

## Chapter 5

# THE IP5 OFFICES AND THE PATENT COOPERATION TREATY (PCT)

This chapter presents first the impact of the PCT system on patenting activity. Then it describes the various activities of the IP5 Offices that relate to the PCT system. The graphs cover five-year periods that include the latest year for which reliable data are available.

Graphs are presented that display the shares, by origin, of those patent applications and grants using the PCT filing route. Descriptions are given of additional activities of the IP5 Offices under the PCT, as Receiving Offices (RO) for applicants in their respective territories, as International Search Authorities (ISA) and as International Preliminary Examination Authorities (IPEA). PCT searches are a significant workload for the IP5 Offices in addition to those already described in Chapter 4.

Statistics in this chapter have been derived from the WIPO Statistics Database<sup>41</sup> and the IP5 Offices.

Selected statistics for patent families are included in this chapter (see also Chapter 3). A patent family is a group of patent filings that claim the priority of a single filing.

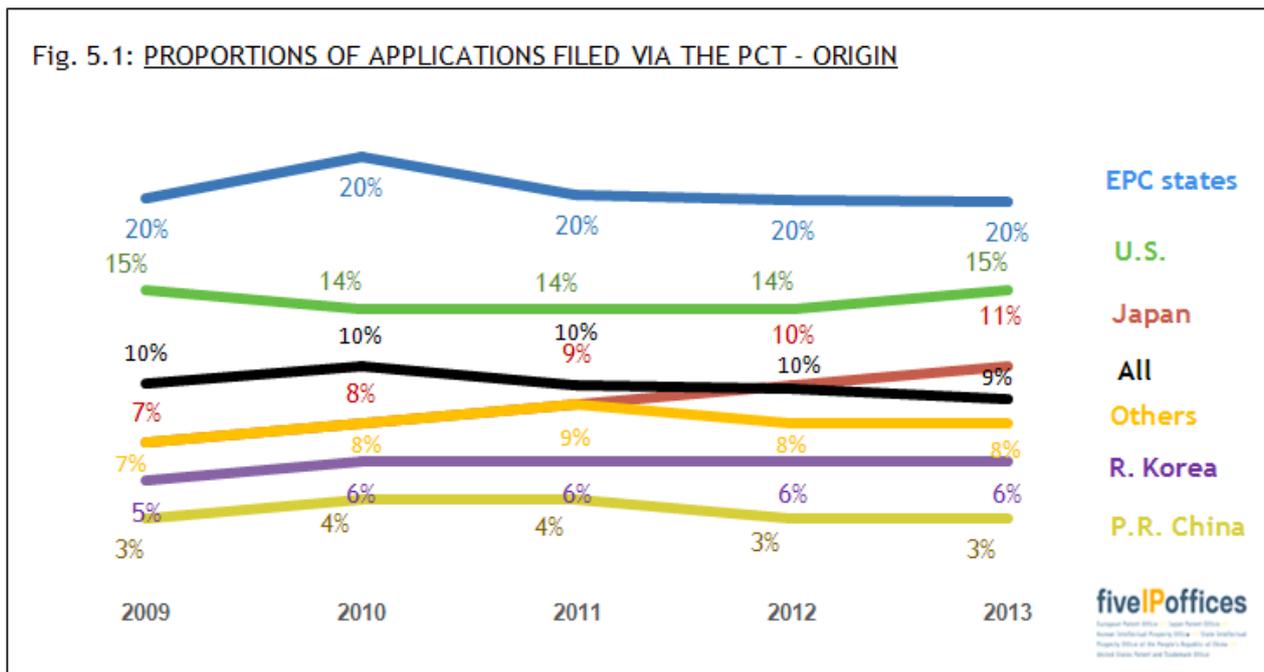
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<sup>41</sup>See footnote 7, p.3.

## PCT AS FILING ROUTE

### PATENT FILINGS

Fig. 5.1 shows, for each bloc of origin (residence of first-named applicant or inventor), the proportions of all patent applications filed that are PCT international applications. Applications are counted in the year of filing.



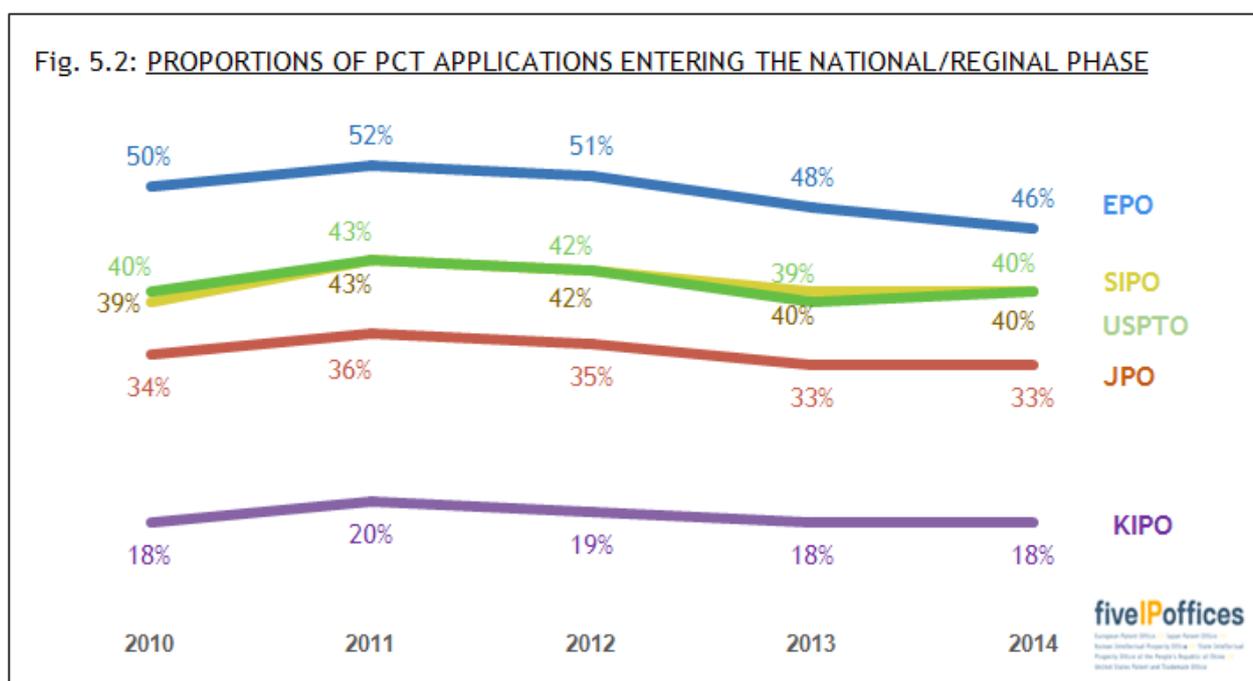
On average, 10 percent of the applications were filed via the PCT route between 2009 and 2012.

In 2013, the proportion of applications filed via the PCT remained stable for applications originating from the EPC states, R. Korea and P.R. China. For Japan and the U.S., the proportion increased by 1 percent. The proportions for the EPC states origin applications and the U.S. origin applications continue to be higher than the proportions for applications from the remaining blocs.

## NATIONAL / REGIONAL PHASE ENTRY

After the international phase of the PCT procedure, applicants decide whether they wish to continue further with their applications in the national or regional phase for each country or regional organization of interest. A decision has to be made for each jurisdiction. If the decision is made to proceed further, the applicant has to fulfil the various requirements of the selected PCT contracting states or organizations. The application then enters the national or regional phase in the selected areas.

Fig. 5.2 shows the proportions of PCT applications in the international phase that entered the national or regional phase at each of the IP5 Offices. Applications are counted in the year corresponding to the date when the delay to enter the national or regional phase has expired<sup>42</sup>.



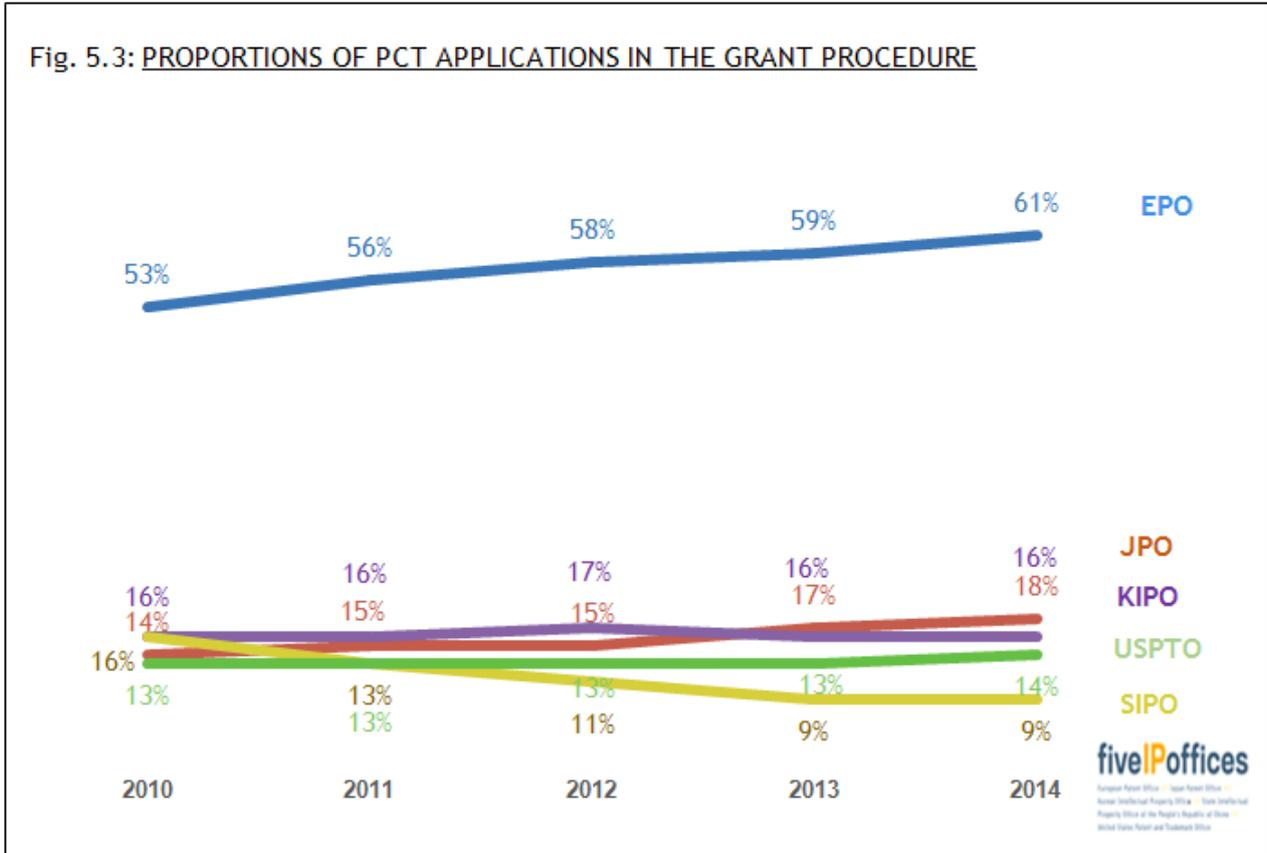
A higher proportion of PCT applications enter the regional phase at the EPO than enter the national phase at the other IP5 Offices. This is due to the multinational dimension of the EPO, which provides an opportunity to proceed further with a unique procedure for several countries. The proportion remained lower at the KIPO.

The proportions observed at all offices increased between 2010 and 2011, but then tended to decline. From 2013 to 2014 the proportion declined only at the EPO.

<sup>42</sup>It should be noted that counts from EPC contracting state national offices are not reported in Figs. 5.2, 5.3, and 5.4.

SHARE OF PCT APPLICATIONS

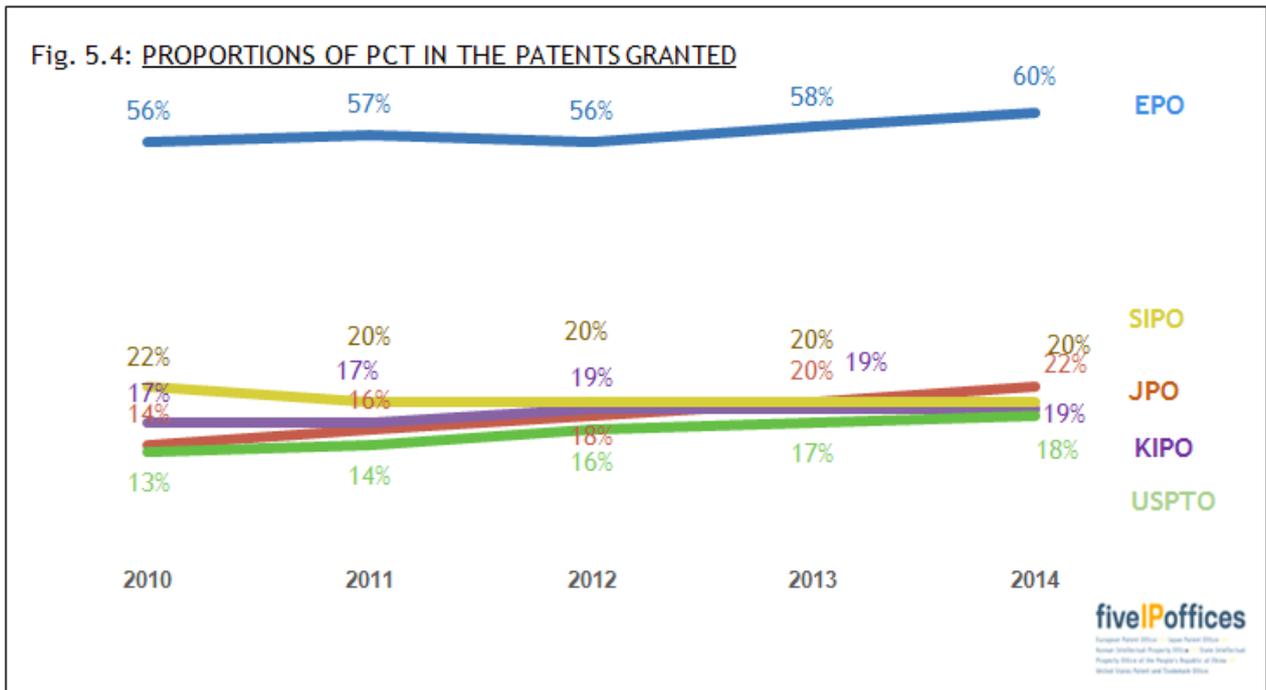
Fig. 5.3 shows the share of PCT among all applications that entered the grant procedure at each office (as presented earlier in Fig. 4.1).



The proportion of PCT national/regional applications further increased at the EPO in 2014. Since 2010, the SIPO had a decrease in the PCT share of all applications that entered the grant procedure, mainly due to the higher growth of patent applications filed via the Paris route compared to the growth of PCT applications entering national phase. EPO continues to have much higher proportions of PCT among applications than at the other IP5 Offices.

**PCT GRANTS**

Fig. 5.4 shows the proportions of patents granted by each of the IP5 Offices that were based on PCT applications.



Granted patents generally relate to applications that were filed several years earlier.

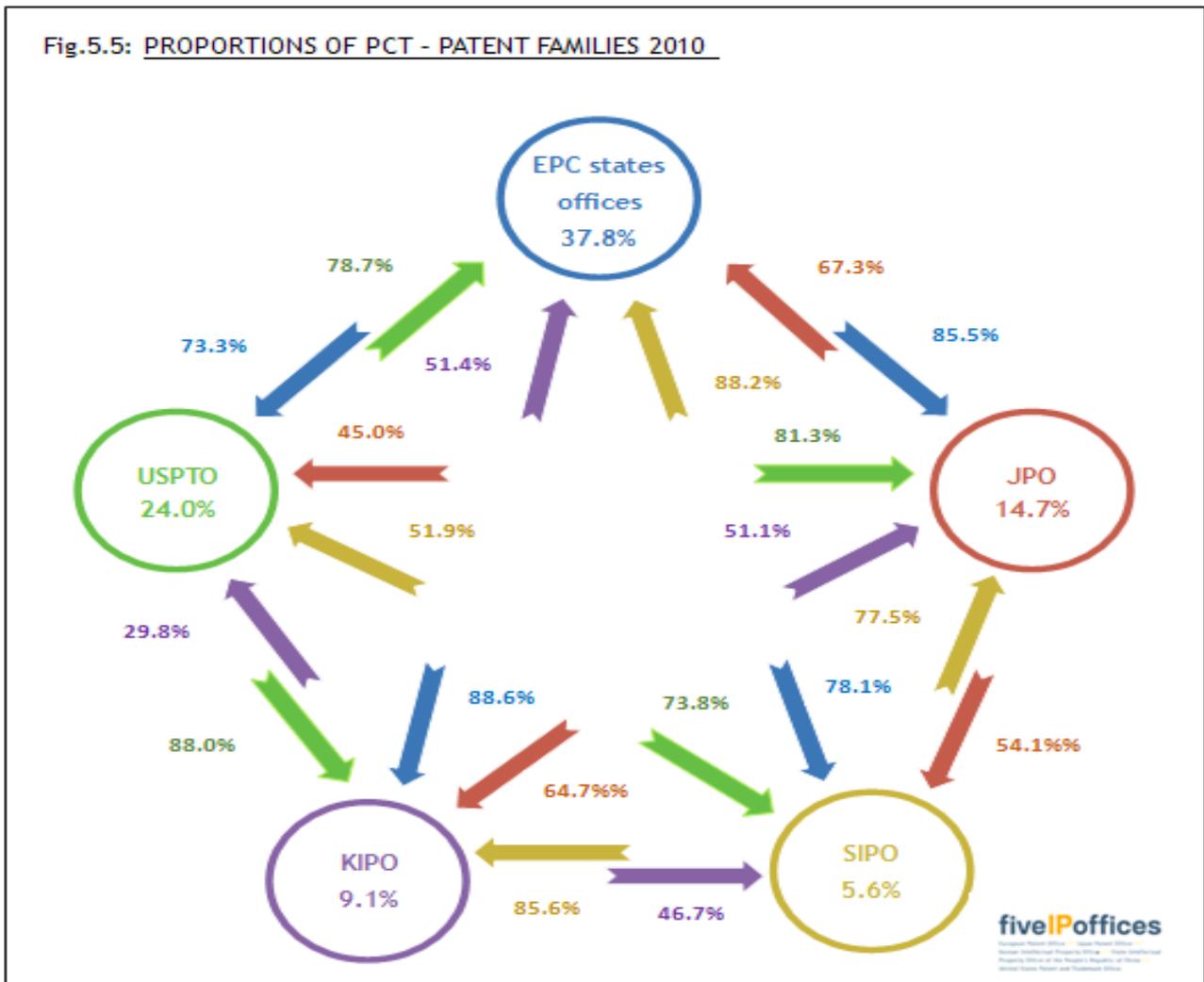
Over the period, there was a convergence of the proportions for the JPO, KIPO, SIPO, and USPTO towards about 20 percent. The proportion of PCT granted patents at the EPO further increased.

### PATENT FAMILIES AND PCT

A patent family is a group of patent filings that claim the priority of a single filing.

The PCT system provides a good way to make subsequent patent applications in a large number of countries. Therefore it can be expected that many patent families flowing between blocs will use the PCT route. In this section, the use of the PCT system implies that at least one PCT application has been made within the family of filings for the same invention.

Fig. 5.5 shows the usage of the PCT among patent families in 2010. Two types of percentages are shown. The first, next to the name of each bloc, is the proportion of the overall number of first filings for the bloc that generated families using the PCT. The second, next to the arrows indicating flows between-blocs, shows the share of total patent family flows that used the PCT system. This figure is based on first filings in 2010, and can be compared with Fig. 3.13.

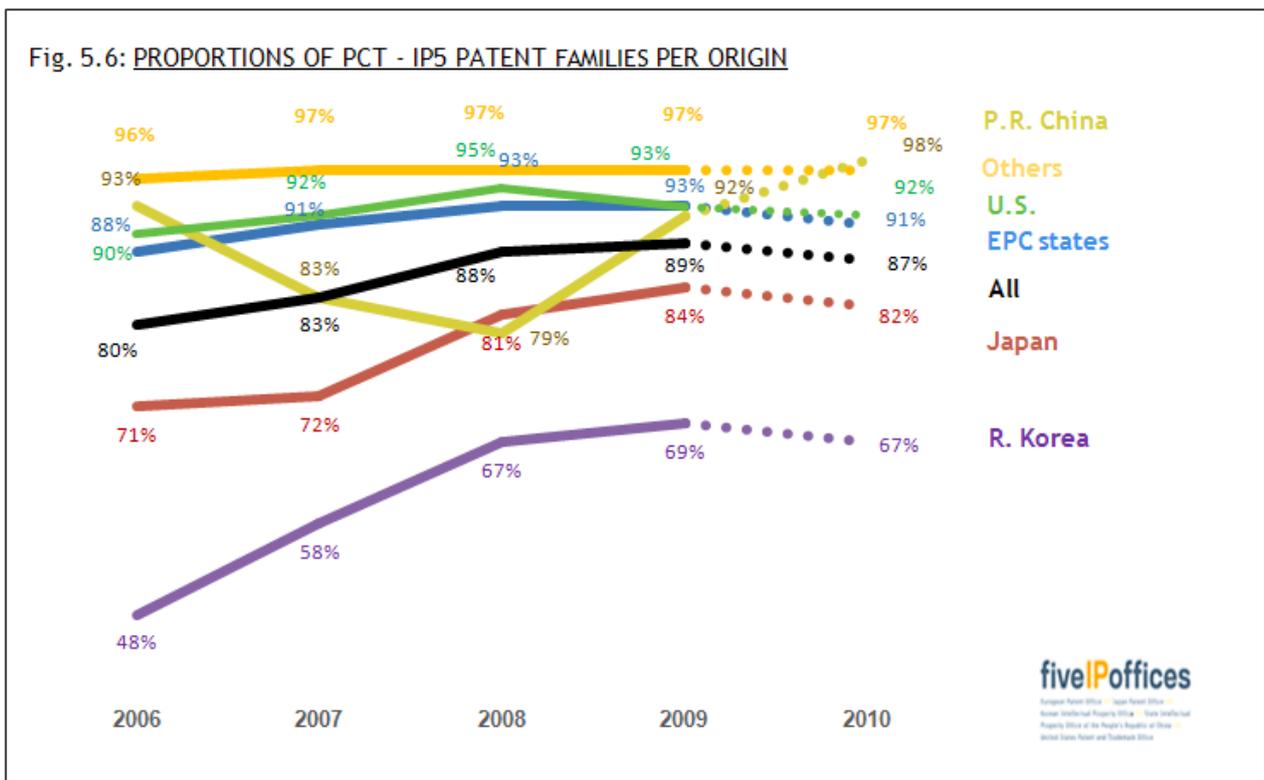


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In general, the usage of the PCT route is far higher when making applications abroad rather than at home. Applicants from the U.S. and the EPC states prefer to use the PCT system to a greater extent than applicants from P.R. China, Japan and R. Korea.

Comparing over several years, after a long period of increase there was a dip in the overall proportion of PCT usage among first filings for the combined IP5 area, from 17.4% in 2007 to 16.1% in 2008, followed by a resumption of the increase to 16.9% in 2009 and 17.3% in 2010. This was probably due to the recession in 2009, with the dip coming for first filings in 2008 because the decision to use the PCT system usually comes one year later. This contrasts to the dip in the overall number of worldwide first filings that took place in 2009, as was discussed earlier in Chapter 3<sup>43</sup>.

Fig. 5.6 shows the proportions of IP5 patent families by bloc of origin (residence of first-named applicants or inventors), as given earlier in Fig. 3.15, that made some use of the PCT system.



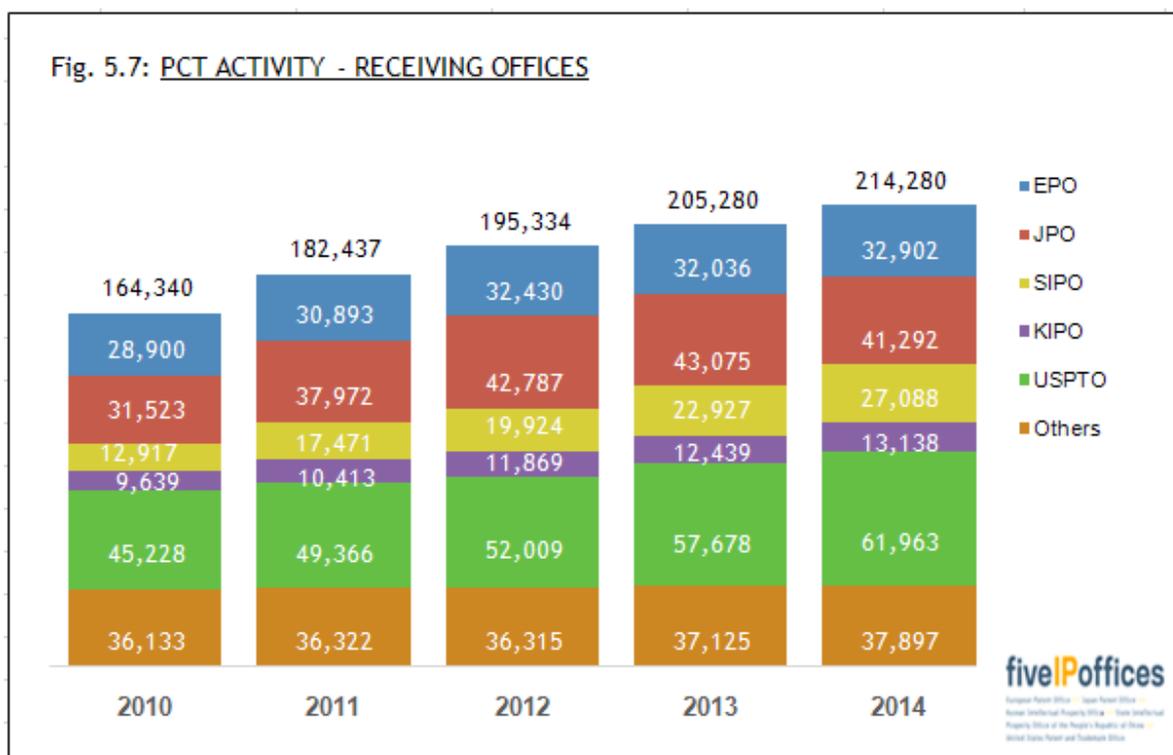
Since IP5 patent families represent highly internationalized applications, the average rate of PCT usage is high compared to the overall usage of PCT among applications in general, as was shown in Fig. 5.1. The percentage of usage of the PCT system has generally decreased in the IP5 patent families in 2010, except for the P.R. China which increased by 6 percent.

<sup>43</sup> See the patent families section of the statistical tables at the website.

## PCT AUTHORITIES

Under the PCT, each of the IP5 Offices acts as RO, mainly for applicants from its own geographical zone, and as ISA and IPEA for non-residents and residents. The following graphs show the trends from 2010 to 2014.

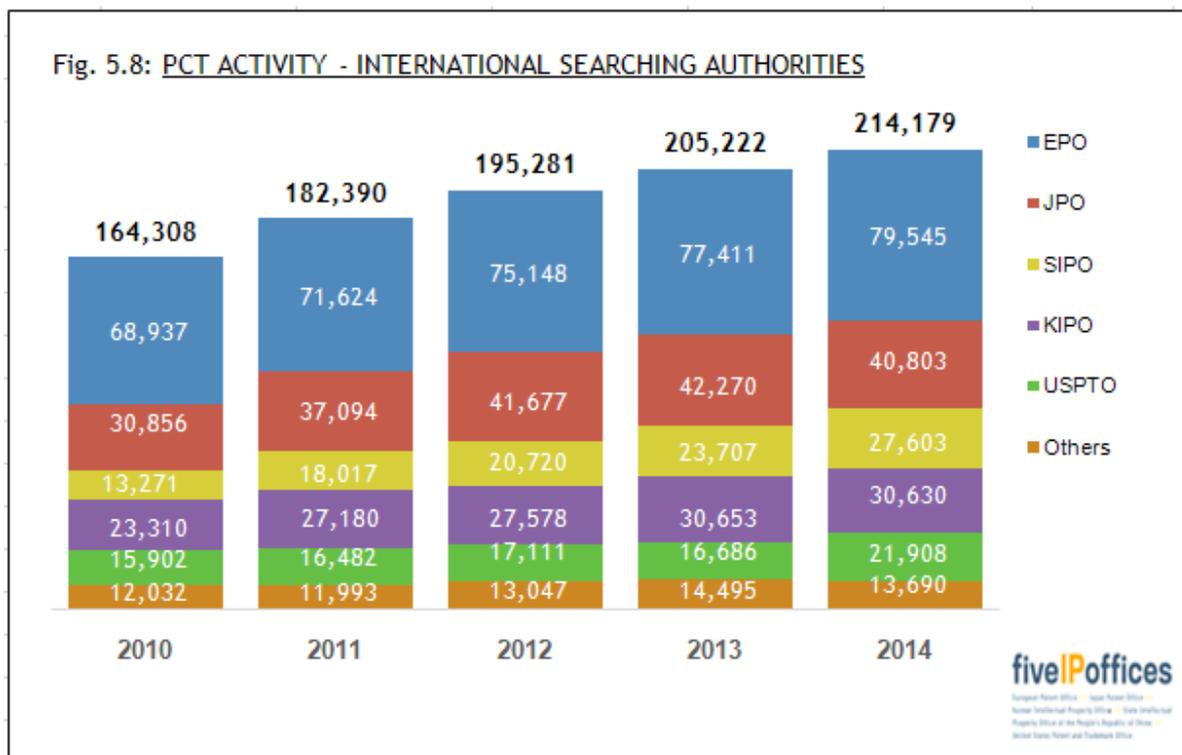
Fig. 5.7 shows the breakdown of PCT international filings by ROs over time.



The totals for PCT international filings are also shown in Fig. 3.1. The total number of PCT international filings has recovered from 2010 and steadily increased by 2014. The compound annual growth rate from 2010 to 2014 was 6.8 percent.

In 2014, the IP5 Offices had an overall increase of PCT international filings of 4 percent. The SIPO (18 percent), the USPTO (7 percent) and the KIPO (6 percent) had the largest percentage increases. Together the IP5 Offices were RO for 82 percent of the PCT international filings in 2014 (78 percent in 2010).

Fig. 5.8 shows the breakdown over time of the numbers of international search requests to offices as ISA, for those applications for which information is known.

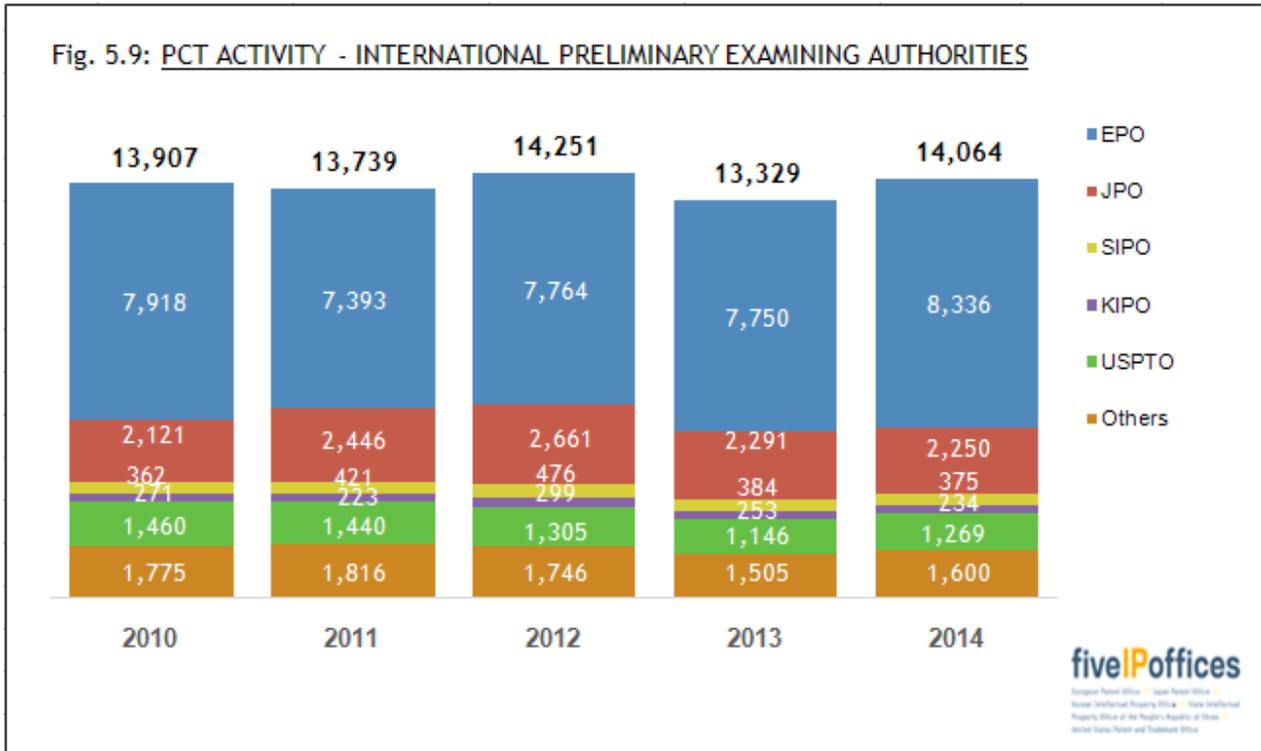


The IP5 Offices together received 94 percent of the PCT international search requests in 2014. The EPO received consistently the largest number of requests (37 percent of all requests in 2014).

In 2014, strong growth was experienced by the SIPO (16 percent) and the USPTO (31 percent). The EPO experienced lesser growth while the JPO experienced a slight decline in the number of requests.

Since 2006, the KIPO has acted as an available ISA for international applications filed under the PCT with the U.S. as RO, or with International Bureau of the WIPO (IB) as RO where at least one of the applicants is a resident or national of the U.S. The combined number of international search requests to the KIPO and the USPTO has increased from 2010 and increased by 11 percent in 2014.

Fig. 5.9 shows the breakdown over time of the numbers of international preliminary examination requests to Offices as IPEA.



The number of requests for international preliminary examinations nowadays remains relatively stable, except that there was a reduction by 9% for USPTO between 2011 and 2012, increased slightly in 2012.

Together, the IP5 Offices were in charge of 89 percent of the IPEA work in 2014 (88 percent in 2012). Annually, from 2010 to 2014, the EPO performed well over half of all the international preliminary examinations.