

SIDEBAR

There Is More to Invention Than Patenting

Inventors often have economic motivations to keep the details of their inventions secret. The patenting system provides the legal right for a limited time to exclude others from making, using, offering for sale, or selling the invention, in exchange for public disclosure of the technical information in the granted patent. Extensive publicly available administrative data exist for patents and their inventors, and extensive databases allow for systematic insights into these patents. In the absence of other comprehensive data on invention, patent data provide unique and useful insights into the inventions deemed valuable enough to patent. However, analysis of these data requires caution.

One caveat is that most patented inventions are never commercialized; they are neither representative of all inventions nor are they measures of innovation. Conversely, many valuable inventions that are commercialized are not patented. Companies choose a variety of strategies to protect their inventions and intellectual property. For example, U.S. companies rate trade secrets higher than patents in their importance for protecting intellectual property, which is true even for R&D-performing firms.

In addition, patent protection may be sought for reasons other than intended commercialization. Privately owned patents may be obtained to block rivals and negotiate with competitors, to use in lawsuits, or to build “thickets” of patents to impede or raise others’ costs of R&D and innovation (Cohen, Nelson, and Walsh 2000). Research suggests that some organizations and countries pursue “strategic patenting” to block competitors and to monetize patents through licensing and other activities (Ernst 2013:1–9). Other firms may respond by patenting defensively. New and emerging firms may seek patent protection to help obtain financing because investors perceive patents as potentially valuable for a firm’s assets and future profitability. Finally, cross-country analysis indicates that international differences in taxes on corporate and patent income influence the choice of patent location for multinational firms (Organisation for Economic Co-operation and Development 2016:3). However, within these limitations, U.S. Patent and Trademark Office patent documents tell us when and in what technology areas inventors have decided to protect their intellectual property with patent protection. This rich detail, which also includes the name and address of the inventor and assignee, justifies presentation of the patent documents.

This report provides statistics on the relative extent to which private industry, the federal government (intramural research facilities and federally funded R&D centers), and higher education institutions account for a recent year’s U.S. patent awards. There are marked differences in terms of the scale of economic resources directed toward patenting inventions among these sectors; the private business sector expends significantly more resources than either the federal government or higher education. Even so, each of these sectors has evolved substantial capacities for identifying potentially patentable inventions and filing patent applications in the United States and worldwide. Differences also exist within and across these sectors in the perceived net benefit of choosing patenting as a principal means of pursuing the further development and commercialization of inventions.