

## 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 RO for applicants in their respective territories, as ISA and as IPEA. PCT searches are a significant workload item at the IP5 Offices in addition to those already described in Chapter 4.

Statistics in this chapter are derived from the WIPO Statistics Database<sup>34</sup> and from the IP5 Offices.

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

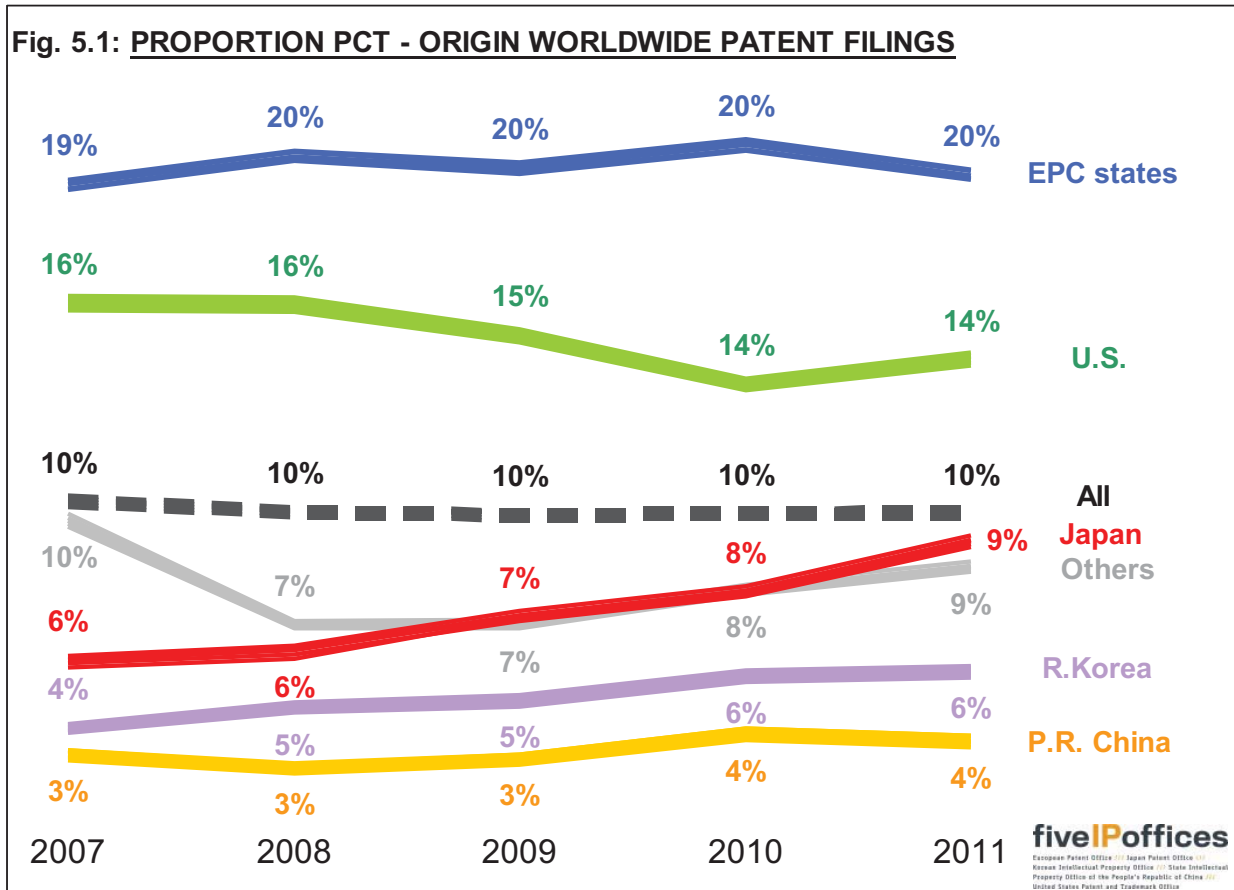
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<sup>34</sup> See footnote 6 p.3

## 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.



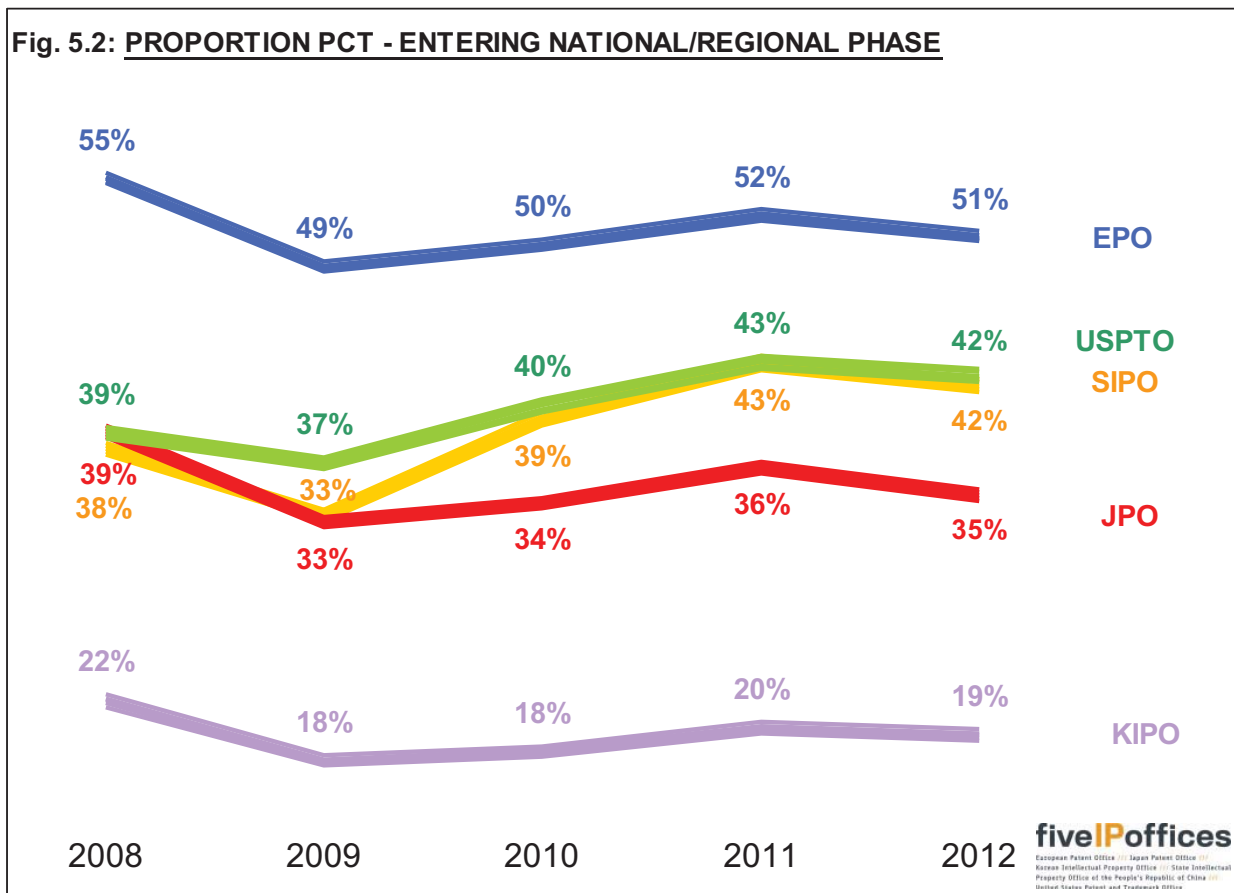
On average, 10 percent of the applications were filed via the PCT route between 2007 and 2011.

In 2011, the proportion of applications filed via the PCT increased for applications originating from most of the regions with the exception of the EPC states and P.R. China, where the proportion declined. The proportions for EPC states origin applications and 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 organisation 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 organisations. 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>35</sup>.



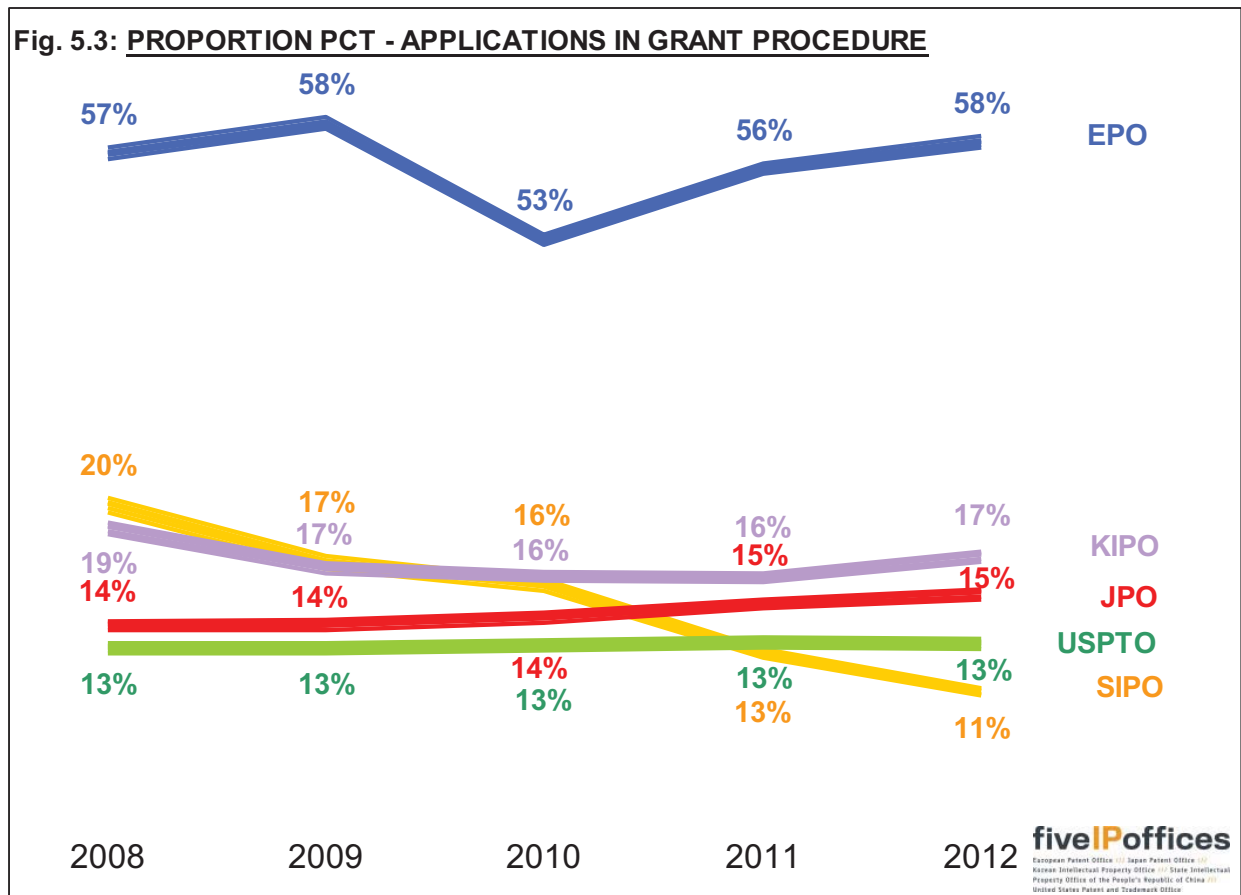
A higher proportion of PCT applications enter the regional phase at the EPO than enter the national phase at the JPO, the SIPO, or the USPTO. This is due to the multinational dimension of the EPO, which provides an opportunity to proceed further with a unique procedure for several countries. The proportion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

After a general declining trend observed at all offices up to 2009, the proportions grew for all offices, with the EPO retaining the highest proportion.

<sup>35</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

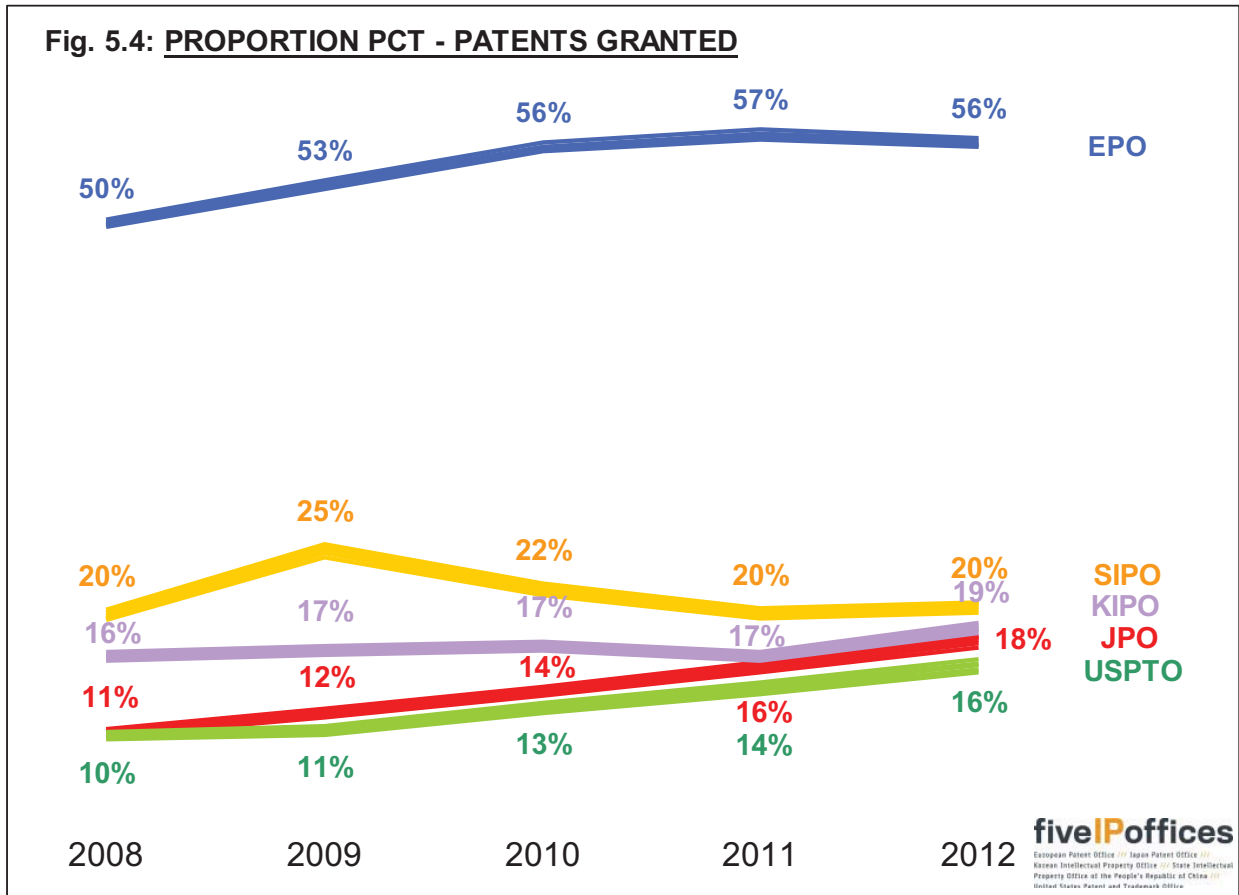
Fig. 5.3 shows the share of PCT among all applications that entered the grant procedure at each office (as presented earlier in Fig. 4.1).



The proportion of PCT national/regional applications further increased at the EPO in 2012 to return to its 2009 level. The decrease in 2010 can probably be explained by the rule adjustment that led to additional divisional non-PCT applications in 2010 as a one-off effect. 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 than the growth of PCT applications entering national phase. Except at the EPO, the proportions of PCT among applications are at comparable level for all 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 had been filed several years earlier.

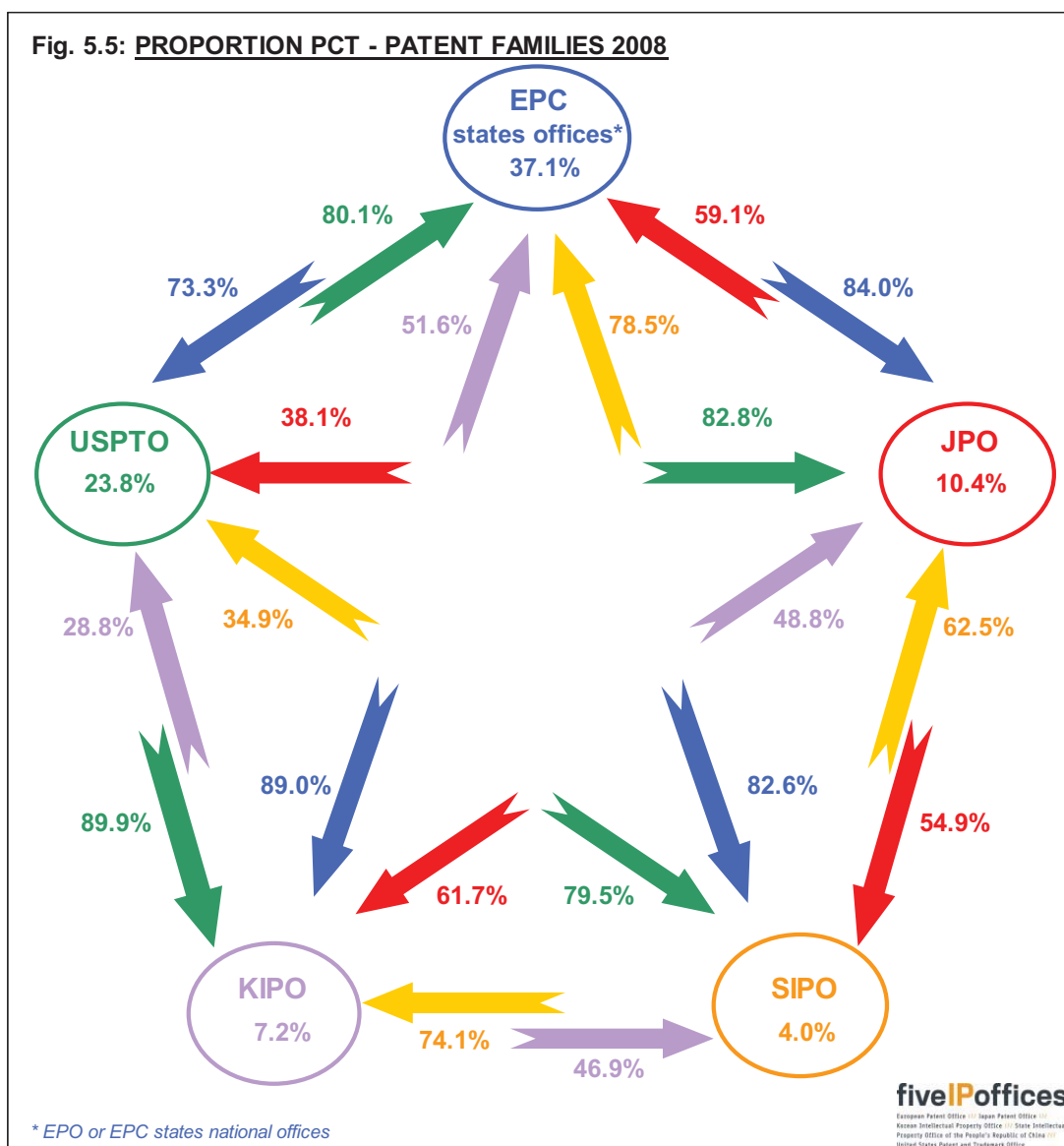
Over the period, there was a general increase of the proportion of PCT in granted patents at the EPO, at the JPO, at the KIPO and at the USPTO. The SIPO, however, had a decreasing proportion after 2009, which can be explained by the faster growth of patent applications filed through the Paris route than that of PCT applications entering into national phase.

## PATENT FAMILIES AND PCT

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

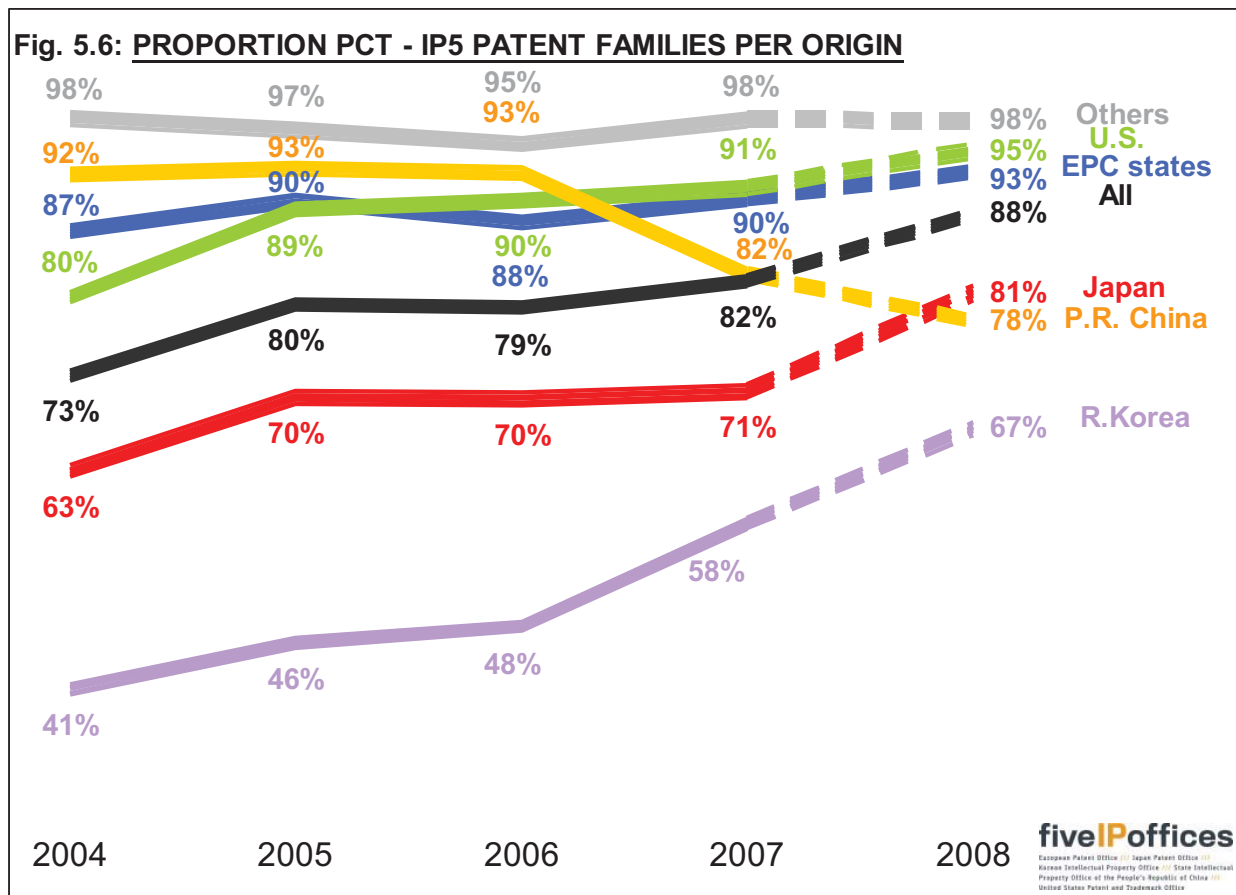
The PCT system provides a good way to make subsequent patent applications in a large number of countries. Therefore it can be expected that many patent families flowing between blocs will use the PCT route. In this section, the use of the PCT system implies that at least one PCT application has been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

Fig. 5.5 shows the usage of the PCT among patent families in 2008. 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 2008, and can be compared with Fig. 3.13.



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.

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.



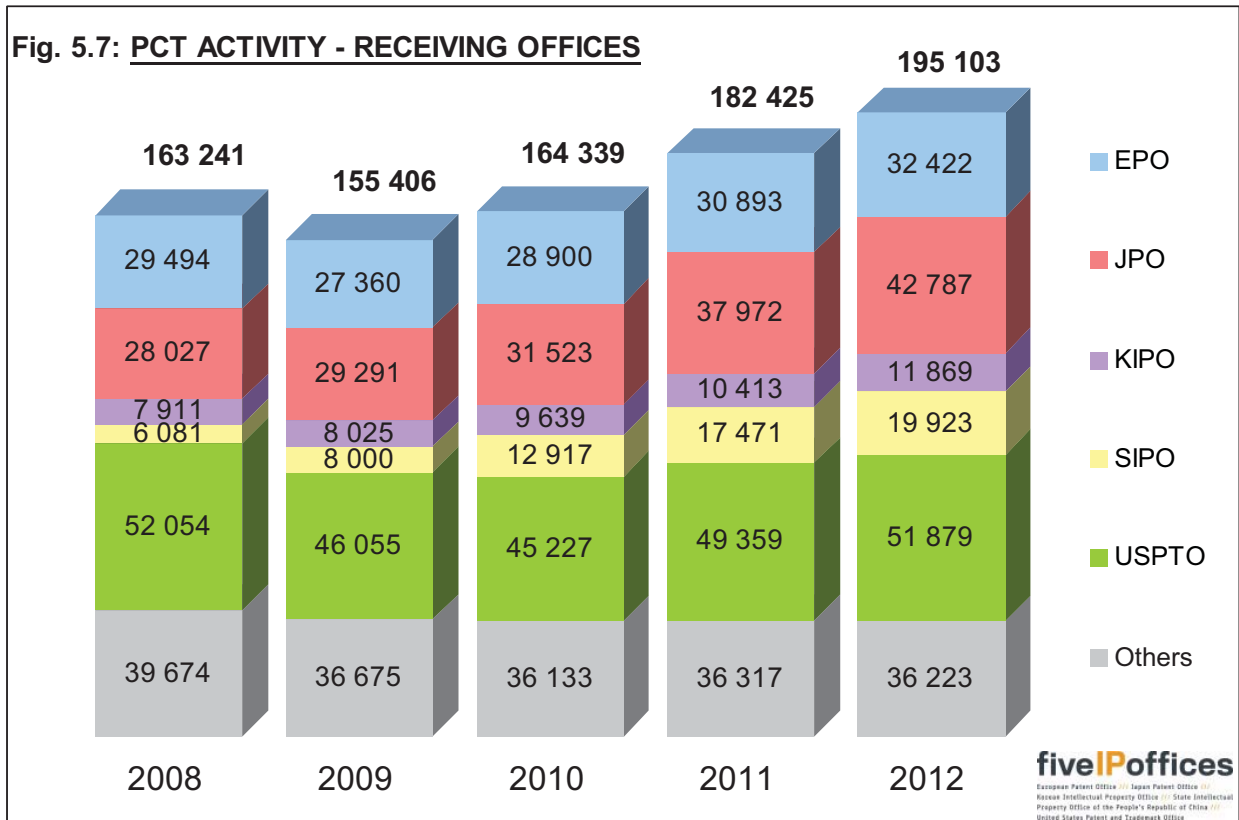
Since IP5 patent families represent highly internationalised applications, it is not surprising that the average rate of PCT usage is high compared to the overall usage of PCTs among applications in general, as was shown in Fig. 5.1. The percentage of usage of the PCT system has generally grown in the IP5 patent families over the period from 2004 to 2008, except for P.R. China, where nevertheless the absolute number of IP5 patent families that make use of the PCT has increased<sup>36</sup>.

<sup>36</sup> PCT percentages for the counts in Table 3 are given in the statistical web based annex.

## 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 2008 to 2012.

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

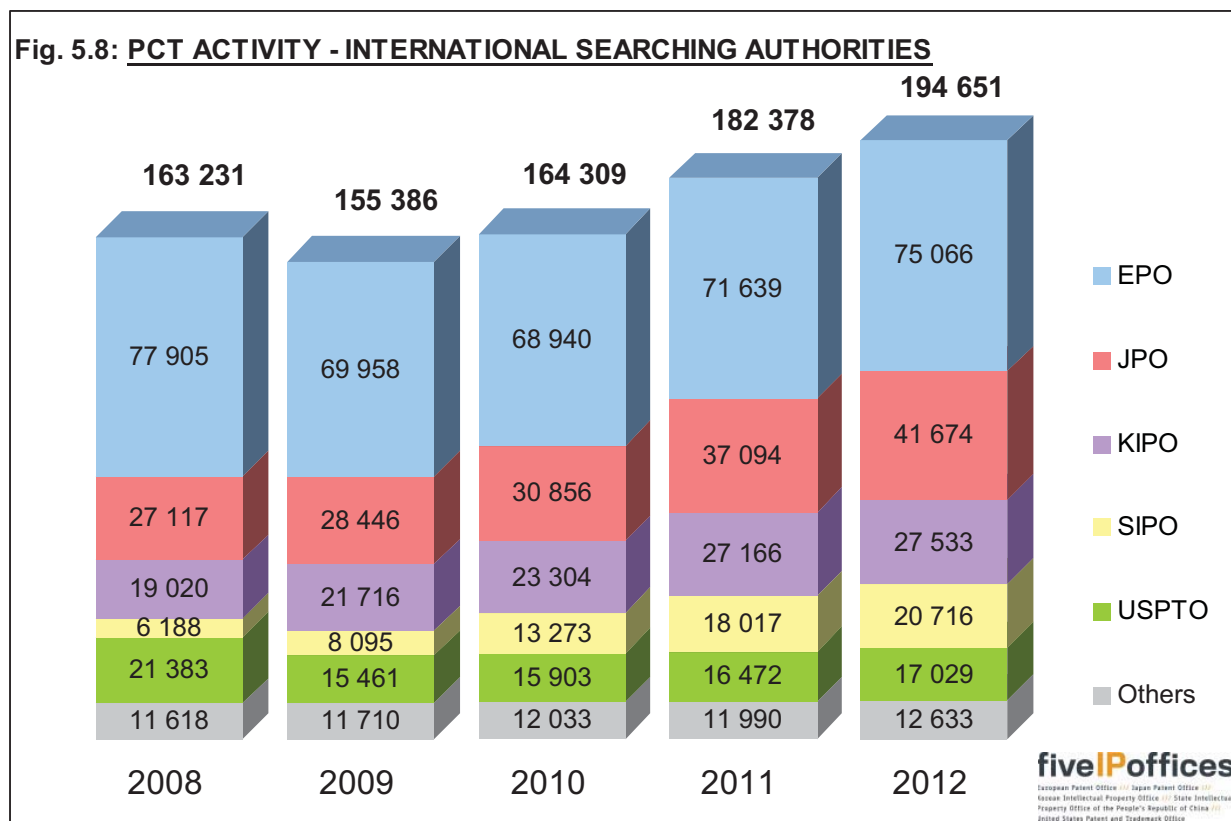


The totals for PCT international filings are also shown in Fig. 3.1. After the total number of PCT international filings recovered in 2010 it increased further by 11 percent in 2011 and 7 percent in 2012. The compound annual growth rate from 2008 to 2012 was 4.6 percent.

In 2012, the IP5 Offices had an overall increase of PCT international filings of 8 percent. The SIPO, the KIPO (both 14 percent) and the JPO (13 percent) had the largest increases. Together the IP5 Offices were RO for 81 percent of the PCT international filings in 2012 (76 percent in 2008).



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.

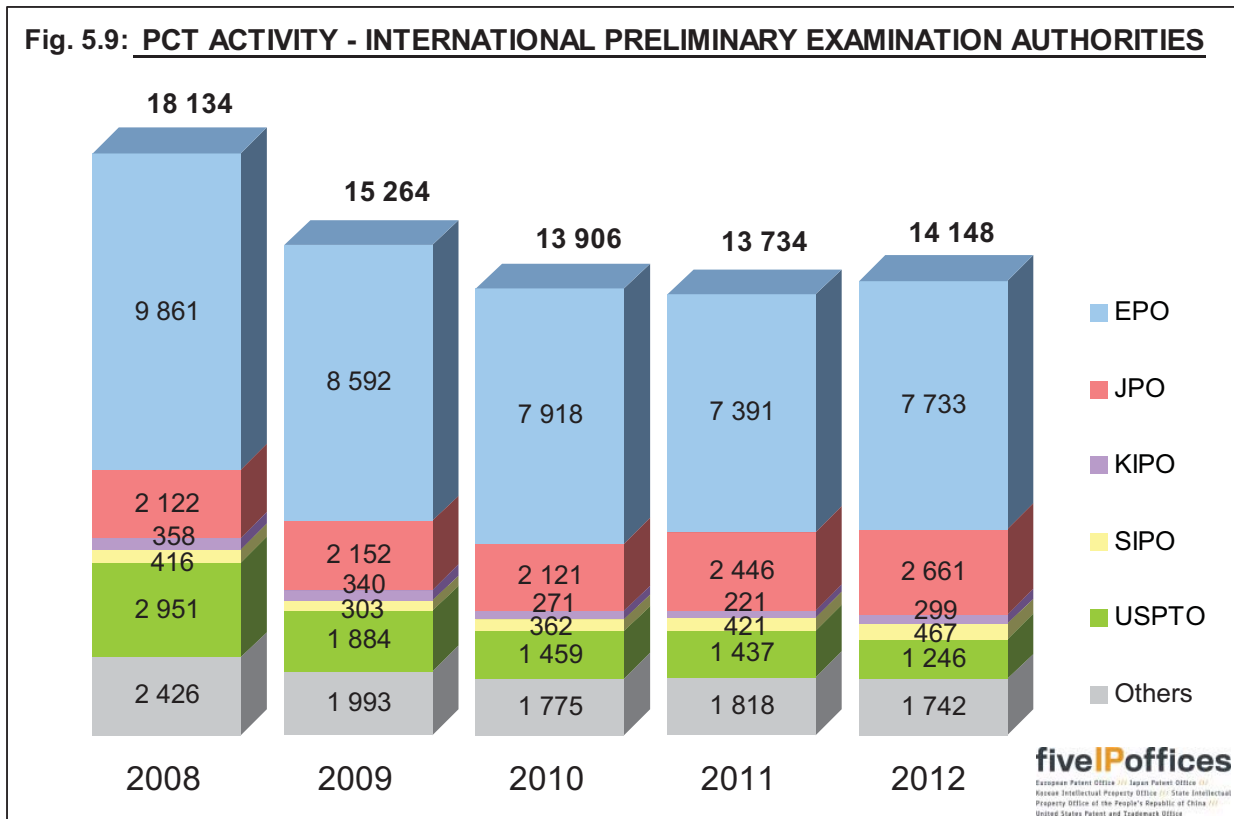


The IP5 Offices together received 94 percent of the PCT international search requests in 2012. The EPO received consistently the largest number of requests (39 percent of all requests in 2012). From 2008 to 2012, the proportions of applicants that selected the JPO (21 percent in 2012), the SIPO (11 percent) and the KIPO (14 percent) grew markedly.

In 2012, strong growth was experienced by the JPO (13 percent), the SIPO (15 percent). The EPO, the KIPO and the USPTO experienced smaller increases.

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. After increasing until 2011, the combined number of international search requests to the KIPO and the USPTO remained stable in 2012.

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



After a long period of decline the number of requests for international preliminary examination increased slightly in 2012.

Together, the IP5 Offices were in charge of 88 percent of the IPEA work in 2012 (87 percent for each of the previous years). The EPO has consistently performed the highest proportion of the international preliminary examinations each year. Annually, from 2008 to 2012, the EPO performed over half of the international preliminary examinations.