

# **Chapter 8 - TM Tools-Patent Analysis**

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# Introduction

- The historical purpose of the patent system was to encourage the development of new inventions
- Patents can also be used as bargaining chips.
- Patents served as a very important indication of the worth of a company.
- Many venture capitalists refused to invest in a company that did not have at least a patent application on its product(s) or service(s).

# Patent Analysis

- Patent analysis is a unique management tool for addressing the strategic management of the firm's technology and product or service development process.
  - allows to gauge its current technical competitiveness,
  - to forecast technological trends, and
  - to plan for potential competition based on new technologies.

# Types of Patent Analysis

- **Internal Patent Analysis.** A firm assess its own technological portfolio which allows it to maneuver its own position in a technology class or industry. Internal analysis also identify technologies the firm does not use that may be sold or leased for profit.
- **External Patent Analysis.** A firm predict where its competitors are moving, who may be developing technologies together, and whether or not there may be possible infringements (either on their part or their competitor's).

# Use of the Patent System

- Patents are likely to be applied for in industries
- where the R&D cost is high but imitation is cheap;
- when the information disclosed by the patent does not provide competitors with substantial new innovative opportunities
- when innovation is cumulative or requires the access to multiple fragments of knowledge controlled (through patents) by other agents and exchange of technology becomes critical;
- where the development of an invention made by a small independent inventor requires substantial costs, so that the patent can be licensed to a larger firm; etc..

# Advantages of Patent Analysis

- **Many applications:** Provides invaluable analytic support to a firm's IP management, R&D and technology management, human resources, mergers, acquisitions, and strategic planning; it can also serve as technological indicators and warning.
- **Diverse analytical products:** Specific analytical criteria and techniques may be modified to suit the analyst's unique needs. The analyst's framework can determine the nature of database searches and related collection and collation processes.
- **Reduces uncertainty:** This is the best tool for identifying sources of innovation and technological change. A firm can mitigate the chances of being surprised by new and increasingly advanced technologies developed by both its competitors, and those firms developing a particular technology from outside the traditional industry.

# Advantages of Patent Analysis

- **Dependable data:** The data that is mined for patent and bibliometric analyses is entirely credible, reliable, and objective, because it flows directly from legally bound government databases. Regardless of the specific type of data required for analysis, world patent databases are highly accessible, easily searchable, and available in an increasing number of languages and countries.
- **Customizable analytic and visualization tools are widely available:** Although relatively costly, there are many software options available for purchase online. These programs allow the user to collect, manipulate, and analyze data and create customized visualizations for better dissemination of key analytical findings.

# Weaknesses of Patent Analysis

- **Large volume of data:** Searching patents and technology trends can yield seemingly overwhelming amounts of data. It is important to stay focused on relevant data and technologically significant filings and issuances.
- **Patents require review:** The majority of patents represent mere technological and innovative nuances. Publications and issued patents are largely comprised of company-specific and other minute technology improvements; very few patents represent drastic shifts in innovation. Technological and legal expertise may be necessary to streamline and expedite the process.
- **Human and typographical errors:** Since patent analysts rely solely on patent database information, it is critical to evaluate ALL relevant patents to get a comprehensive search. Patent officers tend to enter data differently, so care must be taken to account for all possible occurrences of a company, inventor, assignee name, and other relevant data. This is especially important when examining patents from multinational countries, given translation issues.



- **Methodological limitations:** Because of the method's use of commercial data, patent analysis is primarily limited to the field of business and competitive intelligence, with few implications into the national security realm.
- **Denial and deception:** Remember that some companies want to hide the technology they are developing. They may forego the patent process and keep the invention as a trade secret. Companies may also have the patent "assigned" to an academic institution, individual, etc., so it is not associated with a patent, but owns the technology behind-the-scenes. For additional fees, a company may also choose to have its application remain unpublished.

# Patent Analysis Tools

- <http://www.patentinsightpro.com/>
- [http://thomsonreuters.com/products\\_services/scientific/DWPI](http://thomsonreuters.com/products_services/scientific/DWPI)
- <http://www.matheo-patent.com/>
- <http://www.i2inc.com/products/>
- <http://www.dialog.com/>
- <http://www.micropatent.com/static/index.htm>

# How to Conduct Patent Analysis

- Establish a clear target and purpose for your analysis.
- Choose a data collection plan.
  - USPTO - [www.uspto.gov](http://www.uspto.gov)
  - Google Patents - <http://www.google.com/patents?hl=en>
  - FreePatentsOnline - [www.freepatentsonline.com](http://www.freepatentsonline.com)
  - <http://www.espacenet.com>
  - <http://www.wipo.int>.
- Choose the appropriate tool for the job.
- Collect the data.
- Fill the gaps in the data.
- Analyze the data.
- Disseminate findings to decision maker.
- Customize an in-house database.
- Keep abreast of emerging services and databases.

Thank you