

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, grants and patent families that use 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.

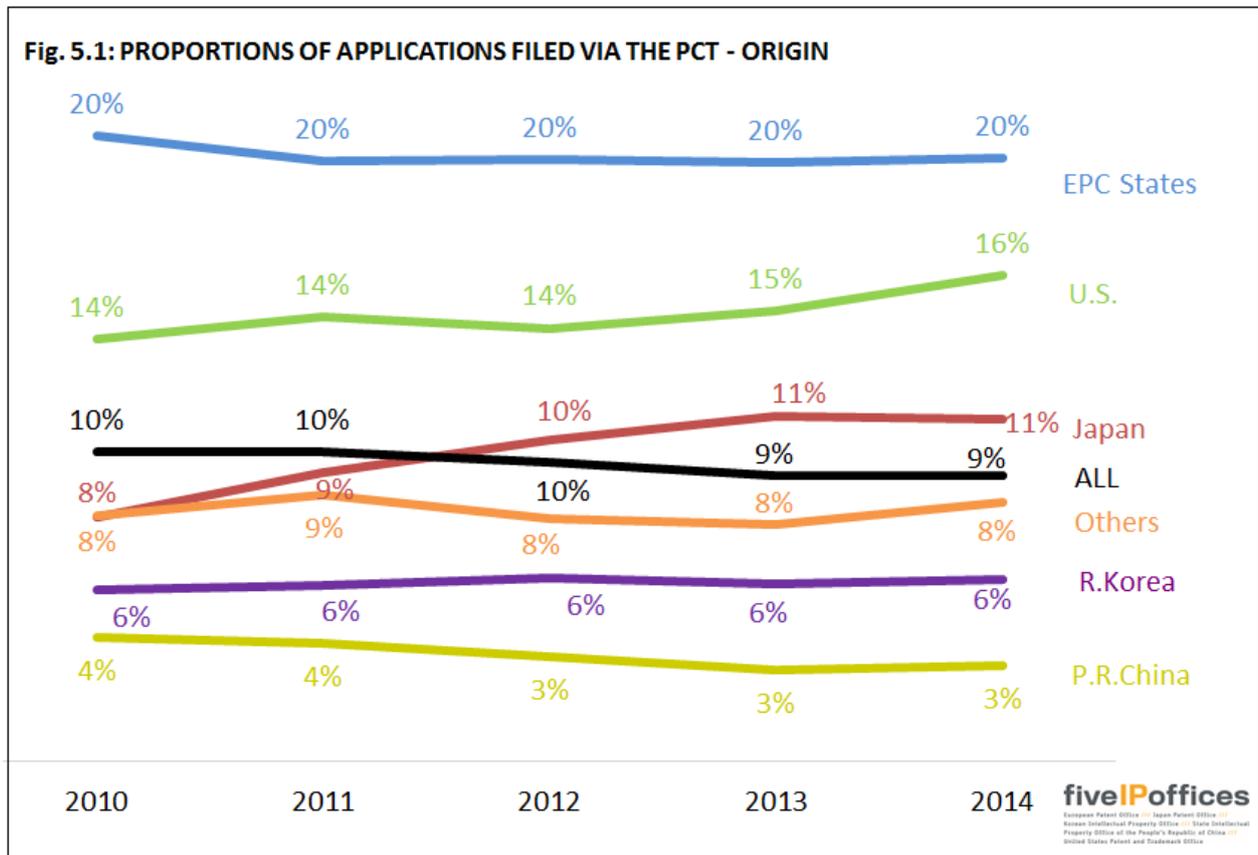
Statistics in this chapter have been derived from the WIPO Statistics Database³⁹ and the IP5 Offices.

³⁹ This edition refers to general patent data as of March 2016, and to PCT international application data as of June 2016, www.wipo.int/ipstats/en/statistics/patents/.

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.



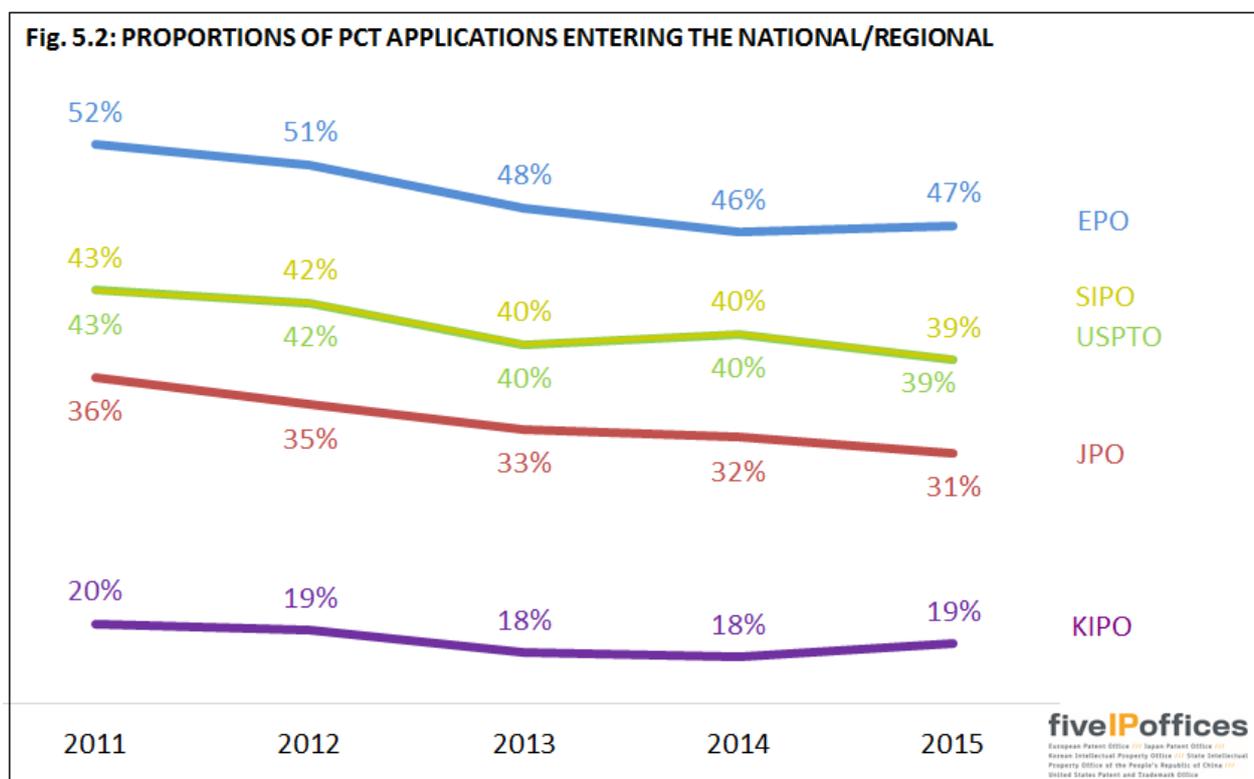
The proportion of PCT slightly declined between 2010 and 2014. This is partially due to the large increase in domestic first filings from P.R. China (see Fig.3.4) leading to a slight decline of the proportion of PCT among filings from P.R. China. Over the period, the share of PCT among filings increased for the other IP5 regions.

Compared to 2013, in 2014 the proportion of applications filed via the PCT remained stable for applications originating from the EPC states, Japan, R. Korea and P.R. China. For the U.S., the proportion increased by 1 percent. The proportions for the EPC states origin applications and for 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 expired⁴⁰.



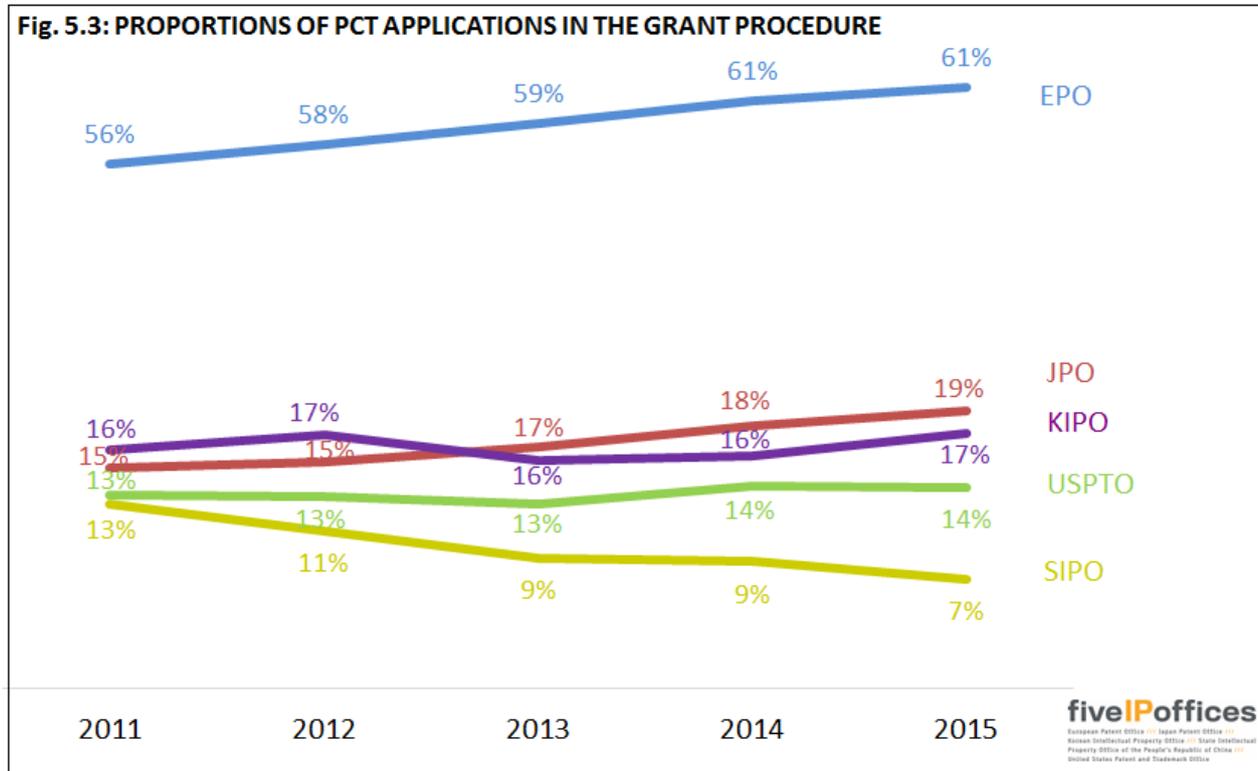
A higher proportion enters the regional phase at the EPO than enters the national phase at any of the other IP5 Offices. This is due to the multinational dimension of the EPO, which provides an opportunity to proceed further with a unique procedure for several countries. The proportion remained lowest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

The proportions observed at all offices tended to decline since 2011. From 2013 to 2014 the proportions increased only at the EPO and the KIPO.

⁴⁰ 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

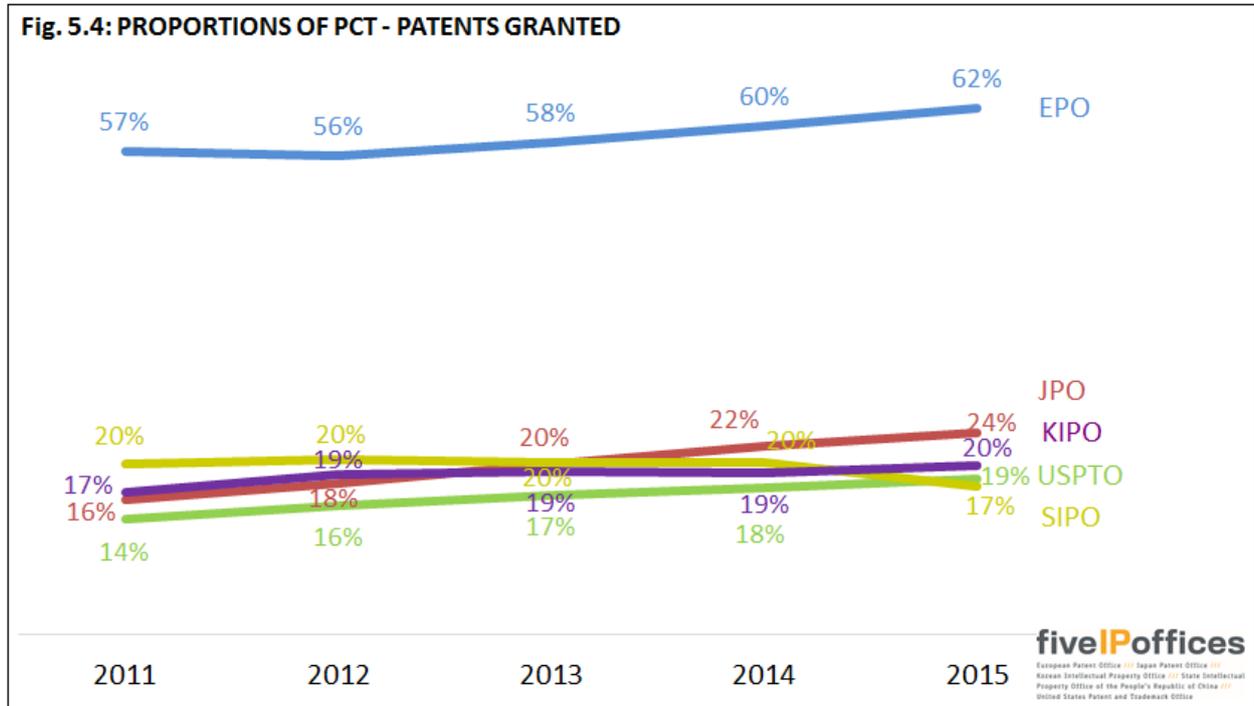
Fig. 5.3 shows the shares of PCT among all applications that entered the grant procedure at each office (as presented earlier in Fig. 4.1).



The proportions of PCT national/regional phase applications among all applications tended to increase from 2014 to 2015, except at SIPO. Since 2011, the SIPO had a decrease in the PCT share of all applications that entered the grant procedure, mainly due to the higher growth of direct national patent applications 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.

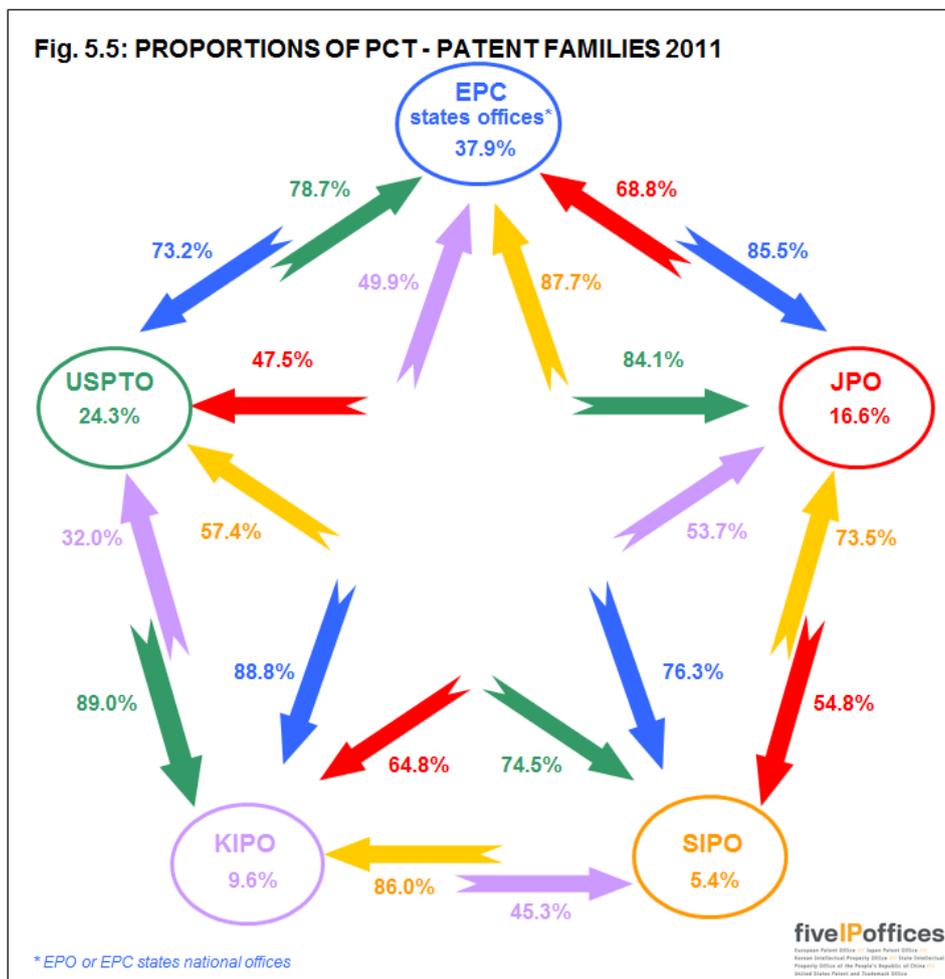
Over the period, the proportions for the JPO, KIPO, SIPO, and USPTO remain close to 20 percent, although in 2015 JPO moved up to 24 percent and SIPO decreased to 17 percent. The proportion of PCT granted patents at the EPO further increased.

PATENT FAMILIES AND PCT

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

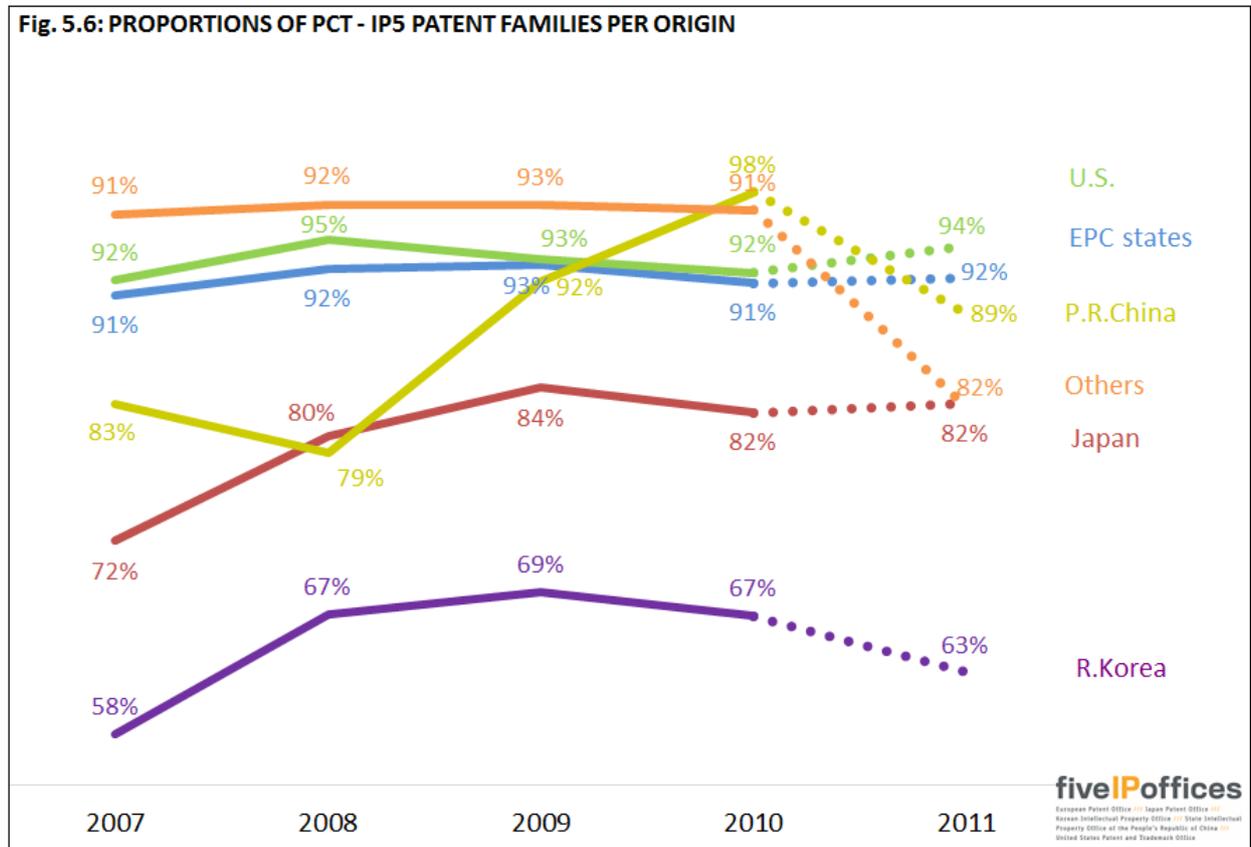
The PCT system provides a good way to make subsequent patent applications in a large number of countries. Therefore it can be expected that many patent families flowing between blocs will use the PCT route. In this section, the usage of the PCT system implies that at least one PCT application has been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

Fig. 5.5 shows the usage of the PCT among patent families in 2011. 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 can be compared with Fig. 3.14, which was also about first filings in 2011.



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. IP5 patent families correspond to filings where activities of the first and/or subsequent associated filings were made in all the IP5 Blocs.

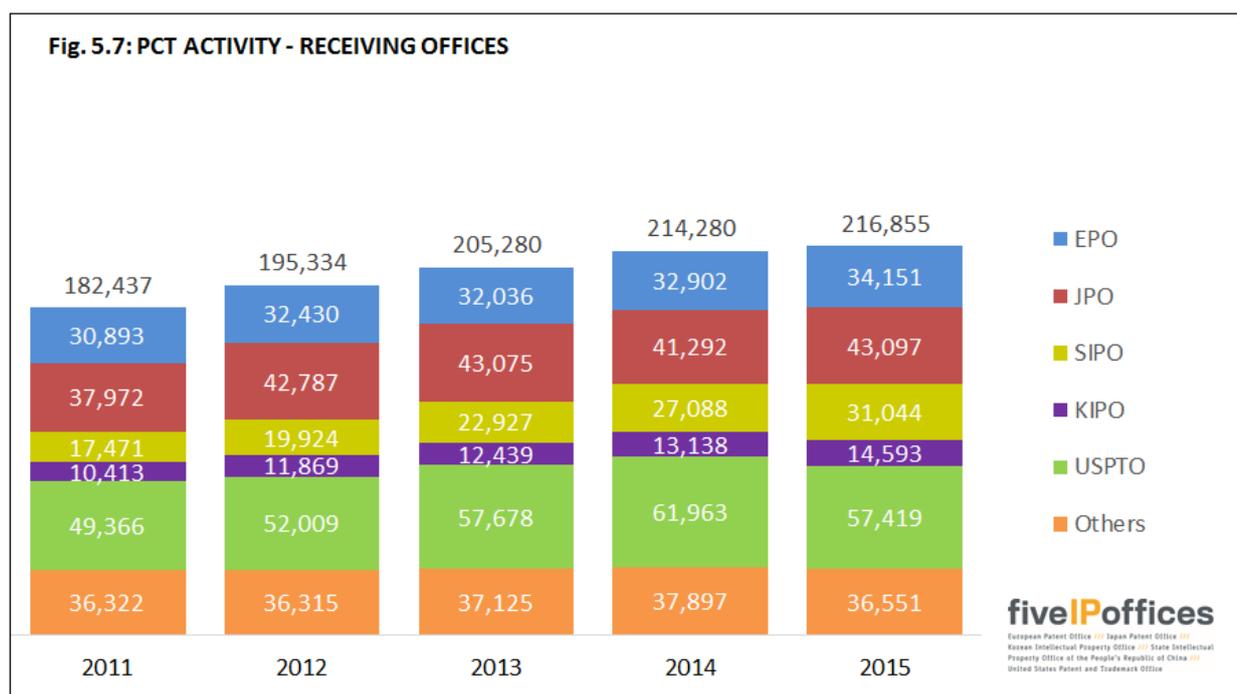


Since IP5 patent families represent highly internationalised applications, the average rate of PCT usage is high compared to the overall usage of PCT among applications in general, as was shown in Fig. 5.1. In 2011, the percentage of usage of the PCT system increased by the U.S. and the EPC states. For P.R. China and R. Korea, the proportion decreased by 9 percent and 4 percent respectively.

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 2011 to 2015.

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

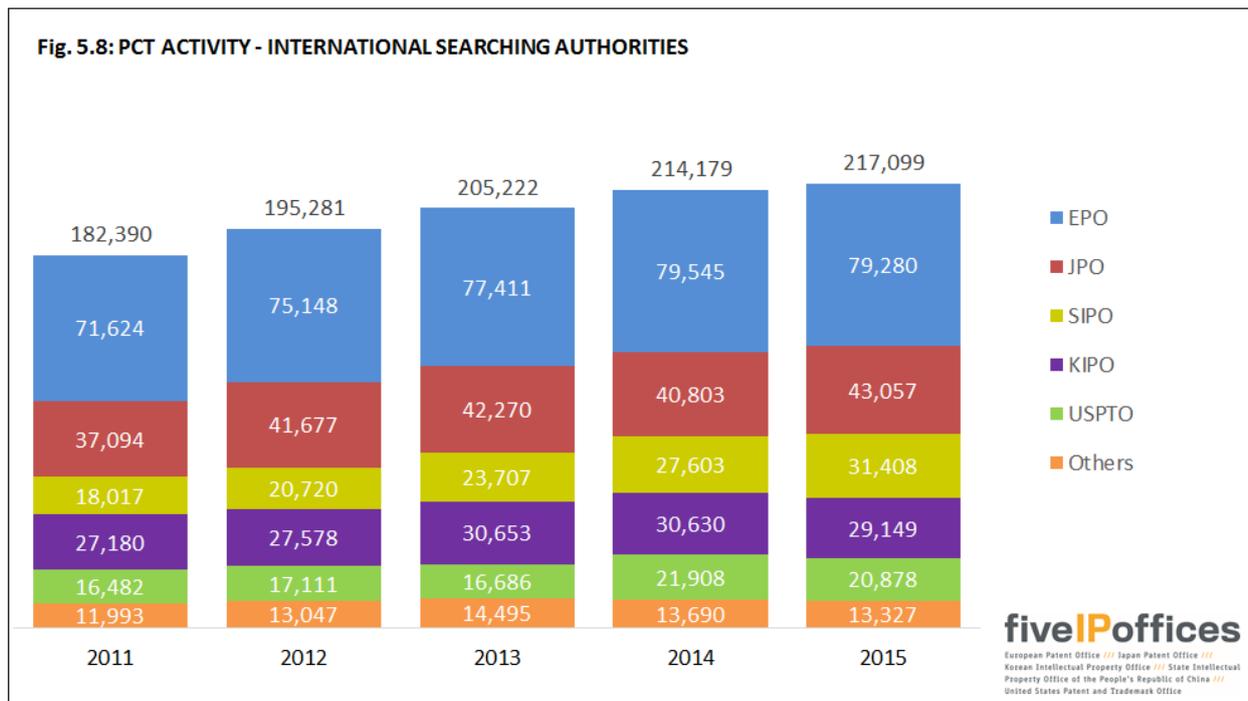


The totals for PCT international phase filings are also shown in Fig. 3.1. The total number of PCT international phase filings has recovered from 2011 and steadily increased by 2015. The compound annual growth rate from 2011 to 2015 was 4.4 percent.

In 2015, the IP5 Offices had an overall increase of PCT international filings of 1.2 percent compared with those in 2014, although decreases were seen for the USPTO (7 percent) and the Others (4 percent). The SIPO (16 percent) had the largest percentage increase. Together the IP5 Offices were RO for 83 percent of the PCT international filings in 2015 (80 percent in 2011).

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.

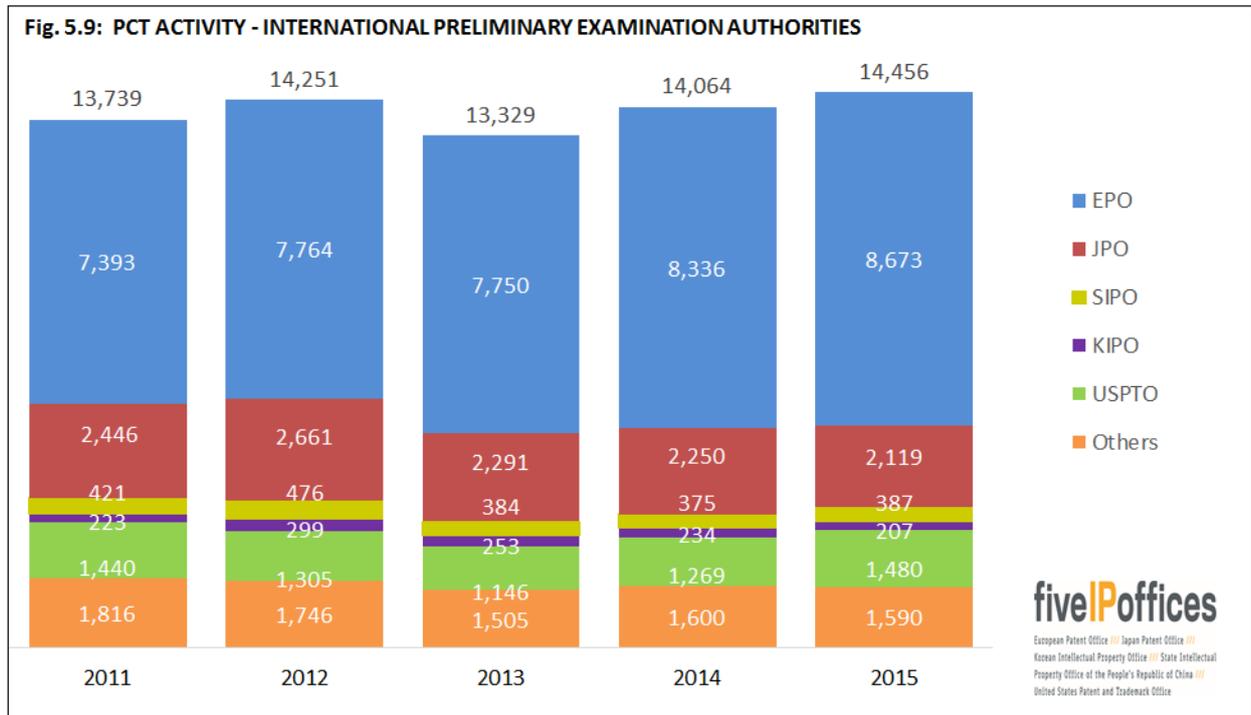
Since 2006, the KIPO has acted as an available ISA for international phase applications filed under the PCT with the U.S. as RO, or with International Bureau of the WIPO (IB) as RO where at least one of the applicants is a resident or national of the U.S.



The IP5 Offices together received 94 percent of the PCT international search requests in 2015. The EPO received consistently the largest number of requests (37 percent of all requests in 2015).

In 2015, strong growth was experienced by the SIPO (14 percent) and the JPO (6percent). For the KIPO and the USPTO, the proportion decreased by 5 percent.

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



From 2014 to 2015, the totals of requests for international preliminary examinations increased 3 percent.

Together, the IP5 Offices were in charge of 89 percent of the IPEA work in 2015. Annually, from 2011 to 2015, the EPO performed more than half of all the international preliminary examinations.