

Facilitating Access or Monopoly: Patent Pools at the Interface of Patent and Competition Regimes

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Received 10 June 2010, revised 3 August 2010

In recent times, patent pools are being increasingly projected in policy circles as an important tool for developing countries, particularly, to gain access and cope with the problem of patent thickets in fields as diverse as pharmaceuticals, biotechnology, nanotechnology, clean energy technologies, etc. However, as borne out by the experience of different countries, particularly the United States, patent pools across industries could become anti-competitive in nature and foster 'monopoly of monopolies'.

As developing countries like India begin to explore possibilities for the creation of patent pools to facilitate access to patented knowledge and technologies, it will be appropriate to look into the interface of the patent and competition regimes and their implications for patent pooling. This is imperative in order to facilitate setting up of pools which optimize the benefits, while reducing the risks of monopoly and cartelization, which they could give rise to. However, patent pooling is a very recent concept in India, the Indian Competition Act, 2002 is yet to be notified in full and there is dearth of case law on the subject. Hence, much of this discussion can at best be anticipatory and derived from the jurisprudence and case law of developed countries, particularly, the United States which has a long history of both pools and competition law.

Keywords: Anticommons, patent pool, patent thicket, access, monopoly, competition

Heller and Eisenberg in 1998 reported a 'tragedy of the anticommons' unfolding with proliferation of intellectual property rights in upstream bio-medical research which created obstacles for a user needing access to multiple patented inputs to create a single useful product.¹ They observed that with each upstream patent allowing its owner to set up another tollbooth on the road to product development, the cost of biomedical innovation increased and slowed down the pace of downstream innovation. A similar situation is being reported in the emergent technology of nanotechnology, where large numbers of overlapping patents are being taken on fundamental nanoscale materials, building blocks and tools. Such patent thickets create 'thorny barriers for would-be innovators'.² In the case of clean energy technologies, the patents for which are mainly held by a few companies in the developed countries, developing countries are facing considerable problems in securing access. Indian firms had great difficulty in acquiring ODS (Ozone Depleting Substances) substituting technology (required to honour international commitments under the Montreal Protocol), owing to exorbitant prices quoted or

restrictive conditions imposed by the patent holders such as conceding majority ownership in proposed joint venture, export restrictions etc.³

In recent times, patent pools and open source have started to gain popularity as strategies to tackle these growing anticommons and provide a solution to the problems which a heavily patented regime leads to. According to the International Expert Group on Biotechnology, Innovation and Intellectual Property, the 'old IP era', characterized by heightened patent protection is gradually waning owing to its contribution to declining innovation and access, and gradually giving way to 'a new IP era'.⁴ This new IP era is based on increasing collaborations and partnerships so that 'knowledge gets to those who need it most to produce and disseminate new products and services'.⁴ It is worth mentioning at the very outset that while patent pools and open source are perceived to be somewhat similar in that they are both based on a paradigm of sharing and cooperation, there are some points of difference. Open source in common understanding is perceived to be more 'altruistic' and broader in scope. Its crux is 'free access' to both patented and non-patented knowledge and involves 'pooling of global information sources, expertise, facilities and management systems', with

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individuals, groups and organizations offering their resources and services in an open format for a particular objective, maybe for drug discovery.⁵ On the other hand, patent pools have a more focused approach, involving an agreement between two or more patent owners to pool their patents and license amongst themselves or to a third party on pre-determined licensing terms. Both strategies have gained support as 'alternative intellectual property strategy' to overcome barriers to access to affordable medicines by the poor in developing countries like India.⁶ UNITAID's initiative to set up a pool to deliver much needed HIV/AIDS medicine to the world's poor, GlaxoSmithKline's support for the creation of a least developed country patent pool for medicines for neglected tropical diseases are efforts in this direction. Patent pools and commons are also receiving considerable policy focus from the World Intellectual Property Organization and the United Nations Department of Economic and Social Affairs as a means to enable transfer of clean energy technologies to developing countries.⁷ In the context of nanotechnology too, observers have examined viability of pools to deal with the fragmented patent landscape where 'all patents can be licensed at a single price', avoiding the cost involved with acquiring numerous licensing agreements.⁸

Despite their potential to solve ills of the patent regime, patent pools may pose problems from the perspective of competition law, as borne out by the experience of developed countries, particularly the United States. As early as 1938, Hamilton found that many existing patent pooling schemes in the United States were used to create 'monopoly of monopolies' with the intention to make industrial knowledge common property of a limited number of economic actors and restrain trade by restricting conditions for use, suppressing new patents, and limiting competition through barricading the market against new entrants.⁹ Most developing countries like India do not have much prior experience with patent pools. Hence, it is imperative that while patent pools are adopted as an alternate strategy to secure access to patented knowledge in diverse areas, developing countries must also be prepared to deal with the potential problems which could arise.

This paper seeks to look into the legal and policy framework in India which could be applicable to patent pools, and operate at the interface of the patent and competition regimes of a country. It examines

relevant provisions of the Indian patent and competition laws and policies and analyses how the two regimes can complement each other in larger public interest, enabling the creation of pools that facilitate access, without becoming a front for reinforcing monopolies and cartels. However, patent pooling is a very recent concept in India, the Indian Competition Act, 2002 is yet to be notified in full and there is lack of case law on the subject. Hence, much of this discussion can at best be anticipatory and derived from the jurisprudence and case law of developed countries, particularly the United States, which has a long history of patent pools of over 150 years.

Opportunities and Risks of Patent Pools

Prior to looking at the Indian scenario, it will be a worthwhile exercise to briefly examine some famous patent pools across industries from the late 19th century to the present, in order to have an idea about the circumstances which necessitate their creation, the opportunities and risks they give rise to and the manner in which such risks have been dealt with by the law. Here, it may be mentioned that majority of these pools have been created in the United States and that individual patent pools vary greatly from each other. Serafino's survey of about 35 patent pools organized or proposed from 1856 to the present across a number of industries indicate that 'each of the patent pools was organized in response to a particular set of policy objectives and circumstances' and there is 'no single reason for creating a patent pool and no single way to manage a pool'.¹⁰ Nevertheless, he arrived at a categorization of patent pools in the following manner:

- 1 Early pools associated with monopolies and cartels-namely the Sewing Machine Combination (1856), National Harrow Company (1890), Motion Picture Patents Company (1908), Davenport Folding Beds (1916) etc.
- 2 Pools created in response to US government policy objectives, which include the Manufacturers Aircraft Association (1917) and the Radio Corporation of America (1919), and
- 3 More recent pools that address standardization, such as the MPEG-2 Patent Portfolio, MPEG-4 (1998), DVD 3C (1998), DVD 6C (1999) etc.

Merges on the other hand, classified patent pools into the following three kinds:

- 1 Mega pools, which are huge industry-wide institutions with dozens of members, and

encompassing hundreds of patents (e.g., Sewing Machine Combination, Manufacturers Aircraft Association etc.)

- 2 Small, contract-based pools (e.g., Davenport bed industry), and
- 3 Recent pools in consumer electronics (MPEG-2, DVD).¹¹

A closer look at a few famous pools in history illustrate the differences.

The Sewing Machine Combination of 1856 was a voluntary arrangement which brought together nine complementary patents held by different patent holders, necessary to build a functional sewing machine. It was necessitated by the considerable litigation between the parties or the 'sewing machine wars' of the 19th century, which threatened to stop production and sales. This patent pool was in existence for the duration of all the original patents, coming to an end when the last patent expired. On the other hand, the Manufacturers' Aircraft Association (MAA) was a government enforced pool formed in 1917, encompassing almost all aircraft manufacturers in the United States. The creation of the MAA was crucial to the US government as the two major patent holders, the Wright Company and the Curtiss Company, had effectively blocked the building of any new airplanes, which the government needed to deploy in large numbers in the soon to begin World War I. A board of arbitrators decided the reward to be paid to individual patent owners. Patents in the pool were divided into two classes: (i) exceptional or foundational patents (for instance, those of Wright Brothers and Curtiss), which earned huge royalties for their holders and (ii) normal patents, the licensing for which was conducted on a royalty-free basis, with mutual forbearance from infringement suits being the real incentive for the exchange.

In contrast to these 'mega' pools, there were also a 'host of smaller, more modest pools targeted at specific industry sectors or technologies', which are akin to multilateral contracts with two basic elements: a contract which consolidates property rights in a central entity and a valuation mechanism, based on a simple formula to divide up the royalty stream.¹¹ An example of this kind of pool is the Davenport bed industry patent pool. In this case, the owners of various patents related to folding beds and other similar devices entered into an agreement providing exclusive license to the Seng Company to manufacture and sell under the pool patents. The Seng

Company paid a fixed percentage to the pool. Pool members split the royalty according to a formula in the pooling agreement. Pools such as these also existed in a host of industries including movie projectors, hydraulic pumps, swimming pool cleaners, synthetic polypropylene fiber production, etc.

Some of the most famous successful instances of patent pooling in recent times have come in the field of consumer electronics. Most of these have been set up in response to the need for standard setting, with even the 'fiercest enemies' having to team up to promote new standards.¹² Once a standard is chosen, patents necessary to create it become very crucial and the standard itself might be subject to holdup if the patent holders do not license their patents on reasonable terms. An example is the MPEG-2 Patent Pool which combined 27 patents held by 9 patent holders necessary to meet MPEG-2 standard; it being a video data storage compression standard used in connection with Digital Versatile Disc (DVD) technology. Another instance is the DVD Patent Pooling formed in 1995. Here, a DVD patent pool was formed amongst Philips and Sony, with the former to be the licensor. Six months later, another DVD pool was formed by Hitachi, Matsushita, Mitsubishi, Time Warner, Toshiba and JVC. Both the pools were cleared by the Anti-Trust Division of the US Department of Justice. It recognized that formation of two patent pools precluded the opportunity for a one-stop-shop, yet, it would lead to a reduction in transaction costs, as now one had to deal with just these two pools, as opposed to separate dealings with the ten firms which constituted these two pools.

Some of the recent patent pools in the biotechnology sector exhibit different characteristics. On one hand, there are pools like the one created in 2001 to clear a patent thicket that restricted commercial use of GFPs (reporter molecules used in drug discovery to create a detailed picture of how potential drugs affect the distribution, trafficking and function of proteins within a cellular environment), in which GE Healthcare (then Amersham Biosciences), Bioline A/S and Invitrogen IP Holdings, formerly Aurora Biosciences Corporation and Columbia University decided to pool their patents. On the other hand, the Golden Rice Pool is a 'humanitarian' pool created to bring together numerous patents held by about 40 organizations, required to produce golden rice. Dr I Potrykus who held the fundamental patent assigned his rights to Syngenta, which then acquired other rights from other patent holders such as Bayer

AG, Monsanto Co, Orynova BV, and Zeneca Mogen BV. Although Syngenta retained the commercial rights, it gave Dr Potrykus a humanitarian license to sublicense to public research institutions and low-income farmers in developing countries the complete package of technologies.

Despite their marked differences as seen in the examples above, all patent pools, however, share one fundamental characteristic: they provide a regularized transaction mechanism in place of the statutory property rule baseline which requires an individual bargain for each transaction.¹¹ The above instances indicate that patent pools, since the earliest ones up to the present, provide a mechanism for obtaining multiple patent rights through a 'one-stop licensing' and confer certain distinct advantages. Lampe and Moser found that pools such as the Sewing Machine Combination led to substantial reduction in licensing costs, as compared to the original fees charged, both for pool and non-pool members (though the former were more benefited).¹³ 'Mega pools' like the MAA and the auto industry patent pool brought an institutionalized end to ubiquitous litigation. Modern pools in consumer electronics help conform to international standards. The Golden Rice pool, on the other hand, is based on an altruistic principle for making available the product for developing countries. In addition, patent pools also provide some not-so obvious advantages such as facilitating institutionalized exchange of technical information that is not covered by patents, through a mechanism for sharing technical information relating to the patented technology, which would otherwise be kept as a trade secret.¹⁴ Further, according to Resnik, pooling would help companies earn a steady income, recover their investments and reduce risk, which could spur them to further research and innovation.¹⁵

Despite the advantages, Krattiger and Kowalski liken patent pools to a 'potential double-edged legal sword', which while being able to cut through patent thicket blockages, pose a number of risks, mainly from the perspective of competition.¹⁶ One of the most serious risks of a patent pool is its potential to foster monopoly, limit competition and become a front for a cartel. A cartel is a horizontal agreement, between enterprises at the same stage of the supply chain, used to fix prices, allocate customers or territories, restrict outputs or rig bids.¹⁷ Being regarded as the most harmful form of violation of competition law, they are subject to the *per se* rule in most jurisdictions, including the United States, Canada, Japan, Germany, etc.¹⁸

Evolving Jurisprudence

Some of the early 20th century pools in the United States were broken up through court intervention owing to their cartel-like attributes. A famous example is the patent pooling arrangement set up by the Radio Corporation of America, along with General Electric, Westinghouse and American Telephone and Telegraph, which was ultimately broken up through a consent decree of the court in *United States v Radio Corporation of America et al.* (in Federal District Court for the District of Delaware, 7 March 1932). Similarly, in *Hartford-Empire v United States*¹⁹, the Court forced the members of a pool cartel covering over 600 patents, controlling the entire field of glass-blowing technology to license the patents to all comers at a reasonable royalty rate.

While the *per se* rule applies when patent pools degenerate into cartels, the former are generally subject to the rule of reason in most jurisdictions. In fact, US courts in some early decisions posed the question as to whether patent pools could at all be the subject matter of anti-trust or competition law enshrined in the Sherman Act of 1890. In *E Bement & Sons v National Harrow Co*²⁰, the Court held that since 'the objective of patent law was monopoly'; patent pools were exempt from anti-trust actions with patent owners having the right to specify prices for their inventions. This position was, however, reversed in *Standard Sanitary Manufacturing Co v United States*²¹, where the US Supreme Court held that patent pools were not objectionable *per se* but increasingly, they were being used to fix prices and to limit industrial output and in this particular case, held that the pool violated antitrust laws. Strong legal backing for pools came in *Standard Oil Co v United States*²² which saw the development of the *rule of reason* doctrine whereby combinations and contracts are subject to anti-trust law only when they 'unreasonably' restrain trade. The Court held that pools might not only be beneficial, but essential if 'technical advancement is not to be blocked by threatened litigation' and further that if the patents were available on 'reasonable terms to all manufacturers', 'such interchange may promote rather than restrain competition'.

The case laws from the United States show that patent pools from time to time have been found guilty of many anti-competitive practices such as price-fixing, tying arrangements and post-sales restrictions on patented goods.²³ What is of considerable interest

is the evolution of varying standards in law on what constitutes 'anti-competitiveness' in respect of patent pools. In a few cases, courts while upholding the position that patent pools *per se* were not violative of equitable conceptions of competition, came down very heavily on the anti-competitive practices of 'patent misuse' of which pools were found guilty.²⁴ In *Motion Picture Patents Co v Universal Film Manufacturing Co*²⁵, the Court invalidated patent licensing restrictions imposed by the patent pool of movie exhibitors, which required that their patented motion picture projection equipment be resold at a set price, and that these projectors be used only with the patented film of the licensors. In *Morton Salt Co v G S Suppiger*²⁶, the Court took a stronger stand on patent misuse and its illegality; tying, price-fixing arrangements, and patentee's post-sales restrictions on patented goods were deemed to be instances of patent misuse. In *United States v Line Material*²⁷, the Court emphasized that 'there is nothing unlawful in the requirement that a licensee should pay a royalty to compensate the patentee for the invention or the use of the patent. The unlawful element is the use of the control that such cross-licensing gives to fix prices'. In the case of *United States v National Lead Co*²⁸, National Lead, a producer of titanium dioxide, used in paints and other products, settled conflicting claims with foreign producers by consenting to cross-license existing and future patents and exchange technical information. The Court held that the agreement to license present and future patents and share know-how led to a thicket blocking new entrants to the market. In a later case *United States v New Wrinkle Inc*²⁹, the Supreme Court held that 'two or more patentees in the same field may not legally combine their valid patent monopolies to secure mutual benefits for themselves through contractual agreements between themselves and other licensees, for control of the sale price of the patented devices'.

Patent misuse in a pool increasingly came to be treated more strictly and finally the US Department of Justice came out in the 1970s with a list of licensing practices which were presumed to be *per se* violations of the antitrust laws or the 'Nine No-Nos'. These included among others, practices such as requiring a licensee to purchase unpatented materials from the licensor, restricting a purchaser of a patented product in the resale of that product, imposing curbs on the licensee's freedom to deal in products or services outside the scope of the patent, requiring the licensee to

accept a package license or to adhere to specified or minimum prices in the sale of the licensed products etc.

This rigid approach to licensing agreements articulated in the 1970s has undergone considerable changes since then, with the Justice Department, in cooperation with the Federal Trade Commission (FTC) coming out with the Antitrust Guidelines for the Licensing of Intellectual Property in 1995 (ref. 30) The 1995 Guidelines highlight the positive aspects of patent pools and coming a far way from the 'Nine No-Nos', identify only few pooling practices as problematic and that too under certain conditions. These include collective price or output restraints (unless they contribute to market efficiency), excluding competitors from access to the pooled patents (but only when the pool members collectively possess market power and the excluded member is, therefore, unable to compete) and restrictions that negatively impact research and development. The Department of Justice came out with additional guidelines while approving three proposed patent pools- the MPEG pool and two DVD pools, as per which patents in the pool must be valid and not expired, there can be no aggregation of competitive technologies and setting a single price for them, independent expert to determine whether a patent is essential to complement technologies in the pool. Further, it must not disadvantage competitors in downstream product markets and pool participants must not collude on prices outside the scope of the pool, for example, on downstream products.

A review of two judicial decisions after the 1995 Guidelines will best illustrate what constitutes the modern standards for a pro-competitive patent pool and when does it amount to patent misuse. In *re Summit Technology Inc and VISX Inc*³¹, the United States Federal Trade Commission charged Summit and VISX, two firms that controlled the market for laser eye surgery, with a price-fixing conspiracy. The two firms were the only two FDA-approved manufacturers of lasers used in photorefractive Keratectomy (PRK) surgery. Instead of entering the market independently, they formed a patent pool through a partnership entity- Pillar Point Partners, which comprised about 25 patents. Pillar Point Partners then licensed the full portfolio of patents back to Summit and VISX and not to any third party. Summit and VISX sold or leased PRK equipment to eye doctors and sublicensed the doctors to perform PRK procedures. According to the Federal Trade

Competition, this pool was anti-competitive. Many of the patents in the Summit/VISX patent pool were competing patents and without the pool, Summit and VISX would have been horizontally competing with each other. According to FTC, the assembly of competing patents could not be justified, and this arrangement eliminated all competition and led to significant increase in the price paid by the consumer for PRK procedure. The pool also prohibited unilateral licensing by either party and hence, restrained competition in every way.

Another famous case is that of *US Philips v International Trade Commission (ITC)*³², where standards for a pro-competitive patent pool have been relaxed to the extent of providing legal sanction for package licensing³³, which could not be deemed to be patent misuse under certain circumstances. The Federal Circuit held that Philips was able to provide evidence that package licensing reduces transaction costs by eliminating the need for multiple contracts and reducing licensors' administrative and monitoring costs.

It is, thus, evident, that since 1995, patent pools have received a liberal treatment in the United States with respect to anti-competitiveness and this trend is only going to accelerate, with a shift towards 'greater leniency in anti-trust regulation of intellectual property' and overt protection of patent rights at the expense of anti-trust law.³⁴ According to Shapiro, the yardsticks for judging the desirability or non-desirability of a pool has finally collapsed to just one parameter: blocking (essential) or complementary patents belong in a pool, while substitute or competing patents are to remain separate.¹²

Much of the discussion and learning's on how to manage the anti-competitive aspects of patent pools have come from the United States. In Europe, till recently, patent pools have not been a matter of much public discussion, with there being very little literature on European policy in this regard.³⁵ The crux of the European competition law is contained in Article 81 of the European Community Treaty, which prohibits anti-competitive arrangements between businesses with Article 81 (1) listing a number of explicitly prohibited categories of anti-competitive behaviour such as fixing purchase or selling prices, limiting or controlling production, markets, technical development or investment etc. Article 81 (3) carves out a number of exemptions, which allows the Commission to declare Article 81(1) inapplicable in case(s) which 'contributes to improving the

production or distribution of goods or to promoting technical or economic progress, while allowing consumers a fair share of the resulting benefit' and which does not impose restrictions not indispensable to attaining these objectives or makes it possible to eliminate competition in a substantial manner. When applied to individual instances, the exemptions are referred to as individual exemptions. Block exemptions refer to regulations which exempt whole categories of business practices. Patent pools are not covered by block exemptions but treated on a case-by-case basis. In the case of a number of pools, the European Commission adopted a 'comfort letter' process whereby letters were issued by it stating its intent not to challenge an arrangement.³⁶ For instance, the Commission cleared the DVD patent pool to be administered by Toshiba in 2000 through a comfort letter. The Commission cleared the pool as it felt that 'the pool would help promote technical and economic progress by allowing quick and efficient introduction of the DVD technology' and does not contain 'unnecessary or excessive restrictions on competition'.³⁷ Similarly, this approach was adopted in the Commission's conditional approval in 2002 of the 3G Patent Platform set up by the developers and manufacturers of the Third Generation or 3G mobile communication products. According to Franzinger, the approach of the Commission towards pools has alternated between leniency and a hard-line approach as seen in individual decisions.²⁵ In his opinion, the tendency of the EC has been to regulate pools quite tightly and has also led to imposition of numerous conditions on pools subject to conditional approvals such as in the 3G mobile pool.

In 2004, the EC came out with a new regulation on block exemption for technology transfer licenses, with it being expressly stated in the preamble itself that it does not deal with licensing agreements to set up 'technology pools' (Commission Regulation (EC) No. 772/ 2004). This is confirmed further in the accompanying guidelines (EC Guidelines, 2004/C 101/02). Nevertheless, the guidelines provide some indication of the conditions which pools will have to comply with in order to be compatible with European competition laws, namely Articles 219-221 which talk about essentiality of patents in a pool, Article 224 which stipulates that pools should be open, and should not foreclose third party technologies. Article 225 stresses on the freedom of the licensee to determine price of the product and also favours the selection of

the patents in the pool by an independent expert. From these Guidelines, it can be anticipated that the European Union is likely to adopt a liberal attitude towards pools which have been recognized to produce 'pro-competitive effects' subject to adherence to a few minimum pro-competitive conditions.

Patent Pools in the Context of the Indian Patent Regime

In developing countries like India, the concept of patent pooling is a fairly recent one and has mainly been discussed as one of the proposed solutions to the problem of access to affordable health care. It is recognized that many of the diseases of the poor require new medicines and none are forthcoming owing to general lack of interest of pharma companies due to the limited nature of the market in developing countries.⁶ A pool is viewed as one of the ways to bring together a number of patents held by different entities, in order to promote the development of and access to solutions for diseases afflicting the poor in developing countries. The Medicines Patent Pool, for instance, proposed by Médecines sans frontières (MSF) seeks to bring together patents held by different entities relating to the manufacture, sale and distribution of HIV-AIDS anti-retroviral medicines (and potentially other medicines that meet significant public health concerns) in the developing world. The imperative of this pool lies in the fact that patent holders are not producing either the fixed-dose combinations or the new formulations required by developing countries and that anti-retrovirals are not affordable in these countries.³⁸

It now remains to be seen how such a patent pool, as described above, would operate in the context of the Indian patent regime and whether any legal barriers can be expected in the operation of such a pool in India. Though a pool might be international in scope, it will be subject to the patent and competition laws of the countries, in which manufacture and/or sale of the product arising out of the pool is likely to occur.

India, prior to 2005, had a process patent regime, which was taken advantage of by sectors such as biopharmaceuticals to develop a generics industry of considerable strength. Being engaged only in the production of bio-generics and not new products, for which they had many process patents, Indian companies did not find much obstruction from the prevalence of anticommmons.³⁹ However, access to patented knowledge is likely to be problematic in the

product patent regime brought into effect by the Patent (Amendment) Act, 2005. In the case of many sectors like biotechnology, nanotechnology etc., there is the prevalence of an increasingly fragmented patented landscape, with many pieces of patented knowledge being required to produce a single product. This translates to the negotiation of multiple licenses and payment of multiple licensing fees, thus, pushing up the prices of the final product.

A patent pool offers some hope in dealing with these problems of securing multiple licenses required for a product, which is also affordable by the poor in developing countries. Although the Indian Patent (Amendment) Act of 2005 (IPA) does not have specific provisions for collective protection of patents through a patent pool, it also does not have provisions which could create legal barriers to its formation. Since the basis of a patent pool are a number of cross-licensing agreements between holders of patents and licensing agreements with other parties wishing to access the patents in a pool, it will be pertinent to look into the provisions dealing with licensing and assignment under the IPA and analyse their implications for patent pooling. Section 68 of the IPA provides scope for assignment of patents by contract in writing. It reads as under:

‘An assignment of a patent or of a share in a patent, a mortgage, license or the creation of any other interest in a patent shall not be valid unless the same were in writing and the agreement between the parties concerned is reduced to the form of a document embodying all the terms and conditions governing their rights and obligations and application for registration of such document is filed in the prescribed manner with the Controller within six months from the commencement of this Act or the execution of the document, whichever is later or within such further period not exceeding six months in the aggregate as the Controller on application made in the prescribed manner allows: Provided that the document shall, when registered, have effect from the date of its execution’.

Under Section 69 of the Act, a person who becomes entitled by such assignment or transmission to a patent or to a share in a patent or becomes entitled as mortgagee, licensee or otherwise to any interest in a patent, shall apply in writing to the

Controller for the registration of his title, or, as the case may be, of notice of his interest in the register.

Also pertinent in the context of patent pools, are the provisions in the Indian Patent Act, which ensure that certain restrictive conditions are not inserted into a contract for licensing of a patent. Insertion of restrictive conditions is a practice which licensing arrangements associated with a pool have often been accused of, leading to much anti-trust litigation across the world. Section 140 of the Indian Patent Act makes it unlawful to insert in a license to manufacture or use a patented article or in a license to work any process protected by a patent, a condition the effect of which may be to:

- (a) require the licensee to acquire from the licensor or his nominees, or to prohibit from acquiring or to restrict in any manner or to any extent his right to acquire from any person or to prohibit him from acquiring except from the licensor or his nominees any article other than the patented article or an article other than that made by the patented process; or
- (b) prohibit the licensee from using or to restrict in any manner or to any extent the right of the licensee, to use an article other than the patented article or an article other than that made by the patented process, which is not supplied by the licensor or his nominee; or
- (c) prohibit the licensee from using or to restrict in any manner or to any extent the right of the licensor to use any process other than the patented process,
- (d) provide exclusive grant back, prevention to challenges to validity of patent and coercive package licensing.

The IPA, thus, has inbuilt provisions to take care of situations and problems which arise out of patent pools, without even requiring recourse to competition law.

While the usual practice to set up a patent pool, as seen in instances across a range of sectors, is by securing voluntary licenses from patent holders, a pool could also be set up through government intervention (as seen in the case of aircraft pool set up by the US government). A pool comprising of voluntary licenses, according to Gold *et al.*, does not raise significant international or national legal issues.²⁷ They further opine that a pool based on non-voluntary licensing (requiring compulsory licenses or government use) could be created but it would be very complex. Section 102 of the IPA may be interpreted

as facilitating setting up of government administered and managed patent pools. As per Section 102(1) the Central Government may, if satisfied that it is necessary that an invention which is the subject of an application for a patent or a patent should be acquired from the applicant or the patentee for a public purpose, publish a notification to that effect in the Official Gazette, and thereupon the invention or patent and all rights in respect of the invention or patent shall, by force of this section, stand transferred to and be vested in the Central Government. In such a case, the Central Government shall pay to the applicant, or, as the case may be, the patentee and other persons such compensation as may be agreed upon between the Central Government and the applicant or patentee and other persons. In case of default of agreement, the compensation is to be determined by the High Court having regard to the expenditure incurred in connection with the invention and, in the case of a patent, the term thereof, the period during which and the manner in which it has already been worked (including the profits made during such period by the patentee or by his licensee whether exclusive or otherwise) and other relevant factors. Making use of the above provisions, the central government has the legal wherewithal under the patent law to acquire the requisite inventions and patents, needed to set up a pool in public interest.

Individual patents needed to set up a pool may also be acquired through compulsory licenses, in cases where voluntary licenses cannot be secured. In the IPA, Section 84 allows such compulsory licensing on a number of stated grounds. However, the fact remains that compulsory licensing is not an easy proposition for developing countries which face political pressure from developed countries, even if that is allowed by TRIPS.⁴⁰ Also, there is some consensus that pools set up through voluntary means have more chances of success. According to Overwalle *et al.*, it is always a better strategy to encourage companies to establish patent pools through voluntary means than to force them into a compulsory licensing scheme.⁴¹ According to Gold *et al.*, the grant of one or more compulsory licenses could create additional pressure to get voluntary licenses for some patent holders, with the risk that other patent holders may be reluctant to license their patents if they know that their voluntary licenses will be supplemented by compulsory licenses.²⁷

Dealing with Anti-Competitive Patent Pools: Is the Indian Competition Regime Equipped?

As already seen from the analysis of developments in the United States and the European Union; patent pooling could raise issues for competition law. In India, under the new Competition Act of 2002, yet to be notified in full, there are prohibitions on certain kinds of IPR licensing agreements which are deemed to be 'anti-competitive in nature'. As per Section 3(1) of the Act, no enterprise or association of enterprises or person or association of persons shall enter into any agreement in respect of production, supply, distribution, storage, acquisition or control of goods or provision of services, which causes or is likely to cause an appreciable adverse effect on competition within India, which shall be void under Sub-section (2). The section basically talks about two kinds of anti-competitive agreements: horizontal and vertical. Section 3(3) deals with horizontal agreements, providing that any agreement entered into between enterprises or associations of enterprises or persons or associations of persons or between any person and enterprise or practice carried on, or decision taken by, any association of enterprises or association of persons, including cartels, engaged in identical or similar trade of goods or provision of services, which (a) directly or indirectly determines purchase or sale prices; (b) limits or controls production, supply, markets, technical development, investment or provision of services; (c) shares the market or source of production or provision of services by way of allocation of geographical area of market, or type of goods or services, or number of customers in the market or any other similar way; (d) directly or indirectly results in bid rigging or collusive bidding, shall be presumed to have an appreciable adverse effect on competition and hence void. However, this sub-section comes with a proviso that nothing contained in this sub-section shall apply to any agreement entered into by way of joint ventures if such agreement increases efficiency in production, supply, distribution, storage, acquisition or control of goods or provision of services.

Section 3(4) deals with vertical agreements and provides that any agreement amongst enterprises or persons at different stages or levels of the production chain in different markets, in respect of production, supply, distribution, storage, sale or price of, or trade in goods or provision of services, including- (a) tie-in arrangement; (b) exclusive supply agreement;

(c) exclusive distribution agreement; (d) refusal to deal; (e) resale price maintenance, shall be an agreement in contravention of Sub-section (1) if such agreement causes or is likely to cause an appreciable adverse effect on competition in India.

Section 3(5) of the Competition Act has an express provision that reasonable conditions as may be necessary for protecting IPRs during their exercise would not constitute anti-competitive agreements. The expression 'reasonable conditions' has not been defined or explained in the Act. An advocacy booklet brought out by the Competition Commission of India (2002) offers the interpretation that this implies that unreasonable conditions that attach to an IPR will attract Section 3 (ref. 42). According to this document, licensing arrangements likely to affect adversely the prices, quantities, quality or varieties of goods and services will fall within the contours of competition law as long as they are not in reasonable juxtaposition with the bundle of rights that go with IPRs. It goes on to give examples of licensing arrangements that may be anti-competitive in nature, such as an agreement which divides the markets among firms that would have competed using different technologies, arrangements that effectively merges the R&D activities of two or only a few entities that could plausibly engage in R&D in the relevant field, exclusive licensing arrangements, including cross-licensing by parties collectively possessing market power, grant backs and acquisition of IPRs.

The Competition Commission of India (CCI), in this document, also identifies a set of practices which are anti-competitive or restrictive in nature. It defines patent pooling as a 'restrictive practice, which will not constitute being a part of the bundle of rights forming part of an IPR'. It identifies the conditions under which the patent pool becomes anti-competitive. According to the CCI, this happens when the firms in a manufacturing industry decide to pool their patents and agree not to grant licenses to third parties, at the same time fixing quotas and prices. They may earn supra-normal profits and keep new entrants out of the market. In particular, if all the technology is locked in a few hands by a pooling agreement, it will be difficult for outsiders to compete. It also identifies tie-in arrangements, fixing prices, prohibiting a licensee to use rival technology, agreement to pay royalty even after the patent has expired or for unpatented know-how, insertion of a condition not to challenge validity of the IPR in question, requiring licensee to grant

back to the licensor any know-how or IPR acquired and not to grant licenses to anyone else, package licensing and a number of other practices as 'anti-competitive'. While the case law on the subject is yet to develop, these illustrative examples provided by the CCI are likely to serve as guidelines for decisions on situations when licensing practices (including cross-licensing) could be determined as 'anti-competitive'. These could provide valuable guidelines for organizers of patent pools in India, to ensure that the pool does not attract anti-trust litigation. As the case law from developed countries indicate, patent pools have been charged to be anti-competitive in situations where many of the restrictive practices highlighted by the CCI have been found to exist.

A reading of Section 3(5) makes it amply clear that its jurisdiction is restricted only to IPR conferred by the Indian legislation. The question remains as to what would happen in cases where the IPR is conferred by a foreign statute (which is mostly likely to happen for many patents in a patent pool). According to Bhatia, Hussain and Nair, in such a case, presumption may be made that such IPR would be measured against the standard of appreciable adverse effect on competition in Sub-section (1) or (4) of Section 3 (ref. 43). As per these provisions, an offence is committed when a particular agreement causes or is likely to cause an appreciable adverse effect on competition in India, which will be deemed to be void under Sub-section (2). Bhatia, Hussain and Nair point out that the newly enacted Competition Act of India is at variance with the old Monopolies and Restrictive Trade Practices Act (MRTP Act), 1969 which it replaced. Whereas the earlier MRTP Act sought to avoid concentration of economic power and deemed several kinds of agreements as anti-competitive without enquiry, the new legislation endeavours to promote competition in markets and seeks to restrict only those anti-competitive practices that have an appreciable adverse effect on competition. This leads one to interpret that patent pooling practices are likely to receive a liberal interpretation under the new Competition law, unless anti-competitive practices such as refusal to license to third parties, price-fixing, tying, package licensing associated with the pool, leads to an appreciable adverse effect on competition in India. The rule of reason followed abroad also seems to be resorted to by the Indian Competition Act, where a horizontal agreement (many patent pools are horizontal

agreement) may be held not to be anti-competitive if such agreement increases efficiency in production, supply, distribution, storage, acquisition or control of goods or provision of services.

Conclusion

Patent pooling holds out some hope as an alternative IP strategy in a post TRIPS scenario and in a fragmented and thicketed patent landscape in many crucial sectors. The Indian patent regime is unlikely to create any barriers to pooling; though government administered and managed pools would be easier to set up under the existing law. Also, the Indian patent law has some provisions which could be used to nip problems associated with anti-competitiveness in the bud, without even going to competition laws. The competition law and policy in India view patent pooling as a 'restrictive practice' when certain anti-competitive practices are associated with it. However, it may be inferred that a pool is not likely to attract anti-trust litigation if the licensing arrangements and agreements under it do not have an appreciable adverse effect on competition in India, increases efficiency and have more positive than negative effects. These provisions at the moment, however, remain largely interpretative and 'quite sketchy and inadequate', aggravated by the lack of case law on the subject.⁴⁴ In the near future, courts will have to play an important role in guiding the direction of jurisprudence and precedent based law in this regard.

Acknowledgement

This paper is based largely on the research findings of TERI's project on Patent Pooling and Access to Knowledge: A Case Study of Biotechnology with Reference to India, supported by IDRC, Canada. The author is grateful to colleagues Mr Nitya Nanda and Ms Nidhi Srivastava for their valuable inputs.

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