

Chapter 5

THE IP5 OFFICES AND THE PATENT COOPERATION TREATY (PCT)

This chapter presents firstly 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 available⁴⁷.

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 Database⁴⁸ and the IP5 Offices. Data for 2016 are presented in all figures except for Fig. 5.1 (proportions of applications filed by PCT) and Fig. 5.6 (IP5 patent families by origin).

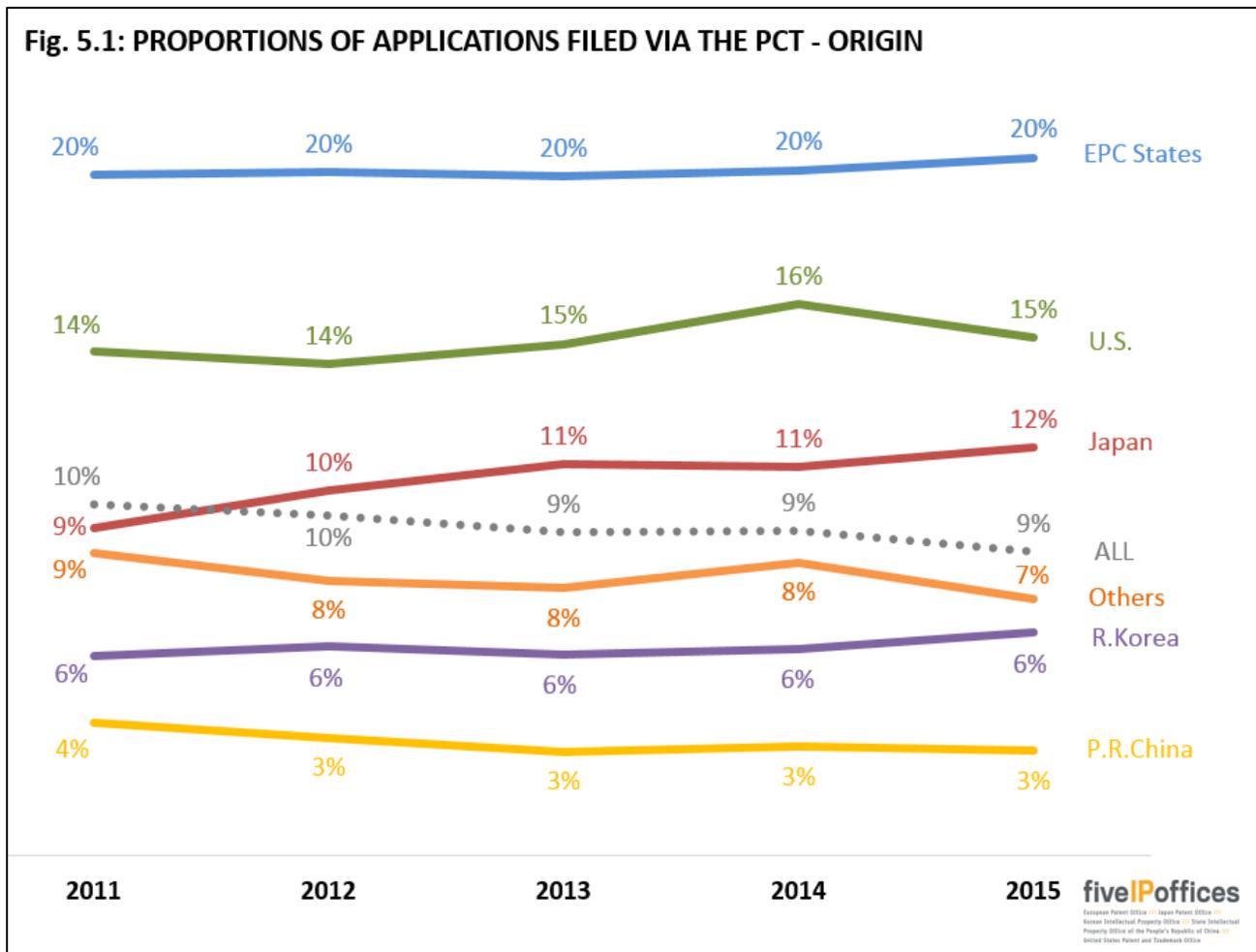
⁴⁷ The statistical tables file found in the web version of this report includes extended time series for most of the data included in this chapter. www.fiveipoffices.org/statistics/statisticsreports.html

⁴⁸ This edition refers to general patent data as of March 2017, and to PCT international application data as of June 2017, www.wipo.int/ipstats/en/index.html

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 filings that are PCT international applications. Applications are counted in the year of filing. These data are comparable to those in Figs. 3.1 to 3.4.



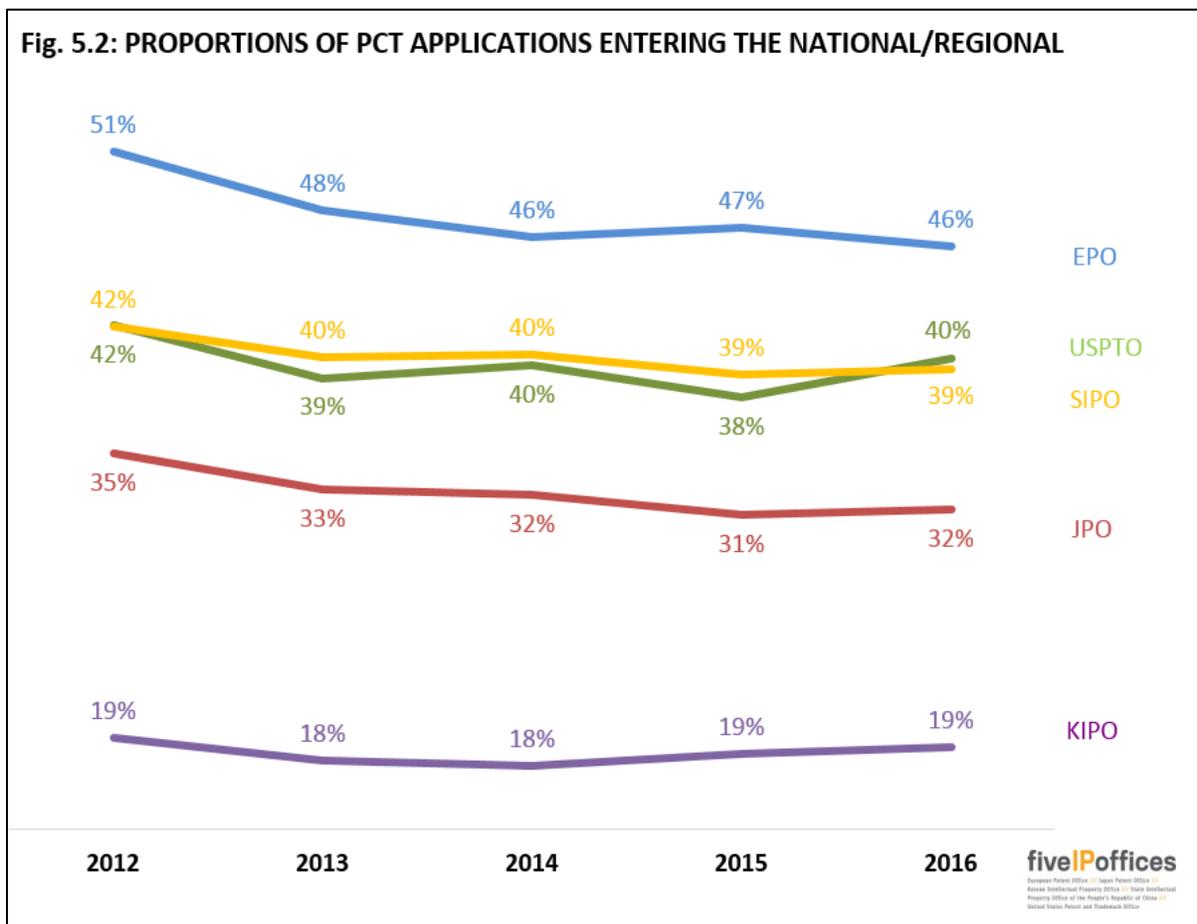
On average, 9 percent of the filings were made via the PCT route in 2015.

Comparing 2014 and 2015, 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, the proportion increased by 1 percent, while the U.S. proportion declined 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 international PCT applications 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 expired⁴⁹.



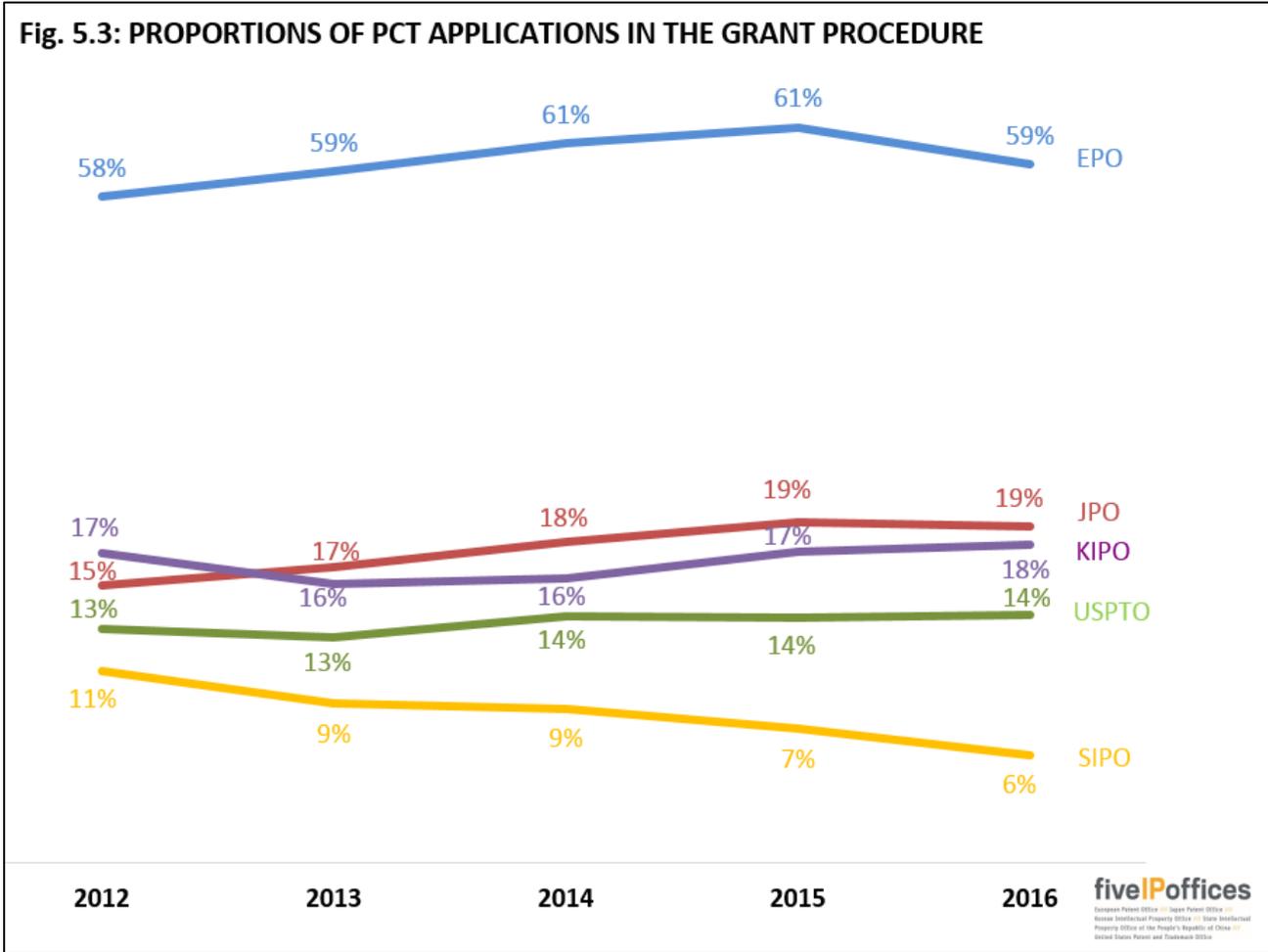
A higher proportion enters the regional phase at the EPO than enters the national phase at any of the other IP5 Offices. This is due to the multinational dimension of the EPO, which provides an opportunity to proceed further with a unique procedure for several countries. The proportion remained lowest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

⁴⁹ It should be noted that counts from EPC contracting state national offices are not reported in Figs. 5.2, 5.3, and 5.4.

The proportions observed at all offices declined between 2012 and 2014. Comparing 2016 to 2014, the proportions remained essentially constant for the EPO, the USPTO and the JPO. For the same comparison, the proportion for the KIPO increased by 1 percent while the proportion for SIPO decreased by 1 percent.

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).

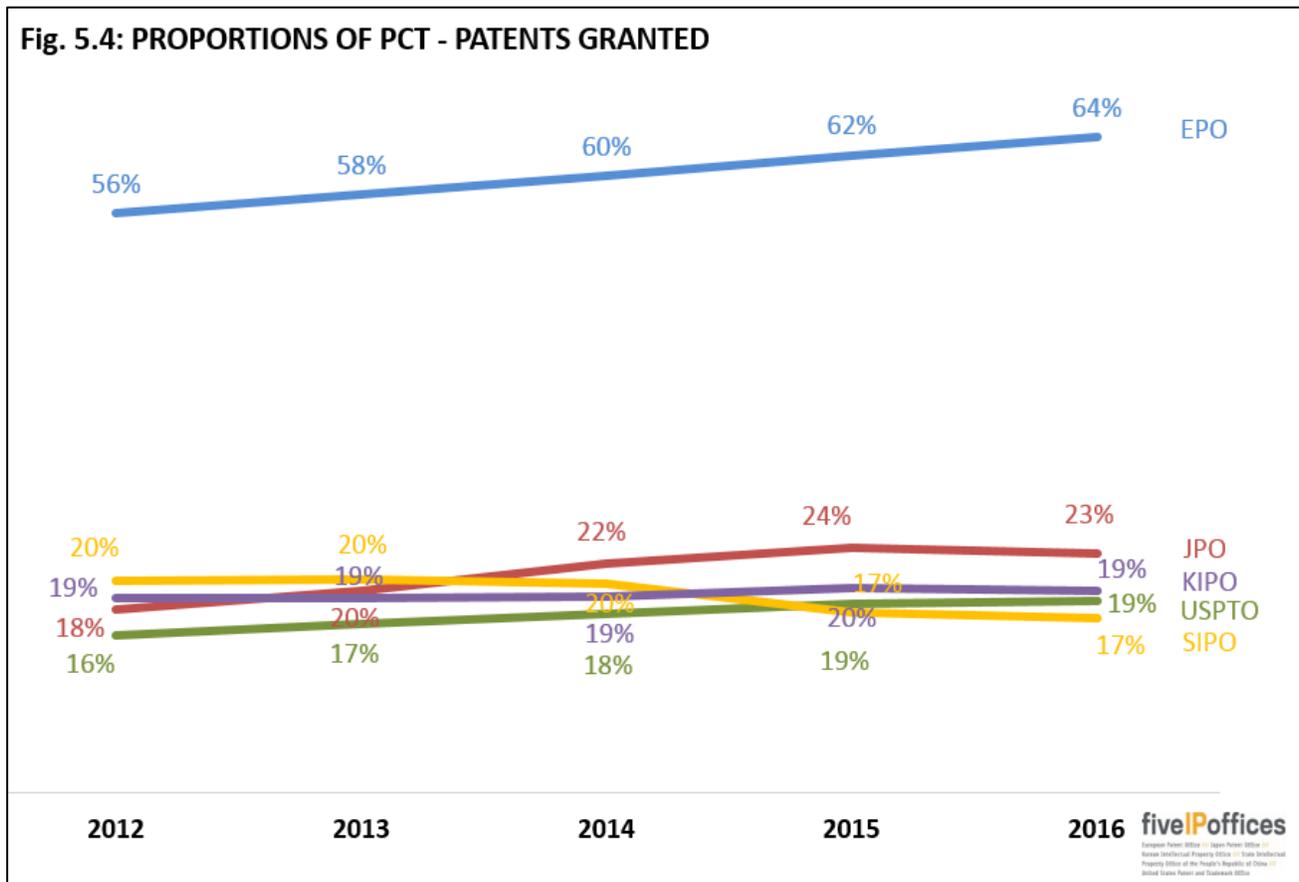


The proportions of PCT national/regional phase applications among all applications remained relatively stable from 2015 to 2016, with the exception of the EPO and the SIPO. The EPO experienced a decrease of 2 percent, while the SIPO saw an increase of 6 percent.

EPO continues to have much higher proportion of PCT applications when compared to 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.

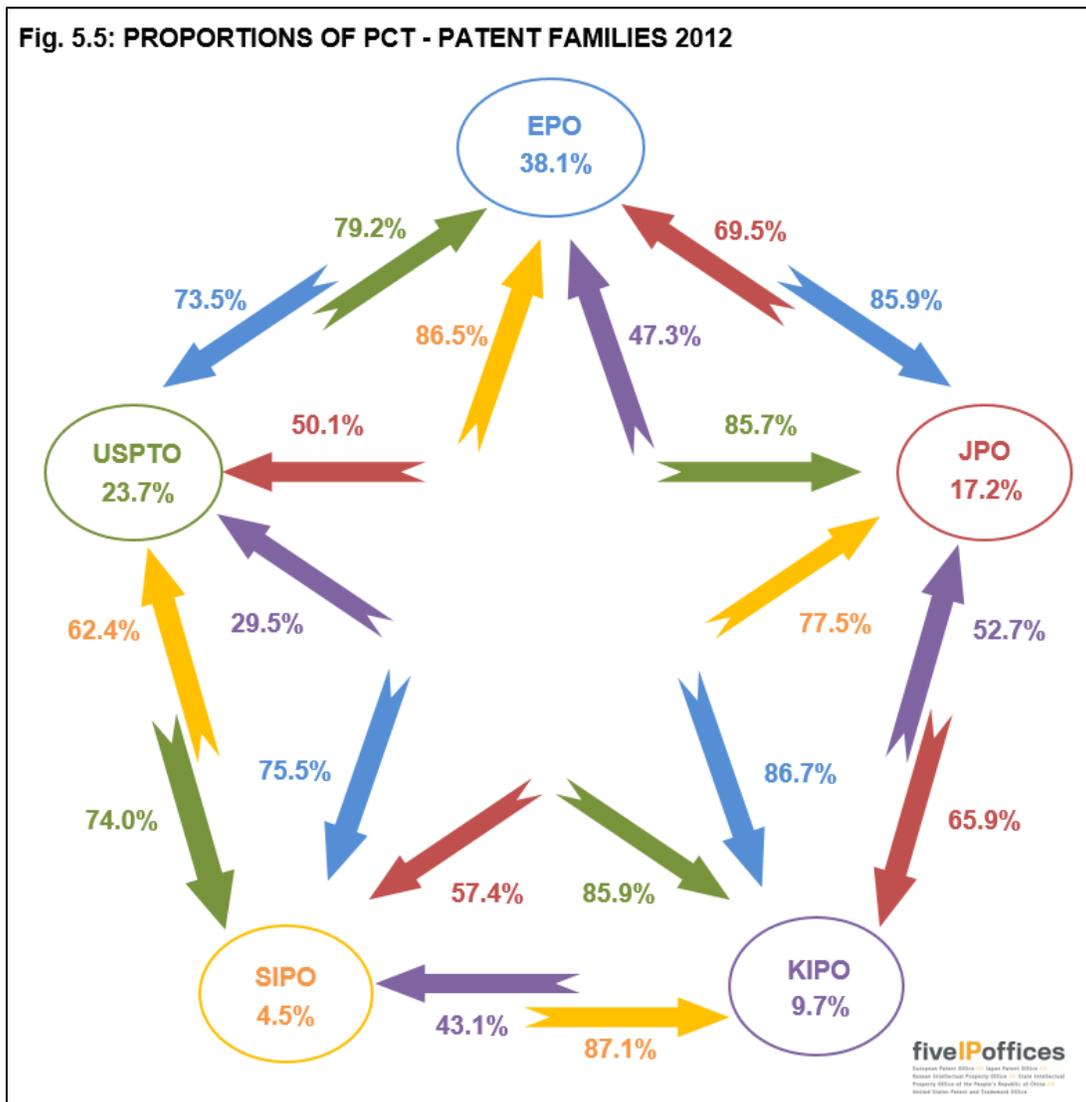
Over the 5-year period, there was an increase in the proportion of the PCT granted patents at the EPO and the JPO of 8 percent and 5 percent, respectively. The USPTO percentage increased by 3 percent, while the KIPO percentage held constant at 19 percent and the SIPO percentage decreased by 3 percent. The percentages of PCTs in granted patents in Fig. 5.4 are higher than the percentages of PCTs in applications in Fig. 5.3, for all IP5 Offices since 2015 and for all IP5 Offices except the EPO before 2015.

PATENT FAMILIES AND PCT

A patent family is a group of patent filings that claim the priority of a single filing, as was described in the final section of Chapter 3.

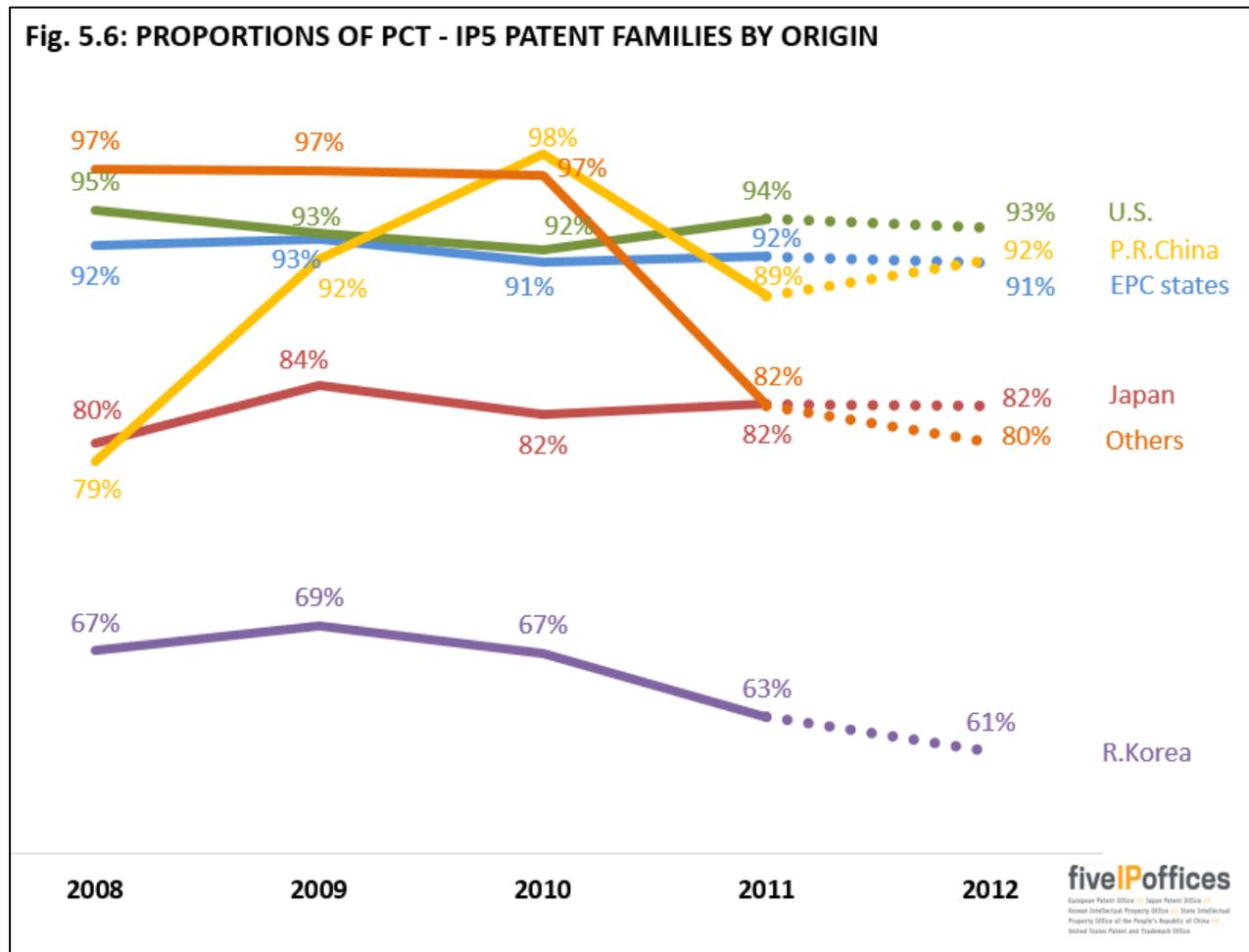
The PCT system provides a good way to make subsequent patent applications in a large number of countries. Therefore, it can be expected that many patent families flowing between blocs will use the PCT route. In this section, the usage of the PCT system implies that at least one PCT application has been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

Fig. 5.5 shows the usage of the PCT among patent families in 2012. 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 2012, and can be compared with Fig. 3.14.



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



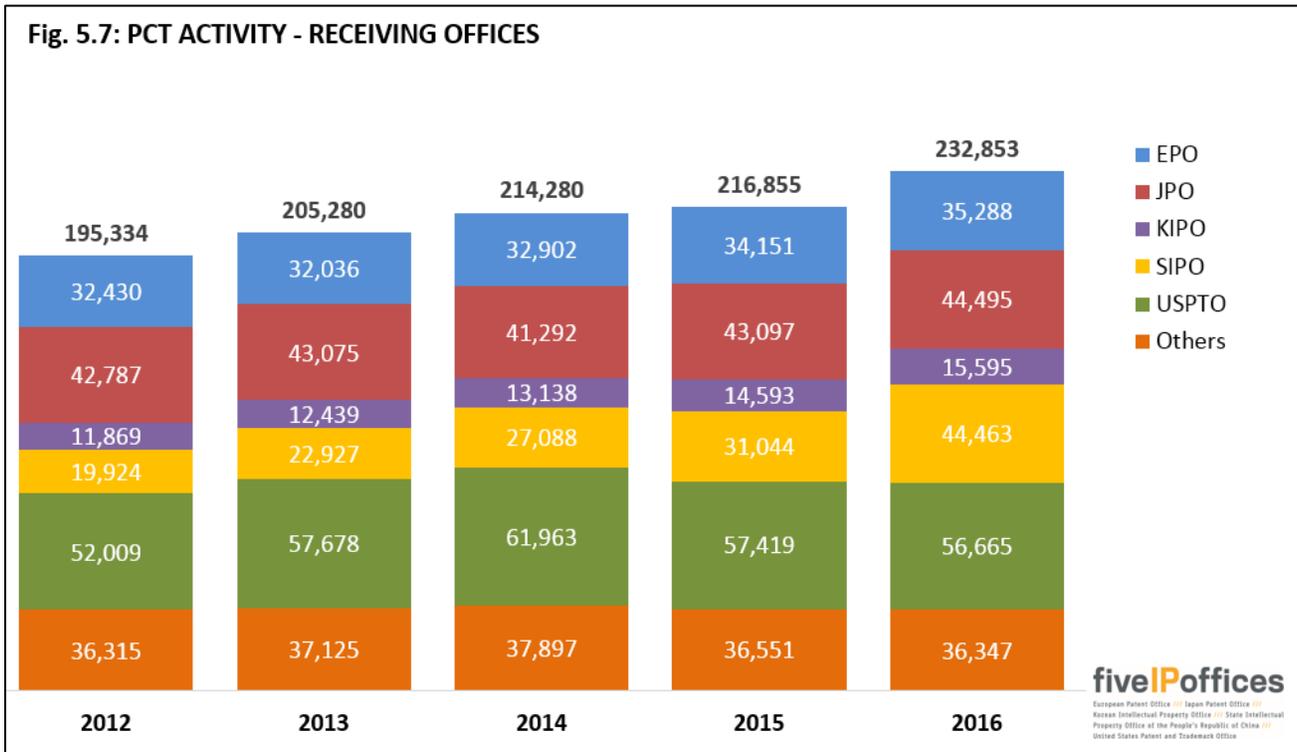
Since IP5 patent families represent highly internationalised applications, the rate of PCT usage is high compared to the overall usage of PCTs among applications in general, as was shown in Fig. 5.1.

In 2012, the percentage of usage of the PCT system has decreased in the U.S., the EPC states and R. Korea by 1 percent, 1 percent and 2 percent, respectively. Usage in the P.R. China increased by 3 percent and for the JPO, the percentage of usage of the PCT system remain unchanged at 82 percent.

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 2012 to 2016.

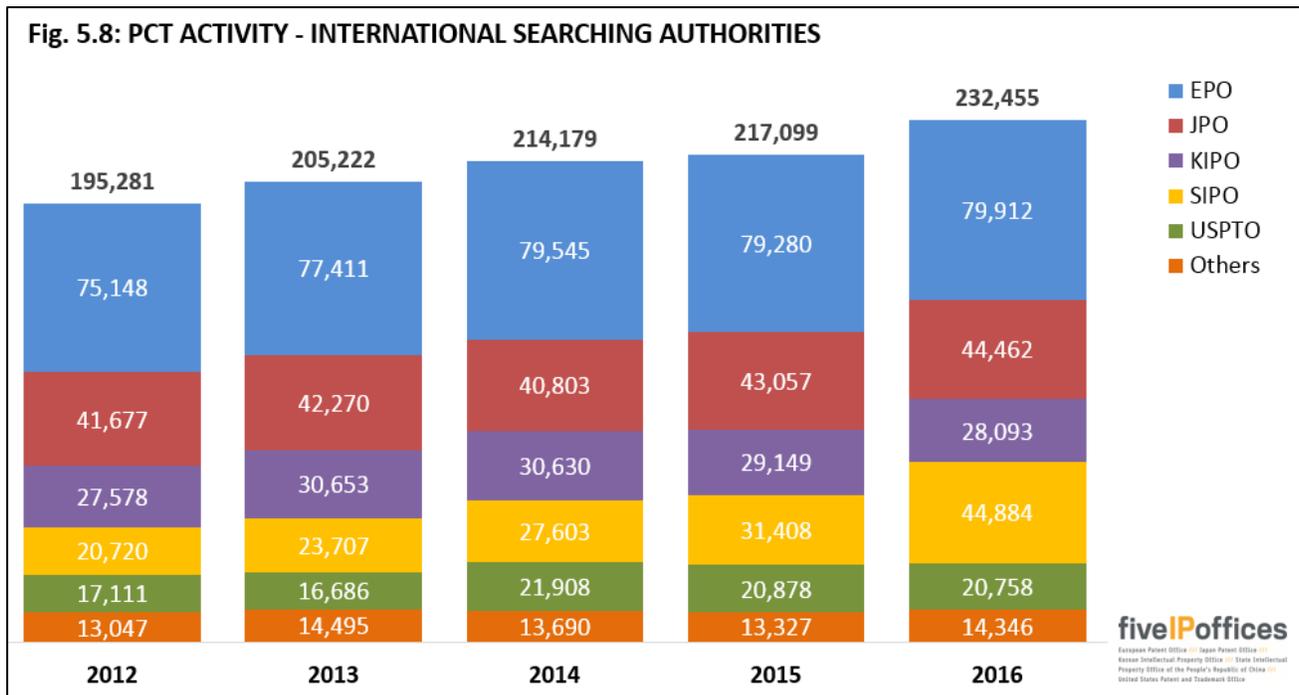
Fig. 5.7 shows the breakdown of PCT international filings by ROs over time.



The total number of PCT international phase filings steadily increased from 2012 to 2014 and grew at a lower pace in 2015. The compound annual growth rate from 2012 to 2016 was 4.5 percent.

In 2016, the IP5 Offices had an overall increase of PCT international filings of 9 percent compared with 2015, although decreases were seen for the USPTO (1 percent). The SIPO had the largest percentage increase 43 percent. Together the IP5 Offices were RO for 84 percent of the PCT international filings in 2016 (81 percent in 2012).

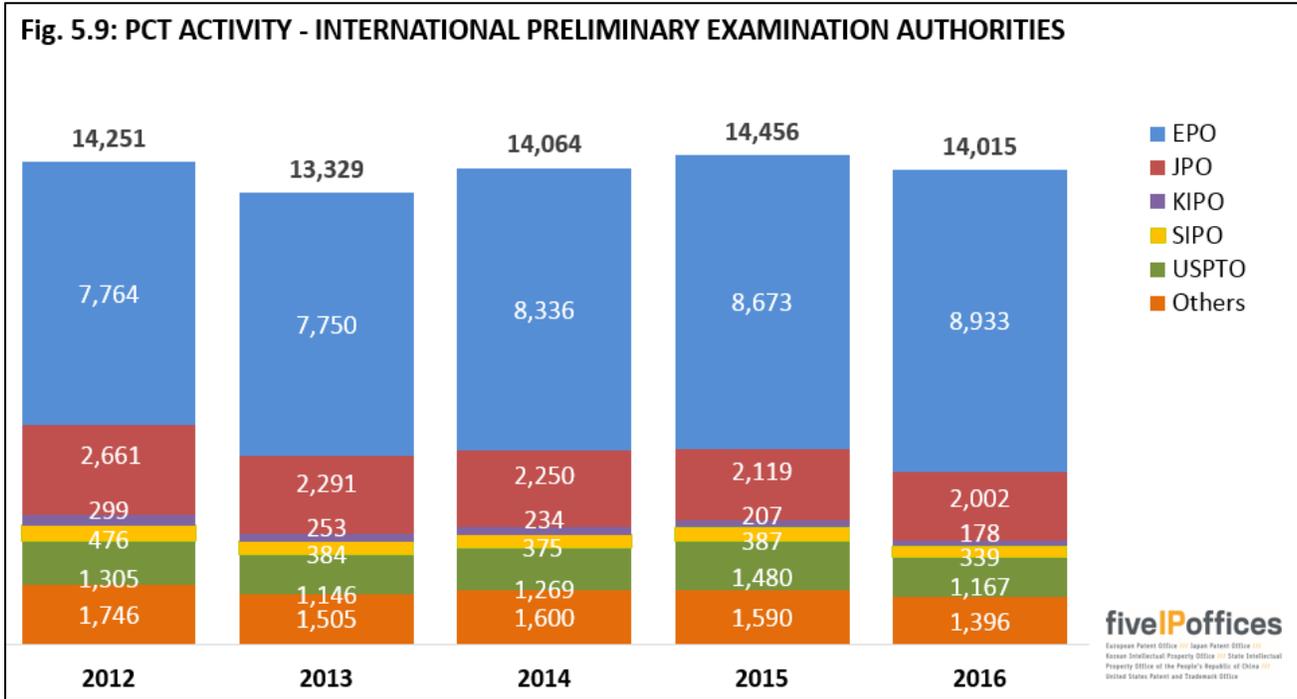
Fig. 5.8 shows the breakdown over time of the numbers of international search requests to offices as ISA, for those applications for which information is known.



There is a steady increase in total activity over the period described. In 2016, the IP5 Offices received 94 percent of all PCT international search requests, consistent with the percentage of requests received by the IP5 Offices in 2014 and 2015. The EPO continues to receive the largest number of requests, receiving 34 percent of all requests in 2016.

The SIPO once again demonstrated strong growth with a 43 percent increase. The JPO experienced an increase of 3 percent, while the proportion of requests received at the KIPO and the USPTO decreased by 4 percent and 1 percent, respectively.

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



From 2015 to 2016, the totals of requests for international preliminary examinations decreased 3 percent. While the numbers are roughly the same over the five years described, it should be born in mind that the annexed statistical tables file shows that there had been a decline in the numbers over the past 10 years.

Together, the IP5 Offices were in charge of 90 percent of the IPEA work in 2016. Annually, from 2012 to 2016, the EPO performed more than half of all the international preliminary examinations.