

# **Construction of a Patent Database of Chinese Listed Companies and a First Look at their Patenting Activities**

## **Abstract**

Although China is now the largest patent filing country in the world, there is little firm-level research using Chinese patents due to potential difficulties in integrating Chinese patent data with firm data. This paper describes the methodology underlying an initial attempt to construct a Chinese Patent Database to link patent applications filed with China's State Intellectual Property Office (SIPO) to Chinese listed companies and their subsidiaries. We develop a computing program to match the assignee names of SIPO patents to the names of listed companies and subsidiaries based on a similarity score, taking into account unique challenges associated with matching Chinese firm-names and Chinese characters. High-scoring likely matches are then checked manually to verify whether they are indeed true matches. The resulting database includes 191,325 SIPO patents matched to Chinese listed companies and their subsidiaries from 1990 to 2010. Using this database, we examine the distribution of these companies' patent applications across technology classes and geographic locations against the population of patents from SIPO, to assess listed companies' role of innovation in China. We then compare invention patents of listed companies with those from two control samples in terms of grant ratio, grant lag, and in-force duration. In making the database public to the research community, we aim to encourage new streams of research on Chinese patents and China's fast-changing innovation landscape.