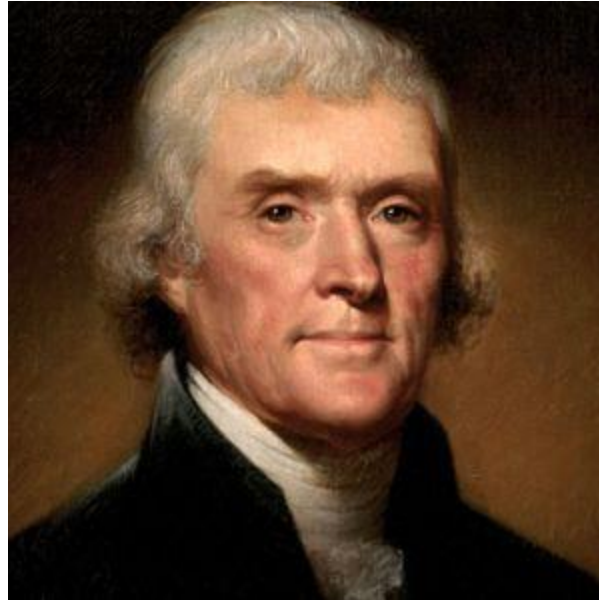


Patent Quality at the USPTO and EPO

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The difficulty in ensuring patent quality is not new



But, the data and analytics we can apply to patent quality now make it possible to develop finer-grained, **comparative** insights into patent quality

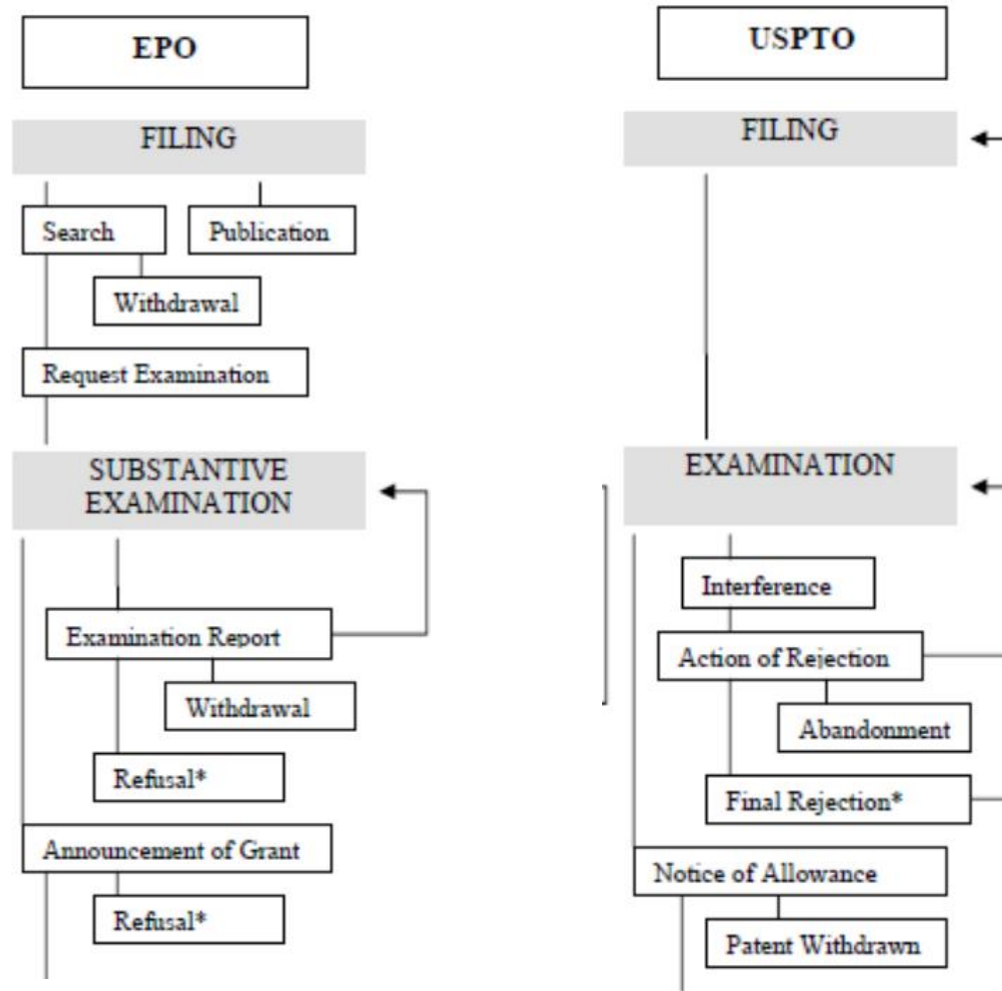
This Presentation

- 1. Differences between patent prosecution at the EPO and USPTO**
- 2. Differences in perceptions of patent quality**
- 3. Matched pair analysis: NPL, efficiency, quality**

This Presentation

- 1. Differences between patent prosecution at the EPO and USPTO**

EPO v. USPTO: In the EPO search and examination are bifurcated, in the USPTO, they are unified.

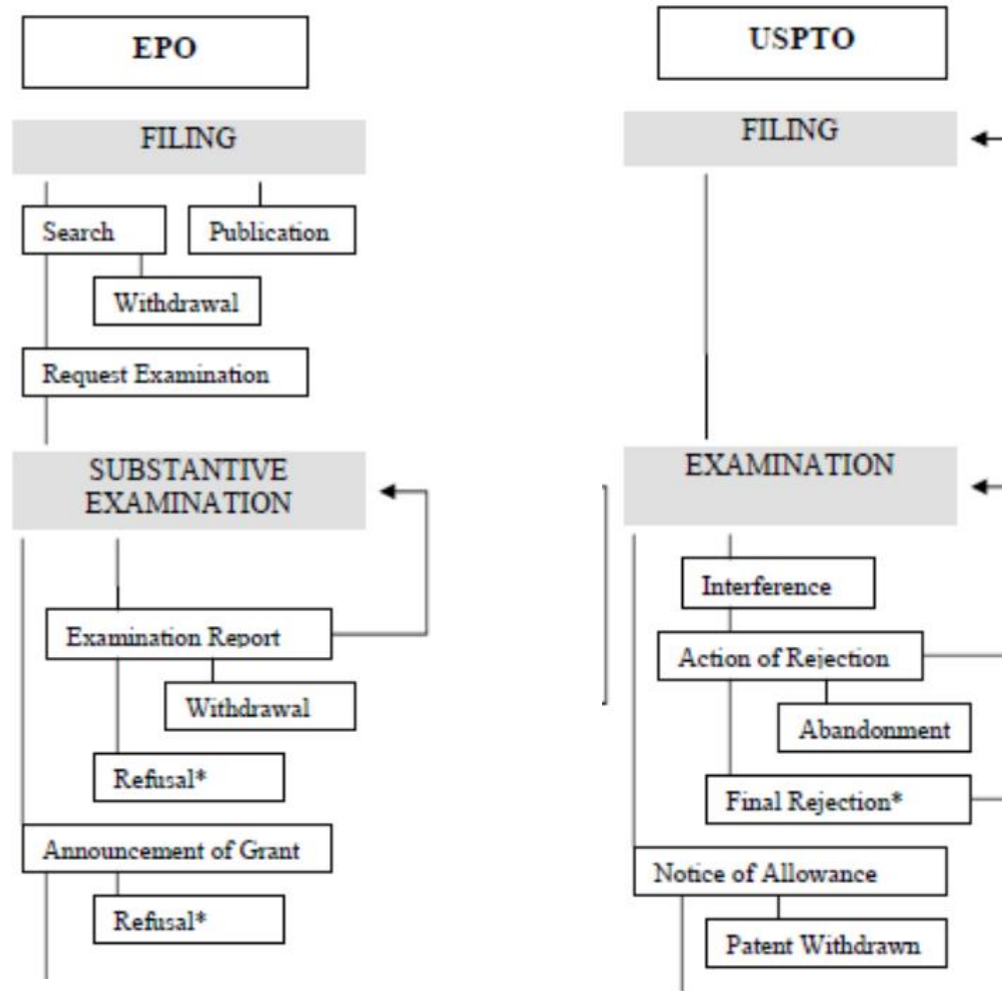


EPO v. USPTO: Search + exam fees are higher and renewal fees start earlier in the EPO than in the US.

- EPO**
- Search fee of 1300E + Examination and designation fee of 1635E = 2935E
 - Renewal fees starting at Y3 (470E) and rising

- PTO**
- Application fee of \$1600
 - Issue fee of \$960
 - Renewal fees every three years starting at 3.5 years post issuance (\$1600) and rising

EPO v. USPTO: The USPTO (but not EPO) allows continued prosecution after final rejection.



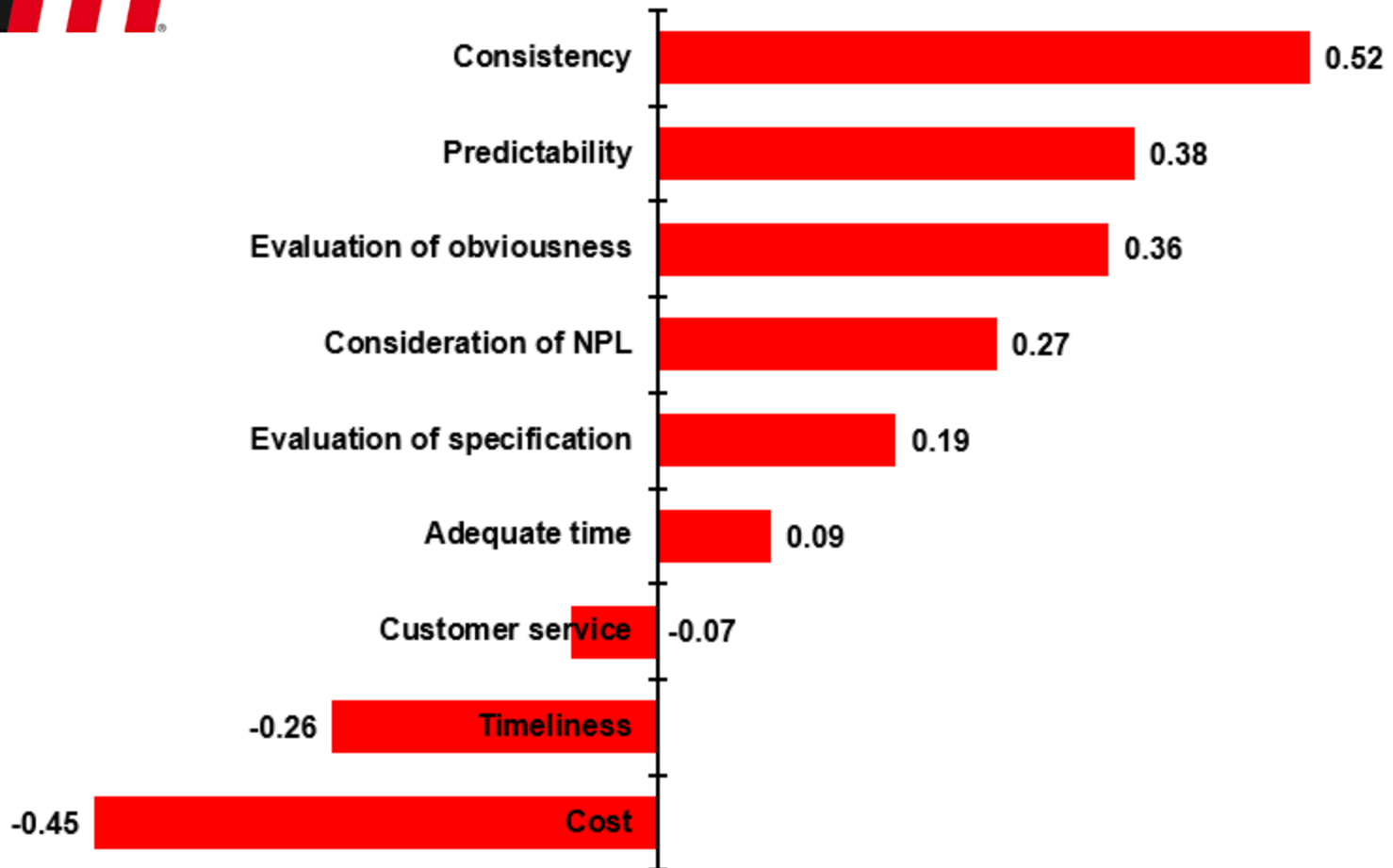
This Presentation

2. Differences in perceptions of patent quality

IAM/Santa Clara 2016 Quality Survey: USPTO v. EPO – Differences in Comparative Ratings (on a scale of 1 to 5)



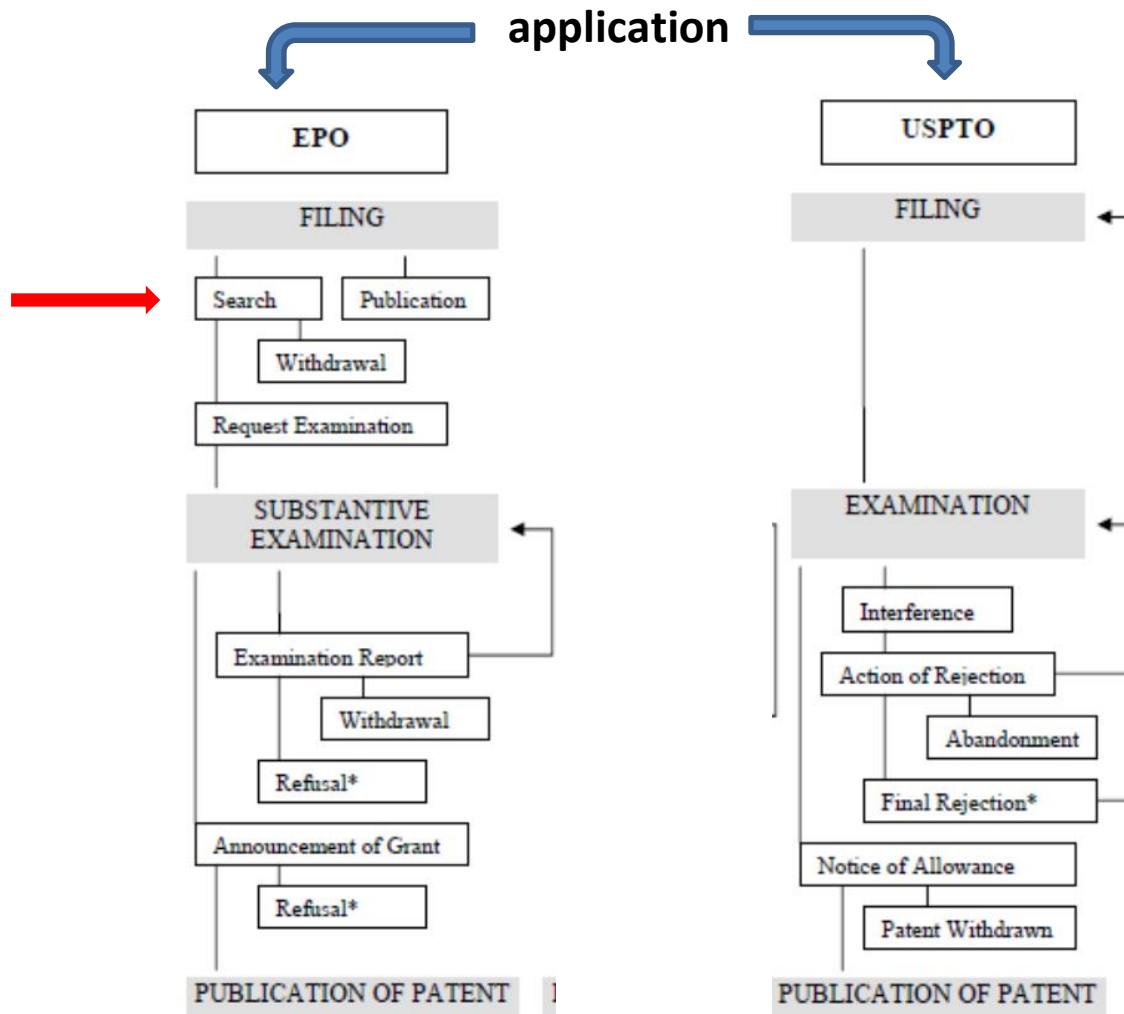
Figure 2: EPO v USPTO, comparative ratings
(USPTO ranks best in customer service, timeliness and cost)



This Presentation

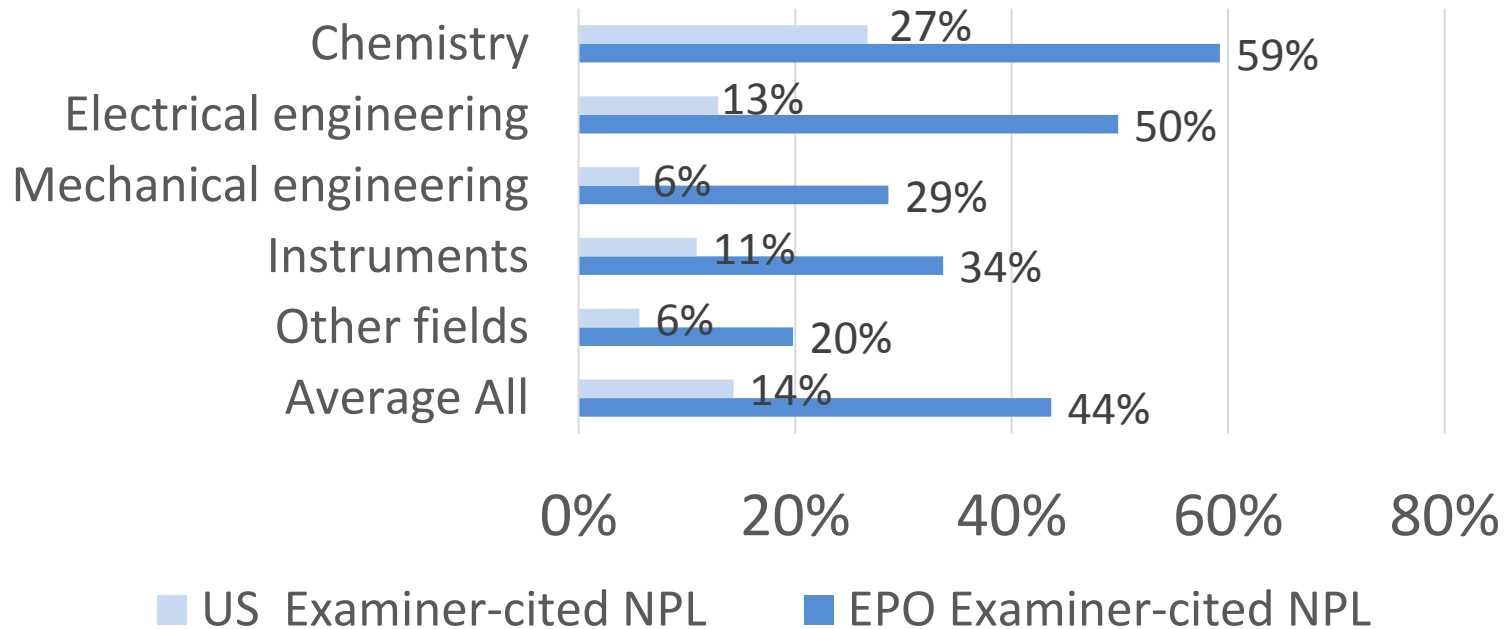
3. Matched pair analysis: NPL, withdrawal, efficiency, quality

What happens when the same patent application is submitted to the EPO and USPTO?



EPO examiners are more likely to cite NPL and less likely to issue patents

FIG __: US v. EPO Examiner Use of Non-Patent Literature (~7K 2002 Matched App Pairs)

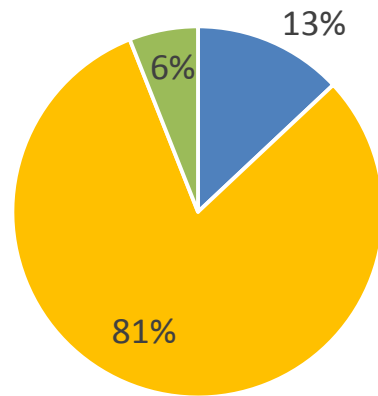


Matches generated with Innography

NPL data: EP Register 2015, USPTO PAIR 2015, Google Patents (Front Page information)

... but not because the EPO denies more patents, but because applicants withdraw more patents

FIG ____ The Resolution of Non-Granted
European Patent Applications (N= 3,517 2002
Matched Pairs)



■ Pending ■ Withdrawn ■ Refused

*The majority
of nongranted
apps in the EPO
are withdrawn,
not refused*

What makes EPO applicants withdraw?

“In the EPO, patents are granted in 49% of total filings, with 22% of applications abandoned after the search report and 29% abandoned after examination.”

- EPO President Battistelli at the 30th Annual US Bar- EPO Liaison Council Meeting, 10/30/2014

Data Description

- The data in our study consists of 35,888 patents:
 - The applications are filed from 2002-2008.
 - The patents are granted by both the USPTO and the EPO with English claims.
 - Data source: USPTO BULK Data, PATSTAT, Thomson Innovation.

	Number of observations	Number of observations excluding patent continuations	
US application date is more than 365 days earlier than EPO application date	713	659	
US application date is less than 365 days earlier than EPO application date	25242	23732	Country of Priority-- USPTO
US application date is the same as EPO application date	4262	3923	
US application date is less than 365 days later than EPO application date	5400	5023	Country of Priority-- EPO
US application date is more than 365 days later than EPO application date	271	257	
Total	35888	33594	

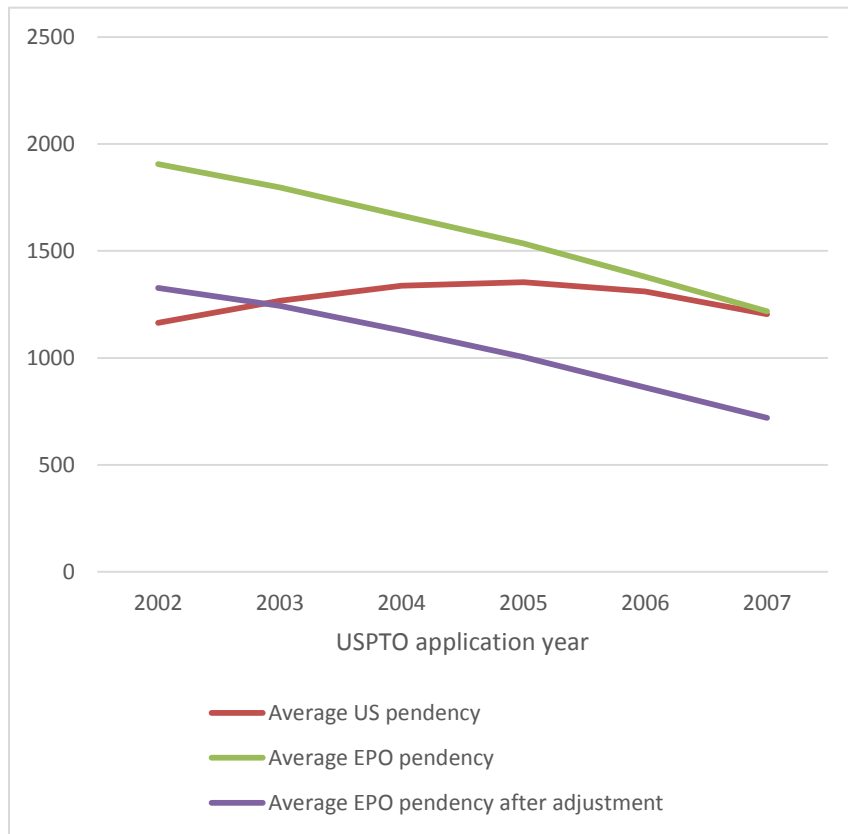
Key Variables and Definition

- Efficiency Measure:
 - Patent pendency is measured as the length of time between patent application filing and the issue of the patent or the abandonment of the application.
 - Considering the differences between the USPTO and the EPO patent prosecution, the EPO pendency is adjusted by subtracting the duration for the first search phase.
- Quality Measures:
 - Number of Claims.
 - Number of Independent Claims.
 - Number of Words in the First Claim.

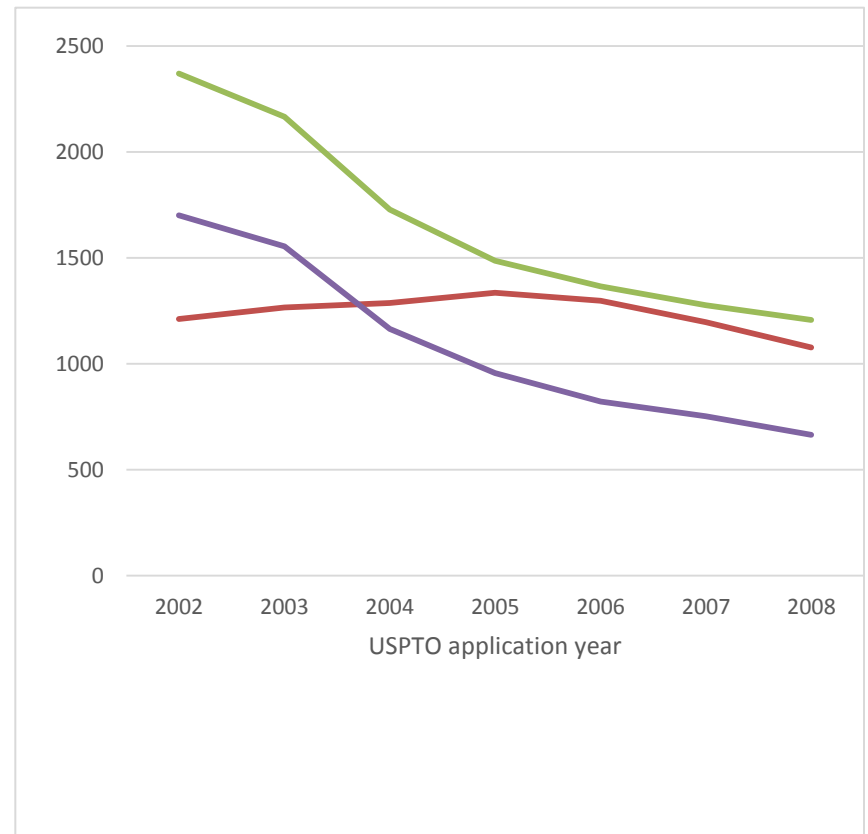
The Trend of Average Pendency

- Differences in Pendency among two offices decrease from 2002 to 2008.

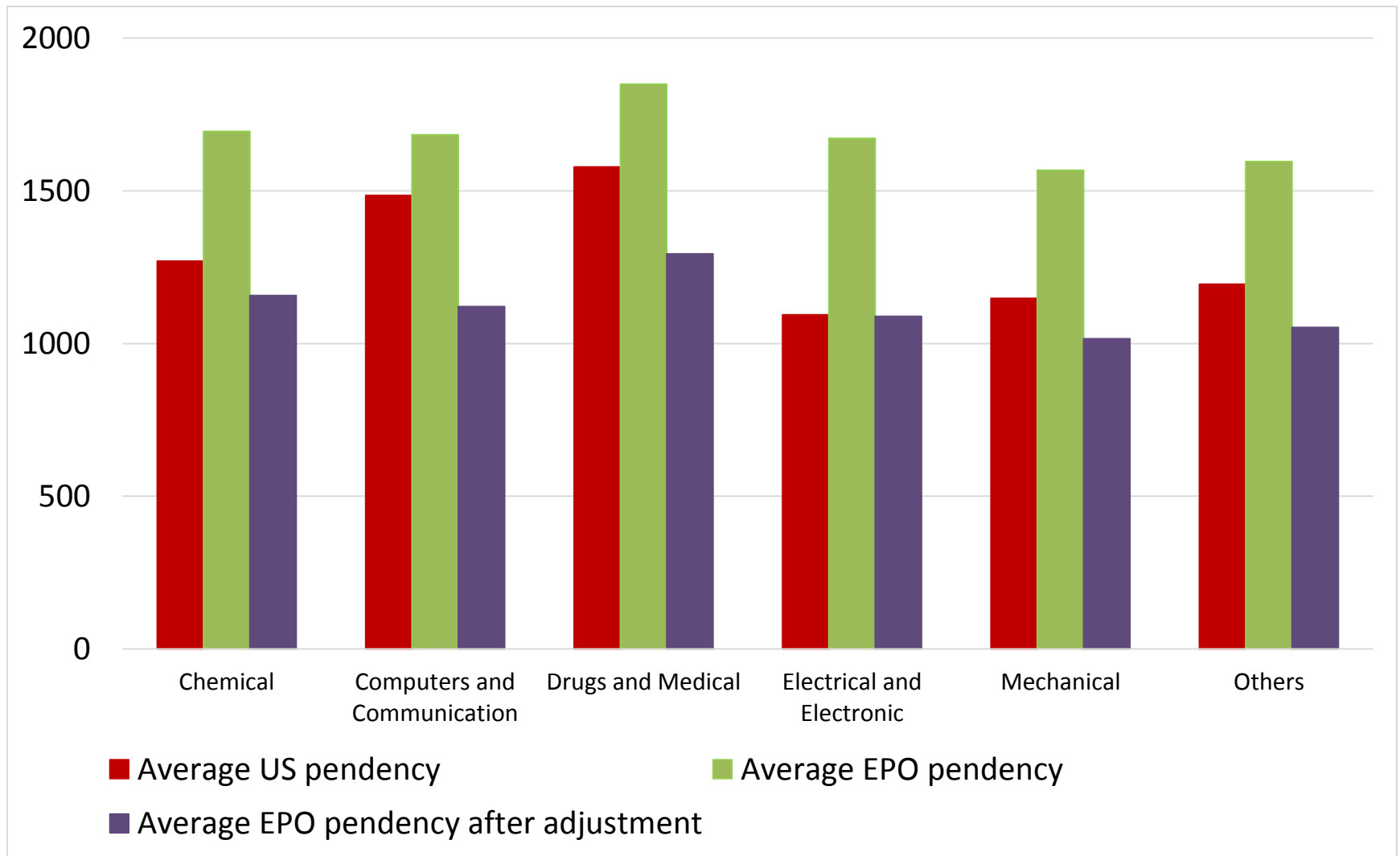
Country of Priority--USPTO



Country of Priority--EPO



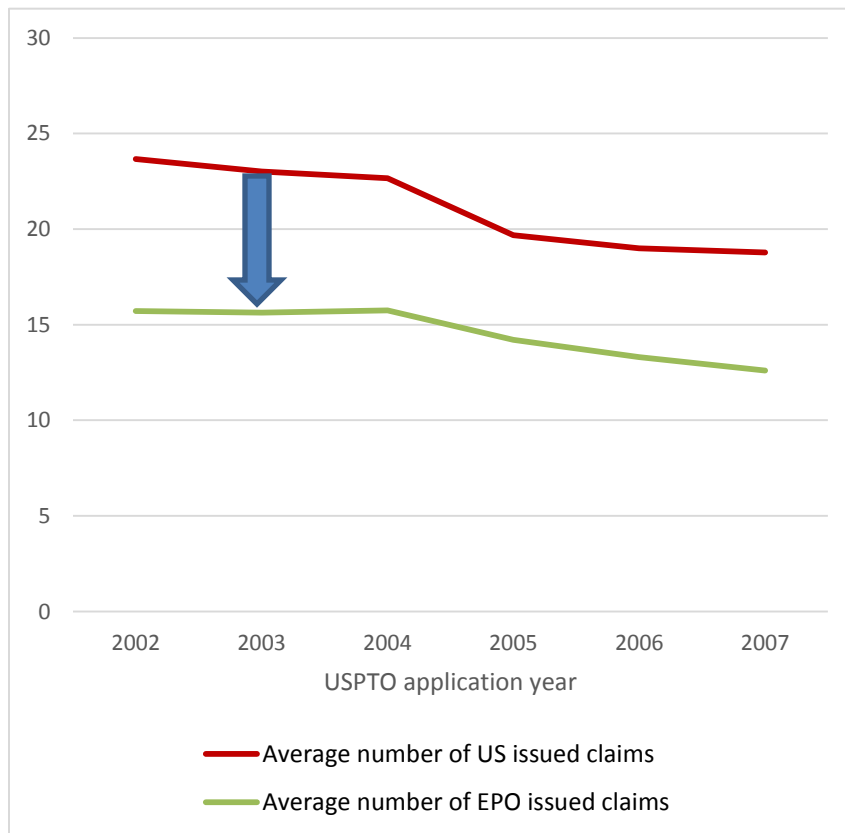
The Average Pendency by Technology



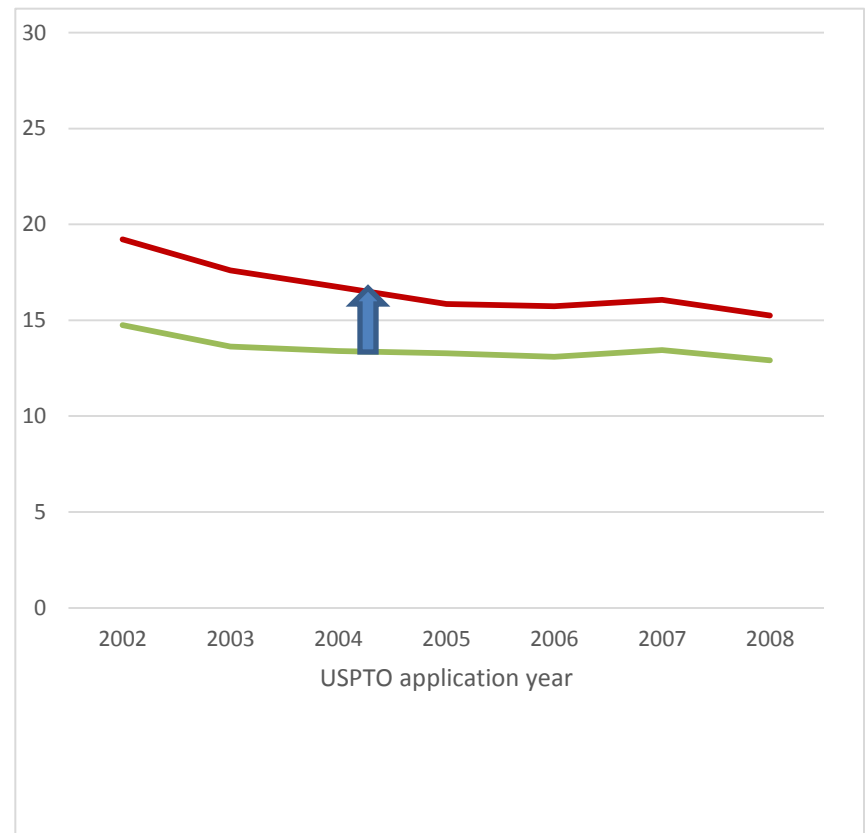
The Trend of Average Number of Issued Claims

- Difference in the number of issued claims among two offices is smaller when the patents claim priority at the EPO. It hints that the EPO fee structure better incentivizes applicants not to file worthless claims.

Country of Priority--USPTO



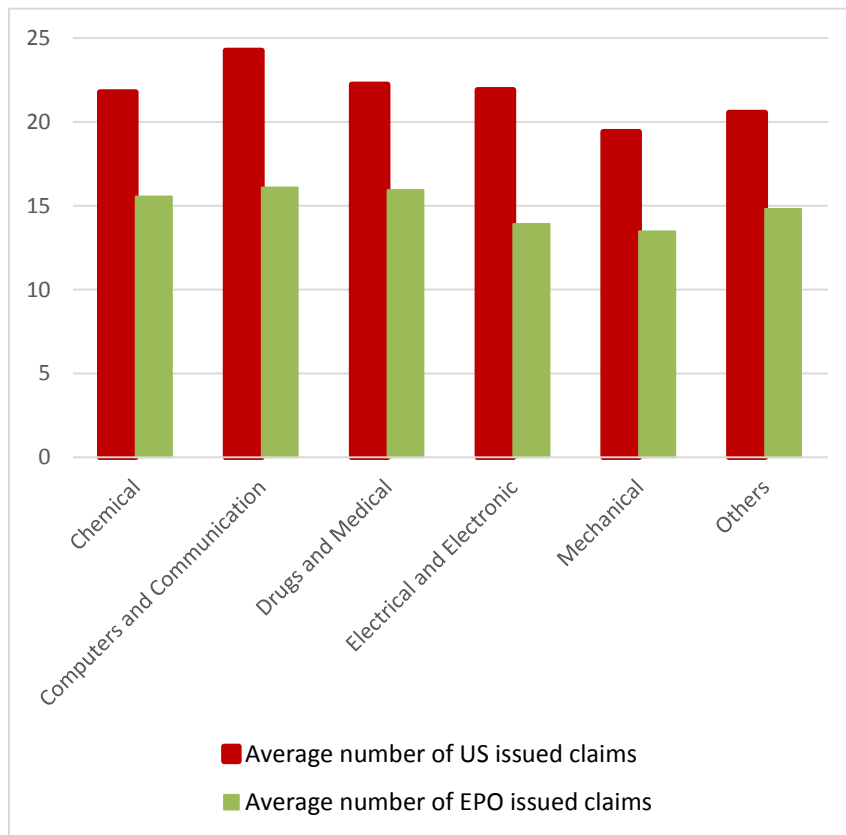
Country of Priority--EPO



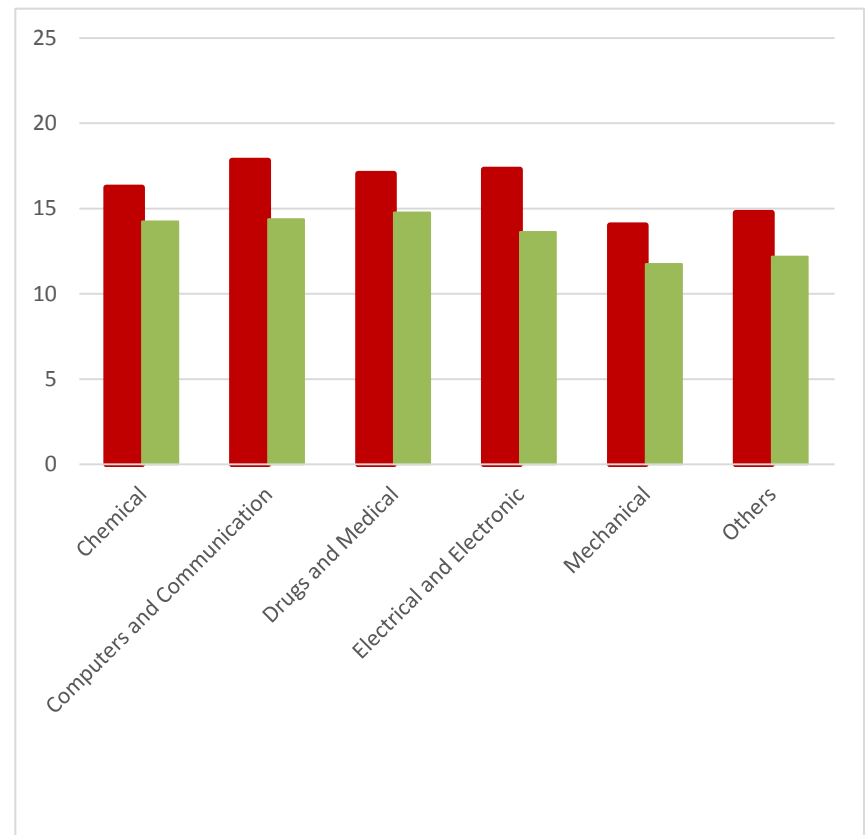
The Average Number of Issued Claims by Technology

- Average number of issued claims is smaller when the patents claim priority at the EPO.

Country of Priority--USPTO



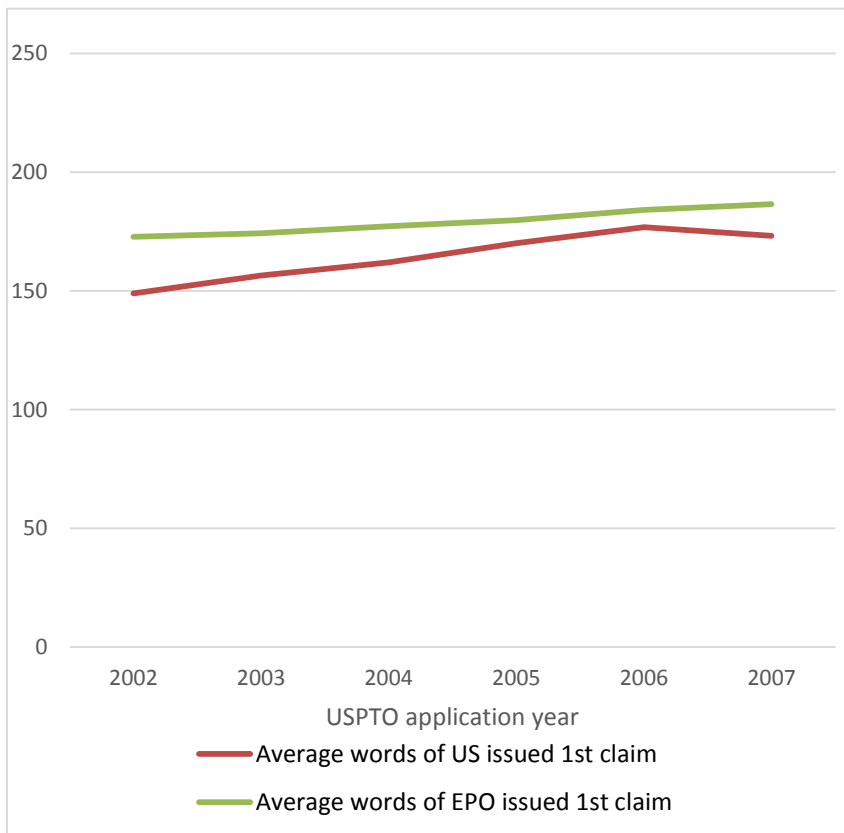
Country of Priority--EPO



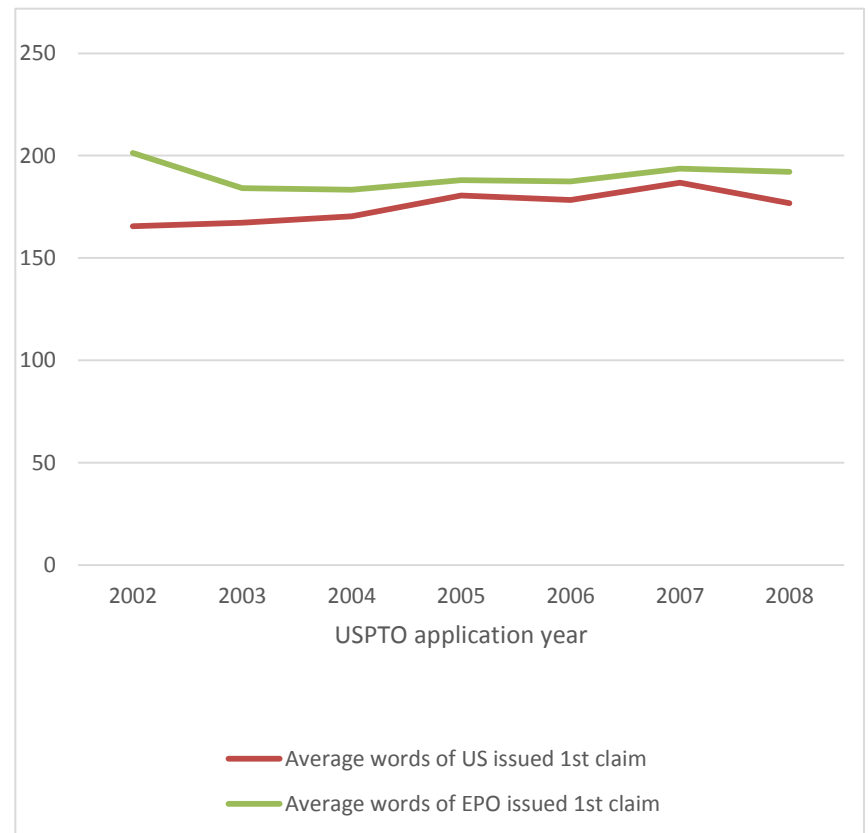
The Trend of Average Number of Words in the Issued 1st Claim

- Average number of words in the issued 1st claim is higher when the patents claim priority at the EPO.

Country of Priority--USPTO



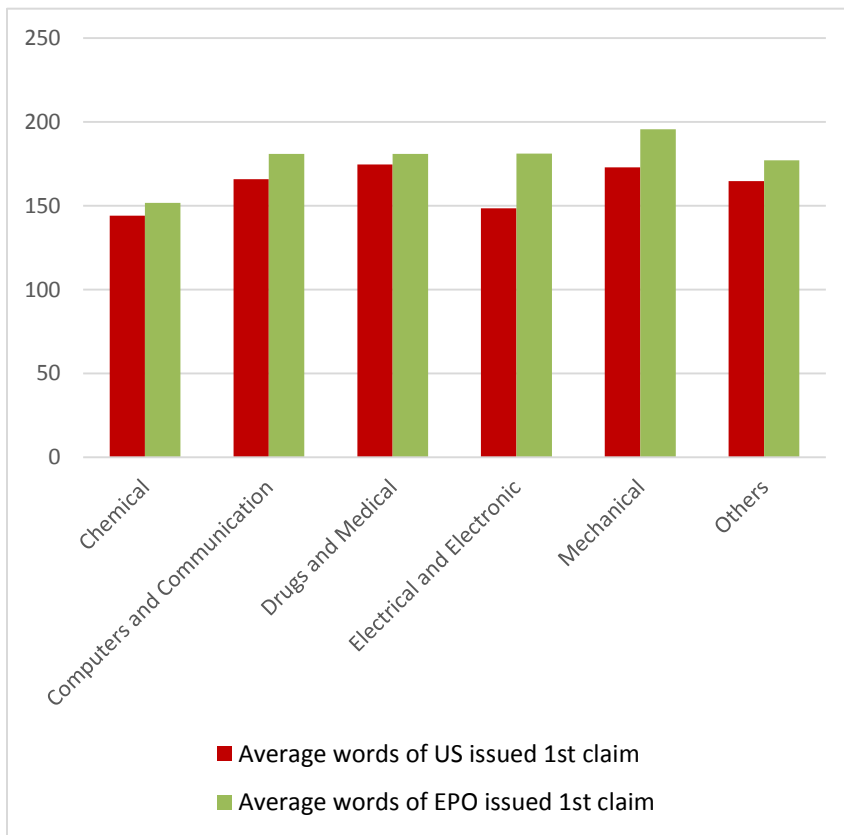
Country of Priority--EPO



The Average Number of Words in the Issued 1st Claim by Technology

- Average number of words in the issued 1st claim is higher in all technology fields when the patents claim priority at the EPO.

Country of Priority--USPTO



Country of Priority--EPO

