



# Patents, intellectual property rights and their social utility

Deepanshu Mohan examines the structure of intellectual property, patent inflation and what can be done to cultivate innovation

*“A wise (wo)man will always allow a fool to rob her/him of ideas without yelling ‘Thief’...  
If (s)he is wise, (s)he has not been impoverished... Nor has the fool been enriched  
The thief flatters us by stealing... We flatter her/him by complaining.”*

Ben Hecht, A Child of the Century<sup>1</sup>

**T**he imperative to innovate and cultivate a creative environment in a large working age population like India throws a number of policy-centric questions across a wide range of subjects. These feature deliberations around reforms in education policy; creating direct incentives for enhancing self-entrepreneurial opportunities within/across centres of learning; facilitating an ease of entry for new firms within tech-based innovation sectors; and, ensuring protective measures for potential innovators through intellectual property rights.

How the ‘wise’ (borrowed from the quote above) may protect their and others capability to innovate against those categorized as ‘thieves’? To what extent a highly IPR regulated society may affect creative capabilities amongst individuals? This essay discusses some of these questions on the social utility of IPR regulations with a greater emphasis on one of the aspects of IPR ie. patents- which in the context of India- can be identified as one of the emerging areas of analytical scrutiny.

Before getting into the details of patenting and its relationship with social innovation, let’s start with the basic conceptual structure of intellectual property. One can **define** Intellectual Property (IP) as *“the creations of the mind that include inventions; literary and artistic works; designs and symbols etc. used +in commerce”*.

Protected in law, IP takes many regulatory forms as patents, copyright, trademarks and trade secrets. The historical objective of IP (observed for centuries) more or less has been centered on balancing the interest of the innovators

by protecting their innovation and giving them the opportunity to profit from it with the given needs of the society, at a given time.

It is in this regard one often tends to observe a conflict of interest emerging from innovators who may tend to use regulatory mechanisms under IP laws to maximize their own interests (say, consolidate or expand their market position and profit share) as against those advocating the social value and utility of certain innovations for a greater common good.

*Whether it is patents or any other regulatory form of intellectual property, it is pertinent to acknowledge the role of IP as a necessary evil for stimulating pathways of research and development by providing a protected income incentive for the innovator*

In this context, one of the most debated aspects of IP laws remains centered on regulatory aspects such as patenting and the nature of its effectiveness in both - promoting and protecting innovative capabilities of individuals.

A patent guarantees its holder an exclusive right through a monopoly on the use of the knowledge it generates. The grant of a patent includes a defined period (usually, twenty years from the date of issue but can be longer), after which the knowledge may fall into the public domain. Three simplistic criteria determining the patentability of an innovation usually feature: a discovery that is not obvious (non-obvious); that, may not be covered by 'prior art' (novelty) and must be seen to be useful (usability).

As argued by Jean Tirole (2016) - *"Patenting is a public process and allows patent holders to manage their intellectual property as they wish, for instance to sell exclusive licenses if they do not want to exploit the innovations themselves"*.

### **Developing trends in (new) patent regimes**

The historical practice of patenting can be dated back to ancient Greece, later spreading to parts of Florence, Venice by the fifteenth century. Over the last three decades with a rapid expansion of businesses in form of global multinational companies and increased awareness about IP rights, we have seen a patenting inflation (substantial increase in patent applications and grants) particularly in countries like the China, United States, Japan, Germany etc.

This considerable increase in applying and granting patents can be traced to several reasons. First, there have been incentives for patent offices to facilitate this, particularly within the US where before the America Invents Act of 2011, the Patent and Trademark office was indirectly encouraged to grant patents rather than to refuse them.

Second, governments have more often than not, broadened the definition of 'patentable inventions' to include biotechnology, life sciences, software programs and business methods.

Third, with rapidly expanding forces of economic globalization and oligopolization of market segments, big corporations are gaining control of emerging market spaces and using sovereign patenting laws to consolidate their competitive advantage in a given market (as seen in countries like China, South Korea).

In the Indian context one observes a contrarian scenario ie. is of low patentability of innovations in spite of a **rising number** of patent applications recently. A combination of factors: administrative glitches in examining the quality of patents filed (due to a high workload of patent examiners); low levels of public R&D spending and a lack of information on patenting **traditional knowledge** forms (say, in pharmaceuticals)-paint a picture of a *low tech-based innovative capacity* in India's manufacturing and service sector (including the IT sector that employs a massive, skilled labour force).

While it may be useful to understand the reasons for a low case of patentability of innovations in India, perhaps, a more important question here could be to see if increasing patent applications and patent grants actually increase innovative capacities within/across commercial activities (in case of other countries) or how an increase in patenting may produce counter-productive effects.

The latter seems true when we carefully analyze the case of countries like China and the US which **witness** the highest degree of patent inflation, projecting considerable (adverse) effects for innovators and the socio-business nature of a given commercial activity.

## Counter-productive effects of patent inflation

The economic consequences of a high degree of patent inflation echo substantial effects. Some patents have the potential to capture economic value without representing a major advance for society. Say, the Amazon's 1999 US patent on '1-Click Ordering' which protected Amazon's sole use of the idea that an online retailer could keep information about customers (on billing, delivery addresses, credit card details etc.), so that it does not have to ask for them again and again when the customer makes the purchase.

In terms of any benefits accrued from such aspect of patenting which featured legal costs (involving court cases- including one in 2007), this particular patent fulfilled a much lesser societal value. [Websites](#) reflect an [absurd list](#) of patents applied for in recent applications.

Another effect of *patent inflation* today is with respect to the multiplication of 'gatekeepers for a given technology', reflecting a high accumulated amount of licensing fees that is subsequently imposed on users. This is particularly relevant in the case of biotech and software sectors, which feature a multitude of patents held by different owners (becoming the 'gatekeepers for a given technology'). Such [patent thickets](#) lead to an accumulation of royalties that have to be paid for licenses by users and further distort input-output costs of production involved.

To deal with such a problem of '*royalty accumulation*', competition authorities are trying to encourage the use of patent pools- seen as agreements among different firms to jointly market licenses for a group of patents related to the technology concerns and belonging to given members of the pool. Patent pooling is effective as far as it allows technology users to acquire a comprehensive license and restrict patent-competition. The formation of such patent pools allow what some economists term as '*coopetition*' (an amalgamation of 'cooperation' and 'competition'). Unfortunately, such an activity of patent pooling also gives firms (involved in pooling patents), an opportunity to raise prices tacitly by colluding (termed *tacit collusion*).

## What can be done?

“When we think of an economic problem, the first answer that occurs to us is not always the correct one.” (Tirole, 2016). It is difficult to offer any uniform prescriptive solution to a very case sensitive and situation-dependent problem which is often the case in analyzing most IP related cases (in patenting or otherwise). Perhaps, this is exactly what makes the subject of IPR more complex particularly in times when global value and supply chains are deeply interconnected due to the effects of digitization with the phenomenology of markets reflecting complex network effects.

For example, in case of information technologies where users of technology have to coordinate if they want to interact, it may be easier to set specific standards to ensure for example, app developers of a certain smartphone conform to some technical standards set for Apple’s iOS or Google’s Android. Here, a standard-setting organization that is (cap)able of considering alternative technological approaches involved in a given commercial activity can then establish a standard with a given set of functions (for users, tech. developers etc.) to incorporate into their technological choices.

Nonetheless, standard setting process can enable a monopoly rent seeking behaviour amongst big corporations which is a common problem. When standards are breached, court cases proliferate, legal costs go up and quite often the courts (or regulatory authorities) lack the information to make a ‘reasonable’ decision.

## Cultivating institutions of innovation

From an economic standpoint, technology-based innovations in any stage of development in a society require two things: *innovators* and *finance*. Unless the state and other regulatory agencies are able to nurture an environment for ensuring a right balance of incentive structures for both, the interests of innovators will perpetually outbalance the needs of the society (than the other way round).

An imagination to foster innovation puts more emphasis on role of universities and other advanced research institutes (than corporations per se) in facilitating a high-quality training of young individuals, pursue state of the art research and encouraging self-entrepreneurial opportunities. Incentives matter more in this regard than uniform regulatory prohibitions.

If the ultimate objective is to cultivate an environment of innovation or in Schumpeterian language promote 'creative destruction' where new innovations drive out old innovations, it is important to avoid any uniform, policy-based prescriptions on matters of intellectual property (at least, in case of patenting).

From the perspective of India where most markets are in a nascent stage of evolution, any radical effort made to significantly control or regulate pricing while restricting entry possibilities of young (self-started) firms is likely distort to incentive structures, proving to be counter-productive to the innovation cycle.

Whether it is patents or any other regulatory form of intellectual property, it is pertinent to acknowledge the role of IP as a *necessary evil* for stimulating pathways of research and development by providing a protected income incentive for the innovator.

However, the actual evidence to check whether IP (and the law or policy protecting it) leads to the desired goal of enabling innovation within any given commercial activity must qualify to a periodic process of scrutiny to understand what kind of regulation works and doesn't work-particularly for economies transitioning across different stages of economic and social development. ■

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### Endnotes

1. *The quote has been slightly modified to make the author's point more gender inclusive.*