



PATENT EXAMINER CITATION

COMPARISON US VS CN

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INTRODUCTION

Patent examiners play an important role in the whole patent system. Through the examination of patents, they can not only decide whether to grant patents, but also have an important impact on the final quality of patents. In the process of patent examination, the most critical thing is to comment on the novelty and creativity of the examined patent by comparing the previous patent technologies. Therefore, analyzing the patent cited by the patent examiner is an interesting and meaningful work.

In this report, the cited patents of patent examiners in the United States and China are counted and compared, so as to understand the similarities and differences of patent examination between the United States and China to a certain extent.

GENERAL INFORMATION

Both the United States and China have huge invention patent applications, and the number of invention patent applications in China has increased rapidly in recent years, while the United States has maintained a relatively stable state (as shown in **Figure 1 and Figure 2**).

Obviously, American and Chinese patent examiners need to examine a large volume of patents every year.

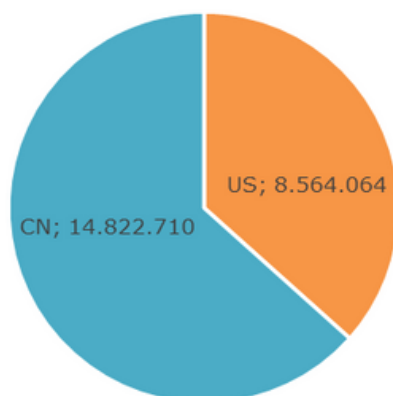


Figure 1 Total invention patents in the United States and China

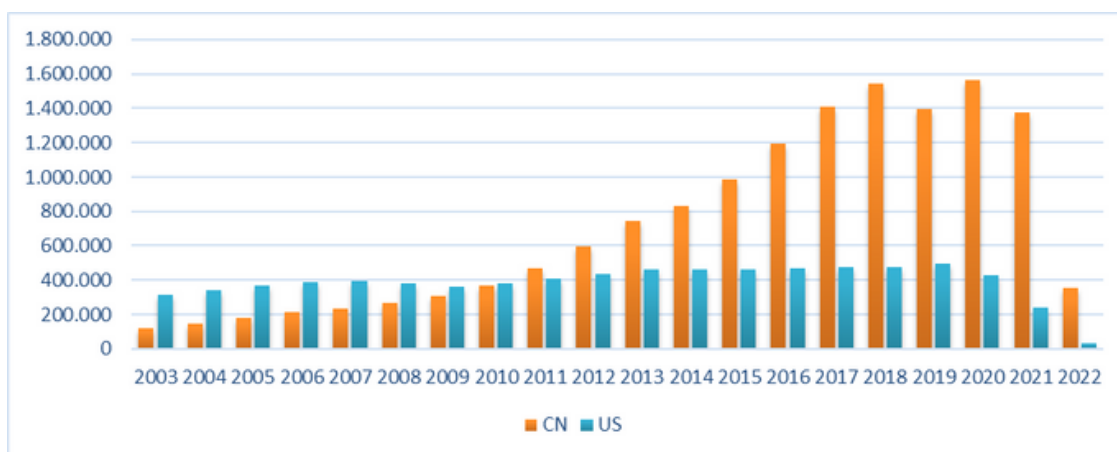


Figure 2 Invention Patent Application Trend in the United States and China

CITATION CATEGORY

In the examination of patents, the categories of citations cited by the examiner mainly include Class X documents (for commenting on the novelty of patents), Class Y documents (for commenting on the creativity of patents) and Class A documents (as the background technology of patents).

It can be seen from **Figure 3** that in the patent examination, the number of patents that the U.S. patent examiner cited Class Y documents and class a documents for examination is equivalent, while the number of patents that cited class X documents for examination is relatively low, which indicates that the number of patents with novelty problems in the U.S. patent applications is relatively low; Correspondingly, the proportion of patents examined by Chinese patent examiners who cited Class X documents was significantly higher. At the same time, most patent documents cited Class A documents in the examination process, forming a sharp contrast with the United States.

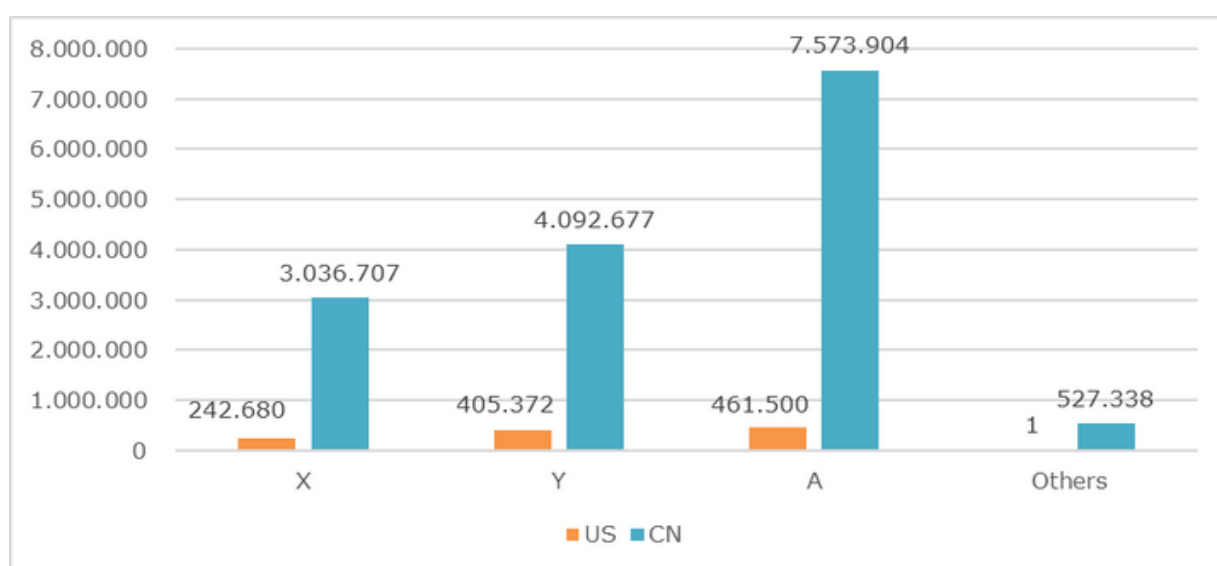


Figure 3 Comparison of Citation Categories of Patent Examiners in the United States and China

CITATION CATEGORY

When the citation in the process of patent examination is Class X or Y documents, it means that the patent needs to be modified to be granted or cannot be granted. Through further statistical analysis, it is found that the proportion of patent documents cited by U.S. patent examiners as Class X or Y documents is 83.58%, and that of China is 75.53% (as shown in **Figure 4**). This shows that the grant rate of Chinese patents after the initial examination may be higher than that of the United States.

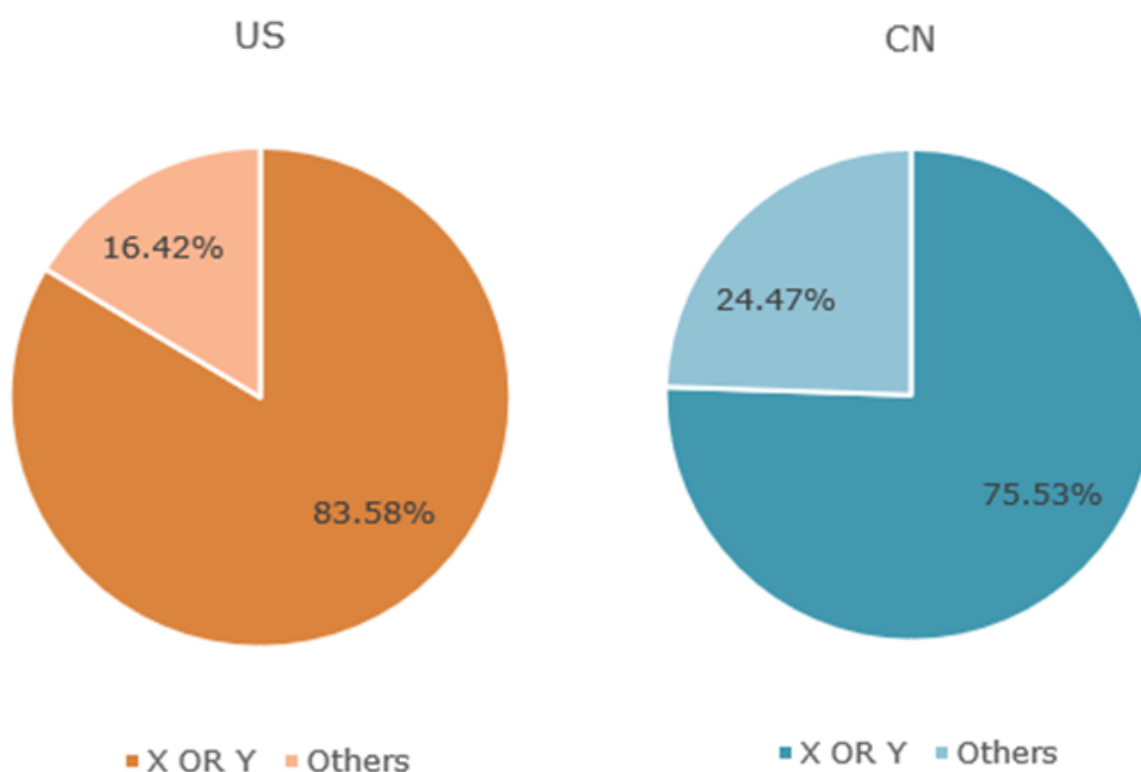


Figure 4 Proportion of Patent Citations Involving x/y Documents in the United States and China

CITATION ORIGIN

Through the analysis of citation origin, we can understand the current technology concerns of examiners in different countries. Due to the large number of citations in the process of patent examination in the United States and China, this report selects 50,000 patents recently examined by the examiners of the two countries to analyze the origin of citations.

It can be seen from **Figure 5** that among the 50,000 patents recently examined in the United States, the total number of citations is 349,720, of which 340,376 U.S. patents are cited, accounting for 97.33%; While the proportion of patents in other countries is very low. Among them, the number of patents of WIPO, Japan, the European Bureau, China and Germany cited by the U.S. patent examiner is relatively large.

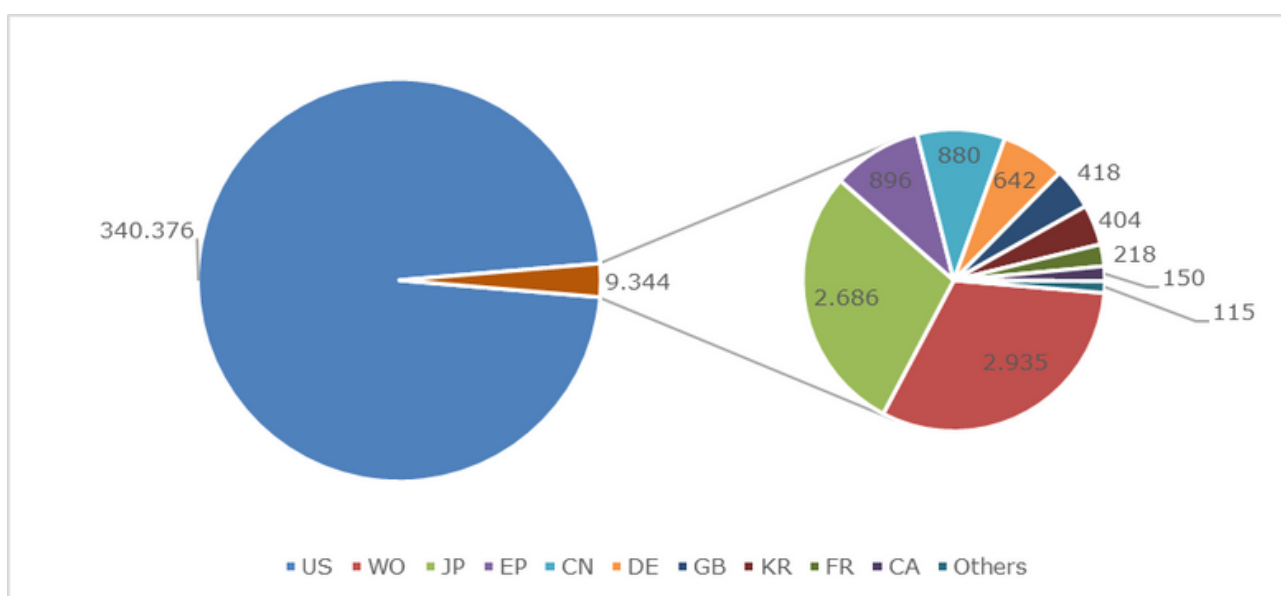


Figure 5 Distribution of Patent Origin Countries Cited by U.S. Patent Examiners

CITATION ORIGIN

It can be seen from **Figure 6** that compared with the United States, the number of foreign patents cited by Chinese patent examiners is more, but still low. Among the 392,731 cited documents, 309,301 are from China, accounting for 78.76%, and the remaining 21.24% are from abroad. Among them, the United States is the most cited origin of Chinese patent examiners, followed by Japan and WIPO.

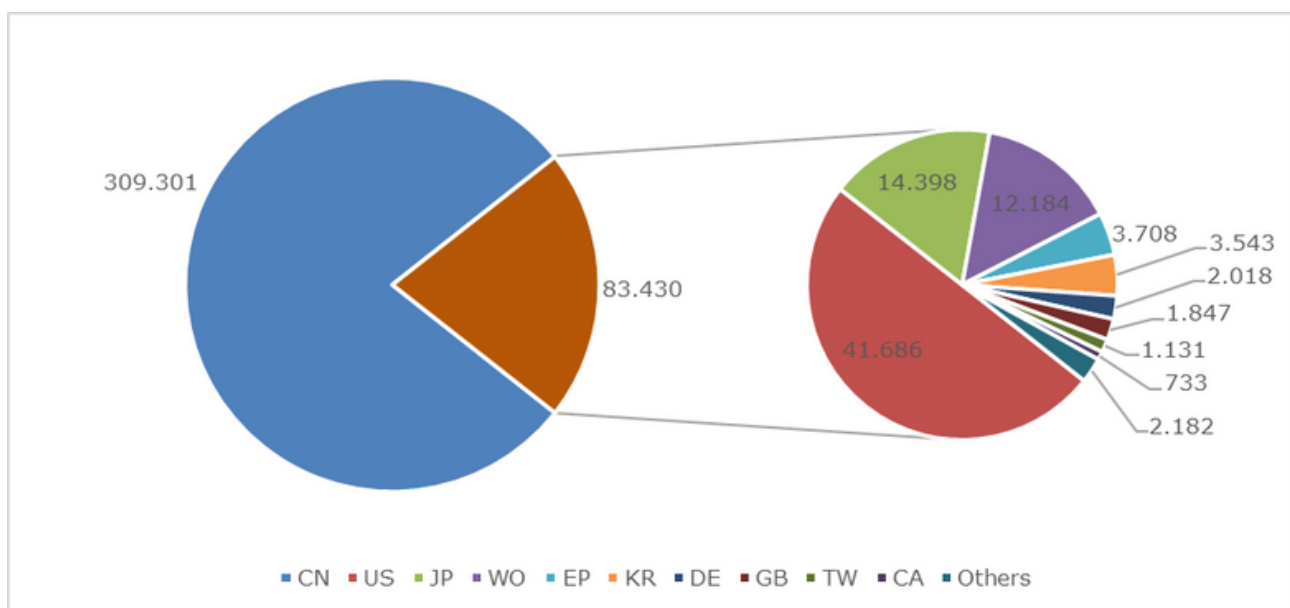


Figure 6 Distribution of Patent Origin Countries Cited by Chinese. Patent Examiners

NUMBER OF CITATIONS

In patent examination, the number of patents cited by patent examiners also deserves attention. It can be seen from **Figure 7** and **Figure 8** that the number of citations of patent examiners in China and the United States is usually less than 5, and the proportion of citations in 6-10 is significantly higher in China than in the United States. In addition, the proportion of citations in more than 10 is higher in the United States than in China. This may indicate that most Chinese patent examiners hope to limit citations to less than 10 in the patent examination process, while American patent examiners will quote more patents in some cases.

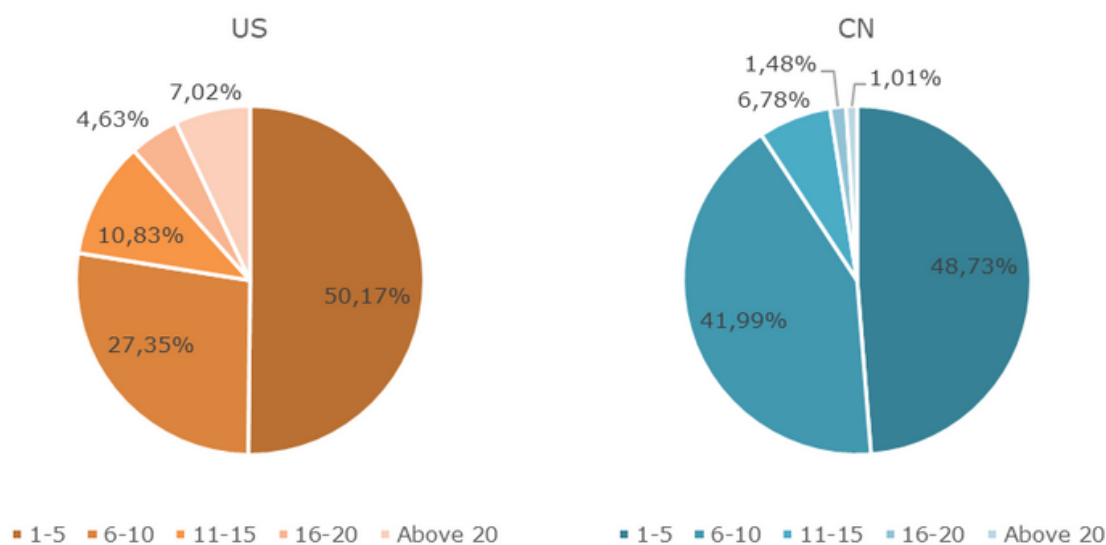


Figure 7 Proportion of Different Citations Number in Patents Examined by U.S. Patent Examiners

Figure 8 Proportion of Different Citations Number in Patents Examined by Chinese Patent Examiners

CONCLUSION

It remains remarkable (and this applies not only to the US and China, but also many other offices) that the number of foreign citations is so much less than national citations. On any technology field there should be comparable national and foreign citations, but patent offices often still cite more national than foreign. This may be caused by language and/or time barriers but it is arguable that relevant patents are missed that should be cited, or even considered invalidating.

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