Metrics and evaluation for IPR

Why is measurement important for policy?

Appropriate measurement is critical for policy to support innovation since it can help policy makers to do the following:

- Assess the contribution of innovation to achieve social and economic objectives;

- Understand the determinants of and obstacles to innovation to design policies with higher chances of success;

- Evaluate the effectiveness of different policy approaches, and consequently adapt current policies and design new ones; and

- Benchmark innovation performance and conditions for innovation to those of other countries.

How are patent data relevant sources of information for innovation policy?

Patent data, readily available from national and regional patent offices, provide rich information on technical characteristics of inventions, development and ownership of inventions and the history of application. The amount of patent data available, the spatial and temporal coverage and the range of technologies they cover in detail are typically very large. However, the use of patent data to assess innovation performance poses several caveats such as the facts that not all inventions are patented, that differences in patenting across fields of activity, that the value of patents varies substantially and that patenting will be critically affected by different legal IP systems (see Aspects and availability of patent data [1]).

However, if these factors are adequately taken into account, patent data can be used as measures of inputs to innovation, indicators of economic performance and measures of characteristics of innovative activities. They can also allow assessing the economic value of inventions and evaluating aspects the patent system itself.

Regarding the characteristics of innovative activities (see Patent data – Characteristics of innovative activities [2]), they allow analysis in the following dimensions:

- The performance of firms, regions and countries (see Patent data - The performance of firms, regions and countries [3]).

- Patenting strategies of firms (see Patent data - Patenting strategies of firms [4]).

- Emerging technologies (see Patent data - Emerging technologies [5]).

- The role of universities in technological development (see Patent data - The role of universities in technological development [6]).

- The performance and mobility of researchers (see Patent data - The performance and mobility of researchers [7]).

- The geography of invention (see Patent data - The geography of invention [8]).

- Knowledge diffusion and technological change (see Knowledge diffusion and technological change [9]).

- Globalisation of research (see Patent data - Globalisation of research [10]).

Moreover, assessing the value of patents is critical for policy, therefore should not be neglected, given substantial heterogeneities in patent value. The term "patent value" can refer to the economic "private" value to the holder or to "social" value of the patent. Several approaches have been adopted to evaluate patent value, including forward citations indicators (e.g. generality of a patent, current impact index), indicators based on procedural information and applicants' behaviour (e.g. fate of the patent application, renewal of patents) and other indicators (e.g. number of claims, number of technical classes, number of inventors in a patent, opposition and litigation) (see Patent data—Patent valuation methods [11]).

Empirical work on the impacts of intellectual property legal standards and regulations on firms' innovation performance requires quantitative indicators. Several indicators have been developed, including the widely used indexes developed by Ginarte and Park (1997). It is important to note that this particular index is an indicator of the legal strength of IP protection as specified by regulations. It does not reflect the experience "on the ground". The index has been used to analyse the impacts of IP standards on technology transfer and access to foreign knowledge, among other dimensions of relevance to innovation (see Metrics – IP standards, regulations and legal systems [12]).

IP data beyond patents as relevant sources of information for innovation policy

As with patent data, substantial statistics are available on the other types of IPR (see Types of IPR [13]). They similarly provide relevant information for innovation policy. Some of these measures, including trademarks and utility models, are particularly useful also for assessing innovation in developing countries, as patents often are weakly used by national firms. Data on industrial design are also available. More indirect approaches have been developed to study unregistered IP, such as copyright and trade secrets, including conducting analyses of industries that strongly rely on them.

References

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