office (KIPO) and the United States Patent and Trademark Office (USPTO) exhibit an upward trend. In 2004, KIPO surpassed the JPO and has maintained second position ever since. The Office for Harmonization in the Internal Market (OHIM) began issuing the Registered Community Design (RCD) in 2003. Its application numbers increased from around 10,400 in 2003 to around 23,100 in 2011.[13]

Figure C.2.1.2 depicts the number of designs contained in applications filed for the top 20 offices. China – with more than 521,000 designs – is the largest office by far. OHIM, KIPO and the IP office of Germany each received applications containing more than 54,000 designs. Among the top 20 offices, 9 are located in middle-income countries.

For the majority of the reported offices, the non-resident share was considerably higher than the global average (10.9%). Non-resident applicants accounted for the majority of design counts at the IP offices of Australia, China Hong Kong (SAR), Croatia, Mexico, the Russian Federation and Singapore. In contrast, the non-resident share stood below 5% at the IP offices of China, Italy and Spain. For most offices, the 2011 non-resident share was higher than in 2010.

Figure C.2.1.2 Application design counts for the top 20 offices, 2011



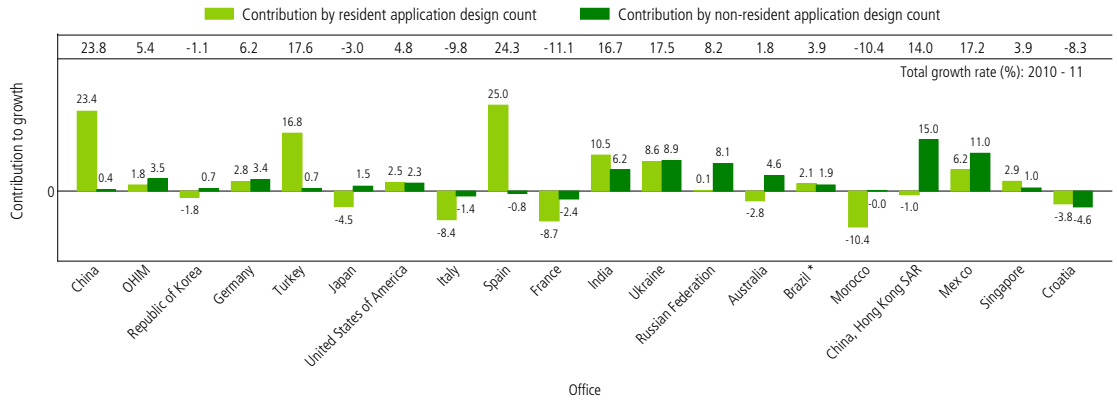
Note: *2010 data; OHIM = Office for Harmonization in the Internet Market

Source: WIPO Statistics Database, October 2012

The majority of the offices presented in Figure C.2.1.3 saw growth in design counts in 2011 compared to 2010. Seven of them experienced double-digit growth. The IP offices of Croatia, France, Italy and Morocco saw considerable declines in design counts, reflecting declines in resident applications. The contribution of resident and non-resident applications to total growth varied widely across offices. Almost all the growth at the IP offices of China, Spain and Turkey reflected growth in resident applications. In contrast, growth in non-resident applications was the main contributor to total growth at the IP offices of China Hong Kong (SAR) and the Russian Federation.

13 See footnote 3.

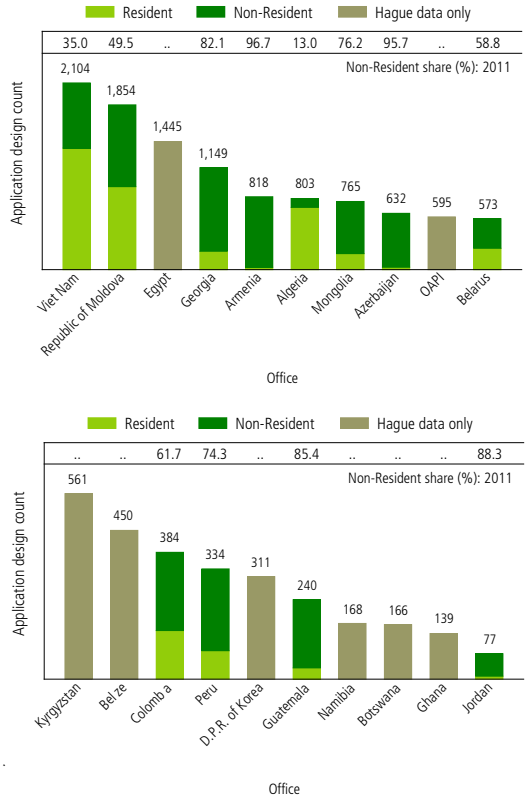
Figure C.2.1.3 Contribution of resident and non-resident application design counts to total growth for the top 20 offices, 2010-11



Note: *Growth rate refers to 2009-2010; OHIM = Office for Harmonization in the Internet Market

Source: WIPO Statistics Database, October 2012

Figure C.2.1.4 Application design counts for selected middle- and low-income countries, 2011



Note: '..' = not available; OAPI = African Intellectual Property Organization

Source: WIPO Statistics Database, October 2012

Figure C.2.1.4 shows design count data for offices of selected middle- and low-income countries.[14] For several offices, this figure includes only Hague designation data, as statistics from the national IP office are unavailable. Among the reported offices, Viet Nam saw the largest number of design counts (2,104 designs), followed by the Republic of Moldova, Egypt and Georgia. These four offices received more than 1,100 designs each.

The non-resident share in total design counts for the reported offices was substantially higher than the non-resident share observed for the top 10 offices (see Figure C.2.1.2). The majority of design counts at these offices were of foreign origin. Algeria was the only exception, with local applicants accounting for the bulk of total design counts.

14 The selected offices are from different world regions. Data for all available offices are presented in the statistical annex.

Table C.2.1.5 Industrial design applications by class for selected office, 2011

Class number	Class name	Office									
		AU	CA	DE	EM	FR	HK	IN	RU	TH	TR
1	Foodstuffs	69	62	279	195	18	23	36	60	39	57
2	Articles of clothing and haberdashery	472	357	5,285	1,383	339	118	216	91	117	560
3	Travel goods, cases, parasols and personal belongings, not elsewhere specified	118	52	1,199	855	206	173	82	37	52	162
4	Brushware	80	156	153	158	6	41	49	36	28	61
5	Textile piecegoods, artificial and natural sheet material	24	40	10,599	163	17	89	422	136	60	18
6	Furnishing	362	247	8,056	2,541	524	88	684	120	606	1,679
7	Household goods, not elsewhere specified	467	404	1,203	1,605	171	278	428	176	155	763
8	Tools and hardware	457	326	664	1,315	117	69	647	116	272	424
9	Packages and containers for the transport or handling of goods	681	662	993	2,198	243	368	1,034	502	338	719
10	Clocks and watches and other measuring instruments, checking and signalling instruments	76	69	1,009	775	69	418	142	102	91	231
11	Articles of adornment	97	55	4,151	656	284	292	299	162	129	233
12	Means of transport or hoisting	506	391	1,176	1,599	203	79	751	441	472	354
13	Equipment for production, distribution or transformation of electricity	136	127	349	693	38	110	526	150	93	97
14	Recording, communication or information retrieval equipment	349	564	894	1,766	113	1,055	347	262	107	129
15	Machines, not elsewhere specified	196	85	184	717	24	49	292	153	141	292
16	Photographic, cinematographic and optical apparatus	42	58	90	315	31	28	34	32	28	23
17	Musical instruments	7	4	60	54	19	4	3	1	7	9
18	Printing and office machinery	8	8	106	58	5	38	30	21	11	7
19	Stationery and office equipment, artists' and teaching materials	51	55	1,821	571	136	131	155	339	107	183
20	Sales and advertising equipment, signs	85	159	581	356	105	40	19	45	27	162
21	Games, toys, tents and sports goods	271	150	901	883	174	473	101	83	69	120
22	Arms, pyrotechnic articles, articles for hunting, fishing and pest killing	37	36	50	131	18	5	14	11	9	40
23	Fluid distribution equipment, sanitary, heating, ventilation and air-conditioning equipment, solid fuel	407	313	515	1,365	83	259	550	200	368	358
24	Medical and laboratory equipment	192	175	200	749	22	27	247	82	47	86
25	Building units and construction elements	322	157	2,263	897	283	44	137	167	216	424
26	Lighting apparatus	189	277	2,571	1,424	186	363	359	109	68	245
27	Tobacco and smokers' supplies	5	19	88	60	15	15	31	5	5	26
28	Pharmaceutical and cosmetic products, toilet articles and apparatus	133	161	144	379	21	120	153	96	34	81
29	Devices and equipment against fire hazards, for accident prevention and for rescue	10	40	8	77	2	-	23	12	7	5
30	Articles for the care and handling of animals	44	18	338	162	39	5	14	4	8	20
31	Machines and appliances for preparing food or drink, not elsewhere specified	35	-	23	137	12	20	84	43	-	34
32	Graphic symbols and logos, surface patterns, ornamentation	-	-	2,555	1,064	944	3	-	189	-	1,272
--	Unknown	38	-	4,629	-	-	14	278	632	38	-

Note: AU (Australia), CA (Canada), DE (Germany), EM (Office for Harmonization in the Internal Market), FR (France), HK (China, Hong Kong (SAR)), IN (India), RU (Russian Federation), TH (Thailand) and TR (Turkey). Class data for the IP offices of China, Japan, the Republic of Korea and the US are unavailable. Data refer to application counts rather than design counts.

Source: WIPO Statistics Database, October 2012

Table C.2.1.5 reports industrial design applications by class for selected offices. Data refer to application counts. Class data for the JPO, KIPO, SIPO and the USPTO – four larger offices – are unavailable.[15] The class distribution varied considerably among offices. Worldwide, class 6 (furnishing) accounted for the largest share in total applications (Table C.1.1.3); however, for the reported offices, class 6 had the largest share in total applications at only three offices, namely OHIM and the IP offices of Thailand and Turkey. The offices of Australia, Canada, India and the Russian Federation received the largest

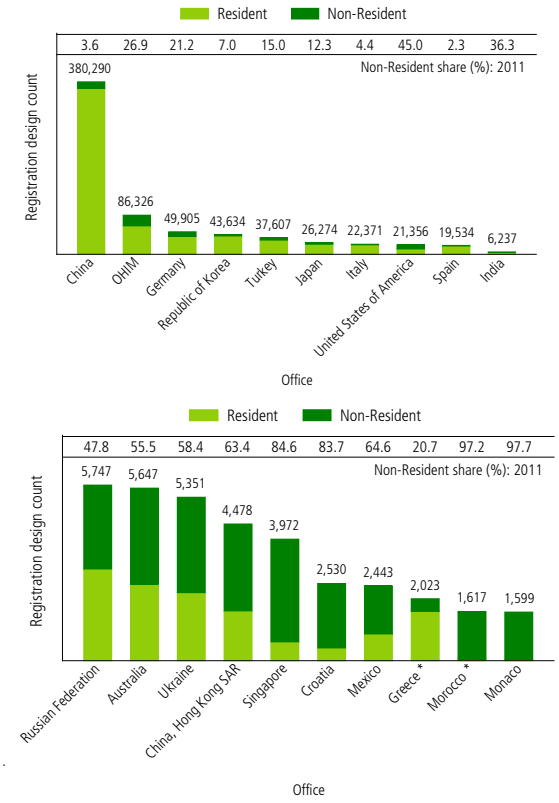
15 For the USPTO, class data are available for registrations, but not applications. Class 14 (recording, communications, etc.) accounted for the largest share (10.7%) of all registrations at the USPTO in 2011.

numbers of applications for class 9 (packages, etc.). Class 5 (textiles, piecegoods, etc.) – the second largest class at the worldwide level – accounted for the largest share for the IP office of Germany. The combined share of the top three classes ranged from 45.1% in Germany to 25.7% at OHIM.

C.2.2 Registrations by office

Figure C.2.2.1 depicts the number of designs contained in registrations for the top 20 offices. There are strong similarities between application and registration data for most offices.[16] However, a few exceptions exist, notably for the IP offices of Mexico and the Republic of Korea, where the difference between application and registration design counts is considerable. The number of designs registered at SIPO (380,290) was 4.4 times more than the number registered at OHIM – the second largest office. The gap between these two offices was smaller for registrations than for applications (6 times). Residents accounted for the bulk of registrations at SIPO. Along with Spain (2.3%), China (3.6%) saw the lowest non-resident share of registrations. This is in contrast to the IP offices of Monaco and Morocco, where their non-resident shares stood at around 97%.

Figure C.2.2.1 Registration design counts for the top 20 offices, 2011



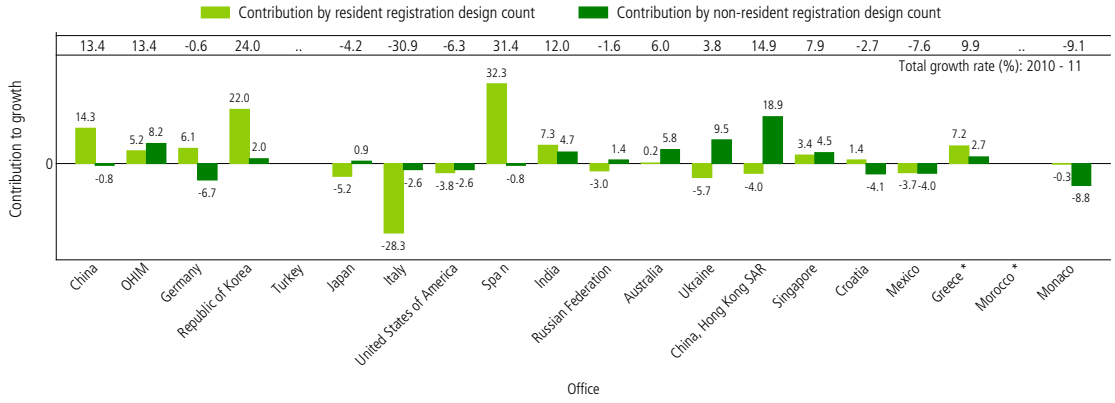
Note: *2010 data; Registration data for Brazil and France - two larger offices in terms of application data (see Figure C.2.1.2) – are not available; OHIM = Office for Harmonization in the Internet Market

Source: WIPO Statistics Database, October 2012

Figure C.2.2.2 shows the contribution of resident and non-resident growth to overall growth for the top 20 offices. Like for applications, this varied considerably across offices. Growth in resident registrations accounted for almost all the growth at SIPO and the IP offices of the Republic of Korea and Spain. Growth at the offices of Australia, China Hong Kong (SAR) and Ukraine reflected growth in non-resident registrations. Italy, Mexico, Monaco and the US saw declines in both resident and non-resident registrations.

16 This may reflect the fact that, for many offices, the registration process involves only a formality examination.

Figure C.2.2.2 Contribution of resident and non-resident registration design counts to total growth for the top 20 offices, 2010-11



Note: '..' = not available; *Growth rate refers to 2009-2010; OHIM = Office for Harmonization in the Internet Market

Source: WIPO Statistics Database, October 2012

C.3

INDUSTRIAL DESIGN APPLICATIONS AND REGISTRATIONS BY ORIGIN

Applications at regional offices are equivalent to multiple applications in each of their member states. This subsection reports figures based on equivalent applications or registrations. To calculate equivalent applications or registrations, a filing at the African Intellectual Property Organization (OAPI), the Benelux Office for Intellectual Property (BOIP) or OHIM is counted multiple times according to the number of each office's member states. By contrast, an application filed at the African Regional Intellectual Property Organization (ARIPO) is counted as one application abroad if the applicant does not reside in a member state and as one resident and one application abroad if the applicant resides in one of its member states. This method may underestimate filings at ARIPO, as filings there may lead to protection in more than one jurisdiction. However, there is insufficient information on designations or validations in ARIPO member states, which has led to the adoption of the above counting method.

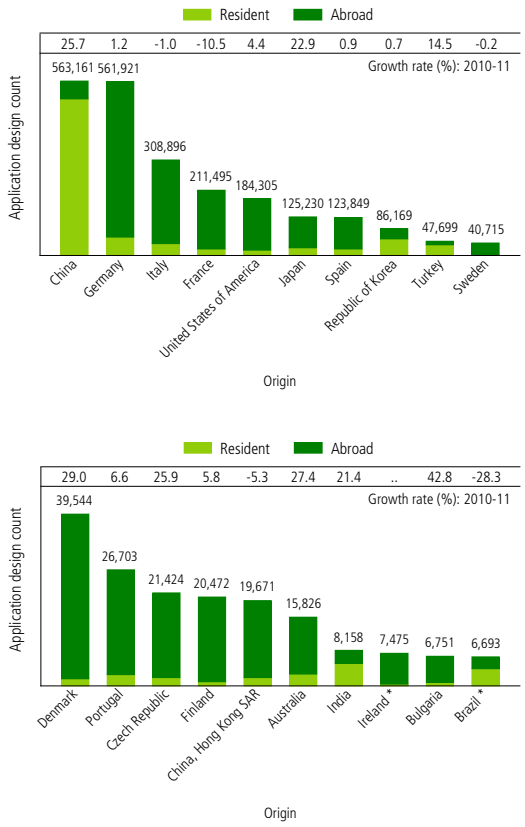
In this subsection, the terms "designs", "applications" and "registrations" refer to equivalent design counts, unless otherwise stated.

C.3.1 Equivalent applications and registrations by origin

Figure C.3.1.1 depicts the number of equivalent design counts for the top 20 origins in 2011. The number of equivalent design counts from residents of China and Germany were of similar magnitude and their combined total stood at around 1.1 million. Equivalent design counts filed by residents of China grew rapidly over the past few years, with China surpassing Germany to become the top origin in 2011. Residents of China filed the bulk of their applications with SIPO (90%), while their applications abroad constituted the remaining small fraction. In contrast, applications abroad (89%) constituted the bulk of total design counts for German residents. The top 20 list mostly consists of European countries, partly reflecting the OHIM multiplier. Eight of the top 20 origins saw double-digit growth in equivalent design counts between 2010 and 2011. France is the only origin to have seen a considerable decline.[17]

17 Brazil saw a 28% decrease, but its data refer to 2009-2010.

Figure C.3.1.1 Equivalent application design counts for the top 20 origins, 2011



Note: '..' = not available; *2010 data; and growth rate refers to 2009-2010.

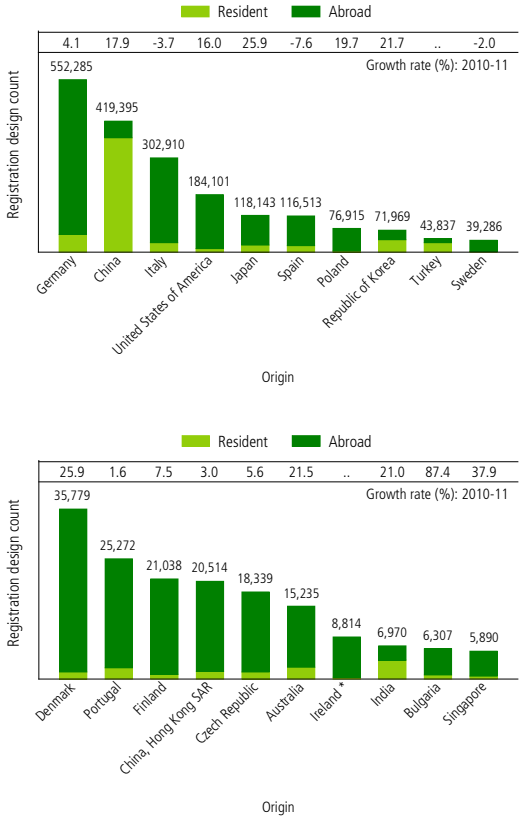
Source: WIPO Statistics Database, October 2012

Figure C.3.1.2 depicts the number of designs contained in equivalent registrations for the top 20 origins. With 552,285 designs, German applicants accounted for the highest number of designs registered worldwide in 2011, followed by applicants from China (with 419,395 designs) and Italy (with 302,910 designs). The top 20 list mostly consists of European countries, again reflecting the OHIM multiplier. For all origins reported, the numbers of design counts in applications and registrations were of similar magnitude, except for China.

For all origins, except China, India, the Republic of Korea and Turkey, more than four-fifths of all designs were registered abroad. This is similar to the pattern observed for equivalent application design counts (Figure C.3.1.1). The high share of registrations abroad once again reflects the OHIM multiplier.

All origins, except Italy, Spain and Sweden, saw a higher number of designs registered in 2011 than in 2010. Italy and Sweden saw declines in both applications and registrations over the same period.

Figure C.3.1.2 Equivalent registration design counts for the top 20 origins, 2011



Note: '..' = not available; *2010 data

Source: WIPO Statistics Database, October 2012

C.3.2 Industrial design applications by office and origin

Table C.3.2 presents a breakdown of the number of designs contained in applications by origin (source) and office (destination) for the top offices and origins. The table provides a detailed picture of industrial design application flows across countries.

In all reported offices, except Australia, the Russian Federation and OHIM, residents accounted for the largest share of applications.

Excluding residents of the country concerned, residents of the US accounted for the largest share of total applications in Australia, India, Japan and the Russian Federation. In China, the Republic of Korea and the US, residents of Japan accounted for the largest share. The largest non-resident share at the IP offices of France, Morocco, Spain, Turkey and Ukraine belonged to residents of Switzerland.

Table C.3.2 Application design counts by office and origin: top offices and origins, 2011

Origin	Office														
	CN	EM	KR	DE	TR	JP	US	IT	ES	FR	IN	UA	RU	AU	MA
Australia	201	459	17	-	-	44	387	-	-	-	41	-	6	2,664	-
Austria	84	2,314	9	5,315	22	25	185	-	-	-	10	-	34	29	-
China	507,538	1,985	125	137	8	144	932	-	-	10	45	4	38	88	2
China, Hong Kong SAR	-	643	9	20	1	51	294	-	-	28	11	-	5	28	-
France	454	7,078	86	54	516	179	545	44	17	14,795	80	149	125	81	363
Germany	1,286	18,983	258	41,441	431	361	1,297	22	2	73	319	137	452	186	50
India	22	107	2	5	3	1	64	-	-	-	5,156	1	1	1	1
Italy	524	10,157	93	4,463	162	144	506	28,306	-	24	80	6	97	51	-
Japan	4,532	3,199	1,757	138	121	26,658	2,490	3	3	5	625	38	393	352	1
Morocco	-	1	-	30	1	-	-	35	-	39	-	-	-	-	3,457
Netherlands	444	2,362	102	96	52	111	169	-	-	1	179	19	167	117	-
Poland	34	2,991	-	49	17	-	51	-	-	27	7	63	47	-	-
Republic of Korea	1,521	1,040	54,300	29	18	545	1,246	6	4	6	3	-	185	49	-
Russian Federation	33	86	-	2	27	2	18	2	-	-	5	270	2,887	4	1
Spain	124	3,857	27	183	109	26	104	-	18,540	28	27	57	18	11	10
Switzerland	472	6,374	122	558	1,732	335	252	58	45	108	234	1,164	254	157	1,056
Turkey	36	421	-	61	35,488	-	13	-	10	27	17	52	34	1	-
Ukraine	1	20	-	14	13	-	1	14	1	13	-	3,444	90	-	-
United Kingdom	318	5,307	99	5	57	192	878	3	1	8	241	72	115	258	40
United States of America	2,490	5,770	1,211	203	155	1,311	17,443	19	3	86	791	59	643	1,330	3
Other / Unknown	1,354	14,071	354	1,238	2,285	676	3,592	762	368	928	345	1,200	486	559	410
Total	521,468	87,225	58,571	54,041	41,218	30,805	30,467	29,274	18,994	16,206	8,216	6,735	6,077	5,966	5,394

Note: CN (China), EM (Office for Harmonization in the Internal Market), KR (Republic of Korea), DE (Germany), TR (Turkey), JP (Japan), US (United States of America), IT (Italy), ES (Spain), FR (France), IN (India), UA (Ukraine), RU (Russian Federation), AU (Australia) and MA (Morocco)

Source: WIPO Statistics Database, October 2012

C.4

Industrial design registrations through the Hague system

An applicant seeking protection for an industrial design in a number of countries or jurisdictions can choose to file an application directly with each national or regional IP office or a single application via the Hague system. The Hague system makes it possible for an applicant to register industrial designs in multiple Contracting Parties by filing a single application with the International Bureau of WIPO. Moreover, each application filed under the Hague system may contain up to 100 different designs. An application for international registration of an industrial design leads to its recording in the International Register and the publication of the registration in the International Designs Bulletin. A registration recorded in the International Register has the same effect as one made directly with each designated contracting party, unless the IP office of a specific contracting party issues a refusal. In 2011, the Hague system comprised 60 members.

C.4.1 International registrations of industrial designs

The International Bureau of WIPO recorded 2,363 international registrations for industrial designs in 2011, corresponding to an increase of 6.6% on 2010. The last four years saw considerable growth in registrations, although growth rates varied considerably.

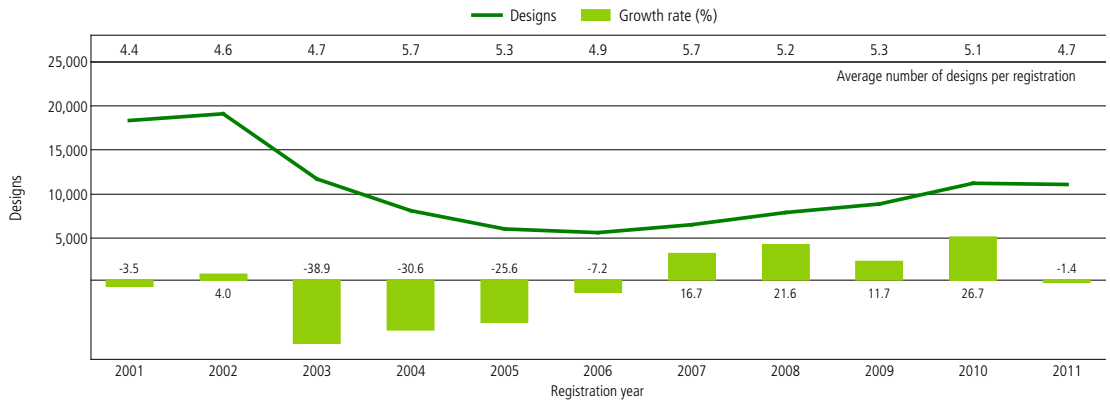
The large decline witnessed after 2002 can be explained by the availability of the RCD issued by OHIM. This enables applicants to file a single application for protection across all European Union (EU) member states. Applicants seeking protection in EU markets began to use the RCD rather than the Hague system. However, international registrations rebounded strongly in 2008, which corresponds to the year the EU became a member of the Hague system. As a result, a single Hague registration can lead to design protection across all EU member states, as well as in other members of the Hague system, for example, Switzerland and Turkey.

As mentioned earlier, the Hague system permits a single international registration to include up to 100 different designs, provided they relate to products of the same class listed in the Locarno Classification. After four years of growth, the total number of designs contained in international registrations declined by 1.4% in 2011 (Figure C.4.1.2). The total number of designs in registrations fell from 11,238 in 2010 to 11,077 in 2011. This decrease in the total number of designs, despite growth in international registrations, reflected a drop in the average number of designs per registration from 5.1 in 2010 to 4.7 in 2011. The average number of designs per registration varied between 4.4 and 5.7 over the period 2001-2011.

Figure C.4.1.1 International registrations of industrial designs

Source: WIPO Statistics Database, October 2012

Figure C.4.1.2 Designs contained in international registrations



Source: WIPO Statistics Database, October 2012

Figure C.4.1.3 depicts the number of designs contained in international registrations by country of origin for the top 20 origins. A registration is allocated to the applicant's "true" origin rather than to the Hague member in respect of which the applicant fulfilled the condition for filing the application.[18] For this reason, countries that are not members of the Hague system, such as the US, appear in the origin list. Holders residing in Germany owned the largest number of designs contained in international registrations, followed by Switzerland and the US. Together, Germany and Switzerland accounted for more than half of all designs contained in Hague registrations in 2011. The US – a non-member – accounted for around one-tenth of the 2011 total. The top three origins saw growth in designs registered in 2011. As a result, their combined share of the total increased from 58.5% in 2010 to 63.8% in 2011. Several origins saw fewer designs registered in 2011 than in 2010.

Figure C.4.1.3 Designs contained in international registrations for the top 15 origins, 2011

Source: WIPO Statistics Database, October 2012

18 Applicants domiciled in a non-member country can file applications for international registrations if they have a real and effective industrial or commercial establishment in the jurisdiction of a Hague member country/region.

Table C.4.2 Top Hague applicants

2011 Rank	Applicant's Name	Origin	Hague International Applications		
			2009	2010	2011
1	THE PROCTER & GAMBLE COMPANY	United States of America	110	129	167
2	THE SWATCH GROUP MANAGEMENT SERVICES AG	Switzerland	81	75	70
3	KONINKLIJKE PHILIPS ELECTRONICS N.V.	Netherlands	33	87	64
4	THE GILLETTE COMPANY	United States of America	37	44	56
5	DAIMLER AG	Germany	20	36	55
6	SOCIÉTÉ DES PRODUITS NESTLÉ S.A.	Switzerland	12	24	47
7	VESTEL BEYAZ ESYA SANAYI VE TICARET ANONIM SIRKETI	Turkey	-	52	40
8	VOLKSWAGEN AG	Germany	32	46	38
9	LIDL STIFTUNG & CO. KG	Germany	36	20	28
10	BRAUN GMBH	Germany	25	30	25
11	PI-DESIGN AG	Switzerland	42	33	20
12	ALFRED KÄRCHER GMBH & CO. KG	Germany	20	18	15
12	HERMES SELLIER	France	21	14	15
14	FONKEL MEUBELMARKETING B.V.	Netherlands	18	20	14
14	MAPED	France	15	12	14
14	UNILEVER N.V.	Netherlands	14	21	14
17	ETA SA MANUFACTURE HORLOGÈRE SUISSE	Switzerland	4	2	12
17	LEIFHEIT AG	Germany	-	14	12
19	CARTIER CRÉATION STUDIO SA	Switzerland	15	18	11
19	GEBERIT INTERNATIONAL AG	Switzerland	-	10	11
19	NEOPERL GMBH	Germany	-	-	11

Note: Includes applicants with more than 10 applications in 2011

Source: WIPO Statistics Database, October 2012

C.4.2 Top Hague applicants

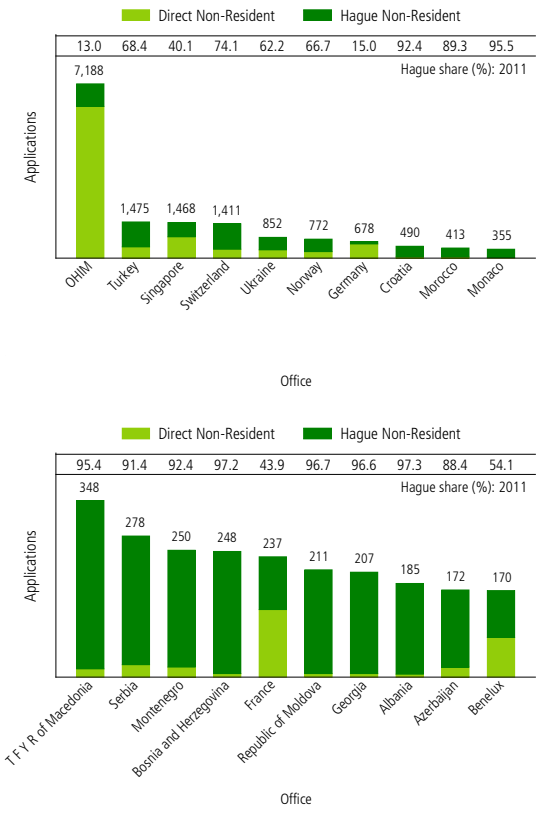
Table C.4.2 provides a list of top Hague applicants for the past three years. For the third consecutive year, the US-based company Procter & Gamble filed the highest number of international applications. Despite filing fewer applications in 2011 than in 2010, The Swatch Group Management Services AG and Koninklijke Philips Electronics N.V. were the second and third largest applicants. Among the 21 applicants shown, seven are located in Germany and six in Switzerland. Two of the top five applicants in 2011 were from the US, which is not a member of the Hague system (see footnote 18 for further explanation).

C.4.3 Non-resident industrial design applications by filing route for selected Hague members

Applicants seeking design protection in foreign jurisdictions can either file applications directly at national or regional IP offices or make use of the Hague system. Figure C.4.3 shows the breakdown of non-resident applications filed directly at offices and those filed via the Hague system. Worldwide, about 12.1% of all non-resident applications were filed via the Hague system in 2011. However, not all offices – notably China, the largest office in the world – are members of the Hague system. Data for Hague members show that 31.5% of all non-resident applications were filed through the Hague system.

The Hague share in total non-resident applications varied across IP offices. For a large number of offices, the Hague system accounted for the great majority of non-resident applications. In contrast, direct filings accounted for most non-resident applications received by OHIM and the IP office of Germany.

Figure C.4.3 Non-resident industrial design applications by filing route for selected Hague members



Note: Data refer to the number of industrial design applications and not the number of designs contained in applications; OHIM = Office for Harmonization in the Internet Market

Source: WIPO Statistics Database, October 2012

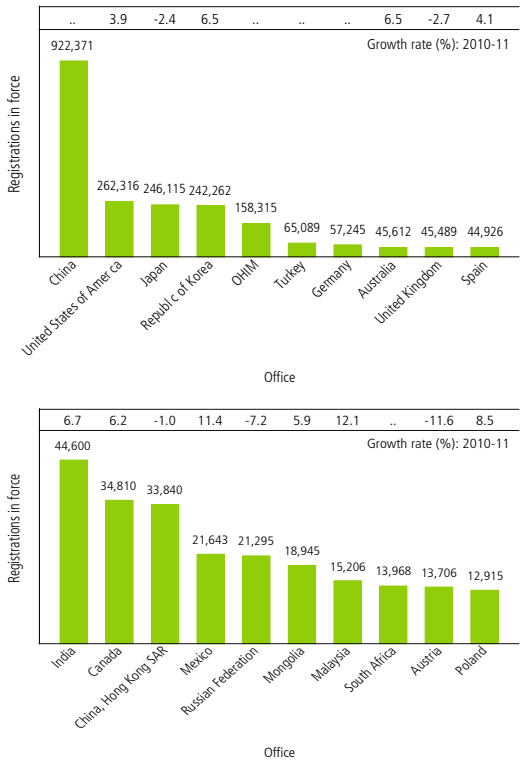
C.5

INDUSTRIAL DESIGN REGISTRATIONS IN FORCE

Industrial design registrations are valid for a limited period. The term of protection is usually 15 years; however, some offices provide protection for only 10 years.

In 2011, over 2.5 million industrial design registrations were in force worldwide.[19] SIPO had the largest number of registrations in force, accounting for around 37% of the world total (Figure C.5.1). SIPO had a larger number of registrations than the combined total of the USPTO, the JPO, KIPO and OHIM – the four largest offices after SIPO. Malaysia and Mexico saw the fastest growth on 2010, while Austria and the Russian Federation experienced considerable declines over the same period.

Figure C.5.1 Industrial design registrations in force by office, 2011

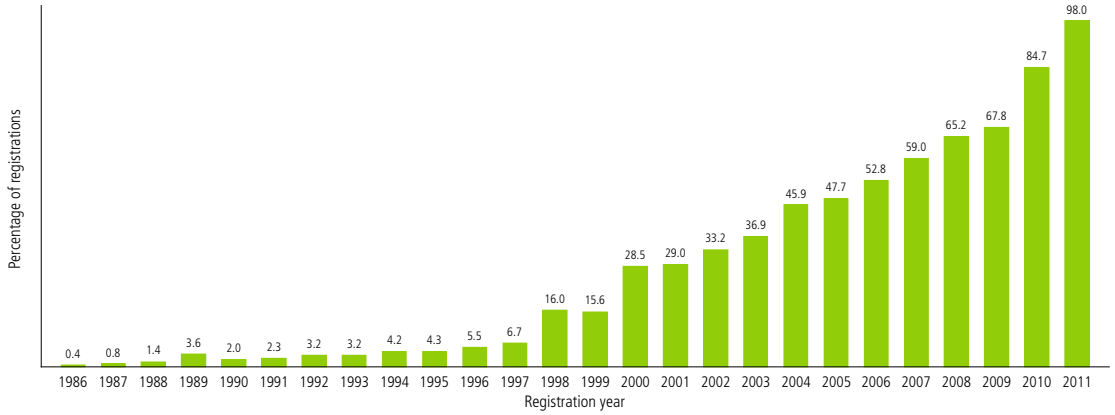


Note: ".." = not available; Data refer to the number of industrial design registrations in force and not the number of designs contained in registrations; OHIM = Office for Harmonization in the Internet Market

Source: WIPO Statistics Database, October 2012

19 Data are available for 77 offices including all major offices except Brazil, France and Italy.

Figure C.5.2 Industrial design registrations in force in 2011 as a percentage of total registrations



Note: Percentages are calculated as follows: number of industrial design registered in year t and in force in 2011 divided by the total number of industrial design registered in year t. The graph is based on data from 62 offices (includes all large offices, except France and Japan) for which a breakdown of industrial design registrations in force by year of registrations are available.

Source: WIPO Statistics Database, October 2012

Figure C.5.2 depicts the distribution of industrial design registrations in force in 2011 by their year of registration and as a percentage of total registrations in a given year; it thus portrays the age distribution of industrial designs in force. Data for most large offices are included in this graph, with France and Japan as the most notable exceptions. The figure shows that around 59% of industrial designs registered in 2007 were still in force in 2011 and only a small proportion (less than 7%) of industrial designs registered before 1998 was still in force in 2011. The graph also shows that 15% of the 2010 registrations expired within a year. This reflects the fact in some offices (e.g. KIPO and SIPO), holders are required to pay annual fees to maintain registrations.

SECTION D
PLANT VARIETY PROTECTION

The International Union for the Protection of New Varieties of Plants (UPOV) was established in 1961 by the International Convention for the Protection of New Varieties of Plants (the "UPOV Convention"). UPOV provides and promotes an effective system of plant variety protection, with the aim of encouraging the development of new varieties of plants, for the benefit of society.

In order to obtain protection, a breeder must file an individual application with each authority entrusted with the granting of breeders' rights. A breeder's right is only granted where the variety is new, distinct, uniform, stable and has a suitable denomination.

In the United States of America (US), there are two legal frameworks for protecting new plant varieties: the Plant Patent Act (PPA) and the Plant Variety Protection Act (PVPA). According to the PPA, whoever invents or discovers and asexually reproduces any distinct and new variety of plant, including cultivated sports, mutants, hybrids, and newly found seedlings, other than a tuber propagated plant (in practice, Irish potato and Jerusalem artichoke) or a plant found in an uncultivated state, may obtain a patent therefor. Under the PVPA, the US protects all sexually reproduced plant varieties and tuber propagated plant varieties excluding fungi and bacteria.

This section covers plant variety protection statistics relating to applications, grants and grants in force, based on data collected from 66 offices.

D.1

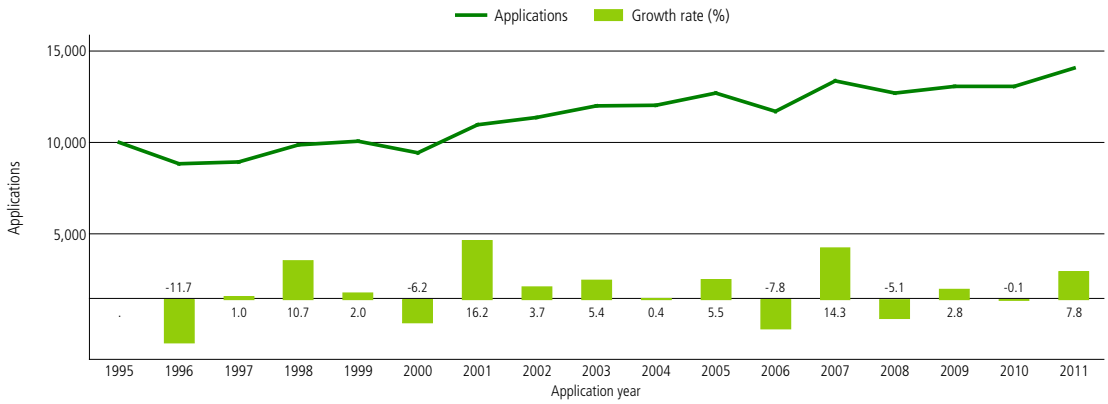
PLANT VARIETY APPLICATIONS AND GRANTS

D.1.1 Applications worldwide

Figure D.1.1 depicts the total number of plant variety applications worldwide between 1995 and 2011. World totals are WIPO estimates covering data for 66 offices. Between 1995 and 2011, the total number of applications increased from 10,000 to over 14,000. This growth occurred in the face of substantial year-on-year fluctuation in application numbers; for example, since 2003, growth in applications in a given year was followed by a drop the next year. However, after a modest decline in 2010, plant variety applications worldwide grew by 7.8% in 2011 – the fastest growth since 2007. Together, growth in applications at the office of Israel and the Community Plant Variety Office (CPVO) of the European Union (EU) accounted for three-fifths of total growth in 2011.[1]

1 In relation to plant varieties, this publication uses the term "office" to refer to reporting authorities and "origin" to indicate the origin of applicants.

Figure D.1.1 Trend in plant variety applications worldwide



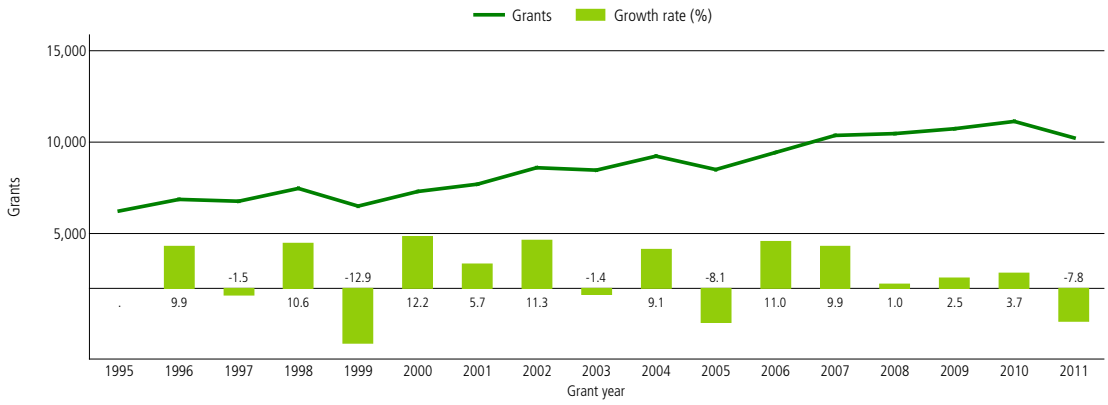
Note: World totals are WIPO estimates covering data for 66 offices.

Source: WIPO Statistics Database, October 2012

D.1.2 Grants worldwide

As was the case for applications, the long-term trend of plant variety grants is upwards.[2] Grants worldwide increased from around 6,200 in 1995 to a peak of 11,100 in 2010. In 2011, the number of grants worldwide was estimated at around 10,200, representing a 7.8% decrease on 2010. This decrease in grants followed five years of continuous growth, and was mainly due to substantial declines in grants at the offices of China and Ukraine.

Figure D.1.2 Trend in plant variety grants worldwide



Note: World totals are WIPO estimates covering data for 66 offices.

Source: WIPO Statistics Database, October 2012

2 For simplicity, this publication uses the term "grant" rather than the formal term "titles issued".

D.2

PLANT VARIETY APPLICATIONS AND GRANTS BY OFFICE

This subsection provides detailed data on plant variety applications and grants by national and regional offices. In relation to plant varieties, this publication uses the term "office" to refer to reporting authorities and "origin" to indicate the origin of applicants.

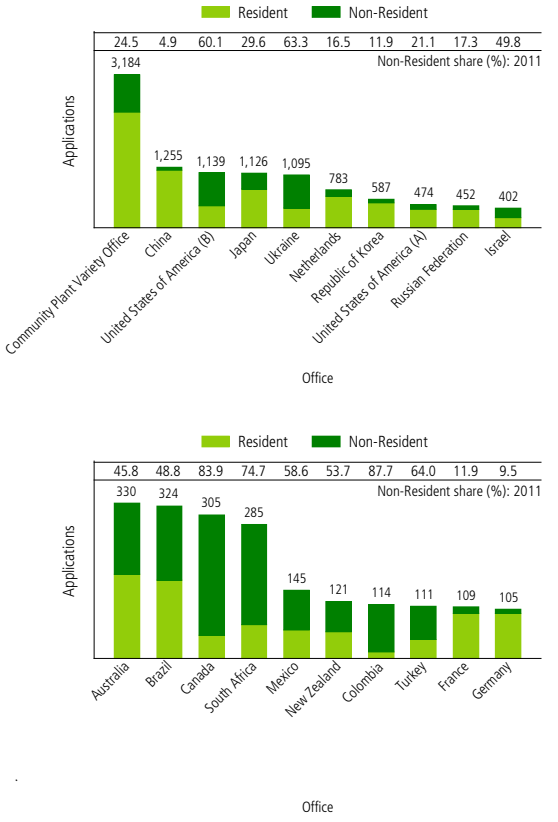
D.2.1 Applications for the top 20 offices

Figure D.2.1 shows the number of plant variety applications broken down by resident and non-resident filings for the top 20 offices. The CPVO received the most applications in 2011, followed by the offices of China, the US (B, PPA data) and Japan.[3] Apart from the CPVO, four other offices received more than 1,000 applications each in 2011.

The non-resident share in total applications varied from 4.9% in China to 87.7% in Colombia. For 10 of the top 20 offices, non-resident applications accounted for about 50% or more of total applications received. In contrast, non-resident applicants accounted for around one-tenth of all applications filed at the offices of France, Germany and the Republic of Korea.

The majority of offices saw growth in applications between 2010 and 2011. Israel saw the largest increase with 313 additional applications. In contrast, the US (A, PVPA data) saw the largest decrease with 180 fewer applications.

Figure D.2.1 Plant variety applications for the top 20 offices, 2011



Note: United States of America (A) refers to PVPA data, and United States of America (B) refers to PPA data.

Source: WIPO Statistics Database, October 2012

3 The US ranks second if PVPA and PPA data are combined.

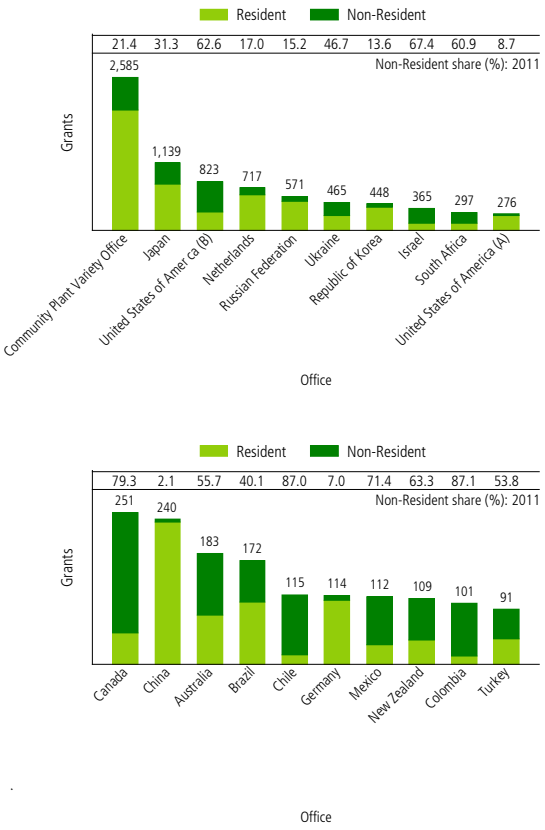
D.2.2 Grants for the top 20 offices

Similar to applications, the CPVO (2,585) issued the largest number of plant variety grants in 2011, followed by Japan (1,139), the US (B) (823) and the Netherlands (717).

The non-resident share in total grants varied from 2% in China to around 87% in Chile and Colombia. This is of similar magnitude for their application data.

Half of the top 20 offices issued fewer grants in 2010 than in 2011, with the most notable decreases recorded for China (-64%), Ukraine (-55.5%) and the US (A) (-30%). The fastest growth during the same period occurred at the offices of Chile, Israel and the Netherlands.

Figure D.2.2 Plant variety grants for the top 20 offices, 2011



Note: United States of America (A) refers to PVPA data, and United States of America (B) refers to PPA data.

Source: WIPO Statistics Database, October 2012

D.3

PLANT VARIETY APPLICATIONS AND GRANTS BY ORIGIN

The statistics presented in this subsection offer insight into the origin of demands for plant variety protection. Plant variety activity by origin includes resident applications and applications abroad. Origin is determined based on the residency of the applicant.

This subsection presents application and grant data by origin based on two different counting methods. First, data based on absolute number count are presented, followed by data based on the equivalent count concept. The difference between the two methods lies in the treatment of regional office (CPVO) data. An application at the CPVO is counted only once with the absolute count method, whereas, with the equivalent count method, a single application at the CPVO is treated as equivalent to multiple applications. For instance, to calculate the number of equivalent applications at the CPVO, each application is multiplied by the corresponding number of member states. If the applicant resides in one of the 27 EU member states, the application is counted as one resident filing and 26 filings abroad. However, if the applicant does not reside in an EU member state, the application is counted as 27 applications abroad.

D.3.1 Applications and grants by origin

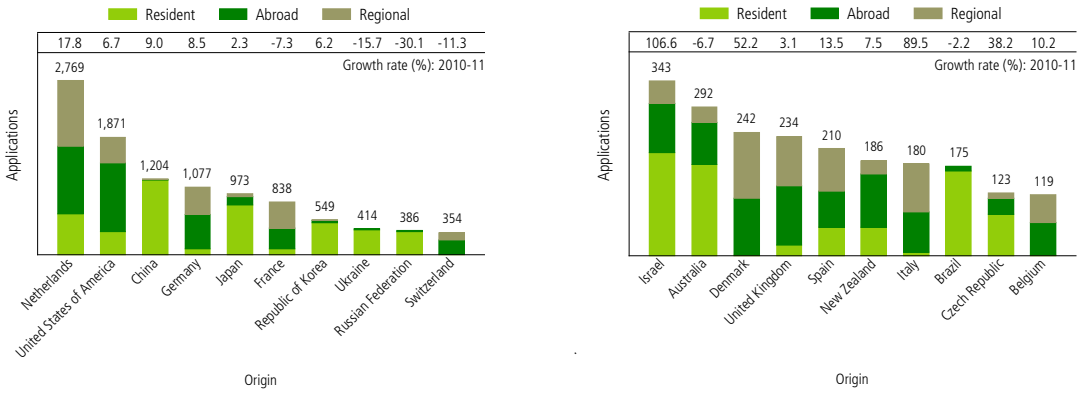
Plant variety application and grant data for the top 20 origins, based on the absolute count method, are presented in Figures D.3.1.1 and D.3.1.2.

The largest number of plant variety applications originated in the Netherlands (2,769), followed by applications filed by residents of the US, China and Germany (Figure D.3.1.1). The majority of origins filed more applications in 2011 than in 2010. Residents of Israel (+106.6%), Italy (+89.5%) and Denmark (+52.2%) saw the largest growth in applications during this period. In contrast, residents of the Russian Federation (-30.1%), Ukraine (-15.7%) and Switzerland (-11.3%) filed considerably fewer applications in 2011 than in 2010.

Applicants residing in Brazil, China, the Republic of Korea, the Russian Federation and Ukraine filed the bulk of their applications at their respective national offices. In contrast, applications abroad accounted for more than half of all applications originating in Belgium, Germany, New Zealand, Switzerland and the US.

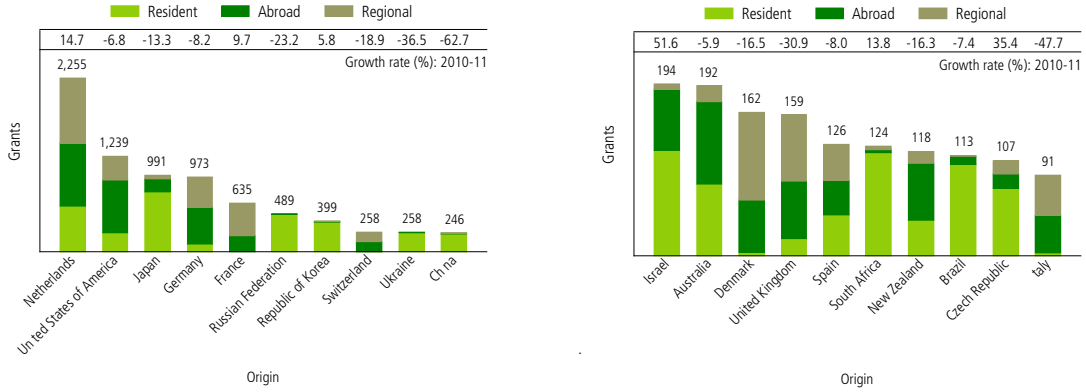
Grant data show a profile similar to that for application data for all reported origins. However, there are some differences in the ranking of origins. Applicants from the Netherlands received the largest number of grants, followed by applicants residing in the US, Japan and Germany (Figure D.3.1.2). China ranked in third position for applications but in 10th position for grants. The majority of origins received fewer grants in 2011 than in 2010; this is in contrast to the trend observed for application data. The most notable decline (-62.7%) in grants was for applicants residing in China. The distribution of resident grants, grants abroad and regional grants data is similar, for all origins, to that of application data.

Figure D.3.1.1 Plant variety applications for the top 20 origins, 2011



Source: WIPO Statistics Database, October 2012

Figure D.3.1.2 Plant variety grants for the top 20 origins, 2011



Source: WIPO Statistics Database, October 2012

D.3.2 Equivalent applications and grants by origin

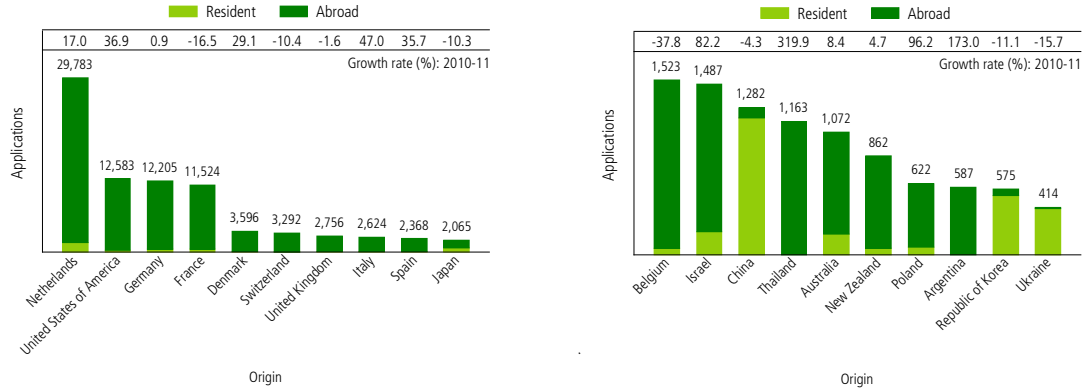
Plant variety application and grant data for the top 20 origins, based on the equivalent count method, are presented in Figures D.3.2.1 and D.3.2.2.

Equivalent application count data show that, in 2011, the largest number of plant variety applications originated in the Netherlands, followed by applications filed by residents of the US, Germany and France. The volume of applications from the latter three were of a similar magnitude; however, the volume of applications filed by Dutch applicants was more than double that filed by US applicants (Figure D.3.2.1).

For the majority of origins, applications abroad accounted for the largest share of total applications. This was partly due to the multiplier applied to regional applications. Applicants residing in China, the Republic of Korea and Ukraine filed the bulk of their applications at their respective national offices.

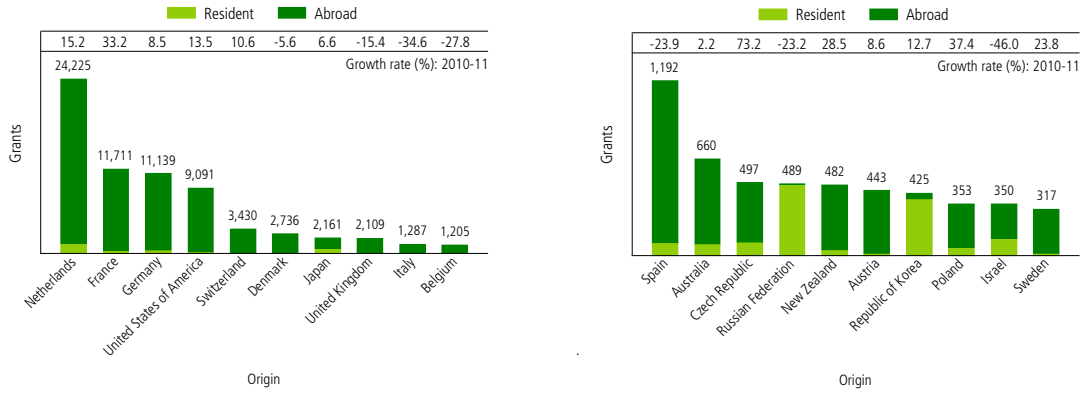
Equivalent grant data for all reported origins show a profile similar to the one for equivalent application data. However, there are some differences in the ranking of origins. Applicants from the Netherlands received the largest number of grants, followed by applicants residing in France, Germany and the US. For all origins, except the Republic of Korea and the Russian Federation, grants issued abroad accounted for the largest share of total grants.

Figure D.3.2.1 Equivalent plant variety applications for the top 20 origins, 2011



Source: WIPO Statistics Database, October 2012

Figure D.3.2.2 Equivalent plant variety grants for the top 20 origins, 2011



Source: WIPO Statistics Database, October 2012

D.3.3 Non-resident applications by office and origin

Plant breeders frequently seek protection for their new plant varieties abroad. Table D.3.3 offers an overview of the flow of cross-border filings. The underlying data refer to actual numbers of plant variety applications instead of equivalent counts.

The most popular destinations for plant variety protection by foreign applicants were the CPVO, Ukraine, the US (B) (PPA data), Japan and Canada. Applicants from the Netherlands accounted for the largest non-resident share at nine offices, and had the highest share at the offices of Colombia and Ecuador (68% for each). US applicants accounted for the largest non-resident share at seven offices, including the CPVO and the offices of Chile and Mexico where they accounted for the majority share. Swiss applicants had the highest non-resident share in the Netherlands and the US (A) (PVPA data).

Table D.3.3 Non-resident plant variety applications by office and origin, 2011

	Origin																				
Office	**AR**	**AT**	**AU**	**BE**	**CH**	**CZ**	**DE**	**DK**	**ES**	**FR**	**GB**	**IL**	**IT**	**JP**	**KR**	**NL**	**NZ**	**RS**	**TH**	**US**	**Others**
Australia	1	2		2	2	2	18		5	6	9	1	1	11		17	23		1	41	9
Brazil					14	3	9		3	6		3	9	9		79	5			17	1
Canada			5		37	2	18	31		4	1		1	18		47	4			88	0
Chile			1			3	1			4	1		2			17	11			45	1
China				2			2						1	4	9	33				10	1
Colombia							4		1	1		7	7			68	1			9	2
Community Plant Variety Office	20		30		113							44		42	1		26		43	412	50
Ecuador							13		1	1	1	4	2			57				2	2
Israel			3	2	7		28	5	3	6			2	32		74	3			30	5
Japan					18		48	16	5	13	8	42	17		6	117	1			40	2
Mexico			3		1	2			4			4	2			18	5			44	2
Netherlands					47		19	8		21	9	3								9	13
New Zealand		1	6	3	1	2	1	4		1	12			8		7				18	1
Republic of Korea						3	8	2			6		1	11		24	1			4	10
Russian Federation		2		1			22			3	1			1		27				3	18
South Africa	3		27		1	3	3		7	16	8		2	1		27	10			105	0
Turkey		2		1		1	4		24	14			1			6	1			8	9
Ukraine		21	1	18	38	3	85	1		141	5		7		11	129		58		112	63
United States of America (A)			1		56		8			6				2		17	2				8
United States of America (B)			30	27	1	1	154	44	4	34	50	31	8	40	2	205	24		1		28
Others	43	2	6	8	5	6	109	1	14	54	5	2	17	1	3	94	13	0	0	45	

Note: Argentina (AR), Austria (AT), Australia (AU), Belgium (BE), Switzerland (CH), Czech Republic (CZ), Germany (DE), Denmark (DK), Spain (ES), France (FR), United Kingdom (GB), Israel (IL), Italy (IT), Japan (JP), Republic of Korea (KR), Netherlands (NL), New Zealand (NZ), Serbia (RS), Thailand (TH) and United States of America (US)

Source: WIPO Statistics Database, October 2012

D.4

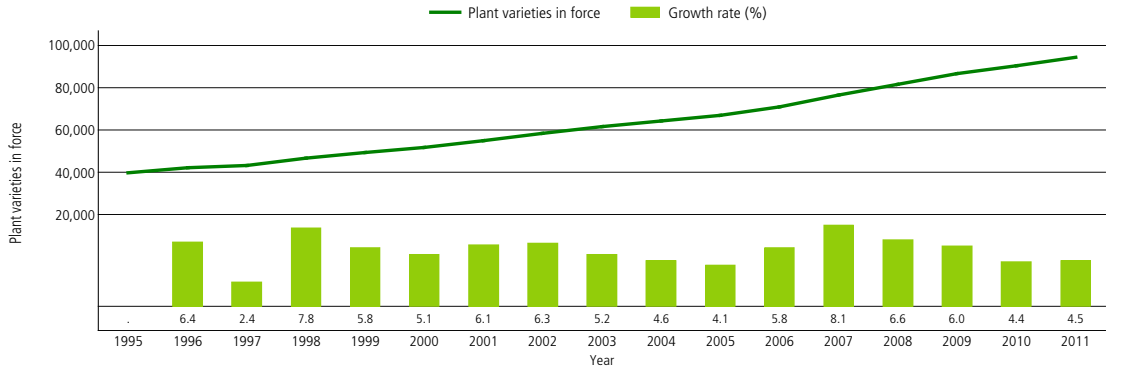
PLANT VARIETY GRANTS IN FORCE

The protection of plant varieties is granted for a limited period of time, in accordance with the legislation governing plant variety protection in the territory concerned. Figure D.4.1 shows the total number of plant variety grants in force worldwide between 1995 and 2011. World totals are WIPO estimates covering data for 66 offices. There were around 94,300 plant varieties in force in 2011, which is more than double the amount in force in 1995 (around 39,600). There has been a consistent upward trend in the number of plant varieties in force, even though the growth rate has slowed since 2007.

As shown in Figure D.4.2, the CPVO accounted for approximately 20% of all plant variety grants in force worldwide in 2011. This reflects the fact that this office has issued the largest number of grants over the past few years. A high number of grants were also in force at the offices of Japan and the US (B) (PPA data).

The majority of the offices presented in Figure D.4.2 had higher numbers of plant variety grants in force in 2011 than in 2010. The offices of the Netherlands, the Republic of Korea and Ukraine saw double-digit growth. In contrast, France and Italy exhibited substantial declines.

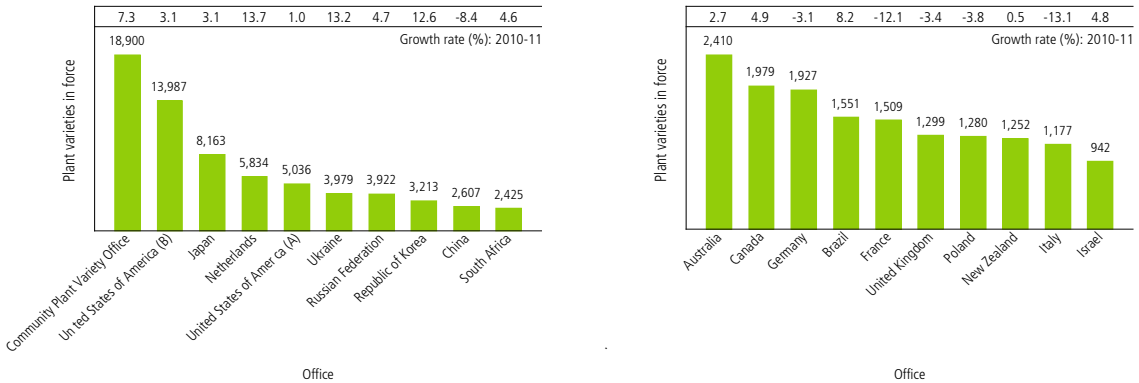
Figure D.4.1 Trend in plant varieties in force worldwide



Note: World totals are WIPO estimates covering data for 66 offices.

Source: WIPO Statistics Database, October 2012

Figure D.4.2 Plant varieties in force for selected offices, 2011



Note: United States of America (A) refers to PVPA data, and United States of America (B) refers to PPA data.

Source: WIPO Statistics Database, October 2012

ANNEX, GLOSSARY AND LIST OF ABBREVIATIONS

ANNEX A

DEFINITIONS FOR SELECTED ENERGY-RELATED TECHNOLOGY FIELDS

Energy-related technologies	International Patent Classification (IPC) Symbols
Solar energy technology	F24J 2/00, F24J 2/02, F24J 2/04, F24J 2/05, F24J 2/06, F24J 2/07, F24J 2/08, F24J 2/10, F24J 2/12, F24J 2/13, F24J 2/14, F24J 2/15, F24J 2/16, F24J 2/18, F24J 2/23, F24J 2/24, F24J 2/36, F24J 2/38, F24J 2/42, F24J 2/46, F03G 6/06, G02B 5/10, H01L 31/052, E04D 13/18, H01L 31/04, H01L 31/042, H01L 31/18, E04D 1/30, G02F 1/136, G05F 1/67, H01L 25/00, H01L 31/00, H01L 31/048, H01L 33/00, H02J 7/35, H02N 6/00
Fuel cell technology	H01M 4/00, H01M 4/86, H01M 4/88, H01M 4/90, H01M 8/00, H01M 8/02, H01M 8/04, H01M 8/06, H01M 8/08, H01M 8/10, H01M 8/12, H01M 8/14, H01M 8/16, H01M 8/18, H01M 8/20, H01M 8/22, H01M 8/24
Wind energy	F03D 1/00, F03D 3/00, F03D 5/00, F03D 7/00, F03D 9/00, F03D 11/00, B60L 8/00
Geothermal energy	F24J 3/08, F03G 4/00, F03G 7/05

Note: For a definition of IPC symbols, see *www.wipo.int/classifications/ipc/en/.* The correspondence between IPC symbols and technology fields is not always clear-cut. Therefore, it is difficult to capture all patents in a specific technology field. Nonetheless, the IPC-based definitions of the four technologies presented above are likely to capture the vast majority of related patents.

Source: WIPO

Annex B

International classification of goods and services under the Nice Agreement

Class Headings	Products
Class 1	Chemicals used in industry, science and photography, as well as in agriculture, horticulture and forestry; unprocessed artificial resins, unprocessed plastics; manures; fire extinguishing compositions; tempering and soldering preparations; chemical substances for preserving foodstuffs; tanning substances; adhesives used in industry
Class 2	Paints, varnishes, lacquers; preservatives against rust and against deterioration of wood; colorants; mordants; raw natural resins; metals in foil and powder form for painters, decorators, printers and artists
Class 3	Bleaching preparations and other substances for laundry use; cleaning, polishing, scouring and abrasive preparations; soaps; perfumery, essential oils, cosmetics, hair lotions; dentifrices
Class 4	Industrial oils and greases; lubricants; dust absorbing, wetting and binding compositions; fuels (including motor spirit) and illuminants; candles and wicks for lighting
Class 5	Pharmaceutical and veterinary preparations; sanitary preparations for medical purposes; dietetic substances adapted for medical use, food for babies; plasters, materials for dressings; material for stopping teeth, dental wax; disinfectants; preparations for destroying vermin; fungicides, herbicides
Class 6	Common metals and their alloys; metal building materials; transportable buildings of metal; materials of metal for railway tracks; non-electric cables and wires of common metal; ironmongery, small items of metal hardware; pipes and tubes of metal; safes; goods of common metal not included in other classes; ores
Class 7	Machines and machine tools; motors and engines (except for land vehicles); machine coupling and transmission components (except for land vehicles); agricultural implements other than hand-operated; incubators for eggs
Class 8	Hand tools and implements (hand-operated); cutlery; side arms; razors
Class 9	Scientific, nautical, surveying, photographic, cinematographic, optical, weighing, measuring, signaling, checking (supervision), life-saving and teaching apparatus and instruments; apparatus and instruments for conducting, switching, transforming, accumulating, regulating or controlling electricity; apparatus for recording, transmission or reproduction of sound or images; magnetic data carriers, recording discs; automatic vending machines and mechanisms for coin-operated apparatus; cash registers, calculating machines, data processing equipment and computers; fire-extinguishing apparatus
Class 10	Surgical, medical, dental and veterinary apparatus and instruments, artificial limbs, eyes and teeth; orthopedic articles; suture materials
Class 11	Apparatus for lighting, heating, steam generating, cooking, refrigerating, drying, ventilating, water supply and sanitary purposes
Class 12	Vehicles; apparatus for locomotion by land, air or water
Class 13	Firearms; ammunition and projectiles; explosives; fireworks
Class 14	Precious metals and their alloys and goods in precious metals or coated therewith, not included in other classes; jewellery, precious stones; horological and chronometric instruments
Class 15	Musical instruments
Class 16	Paper, cardboard and goods made from these materials, not included in other classes; printed matter; bookbinding material; photographs; stationery; adhesives for stationery or household purposes; artists' materials; paint brushes; typewriters and office requisites (except furniture); instructional and teaching material (except apparatus); plastic materials for packaging (not included in other classes); printers' type; printing blocks
Class 17	Rubber, gutta-percha, gum, asbestos, mica and goods made from these materials and not included in other classes; plastics in extruded form for use in manufacture; packing, stopping and insulating materials; flexible pipes, not of metal
Class 18	Leather and imitations of leather, and goods made of these materials and not included in other classes; animal skins, hides; trunks and travelling bags; umbrellas, parasols and walking sticks; whips, harness and saddlery

Class 19	Building materials (non-metallic); non-metallic rigid pipes for building; asphalt, pitch and bitumen; non-metallic transportable buildings; monuments, not of metal
Class 20	Furniture, mirrors, picture frames; goods (not included in other classes) of wood, cork, reed, cane, wicker, horn, bone, ivory, whalebone, shell, amber, mother-of-pearl, meerschaum and substitutes for all these materials, or of plastics
Class 21	Household or kitchen utensils and containers; combs and sponges; brushes (except paint brushes); brush-making materials; articles for cleaning purposes; steelwool; unworked or semi-worked glass (except glass used in building); glassware, porcelain and earthenware not included in other classes
Class 22	Ropes, string, nets, tents, awnings, tarpaulins, sails, sacks and bags (not included in other classes); padding and stuffing materials (except of rubber or plastics); raw fibrous textile materials
Class 23	Yarns and threads, for textile use
Class 24	Textiles and textile goods, not included in other classes; bed and table covers
Class 25	Clothing, footwear, headgear
Class 26	Lace and embroidery, ribbons and braid; buttons, hooks and eyes, pins and needles; artificial flowers
Class 27	Carpets, rugs, mats and matting, linoleum and other materials for covering existing floors; wall hangings (non-textile)
Class 28	Games and playthings; gymnastic and sporting articles not included in other classes; decorations for Christmas trees
Class 29	Meat, fish, poultry and game; meat extracts; preserved, frozen, dried and cooked fruits and vegetables; jellies, jams, compotes; eggs, milk and milk products; edible oils and fats
Class 30	Coffee, tea, cocoa, sugar, rice, tapioca, sago, artificial coffee; flour and preparations made from cereals, bread, pastry and confectionery, ices; honey, treacle; yeast, baking-powder; salt, mustard; vinegar, sauces (condiments); spices; ice
Class 31	Agricultural, horticultural and forestry products and grains not included in other classes; live animals; fresh fruits and vegetables; seeds, natural plants and flowers; foodstuffs for animals, malt
Class 32	Beers; mineral and aerated waters and other non-alcoholic drinks; fruit drinks and fruit juices; syrups and other preparations for making beverages
Class 33	Alcoholic beverages (except beers)
Class 34	Tobacco; smokers' articles; matches

Class Headings	**Services**
Class 35	Advertising; business management; business administration; office functions
Class 36	Insurance; financial affairs; monetary affairs; real estate affairs
Class 37	Building construction; repair; installation services
Class 38	Telecommunications
Class 39	Transport; packaging and storage of goods; travel arrangement
Class 40	Treatment of materials
Class 41	Education; providing of training; entertainment; sporting and cultural activities
Class 42	Scientific and technological services and research and design relating thereto; industrial analysis and research services; design and development of computer hardware and software
Class 43	Services for providing food and drink; temporary accommodation
Class 44	Medical services; veterinary services; hygienic and beauty care for human beings or animals; agriculture, horticulture and forestry services
Class 45	Legal services; security services for the protection of property and individuals; personal and social services rendered by others to meet the needs of individuals

Note: See *www.wipo.int/classifications/nivilo/nice/index.htm?lang=EN* for further information on the International Classification of Goods and Services under the Nice Agreement.

Source: WIPO

CLASS GROUPS DEFINED BY EDITAL®

Industry sector	Nice classes
Agricultural products and services	29, 30, 31, 32, 33, 43
Management, Communications, Real estate and Financial services	35, 36
Chemicals	1, 2, 4
Textiles - Clothing and Accessories	14, 18, 22, 23, 24, 25, 26, 27, 34
Construction, Infrastructure	6, 17, 19, 37, 40
Pharmaceuticals, Health, Cosmetics	3, 5, 10, 44
Household equipment	8, 11, 20, 21
Leisure & Education = Leisure, Education, Training	13, 15, 16, 28, 41
Scientific research, Information and Communication technology	9, 38, 42, 45
Transportation and Logistics	7, 12, 39

Source: Edital®

GLOSSARY

This glossary seeks to assist readers in better understanding key technical terms and concepts. Many of the terms are defined generically (e.g., "application"), but apply to several or all of the various forms of IP covered in this report.

Applicant: An individual or other legal entity that files an application for a patent, utility model, trademark or industrial design. There may be more than one applicant in an application. For the statistics presented in this publication, the name of the first-named applicant is used to determine the owner of the application.

Application: The procedure for requesting IP rights at an office, which examines the application and decides whether to grant or refuse protection. Application also refers to a set of documents submitted to an office by the applicant.

Application abroad: For statistical purposes, an application filed by a resident of a given state/jurisdiction with an IP office of another state/jurisdiction. For example, an application filed by an applicant domiciled in France with the JPO is considered an "application abroad" from the perspective of France. This differs from a "non-resident application", which describes an application filed by a resident of a foreign state/jurisdiction from the perspective of the office receiving the application.

Application date: The date on which the IP office receives an application that meets the minimum requirements. Application date is also referred to as the filing date.

Budapest Treaty: Disclosure of an invention is a requirement for the granting of a patent. Normally, an invention is disclosed by means of a written description. Where an invention involves a microorganism or the use of a microorganism, disclosure is not always possible in writing but can sometimes only be effected by the deposit, with a specialized institution, of a sample of the microorganism. In order to eliminate the need to deposit a microorganism in each country in which patent protection is sought, the Budapest Treaty provides that the deposit of a microorganism with any "international depositary authority" (IDA) suffices for the purposes of patent procedure before the national patent offices of all contracting states and before any regional patent office (where such a regional office recognizes the effects of the Treaty).

Class: Refers to the classes defined in the Locarno and Nice Classifications. Classes indicate the categories of products and services (where applicable) for which trademark or industrial design protection is requested. (See "Locarno Classification" and "Nice Classification".)

Class count: The number of classes specified in a trademark application or registration. In the international trademark system and at certain offices, an applicant can file a trademark application that specifies one or more of the 45 goods and services classes of the Nice Classification. Offices use either a single- or multi-class filing system. For example, the offices of Japan, the Republic of Korea and the United States of America (US) as well as many European offices have multi-class filing systems. The offices of Brazil, China and Mexico follow a single-class filing system, requiring a separate application for each class in which applicants seek trademark protection. To capture the differences in application numbers across offices, it is useful to compare their respective application and registration class counts.

Community Plant Variety Office (CPVO) of the European Union (EU): An EU agency that manages a system of plant variety rights covering the 27 EU member states.

Complex technology: A technology usually defined as one for which the resulting products or processes consist of numerous separately patentable elements, and for which patent ownership is typically widespread. For example, smartphones fall into the category of complex technologies.

Contracting Party (Hague member): A state or intergovernmental organization that is a member of the Hague System for the International Registration of Industrial Designs. The expression "contracting party" includes any state or intergovernmental organization party to the 1999 Act and/or the 1960 Act of the Hague Agreement. The entitlement to file an international application under the Hague Agreement is limited to natural persons or legal entities having a real and effective industrial or commercial establishment, or a domicile, in at least one of the contracting parties to the Agreement, or to nationals of one of these contracting parties, or of a member state of an intergovernmental organization that is a contracting party. In addition, but only under the 1999 Act, an international application may be filed on the basis of habitual residence in the jurisdiction of a contracting party.

Designation: The specification in an international registration of a Hague or Madrid member's jurisdiction in which holders of registrations seek protection for their industrial designs or trademarks.

Direct filing: See "National route".

Discrete technology: A technology describing products or processes that consist of a single and/or relatively few patentable elements, and for which patent ownership is relatively concentrated. For example, a pharmaceutical product is considered a discrete technology.

Equivalent application: Applications at regional offices are equivalent to multiple applications, one in each of the states that is a member of those offices. To calculate the number of equivalent applications for BOIP, EAPO, OAPI or OHIM data, each application is multiplied by the corresponding number of member states. For EPO and ARIPO data, each application is counted as one application abroad if the applicant does not reside in a member state; or as one resident and one application abroad if the applicant resides in a member state. The equivalent application concept is used for reporting data by origin.

Equivalent grant (registration): Grants (registrations) at regional offices are equivalent to multiple grants (registrations), one in each of the states that is a member of those offices. To calculate the number of equivalent grants (registrations) for BOIP, EAPO, OAPI or OHIM data, each grant (registration) is multiplied by the corresponding number of member states. For EPO and ARIPO data, each grant is counted as one grant abroad if the applicant does not reside in a member state; or as one resident and one grant abroad if the applicant resides in a member state. The equivalent grant (registration) concept is used for reporting data by origin.

European Patent Convention (EPC): The Convention on the Grant of European Patents, commonly known as the European Patent Convention (EPC), is a multilateral treaty instituting the European Patent Organisation and providing a legal system according to which European patents are granted. The EPC permits applicants to file a single application at the European Patent Office (EPO) and to designate any of the participating European countries.

European Patent Office (EPO): The EPO is the regional patent office created under the European Patent Convention (EPC), in charge of granting European patents for EPC member states. Under PCT procedures, the EPO acts as a receiving office, an international searching authority and an international preliminary examining authority.

Filing: See "Application".

Foreign-oriented patent families: A patent family having at least one filing office that is different from the office of the applicant's origin. (See "Patent Family".)

Grant: A set of exclusive rights legally accorded to the applicant when a patent or utility model is "granted" or "issued". (See "Patent" and "Utility model".)

Gross domestic product (GDP): The total unduplicated output of economic goods and services produced within a country as measured in monetary terms.

Hague international application: An application for the international registration of an industrial design filed under the WIPO-administered Hague system.

Hague international registration: An international registration issued via the Hague system, which facilitates the acquisition of industrial design rights in multiple jurisdictions. An application for international registration of an industrial design leads to its recording in the International Register and the publication of the registration in the International Designs Bulletin. If the registration is not refused by the IP office of a designated Hague member, the international registration will have the same effect as a registration made in that jurisdiction.

Hague route: An alternative to the Paris route (direct route), the Hague route enables an application for international registration of industrial designs to be filed using the Hague system.

Hague system: The abbreviated form of the Hague System for the International Registration of Industrial Designs. This system consists of several international treaties (the London Act (currently frozen), the Hague Act and the Geneva Act). The Hague system makes it possible for an applicant to register up to 100 industrial designs in multiple jurisdictions by filing a single application with the International Bureau of WIPO. It simplifies the process of multinational registration by reducing the requirement to file separate applications with each IP office. The system also simplifies the subsequent management of the industrial design, since it is possible to record changes or to renew the registration through a single procedural step.

In Force: Refers to IP rights that are currently valid. To remain in force, IP protection must be maintained (see “Maintenance”).

Industrial design: Industrial designs are applied to a wide variety of industrial products and handicrafts. They refer to the ornamental or aesthetic aspects of a useful article, including compositions of lines or colors or any three-dimensional forms that give a special appearance to a product or handicraft. The holder of a registered industrial design has exclusive rights against unauthorized copying or imitation of the design by third parties. Industrial design registrations are valid for a limited period. The term of protection is usually 15 years for most jurisdictions. However, differences in legislation do exist, notably in China (which provides for a 10-year term from the application date) and the US (which provides for a 14-year term from the date of registration).

Intellectual property (IP): Refers to creations of the mind: inventions, literary and artistic works, and symbols, names, images and designs used in commerce. IP is divided into two categories: industrial property, which includes patents, utility models, trademarks, industrial designs and geographical indications of source; and copyright, which includes literary and artistic works such as novels, poems and plays, films, musical works, artistic works such as drawings, paintings, photographs and sculptures, and architectural designs. Rights related to copyright include those of performing artists in their performances, producers of phonograms in their recordings, and those of broadcasters in their radio and television programs.

International Bureau (IB): In the context of the PCT, Hague and Madrid systems, the International Bureau of WIPO acts as a receiving office for international applications from all contracting states/parties. It also handles processing tasks with respect to these applications and the subsequent management of Hague and Madrid registrations.

International Depositary Authority (IDA): A scientific institution - typically a “culture collection” - capable of storing microorganisms that has acquired the status of an "international depositary authority" under the Budapest Treaty and that provides for the receipt, acceptance and storage of microorganisms and the furnishing of samples thereof. Presently, there are 41 such authorities.

International Patent Classification (IPC): The IPC provides for a hierarchical system of language-independent symbols for the classification of patents and utility models according to the different areas of technology to which they pertain. The symbols contain information relating to sections, classes, subclasses and groups.

International Union for the Protection of New Varieties of Plants (UPOV): An intergovernmental organization established by the International Convention for the Protection of New Varieties of Plants ("UPOV Convention"), which was adopted on December 2, 1961. UPOV provides and promotes an effective system of plant variety protection, with the aim of encouraging the development of new varieties of plants for the benefit of society.

Invention: A new solution to a technical problem. To obtain patent rights, the invention must be novel, involve an inventive step and be industrially applicable, as judged by a person skilled in the art.

Locarno Classification (LOC): The abbreviated form of the International Classification for Industrial Designs under the Locarno Agreement used for registering industrial designs. The LOC comprises a list of 32 classes and their respective subclasses, with explanatory notes and an alphabetical list of goods in which industrial designs are incorporated, and an indication of the classes and subclasses into which they fall.

Madrid international application: An application for the international registration of a trademark filed under the WIPO-administered Madrid Agreement or Madrid Protocol.

Madrid international registration: An international registration issued via the Madrid system, which facilitates the acquisition of trademark rights in multiple jurisdictions. An application for international registration of a trademark leads to its recording in the International Register and the publication of the registration in the WIPO Gazette of International Marks. If the registration is not refused by the IP office of a designated Madrid member, the international registration will have the same effect as a registration made in that jurisdiction.

Madrid route: An alternative to the Paris route (direct route), the Madrid route enables an application for international registration of a trademark to be filed using the Madrid system.

Madrid system: The abbreviated form of the Madrid System for the International Registration of Marks, established under the Madrid Agreement and the Madrid Protocol and administered by WIPO. The Madrid system makes it possible for an applicant to register a trademark in a large number of countries by filing a single application at their national or regional IP office that is party to the system. The Madrid system simplifies the process of multinational trademark registration by reducing the requirement to file separate applications at each office. It also simplifies the subsequent management of the mark, since it is possible to record changes or to renew the registration through a single procedural step. Registration through the Madrid system does not create an "international" trademark, and the decision to register or refuse the trademark remains in the hands of national and/or regional office(s). Trademark rights are limited to the jurisdiction of the trademark registration office(s).

Maintenance: An act by the applicant to keep the IP grant/registration valid (in force), primarily by paying the required fee to the IP office of the state/jurisdiction providing protection. The fee is also known as a "maintenance fee". A trademark can be maintained indefinitely by paying renewal fees; however, patents, utility models and industrial designs can only be maintained for a limited number of years. (See "Renewal".)

Microorganism deposit: the transmittal of a microorganism to an international depositary authority (IDA), which receives and accepts it, or the storage of such a microorganism by the IDA, or both transmittal and storage.

National Phase Entry (NPE): See "National Phase under the PCT".

National Phase under the PCT: This follows the international phase of the PCT procedure, and consists of the entry and processing of the international application in the individual countries or regions in which the applicant seeks protection for an invention.

National route: Applications for IP protection filed directly with the national office of or acting for the relevant state/jurisdiction (see also "PCT route", "Hague route" or "Madrid route"). National route is also called the "direct route" or "Paris route".

Nice Classification (NCL): The abbreviated form of the International Classification of Goods and Services for the Purposes of Registering Marks under the Nice Agreement. The Nice Classification is divided into 34 classes for goods and 11 for services.

Non-Resident: For statistical purposes, a "non-resident" application refers to an application filed with the IP office of or acting for a state/jurisdiction in which the first-named applicant in the application does not have residence. For example, an application filed with the JPO by an applicant residing in France is considered a non-resident application from the perspective of this office. Non-resident applications are sometimes referred to as foreign applications. A non-resident grant or registration is an IP right issued on the basis of a non-resident application.

Origin (Country/Region): For statistical purposes, the "origin" of an application means the country/territory of residence of the first-named applicant in the application. In some cases (notably in the US), the country of origin is determined by the residence of the assignee instead of that of the applicant.

Paris Convention: The Paris Convention for the Protection of Industrial Property (1883), signed on March 20, 1883, is one of the most important IP treaties. It establishes the "right of priority" that enables an IP applicant, when filing an application in countries other than the original country of filing, to claim priority of an earlier application filed up to 12 months previously.

Paris route: An alternative to the PCT, Hague or Madrid routes, the Paris route (also called the "direct route") enables individual IP applications to be filed directly with an office that is a signatory of the Paris Convention.

Patent: A set of exclusive rights granted by law to applicants for inventions that are new, non-obvious and commercially applicable. It is valid for a limited period of time (generally 20 years), during which patent holders can commercially exploit their inventions on an exclusive basis. In return, applicants are obliged to disclose their inventions to the public in a manner that enables others, skilled in the art, to replicate the invention. The patent system is designed to encourage innovation by providing innovators with time-limited exclusive legal rights, thus enabling innovators to appropriate a return on their innovative activity.

Patent Cooperation Treaty (PCT): The PCT is an international treaty, administered by WIPO. The PCT system facilitates the filing of patent applications worldwide and makes it possible to seek patent protection for an invention simultaneously in each of a large number of countries by first filing a single "international" patent application. The granting of patents, which remains under the control of the national or regional patent offices, is carried out in what is called the "national phase" or "regional phase".

Patent Family: A set of interrelated patent applications filed in one or more countries/jurisdictions to protect the same invention.

Patent opposition: An administrative process for disputing the validity of a granted patent that is often limited to a specific time period after the patent has been granted. For example, at the EPO anyone may oppose a patent within nine months of publication of the grant of the European patent in the European Patent Bulletin.

PCT Filing: Abbreviated form of "PCT International Application".

PCT International Application: A patent application filed through the WIPO-administered Patent Cooperation Treaty (PCT).

PCT-Patent Prosecution Highway Pilots (PCT-PPH): A number of bilateral agreements signed between patent offices enable applicants to request a fast-track examination procedure, whereby patent examiners can make use of the work products of another office or offices. These work products can include the results of a favorable written opinion by an ISA, the written opinion of an IPEA or the international preliminary report on patentability (IPRP) issued within the framework of the PCT. By requesting this procedure, applicants can generally obtain patents from participating offices more quickly.

PCT route: Patent applications filed or patents granted based on PCT international applications.

PCT system: The PCT, an international treaty administered by WIPO, facilitates the acquisition of patent rights in a large number of jurisdictions. The PCT system simplifies the process of multiple national patent filings by reducing the requirement to file a separate application in each jurisdiction. However, the decision of whether to grant patent rights remains in the hands of national and regional patent offices, and patent rights remain limited to the jurisdiction of the patent-granting authority. The PCT international application process starts with the international phase, during which an international search and possibly a preliminary examination are performed, and concludes with the national phase, during which national and regional patent offices decide on the patentability of an invention according to national law.

Pending patent application: In general, a patent application filed with a patent office and for which no patent has yet been granted or refused nor the application withdrawn. In jurisdictions where a request for examination is obligatory to start the examination process, a pending application may refer to an application for which a request for examination has been received but for which no patent has been granted or refused, nor the application withdrawn.

Plant Patent Act (PPA) of the US: Under the law commonly known as the "Plant Patent Act", whoever invents or discovers and asexually reproduces any distinct and new variety of plant, including cultivated sports, mutants, hybrids and newly found seedlings, other than a tuber propagated plant or a plant found in an uncultivated state, may obtain a patent therefor.

Plant Variety: According to the UPOV Convention, "variety" means a plant grouping within a single botanical taxon of the lowest known rank, which, irrespective of whether the conditions for the grant of a breeder's right are fully met, can be (a) defined by the expression of the characteristics resulting from a given genotype or combination of genotypes; (b) distinguished from any other plant grouping by the expression of at least one of the said characteristics; and (c) considered as a unit with regard to its suitability for being propagated unchanged.

Plant Variety Grant: Under the UPOV Convention, the breeder's right is only granted (title of protection is issued) where the variety is new, distinct, uniform, stable and has a suitable denomination.

Plant Variety Protection Act (PVPA) of the US: Under the PVPA, the US protects all sexually reproduced plant varieties and tuber propagated plant varieties excluding fungi and bacteria.

Prior art: All information disclosed to the public about an invention, in any form, before a given date. Information on prior art can assist in determining whether the claimed invention is new and involves an inventive step (is non-obvious) for the purposes of international searches and international preliminary examination.

Priority date: The filing date of the application on the basis of which priority is claimed.

Publication date: The date on which an IP application is disclosed to the public. On that date, the subject matter of the application becomes "prior art".

Regional Application/Grant (Registration): An application filed with or granted (registered) by a regional IP office having jurisdiction over more than one country. Regional IP offices in operation include: the African Regional Intellectual Property Organization (ARIPO), the Benelux Office for Intellectual Property (BOIP), the Eurasian Patent Office (EAPO), the European Patent Office (EPO), the African Intellectual Property Organization (OAPI) and the Office for Harmonization in the Internal Market (OHIM) of the EU.

Regional route (or regional direct): Applications for IP protection filed or granted based on applications filed with a regional IP office.

Registered Community Design (RCD): A registration issued by the Office for Harmonization in the Internal Market (OHIM) based on a single application filed directly with this office by an applicant seeking protection within the EU as a whole.

Registration: A set of exclusive rights legally accorded to the applicant when an industrial design or trademark is "registered" or "issued". (See "Industrial design" or "Trademark".) Registrations are issued to applicants to make use of and exploit their industrial design or trademark for a limited period of time and can, in some cases, particularly in the case of trademarks, be renewed indefinitely.

Renewal: The process by which the protection of an IP right is maintained (i.e., kept in force). This usually consists of paying renewal fees to an IP office at regular intervals. If renewal fees are not paid, the registration may lapse. (See "Maintenance".)

Research and development (R&D) expenditure: The money spent on creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge related to human culture and society, and the use of this stock of knowledge to devise new applications.

Resident: For statistical purposes, a "resident" application refers to an application filed with the IP office of or acting for the state/jurisdiction in which the first-named applicant in the application has residence. For example, an application filed with the Japan Patent Office (JPO) by a resident of Japan is considered a resident application for the JPO. Resident applications are sometimes referred to as domestic applications. A resident grant/registration is an IP right issued on the basis of a resident application.

Trademark: A trademark is a distinctive sign that identifies certain goods or services as those produced or provided by a specific person or enterprise. The holder of a registered trademark has the legal right to exclusive use of the mark in relation to the products or services for which it is registered. The owner can prevent unauthorized use of the trademark, or a confusingly similar mark, so as to prevent consumers and the public in general from being misled. Unlike patents, trademarks can be maintained indefinitely by paying renewal fees. The procedures for registering trademarks are governed by the rules and regulations of national and regional IP offices. Trademark rights are limited to the jurisdiction of the authority that registers the trademark. Trademarks can be registered by filing an application at the relevant national or regional office(s), or by filing an international application through the Madrid system.

Utility Model: A special form of patent right granted by a state/jurisdiction to an inventor or the inventor's assignee for a fixed period of time. The terms and conditions for granting a utility model are slightly different from those for normal patents (including a shorter term of protection and less stringent patentability requirements). The term "utility model" can also describe what are known in certain countries as "petty patents", "short-term patents" or "innovation patents".

Validation: Procedure by which patent protection is validated post-grant at the offices designated in an EPO patent grant. The procedure varies among European offices but usually involves a translation into the national language and/or a payment of fees.

World Intellectual Property Organization (WIPO): A United Nations specialized agency 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. WIPO is dedicated to developing a balanced and effective international IP system that rewards creativity, stimulates innovation and contributes to economic development while safeguarding the public interest.

LIST OF ABBREVIATIONS

ARIPO	African Regional Intellectual Property Organization
BOIP	Benelux Office for Intellectual Property
CPVO	Community Plant Variety Office of the European Union
EAPO	Eurasian Patent Organization
EPO	European Patent Office
EU	European Union
GDP	Gross Domestic Product
IB	International Bureau
ID	Industrial Design
IDA	International Depositary Authority
IP	Intellectual Property
IPC	International Patent Classification
JPO	Japan Patent Office
KIPO	Korean Intellectual Property Office
OAPI	African Intellectual Property Organization
OHIM	Office for Harmonization in the Internal Market
PCT	Patent Cooperation Treaty
PCT NPE	Patent Cooperation Treaty National Phase Entry
PPA	Plant Patent Act of the United States of America
PPP	Purchasing Power Parity
PVPA	Plant Variety Protection Act of the United States of America
R&D	Research and Development
RCD	Registered Community Design
SIPO	State Intellectual Property Office of the People's Republic of China
UM	Utility Model
UPOV	International Union for the Protection of New Varieties of Plants
USPTO	United States Patent and Trademark Office
WIPO	World Intellectual Property Organization

STATISTICAL TABLES

Table P1: Patent applications by patent office and origin, 2011

	Applications by Office			Equivalent Applications by Origin	PCT International Applications		PCT National Phase Entry	
Name	Total	Resident	Non-Resident	Total (1)	Receiving Office	Origin	Office	Origin
Afghanistan	..	..	..	4	n.a.	0	..	3
African Intellectual Property Organization	..	..	..	n.a.	3	n.a.	..	n.a.
African Regional Intellectual Property Organization	..	..	..	n.a.	2	n.a.	..	n.a.
Albania	11	3	8	3	0	0	6	..
Algeria	897	94	803	102	3	4	766	2
Andorra	..	..	..	29	n.a.	3	..	22
Angola (5)	..	..	..	4	n.a.	0	..	3
Antigua and Barbuda	..	..	..	10	0	1	..	6
Argentina (2,4)	4,717	..	..	307	n.a.	25	..	112
Armenia	140	121	19	200	4	6	10	7
Aruba	..	..	..	2	n.a.	0	..	..
Australia	25,526	2,383	23,143	11,348	1,690	1,739	18,847	6,906
Austria	2,430	2,154	276	11,393	566	1,346	185	5,031
Azerbaijan	205	193	12	418	10	9	9	1
Bahamas	..	..	..	115	n.a.	9	..	79
Bahrain	140	1	139	9	0	0	136	..
Bangladesh	306	32	274	36	n.a.	0	..	1
Barbados (5)	71	0	71	402	n.a.	110	71	289
Belarus	1,871	1,725	146	2,368	8	14	102	6
Belgium	763	636	127	11,427	72	1,191	..	6,199
Belize	..	..	..	12	0	6	..	..
Bermuda	..	..	..	157	n.a.	0	..	62
Bhutan	..	..	..	1	n.a.	0	..	1
Bolivia (Plurinational State of)	..	..	..	2	n.a.	0	..	2
Bonaire, Saint Eustatius and Saba	..	..	..	1	n.a.	0	..	..
Bosnia and Herzegovina	55	43	12	48	6	6	9	2
Botswana	..	..	..	4	0	0	..	..
Brazil (2,3)	22,686	2,705	19,981	4,212	519	564	18,654	1,012
Brunei Darussalam	..	..	..	12	n.a.	0	..	2
Bulgaria	283	262	21	394	28	28	8	65
Burkina Faso (2,3,6)	2	2	0	3	0	0	..	1
Burundi	..	..	..	..	n.a.	3	..	..
Cambodia	..	..	..	2	n.a.	0	..	1
Cameroon (6)	..	..	..	1	n.a.	3	..	..
Canada	35,111	4,754	30,357	24,528	2,176	2,929	26,759	8,357
Chad (6)	..	..	..	52	0	0	..	44
Chile	2,792	339	2,453	657	84	118	2,199	230
China	526,412	415,829	110,583	435,608	17,471	16,402	64,486	12,713
China, Hong Kong SAR	13,493	181	13,312	1,647	0	0	..	216
China, Macao SAR	60	4	56	28	n.a.	0	..	3
Colombia	1,953	183	1,770	386	2	57	1,701	145
Congo (6)	..	..	..	..	0	1	..	..
Cook Islands	..	..	..	1	n.a.	0	..	1
Costa Rica	644	14	630	36	2	3	619	7
Côte d'Ivoire (6)	..	..	..	2	0	2	..	..
Croatia	251	230	21	366	45	47	10	59
Cuba	246	62	184	157	9	10	183	83
Curaçao	..	..	..	1	n.a.	0	..	..
Cyprus	8	0	8	340	0	26	..	138
Czech Republic	880	783	97	1,802	126	148	44	511

Name	Applications by Office			Equivalent Applications by Origin	PCT International Applications		PCT National Phase Entry	
	Total	Resident	Non-Resident	Total (1)	Receiving Office	Origin	Office	Origin
Democratic People's Republic of Korea (2,3)	8,057	8,018	39	8,055	4	4	37	26
Democratic Republic of the Congo	..	..	..	1	n.a.	1	..	..
Denmark	1,771	1,574	197	11,565	678	1,314	48	6,572
Dominica	..	..	..	3	0	2	..	1
Dominican Republic (2,4)	339	..	..	8	6	7	..	1
Ecuador (2,3)	694	4	690	15	3	33	..	5
Egypt	2,209	618	1,591	727	29	33	1,537	41
El Salvador	..	..	..	8	1	1	..	4
Estonia	77	62	15	272	9	35	5	100
Eurasian Patent Organization	3,560	536	3,024	n.a.	14	n.a.	2,895	n.a.
European Patent Office	142,793	71,898	70,895	n.a.	30,893	n.a.	80,275	n.a.
Finland	1,774	1,650	124	11,516	1,230	2,079	..	6,586
France	16,754	14,655	2,099	65,349	3,498	7,438	..	33,227
Gabon (6)	..	..	..	..	0	3	..	..
Gambia (8)	..	..	..	1	n.a.	0	..	..
Georgia	398	138	260	158	5	7	245	13
Germany	59,444	46,986	12,458	172,764	1,698	18,852	2,946	69,983
Ghana	..	..	..	..	0	2	..	..
Greece (2,3)	744	728	16	1,172	58	93	..	257
Grenada	..	..	..	1	0	0	..	1
Guatemala	331	4	327	5	0	0	318	..
Guinea (6)	..	..	..	1	0	0	..	1
Honduras	255	2	253	2	0	0	236	2
Hungary	698	662	36	1,695	131	140	5	820
Iceland	71	50	21	324	18	43	15	187
India	42,291	8,841	33,450	15,717	897	1,330	28,456	3,022
Indonesia	5,838	541	5,297	607	8	13	4,847	41
International Bureau	..	..	..	n.a.	8,774	n.a.	..	n.a.
Iran (Islamic Republic of)	..	..	..	113	n.a.	1	..	8
Iraq	..	..	..	4	n.a.	0	..	..
Ireland	561	494	67	4,131	67	415	..	1,781
Israel	6,886	1,360	5,526	10,821	1,061	1,452	5,525	5,026
Italy	9,721	8,794	927	27,679	424	2,695	..	10,751
Jamaica	113	20	93	25	n.a.	3	..	..
Japan	342,610	287,580	55,030	472,417	37,972	38,874	51,519	95,258
Jordan	400	40	360	75	n.a.	1	..	5
Kazakhstan	1,732	1,415	317	1,821	22	23	132	24
Kenya (2,3)	197	77	120	81	4	9	118	13
Kuwait	..	..	..	100	n.a.	4	..	6
Kyrgyzstan (2,3)	140	134	6	181	0	1	1	1
Lao People's Democratic Republic (5)	..	..	..	..	n.a.	5	..	..
Latvia	183	173	10	323	10	17	..	102
Lebanon (4)	282	..	..	48	n.a.	1	..	27
Liberia	..	..	..	1	0	1	..	..
Libya	..	..	..	1	0	0	..	..
Liechtenstein (7)	..	..	..	1,157	n.a.	86	..	268
Lithuania	108	93	15	142	14	25	5	22
Luxembourg	128	85	43	2,281	0	246	4	1,485
Madagascar (5)	61	3	58	4	n.a.	2	52	..
Malaysia	6,452	1,076	5,376	1,927	251	263	4,687	492
Mali (6)	..	..	..	6	0	0	..	..
Malta	15	9	6	267	0	18	..	195

Name	Applications by Office			Equivalent Applications by Origin	PCT International Applications		PCT National Phase Entry	
	Total	Resident	Non-Resident	Total (1)	Receiving Office	Origin	Office	Origin
Marshall Islands	..	..	..	2	n.a.	0	..	..
Mauritius (2,4)	16	..	..	41	n.a.	4	..	10
Mexico	14,055	1,065	12,990	1,863	167	225	11,000	547
Monaco	9	6	3	142	0	26	..	63
Mongolia (2,3)	179	110	69	111	0	1	68	37
Montenegro (5)	103	20	83	30	0	2	82	..
Morocco	1,049	169	880	191	18	19	857	15
Namibia (8)	..	..	..	10	0	19	..	9
Nepal	..	..	..	3	n.a.	0	..	1
Netherlands	2,895	2,585	310	32,376	996	3,503	..	20,396
New Zealand	6,209	1,501	4,708	3,021	277	328	4,045	1,116
Nicaragua	..	..	..	..	0	1	..	..
Niger (6)	..	..	..	2	0	0	..	2
Nigeria (5)	..	..	..	17	0	5	..	2
Norway	1,776	1,122	654	5,325	355	698	509	3,143
Oman (5)	..	..	..	8	0	0	..	..
Pakistan	953	92	861	139	n.a.	1	..	3
Panama	441	21	420	70	n.a.	10	..	35
Paraguay (2,3)	365	18	347	41	n.a.	1	..	21
Peru	1,168	39	1,129	75	6	6	1,002	32
Philippines	3,196	186	3,010	298	20	21	..	22
Poland	4,123	3,879	244	4,890	207	235	54	468
Portugal	646	571	75	992	48	95	13	287
Qatar	..	..	..	29	0	0	..	1
Republic of Korea	178,924	138,034	40,890	187,454	10,413	10,447	31,039	14,047
Republic of Moldova	108	97	11	193	3	2	7	..
Romania	1,463	1,424	39	1,597	23	26	15	60
Russian Federation	41,414	26,495	14,919	31,433	1,049	996	12,287	1,556
Saint Kitts and Nevis	..	..	..	..	n.a.	1	..	..
Saint Vincent and the Grenadines (5)	..	..	..	8	0	4	..	6
Samoa	..	..	..	33	n.a.	2	..	4
San Marino (4)	64	..	..	68	0	1	..	26
Sao Tome and Principe (5)	..	..	..	3	n.a.	0	..	..
Saudi Arabia	990	347	643	1,067	n.a.	147	..	309
Senegal (6)	..	..	..	1	0	2	..	1
Serbia	229	180	49	240	17	19	21	36
Seychelles	..	..	..	86	0	3	..	55
Sierra Leone (8)	..	..	..	2	n.a.	1	..	2
Singapore	9,794	1,056	8,738	4,529	457	662	6,726	1,937
Slovakia	257	224	33	432	49	59	18	120
Slovenia (2,3)	453	442	11	1,043	80	125	..	412
Solomon Islands	..	..	..	1	n.a.	0	..	..
South Africa	7,245	656	6,589	1,718	93	319	6,140	968
Spain	3,626	3,430	196	10,564	1,301	1,729	98	4,352
Sri Lanka (2,3,5)	460	225	235	243	n.a.	12	..	7
Sudan	..	..	..	..	0	2	..	..
Swaziland (8)	..	..	..	7	0	2	..	6
Sweden	2,341	2,004	337	21,480	1,845	3,462	53	14,073
Switzerland	2,043	1,597	446	37,477	312	4,009	53	20,778
Syrian Arab Republic	..	..	..	7	5	5	..	..
T F Y R of Macedonia	40	37	3	41	0	0	..	..

Name	Applications by Office			Equivalent Applications by Origin	PCT International Applications		PCT National Phase Entry	
	Total	Resident	Non-Resident	Total (1)	Receiving Office	Origin	Office	Origin
Tajikistan	5	4	1	22	0	0	..	..
Thailand	3,924	927	2,997	1,137	51	67	2,150	70
Trinidad and Tobago	..	..	..	16	0	0	..	5
Tunisia	..	..	..	15	6	8	..	2
Turkey	4,113	3,885	228	5,265	279	539	157	928
Turkmenistan	..	..	..	2	0	0	..	..
Uganda (8)	..	..	..	2	n.a.	2	..	..
Ukraine	5,253	2,649	2,604	3,312	131	141	2,321	137
United Arab Emirates (5)	..	..	..	194	n.a.	38	..	51
United Kingdom	22,259	15,343	6,916	49,938	4,226	4,848	1,937	23,569
United Republic of Tanzania (8)	..	..	..	3	0	0	..	2
United States of America	503,582	247,750	255,832	432,298	49,303	49,051	97,561	142,505
Uruguay	687	20	667	61	n.a.	5	..	19
Uzbekistan	556	282	274	304	0	1	257	..
Vanuatu	..	..	..	1	n.a.	0	..	1
Venezuela (Bolivarian Republic of)	1,598	33	1,565	90	n.a.	2	..	4
Viet Nam	3,560	300	3,260	321	11	18	2,945	14
Yemen	44	7	37	9	n.a.	1	..	..
Zambia	..	..	..	1	1	0	..	1
Zimbabwe	..	..	..	6	0	2	..	..

(1) Equivalent patent applications by origin data are incomplete, as some offices do not report detailed statistics containing the origin of applications.
(2) 2010 data are reported for applications by office.
(3) 2010 data are reported for applications by origin.
(4) The office did not report resident applications. Therefore, the applications by origin data may be incomplete.
(5) The International Bureau acts as the receiving office for PCT applications.
(6) The African Intellectual Property Organization (OAPI) acts as the receiving office for PCT applications.
(7) The Swiss Federal Institute of Intellectual Property (IFPI) acts as the receiving office for PCT applications.
(8) The African Regional Intellectual Property Organization (ARIPO) acts as the receiving office for PCT applications.
n.a. not applicable
.. not available

Source: WIPO Statistics Database, October 2012

Table P2: Patent grants by patent office and origin, and patents in force, 2011

	Grants by Office			Equivalent Grants by Origin	In Force by Office
Name	Total	Resident	Non-Resident	Total (1)	Total
Afghanistan	..	..	..	1	..
Albania	21	1	20	1	64
Algeria	1,546	93	1,453	94	4,625
Andorra	..	..	..	6	..
Antigua and Barbuda	..	..	..	2	..
Argentina	..	..	..	104	..
Armenia	112	109	3	136	285
Australia	17,877	1,267	16,610	6,162	105,463
Austria (5)	1,198	1,010	188	4,855	10,066
Azerbaijan	118	109	9	185	..
Bahamas	..	..	..	56	..
Bangladesh	85	6	79	6	..
Barbados	6	0	6	436	61
Belarus	1,474	1,365	109	2,001	4,842
Belgium	541	424	117	5,217	..
Belize	..	..	..	12	..
Bermuda	..	..	..	57	..
Bolivia (Plurinational State of)	..	..	..	1	..
Bosnia and Herzegovina	115	28	87	29	746
Botswana	..	..	..	4	..
Brazil (2,3,5)	3,251	314	2,937	805	40,022
Brunei Darussalam	..	..	..	18	..
Bulgaria	128	61	67	136	7,399
Burkina Faso	..	..	..	1	..
Canada	20,762	2,150	18,612	10,617	137,368
Chad	..	..	..	3	..
Chile	1,013	104	909	195	8,644
China	172,113	112,347	59,766	118,158	696,939
China, Hong Kong SAR (5)	5,050	76	4,974	690	33,225
China, Macao SAR	45	2	43	9	429
Colombia	617	34	583	62	2,979
Costa Rica	38	1	37	17	245
Croatia	184	11	173	86	2,791
Cuba	154	53	101	151	228
Cyprus	1	0	1	139	171
Czech Republic	687	325	362	749	9,059
Democratic People's Republic of Korea (2,3)	6,290	6,243	47	6,263	..
Denmark	110	73	37	4,260	1,597
Dominican Republic	..	..	..	4	..
Ecuador (2,4,5)	28	..	..	3	199
Egypt	483	61	422	89	3,187
Estonia	129	32	97	88	1,293
Eurasian Patent Organization	1,258	222	1,036	n.a.	n.a.
European Patent Office	62,112	32,585	29,527	n.a.	n.a.
Finland	841	718	123	5,827	36,003
France (5)	10,213	8,815	1,398	34,766	435,915
Georgia	237	104	133	108	1,066
Germany	11,719	8,208	3,511	72,346	527,917
Ghana	..	..	..	1	..
Greece (2,3,5)	479	467	12	628	32,120
Guatemala	39	3	36	3	636

	Grants by Office			Equivalent Grants by Origin	In Force by Office
Name	Total	Resident	Non-Resident	Total (1)	Total
Guinea	..	..	..	1	..
Honduras	151	1	150	2	255
Hungary	445	160	285	643	5,227
Iceland (5)	67	6	61	124	1,892
India	5,168	776	4,392	2,877	41,361
Indonesia	..	..	..	19	..
Iran (Islamic Republic of)	..	..	..	33	..
Iraq	..	..	..	2	..
Ireland	250	195	55	1,865	88,044
Israel	5,104	734	4,370	4,237	24,338
Italy	6,380	5,680	700	16,212	38,900
Jamaica	..	..	..	2	..
Japan	238,323	197,594	40,729	304,604	1,542,096
Jordan	40	15	25	38	320
Kazakhstan (5)	1,887	1,608	279	1,711	581
Kenya	..	..	..	4	..
Kuwait	..	..	..	28	..
Kyrgyzstan (2,3,5)	109	106	3	170	112
Latvia	180	179	1	285	6,170
Lebanon	..	..	..	15	..
Lesotho	..	..	..	1	..
Liechtenstein	..	..	..	550	..
Lithuania	96	85	11	107	625
Luxembourg (5)	65	39	26	912	21,346
Madagascar (2,3)	55	5	50	5	417
Malawi	..	..	..	1	..
Malaysia (5)	2,353	310	2,043	599	96
Malta	1	0	1	94	432
Mauritania	..	..	..	1	..
Mauritius (2,4)	8	..	..	23	..
Mexico	11,485	245	11,240	473	89,992
Monaco	13	8	5	80	51,007
Mongolia (2,3,5)	96	50	46	50	2,645
Montenegro	406	12	394	12	634
Morocco	979	126	853	148	..
Mozambique	..	..	..	1	..
Namibia	..	..	..	2	..
Nepal	..	..	..	1	..
Netherlands	2,042	1,767	275	14,924	12,713
New Zealand	4,710	326	4,384	1,000	35,700
Niger	..	..	..	1	..
Nigeria	..	..	..	2	..
Norway	1,612	409	1,203	2,286	16,060
Oman	..	..	..	3	..
Pakistan	469	29	440	34	..
Panama	321	12	309	74	6,152
Paraguay	..	..	..	2	..
Peru	385	9	376	20	2,489
Philippines (5)	1,135	6	1,129	51	52,527
Poland	3,112	1,989	1,123	2,208	35,612
Portugal	145	96	49	287	1,932
Qatar	..	..	..	3	..
Republic of Korea	94,720	72,258	22,462	97,714	678,005

	Grants by Office			Equivalent Grants by Origin	In Force by Office
Name	Total	Resident	Non-Resident	Total (1)	Total
Republic of Moldova	63	61	2	72	799
Romania	430	406	24	456	14,393
Russian Federation	29,999	20,339	9,660	22,177	168,558
Rwanda	..	..	..	1	..
Saint Kitts and Nevis	..	..	..	2	..
Saint Vincent and the Grenadines	..	..	..	5	..
Samoa	..	..	..	10	..
San Marino	..	..	..	22	..
Saudi Arabia	252	17	235	228	1,933
Senegal	..	..	..	1	..
Serbia	179	60	119	100	1,439
Seychelles	..	..	..	29	..
Singapore	5,949	484	5,465	2,043	..
Slovakia	317	50	267	105	3,617
Slovenia (2,3,5)	250	241	9	557	1,485
South Africa (5)	5,296	567	4,729	1,119	6,530
Spain	2,812	2,614	198	5,068	32,834
Sri Lanka (2,3)	504	220	284	223	..
Swaziland	..	..	..	17	..
Sweden (5)	1,039	842	197	10,905	80,132
Switzerland	368	243	125	17,564	143,253
Syrian Arab Republic	..	..	..	2	..
T F Y R of Macedonia	..	..	..	1	..
Tajikistan	5	5	0	23	253
Thailand	900	143	757	231	10,578
Trinidad and Tobago	..	..	..	7	..
Tunisia	..	..	..	11	..
Turkey	893	770	123	1,227	7,565
Turkmenistan	..	..	..	9	..
Ukraine	4,061	1,902	2,159	2,149	24,771
United Arab Emirates	..	..	..	35	..
United Kingdom	7,173	2,992	4,181	18,275	445,380
United States of America	224,505	108,626	115,879	201,158	2,113,628
Uruguay	13	1	12	8	863
Uzbekistan	179	108	71	108	679
Vanuatu	..	..	..	2	..
Venezuela (Bolivarian Republic of)	..	..	..	33	..
Viet Nam	1,844	48	1,796	53	9,990
Zimbabwe	..	..	..	133	..

(1) Equivalent patents granted by origin data are incomplete, as some offices do not report detailed statistics containing the origin of applications for which patents were granted.
(2) 2010 data are reported for patents granted by office.
(3) 2010 data are reported for patents granted by origin.
(4) The office did not report resident patents granted; therefore, grants by origin data may be incomplete.
(5) 2010 data are reported for patents in force.
n.a. not applicable
.. not available

Source: WIPO Statistics Database, October 2012

Table T1: Trademark applications by office and origin, 2011

	Application Class Count by Office			Equivalent Application Class Count by Origin	Madrid International Applications	
Name	Total	Resident	Non-Resident	Total (1)	Origin	Designated Madrid Member
Afghanistan	..	..	..	195	n.a.	n.a.
Albania	9,242	427	8,815	488	0	2,965
Algeria	11,620	3,456	8,164	3,497	3	2,054
Andorra	2,047	677	1,370	2,434	n.a.	n.a.
Angola	..	..	..	447	n.a.	n.a.
Antigua and Barbuda (4)	1,975	..	1,975	288	0	788
Argentina (2,4)	69,565	..	..	9,725	n.a.	n.a.
Armenia	10,297	2,084	8,213	3,328	32	3,118
Aruba	..	..	..	1,954	n.a.	n.a.
Australia	112,635	69,058	43,577	141,215	987	11,254
Austria (4)	8,925	..	8,925	255,289	803	3,420
Azerbaijan (4)	8,493	..	8,493	561	5	3,822
Bahamas	..	..	..	4,689	n.a.	n.a.
Bahrain	10,868	269	10,599	1,135	3	2,522
Bangladesh	11,645	8,632	3,013	8,905	n.a.	n.a.
Barbados	1,371	142	1,229	3,425	n.a.	n.a.
Belarus (4)	15,184	..	15,184	3,927	203	6,252
Belgium (5)	n.a.	n.a.	n.a.	172,663	n.a.	n.a.
Belize	..	..	..	1,390	n.a.	n.a.
Benelux (6)	75,792	60,081	15,711	127,625	1,920	3,632
Benin	..	..	..	6	n.a.	n.a.
Bermuda	..	..	..	6,441	n.a.	n.a.
Bhutan (4)	1,791	..	1,791	1	0	664
Bolivia (Plurinational State of)	..	..	..	44	n.a.	n.a.
Bonaire, Saint Eustatius and Saba (4)	1,572	..	1,572	..	0	673
Bosnia and Herzegovina	12,570	479	12,091	957	21	4,004
Botswana (4)	2,199	..	2,199	39	0	864
Brazil (3)	152,735	..	..	120,886	n.a.	n.a.
Brunei Darussalam	..	..	..	214	n.a.	n.a.
Bulgaria	19,703	13,476	6,227	70,067	189	2,280
Burkina Faso	..	..	..	7	n.a.	n.a.
Cambodia	..	..	..	35	n.a.	n.a.
Cameroon	..	..	..	149	n.a.	n.a.
Canada	133,921	73,192	60,729	155,666	n.a.	n.a.
Central African Republic	..	..	..	5	n.a.	n.a.
Chile (9)	70,974	48,917	22,057	54,914	n.a.	n.a.
China	1,418,251	1,273,827	144,424	1,441,246	2,149	20,169
China, Hong Kong SAR	61,062	22,317	38,745	76,208	n.a.	n.a.
China, Macao SAR	8,590	1,240	7,350	1,496	n.a.	n.a.
Colombia	29,084	16,976	12,108	22,050	n.a.	n.a.
Congo	..	..	..	165	n.a.	n.a.
Cook Islands	..	..	..	46	n.a.	n.a.
Costa Rica	14,124	6,759	7,365	8,007	n.a.	n.a.
Côte d'Ivoire	..	..	..	125	n.a.	n.a.
Croatia	22,116	4,822	17,294	12,367	218	5,822
Cuba	4,732	600	4,132	1,306	3	1,457
Curaçao	2,723	1	2,722	3,224	10	765
Cyprus	3,867	646	3,221	46,717	24	1,177
Czech Republic	37,236	29,462	7,774	106,423	361	2,565

Name	Application Class Count by Office			Equivalent Application Class Count by Origin	Madrid International Applications	
	Total	Resident	Non-Resident	Total (1)	Origin	Designated Madrid Member
Democratic People's Republic of Korea (4)	3,466	..	3,466	86	0	1,399
Denmark	13,950	8,141	5,809	115,660	350	1,970
Djibouti	..	..	..	1	n.a.	n.a.
Dominica	..	..	..	105	n.a.	n.a.
Dominican Republic	..	..	..	727	n.a.	n.a.
Ecuador (2,3)	16,195	8,750	7,445	9,742	n.a.	n.a.
Egypt (4)	11,020	..	11,020	2,028	35	4,793
El Salvador	..	..	..	322	n.a.	n.a.
Equatorial Guinea	..	..	..	1	n.a.	n.a.
Estonia	6,634	1,766	4,868	16,067	42	1,845
Ethiopia	..	..	..	19	n.a.	n.a.
Fiji	..	..	..	161	n.a.	n.a.
Finland	15,224	10,468	4,756	110,974	189	1,724
France (4,8)	288,540	..	..	1,032,782	3,804	4,470
Gabon	..	..	..	13	n.a.	n.a.
Georgia	10,301	1,454	8,847	1,872	7	3,454
Germany	205,961	181,118	24,843	2,120,913	4,999	5,232
Ghana (4)	2,750	..	2,750	5	22	1,153
Greece (4)	4,397	..	4,397	39,825	70	1,978
Grenada	..	..	..	2	n.a.	n.a.
Guatemala (2,3)	9,175	3,778	5,397	4,625	n.a.	n.a.
Guinea	..	..	..	11	n.a.	n.a.
Guyana	..	..	..	8	n.a.	n.a.
Haiti	1,949	572	1,377	577	n.a.	n.a.
Holy See	..	..	..	162	n.a.	n.a.
Honduras	1,997	0	1,997	112	n.a.	n.a.
Hungary	14,865	8,762	6,103	38,393	235	2,202
Iceland	8,560	1,501	7,059	3,851	45	2,564
India	198,547	176,386	22,161	194,697	n.a.	n.a.
Indonesia	..	..	..	2,434	n.a.	n.a.
Iran (Islamic Republic of) (4)	8,028	..	8,028	2,737	15	3,623
Iraq	..	..	..	255	n.a.	n.a.
Ireland (4)	7,610	..	..	71,446	63	1,427
Israel	16,838	3,392	13,446	23,274	200	4,182
Italy	98,054	85,129	12,925	776,789	2,306	4,355
Jamaica	..	..	..	1,170	n.a.	n.a.
Japan (4,8)	189,217	..	..	345,722	1,538	13,152
Jordan	6,812	2,298	4,514	3,904	n.a.	n.a.
Kazakhstan (4)	12,994	..	12,994	1,598	54	5,472
Kenya (4)	3,936	..	3,936	719	9	1,715
Kuwait	..	..	..	871	n.a.	n.a.
Kyrgyzstan	7,388	271	7,117	338	7	2,833
Lao People's Democratic Republic	..	..	..	273	n.a.	n.a.
Latvia	7,391	2,166	5,225	10,051	109	2,054
Lebanon	..	..	..	2,343	n.a.	n.a.
Lesotho (4)	1,723	..	1,723	6	0	690
Liberia (4)	2,124	..	2,124	2	0	818
Libya	..	..	..	30	n.a.	n.a.
Liechtenstein (4)	7,817	3	7,814	18,446	103	2,791
Lithuania	8,730	3,330	5,400	12,263	113	2,163
Luxembourg (5)	n.a.	n.a.	n.a.	86,667	n.a.	n.a.

Name	Application Class Count by Office			Equivalent Application Class Count by Origin	Madrid International Applications	
	Total	Resident	Non-Resident	Total (1)	Origin	Designated Madrid Member
Madagascar	5,239	1,872	3,367	1,957	1	992
Malawi	..	..	..	21	n.a.	n.a.
Malaysia	28,833	13,001	15,832	18,304	n.a.	n.a.
Maldives	..	..	..	57	n.a.	n.a.
Mali	..	..	..	4	n.a.	n.a.
Malta	822	423	399	14,909	n.a.	n.a.
Marshall Islands	..	..	..	278	n.a.	n.a.
Mauritania	..	..	..	21	n.a.	n.a.
Mauritius	..	..	..	2,901	n.a.	n.a.
Mexico	100,281	71,091	29,190	88,777	n.a.	n.a.
Monaco	9,926	1,956	7,970	14,564	61	2,802
Mongolia (2,3)	8,009	3,234	4,775	3,448	6	1,794
Montenegro (4)	10,147	..	10,147	522	10	3,648
Morocco (2,3)	29,829	16,396	13,433	20,473	84	4,380
Mozambique (4)	2,581	..	2,581	113	0	1,114
Myanmar	..	..	..	33	n.a.	n.a.
Namibia (4)	2,457	..	2,457	108	0	1,012
Nepal	..	..	..	50	n.a.	n.a.
Netherlands (5)	n.a.	n.a.	n.a.	396,361	n.a.	n.a.
New Zealand	32,395	14,665	17,730	31,374	n.a.	n.a.
Nicaragua	..	..	..	43	n.a.	n.a.
Niger	..	..	..	2	n.a.	n.a.
Nigeria	..	..	..	391	n.a.	n.a.
Norway (4)	22,449	..	22,449	33,221	423	9,185
Office for Harmonization in the Internal Market (7)	303,663	234,079	69,584	79,995	5,859	17,618
Oman (4)	5,555	..	5,555	255	0	2,352
Pakistan	..	..	..	597	n.a.	n.a.
Panama	11,372	4,167	7,205	9,354	n.a.	n.a.
Papua New Guinea	..	..	..	39	n.a.	n.a.
Paraguay (2,3)	22,102	13,140	8,962	13,468	n.a.	n.a.
Peru (3)	28,766	..	..	19,911	n.a.	n.a.
Philippines (2,3)	24,597	11,771	12,826	12,362	n.a.	n.a.
Poland	48,835	39,805	9,030	214,538	342	3,362
Portugal	30,750	23,901	6,849	94,727	175	2,361
Qatar	..	..	..	2,960	n.a.	n.a.
Republic of Korea	174,297	132,864	41,433	187,540	488	10,557
Republic of Moldova	13,392	3,049	10,343	4,432	46	3,700
Romania	29,705	22,612	7,093	77,356	76	2,595
Russian Federation	209,483	148,192	61,291	208,100	1,652	16,843
Saint Kitts and Nevis	..	..	..	131	n.a.	n.a.
Saint Lucia	..	..	..	76	n.a.	n.a.
Saint Vincent and the Grenadines	..	..	..	115	n.a.	n.a.
Samoa	..	..	..	488	n.a.	n.a.
San Marino (4)	3,703	..	3,703	3,784	7	1,390
Sao Tome and Principe (4)	1,504	..	1,504	2	0	570
Saudi Arabia	..	..	..	3,840	n.a.	n.a.
Senegal	..	..	..	17	n.a.	n.a.
Serbia	18,675	2,649	16,026	9,013	163	5,328
Seychelles	91	91	0	1,637	n.a.	n.a.
Sierra Leone (4)	1,908	..	1,908	29	0	779

Name	Application Class Count by Office			Equivalent Application Class Count by Origin	Madrid International Applications	
	Total	Resident	Non-Resident	Total (1)	Origin	Designated Madrid Member
Singapore	36,579	6,504	30,075	36,532	226	8,197
Sint Maarten (Dutch Part)	2,184	0	2,184	..	0	744
Slovakia	15,179	8,301	6,878	31,365	105	2,052
Slovenia (2,3)	10,764	5,591	5,173	34,866	183	2,020
Solomon Islands	..	..	..	41	n.a.	n.a.
Somalia	..	..	..	2	n.a.	n.a.
South Africa	33,484	19,522	13,962	29,661	n.a.	n.a.
Spain	73,245	62,410	10,835	735,238	568	3,822
Sri Lanka (2,3)	6,244	3,942	2,302	5,194	n.a.	n.a.
Sudan (4)	2,974	..	2,974	108	0	1,274
Suriname	..	..	..	97	n.a.	n.a.
Swaziland (4)	1,881	..	1,881	288	0	790
Sweden	25,437	19,420	6,017	208,796	259	2,125
Switzerland	85,011	34,264	50,747	407,529	2,928	14,705
Syrian Arab Republic (4)	6,329	..	6,329	1,145	5	2,585
T F Y R of Macedonia (4)	9,767	..	9,767	963	24	3,628
Tajikistan	6,208	297	5,911	297	0	2,114
Thailand	38,950	23,457	15,493	31,811	n.a.	n.a.
Timor-Leste	..	..	..	1	n.a.	n.a.
Togo	..	..	..	87	n.a.	n.a.
Trinidad and Tobago	..	..	..	12	n.a.	n.a.
Tunisia	..	..	..	3,680	n.a.	n.a.
Turkey	184,939	152,261	32,678	201,885	982	9,950
Turkmenistan (4)	5,308	..	5,308	22	0	2,467
Uganda	..	..	..	282	n.a.	n.a.
Ukraine	60,240	28,514	31,726	40,777	365	9,536
United Arab Emirates	..	..	..	15,375	n.a.	n.a.
United Kingdom	89,240	72,109	17,131	976,971	1,129	4,453
United Republic of Tanzania	..	..	..	607	n.a.	n.a.
United States of America	412,014	319,311	92,703	1,315,727	4,791	17,152
Uruguay	10,670	4,099	6,571	5,211	n.a.	n.a.
Uzbekistan	12,108	4,500	7,608	4,510	0	2,807
Vanuatu	..	..	..	4	n.a.	n.a.
Venezuela (Bolivarian Republic of)	19,587	11,066	8,521	12,079	n.a.	n.a.
Viet Nam	56,138	34,718	21,420	36,996	56	5,507
Yemen	3,233	2,191	1,042	2,220	n.a.	n.a.
Zambia (4)	2,266	..	2,266	2	0	939
Zimbabwe	..	..	..	15	n.a.	n.a.

(1) Data on equivalent application class count by origin are incomplete, as some offices do not report detailed statistics containing the origin of application class counts.
(2) 2010 data are reported for application class count by office.
(3) 2010 data are reported for equivalent application class count by origin.
(4) Only Madrid designation data are available; therefore, application class count by office and origin data may be incomplete.
(5) This country does not have a national trademark office. All applications for trademark protection are filed at the Benelux Office for Intellectual Property (BOIP) or the Office for Harmonization in the Internal Market (OHIM) of the European Union (EU).
(6) Resident applications include those filed by residents of Belgium, Luxembourg and the Netherlands.
(7) Resident applications include those filed by residents of EU member states.
(8) Equivalent application class count by origin is calculated using an estimated component for the missing resident application class count at the national office.
(9) Application class count by office data include renewal statistics.
n.a. not applicable
.. not available

Source: WIPO Statistics Database, October 2012

Table T2: Trademark registrations by office and origin, and trademarks in force, 2011

	Registration Class Count by Office			Equivalent Registration Class Count by Origin	Madrid International Registrations by Origin	Registrations in Force by Office
Name	Total	Resident	Non-Resident	Total (1)	Total	Total
Afghanistan	..	..	..	276	n.a.	..
Albania	9,006	297	8,709	360	0	7,167
Algeria	9,717	1,894	7,823	1,913	2	15,271
Andorra	2,030	673	1,357	2,489	n.a.	18,570
Angola	..	..	..	359	n.a.	..
Antigua and Barbuda (4)	1,539	..	1,539	523	0	..
Argentina	..	..	..	8,908	n.a.	..
Armenia	9,475	1,597	7,878	2,553	44	10,684
Aruba	..	..	..	299	n.a.	..
Australia	78,183	42,526	35,657	102,887	958	476,726
Austria (4)	8,528	..	8,528	229,529	799	111,908
Azerbaijan (4)	8,443	..	8,443	507	9	..
Bahamas	..	..	..	3,545	n.a.	..
Bahrain	10,946	422	10,524	1,459	2	..
Bangladesh (2,3)	1,519	307	1,212	580	n.a.	..
Barbados	216	22	194	2,818	n.a.	..
Belarus (4)	14,838	..	14,838	3,332	166	100,436
Belgium (6)	n.a.	n.a.	n.a.	152,778	n.a.	n.a.
Belize	..	..	..	823	n.a.	..
Benelux (7)	62,860	51,556	11,304	116,913	1,902	576,619
Bermuda	..	..	..	4,272	n.a.	..
Bhutan (4)	1,789	..	1,789	1	0	..
Bolivia (Plurinational State of)	..	..	..	31	n.a.	..
Bonaire, Saint Eustatius and Saba (4)	1,572	..	1,572	..	0	..
Bosnia and Herzegovina	13,773	356	13,417	796	34	62,363
Botswana (4)	2,199	..	2,199	21	0	..
Brazil	..	..	..	15,767	n.a.	..
Brunei Darussalam	..	..	..	139	n.a.	..
Bulgaria	14,576	6,932	7,644	40,284	142	57,149
Burkina Faso	..	..	..	1	n.a.	..
Burundi	..	..	..	2	n.a.	..
Cambodia	..	..	..	6	n.a.	..
Cameroon	..	..	..	7	n.a.	..
Canada	71,027	37,519	33,508	105,946	n.a.	476,687
Cape Verde	..	..	..	139	n.a.	..
Central African Republic	..	..	..	5	n.a.	..
Chad	..	..	..	1	n.a.	..
Chile (5,10)	45,525	28,961	16,564	34,468	n.a.	403,871
China	1,033,571	926,330	107,241	1,071,652	2,053	5,510,077
China, Hong Kong SAR	43,575	15,405	28,170	55,747	n.a.	276,186
China, Macao SAR	6,870	821	6,049	1,036	n.a.	56,970
Colombia	22,138	13,083	9,055	17,270	n.a.	240,860
Congo	..	..	..	1	n.a.	..
Cook Islands	..	..	..	48	n.a.	..
Costa Rica	10,184	4,591	5,593	5,705	n.a.	113,705
Côte d'Ivoire	..	..	..	114	n.a.	..
Croatia	22,578	5,170	17,408	11,882	180	132,596
Cuba	4,170	401	3,769	868	3	16,364
Curaçao	2,710	1	2,709	1,837	8	20,144
Cyprus	3,874	628	3,246	25,318	25	688,356

	Registration Class Count by Office			Equivalent Registration Class Count by Origin	Madrid International Registrations by Origin	Registrations in Force by Office
Name	Total	Resident	Non-Resident	Total (1)	Total	Total
Czech Republic	30,449	23,376	7,073	83,575	283	117,575
Democratic People's Republic of Korea (4)	3,084	..	3,084	278	0	..
Democratic Republic of the Congo	..	..	..	27	n.a.	..
Denmark	11,462	7,162	4,300	103,035	364	165,848
Dominica	..	..	..	16	n.a.	..
Dominican Republic	..	..	..	650	n.a.	..
Ecuador (2,3,5)	10,752	10,752	0	12,139	n.a.	115,102
Egypt (4)	10,717	..	10,717	2,846	32	..
El Salvador	..	..	..	314	n.a.	..
Equatorial Guinea	..	..	..	85	n.a.	..
Estonia	6,154	1,607	4,547	15,023	44	61,416
Ethiopia	..	..	..	13	n.a.	..
Fiji	..	..	..	23	n.a.	..
Finland	12,600	8,084	4,516	96,073	192	114,203
France (4,9)	9,315	..	9,315	875,224	3,785	..
Gabon	..	..	..	13	n.a.	..
Georgia	9,505	1,047	8,458	1,225	7	45,982
Germany	164,821	148,778	16,043	1,872,023	4,943	780,950
Ghana (4)	2,750	..	2,750	90	0	..
Greece (4)	4,352	..	4,352	33,369	65	..
Grenada	..	..	..	8	n.a.	..
Guatemala	..	..	..	894	n.a.	..
Guinea	..	..	..	10	n.a.	..
Guinea-Bissau	..	..	..	4	n.a.	..
Guyana	..	..	..	254	n.a.	..
Haiti	..	..	..	5	n.a.	1,949
Holy See	..	..	..	162	n.a.	..
Honduras	5,001	1,149	3,852	1,198	n.a.	105,794
Hungary	11,820	5,841	5,979	33,161	214	175,118
Iceland	8,028	1,356	6,672	3,784	33	53,250
India	142,943	122,440	20,503	139,109	n.a.	881,211
Indonesia	..	..	..	1,653	n.a.	..
Iran (Islamic Republic of) (4)	7,295	..	7,295	2,549	17	..
Iraq	..	..	..	159	n.a.	..
Ireland (4)	6,242	..	..	62,187	59	89,540
Israel	19,526	3,360	16,166	20,061	180	166,179
Italy	137,987	124,029	13,958	782,068	2,333	361,305
Jamaica	..	..	..	1,281	n.a.	..
Japan (4,9)	12,179	..	12,179	294,633	1,582	1,761,363
Jordan	5,435	1,157	4,278	2,589	n.a.	22,794
Kazakhstan (4,5)	11,758	..	11,758	2,301	51	28,117
Kenya (4)	3,934	..	3,934	788	9	..
Kuwait	..	..	..	929	n.a.	..
Kyrgyzstan	6,886	200	6,686	231	3	8,394
Lao People's Democratic Republic	..	..	..	140	n.a.	..
Latvia	7,104	1,996	5,108	9,101	103	29,485
Lebanon	..	..	..	2,142	n.a.	..
Lesotho (4)	1,723	..	1,723	..	0	..
Liberia (4)	2,124	..	2,124	18	0	..
Libya	..	..	..	32	n.a.	..
Liechtenstein (4)	7,778	3	7,775	16,253	98	..
Lithuania	7,354	2,254	5,100	10,044	88	36,825

Name	Registration Class Count by Office			Equivalent Registration Class Count by Origin	Madrid International Registrations by Origin	Registrations in Force by Office
	Total	Resident	Non-Resident	Total (1)	Total	Total
Luxembourg (6)	n.a.	n.a.	n.a.	78,495	n.a.	n.a.
Madagascar	4,455	1,381	3,074	1,465	1	..
Malawi	..	..	..	5	n.a.	..
Malaysia	23,819	10,201	13,618	16,488	n.a.	56,649
Maldives	..	..	..	58	n.a.	..
Malta	845	423	422	12,793	n.a.	27,648
Marshall Islands	..	..	..	152	n.a.	..
Mauritania	..	..	..	15	n.a.	..
Mauritius	..	..	..	3,056	n.a.	..
Mexico	68,234	45,957	22,277	60,757	n.a.	721,928
Monaco	9,895	1,923	7,972	12,246	58	10,127
Mongolia (2,3,5)	8,135	3,510	4,625	3,716	6	55,573
Montenegro (4)	10,094	..	10,094	563	10	19,703
Morocco (2,3,5)	27,714	14,619	13,095	18,263	88	117,870
Mozambique (4)	2,558	..	2,558	110	0	..
Myanmar	..	..	..	32	n.a.	..
Namibia (4)	2,457	..	2,457	34	0	..
Nepal	..	..	..	20	n.a.	..
Netherlands (6)	n.a.	n.a.	n.a.	350,879	n.a.	n.a.
New Zealand	11,607	5,524	6,083	18,497	n.a.	223,677
Nicaragua	..	..	..	51	n.a.	..
Niger	..	..	..	1	n.a.	..
Nigeria	..	..	..	560	n.a.	..
Norway (4)	20,006	..	20,006	29,556	355	100,865
Office for Harmonization in the Internal Market (8)	270,438	208,327	62,111	64,330	5,553	757,021
Oman (4)	5,554	..	5,554	213	0	..
Pakistan	..	..	..	687	n.a.	..
Panama	9,349	3,351	5,998	8,290	n.a.	159,391
Papua New Guinea	..	..	..	19	n.a.	..
Paraguay	..	..	..	338	n.a.	..
Peru (4,5)	21,595	..	..	3,719	n.a.	221,521
Philippines (2,3)	18,176	7,662	10,514	9,063	n.a.	..
Poland	31,519	23,170	8,349	150,528	310	238,053
Portugal	27,580	21,298	6,282	86,270	158	322,954
Qatar	..	..	..	2,437	n.a.	..
Republic of Korea	102,147	64,844	37,303	113,187	433	768,019
Republic of Moldova	11,386	2,142	9,244	3,315	42	18,321
Romania	22,985	15,022	7,963	43,932	73	78,260
Russian Federation	97,100	51,010	46,090	105,874	1,328	423,940
Rwanda	..	..	..	3	n.a.	..
Saint Kitts and Nevis	..	..	..	209	n.a.	..
Saint Lucia	..	..	..	217	n.a.	..
Saint Vincent and the Grenadines	..	..	..	37	n.a.	..
Samoa	..	..	..	432	n.a.	..
San Marino (4)	3,703	..	3,703	3,252	7	..
Sao Tome and Principe (4)	1,504	..	1,504	..	0	..
Saudi Arabia	..	..	..	3,504	n.a.	..
Senegal	..	..	..	84	n.a.	..
Serbia	16,989	1,675	15,314	7,701	161	27,335
Seychelles	91	91	0	1,890	n.a.	..
Sierra Leone (4)	1,908	..	1,908	2	0	..

	Registration Class Count by Office			Equivalent Registration Class Count by Origin	Madrid International Registrations by Origin	Registrations in Force by Office
Name	Total	Resident	Non-Resident	Total (1)	Total	Total
Singapore	25,993	4,183	21,810	29,993	235	309,445
Sint Maarten (Dutch Part)	2,159	0	2,159	..	0	19,699
Slovakia	12,967	6,611	6,356	22,609	82	49,403
Slovenia (2,3,5)	9,474	4,477	4,997	33,192	171	24,829
Solomon Islands	..	..	..	4	n.a.	..
Somalia	..	..	..	1	n.a.	..
South Africa	31,286	17,728	13,558	26,316	n.a.	287,052
Spain	66,659	56,721	9,938	660,868	558	885,057
Sri Lanka (2,3)	1,039	570	469	1,947	n.a.	..
Sudan (4)	2,934	..	2,934	2	0	..
Suriname	..	..	..	358	n.a.	..
Swaziland (4)	1,881	..	1,881	8	0	..
Sweden	16,995	11,567	5,428	182,659	247	136,206
Switzerland	79,651	31,372	48,279	375,264	2,928	212,208
Syrian Arab Republic (4)	4,517	..	4,517	655	4	..
T F Y R of Macedonia (4)	9,717	..	9,717	856	18	..
Tajikistan	6,468	326	6,142	327	0	9,472
Thailand	18,707	11,657	7,050	17,910	n.a.	..
Togo	..	..	..	553	n.a.	..
Trinidad and Tobago	..	..	..	63	n.a.	..
Tunisia	..	..	..	1,785	n.a.	..
Turkey	90,166	61,774	28,392	104,665	912	461,713
Turkmenistan (4)	5,278	..	5,278	..	0	..
Uganda	..	..	..	7	n.a.	..
Ukraine	52,041	22,429	29,612	31,780	356	133,411
United Arab Emirates	..	..	..	12,880	n.a.	..
United Kingdom	75,804	59,906	15,898	863,421	1,093	509,157
United Republic of Tanzania	..	..	..	296	n.a.	..
United States of America	249,034	179,604	69,430	1,032,708	4,652	1,735,204
Uruguay	8,215	3,611	4,604	4,859	n.a.	76,453
Uzbekistan	9,464	2,448	7,016	2,467	0	14,478
Vanuatu	..	..	..	8	n.a.	..
Venezuela (Bolivarian Republic of)	12,006	6,455	5,551	7,288	n.a.	..
Viet Nam	43,236	23,887	19,349	25,706	60	155,010
Yemen	2,729	2,083	646	2,226	n.a.	..
Zambia (4)	2,266	..	2,266	3	0	..
Zimbabwe	..	..	..	14	n.a.	..

(1) Data on equivalent registration class count by origin are incomplete, as some offices do not report detailed statistics containing the origin of registration class counts.
(2) 2010 data are reported for registration class count by office.
(3) 2010 data are reported for equivalent registration class count by origin.
(4) Only Madrid designation data are available; therefore, registration class count by office and origin data may be incomplete.
(5) 2010 data are reported for trademarks in force.
(6) This country does not have a national trademark office. All trademark registrations for this country are issued by the Benelux Office for Intellectual Property (BOIP) or the Office for Harmonization in the Internal Market (OHIM) of the European Union (EU).
(7) Resident registrations include those issued to residents of Belgium, Luxembourg and the Netherlands.
(8) Resident registrations include those issued to residents of EU member states.
(9) Equivalent registration class count by origin is calculated using an estimated component for the missing resident registration class count at the national office.
(10) Registration class count by office data include renewal statistics.
n.a. not applicable
.. not available

Source: WIPO Statistics Database, October 2012

Table ID1: Industrial design applications by office and origin, 2011

	Application Design Count by Office			Equivalent Application Design Count by Origin	Hague International Applications	
Name	Total	Resident	Non-Resident	Total(1)	Origin	Designated Hague Member
Afghanistan	..	..	..	11	0	n.a.
African Intellectual Property Organization (4)	595	..	595	12	0	96
Albania	848	16	832	16	0	190
Algeria	803	699	104	699	0	n.a.
Andorra	..	..	..	189	0	n.a.
Angola	..	..	..	54	0	n.a.
Antigua and Barbuda	..	..	..	54	0	n.a.
Argentina (2,4)	1,676	..	..	43	0	n.a.
Armenia	818	27	791	27	0	167
Australia	5,966	2,664	3,302	15,826	1	n.a.
Austria	..	..	..	68,219	22	n.a.
Azerbaijan	632	27	605	30	0	167
Bahamas	..	..	..	221	0	n.a.
Bahrain	..	..	..	4	0	n.a.
Bangladesh	..	..	..	12	0	n.a.
Barbados	..	..	..	205	0	n.a.
Belarus	573	236	337	342	0	n.a.
Belgium (4)	n.a.	n.a.	n.a.	42,351	42	n.a.
Belize (4)	450	..	450	15	0	119
Benelux (4,5)	941	..	941	150	0	100
Benin (4)	79	..	79	1	0	13
Bermuda	..	..	..	326	0	n.a.
Bosnia and Herzegovina	1,094	25	1,069	127	2	251
Botswana (4)	166	..	166	..	0	30
Brazil (2,3)	5,501	3,863	1,638	6,693	0	n.a.
Brunei Darussalam	..	..	..	1	0	n.a.
Bulgaria	664	614	50	6,751	16	27
Canada	..	..	..	10,623	3	n.a.
Chile	..	..	..	6	0	n.a.
China	521,468	507,538	13,930	563,161	5	n.a.
China, Hong Kong SAR	4,839	1,818	3,021	19,671	1	n.a.
China, Macao SAR	158	7	151	39	0	n.a.
Colombia	384	147	237	187	0	n.a.
Cook Islands	..	..	..	6	0	n.a.
Costa Rica (2,3)	67	10	57	12	0	n.a.
Côte d'Ivoire (4)	51	..	51	..	1	16
Croatia	2,723	622	2,101	2,579	19	485
Curaçao	..	..	..	..	1	n.a.
Cyprus	206	206	0	2,814	3	n.a.
Czech Republic	1,238	1,189	49	21,424	8	n.a.
Democratic People's Republic of Korea (4)	311	..	311	6	0	81
Denmark	311	209	102	39,544	18	33
Dominican Republic (2,4)	79	..	..	31	0	n.a.
Ecuador (2,3)	162	52	110	53	0	n.a.
Egypt (4)	1,445	..	1,445	405	3	303
El Salvador	..	..	..	5	0	n.a.
Estonia (4)	49	..	49	2,547	1	22
Finland	309	258	51	20,472	15	14
France	16,206	14,795	1,411	211,495	241	122
Gabon (4)	89	..	89	..	0	11

	Application Design Count by Office			Equivalent Application Design Count by Origin	Hague International Applications	
Name	Total	Resident	Non-Resident	Total(1)	Origin	Designated Hague Member
Georgia	1,149	206	943	207	0	210
Germany	54,041	41,441	12,600	561,921	584	125
Ghana (4)	139	..	139	2	0	34
Greece (2,3)	1,941	1,526	415	4,828	10	52
Guatemala	240	35	205	36	0	n.a.
Honduras	..	..	..	1	0	n.a.
Hungary	893	755	138	5,210	3	38
Iceland	326	52	274	669	9	92
India	8,216	5,156	3,060	8,158	0	n.a.
Indonesia	..	..	..	76	0	n.a.
Iran (Islamic Republic of)	..	..	..	5	0	n.a.
Ireland (2,3)	124	110	14	7,475	1	n.a.
Israel	..	..	..	7,728	1	n.a.
Italy	29,274	28,306	968	308,896	141	98
Japan	30,805	26,658	4,147	125,230	0	n.a.
Jordan	77	9	68	12	0	n.a.
Kazakhstan	..	..	..	55	0	n.a.
Kenya	..	..	..	1	0	n.a.
Kuwait	..	..	..	2	0	n.a.
Kyrgyzstan (4)	561	..	561	..	0	150
Latvia	194	117	77	2,852	0	30
Lebanon	..	..	..	102	0	n.a.
Liechtenstein (4)	1,280	24	1,256	4,166	25	324
Lithuania	533	61	472	1,223	1	52
Luxembourg (4)	n.a.	n.a.	n.a.	9,446	27	n.a.
Malaysia	..	..	..	1,179	0	n.a.
Mali (4)	85	..	85	..	0	10
Malta	..	..	..	326	0	n.a.
Mexico	4,149	1,909	2,240	2,361	0	n.a.
Monaco	1,591	29	1,562	606	3	360
Mongolia	765	182	583	182	0	162
Montenegro	1,051	14	1,037	14	0	249
Morocco	5,394	3,457	1,937	3,729	4	398
Namibia (4)	168	..	168	..	0	28
Netherlands (4)	n.a.	n.a.	n.a.	65,598	128	n.a.
New Zealand (2,3)	1,298	449	849	5,659	1	n.a.
Niger (4)	85	..	85	27	0	9
Nigeria	..	..	..	1	0	n.a.
Norway (4)	2,055	48	2,007	5,675	47	578
Office for Harmonization in the Internal Market (5)	87,225	64,343	22,882	28,212	0	1,923
Oman (4)	697	..	697	..	0	195
Panama	70	0	70	86	0	n.a.
Peru	334	86	248	89	0	n.a.
Philippines	..	..	..	12	0	n.a.
Poland (4)	50	..	50	81,154	17	24
Portugal	1,623	1,598	25	26,703	2	n.a.
Republic of Korea	58,571	54,300	4,271	86,169	0	n.a.
Republic of Moldova	1,854	936	918	1,133	1	202
Romania	1,164	1,030	134	5,203	4	23
Russian Federation	6,077	2,887	3,190	5,946	1	n.a.

	Application Design Count by Office			Equivalent Application Design Count by Origin	Hague International Applications	
Name	Total	Resident	Non-Resident	Total(1)	Origin	Designated Hague Member
Rwanda (4)	5	..	5	..	0	1
Samoa	..	..	..	4	0	n.a.
San Marino	..	..	..	30	0	n.a.
Sao Tome and Principe (4)	83	..	83	..	0	21
Saudi Arabia	752	246	506	249	0	n.a.
Senegal (4)	79	..	79	..	0	14
Serbia	1,216	107	1,109	380	15	280
Seychelles	..	..	..	228	0	n.a.
Singapore	3,985	663	3,322	2,810	6	629
Slovakia	416	362	54	5,071	0	n.a.
Slovenia (2,4)	566	..	..	6,151	15	76
South Africa	..	..	..	1,056	0	n.a.
Spain	18,994	18,540	454	123,849	32	76
Sri Lanka	..	..	..	299	0	n.a.
Suriname (4)	125	..	125	..	0	29
Swaziland	..	..	..	3	0	n.a.
Sweden	606	583	23	40,715	34	n.a.
Switzerland (4)	7,605	2,577	5,028	196,299	600	1,628
Syrian Arab Republic (4)	200	..	200	4	0	69
T F Y R of Macedonia	1,459	87	1,372	228	1	350
Tajikistan	5	0	5	..	0	n.a.
Thailand	..	..	..	348	0	n.a.
Trinidad and Tobago	..	..	..	2	0	n.a.
Tunisia	..	..	..	27	0	0
Turkey	41,218	35,488	5,730	47,699	86	1,093
Ukraine	6,735	3,444	3,291	4,220	7	563
United Arab Emirates	..	..	..	388	0	n.a.
United Kingdom	..	..	..	145,810	29	n.a.
United States of America	30,467	17,443	13,024	184,305	229	n.a.
Uzbekistan	327	301	26	301	0	n.a.
Venezuela (Bolivarian Republic of)	..	..	..	16	0	n.a.
Viet Nam	2,104	1,367	737	1,656	0	n.a.
Yemen	..	..	..	5	0	n.a.
Zimbabwe	..	..	..	2	0	n.a.

(1) Equivalent application design count by origin data are incomplete, as some offices do not report detailed statistics containing the origin of application design counts.
(2) 2010 data are reported for application design count by office.
(3) 2010 data are reported for equivalent application design count by origin.
(4) Only Hague designation data are available; therefore, application design count by office and origin data may be incomplete.
(5) Applications by origin could not be attributed to a specific country member of the Benelux Office for Intellectual Property (BOIP) or of the Office for Harmonization in the Internal Market (OHIM) of the European Union (EU).
n.a. not applicable
.. not available

Source: WIPO Statistics Database, October 2012

Table ID2: Industrial design registrations by office and origin, and industrial designs in force, 2011

	Registration Design Count by Office			Equivalent Registration Design Count by Origin	Hague International Registrations	Registrations in Force by Office
Name	Total	Resident	Non-Resident	Total (1)	Origin	Total
Afghanistan	..	..	..	11	0	..
African Intellectual Property Organization (4)	595	..	595	12	0	..
Albania	822	0	822	1	0	49
Algeria	148	95	53	95	0	999
Andorra	..	..	..	190	0	..
Antigua and Barbuda	..	..	..	54	1	..
Argentina	..	..	..	32	0	..
Armenia	802	17	785	33	0	67
Australia	5,647	2,511	3,136	15,235	1	45,612
Austria	..	..	..	65,688	21	13,706
Azerbaijan	630	16	614	16	0	..
Bahamas	..	..	..	286	0	..
Bahrain	..	..	..	..	0	4
Barbados	..	..	..	197	0	..
Belarus	363	196	167	247	0	1,223
Belgium (4)	n.a.	n.a.	n.a.	39,231	37	n.a.
Belize (4)	450	..	450	9	0	..
Benelux (4)	941	..	941	150	0	10,347
Benin (4)	79	..	79	..	0	..
Bermuda	..	..	..	271	0	..
Bosnia and Herzegovina	1,079	15	1,064	115	3	1,068
Botswana (4)	166	..	166	..	0	..
Brazil	..	..	..	6,151	0	..
Brunei Darussalam	..	..	..	4	0	..
Bulgaria	683	630	53	6,307	16	2,710
Canada	..	..	..	12,161	1	34,810
Chile	..	..	..	11	0	1,778
China	380,290	366,428	13,862	419,395	0	922,371
China, Hong Kong SAR	4,478	1,638	2,840	20,514	1	33,840
China, Macao SAR	64	2	62	34	0	503
Colombia	772	313	459	340	0	..
Cook Islands	..	..	..	6	0	..
Costa Rica (2,3)	74	0	74	1	0	303
Côte d'Ivoire (4)	51	..	51	..	1	..
Croatia	2,530	413	2,117	2,344	17	4,506
Cuba	..	..	..	..	0	402
Cyprus	206	206	0	2,989	3	688
Czech Republic	826	806	20	18,339	9	3,720
Democratic People's Republic of Korea (4)	311	..	311	5	0	..
Denmark	211	122	89	35,779	18	4,014
Dominican Republic	..	..	..	29	0	..
Ecuador (2,3,5)	162	52	110	54	0	917
Egypt (4)	1,407	..	1,407	371	1	..
Estonia (4)	24	..	24	2,684	0	1,501
Finland	355	272	83	21,038	14	3,375
France (4)	1,064	74	990	203,700	229	..
Gabon (4)	89	..	89	..	0	..
Georgia	1,125	179	946	181	0	259
Germany	49,905	39,341	10,564	552,285	573	57,245
Ghana (4)	139	..	139	..	0	..

	Registration Design Count by Office			Equivalent Registration Design Count by Origin	Hague International Registrations	Registrations in Force by Office
Name	Total	Resident	Non-Resident	Total (1)	Origin	Total
Greece (2,3,5)	2,023	1,604	419	4,481	9	1,599
Guatemala	150	10	140	12	0	243
Haiti	..	..	..	1	0	..
Honduras	..	..	..	..	0	26
Hungary	642	531	111	4,703	2	4,228
Iceland	328	52	276	652	9	684
India	6,237	3,971	2,266	6,970	0	44,600
Indonesia	..	..	..	74	0	..
Iran (Islamic Republic of)	..	..	..	2	0	..
Ireland (2,3)	93	79	14	8,814	0	937
Israel	..	..	..	6,233	0	..
Italy	22,371	21,382	989	302,910	134	..
Japan	26,274	23,042	3,232	118,143	0	246,115
Jordan	85	27	58	28	0	1,841
Kazakhstan (5)	..	..	..	27	0	682
Kenya	..	..	..	1	0	..
Kyrgyzstan (4,5)	561	..	561	..	0	186
Latvia	180	103	77	2,991	0	927
Lebanon	..	..	..	15	0	..
Liechtenstein (4)	1,280	24	1,256	4,448	21	..
Lithuania	529	55	474	1,298	1	335
Luxembourg (4)	n.a.	n.a.	n.a.	9,427	26	n.a.
Madagascar	..	..	..	..	0	1,863
Malaysia	..	..	..	1,028	0	15,206
Mali (4)	85	..	85	..	0	..
Malta	..	..	..	270	0	88
Mexico	2,443	865	1,578	1,172	0	21,643
Monaco (5)	1,599	37	1,562	985	3	382
Mongolia	829	246	583	246	0	18,945
Montenegro	1,037	0	1,037	..	0	41
Morocco (2,3)	1,617	45	1,572	727	7	..
Namibia (4)	168	..	168	..	0	..
Netherlands (4)	n.a.	n.a.	n.a.	61,267	133	n.a.
New Zealand (2,3,5)	1,072	338	734	3,174	1	9,650
Niger (4)	85	..	85	27	0	..
Norway (4)	22	..	22	5,416	42	5,864
Office for Harmonization in the Internal Market	86,326	63,085	23,241	27,309	0	158,315
Oman (4)	697	..	697	1	0	..
Pakistan	..	..	..	1	0	6,147
Panama	43	0	43	88	0	445
Peru	229	46	183	54	0	1,855
Philippines (5)	..	..	..	6	0	5,983
Poland	1,445	1,387	58	76,915	16	12,915
Portugal	1,536	1,497	39	25,272	2	4,454
Republic of Korea	43,634	40,579	3,055	71,969	0	242,262
Republic of Moldova	1,204	325	879	527	2	3,511
Romania	1,537	1,453	84	5,577	4	3,736
Russian Federation	5,747	3,002	2,745	5,794	0	21,295
Rwanda (4)	5	..	5	..	0	..
Saint Vincent and the Grenadines	..	..	..	5	0	..
San Marino	..	..	..	27	0	..
Sao Tome and Principe (4)	83	..	83	..	0	..

	Registration Design Count by Office			Equivalent Registration Design Count by Origin	Hague International Registrations	Registrations in Force by Office
Name	Total	Resident	Non-Resident	Total (1)	Origin	Total
Saudi Arabia	457	62	395	65	0	1,741
Senegal (4)	79	..	79	..	0	..
Serbia	1,166	86	1,080	328	11	6,467
Seychelles	..	..	..	221	0	..
Singapore	3,972	613	3,359	5,890	4	11,970
Slovakia	372	327	45	5,177	0	1,025
Slovenia (2,3,5)	527	91	436	3,745	14	658
South Africa	..	..	..	933	0	13,968
Spain	19,534	19,081	453	116,513	27	44,926
Sri Lanka	..	..	..	303	0	..
Suriname (4)	125	..	125	..	0	..
Swaziland	..	..	..	1	0	..
Sweden	599	547	52	39,286	35	7,613
Switzerland (4)	7,604	2,576	5,028	191,699	584	9,535
Syrian Arab Republic (4)	55	..	55	2	0	..
T F Y R of Macedonia	1,421	72	1,349	210	1	2,333
Tajikistan	3	0	3	..	0	38
Thailand	..	..	..	328	0	10,477
Tunisia	..	..	..	108	0	..
Turkey	37,607	31,970	5,637	43,837	78	65,089
Ukraine	5,351	2,224	3,127	2,953	5	9,454
United Arab Emirates	..	..	..	200	0	..
United Kingdom	..	..	..	140,962	17	45,489
United States of America	21,356	11,756	9,600	184,101	227	262,316
Uruguay	..	..	..	6	0	580
Uzbekistan	202	180	22	180	0	365
Venezuela (Bolivarian Republic of)	..	..	..	2	0	..
Viet Nam	1,331	928	403	1,316	0	7,596
Yemen	..	..	..	1	0	..

(1) Equivalent registration design count by origin data are incomplete, as some offices do not report detailed statistics containing the origin of registration design counts.
(2) 2010 data are reported for registration design count by office.
(3) 2010 data are reported for equivalent registration design count by origin.
(4) Only Hague designation data are available; therefore, registration design count by office and origin data may be incomplete.
(5) 2010 data are reported for industrial designs in force.
n.a. not applicable
.. not available

Source: WIPO Statistics Database, October 2012

Table PV1: Plant variety applications and grants by office and origin, 2011

	Applications by Office			Applications by Origin	Equivalent applications by Origin	Grants by Office			Grants in Force
Name	Total	Resident	Non-Resident	Total	Total	Total	Resident	Non-Resident	Office
Argentina (1)	..	..	..	67	587	..	..	..	..
Australia	330	179	151	292	1,072	183	81	102	2,410
Austria	2	2	0	42	302	..	..	..	67
Azerbaijan	62	62	0	62	62	18	18	0	217
Belarus	59	40	19	41	41	38	29	9	233
Belgium	2	1	1	119	1,523	5	5	0	147
Bolivia (Plurinational State of)	10	2	8	2	2	10	2	8	40
Brazil	324	166	158	175	175	172	103	69	1,551
Bulgaria	30	30	0	40	40	44	44	0	427
Canada	305	49	256	70	174	251	52	199	1,979
Chile	92	6	86	12	12	115	15	100	720
China	1,255	1,193	62	1,204	1,282	240	235	5	2,607
Colombia	114	14	100	14	14	101	13	88	441
Community Plant Variety Office	3,184	2,403	781	n.a.	2	2,585	2,031	554	18,900
Costa Rica	5	3	2	8	60	..	..	..	..
Croatia	32	32	0	32	32	..	..	..	..
Cyprus (2)	..	..	..	13	13	..	..	..	..
Czech Republic	92	81	11	123	409	81	76	5	686
Denmark	15	1	14	242	3,596	27	4	23	247
Dominican Republic (1)	..	..	..	..	..	..	..	..	11
Ecuador	85	2	83	14	170	33	0	33	402
Estonia	12	2	10	5	5	12	4	8	97
Finland (1)	..	..	..	10	88	..	..	..	..
France	109	96	13	838	11,524	..	..	..	1,509
Georgia	11	10	1	10	10	11	10	1	36
Germany	105	95	10	1,077	12,205	114	106	8	1,927
Greece (2)	..	..	..	3	29	..	..	..	..
Hungary	31	26	5	38	298	9	9	0	250
India (2)	..	..	..	6	58	..	..	..	..
Ireland	3	2	1	15	41	2	1	1	71
Israel	402	202	200	343	1,487	365	119	246	942
Italy	8	6	2	180	2,624	4	3	1	1,177
Japan	1,126	793	333	973	2,065	1,139	783	356	8,163
Kenya	93	34	59	35	61	87	47	40	293
Kyrgyzstan (1)	..	..	..	..	..	5	5	0	8
Latvia	6	6	0	9	87	29	25	4	280
Lithuania	4	1	3	1	1	4	1	3	34
Malaysia (2)	27	14	13	14	14	..	..	..	..
Mauritius (2)	..	..	..	7	7	..	..	..	..
Mexico	145	60	85	61	61	112	32	80	647
Morocco	62	0	62	..	..	40	16	24	177
Nepal (2)	..	..	..	10	10	..	..	..	..
Netherlands	783	654	129	2,769	29,783	717	595	122	5,834
New Zealand	121	56	65	186	862	109	40	69	1,252
Nicaragua	2	0	2	..	..	1	0	1	5
Norway	23	3	20	6	58	22	9	13	224
Panama	2	0	2	8	60	..	..	..	3
Papua New Guinea (2)	..	..	..	1	1	..	..	..	..
Paraguay	17	5	12	9	9	17	5	12	323
Peru	29	9	20	9	9	6	0	6	38

	Applications by Office			Applications by Origin	Equivalent applications by Origin	Grants by Office			Grants in Force
Name	Total	Resident	Non-Resident	Total	Total	Total	Resident	Non-Resident	Office
Philippines (2)	..	..	..	1	1	..	..	..	..
Poland	70	47	23	76	622	61	47	14	1,280
Portugal	5	4	1	4	4	1	1	0	12
Republic of Korea	587	517	70	549	575	448	387	61	3,213
Republic of Moldova	18	16	2	18	18	15	15	0	86
Romania	35	28	7	39	39	34	34	0	239
Russian Federation	452	374	78	386	386	571	484	87	3,922
Serbia (2)	..	..	..	58	58	..	..	..	..
Singapore (1)	..	..	..	3	3	..	..	..	..
Slovakia	16	10	6	14	14	9	6	3	384
Slovenia	1	1	0	2	28	1	1	0	21
South Africa	285	72	213	86	190	297	116	181	2,425
Spain	61	56	5	210	2,368	47	46	1	332
Swaziland (2)	..	..	..	7	7	..	..	..	..
Sweden	19	11	8	47	229	12	5	7	178
Switzerland	72	13	59	354	3,292	71	7	64	796
Thailand (2)	..	..	..	45	1,163	..	..	..	..
Turkey	111	40	71	51	51	91	42	49	280
Ukraine	1,095	402	693	414	414	465	248	217	3,979
United Kingdom	49	21	28	234	2,756	26	19	7	1,299
United States of America (A)	474	374	100	1,871	12,583	276	252	24	5,036
United States of America (B) (3)	1,139	0	1,139	n.a.	..	823	0	823	13,987
Uruguay	68	6	62	7	7	62	33	29	415
Uzbekistan	14	13	1	13	13	8	8	0	43
Viet Nam	52	28	24	28	28	39	20	19	99

(1) The office did not report data; therefore, applications by origin data may be incomplete.
(2) The country is not a UPOV member.
(3) Applications by origin are reported under “United States of America (A)”, as statistics by origin do not distinguish between applications under the PVPA or the Plant Patent Act.
.. Not available

Source: WIPO Statistics Database, October 2012

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