

**THE MACRO-ECONOMIC IMPACT OF THE PATENT SYSTEM****Vishnu S Warriar\*****Harikrishnan S\*\******Abstract***

Technology and knowledge are important factors for economic growth and development. Patents are legal instruments intended to encourage innovation by providing a limited monopoly to the inventor (or their assignee) in return for the disclosure of the invention. By offering exclusive rights for a limited period, an inventor may recover R&D costs and investments. It also promotes investment to commercialize and market new inventions so that the general public can enjoy the fruit of the innovation. Further, the system is designed to disseminate knowledge and information to the public through publication of patent applications and granted patents. Therefore, allowing the ideas to become public and forming breeding grounds for creation of many more new and useful inventions through dissemination of the knowledge included in the published invention. The underlying assumption being innovation is encouraged because an inventor can secure exclusive rights, and therefore a higher probability of financial rewards in the market place, this paper tries to analyze the macro-economic impact of Patent System.

---

\* B.A.L, LL.M (NLIU, Bhopal), UGC – NET, Assistant Manager – Legal, HLL Lifecare Limited (A Govt. of India Enterprise).

\*\* M.Tech (NIT – Trichy), CSIR-NET, PGDPL (NALSAR University of Law) Doctoral Candidate, IIT – Madras.

---

## A. Introduction

Patent is a set of exclusive rights granted by a sovereign state to an inventor or assignee for a limited period of time in exchange for detailed public disclosure of an invention<sup>1</sup>. Role of patent system in economic growth received greater attention in the recent past especially after the Apple – Samsung case<sup>2</sup>.

The patent system is designed in such a way as to encourage innovation. Patents, by conferring rights on the owner to exclude competitors from the market, offer the incentive for people to study new technology. In some fields, particularly pharmaceuticals, it is also argued that the monopoly of the patent in the market allows the owner recover the huge expenses invested in the research and development phase<sup>3</sup>.

Technology and knowledge are important factors for economic growth and development. Patents are legal instruments intended to encourage innovation by providing a limited monopoly to the inventor (or their assignee) in return for the disclosure of the invention.

By offering exclusive rights for a limited period, an inventor may recover R&D costs and investments. It also promotes investment to commercialize and market new inventions so that the general public can enjoy the fruit of the innovation. Further, the system is designed to disseminate knowledge and information to the public through publication of patent applications and granted patents.

Therefore, allowing the ideas to become public and forming breeding grounds for creation of many more new and useful inventions through dissemination of the knowledge included in the published invention.

---

<sup>1</sup> An invention is a solution to a specific technological problem and is a product or a process.

<sup>2</sup> Apple Inc. v. Samsung Electronics Co., Ltd

<sup>3</sup> Werth, Barry (2013). "Tale of Two Drugs", MIT Technology Review available at <http://www.technologyreview.com/featuredstory/520441/a-tale-of-two-drugs/> last accessed on June 13, 2014 at 12:23 PM

## The Macro-Economic Impact of the Patent System

### B. Relationship between the patent system and economic growth.

The patent system has an impact on the economy as a whole. The economics surrounding group of patents or a single patent revolves around the balance between the expense of maintaining the patent(s), and the income derived from owning those patents<sup>4</sup>.

### C. Patents & free and fair market competition

Patent is an exclusive right enjoyed by the inventor *to exclude others from commercially exploiting the invention for a limited period*. However, in order to get Patent rights, inventor shall disclose the invention. Thus disclosure of invention is an important consideration in any patent granting procedure.

Balance between the interest of patent holder and that of the public has recently been discussed a lot in the light of competition policy, because the *right to exclude others* particularly referred to as “Monopoly”. The aims and objectives of patent and competition policy may seem *prima facie* as odds. However, both competition policy and patent law are complimentary, as both are aimed at encouraging innovation and competition.<sup>5</sup>

Patent rights are not legal monopolies in competition law perspective. They do not necessarily confer monopoly power on patent rights holder.<sup>6</sup> Most of the countries adopted a market system, where free and fair competitions between the enterprises are allowed within the limits defined by law. Such competitions are considered to be the best means of satisfying the demand-supply chain and thereby protecting the consumer interest and the economy as a whole. However, when there is a competition, possibility of unfair practices are high.

Patent holders may deploy their rights improperly to the detriment of competition and technological progress by forming cartel and thereby suppressing competition in associated markets or alternative technologies so as to raise the entry barriers. Such practices will be having direct detrimental impact on economy as well as the consumer interest.

Rules on the prevention of restrictive trade practices as well as on prevention of unfair competition interrelated as both aims at ensuring an efficient operation of the market. However, fair play in the market cannot be ensured only by the protection of industrial

---

<sup>4</sup> Kryazhinskii, Arkadii; Watanabe, Chihiro and Tou, Y. (2002), "Dynamic model of market of patents and equilibria in technology stocks" available at <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.199.4968&rep=rep1&type=pdf>

<sup>5</sup> Atari Games Corp. v. Nintendo of America, Inc

<sup>6</sup> US Federal Trade Commission

## **The Macro-Economic Impact of the Patent System**

properties. Therefore, it is necessary to supplement the laws on industrial property. This can be done by preparing competition law flexible and the protection there under must be independent of any formality such as registration.

In order to maintain fair competition within the market, competition policy prohibits such restrictive trade practices as well as agreements which restrict fair competition in the market. Hence, the interplay between competition policy and the patent law ensures recognition of innovation, by keeping away abuse of dominant powers, maintaining fair competition and improving consumer welfare.

### **D. Patent policies and economic growth**

Importance of Patent and needs for specific policies for patent has been recognized by the policy makers during early 1990's. As a result, policy makers recognized the role of patent system as an important element of the institutional infrastructure and thereby encouraging private investment in Research & Development (R&D) sector.

Patents as a private and intangible good prevent competition based on free-riding and supports innovation based competitions through limited monopoly and public good through disclosure of innovation. Therefore, we can say that, patent system offers a proper balance between two extreme policies viz. private good and public good.

Besides accelerating the growth in innovation, patents also assist in determining the directions of technical change and thereby leading to adopt necessary patent policies in those countries where there are no such practices in existence<sup>7</sup>.

### **E. Economic impact of patents**

Scope of patent protection is regularly assumed to be much broader than actually determined by law. It is then no wonder that the assumption that intellectual property rights in general and patents in particular confer an economic monopoly on their owner is considered by Kitch to be one of the "elementary but persistently repeated errors" in economic analysis<sup>8</sup>.

The economic importance of patents is rapidly increasing. However, visible and demonstrable evidence of economic payoff attributable to intellectual property (IP) protection

---

<sup>7</sup> Petra Moser, How Do Patent Laws Influence Innovation? Evidence from 19th-Century World's Fairs, *American Economic Review*, vol. 95 (4), September 2005, pp. 1215-1236

<sup>8</sup> EDMUND W. KITCH, "Elementary and Persistent Errors in the Economic Analysis of Intellectual Property," 53 *Vanderbilt Law Review*, November 2000, at 1729

## **The Macro-Economic Impact of the Patent System**

(including patent protection) is currently not sufficiently widespread.<sup>9</sup> It is always difficult to analyze the role of the patent system in the economic development process due to the complexities in separating or desegregating the effects of IP protection from other factors which got an impact in the developing economies.

Role of patents in economic development is likely to be case-specific, in the context of both variations from industry to industry and variations among countries. Effects of patents on a given market may vary widely according to the type of market, and whether there are other barriers to entry.

Even in socialist monopole economies, the adherence to international patent laws was or becomes strict, as the effect is reciprocal for public economy, as soon as the level of technology development in these economies creates comparable advantage<sup>10</sup>.

However, since patents essentially encourage innovation by giving owners the right to monopolize the market for a limited time, the public will suffer from the patents that are not innovative by paying higher cost.

### **F. Concluding remarks:**

Technology and knowledge are important factors for economic growth and development. Patents are legal instruments intended to encourage innovation by providing a limited monopoly to the inventor (or their assignee) in return for the disclosure of the invention. By offering exclusive rights for a limited period, an inventor may recover R&D costs and investments. It also promotes investment to commercialize and market new inventions so that the general public can enjoy the fruit of the innovation. Further, the system is designed to disseminate knowledge and information to the public through publication of patent applications and granted patents. Hence, allowing the ideas to become public and forming breeding grounds for creation of many more new and useful inventions through dissemination of the knowledge included in the published invention.

### **Table of Cases**

1. Apple Inc. v. Samsung Electronics Co., Ltd
2. Atari Games Corp. v. Nintendo of America, Inc

---

<sup>9</sup> Keith E. Maskus, *Intellectual Property Rights in the Global Economy* (Washington, D.C.: Institute for International Economics, August 2000).

<sup>10</sup> Langinier, Corinne; GianCarlo, Moschini. "Chapter 3: The Economics of Patents: An Overview" available at [http://www2.econ.iastate.edu/research/webpapers/paper\\_2061.pdf](http://www2.econ.iastate.edu/research/webpapers/paper_2061.pdf) last accessed on June 15, 2014 at 10:28 AM

### Bibliography

1. Blind, Knut; Jungmittag, Andre; The impact of patents and standards on macroeconomic growth: a panel approach covering four countries and 12 sectors available at [http://www.inno.tu-berlin.de/fileadmin/a38335100/PDF\\_Dateien/Allgemein/Blind\\_Jungmittag\\_2008.pdf](http://www.inno.tu-berlin.de/fileadmin/a38335100/PDF_Dateien/Allgemein/Blind_Jungmittag_2008.pdf) last accessed on June 15, 2014 at 7: 31 AM
2. Chu, Angus C; Macroeconomic Effects of Intellectual Property Rights: A Survey, available at [http://mpa.ub.uni-muenchen.de/17342/1/MPRA\\_paper\\_17342.pdf](http://mpa.ub.uni-muenchen.de/17342/1/MPRA_paper_17342.pdf) last accessed on June 15, 2014 at 9:23 AM
3. EDMUND W. KITCH, "Elementary and Persistent Errors in the Economic Analysis of Intellectual Property," 53 Vanderbilt Law Review, November 2000, at 1729
4. Gaur, Abhinav; Rights and Obligation of Patentee: A Negative Right, The Lex-Warrior: Online Law Journal (ISSN: 2319-8338) available at <http://lex-warrior.in/2013/05/rights-and-obligation-of-patentee-a-negative-right/> last accessed on June 13, 2014 at 8: 24 PM
5. <http://www.wipo.int/patent-law/en/developments/economic.html> last accessed on June 14, 2014 at 4:48 PM
6. Keith E. Maskus, Intellectual Property Rights in the Global Economy (Washington, D.C.: Institute for International Economics, August 2000).
7. Kryazhimskii, Arkadii; Watanabe, Chihiro and Tou, Y. (2002), "Dynamic model of market of patents and equilibria in technology stocks" available at <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.199.4968&rep=rep1&type=pdf>
8. Langinier, Corinne; GianCarlo, Moschini. "Chapter 3: The Economics of Patents: An Overview" available at [http://www2.econ.iastate.edu/research/webpapers/paper\\_2061.pdf](http://www2.econ.iastate.edu/research/webpapers/paper_2061.pdf) last accessed on June 15, 2014 at 10:28 AM
9. Petra Moser, How Do Patent Laws Influence Innovation? Evidence from 19th-Century World's Fairs, American Economic Review, vol. 95 (4) , September 2005, pp. 1215-1236
10. Siwal, Ashwini; IPR and Competition Law Regime: Towards a Common Goal, The Lex-Warrior: Online Law Journal (ISSN: 2319-8338) available at <http://lex-warrior.in/2013/05/ipr-and-competition-law-regime-towards-a-common-goal/>

## **The Macro-Economic Impact of the Patent System**

[warrier.in/2012/11/ipr-competition-law-regime-towards-common-goal/](http://lex-warrier.in/2012/11/ipr-competition-law-regime-towards-common-goal/) last accessed on July 14, 2014 at 12:02 PM

11. US Federal Trade Commission

12. Werth, Barry (2013). "Tale of Two Drugs", MIT Technology Review available at <http://www.technologyreview.com/featuredstory/520441/a-tale-of-two-drugs/> last accessed on June 13, 2014 at 12:23 PM

13. Yadav, Puneet; Dahat, Prashant; Intellectual Property: The Dominant Force In Future Commercial Transactions Comprising Mergers and Acquisitions, The Lex-Warrier: Online Law Journal (ISSN: 2319-8338) available at <http://lex-warrier.in/2012/01/intellectual-property-the-dominant-force-in-future-commercial-transactions-comprising-mergers-and-acquisitions/> last accessed on July 14, 2014 at 8:20 PM