



**REGIONAL
ANALYSIS:**

**PROVINCE
DEVELOPMENTS
CHINA**

AUGUST 2022

INTRODUCTION

In the previous report, we have noticed that China has a large number of patents, especially in recent years, the growth rate of China's patent volume is significantly higher than that of other countries. Considering that there are many administrative regions in China, and the patent development of different administrative regions is bound to be different, this report analyzes the patent development of 34 provincial administrative regions in China.

GENERAL INFORMATION

In recent years, the number of patent applications from various provinces in China has increased year by year. Especially after 2015, the number of patents has increased significantly. From 2020 to 2021, the total number of patents applied by various provinces in China has exceeded 5 million (as shown in **Figure 1**).

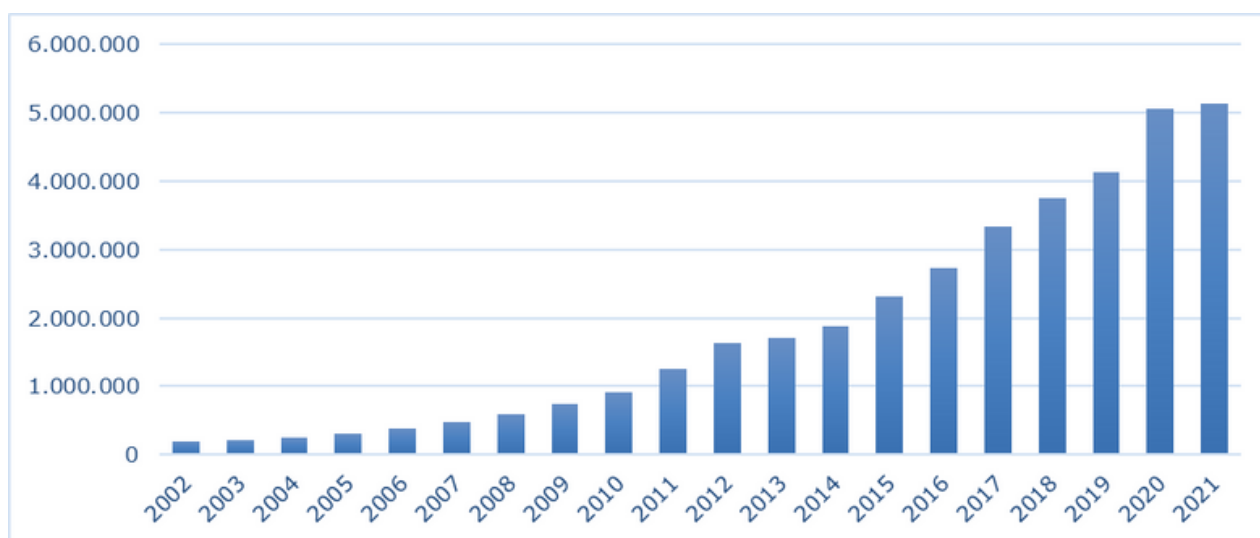


Figure 1 Patent application trend of China

GENERAL INFORMATION

At present, the patent applications of China's provinces are mainly domestic, while the proportion of patents applied to foreign countries is relatively low. Among them, the number of patents applied to the United States and Japan is relatively large (as shown in **Figure 2**).

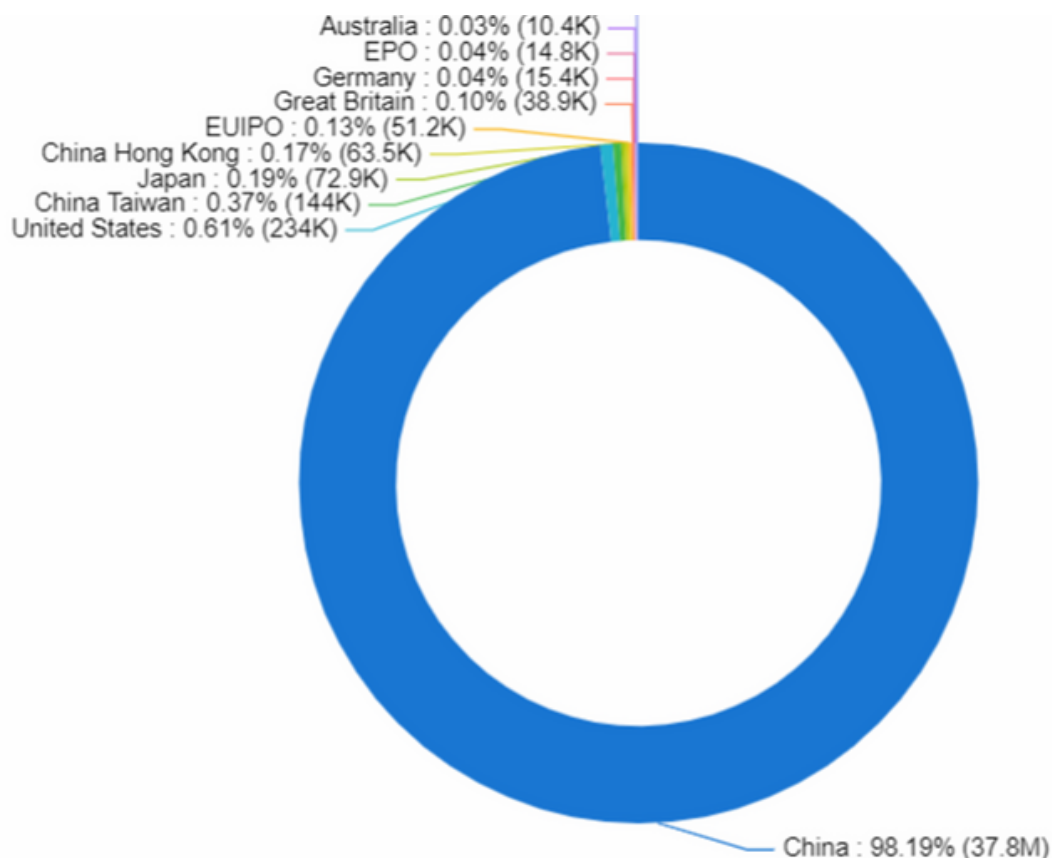


Figure 2 Top countries of target

VOLUME OF PATENTS IN DIFFERENT PROVINCES

Among China's provinces, Guangdong has the largest number of patents, more than 6 million, followed by Jiangsu and Zhejiang. In contrast, Qinghai, Tibet and Macao have the least number of patents, of which the number of patents in Macao is only 2,141 (as shown in **Figure 3**). It can be seen that in China's economically developed and coastal provinces, the volume of patents is very large, which is mainly because many high-tech enterprises are concentrated in areas such as Guangdong and Jiangsu.

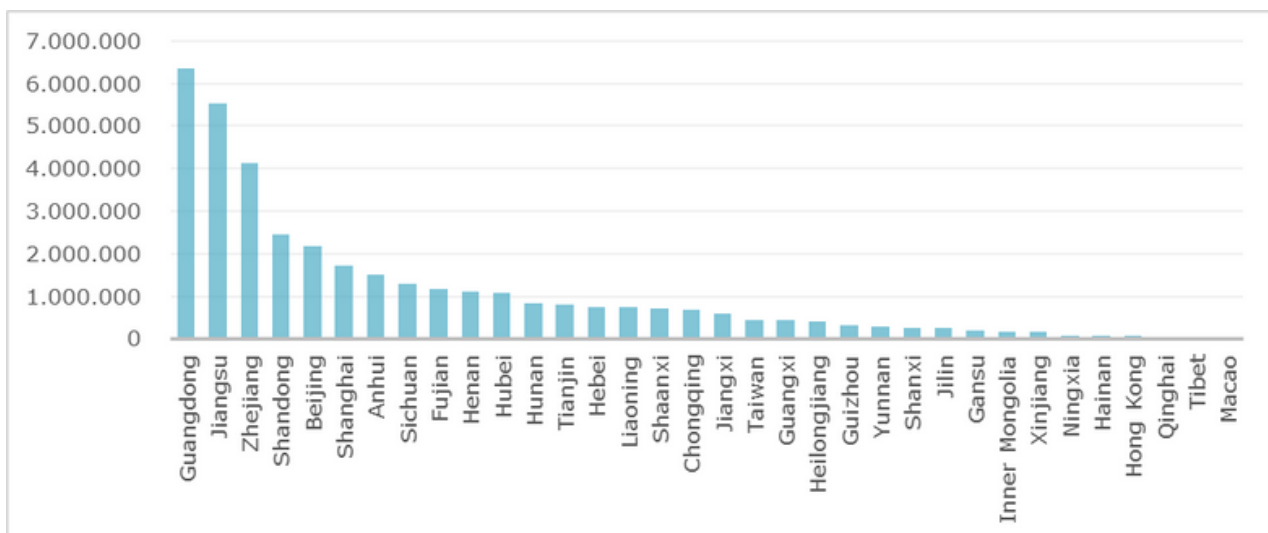


Figure 3 Provincial ranking of patent volume

VOLUME OF PATENTS IN DIFFERENT PROVINCES

Make further statistics on the trend of patent application in the top five provinces in China (as shown in **Figure 4**). It can be found that the growth rate of patent applications in Guangdong, Jiangsu and Zhejiang is obvious, while that in Shandong and Beijing is relatively slow. In particular, Guangdong's high growth rate of patent applications made it surpass Jiangsu in 2016 and become the province with the largest volume of patent applications in China.

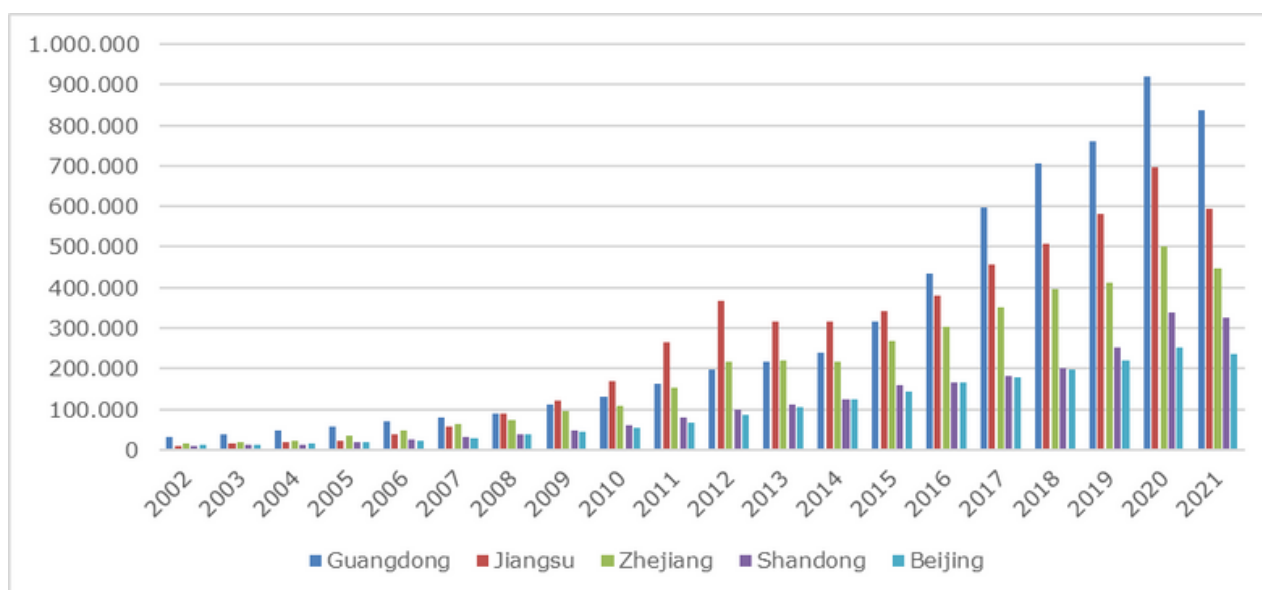


Figure 4 Top provinces of application trend

KEY TECHNOLOGIES IN DIFFERENT PROVINCES

In order to further understand the patent development of different provinces in China, statistics are made on the main technical fields concerned by different provinces. The report only shows the number of patents corresponding to the top ten IPC in Guangdong, Jiangsu and Zhejiang (as shown in **Figure 5-7**). It can be seen that Guangdong's patents are mainly concentrated in the fields related to information technology. Jiangsu has more patents on traditional machinery, and Zhejiang has more patents on mechanical equipment and pollution control.

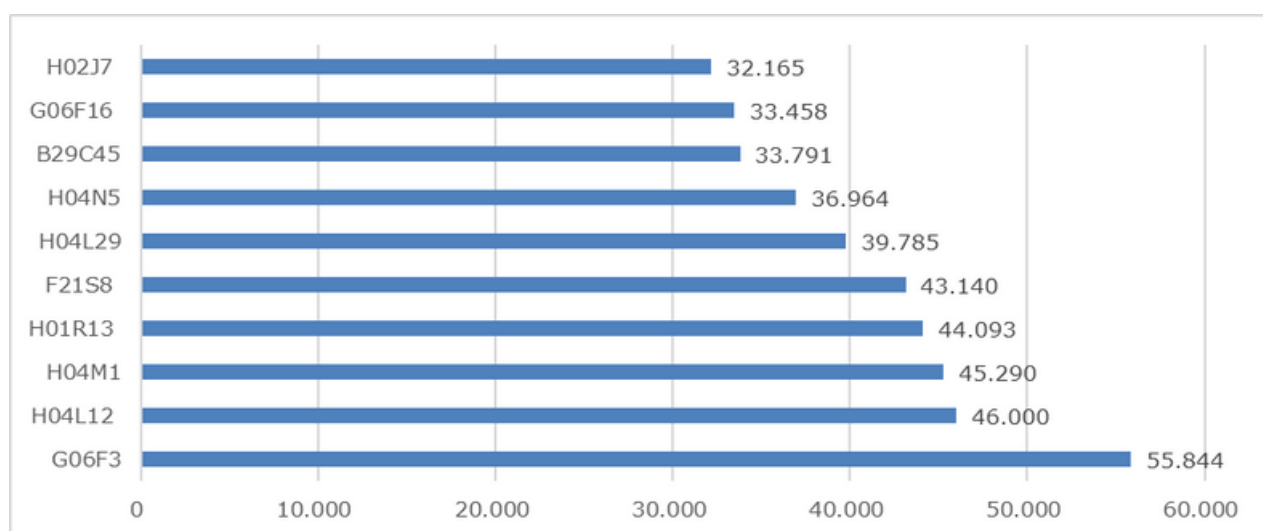


Figure 5 The top 10 IPC classification numbers in Guangdong

KEY TECHNOLOGIES IN DIFFERENT PROVINCES

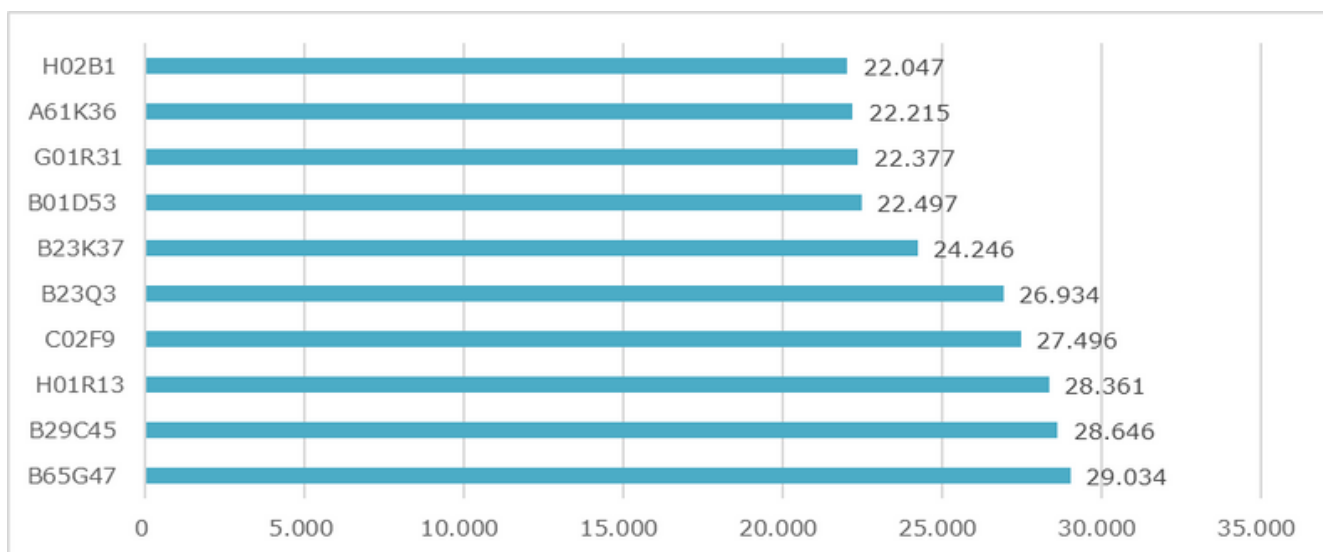


Figure 6 The top 10 IPC classification numbers in Jiangsu

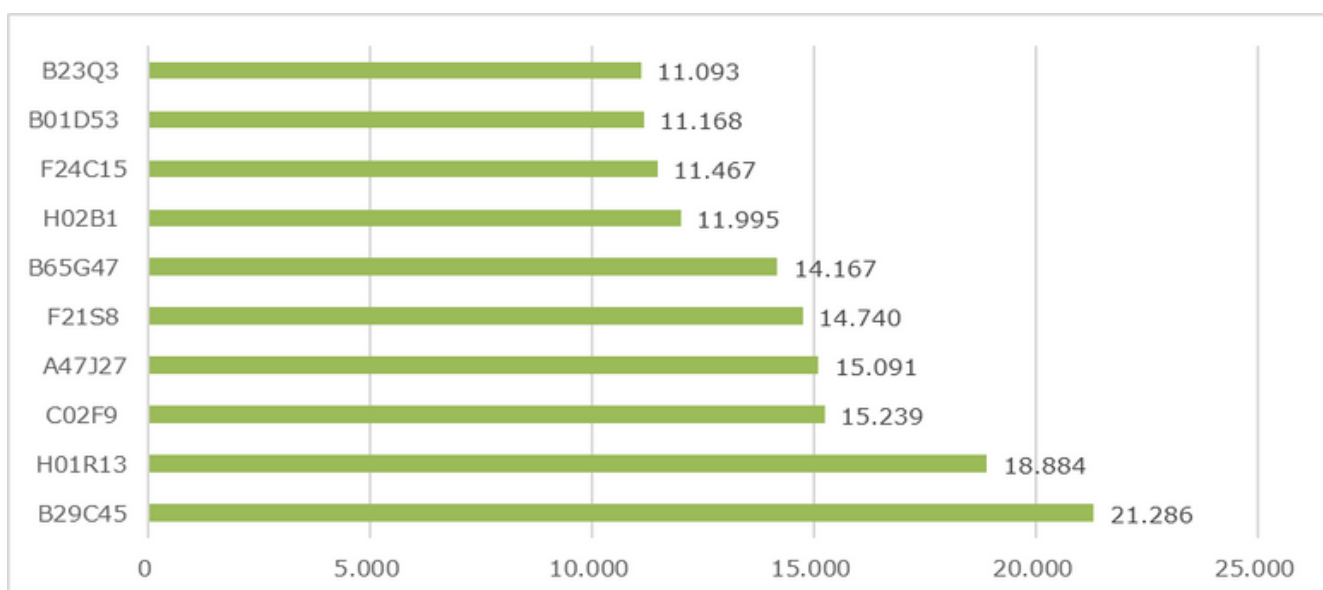


Figure 7 The top 10 IPC classification numbers in Zhejiang

KEY TECHNOLOGIES IN DIFFERENT PROVINCES

For the provinces not listed here, there are also differences in the main technical fields they focus on. For example, Shandong's patents are highly concentrated in medical equipment, and Beijing's patents are highly concentrated in information technology and so on. It can be seen that for different provinces in China, there are great differences in the technical fields of patents that they mainly focus on, and this is often closely related to the local industrial development.

STANDARDIZED CURRENT ASSIGNEES

Based on the analysis of the main applicants in all provinces of China, it is found that most of the top companies in China's patent application volume are concentrated in Guangdong, Zhejiang, Beijing. The most significant is that 6 of the top 10 companies in patent application volume are from Guangdong (as shown in **Figure 8**).

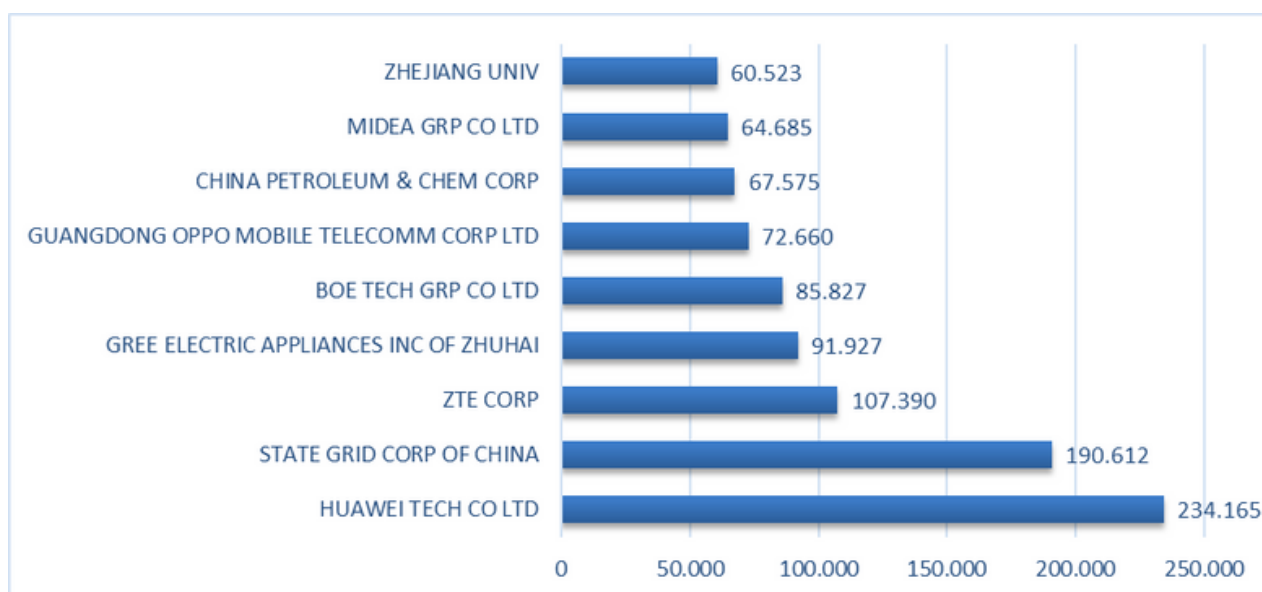


Figure 8 The top 10 standardized current assignees

CONCLUSION

There are great differences between different provinces in China in terms of patent volume and technical fields concerned. Guangdong, Jiangsu and Zhejiang are the provinces with the largest number of patent applications and the fastest growth rate of patent volume in China.

Among them, Guangdong Province has the largest number of high-tech enterprises, and its patent development deserves more attention.

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