



# **PCT – Statistics**

Patent Cooperation Treaty (PCT) Working Group

Fifth Session

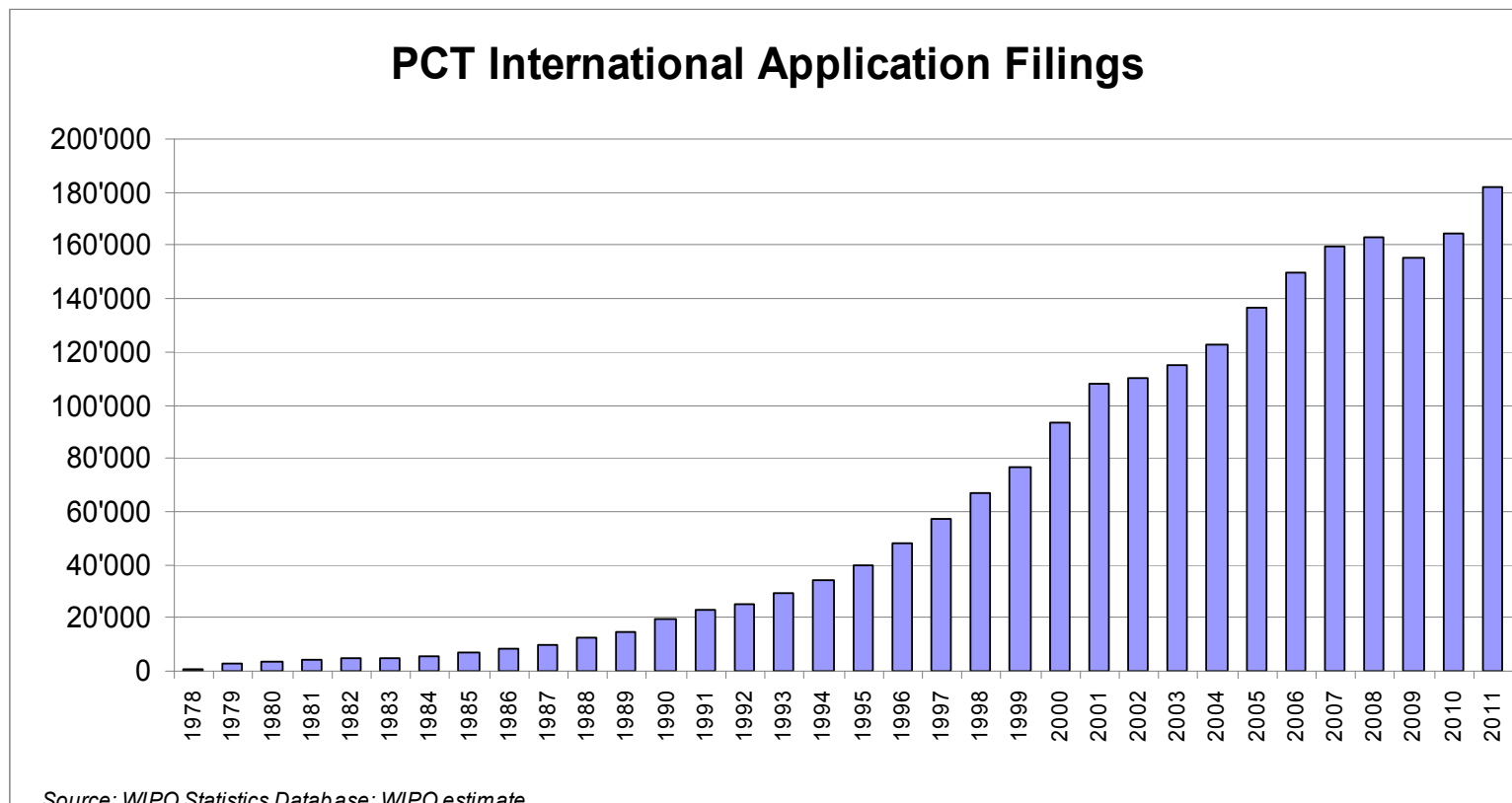
Geneva, May 29 to June 1, 2012

# Outline

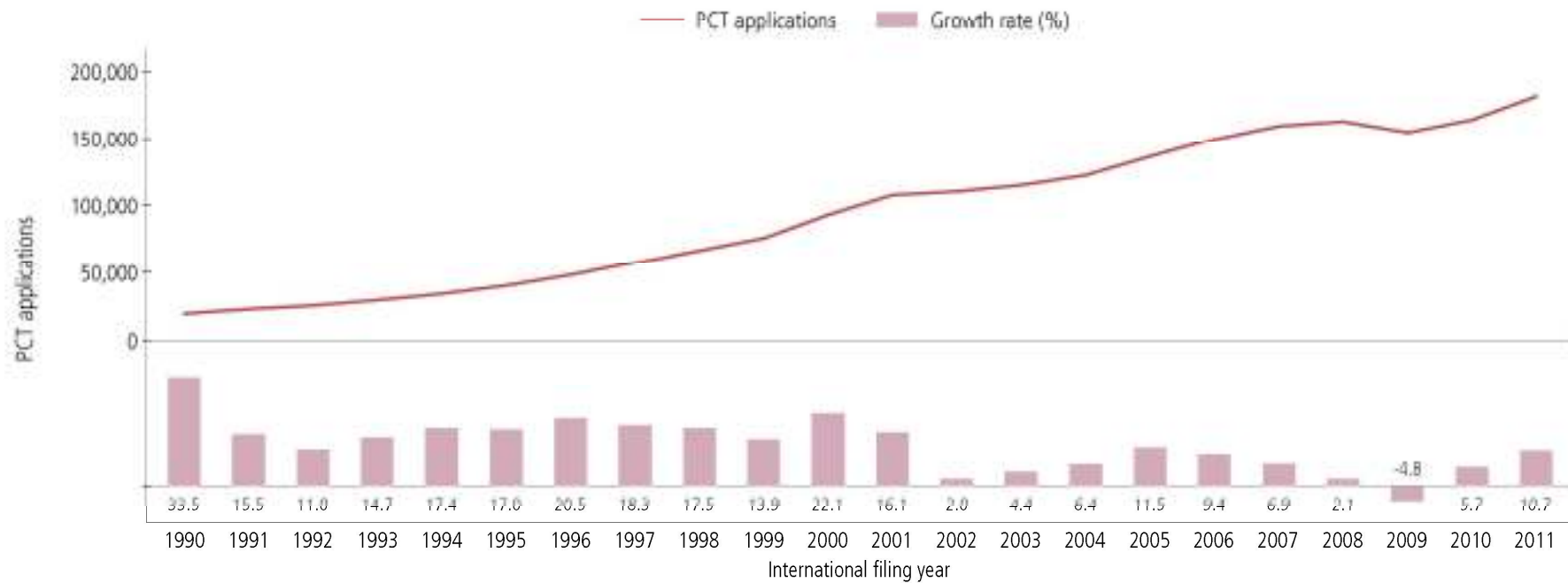
- 1) PCT International Filings
  - 1) Trends and Forecasts
  - 2) Origin of Applicants – Country, Region, Type of Applicant
  - 3) Field of Technology
  - 4) Medium of Filing
  - 5) Languages
- 2) PCT National Phase Entries
  - 1) Trends and Comparison with Direct “Paris” Filings
  - 2) Origin of Applicants
  - 3) Offices
- 3) Receiving Offices
- 4) International Authorities
- 5) PCT – Patent Prosecution Highway

# 1) PCT – International Filings

- 2009: 155,406 international applications (-4.8%)
  - 2010: 164,316 international applications (+5.7%)
  - 2011: 181,900 international applications (+10.7%) – fastest growth since 2005
- 2 millionth PCT application published on PATENTSCOPE on 26 January 2012



# Trends in PCT Applications



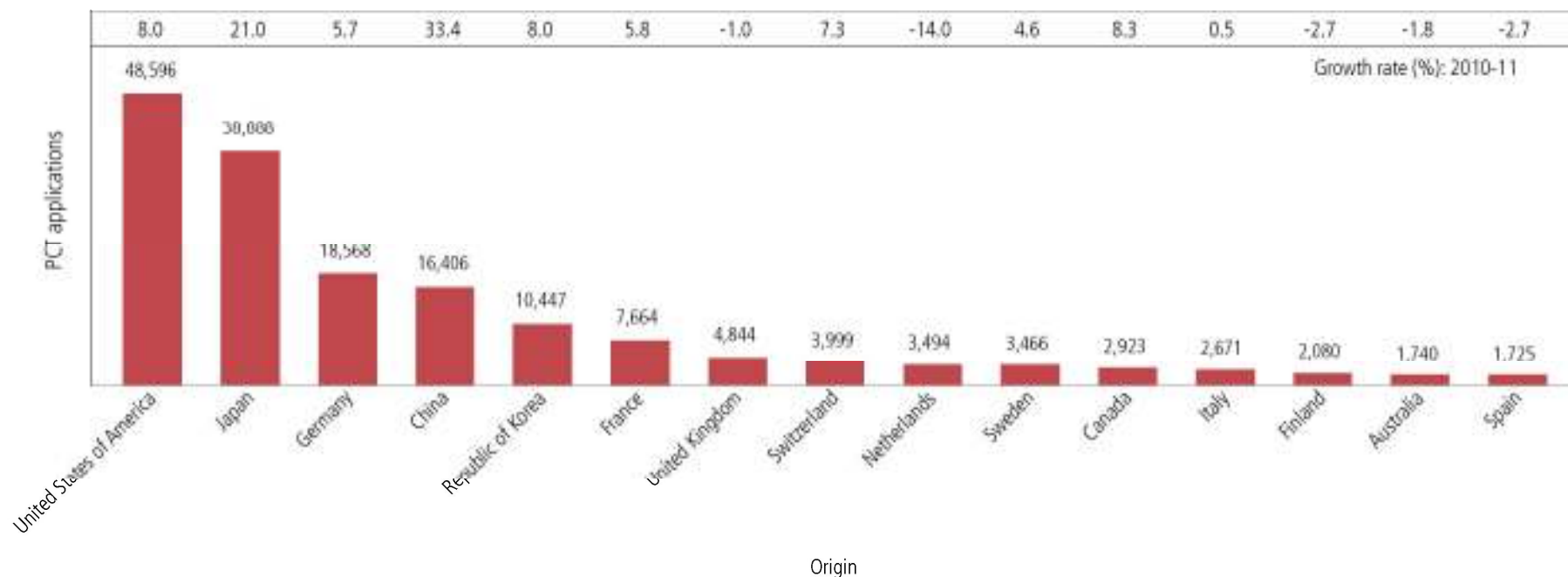
Note: The figures given for PCT applications filed in 2011 are WIPO estimates.

Source: WIPO Statistics Database, March 2012

# Forecast Summary

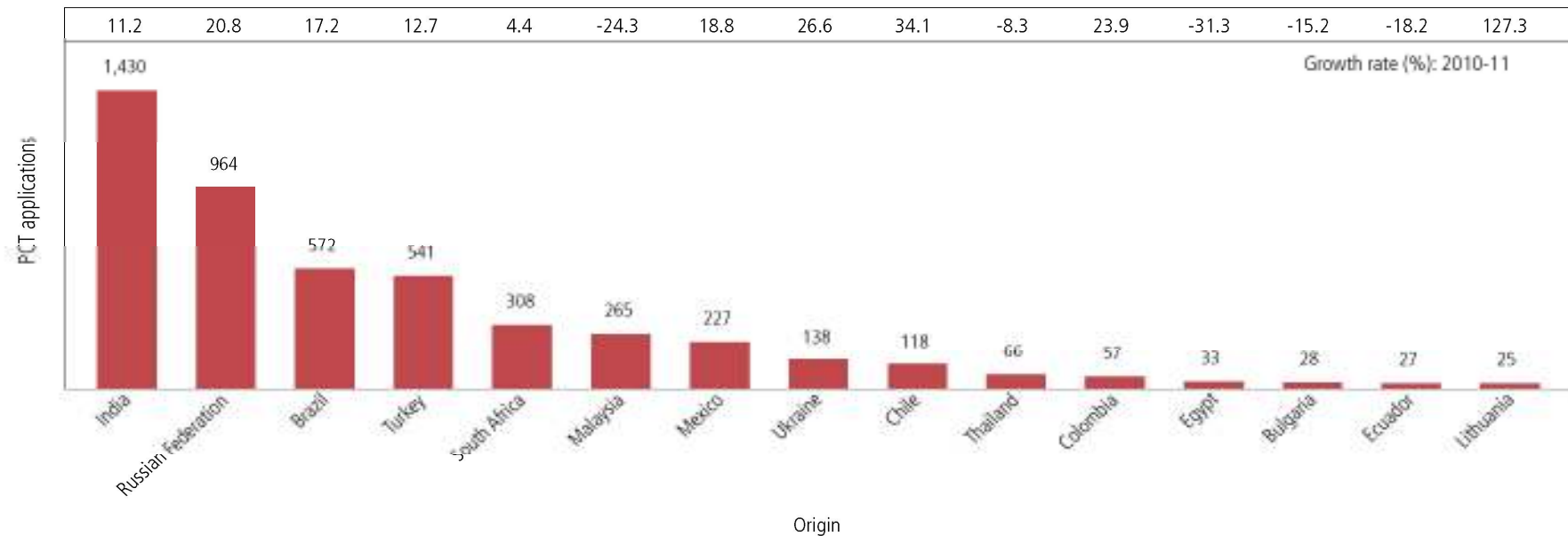
	<b>PCT Filings</b>	<b>Growth</b>
2010	164'322	5.7%
2011	182'300	10.9%
2012	183'700	0.8%
2013	192'300	4.7%
2014	199'400	3.7%
2015	205'100	2.9%

# PCT Applications by Top 15 Origins in 2011



Of the top 15 origins, China (+33.4%), Japan (+21%), Canada (+8.3%), the Republic of Korea (+8%) and the United States of America (+8%) showed the fastest growth in applications.

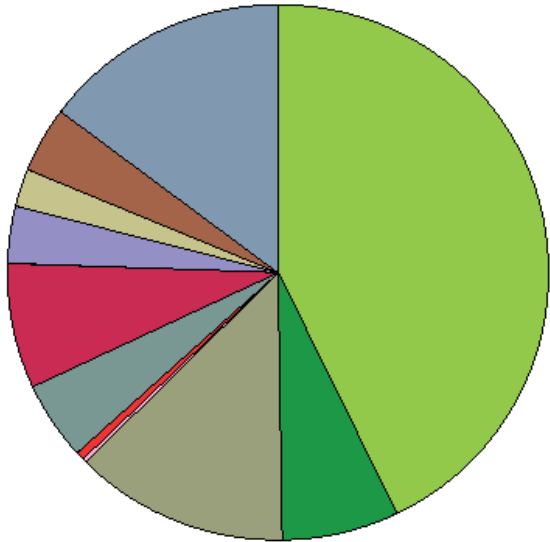
# PCT Applications by top 15 middle-income countries of origin in 2011(excluding China)



India (+11.2%), Russian Federation (+20.8%), Brazil (+17.2%) and Turkey (+12.7%) recorded double-digit filing growth. Malaysia (-24.3%), Egypt (-31.3%), Bulgaria (-15.2%) and Ecuador (-18.2%) saw a drop in applications.

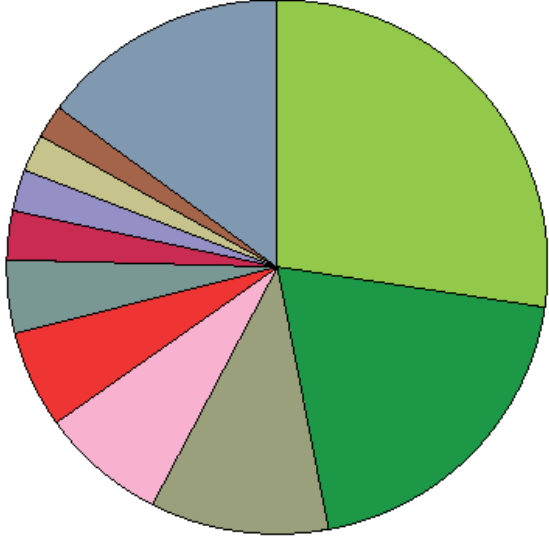
# Country share in total PCT applications

1995



US: 42.8%    JP: 6.9%    DE: 12.8%    CN: 0.3%  
 KR: 0.5%    FR: 4.7%    GB: 7.5%    NL: 3.5%  
 CH: 2.2%    SE: 3.9%    Others: 14.8%

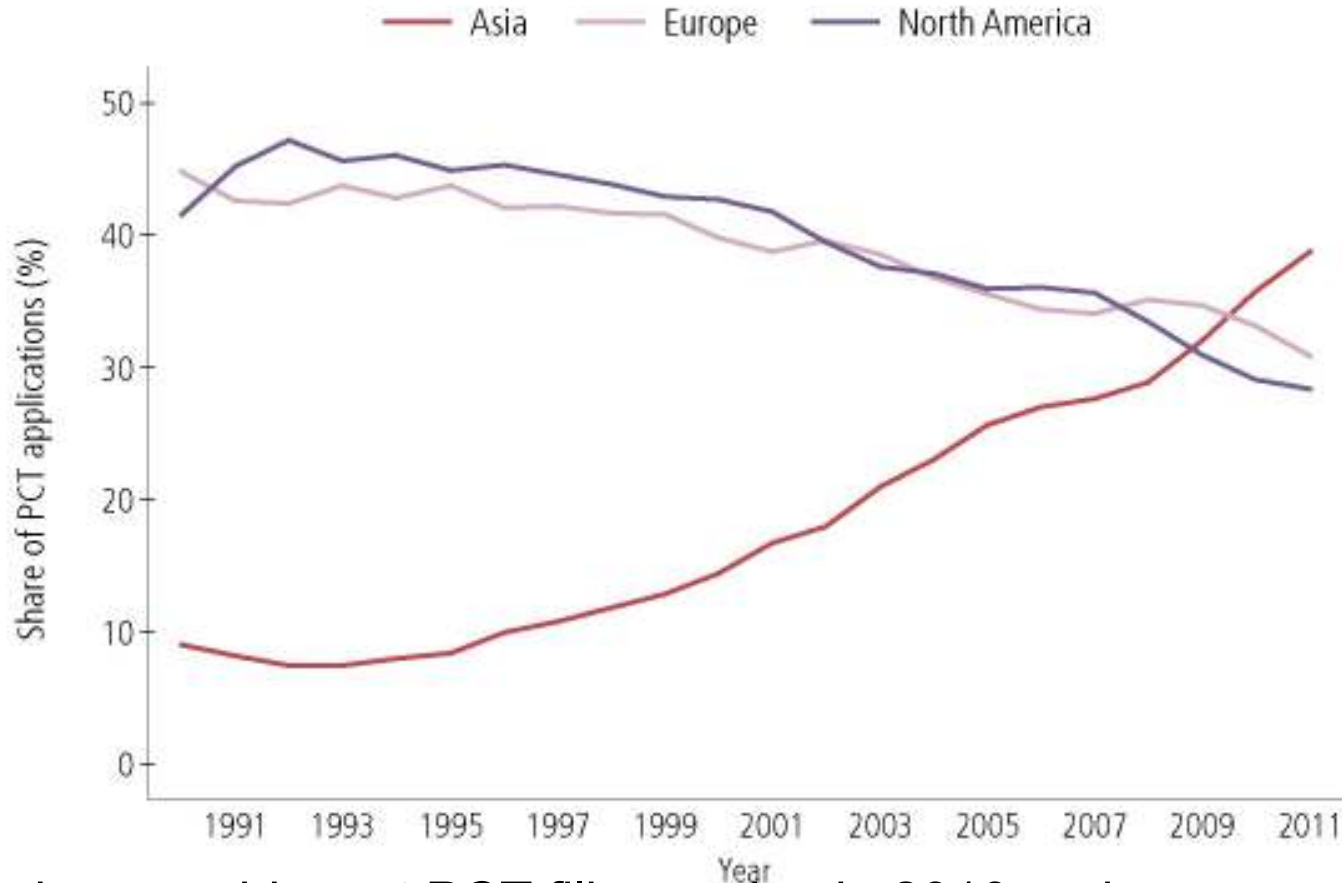
2010



US: 27.4%    JP: 19.6%    DE: 10.7%    CN: 7.5%  
 KR: 5.9%    FR: 4.4%    GB: 3.0%    NL: 2.5%  
 CH: 2.3%    SE: 2.0%    Others: 14.8%

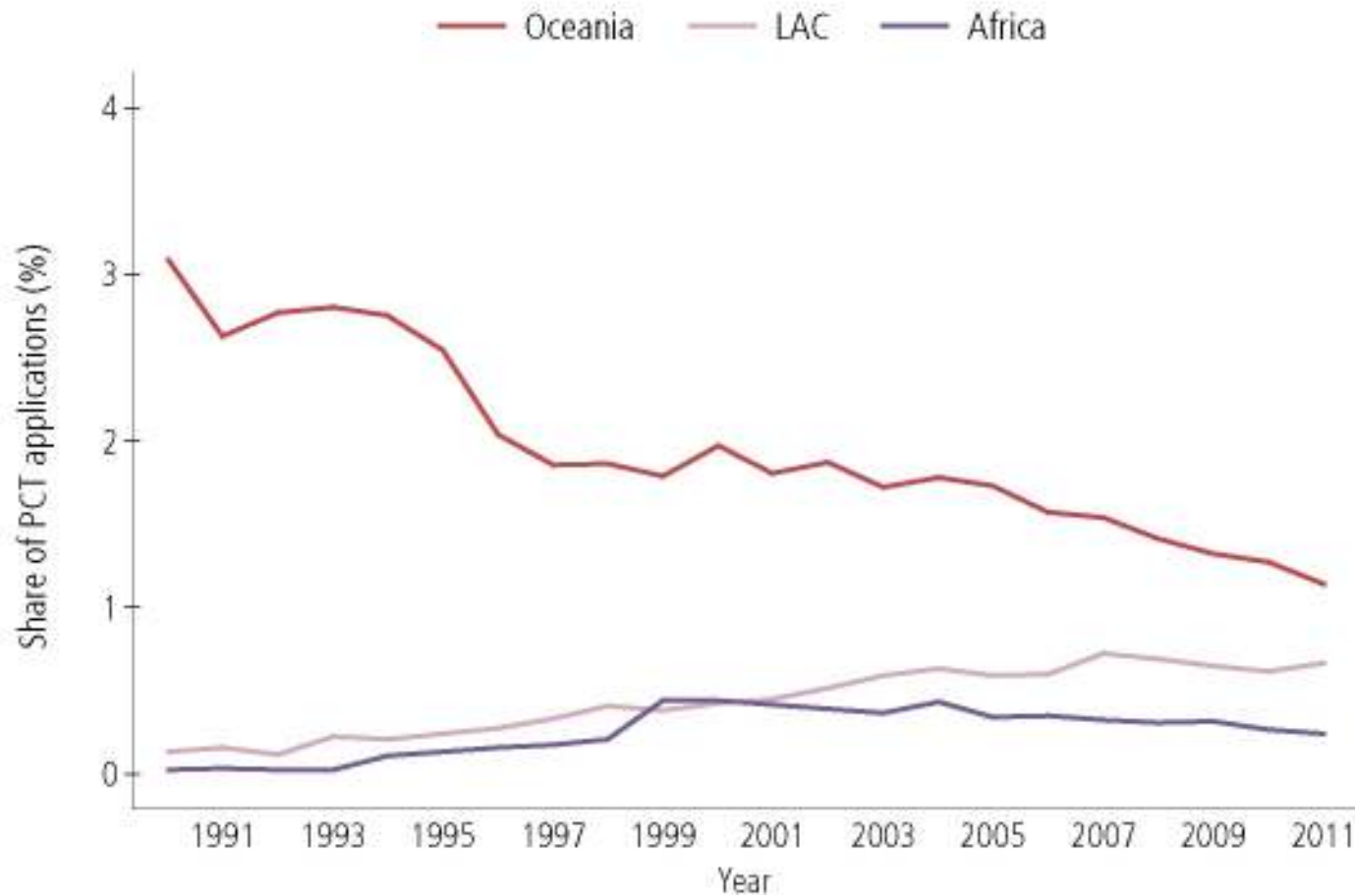


# PCT Applications filed by Region of Origin for Asia, Europe and North America

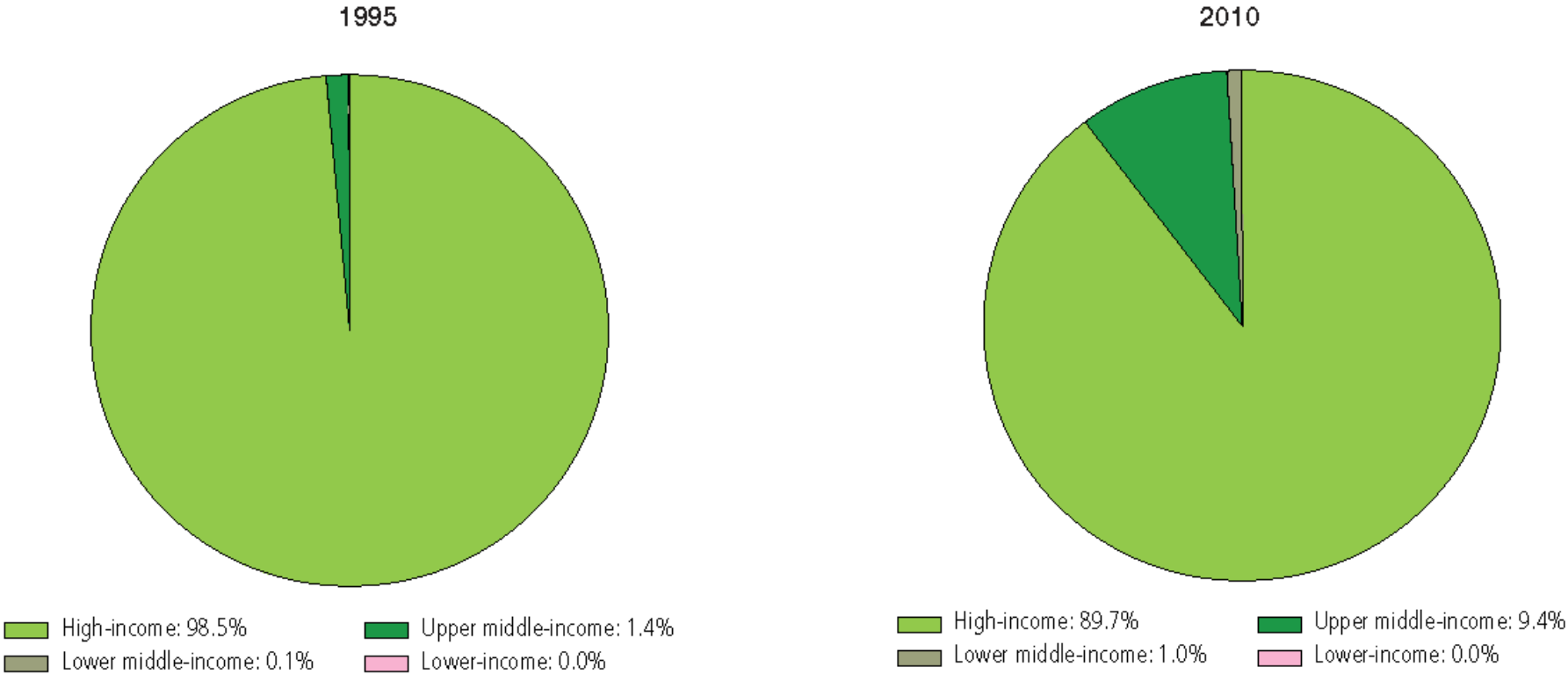


Asia became biggest PCT filing region in 2010 and now accounts for 38.8% of all PCT applications (about 8% higher than Europe)

# PCT Applications filed by Region of Origin of Applicant for Africa, Latin America and the Caribbean and Oceania



# PCT Applications filed by Income Group



Note: The data refer to the international phase of the PCT procedure. Counts are based on the international filing date.  
Source: WIPO Statistics Database, October 2011

Upper middle-income countries accounted for 9.4% of total PCT applications in 2010. Four-fifths of this share is due to China.

# Top 20 PCT Applicants in 2011

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

ZTE Corporation of China with 2,826 published applications overtook Panasonic Cooperation of Japan as the top applicant in 2011.

Data are based on publication date  
Source: WIPO Statistics Database

# Top 20 PCT University Applicants in 2011

Rank	Applicant's Name	Origin	PCT applications			Change compared to 2010
			2009	2010	2011	
1	UNIVERSITY OF CALIFORNIA	United States of America	321	304	277	-27
2	MASSACHUSETTS INSTITUTE OF TECHNOLOGY	United States of America	145	146	179	33
3	UNIVERSITY OF TEXAS SYSTEM	United States of America	126	129	127	-2
4	JOHNS HOPKINS UNIVERSITY	United States of America	87	89	111	22
5	KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY	Republic of Korea	43	51	103	52
6	SEOUL NATIONAL UNIVERSITY	Republic of Korea	76	97	99	2
7	UNIVERSITY OF TOKYO	Japan	94	105	98	-7
8	UNIVERSITY OF MICHIGAN	United States of America	61	79	96	17
9	CORNELL UNIVERSITY	United States of America	70	81	88	7
9	HARVARD UNIVERSITY	United States of America	109	91	88	-3
11	UNIVERSITY OF FLORIDA	United States of America	111	107	84	-23
12	COLUMBIA UNIVERSITY	United States of America	110	91	82	-9
13	LELAND STANFORD JUNIOR UNIVERSITY	United States of America	67	54	79	25
14	KYOTO UNIVERSITY	Japan	44	47	70	23
15	UNIVERSITY OF PENNSYLVANIA	United States of America	80	76	64	-12
16	ISIS INNOVATION LIMITED	United Kingdom	45	46	62	16
17	KOREA UNIVERSITY	Republic of Korea	17	27	60	33
19	CALIFORNIA INSTITUTE OF TECHNOLOGY	United States of America	52	50	59	9
19	OSAKA UNIVERSITY	Japan	38	60	59	-1
20	ARIZONA STATE UNIVERSITY	United States of America	40	64	55	-9

Top three university applicants remained unchanged between 2010 and 2011.

13 of the top 20 university applicants are based in the United States of America, with 3 each from the Republic of Korea and Japan, with one from the United Kingdom

Data are based on publication date and include applicants from all types of educational institutions

Source: WIPO Statistics Database

# Top 20 PCT Government and Research Institution Applicants in 2011

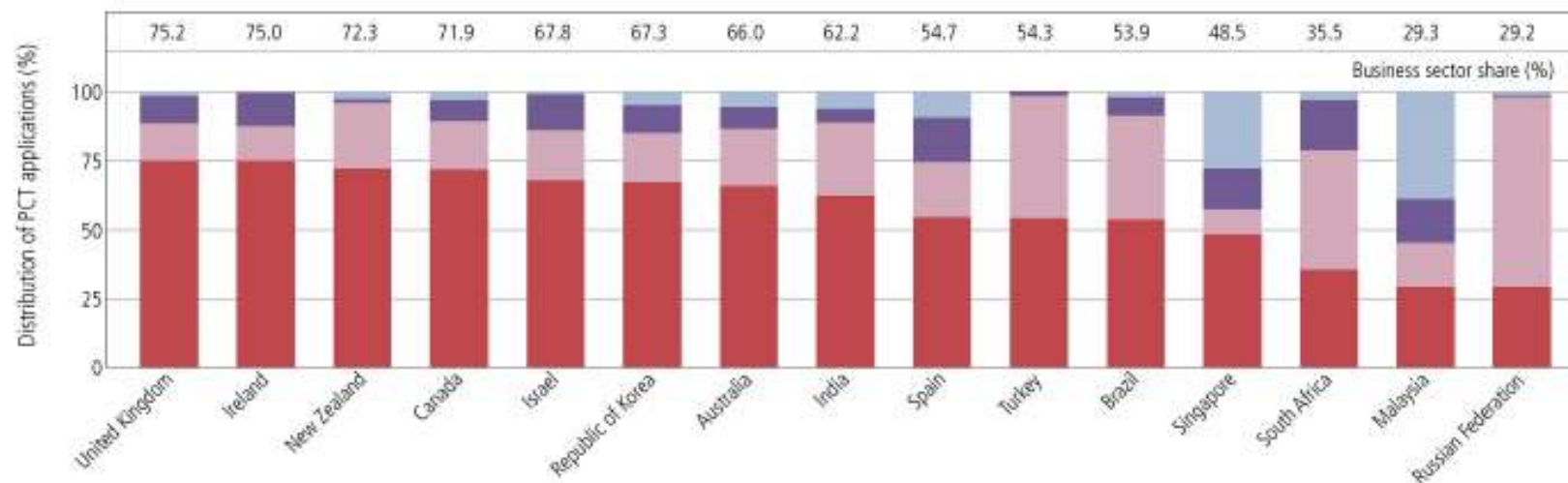
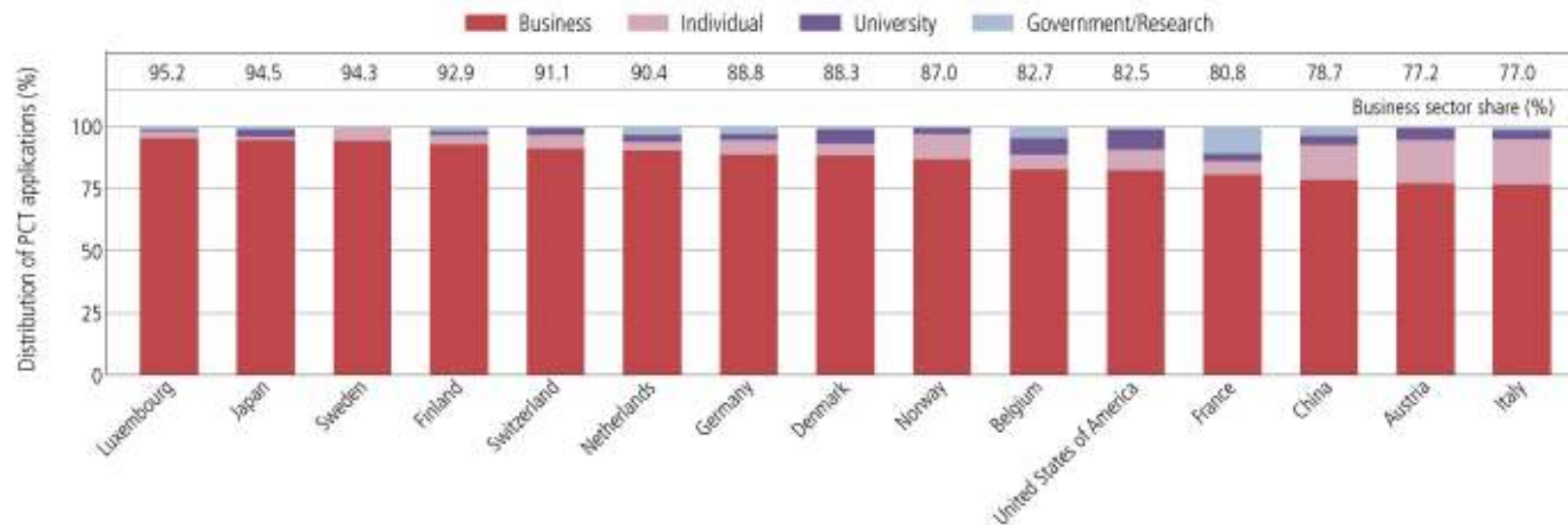
Rank	Applicant's Name	Origin	PCT applications			change compared to 2010
			2009	2010	2011	
1	COMMISSARIAT A L'ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES	France	238	308	371	63
2	FRAUNHOFER-GESELLSCHAFT ZUR FORDERUNG DER ANGEWANDTEN FORSCHUNG E.V.	Germany	265	297	294	-3
3	CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (CNRS)	France	149	207	196	-11
4	AGENCY OF SCIENCE, TECHNOLOGY AND RESEARCH	Singapore	148	154	180	26
5	CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (CSIC)	Spain	86	126	120	-6
6	CHINA ACADEMY OF TELECOMMUNICATIONS TECHNOLOGY	China			119	119
7	MIMOS BERHAD	Malaysia	90	67	108	41
8	ELECTRONICS & TELECOMMUNICATIONS RESEARCH INSTITUTE OF KOREA	Republic of Korea	452	174	104	-70
9	NATIONAL INSTITUTE OF ADVANCED INDUSTRIAL SCIENCE AND TECHNOLOGY	Japan	109	91	100	9
10	UNITED STATES OF AMERICA, REPRESENTED BY THE SECRETARY, DEPARTMENT OF HEALTH AND HUMAN SERVICES	United States of America	107	113	98	-15
11	INSTITUT NATIONAL DE LA SANTE ET DE LA RECHERCHE MEDICALE (INSERM)	France	68	83	90	7
12	NEDERLANDSE ORGANISATIE VOOR TOEGEPAST- NATUURWETENSCHAPPELIJK ONDERZOEK TNO	Netherlands	134	116	82	-34
13	INSTITUTE OF MICROELECTRONICS OF CHINESE ACADEMY OF SCIENCES	China			74	74
13	BATTELLE MEMORIAL INSTITUTE	United States of America	49	50	54	4
15	COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH	India	63	56	53	-3
16	MAX-PLANCK-GESELLSCHAFT ZUR FORDERUNG DER WISSENSCHAFTEN E.V.	Germany	50	57	49	-8
16	MAYO FOUNDATION FOR MEDICAL EDUCATION AND RESEARCH	United States of America	54	60	49	-11
18	COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION	Australia	56	61	48	-13
19	KOREA RESEARCH INSTITUTE OF BIOSCIENCE AND BIOTECHNOLOGY	Republic of Korea	71	44	45	1
20	JAPAN SCIENCE AND TECHNOLOGY AGENCY	Japan	48	51	43	-8

Data are based on publication date and include applicants from private non-profit organizations and hospitals

Source: WIPO Statistics Database

# PCT Applications by Type of Applicant

(Top 30 Origins by Published International Applications for 2011)



# PCT Applications by Field of Technology

Technical Field	Years					2011 Share (%)	Change compared to 2010
	2007	2008	2009	2010	2011		
<b>I Electrical engineering</b>							
1 Electrical machinery, apparatus, energy	7,677	8,943	9,366	9,168	11,296	6.9	25.2
2 Audio-visual technology	6,322	6,251	5,828	5,817	5,830	3.6	-3.8
3 Telecommunications	5,912	6,397	5,656	4,877	4,967	3.0	-1.8
4 Digital communication	7,569	8,846	9,063	10,590	11,574	7.1	9.3
5 Basic communication processes	1,358	1,463	1,392	1,277	1,202	0.7	-5.9
6 Computer technology	1,217	11,725	10,239	9,539	10,455	6.4	9.6
7 IT methods for management	1,869	2,420	2,156	2,083	2,204	1.4	13.0
8 Semiconductors	4,656	5,028	5,582	5,699	6,500	4.0	10.9
<b>II Instruments</b>							
9 Optics	4,277	4,557	4,326	4,192	4,547	2.8	8.5
10 Measurement	6,553	6,855	6,802	6,428	6,555	4.0	2.0
11 Analysis of biological materials	1,750	1,800	1,805	1,709	1,703	1.1	-0.3
12 Control	2,385	2,525	2,297	2,130	2,165	1.3	1.2
13 Medical technology	481	11,088	10,481	10,484	10,753	6.6	2.6
<b>III Chemistry</b>							
14 Organic fine chemistry	6,058	6,117	5,672	5,511	5,283	3.2	-4.1
15 Biotechnology	3,118	5,290	5,313	5,219	5,232	3.2	0.2
16 Pharmaceuticals	8,794	8,868	8,399	7,833	7,683	4.7	-1.9
17 Macromolecular chemistry, polymers	3,065	3,138	3,003	2,806	3,103	1.9	10.6
18 Food chemistry	1,572	1,684	1,318	1,375	1,581	1.0	4.4
19 Basic materials chemistry	4,410	4,731	4,736	4,640	4,873	3.0	5.0
20 Materials, metallurgy	2,558	2,602	2,768	2,667	3,215	2.0	12.1
21 Surface technology, coating	2,183	2,670	2,454	2,424	2,601	1.6	8.8
22 Micro-structural and nano-technology	246	306	344	347	356	0.2	2.6
23 Chemical engineering	3,468	3,790	3,626	3,584	3,848	2.4	7.3
24 Environmental technology	1,974	2,237	2,221	2,164	2,469	1.5	14.1
<b>IV Mechanical engineering</b>							
25 Handling	3,865	3,802	3,721	3,647	4,003	2.5	11.4
26 Machine tools	2,834	3,203	2,945	2,712	3,040	1.9	12.1
27 Engines, pumps, turbines	3,615	4,136	4,387	4,302	5,029	3.1	16.9
28 Textile and paper machines	2,234	2,300	2,164	1,998	1,976	1.2	0.9
29 Other special machines	3,656	4,066	3,992	3,761	4,221	2.6	12.2
30 Thermal processes and apparatus	1,856	2,126	2,369	2,445	2,562	1.6	4.8
31 Mechanical elements	3,854	4,402	4,152	4,050	4,437	2.7	9.6
32 Transport	5,303	5,973	5,634	5,489	6,250	3.8	13.9
<b>V Other fields</b>							
33 Furniture, games	3,655	3,636	3,277	3,098	3,194	2.0	-3.1
34 Other consumer goods	2,934	3,165	3,008	2,889	3,154	1.9	5.2
35 Oil engineering	3,848	4,343	4,424	4,259	4,808	2.9	10.3

Note: Due to confidentiality requirements, the PCT data are based on the publication date.



# Main Fields of Technology for PCT Published Applications and Changes from 2010 to 2011

Main Fields of Technology for PCT Applications by Percentage of Total:

<input type="checkbox"/> Digital Communication Technology	11,574 applications (7.1%)
<input type="checkbox"/> Electrical Machinery	11,296 applications (6.9%)
<input type="checkbox"/> Medical Technology	10,753 applications (6.6%)
<input type="checkbox"/> Computer Technology	10,455 applications (6.4%)

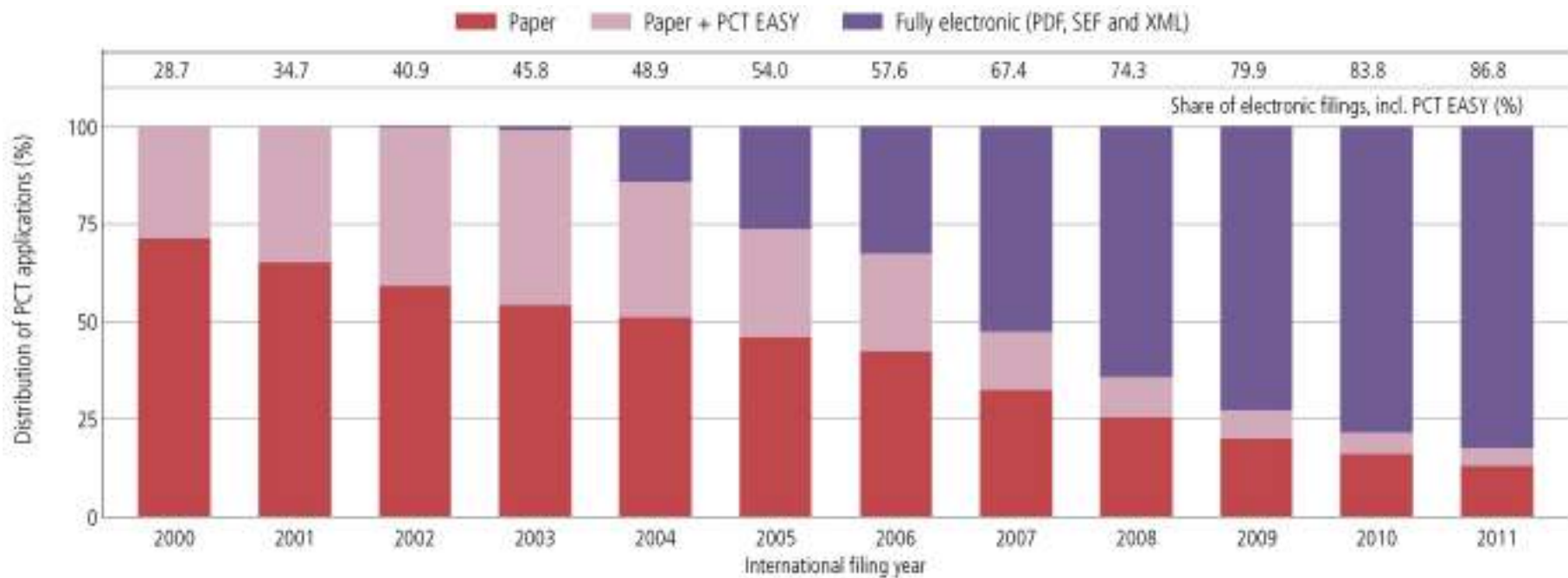
## ■ Largest increases:

<input type="checkbox"/> Electrical machinery:	+23.2%
<input type="checkbox"/> Engines, pumps, turbines:	+16.9%
<input type="checkbox"/> Environmental technology:	+14.1%
<input type="checkbox"/> Transport:	+13.9%

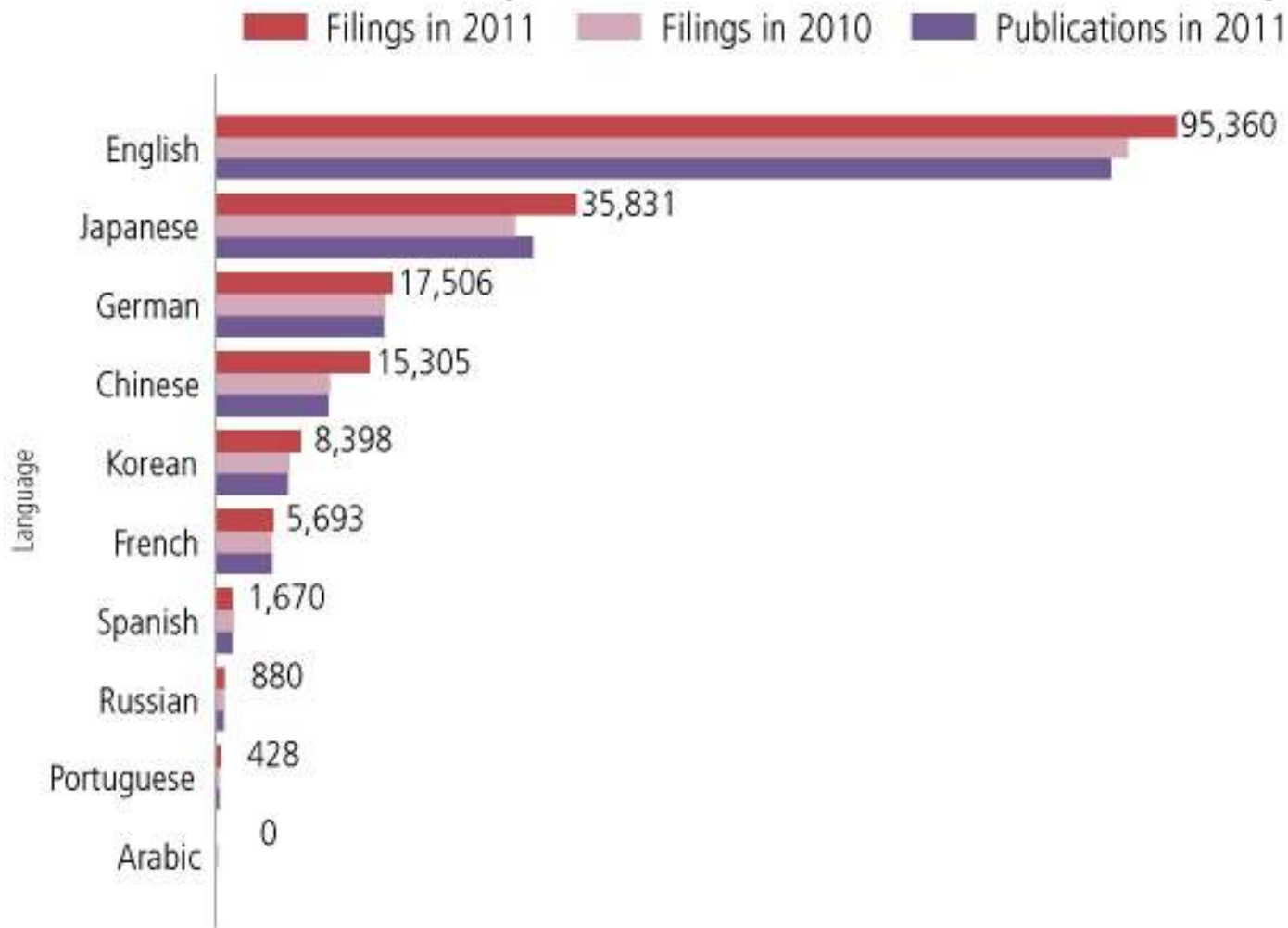
## ■ Decreases in 4 out of 35 fields:

<input type="checkbox"/> Basic communication processes:	-5.9%
<input type="checkbox"/> Organic fine chemistry:	-4.1%
<input type="checkbox"/> Pharmaceuticals:	-1.9%
<input type="checkbox"/> Analysis of biological materials:	-0.3%

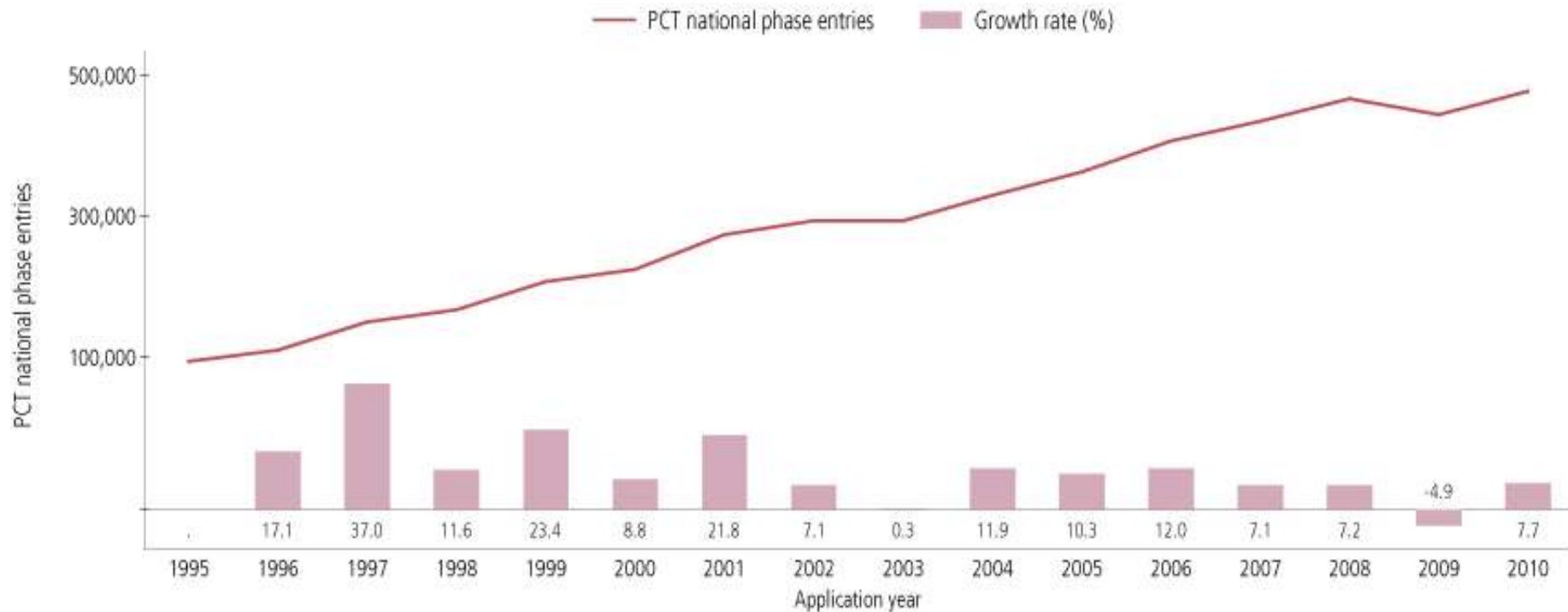
# PCT - Medium of Filing



# Distribution of Filing and Publication Languages

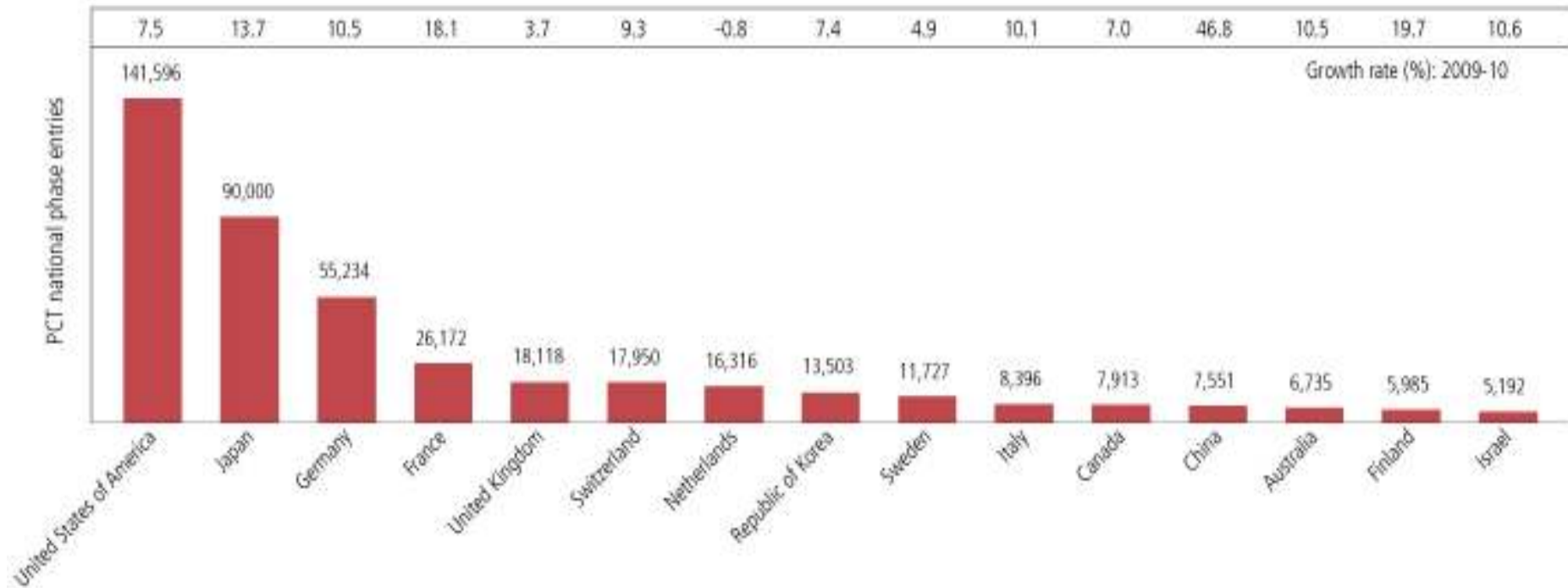


## 2) PCT – National Phase Entries



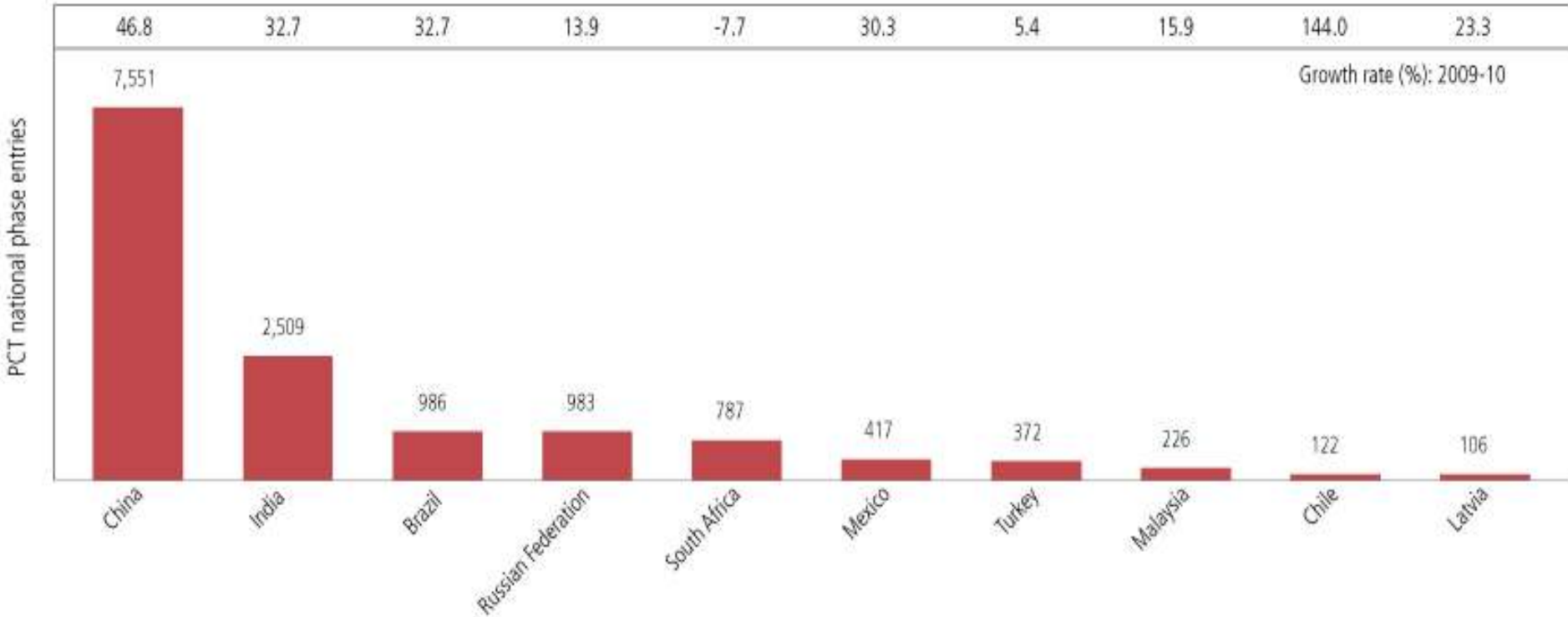
477,500 national phase entries estimated for 2010 (7.7% growth from 2009)

# PCT National Phase Entries for Top 15 Origins 2010



All top 15 origins except the Netherlands saw growth in National Phase Entries. China witnessed the highest growth in National Phase Entries of 46.8%.

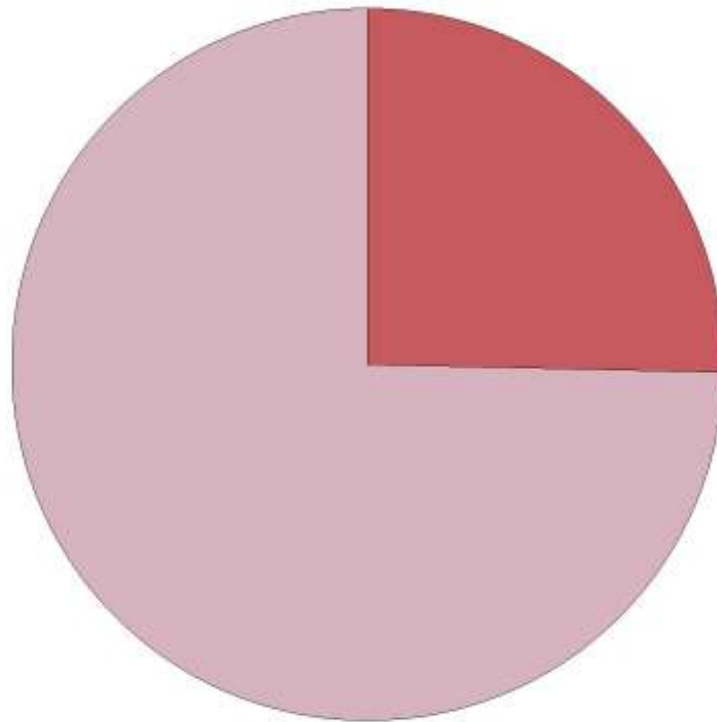
# PCT National Phase Entries for Top 10 Middle-Income Origins in 2010



PCT national phase entries originating from China, India, Brazil, Mexico and Chile grew by over 30% from 2009 to 2010. (Very high growth rate for Chile due to accession to PCT in June 2009)

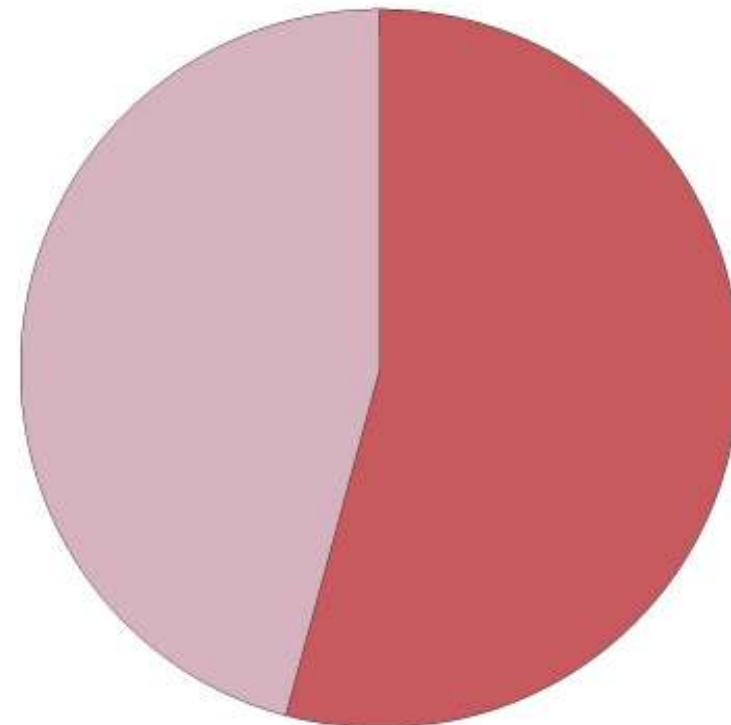
# Share of PCT national phase entries in total non-resident filings

1995



■ Non-resident PCT national phase entries: 25.4%  
■ Non-resident direct filings: 74.6%

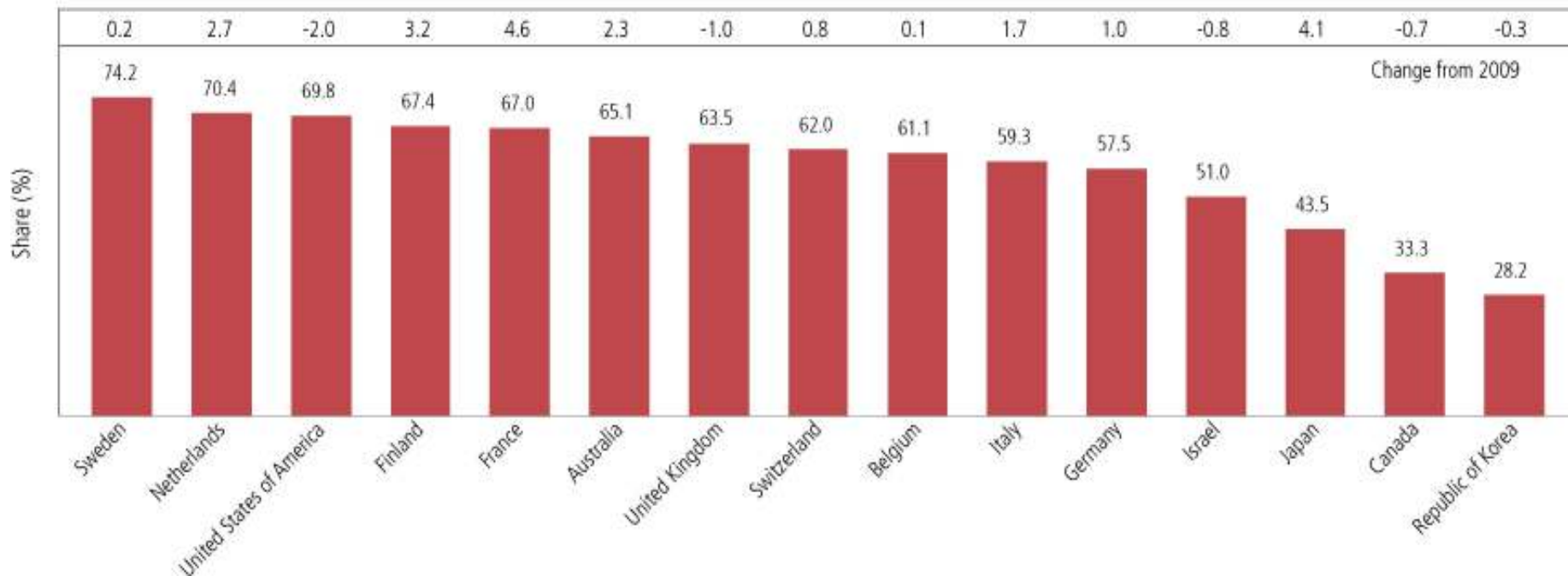
2010



■ Non-resident PCT national phase entries: 54.2%  
■ Non-resident direct filings: 45.8%

# Share of PCT National Phase Entries in Total Abroad Filings

(Top 15 high-income countries in abroad filings)

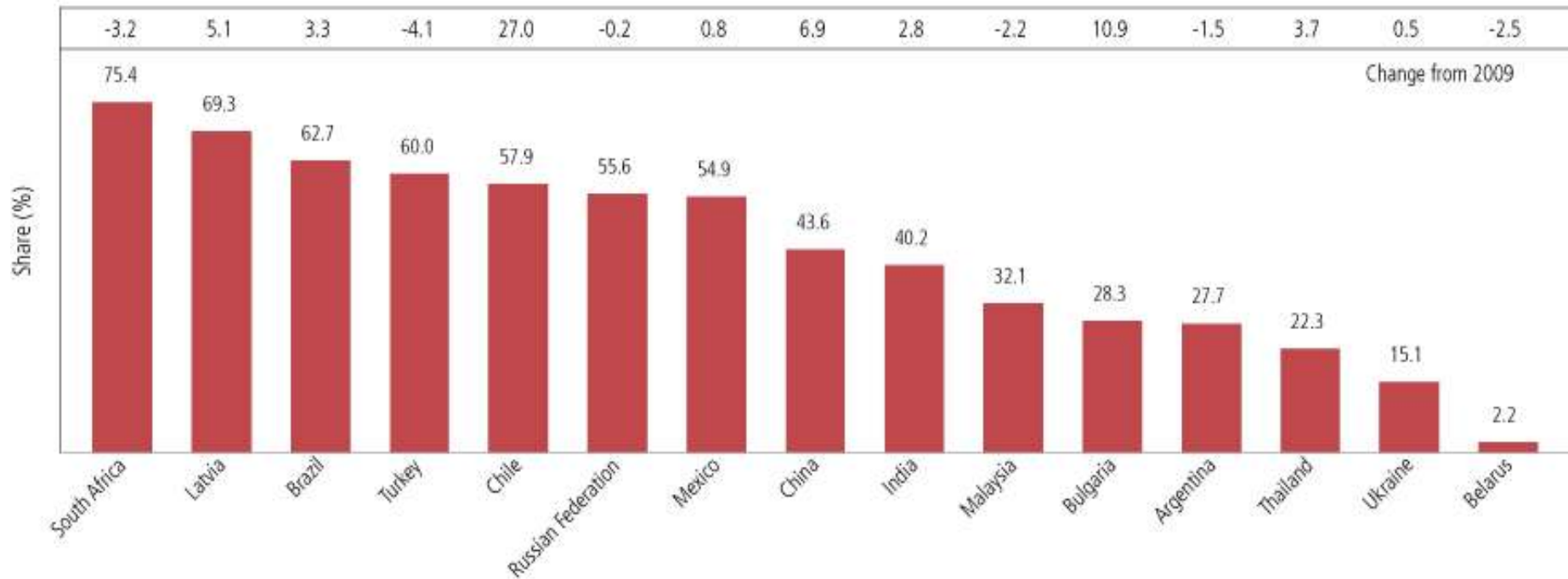


On average, 57% of patent applications filed abroad by applicants from high-income countries were through the PCT system



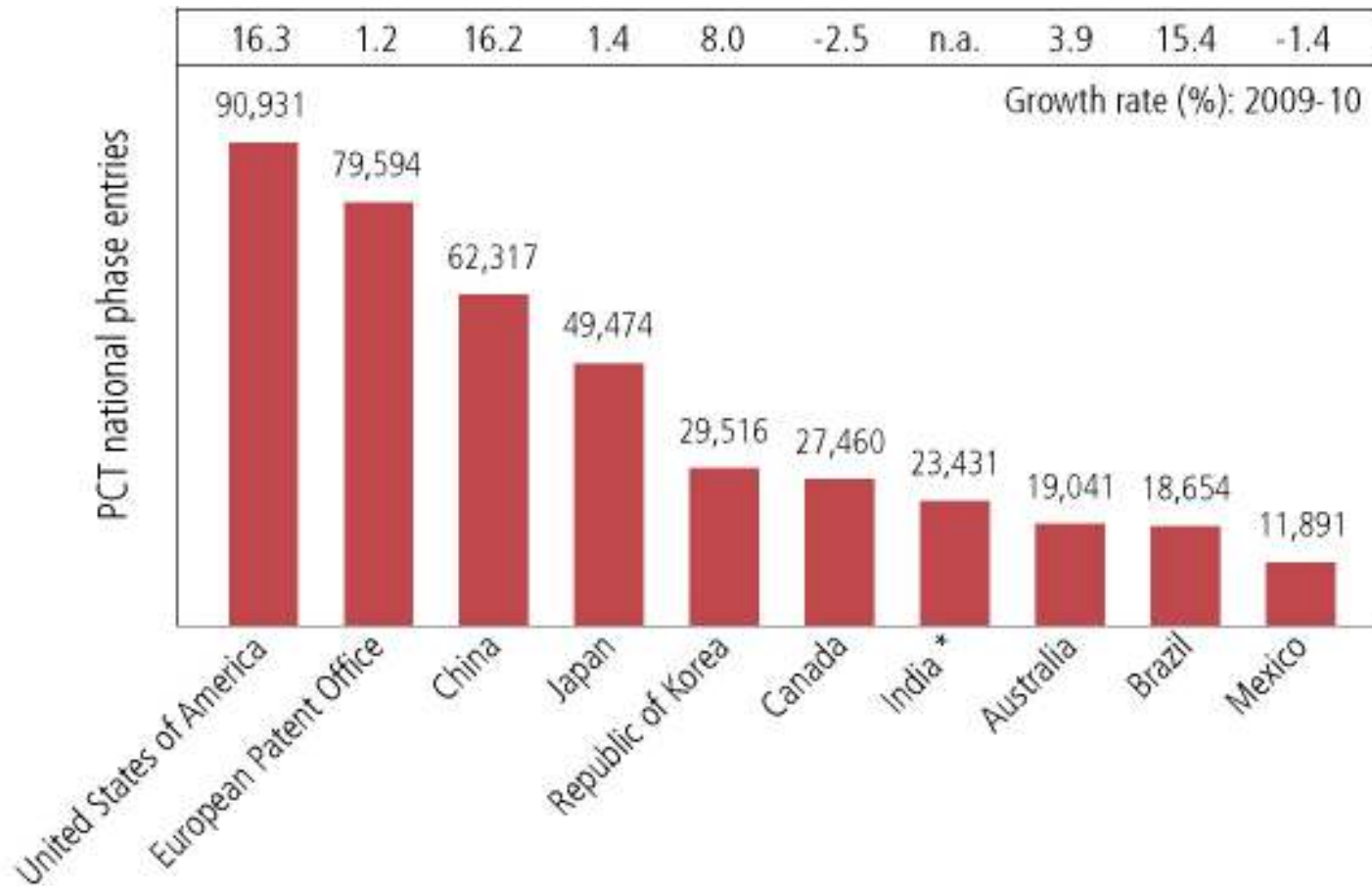
# Share of PCT National Phase Entries in Total Abroad Filings

(Top 15 middle income countries in abroad filings)



On average, 45% of patent applications filed abroad by applicants from middle-income countries were through the PCT system

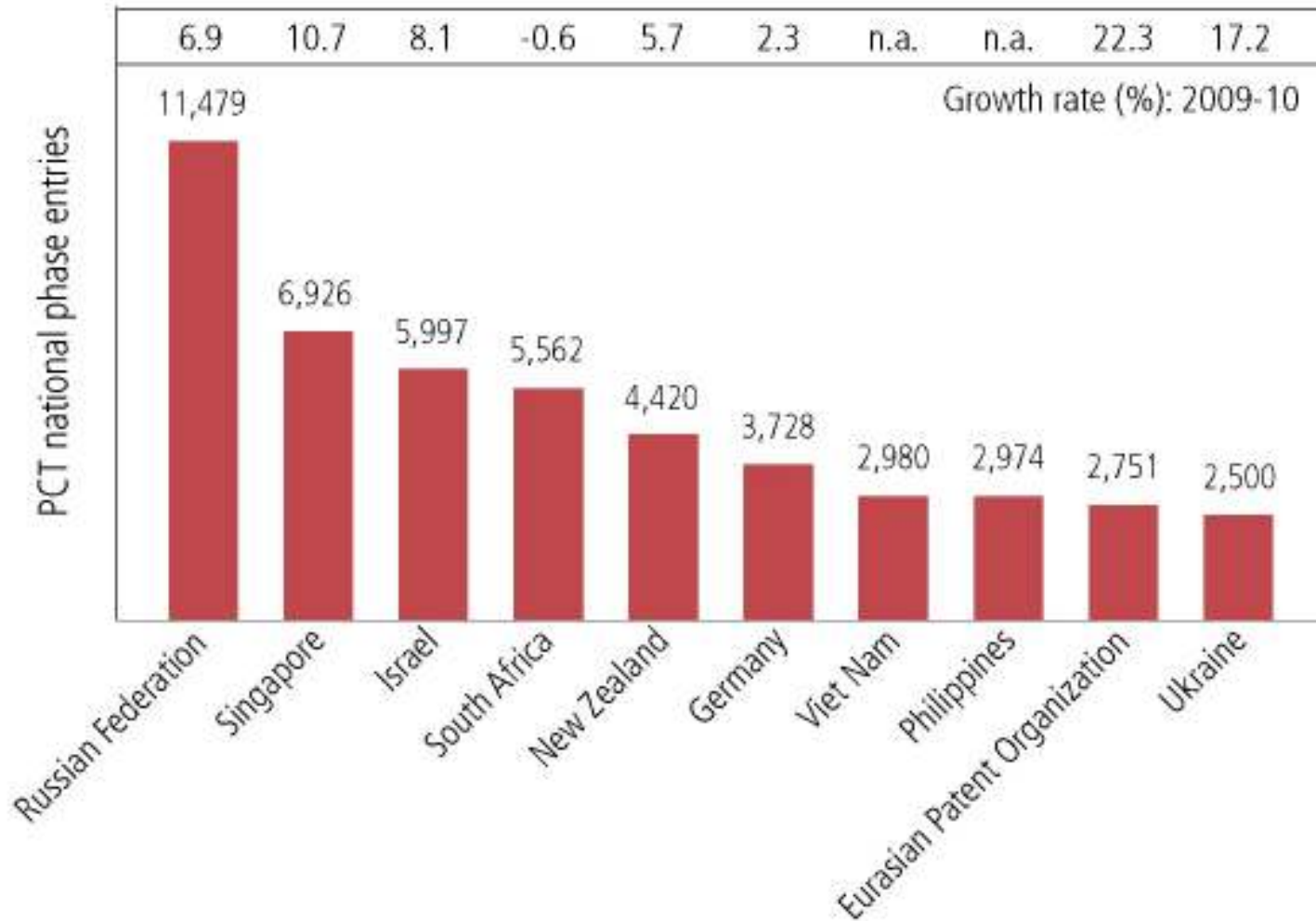
# PCT National Phase Entries for Top 10 Offices 2010



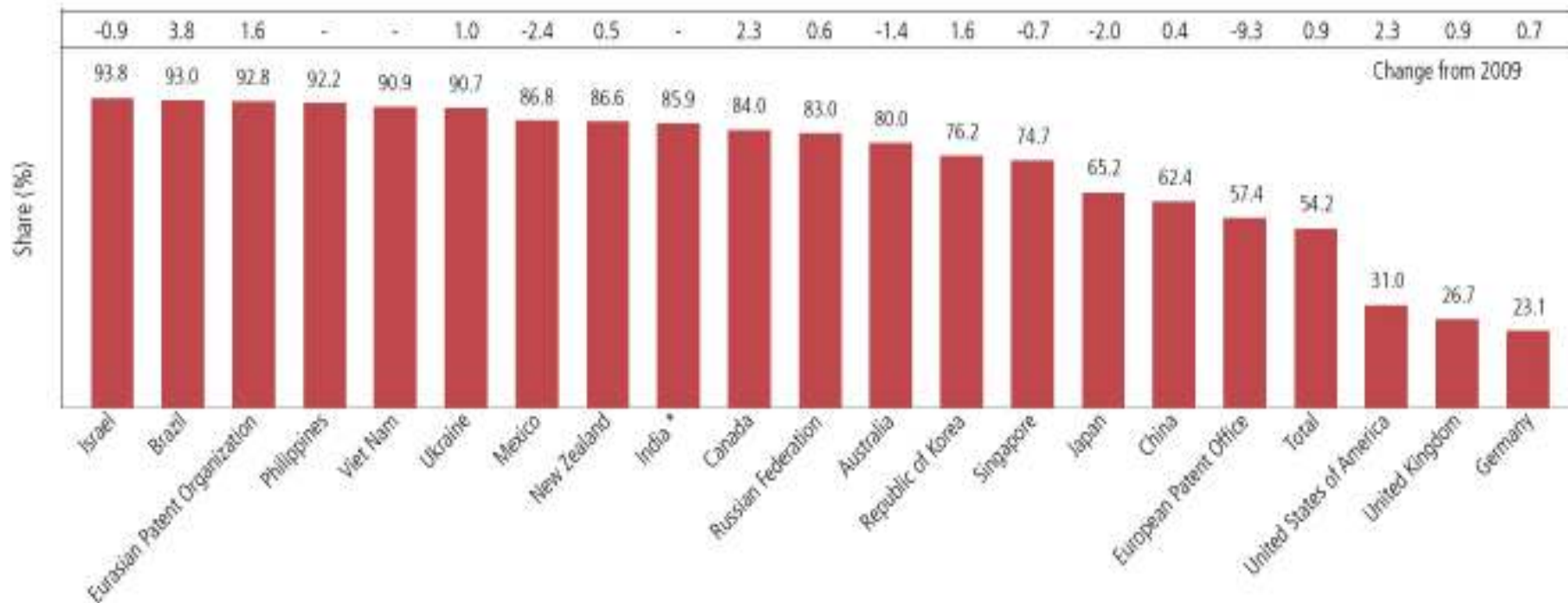
Top 10 Offices accounted for 86% of total national phase entries in 2010. 16.3% growth in national phase entries at USPTO in 2010 to become most preferred Office by destination (previously EPO since at least 1995).

\* Figures for India are for 2009 data.

# PCT National Phase Entries for Next 10 Offices 2010

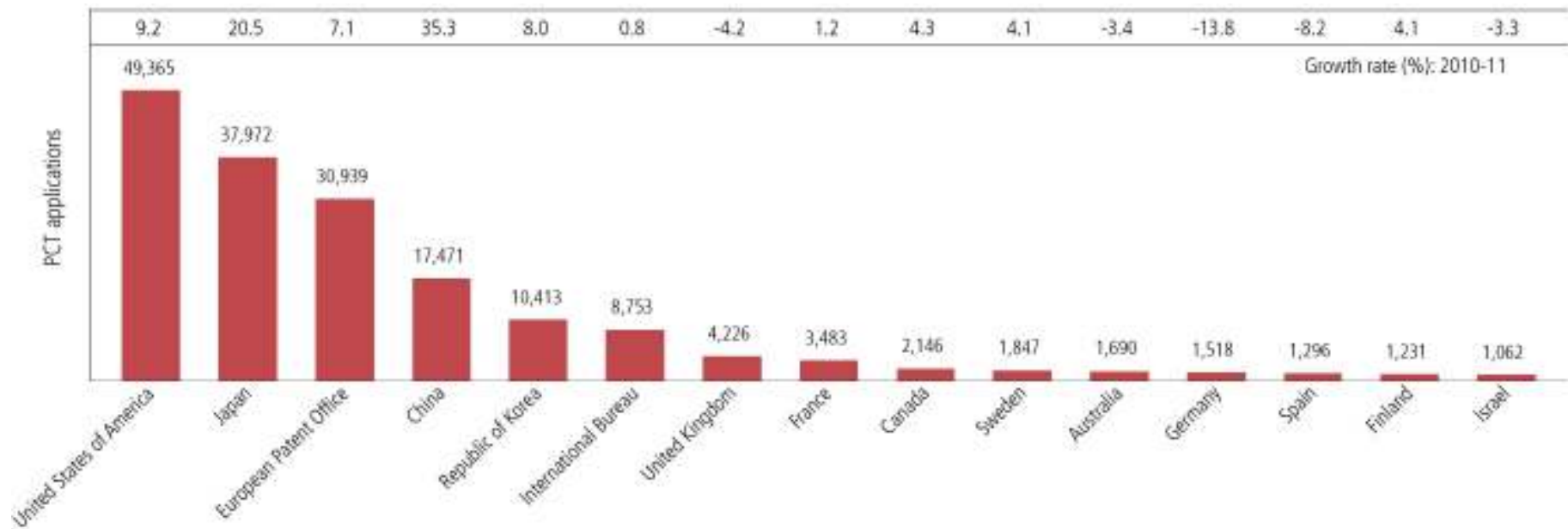


# Share of PCT national phase entries in total non-resident filings by Patent Office for 2010



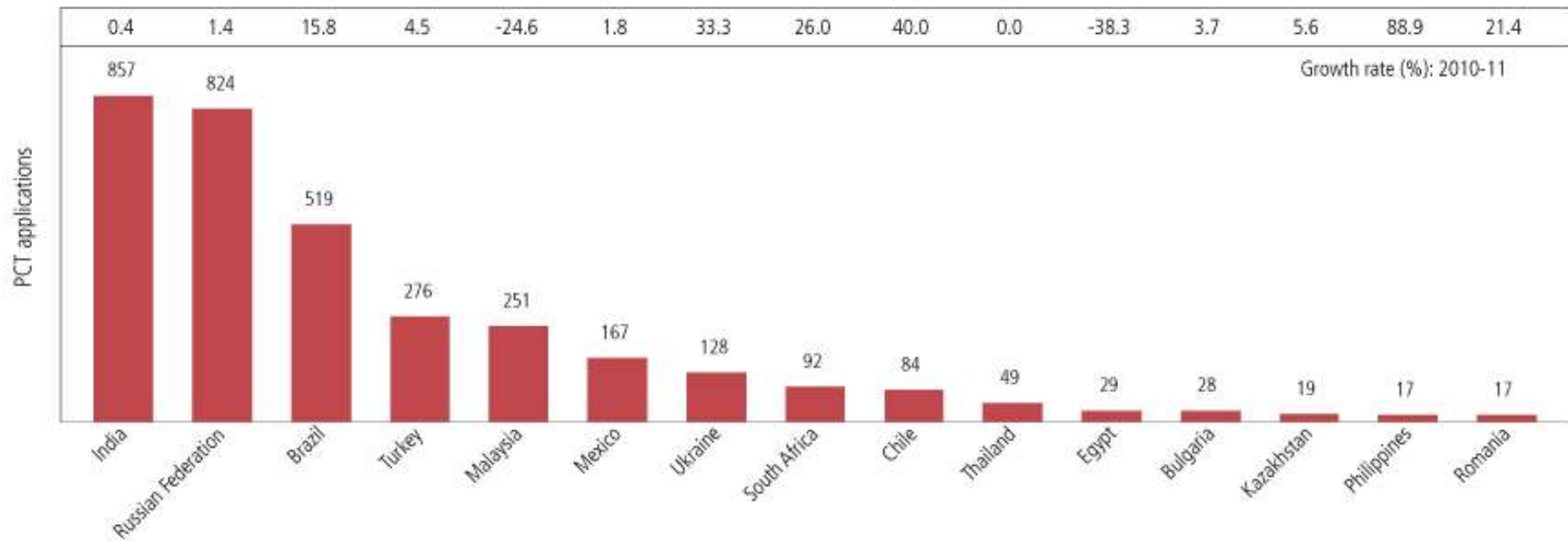
Share defined as non-resident PCT national phase entries divided by non-resident patent applications filed. Five of the top six Offices with shares over 90% are middle-income category countries.

### 3) PCT Applications by Receiving Office



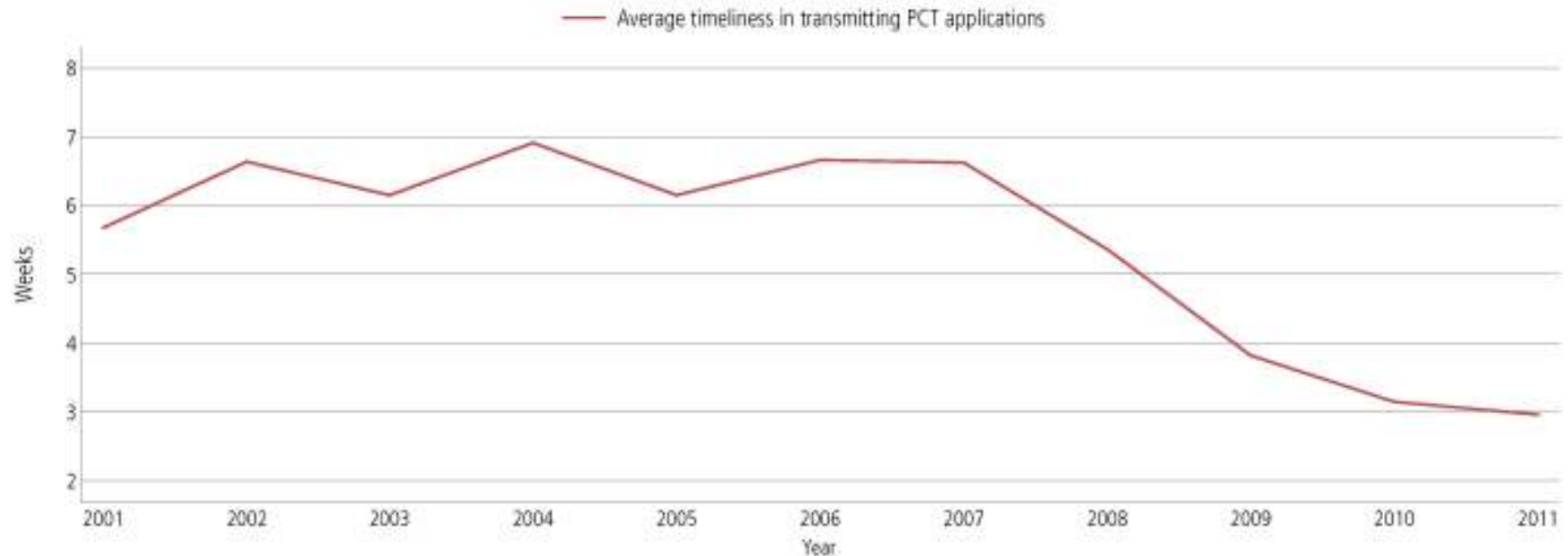
Majority of top 15 receiving offices saw growth in applications, notably in China (+35.3%) and Japan (+20.5%)

# PCT Applications by top 15 Receiving Offices of middle-income countries (excluding China)



India and Russian Federation saw slight growth – significant growth for Brazil (+15.8%)  
 All other countries saw growth except Egypt and Malaysia.

# Receiving Offices: Timeliness of Transmitting PCT Applications to the International Bureau



Note: The timeliness is calculated as the time elapsed between the international filing date and the date on which the International Bureau received the PCT application from the Receiving Office. Applications transmitted under PCT Article 19.4 are excluded.

Source: WIPO Statistics Database, March 2012

Between 2007 and 2011, average transmission time has dropped from six to three weeks. 88.5% of PCT applications transmitted to the IB within 5 weeks in 2011 up from 50.8% in 2007.

## 4) International Authorities

### ■ International Search Reports

- Distribution by International Authority
- Timeliness of Transmission to International Bureau

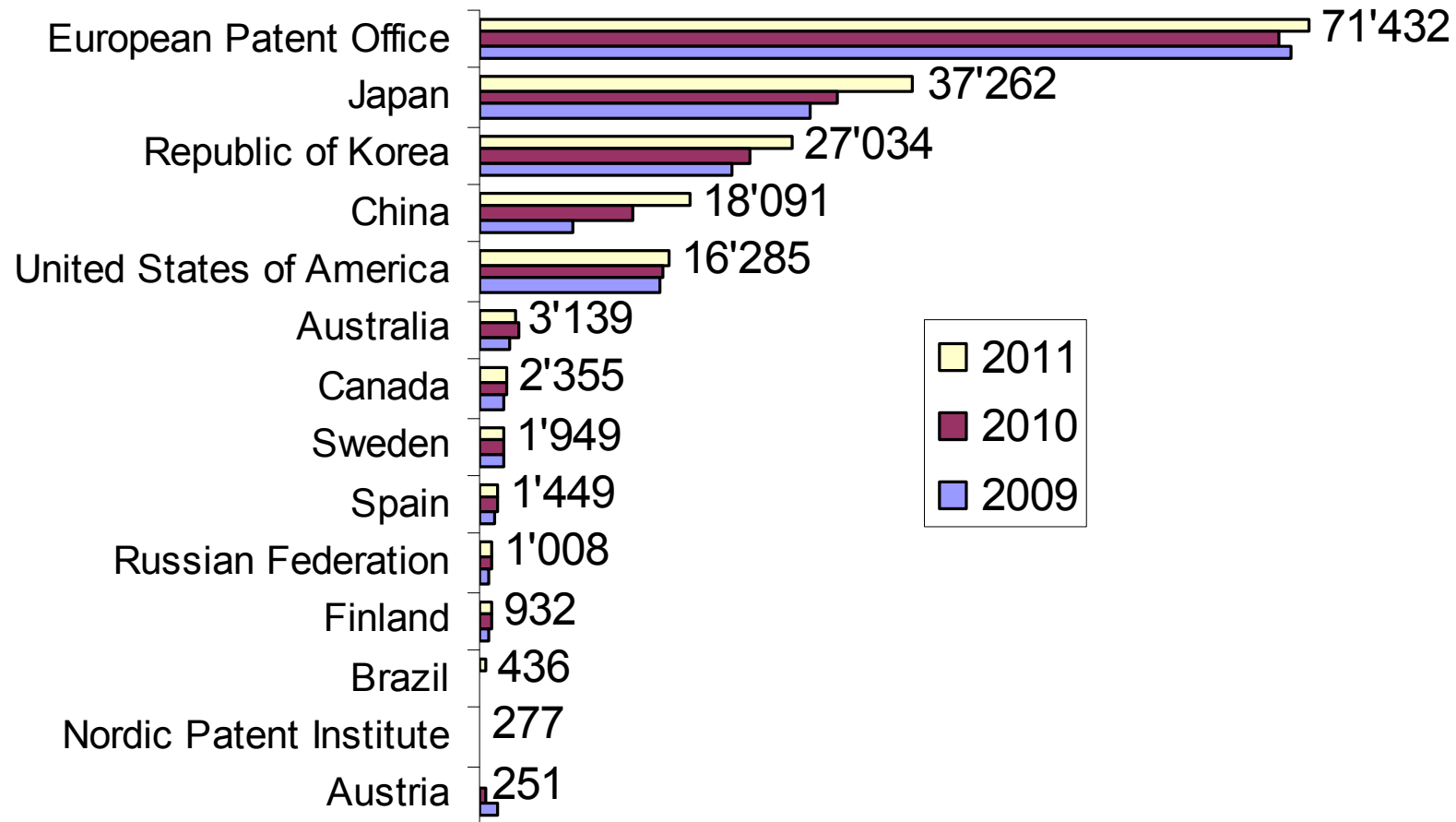
### ■ Supplementary International Search Reports

### ■ International Preliminary Examination Reports

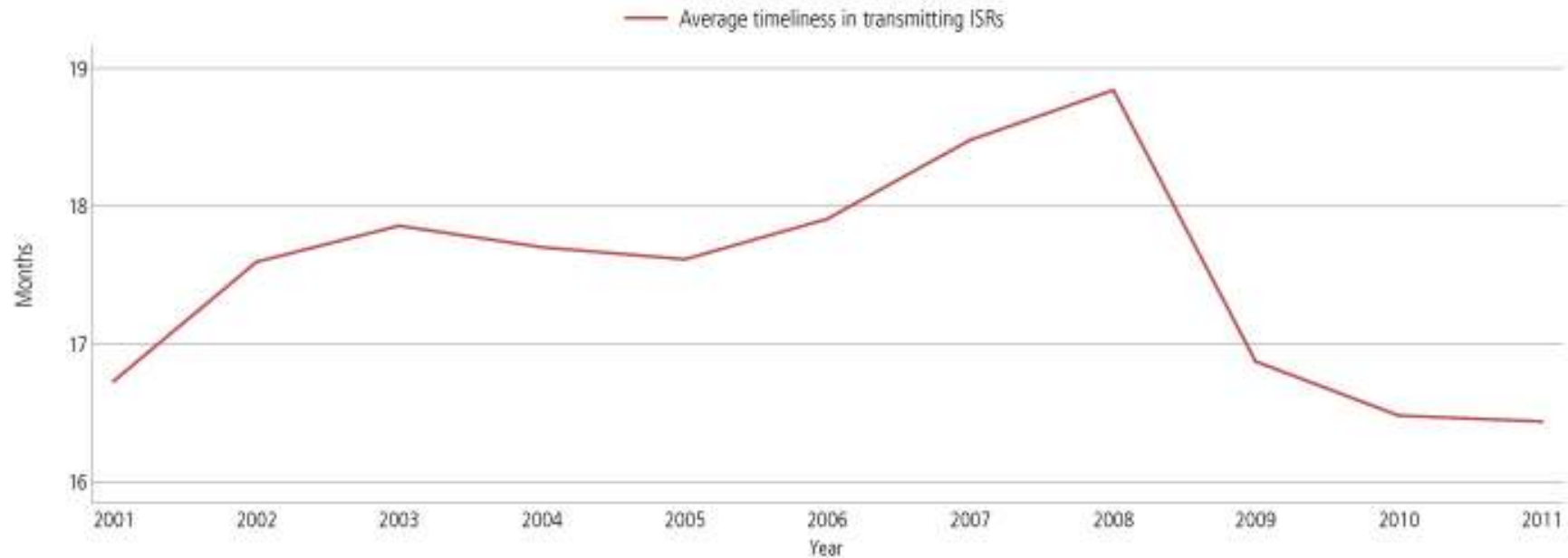
- Demand
- Distribution by International Authority
- Timeliness of Transmission to International Bureau



# Distribution of International Search Reports by International Searching Authority



# Average Timeliness in Transmitting ISRs to the IB



Note: Timeliness is calculated as the time elapsed between the priority date and the date on which the ISA transmits the ISR to the International Bureau.

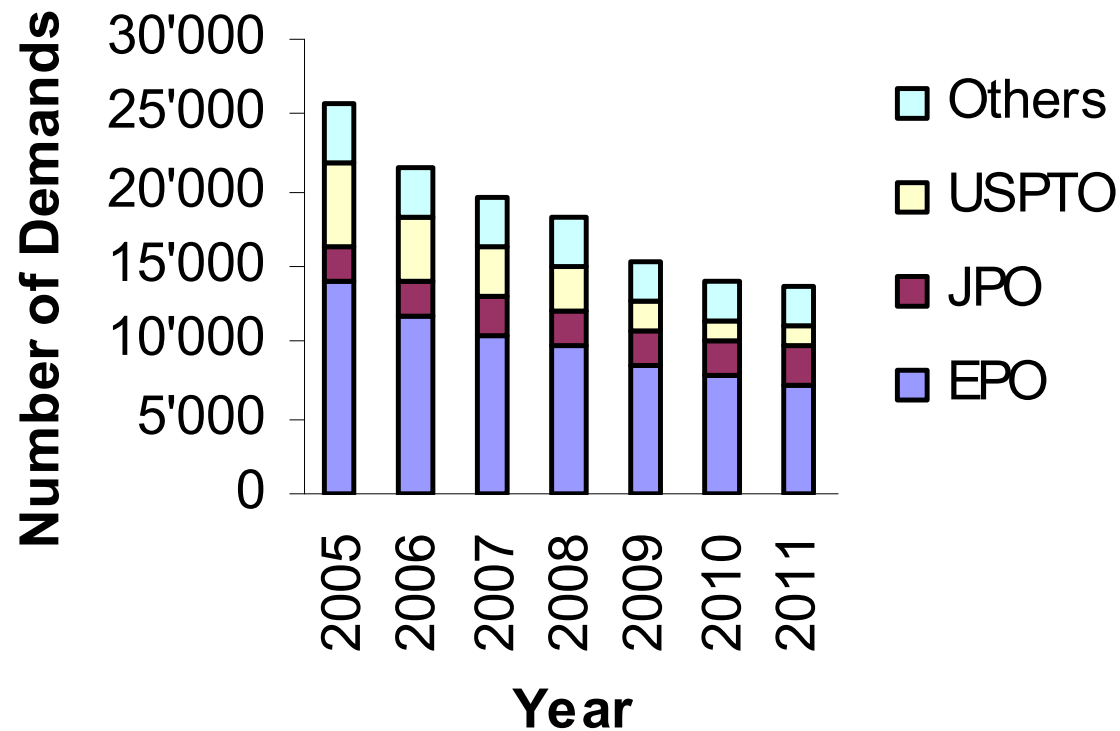
Source: WIPO Statistics Database, March 2012

Average Time in Transmitting ISRs to the IB was 16.4 months in 2011, the shortest over the past decade. 68.3% of ISRs were received within 17 months in 2011 [67.0% in 2010].

# Distribution of SISR's by SISA

<b>Supplementary International Searching Authority</b>			
<b>Year</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>
Total	24	41	41
Austria			1
European Patent Office		3	7
Nordic Patent Institute		1	
Russian Federation	23	35	31
Sweden	2	2	2

# Demands for International Preliminary Examination at International Authorities



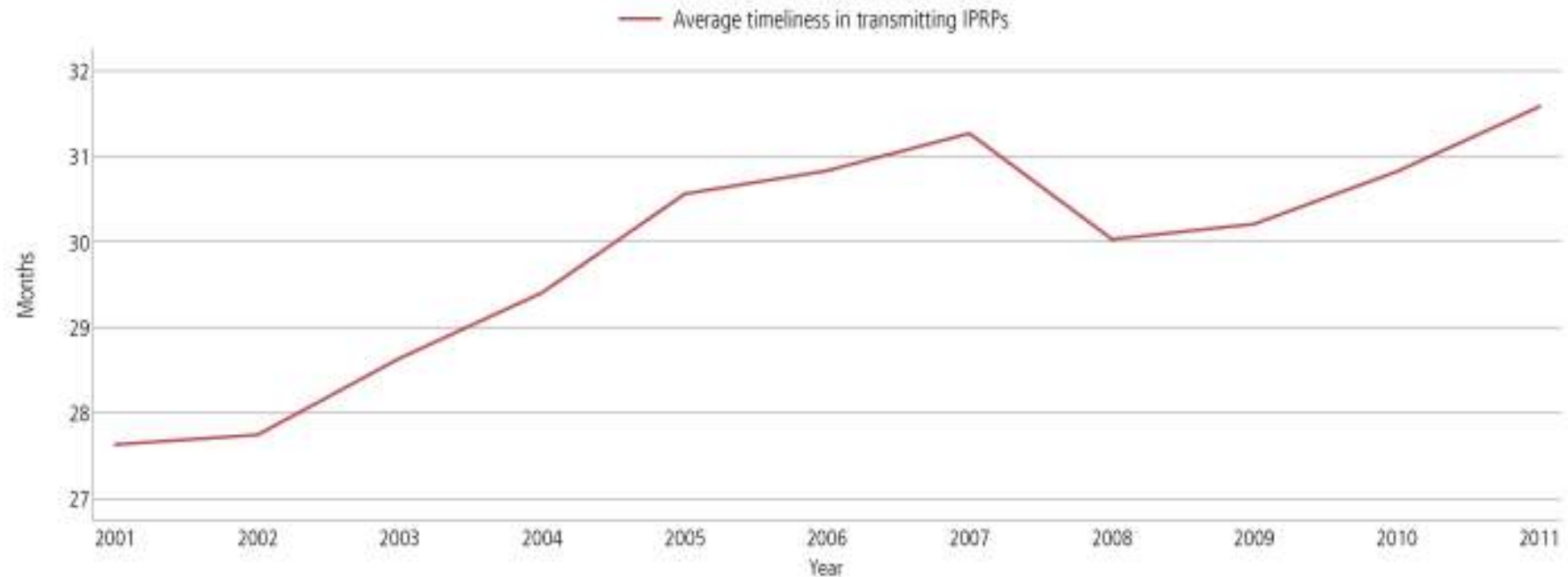
Demand for International Preliminary Examination fell by 47.5% from 2005 to 2011. For 2011, 54.0% of Chapter II demands were received at the EPO, 18.0% at the JPO, 10.1% at the USPTO and 17.9% in other International Authorities

# Distribution of IPRPs by IPEA

International Preliminary Examining Authority	Year					2011	Change compared to 2010 (%)
	2007	2008	2009	2010	2011	Share (%)	
Australia	1,016	826	725	852	704	4.7	-17.4
Austria	131	100	113	61	26	0.2	-57.4
Brazil					15	0.0	
Canada	462	419	427	258	183	1.2	-29.1
China	363	396	425	394	340	2.2	-13.7
European Patent Office	11,244	10,855	9,587	8,266	7,194	47.6	-13.0
Finland	138	184	132	139	122	0.8	-12.2
Japan	2,720	2,376	2,175	1,905	2,203	14.6	15.6
Nordic Patent Institute			11	34	40	0.3	17.6
Republic of Korea	598	476	368	308	247	1.6	-19.8
Russian Federation	105	90	109	62	65	0.4	4.8
Spain	126	117	135	109	148	1.0	35.8
Sweden	714	724	523	409	357	2.4	-12.7
United States of America	5,195	2,183	2,150	2,881	3,479	23.0	20.8
Total	22,812	18,746	16,880	15,678	15,123	100	-3.5

Source: WIPO Statistics Database, March 2012

# Average Timeliness in Transmitting IPRPs



Note: Timeliness is calculated as the time elapsed between the priority date and the date on which the International Bureau received the IPRP from the IPEA.  
Source: WIPO Statistics Database, March 2012

Average time taken to transmit IPRPs increased from 27.6 months in 2001 to 31.6 months in 2011. 68.8% of IPRPs transmitted within 29 months.

## 5) PCT-Patent Prosecution Highway

International Authority	Office of PCT National Phase Entry								Total
	US	JP	EP	CA	AU	CN	RU	SE	
Japan	372	583	138	-	-	7	-	0	1,100
European Patent Office	581	194	-	-	-	-	-	-	775
Republic of Korea	663	-	-	-	-	-	-	-	663
United States of America	126	7	6	-	5	0	1	0	145
Australia	88	-	-	-	3	-	-	-	91
Sweden	21	5	-	-	-	-	-	1	27
Canada	3	-	-	20	-	-	-	-	23
Austria	8	-	-	-	-	-	-	-	8
Russian Federation	6	-	-	-	-	-	-	-	6
Spain	4	0	-	-	-	-	-	-	4
Nordic Patent Institute	3	0	-	-	-	-	-	-	3
China	2	0	-	-	-	-	-	-	2
<b>Total</b>	<b>1,877</b>	<b>789</b>	<b>144</b>	<b>20</b>	<b>8</b>	<b>7</b>	<b>1</b>	<b>1</b>	<b>2,847</b>

Note: AU (Australia), CA, (Canada), CN (China), EP (European Patent Office), JP (Japan), RU (Russian Federation), SE (Sweden), US (United States of America) and - (not applicable).

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

In 2011, 27 PCT-PPH pilots were active, including the participation of 17 Offices and 13 International Authorities.

# Summary for 2011

477,500	National Phase Entries (+7.7%)
181,900	Applications Filed (+10.7%) – 86.8% fully electronic
163,670	Published Applications (+7.7%)
13,567	Chapter II demands (-0.02%)
2,850	PCT Patent Prosecution Highway Requests

Improvements in average timeliness for transmission to the IB of application by RO and transmission of International Search Report,

Longer average transmission time to IB for International Preliminary Examination Report



Further information:  
**2012 PCT Yearly Review**  
**The International Patent System**  
WIPO Publication No:901E/2012  
(English version on WIPO Website  
French and Spanish available soon)

Thank you for your attention