![WIPO - World Intellectual Property Organization logo]

WIPO
WORLD
INTELLECTUAL PROPERTY
ORGANIZATION

C. PCT 1360   October 8, 2012

Madam,
Sir,

Report on Characteristics of International Search Reports

This Circular is addressed to your Office in its capacity as International Searching Authority for the purpose of informing you that the Quality Subgroup of the PCT Meeting of International Authorities is invited to comment on the annexed draft report on characteristics of international search reports with a view to identifying indicators of what should be the focus of further work by the International Authorities.

Background

At its nineteenth session, the Meeting of International Authorities Agreed to go ahead with a study on characteristics of international search reports based on a study which had been performed by the European Patent Office for the Trilateral Offices and which was being extended to the IP5 Offices (see paragraph 52(a) of document *PCT/MIA/19/14*).

The European Patent Office had been willing in principle to extend this work to other International Authorities, but due to constraints on resources was not able to do this for all International Authorities simultaneously. Consequently, this report, which covers all Offices (including all IP5 Offices) that have been operating as International Authorities during the period from 2004 to 2010, has been prepared by the International Bureau using, for the most part, the same methodology and copies of the same databases as had been used by the European Patent Office. There are some minor differences, which mainly result from the International Bureau using its own databases to supply bibliographic data where this allowed information to be determined directly, instead of relying on assumptions or approximations which had been required where data items were not available in the European Patent Office's dataset. One major difference is in table 1.3.18 (patent citations in non-official languages), where the International Bureau has used a more restrictive list of languages than was used in the European Patent Office study. As noted below, the International Bureau will be willing to recalculate this section using whatever set of languages a particular Office considers will give it the most useful information.

/...

Observations by the International Bureau

The International Bureau makes the following initial observations about the report:

(a)   The characteristics in this report have been chosen based on what information can be extracted directly from existing datasets. In many cases they are clearly not the "ideal" information which International Authorities would wish to have available in order to assist their quality processes. One of the important issues will be to determine what additional information it may be justified to gather in order to support the quality process, bearing in mind the costs involved and the fact that the nature of the task is such that it is unlikely that any simple measure could ever be agreed to provide a direct measure of "quality" as such.

(b)   Many of the charts in the report show lines for several different Offices superimposed on one another. This is not intended to provide comparisons between the Offices, but to save space. This presentation reinforces the expected result that for at least some of the characteristics it is meaningless to compare results between Offices; the matters of most interest will be the trends within an Office.

(c)   Section 1.3.18 (percentage of patent citations in non-official languages) shows particularly clearly how it may be meaningless to compare the results of different Offices. In this report, most Offices have been defined as having a single official language, being the official or main language of the relevant State. The exceptions are the Canadian Office (English and French), the European Patent Office (English, French and German) and Nordic Patent Office (Danish, Icelandic and Norwegian). However, this gives lines which tend to be extremely low for Offices where a majority of patent disclosures can be found in that language (whether as direct equivalent of another language version or otherwise) or extremely high for Offices where relatively few patent documents exist in the national language but all the examiners have high proficiency in other languages and the Office as International Authority may well offer services in such other languages. It seems likely that the best result in this case would be to ask each Office to indicate the set of "working" or "main" languages which it feels would give it the most useful information in relation to development of its ability to find documents in other languages.

Issues for the Quality Subgroup

The Quality Subgroup is invited to consider the report and provide comments on the following matters, as well as any others which appear appropriate, with a view to identifying indicators of what should be the focus of further work of the International Authorities:

(a)   The characteristics which are shown – do these characteristics provide you with useful information to assist your quality processes?

(b)   The presentation of the report – is this combined report covering all Offices that have been operating as International Authorities during the period from 2004 to 2010 useful or would it be better to have (either in addition or instead of the combined report) separate reports for each International Authority, allowing it to see its trends more clearly?

(c)   Should new versions of the report be generated for Offices annually to permit ongoing review; if so, at what time of year would be most useful?

(d)   Are there further useful characteristics which are not shown, but which it may be possible to derive from existing datasets?

(e)   Are there further characteristics which it may not be possible to derive from existing datasets, but which would be desirable to measure, either in order to provide metrics which may be of direct interest in assessing quality or else to provide better support for other quality-related processes?

It is recalled that the Meeting also agreed (see paragraph 52(b) of *document PCT/MIA/19/14*):

"(b)   to request the Quality Subgroup to develop the concept of a pilot project under which Offices willing to participate would analyze the usefulness for the national phase of international search reports, based on a set of quality metrics to be developed by the Subgroup; one possibility might be to identify international search reports containing only "A" citations, where the case entered the national phase without any amendments to the claims and where the national search report contained "X" and/or "Y" citations."

As such, the Quality Subgroup is also invited to provide comments on:

(f)   What could be done to help measure the extent to which citations in the international search report were reused in the national phase, whether immediately or else following the collection of the necessary additional data? What additional data would need to be collected? To what extent could useful information be derived from statistics, without devoting significant resources to manual consideration of individual files? Should any new data collection required be performed only in the course of new searches and examinations, or should attempts be made to collect the backfile data? What other indicators apart from reuse of citations in the international search report do you consider might provide measures of the usefulness in the national phase?

Your Office's representative on the quality subgroup is invited to provide comments, using the subgroup's electronic forum, by November 8, 2012.

Yours sincerely,

James Pooley
Deputy Director General

Enclosures: Annex I: Report on Characteristics of International Search Reports
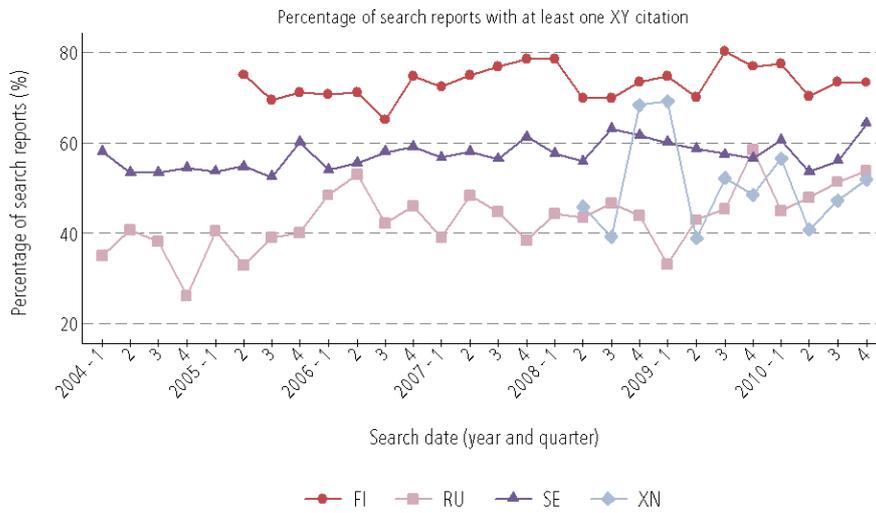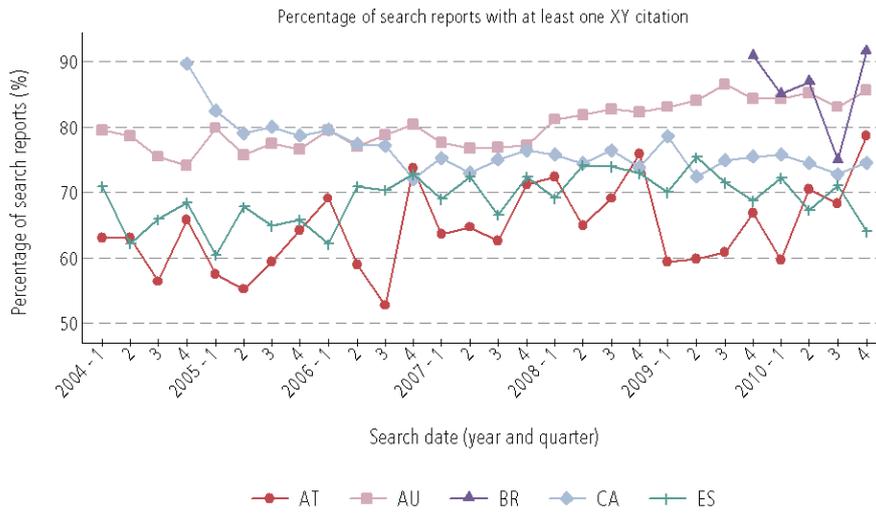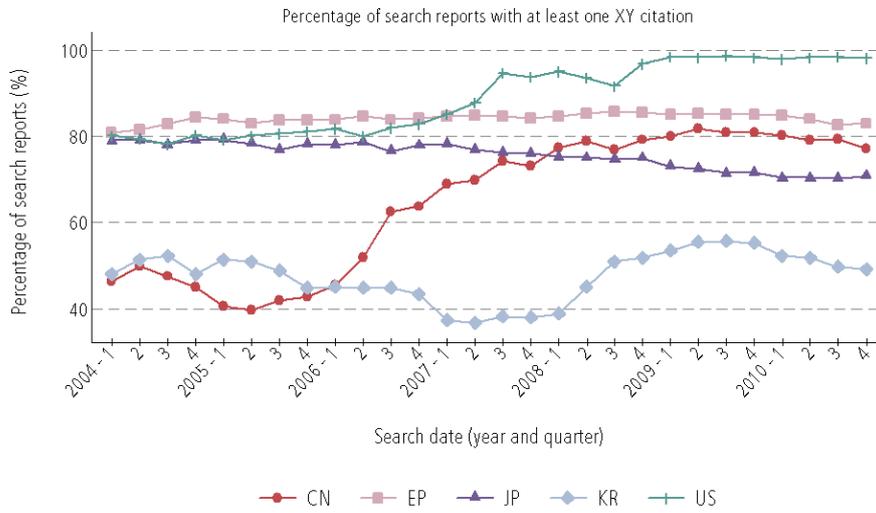   Annex II: Description and Definitions

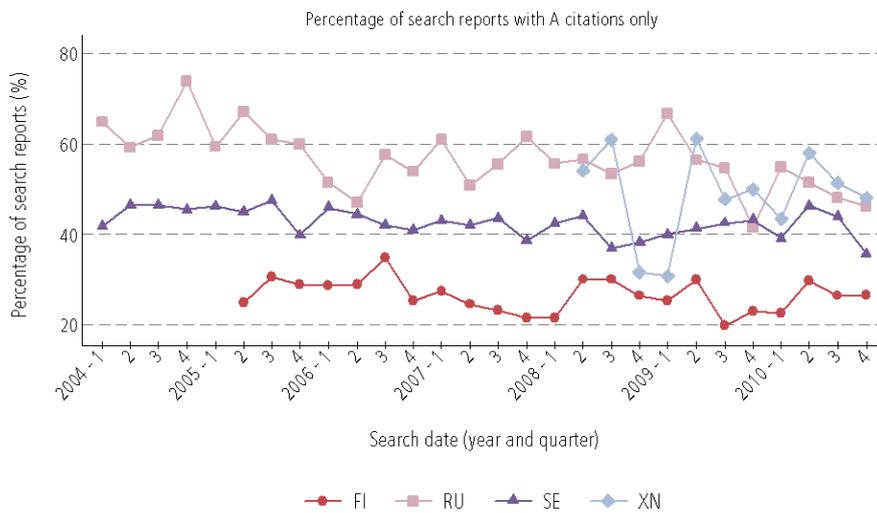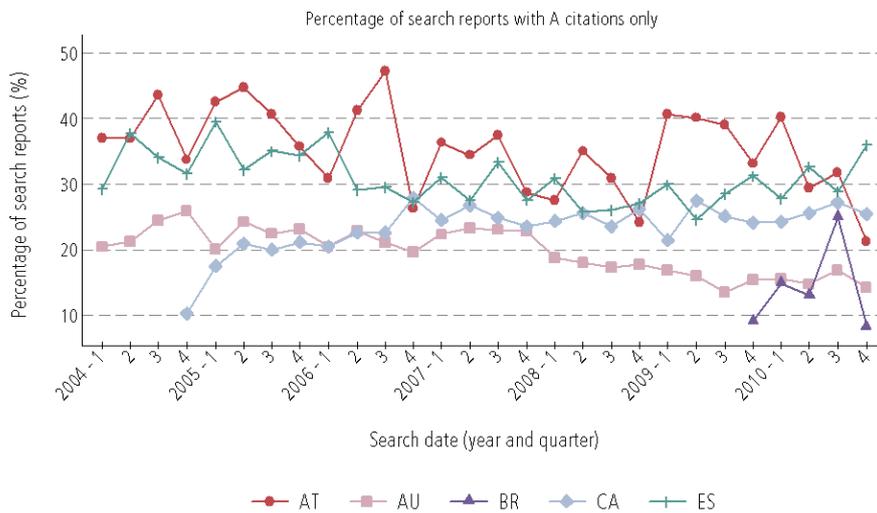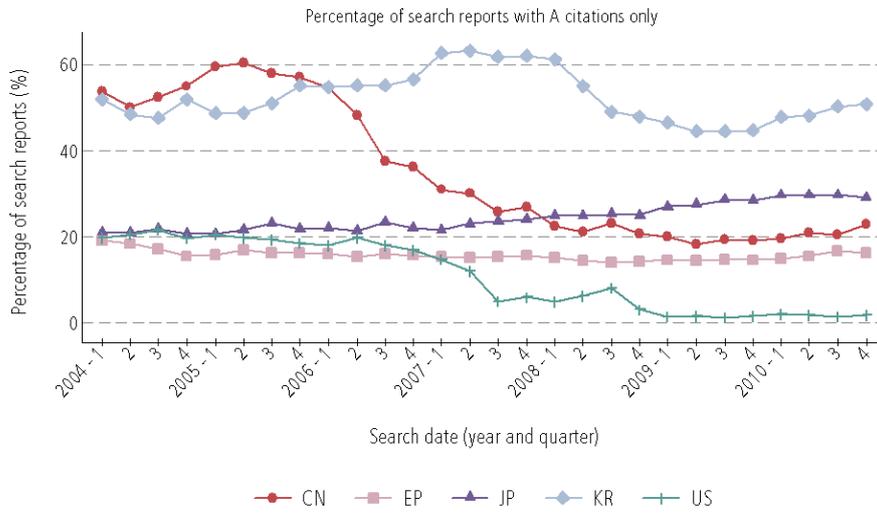# CHARACTERISTICS OF INTERNATIONAL SEARCH REPORTS

Table of Contents

Note: The numbering of these sets of diagrams corresponds to section numbers in the European Patent Office report on which the study was based – these numbers would be revised for any final version of this study.
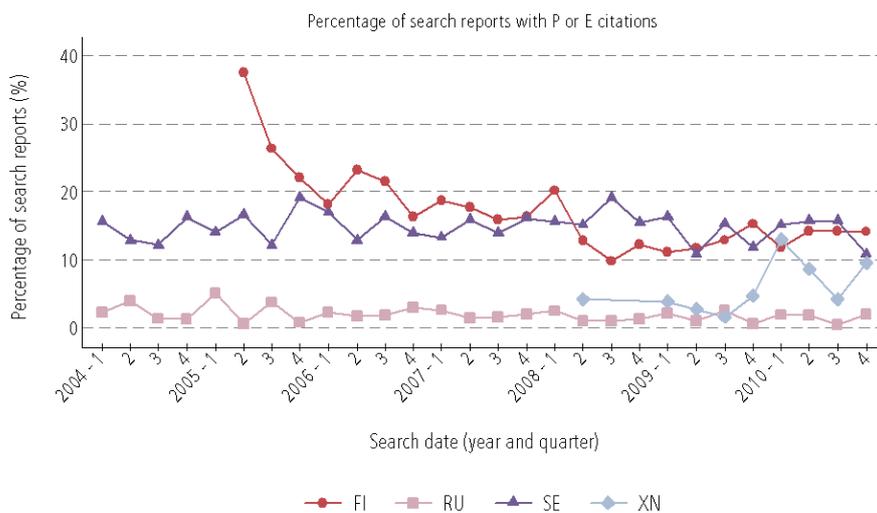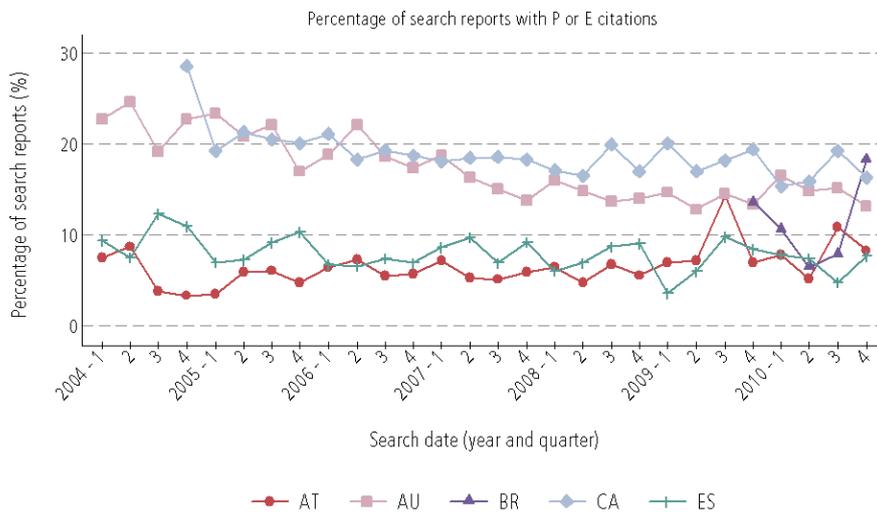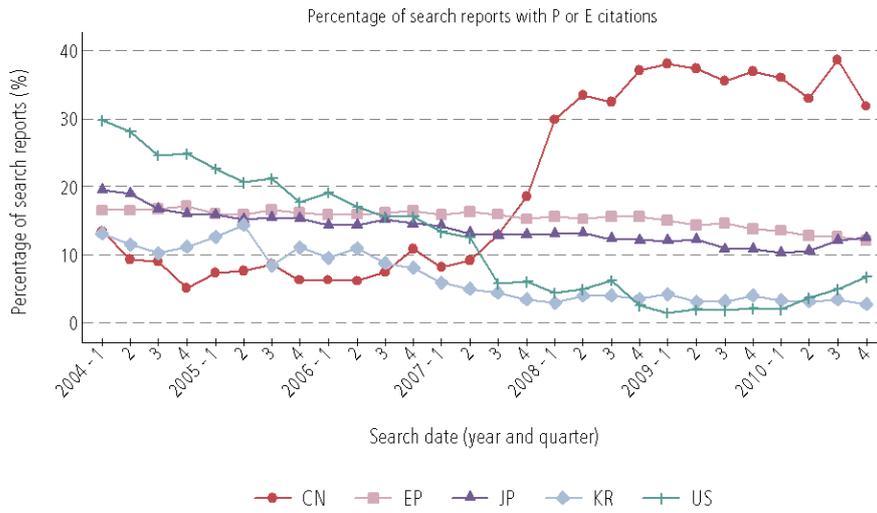
1.2.2 – PERCENTAGE OF PCT SEARCH REPORTS WITH AT LEAST ONE X, Y OR E CITATION

Percentage of search reports with at least one XY citation

Search date (year and quarter)

CN   EP   JP   KR   US

Percentage of search reports with at least one XY citation

Search date (year and quarter)

AT   AU   BR   CA   ES

Percentage of search reports with at least one XY citation
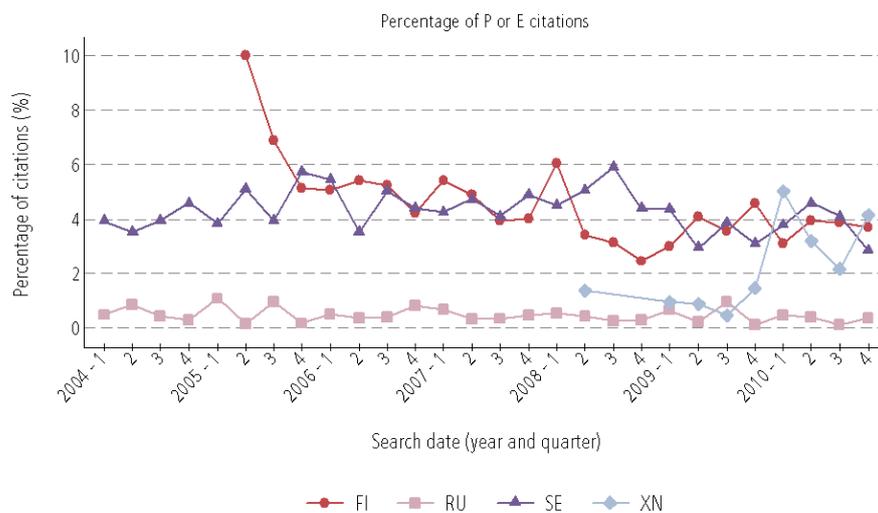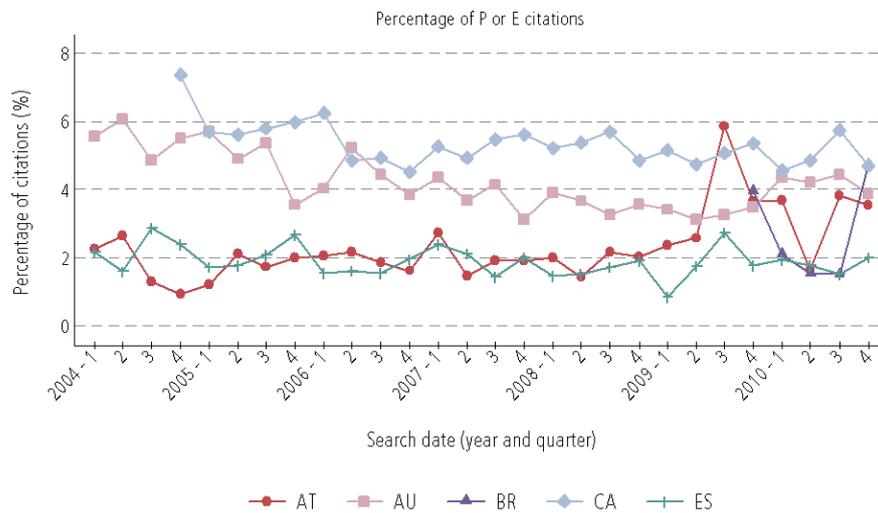

Search date (year and quarter)

FI   RU   SE   XN

1.2.4 – PERCENTAGE OF PCT SEARCH REPORTS WITH A CITATIONS ONLY

Percentage of search reports with A citations only

Search date (year and quarter)

CN   EP   JP   KR   US

Percentage of search reports with A citations only

Search date (year and quarter)

AT   AU   BR   CA   ES

Percentage of search reports with A citations only

Search date (year and quarter)

FI   RU   SE   XN

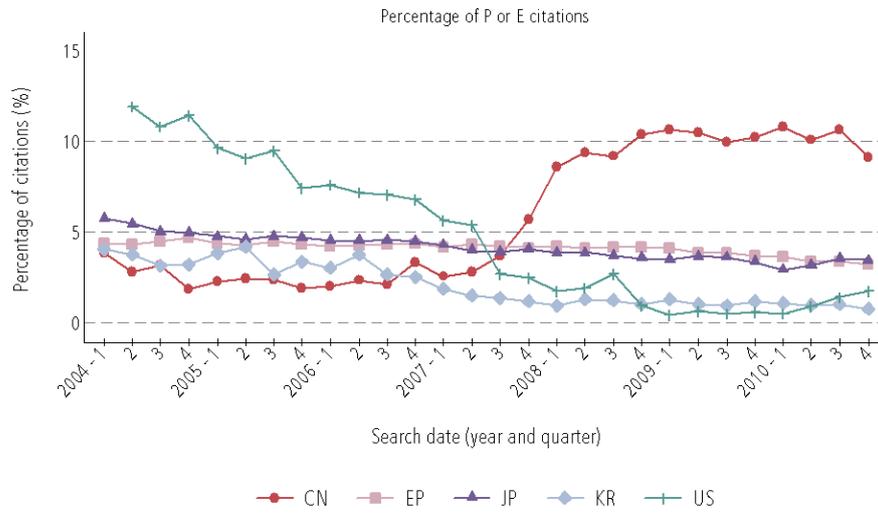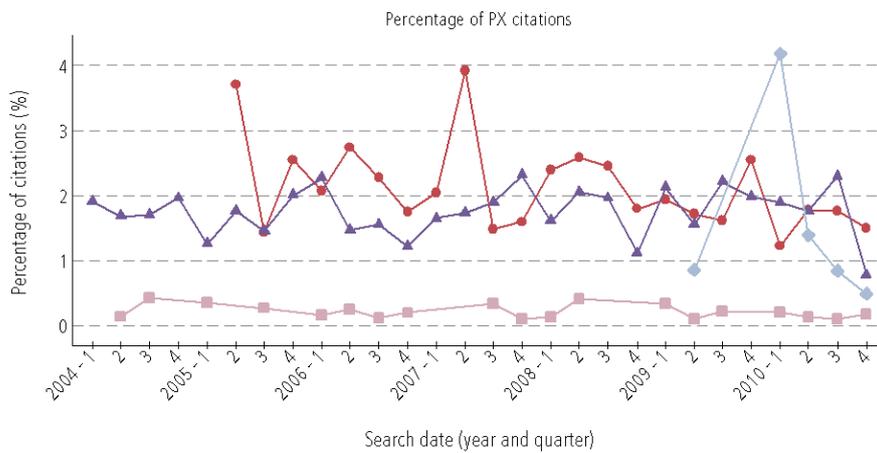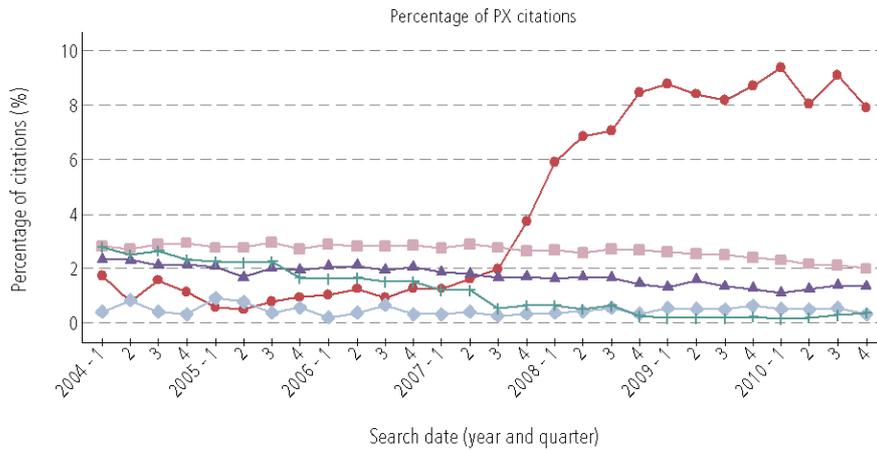## 1.2.6 – PERCENTAGE OF PCT SEARCH REPORTS WITH P OR E CITATIONS

Percentage of search reports with P or E citations

Search date (year and quarter)

CN   EP   JP   KR   US

Percentage of search reports with P or E citations

Search date (year and quarter)

AT   AU   BR   CA   ES

Percentage of search reports with P or E citations


Search date (year and quarter)

FI   RU   SE   XN

1.2.8 – PERCENTAGE OF CITATIONS IN THE CATEGORY OF P OR E

Percentage of P or E citations

Search date (year and quarter)

CN   EP   JP   KR   US

Percentage of P or E citations

Search date (year and quarter)

AT   AU   BR   CA   ES

Percentage of P or E citations

Search date (year and quarter)

FI   RU   SE   XN

1.2.12 – PERCENTAGE OF CITATIONS IN THE CATEGORY OF P AND X

Percentage of PX citations

Search date (year and quarter)

— CN   — EP   — JP   — KR   — US

Percentage of PX citations

Search date (year and quarter)

— AT   — AU   — BR   — CA   — ES

Percentage of PX citations

Search date (year and quarter)

— FI   — RU   — SE   — XN
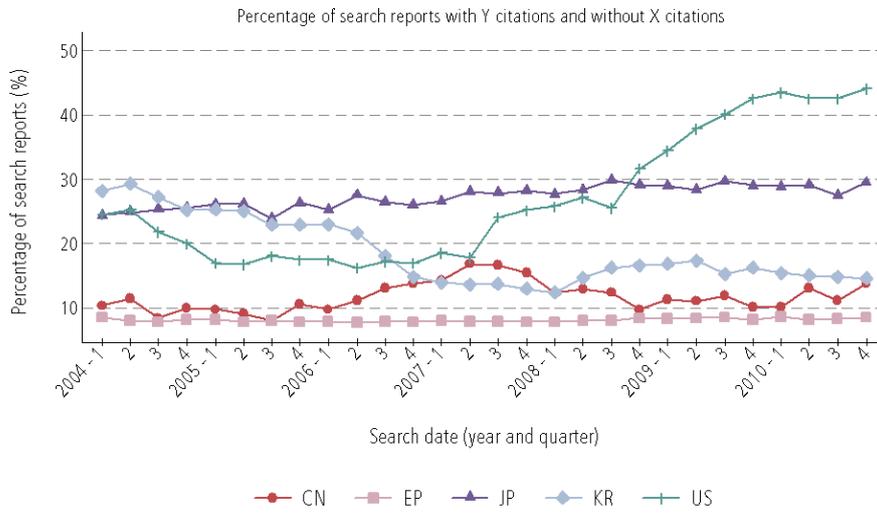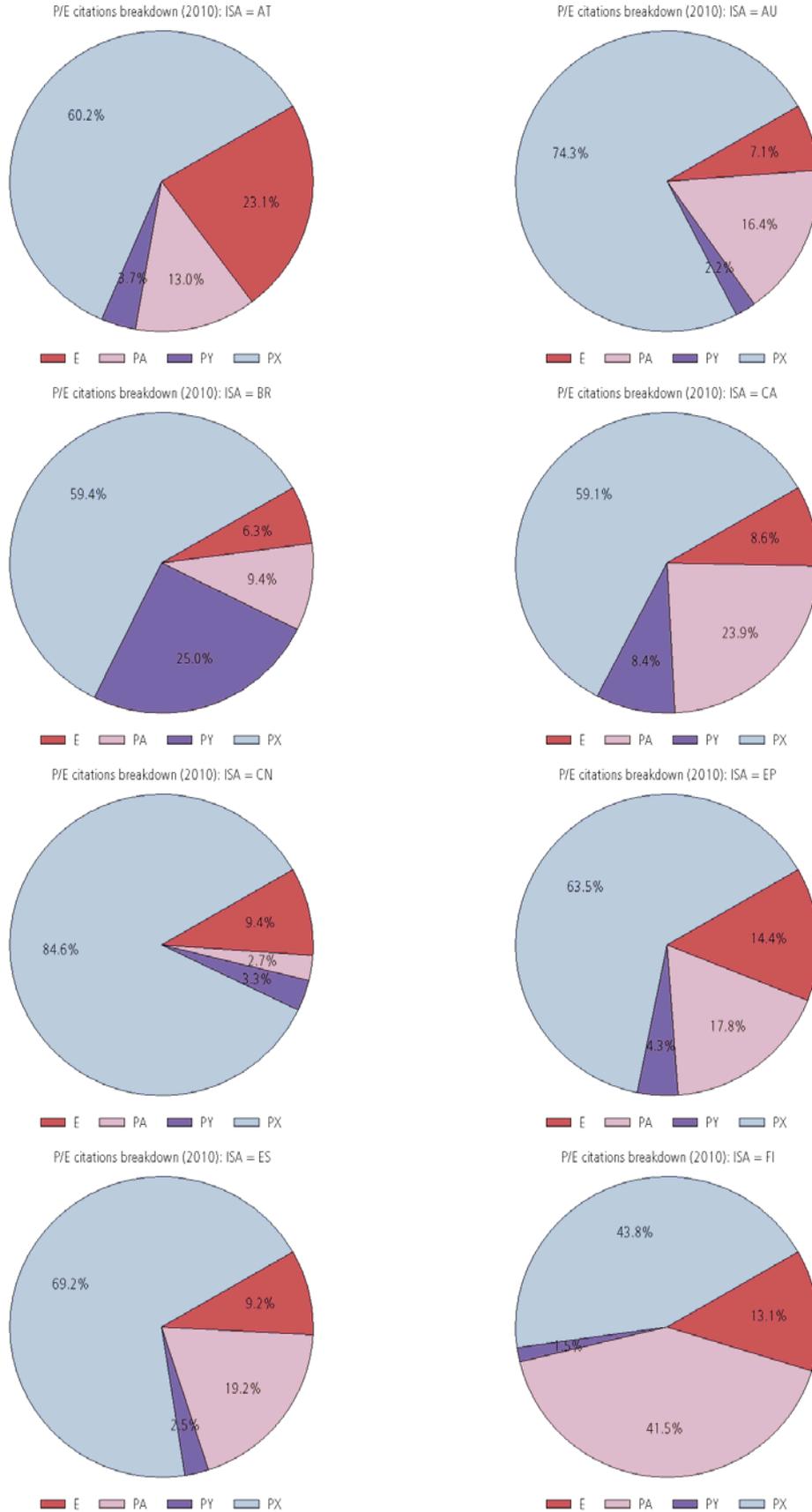
1.2.26 – PERCENTAGE OF PCT SEARCH REPORTS WITH Y CITATIONS AND WITHOUT X CITATIONS

Percentage of search reports with Y citations and without X citations

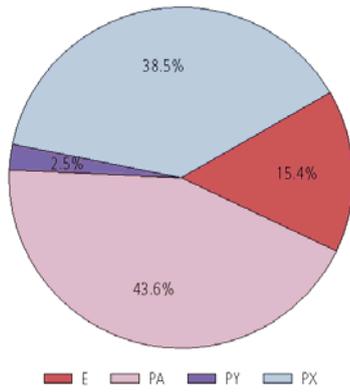Percentage of search reports with Y citations and without X citations

Percentage of search reports with Y citations and without X citations
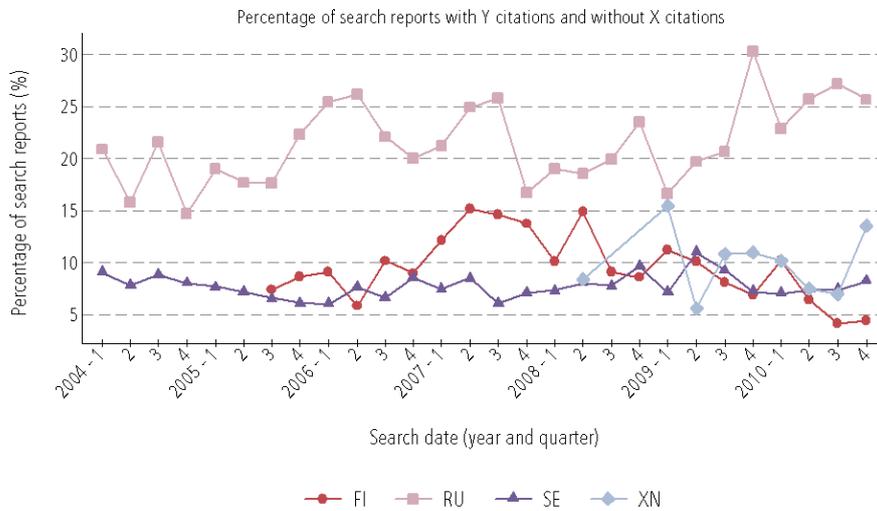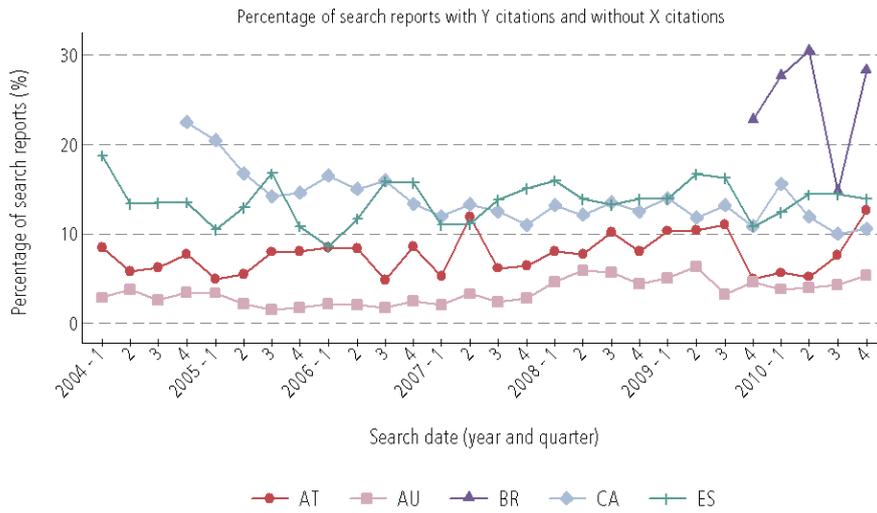
1.2.19 – P/E CITATION BREAKDOWN FOR PCT SEARCH REPORTS (2010)

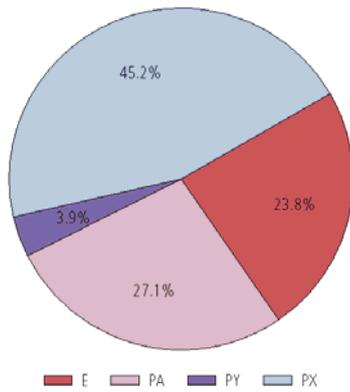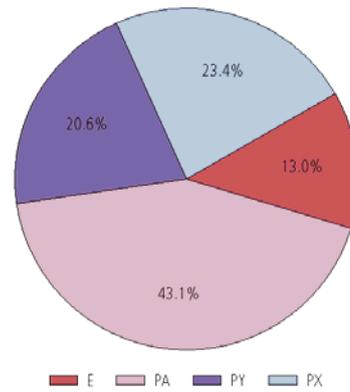P/E citations breakdown (2010): ISA = AT

60.2%

23.1%

3.7% 13.0%

E   PA   PY   PX

P/E citations breakdown (2010): ISA = AU

74.3%

7.1%

16.4%

2.2%

E   PA   PY   PX

P/E citations breakdown (2010): ISA = BR

59.4%

6.3%

9.4%

25.0%

E   PA   PY   PX

P/E citations breakdown (2010): ISA = CA

59.1%

8.6%

23.9%

8.4%

E   PA   PY   PX

P/E citations breakdown (2010): ISA = CN

84.6%

9.4%

2.7%

3.3%

E   PA   PY   PX

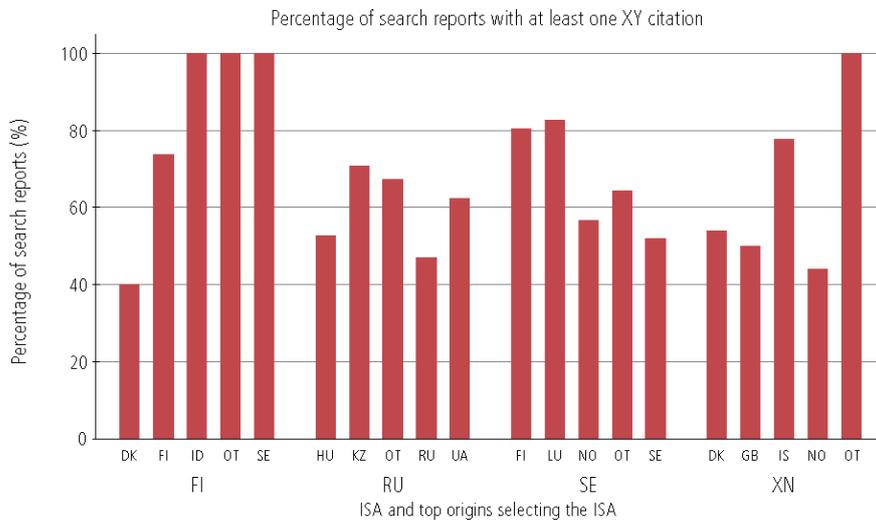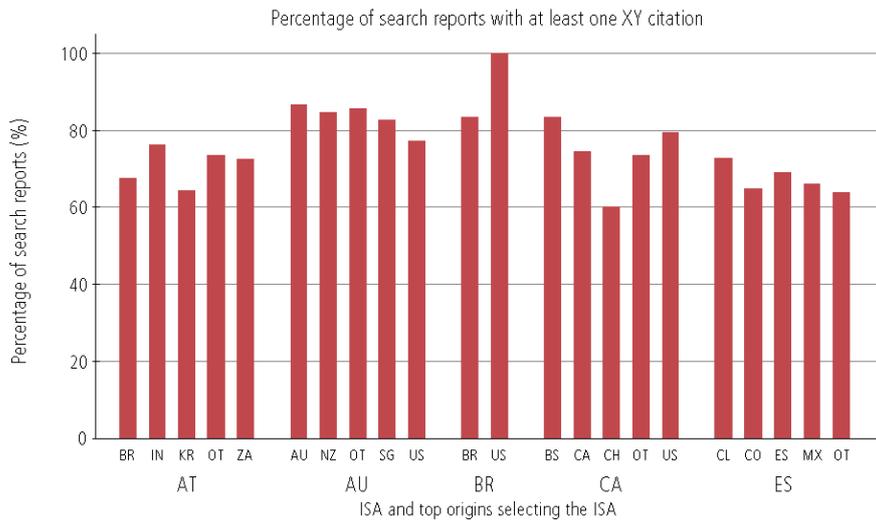P/E citations breakdown (2010): ISA = EP

63.5%

14.4%

17.8%

4.3%

E   PA   PY   PX

P/E citations breakdown (2010): ISA = ES

69.2%

9.2%

19.2%

2.5%

E   PA   PY   PX

P/E citations breakdown (2010): ISA = FI

43.8%

13.1%

41.5%

1.5%

E   PA   PY   PX

P/E citations breakdown (2010): ISA = JP

38.5%

2.5%

15.4%

43.6%

E   PA   PY   PX

P/E citations breakdown (2010): ISA = KR

49.1%

2.2%

17.2%

31.5%

E   PA   PY   PX

P/E citations breakdown (2010): ISA = SE

45.2%

3.9%

23.8%

27.1%

E   PA   PY   PX

P/E citations breakdown (2010): ISA = US
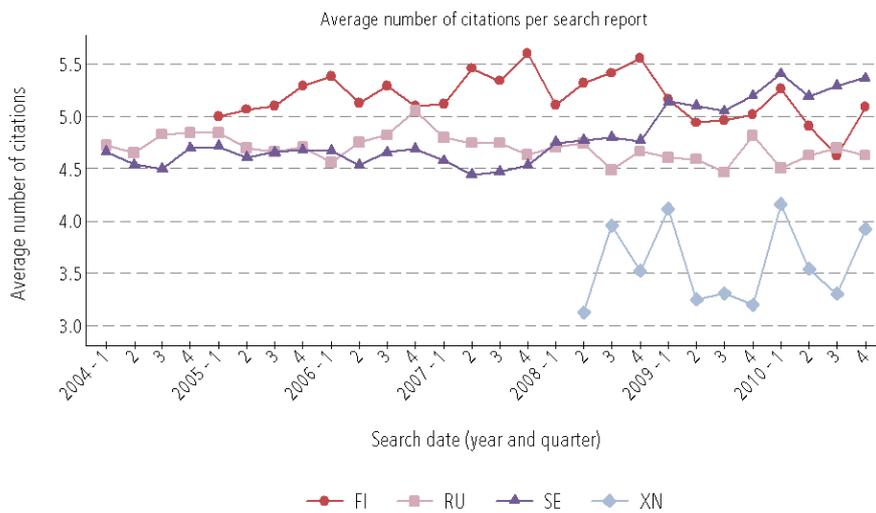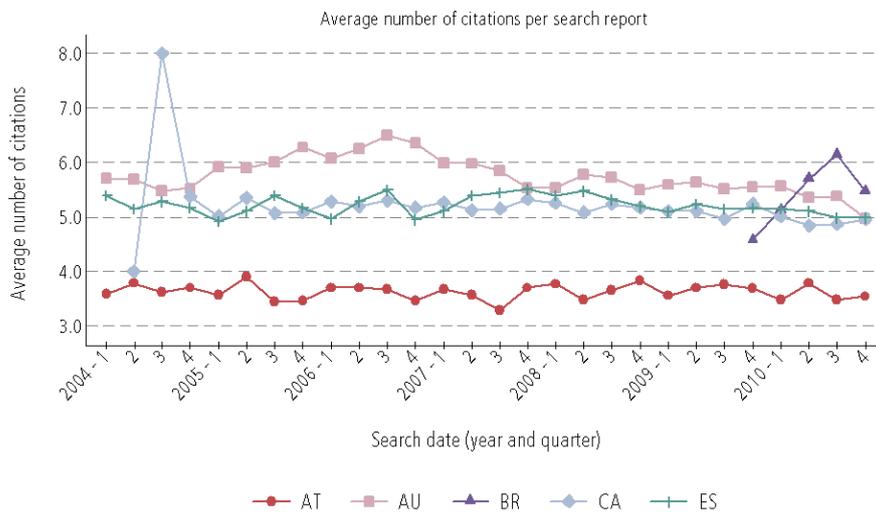
23.4%

20.6%

13.0%

43.1%

E   PA   PY   PX

P/E citations breakdown (2010): ISA = XN

51.4%

2.7%

10.8%

35.1%

E   PA   PY   PX
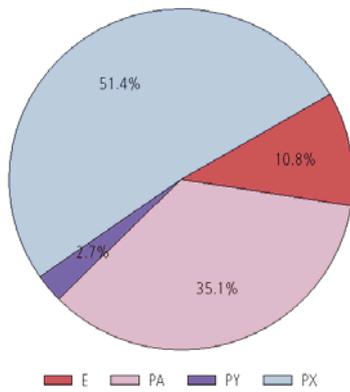
1.2.22 – PERCENTAGE OF PCT SEARCH REPORTS WITH AT LEAST ONE X OR Y CITATION BY TOP APPLICANT'S ORIGIN (2010)

Percentage of search reports with at least one XY citation

Percentage of search reports with at least one XY citation
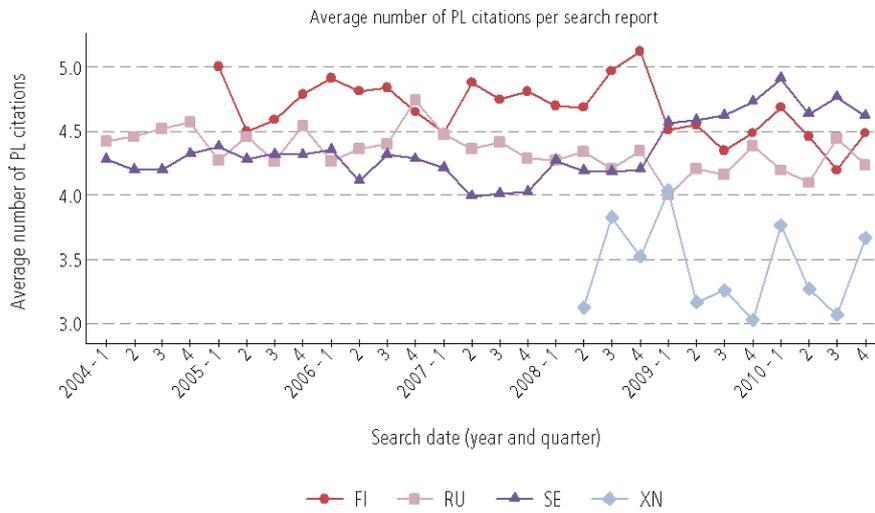

Percentage of search reports with at least one XY citation

1.3.2 – AVERAGE NUMBER OF CITATIONS PER SEARCH REPORT

Average number of citations per search report

Average number of citations per search report
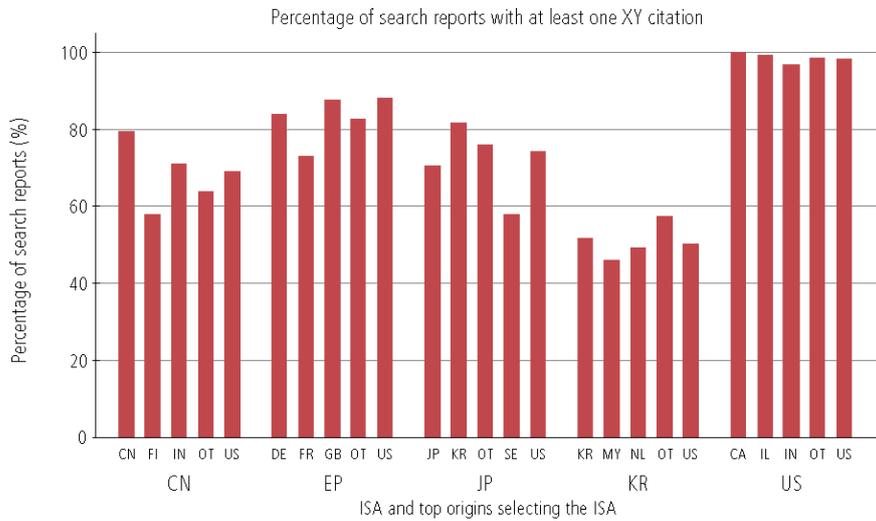
Average number of citations per search report

1.3.4 – AVERAGE NUMBER OF NPL CITATIONS PER SEARCH REPORT

Average number of NPL citations per search report

Average number of NPL citations per search report

Average number of NPL citations per search report
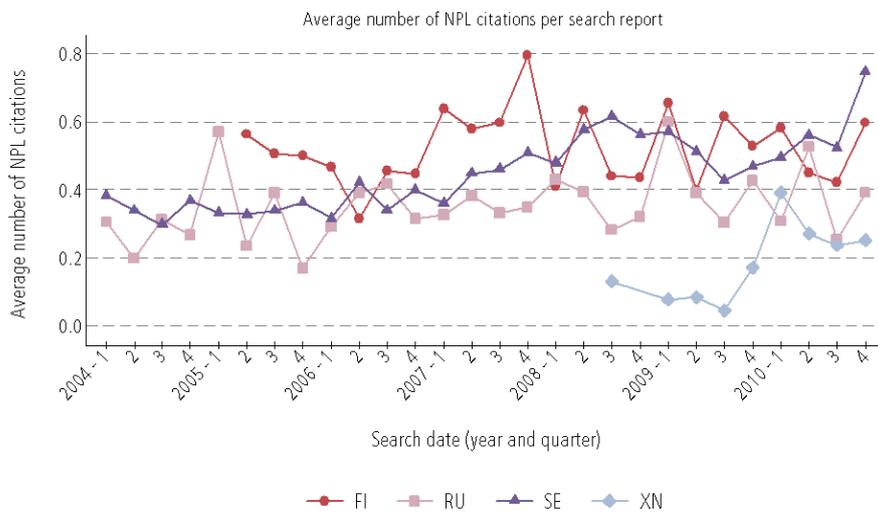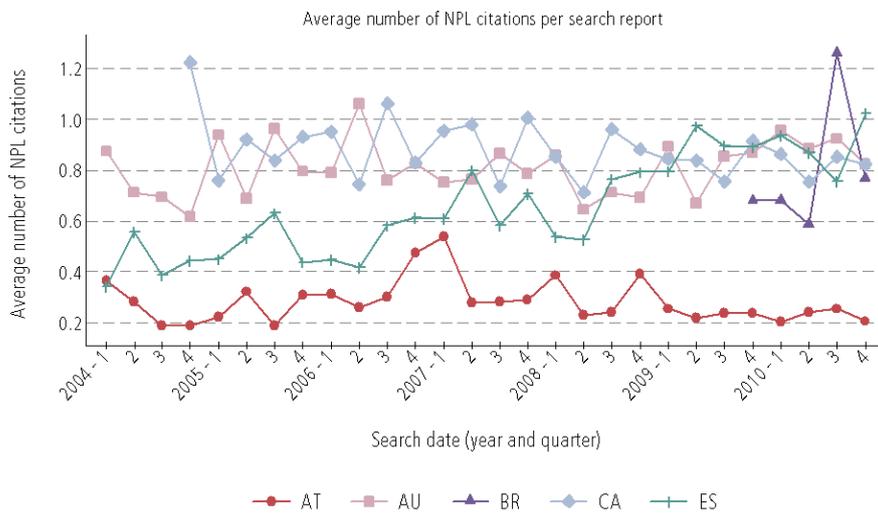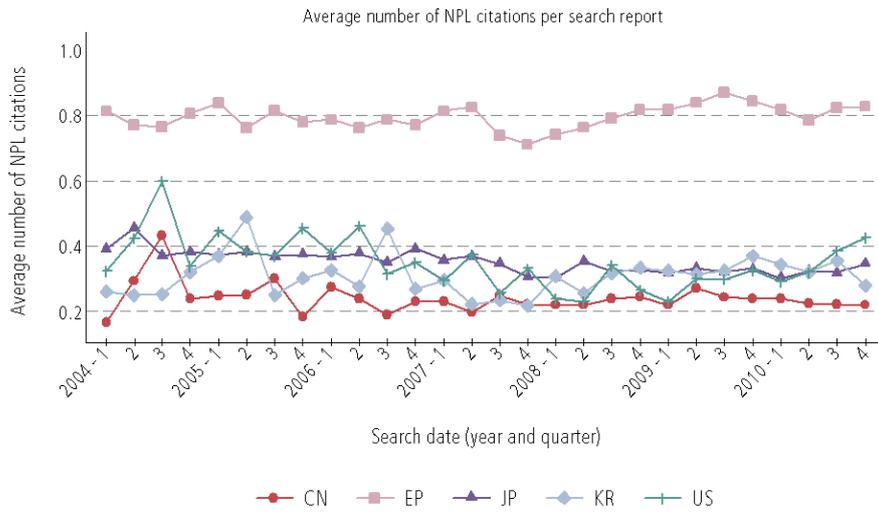
1.3.6 – AVERAGE NUMBER OF PATENT LITERATURE CITATIONS PER SEARCH REPORT
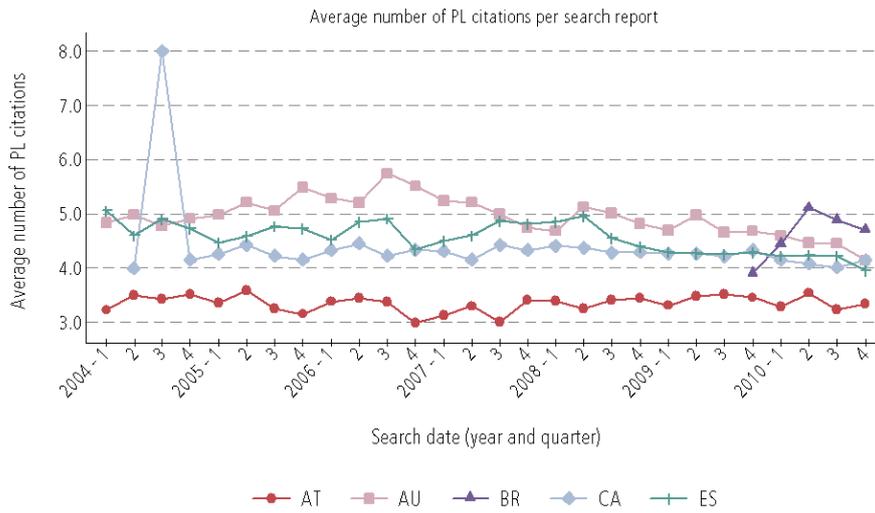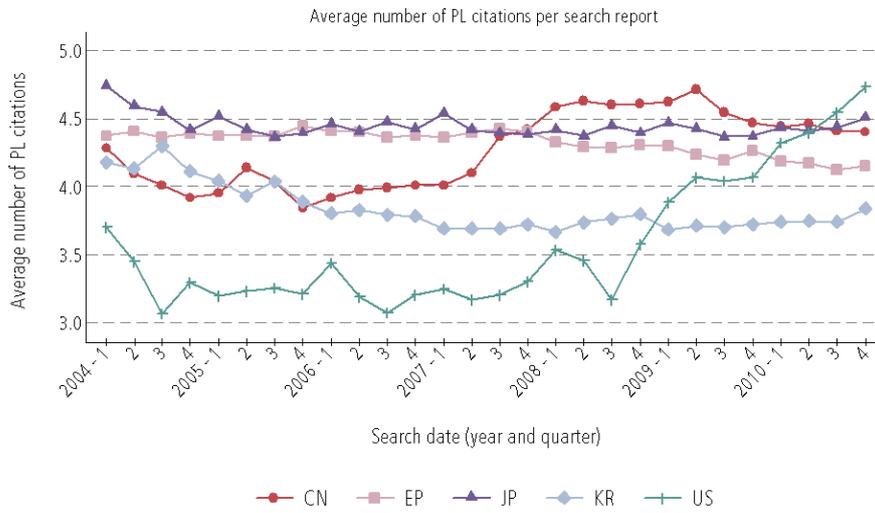

Average number of PL citations per search report

CN EP JP KR US

Average number of PL citations per search report

AT AU BR CA ES
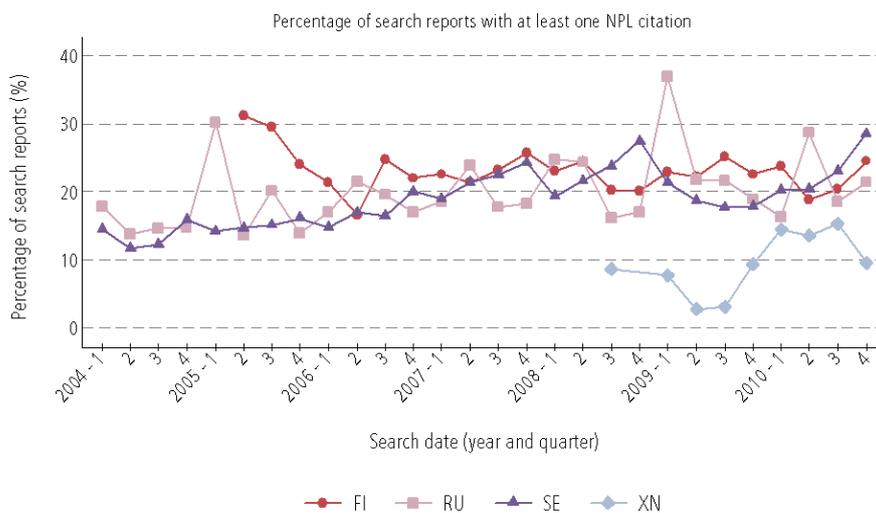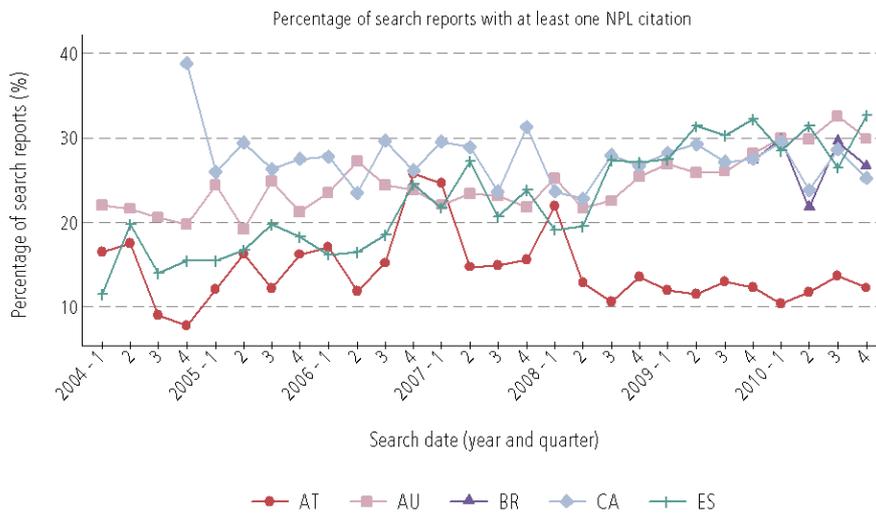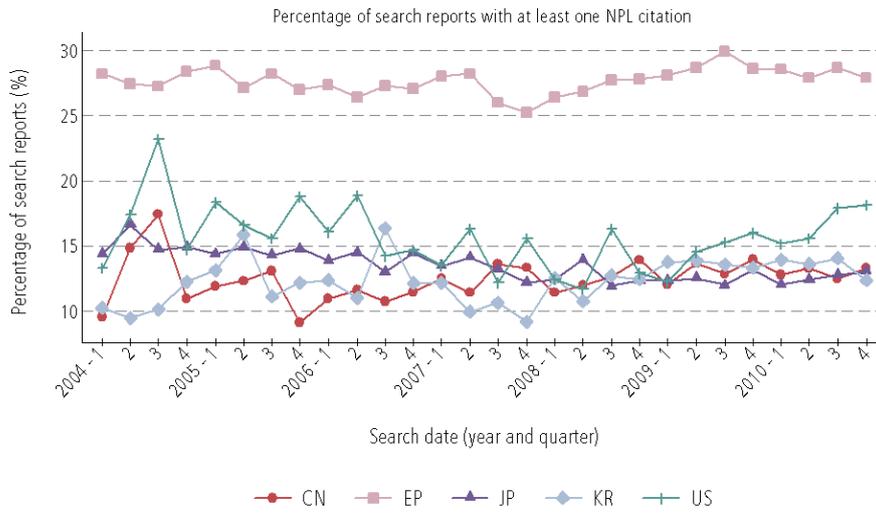

Average number of PL citations per search report

FI RU SE XN

1.3.12 – PERCENTAGE OF NPL CITATIONS IN ALL CITATIONS

Percentage of search reports with at least one NPL citation

Search date (year and quarter)

CN   EP   JP   KR   US

Percentage of search reports with at least one NPL citation

Search date (year and quarter)

AT   AU   BR   CA   ES

Percentage of search reports with at least one NPL citation

Search date (year and quarter)

FI   RU   SE   XN

1.3.14 – PERCENTAGE OF NPL CITATIONS IN THE CATEGORY OF X OR Y IN ALL CITATIONS

Percentage of NPL XY citation

Search date (year and quarter)

CN   EP   JP   KR   US

Percentage of NPL XY citation

Search date (year and quarter)

AT   AU   BR   CA   ES

Percentage of NPL XY citation

Search date (year and quarter)

FI   RU   SE   XN

1.3.8 – PERCENTAGE OF NPL CITATIONS IN ALL CITATIONS
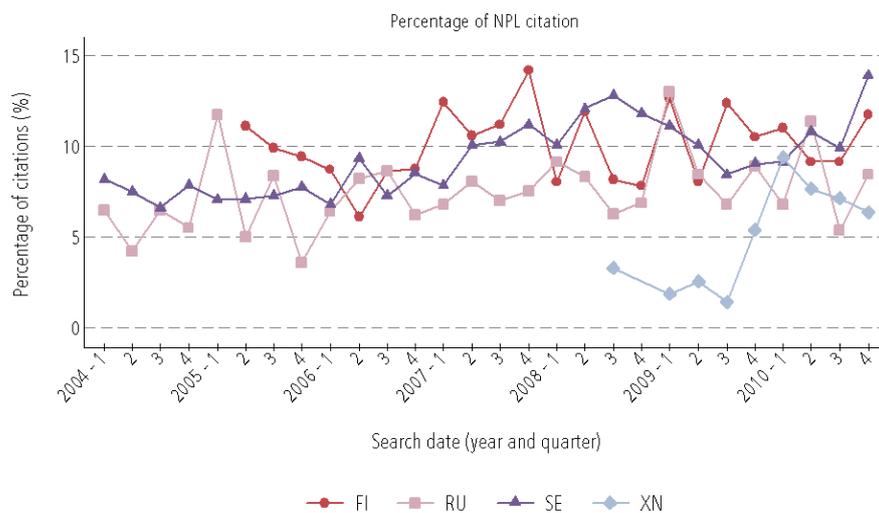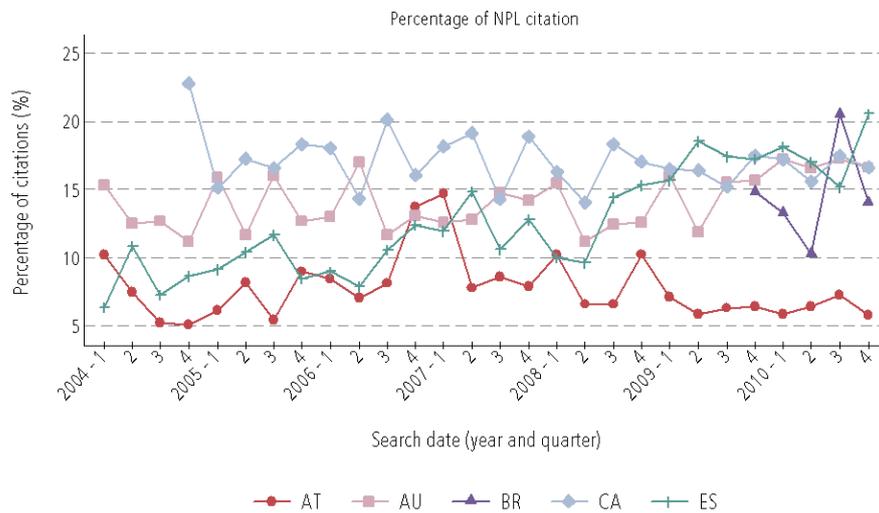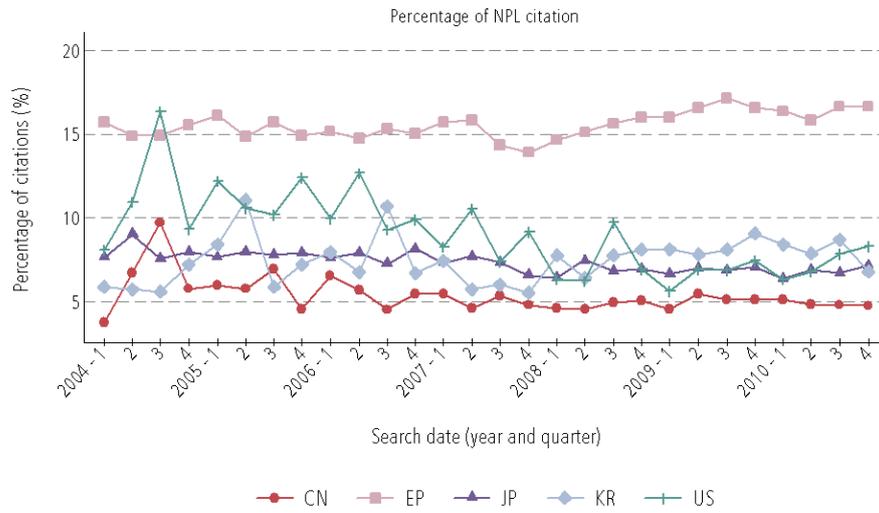
Percentage of NPL citation

Search date (year and quarter)

CN   EP   JP   KR   US

Percentage of NPL citation

Search date (year and quarter)

AT   AU   BR   CA   ES

Percentage of NPL citation

Search date (year and quarter)

FI   RU   SE   XN

1.3.10 – DISTRIBUTION OF PATENT & NON PATENT LITERATURE CITATIONS (2010)

Distribution of patent and non patent literature citations

■ NPL   ■ PAT

Distribution of patent and non patent literature citations

■ NPL   ■ PAT

Distribution of patent and non patent literature citations

■ NPL   ■ PAT

1.3.18 – PERCENTAGE OF PATENT CITATIONS IN NON-OFFICIAL LANGUAGES

Percentage of patent citations in non-official languages

Search date (year and quarter)

CN   EP   JP   KR   US

Percentage of patent citations in non-official languages

Search date (year and quarter)

AT   AU   BR   CA   ES

Percentage of patent citations in non-official languages

Search date (year and quarter)

FI   RU   SE   XN

1.3.23 – PERCENTAGE OF PATENT CITATIONS BY TOP PUBLICATION AUTHORITIES (2010)

Percentage of patent citations by publication authority (2010)

Percentage of patent citations by publication authority (2010)

Percentage of patent citations by publication authority (2010)
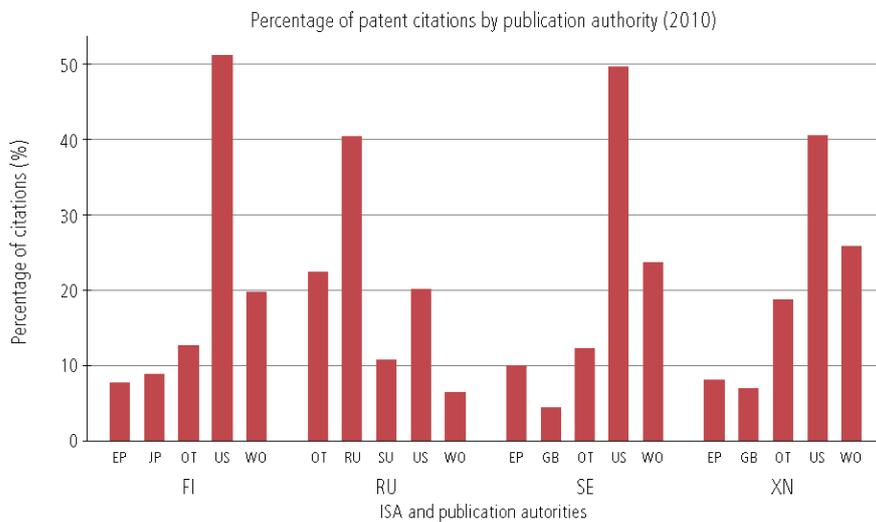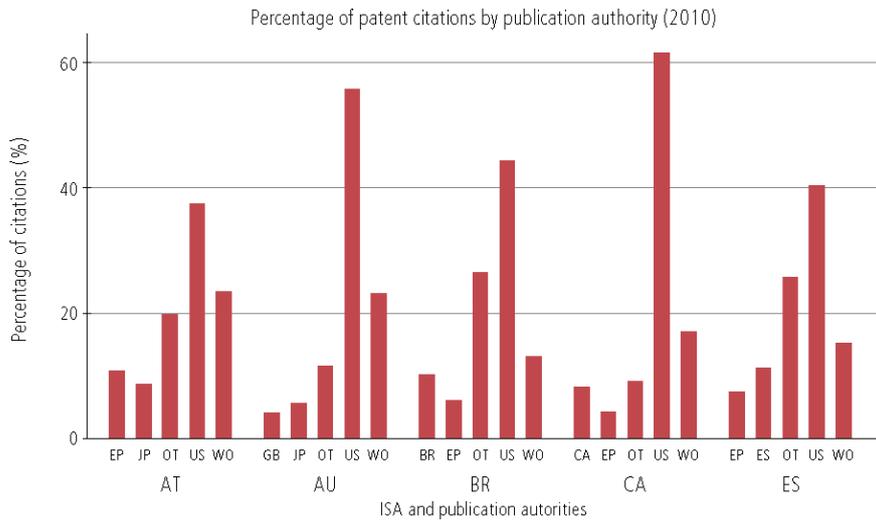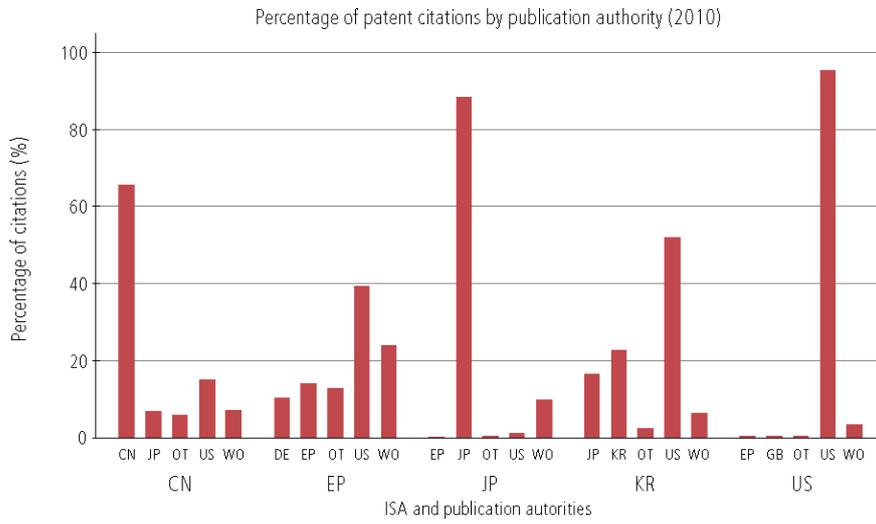
1.3.25 – PERCENTAGE OF PATENT CITATIONS BY PROCESSING AUTHORITIES (I.E. PUBLICATION AUTHORITIES EXCEPT WO) (2010)

Percentage of patent citations by processing authority (2010)

Percentage of patent citations by processing authority (2010)

Percentage of patent citations by processing authority (2010)
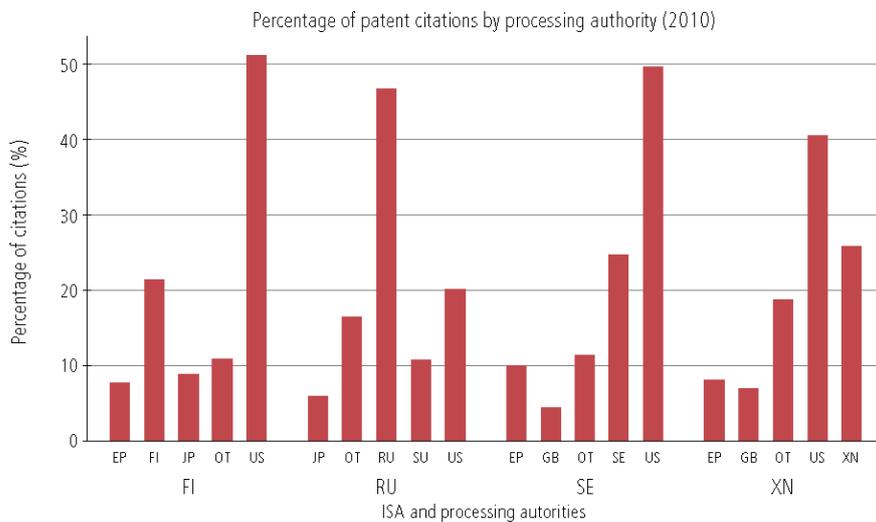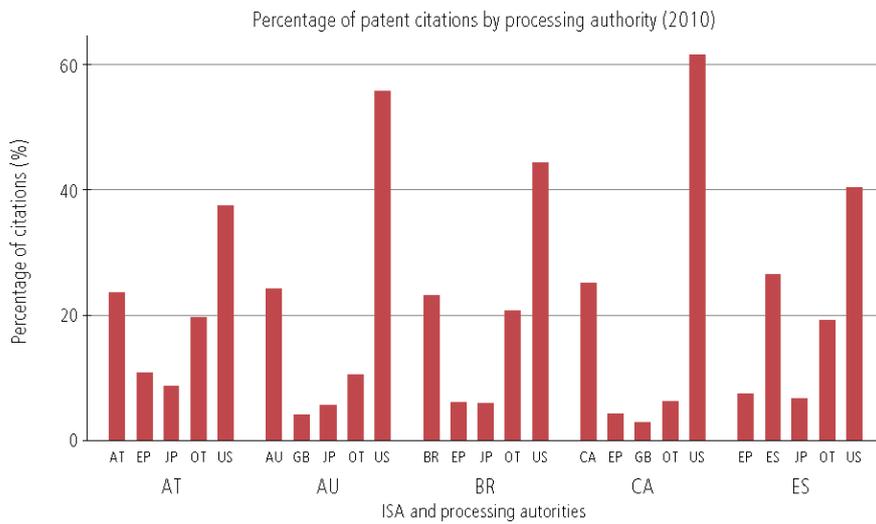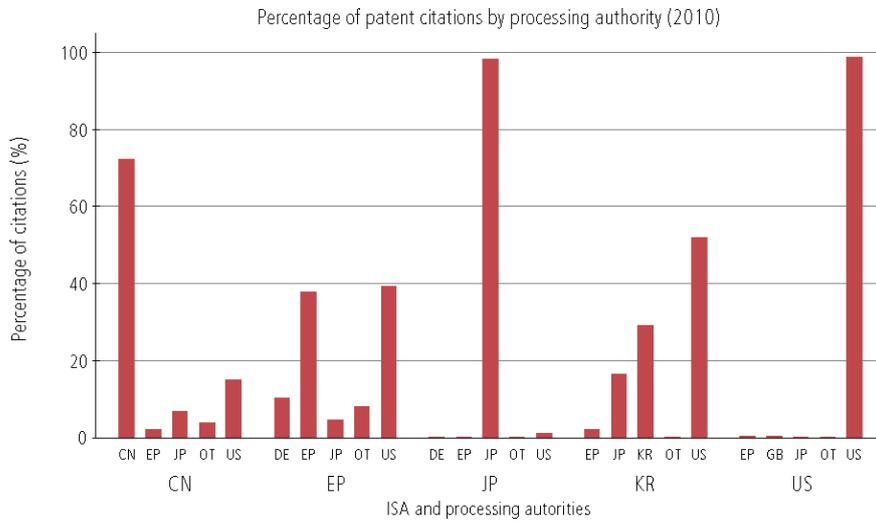
1.1.9 – PERCENTAGE OF PCT SEARCH REPORTS BY TOP APPLICANT'S ORIGIN (2010)

Percentage of search reports by applicants' origin (2010): ISA = AT

36.4%
12.1%
8.7%
11.9%
30.8%

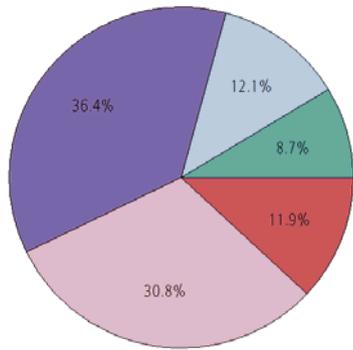BR | IN | KR | Others | ZA

Percentage of search reports by applicants' origin (2010): ISA = AU

13.9%
12.2%
9.4%
10.3%
54.2%
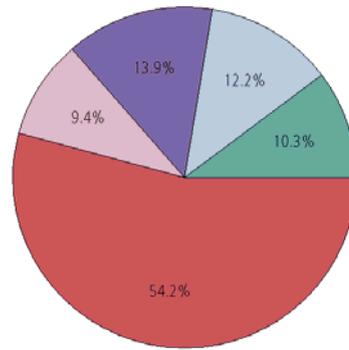
AU | NZ | Others | SG | US

Percentage of search reports by applicants' origin (2010): ISA = BR

99.6%
0.4%

BR | Others

Percentage of search reports by applicants' origin (2010): ISA = CA

3.8%
1.7%
94.6%

CA | Others | US

Percentage of search reports by applicants' origin (2010): ISA = CN

3.8%
1.5%
94.7%

CN | Others | US

Percentage of search reports by applicants' origin (2010): ISA = EP

25.9%
32.6%
24.1%
6.7%
10.7%

DE | FR | GB | Others | US

Percentage of search reports by applicants' origin (2010): ISA = ES

8.9%
2.8%
3.3%
2.8%
82.2%

CL | CO | ES | MX | Others

Percentage of search reports by applicants' origin (2010): ISA = FI

98.1%
1.9%

FI | Others

Percentage of search reports by applicants' origin (2010): ISA = JP

99.4%   0.6%

JP   Others

Percentage of search reports by applicants' origin (2010): ISA = KR

61.4%

3.7%   34.9%

KR   Others   US

Percentage of search reports by applicants' origin (2010): ISA = SE

69.3%

15.6%
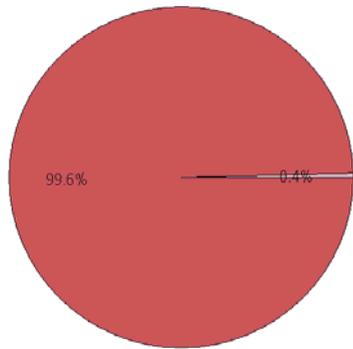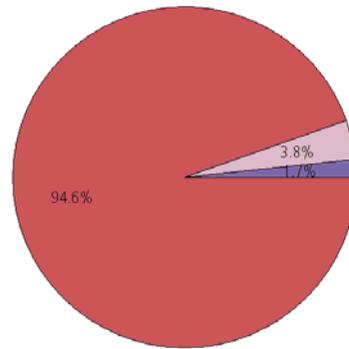
5.6% 5.1% 4.4%

FI   LU   NO   Others   SE

Percentage of search reports by applicants' origin (2010): ISA = US

89.2%

4.4%

6.4%

IL   Others   US

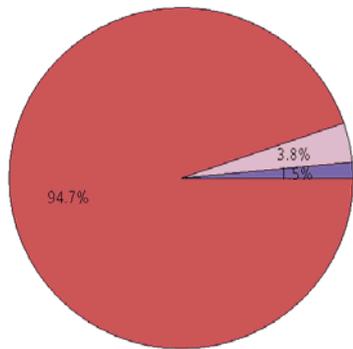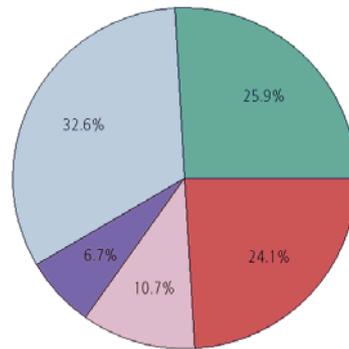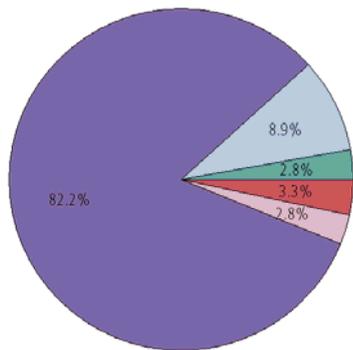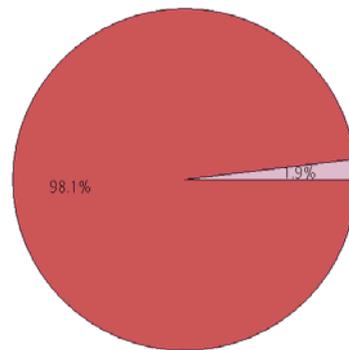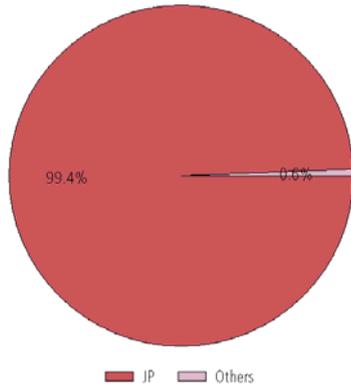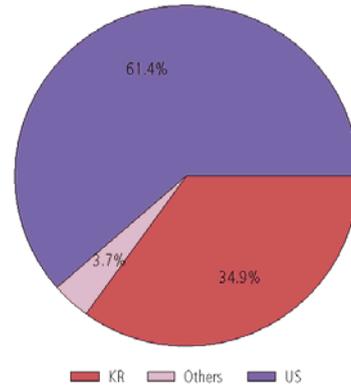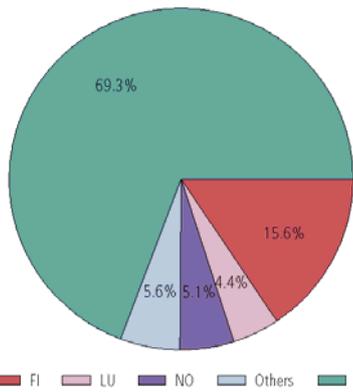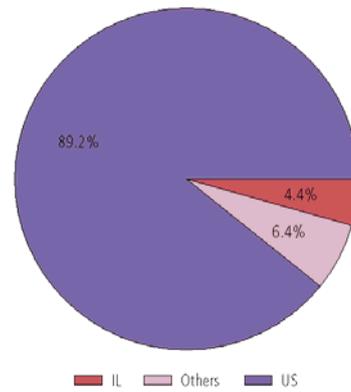Percentage of search reports by applicants' origin (2010): ISA = XN

67.2%

1.8%

27.7%

3.3%

DK   IS   NO   Others
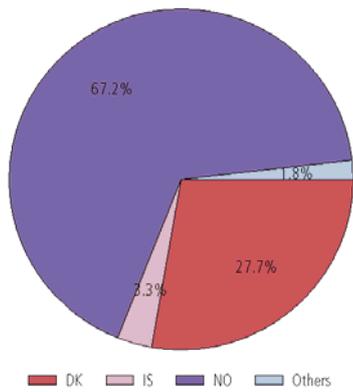
[Annex II follows]

Descriptions and Definitions

DATA SET DESCRIPTION

- The data source is the European Patent Office's PATSTAT database for all citation information. Bibliographic information for international applications is taken mainly from the PATSTAT database, supplemented by information from WIPO internal databases where information could be provided which was not available from PATSTAT.

- The data provided is based on published PCT searches.

- Statistics are presented by search date up to 2010 Q4, meaning the date on which an international search report was transmitted to the International Bureau (since this information is available more consistently than the actual date of search).

- The date ranges for statistics take into account data availability. This is constrained by procedural latency such as time to publication, as well as cut-off dates for database extracts.

- No filing date constraint is applied.

DATA ISSUES

- Applications with no citation recorded are removed, as this generally means that no meaningful international search was carried out for these applications.

- A small number of patent citations are without category codes.

- In case of citn_origin = 5 (documents cited during international search), those citations are considered; otherwise, citations with citn_origin = 0 (documents cited during search) are considered, since this appears to represent a simple error in application of the citn_origin code. Citations with other citn_origin codes are removed.

- NPL citations with no category assigned and with ID >= 900000000 are removed, as they don't seem to be in the original search reports.

- All citation category codes recorded in the database for the valid citations are considered.

- Citation language codes for national patent documents are those recorded in the Patstat database, citation language codes for PCT documents are assigned using WIPO's PCT database as they are more reliable. The language codes are further cleaned up according to information of the authorities who publish those documents.

- No attempt has been made to determine the language of publication of non-patent literature documents.

DEFINITION OF CONCEPTS

Technology breakdown

- Technology sector and field are derived from the IPC classes assigned in the international phase search report or publication.

- The grouping into technology sector and field is based on a concordance provided by WIPO. (http://www.wipo.int/ipstats/en/statistics/patents/pdf/wipo_ipc_technology.pdf).

- This technology breakdown includes 8 technology sectors (Electrical engineering, Energy technology, Instruments, Mechanical engineering, Micro-structural and nano-technology, Other fields and Semiconductors), which are further broken down into 35 technology fields.

- Multiple IPC classes are often assigned to applications. For the present statistics, fractional counting method is applied, that is, an international application and all citations in its search report are evenly distributed to multiple technological fields when multiple fields are associated with it.

- IPC class information is not available for approximately 1% of applications.

Applicant origin

- In general this is the State in which the first-named applicant is resident (overall, this gives a more useful indication of origin of the application than the receiving Office because the International Bureau and regional Offices work for many States, whereas some States do not themselves operate a receiving Office).

- "Unknown" code is used for a small percentage of applications.

XY rate (Searches with XY citations)

- XY rate refers to share of search reports where at least one citation is in the category of X or Y.

- In addition the use of an E citation is counted as XY if it can be assumed that the E citation is prejudicial to novelty. This is the case unless the E category is assigned in combination with A.

Citation category availability

- PATSTAT does not contain all citation categories for each citation. The database contains one citation category per group of categories for each citation. The category groups are defined as follows:

Group 1	X Y A
Group 2	P E
Group 3	D
Group 4	O T L

- Only one category from the same group is selected. The category selected is determined from the order in the table above. In this way a citation will be categorised as X if the citation categories in the search report are XY for this citation. Priority for selecting the letter is according to the ranking of categories left to right within the groups above, rather than the order of their appearance within the citation in the international search report (that is, X will be shown even if the search report lists Y category claims first).

- A maximum of 3 categories is recorded.

- Citation Category Examples:

Search report citation	Citation categories present in PATSTAT
X, Y, A, P	X, P
Y, A, P, E	Y, P
Y, X, O, T	X, O
X, P, D, O	X, P, D

- This means for example in row 1 above the Y nor the A is not stored in PATSTAT.

- In practice it is therefore possible to determine whether a search has at least one X or Y citation. It is also possible to correctly count the number of X citations.

- In approximately 20% of cases it is not possible to correctly count the number of Y categories used, although it is possible to count the use of Y without an X.

- EPO data has been refined with an additional internal data source.

A only rate

- A-only rate refers to the share of search reports where no citation is in the category of X, Y or E.

Y no X rate

- Y no X rate refers to the share of search reports where at least one citation is in the category of Y and there is no X citation.

Search date

- The date when the search report is transmitted to WIPO (the actual date of search is not available in all cases).

Patent Literature/Non-Patent Literature

- Citations in PATSTAT are categorised into patent literature and non-patent literature.

- A citation is considered patent literature if it relates to patent abstracts provided by various providers.

- Less information is available for NPL citations. For example, the language of a NPL citation is not available.

Non official language

- This is used for counting patent citations that are not in an official language of the respective ISA:

ISA	Official language
AT	German
AU	English
BR	Portuguese
CA	English
CA	French
CN	Chinese
EP	German
EP	English
EP	French
ES	Spanish
FI	Finnish
JP	Japanese
KR	Korean
RU	Russian
SE	Swedish
US	English
XN	Danish
XN	Icelandic
XN	Norwegian

- The statistics are based on the actual official languages of the Office, but can easily be redefined to reflect any set of core languages which an Offices considers to be useful in assessing how effective its processes may be at discovering prior art beyond those languages.

Publication authority (of citation)

- This is the patent organization who published a citation document.

- It is normally a national patent office, a regional office such as the EPO, or WIPO.

Processing Authority (of citation)

- Generally processing authority is assigned from the publication authority of the citation.

- For WO publications, the international search authority is chosen to indicate which office processed the cited patent publication. This gives an indication of the nature of the publication which be more useful for some purposes than simply the number of WO citations, which may be in any of 10 languages.

[End of Annex and of circular]