

QuantData Patent Data: Make Easier Alpha Discovery

A. Market Driver

In today's knowledge-based economy, technological capability is increasingly important on determinant of firms' short-term profitability as well as long-term performance. That matters even more in China along with the support from state strategy and the launch of technology innovation board in 2019. However these technological fundamentals are typically not readily discernible from firms' financial reports, but can be demonstrated in patent information which can be key drivers of the economic fortune of today's businesses

B. Value Proposition

QuantData sources full China patent data set, and accurately tags with the listed companies (incl. the subsidiaries). Aside from the raw data, some derived factors like patent maintenance cost, patent book value are provided as well, both of which can be used in various business scenarios, quant strategy development, fundamental research and etc..

Item	Description
Data source	National Intellectual Property Administration, PRC (CNIPA)
Update Frequency	Twice per week (TUE/FRI), 5000 new records/update
Historical Coverage	Back to 1985/01/01 when the CNIPA started to grant patents.
Regional Coverage	China, patents granted by CNIPA
Patent Type	Patents of inventions
Company Coverage	All China A-Shares (3000+) and their subsidiaries (80,000).

C. Use Cases

- **Fundamental Analysis**

The patent volume and book value are positive performance indicator for the company. QuantData developed more factors which can provide more comprehensive evaluation of the company's fundamental, e.g. the terminated patent info as negative indicator, the maintain cost to demonstrate patent quality.

- **Quant Trading**

Employing patent classification code (IPC) as the measure of technological closeness between firms, we find out the technology-linked firms which have strong predictive power for focal firm returns. A long-short strategy based on this effect yields monthly alpha of 117 basis points.

D. Data Dictionary

QuantData's patent data is delivered in CSV file compressed by gzip.

● Level 1

Item	Decription
Ticker	A-stock code of the listed company
Date	CNIPA release date
Announcement	The number of invention patents granted on release date
Termination	The number of invention patents terminated in the period
Cost	The total cost of the invention patents whose annual fee's payment deadline is in the period (list price)
AnnouncementAccum	The accumulation of "Announcement" since 1985
TerminationAccum	The accumulation of "Termination" since 1985
ActiveAccum	The number of active invention patents on release date day
CostAccum	The accumulation of "Cost" since 1985

● Level 2

Item	Decription
Ticker	The A-Shares code of the listed company
PatentNo	The ID of the patent granted by CNIPA
PatentName	The Chinese title of the patent
PatentType	The type of the patent. By default "Invention"
PatentStatus	Valid or Invalid (expired or terminated)
ApplicationDate	The application date of the patent to CNIPA
AnnouncementDate	The announcement date of the grant by CNIPA
Patentee	The Chinese name of current owner of the patent
ApplicantName	The Chinese name of the applicant
NumberOfClaims	Number of the claims to protect
IPC_Details	The full list of the multiple IPC codes
IPC fields Parsing	The parsed fields for the major IPC code (the first one in 4 chars) ● IPC_CODE: IPC ● DESC_CN: Chinese Description of the IPC ● DESC_EN: English Description of the IPC

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