

COMPETITION POLICY AND THE EXERCISE OF INTELLECTUAL PROPERTY RIGHTS (*)

SOMMARIO: 1. *The role of intellectual property rights in promoting innovation*; 2. *Intellectual property rights and the trade off between allocative and dynamic efficiency*; 3. *Competition policy and the exercise of intellectual property rights*; 4. *The TRIPS Agreement, competition policy and intellectual property rights*; 5. *Conclusions*

Abstract

The paper reviews some of the issues related to the application of competition policy in the area of Intellectual Property Rights (IPRs) licensing. IPRs, granted by patents, copyrights, trademarks, etc., play an important role in fostering innovation and sustaining economic growth. These rights allow their holders to exclude, for a limited amount of time, other parties from the benefits arising from new knowledge and, more specifically, from the commercial use of innovative products and processes based on that new knowledge. IPRs, by granting legal exclusivities, may also confer to their holders the ability to exercise market power, at least when similar technologies and products representing viable constraints are not present. Such exercise of market power can lead to allocative inefficiencies. The reward deriving from IPRs is directly related to the duration as well as to the scope of those rights. Determining the duration and scope of IPRs is usually not a task assigned to competition policy makers. Competition policy certainly plays an important role, however, in limiting the extent of market power associated with IPRs, ensuring in particular that such power is not excessively compounded or used as leverage

(*) Autorità garante della concorrenza e del mercato. This article draws upon a document prepared by the author for the June 1999 meeting of the Group of Experts on Competition Law and Policy of the Member countries of UNCTAD (United Nations Conference on Trade and Development). The opinions expressed are personal and do not in any way represent those of UNCTAD or of the Autorità garante della concorrenza e del mercato. I would like to express my gratitude to Francesca Ammassari for useful comments.

and extended to other unrelated markets. Patents, in fact, do not give the right to exclude competition among different patented products. With this respect, competition policy has a role in limiting monopolistic abuses related to the exercise of IPRs. It exercises this role by preventing firms holding competing intellectual property rights from engaging in anti-competitive practices. The final sections of the paper look at the competition policy provisions contained in the Trade-Related Aspects of Intellectual Property Rights (TRIPS) as well as their implications for the international trading system.

L'articolo passa in rassegna alcune delle problematiche relative all'applicazione della politica della concorrenza nell'ambito del trasferimento dei diritti di proprietà intellettuale. Tali diritti, conferiti da brevetti, copyrights e marchi di fabbrica, esercitano un ruolo importante per la promozione dell'innovazione e della crescita economica, garantendo ai loro proprietari la possibilità di escludere, per un limitato periodo di tempo, altre parti dal beneficiare dallo sfruttamento di nuovo sapere e di nuovi prodotti e processi produttivi che utilizzano tale sapere. I diritti di proprietà intellettuale possono altresì conferire ai loro possessori la possibilità di esercitare potere di mercato con conseguenze negative sull'efficienza allocativa, almeno nei casi in cui non siano disponibili tecnologie o prodotti simili che possano costituire valide alternative. I benefici derivanti dai diritti di proprietà intellettuale sono direttamente collegati alla loro durata e al loro campo d'azione. Abitualmente non è compito delle autorità di tutela della concorrenza quello di determinare la durata e la portata di tali diritti. Tuttavia, le politiche di tutela della concorrenza rivestono indubbiamente un ruolo importante nel limitare lo sfruttamento del potere di mercato associato con il possesso dei diritti di proprietà intellettuale assicurando in particolare che tale potere non si rafforzi eccessivamente o venga utilizzato come leva ed esteso ad altri mercati. I brevetti, infatti, non attribuiscono il diritto di eliminare la concorrenza tra diversi prodotti brevettati. A tale proposito, le politiche di tutela della concorrenza ricoprono un ruolo importante nel limitare i possibili abusi collegati all'esercizio dei diritti di proprietà intellettuale, reprimendo le pratiche anticoncorrenziali di imprese in possesso di diritti di proprietà intellettuale. Le sezioni conclusive dell'articolo esaminano le clausole dell'accordo concluso in sede GATT relativo alla protezione dei diritti di proprietà intellettuale (Trade-Related Aspects of Intellectual Property Rights) e le conseguenze di tali clausole per il sistema internazionale di scambi.

1. The role of intellectual property rights in promoting innovation

Intellectual property rights (IPRs), granted by patents ⁽¹⁾, copyrights ⁽²⁾, trademarks ⁽³⁾, etc., play an important role in fostering innovation and sustaining economic growth. These rights allow their holders to exclude, for a limited amount of time, other parties from the benefits arising from new knowledge and, more specifically, from the commercial use of innovative products and processes based on that new knowledge. The ability to temporarily exclude others from the enjoyment of the potential benefits deriving from innovation contributes to provide the incentive for individuals and enterprises to allocate financial and human resources in research and development (R & D) and other costly activities to realize new discoveries, innovative products and production processes.

In the absence of the legal protection ensured by IPRs, rival firms would be entitled to free-ride on the successful results of R & D investments, imitating and exploiting commercially new inventions ⁽⁴⁾. IPRs

(1) "Patents provide an inventor with exclusive rights to a new and useful product, process, substance or design. New products include machines (mechanisms with moving parts) or manufactured articles, such as tools, without moving parts. New processes, or methods, include chemical processes for treating metal or manufacturing drugs, mechanical processes for manufacturing goods, or electrical processes. New substances include chemical compounds and mixtures: the concept covers the composition of matter. New forms of plants can also be covered. New designs include the shapes of products where the shapes serve a functional purpose. In addition, improvements on products, processes, and substances may be patented." DENNIS W. CARLTON and JEFFREY M. PERLOFF, *Modern Industrial Organization*, New York, Harper Collins Publishers, 1989.

(2) "Copyrights give a creator the exclusive production, publication or sales rights to artistic, dramatic, literary or musical works. Examples include articles, books, drawings, maps, musical compositions or photographs." DENNIS W. CARLTON and JEFFREY M. PERLOFF, *Modern Industrial Organization*, New York, Harper Collins Publishers, 1989.

(3) "Trademarks are words, symbols, or other marks used to distinguish a good or service provided by one firm from those provided by other firms." DENNIS W. CARLTON and JEFFREY M. PERLOFF, *Modern Industrial Organization*, New York, Harper Collins Publishers, 1989.

(4) The free-riding problem associated with intellectual property can be well illustrated by way of an example. Once a firm has incurred substantial expenditures in R & D for the development, for instance, of a new, more powerful, type of underwater camera and the first prototype has been realised, it can produce and market the camera on a large scale at a relatively low cost. If the results of the R & D efforts cannot be kept secret but can be easily appropriated, then competing firms would be able to quickly use the results of that

also contribute to promoting the dissemination and commercial application of intellectual property. Firms, in fact, can be expected to be more inclined to transfer new technologies and inventions when a sufficient degree of legal certainty regarding the returns from sharing precious innovative ideas is guaranteed. In some cases, even in the absence of IPRs, firms may still be able to exclude competing firms from having access to their innovations. In these cases, IPRs would not be necessary to recover the investments incurred. However, excluding other firms from sharing know-how is not always possible. Also, a sizeable waste of resources can result from the efforts aimed at maintaining secrecy. In the absence of strong IPRs, an inefficient tendency to allocate resources particularly to those innovative activities which can be more easily kept secret can be expected.

2. Intellectual property rights and the trade off between allocative and dynamic efficiency

IPRs, by granting legal exclusivity, may also confer to their holders the ability to exercise market power ⁽⁵⁾, when similar technologies and products representing viable constraints are not present. Such exercise of market power can lead to allocative inefficiencies: owners of exclusive rights will likely restrict output levels compared to more competitive situations, in the markets for the goods and services incorporating those rights. They will do so in order to maximize their profits. If the supply of these goods and services were expanded, therefore, an increase in society's welfare, through a

research, enter into production of the same innovative new model of underwater camera and sell it at a much lower price. These rival firms, in fact, would not need to recover the costly R & D activities. The innovative firm, on the other hand, might not be able to recover all the costs incurred, since it might be expected that it will have to charge a higher price. If this would be allowed to happen, no firm, in the expectation of free-riding behaviour, would incur the mentioned sunk costs in R & D. With well enforced IPRs, conversely, the innovative firm can take advantage of temporary exclusivity in the exploitation of its R & D efforts and produce the new type of camera avoiding potential free-riding practices of other firms.

⁽⁵⁾ Market power can be defined as the ability to maintain prices above competitive levels for a significant amount of time and profit from such rise in prices

more efficient allocation of resources, would result. It has been observed ⁽⁶⁾, however, that IPRs, while ensuring the exclusion of rival firms from the exploitation of patented technologies and derived products and processes, do not necessarily confer market power to their holders ⁽⁷⁾. In fact, technologies which can be considered, at least to a sufficient degree, potential substitutes do represent effective constraints to the ability of IPRs holders to price their products above competitive levels. Only when alternative technologies are not available, IPRs can be said to grant to their holders monopolistic positions in relevant markets appropriately ⁽⁸⁾ defined.

The exercise of exclusive IPRs which give monopolistic power leading to allocative inefficiencies, in the absence of competing technologies and products, may appear in contrast with what is generally perceived in most jurisdictions as the main objective of competition policy: the protection of the competitive process to ensure an efficient allocation of resources, lower prices and greater consumer choice. Competition policy, however, recognizes that in some circumstances, society would be better off by allowing for limited market restrictions, monopolistic profits and short-term allocative inefficiencies, when these can be proven to promote dynamic efficiency and long-term economic growth ⁽⁹⁾. This tradeoff which has to be

⁽⁶⁾ See for example “*Competition Policy and Intellectual Property Rights*”, Paris, Organization for Economic Co-operation and Development (OECD), 1989

⁽⁷⁾ In a survey conducted in 1981, licensors reported that they faced no alternative supplier only in 27 per cent of the cases. “*Competition Policy and Intellectual Property Rights*”, Organization for Economic Co-operation and Development (OECD), 1989, pp 16-17.

⁽⁸⁾ In order to delimit relevant markets, an assessment of all goods (or services) that are perceived as directly interchangeable by consumers is usually conducted. To verify the substitutability, reference is often made to the cross-elasticity of demand: two goods are viewed as belonging to the same market when the increase in the price of the first one causes a non-marginal increase in the quantity requested of the second. In view of resources and time constraints, competition authorities do not have very often the chance to have access to actual estimates of cross-elasticity in their determination of relevant markets. Therefore, a use of other types of evidence such as market surveys of consumer preferences is made. The relevant market has also a geographic dimension: this is defined as including all areas where concerned consumers are able and willing to redirect their purchases.

⁽⁹⁾ “*The domestic economy can continue to expand only if it succeeds in producing either new products that consumers desire or existing products at lower costs. In the language of welfare economics, a reduction in cost typically has a greater welfare consequence than an equal reduction in price. A reduction in price increases total economic welfare (the sum of the economic benefits to consumers and producers) only*

weighted by competition policy makers in many areas (mergers, joint-ventures, etc.) is clearly a central issue in the interface between competition policy and intellectual property protection: short-term inefficiencies are expected to be the price that society needs to pay in order to receive the “reward” of long-term economic growth ⁽¹⁰⁾.

While the need to grant exclusive rights in order to promote innovation is a relatively accepted principle, defining the boundaries of such rights is a more complex and thorny issue. The risk of reducing social welfare by granting excessive market exclusivity and extra-profits compared to that necessary to recover the investments made and ensure sufficient incentives is always present.

The reward deriving from IPRs, in fact, is directly related to the duration as well as to the scope of those rights. Determining the duration and scope of IPRs is usually not a task assigned to competition policy makers ⁽¹¹⁾. Competition policy certainly plays an important role, however, in limiting the exercise of market power associated with IPRs, ensuring in particular that such power is not excessively compounded or used as leverage and extended to other unrelated markets. Patents, in fact, do not give the right to exclude competition among different patented products. With this respect, competition policy has a role in limiting monopolistic abuses related to the exercise of IPRs. It exercises this role by preventing

to the extent that it increases output. The change in price by itself is a transfer of economic benefits between consumers and producers, with no direct impact on the total. A reduction in cost has a direct benefit by freeing resources that can be used elsewhere in the economy.” RICHARD J. GILBERT, STEVEN C. SUNSHINE, *Incorporating Dynamic Efficiency Concerns in Merger Analysis: the Use of Innovation Markets*, Antitrust Law Journal, Vol. 63, 1995.

⁽¹⁰⁾ Several studies have revealed the important role exercised by technological innovation for the increase in productivity and for the promotion of economic growth. Some of these studies are referred to in UNCTAD, “*Empirical Evidence of the Benefits from Applying Competition Law and Policy Principles to Economic Development in Order to Attain Greater Efficiency in International Trade and Development*” TD/B/COM.2/EM/10/Rev.1.

⁽¹¹⁾ In a recent Roundtable organised at the OECD, one of the points stressed by participants has been that competition authorities should also use their competition advocacy powers in order to ensure that patent offices are aware of the anticompetitive effects of overbroad patents. See “*Competition Policy and Intellectual Property Rights*” (OECD) 1998, Executive Summary pp.7-12.

firms holding competing intellectual property rights from engaging in anti-competitive practices.

3. Competition policy and the exercise of intellectual property rights

Many competition authorities conduct their enforcement activity vis-a-vis the exercise of IPRs treating such rights as similar to other forms of property. Differences exist, however, regarding the consideration accorded to the greater risk of free-riding behavior arising with IPRs and to the fact that intellectual property can be more easily appropriated ⁽¹²⁾. Also, anti-competitive practices are often evaluated for their effects both on products as well as on technologies markets. In fact, restricting competition among competing technologies has welfare-reducing effects parallel to those which would occur with restrictions in products markets.

Another important principle of competition policy vis-a-vis the licensing of IPRs, coherent with the general approach adopted in all other areas of enforcement, consists in drawing a clear distinction between the horizontal and vertical effects of licensing arrangements. Horizontal practices, resulting in coordination of activities among actual or potential competitors, are more likely to have negative effects on competition and on welfare. Clearly anti-competitive behaviour related to the exercise of IPRs between direct competitors occurs, for example, when holders of substitutable technologies enter into cross-licensing arrangements, aimed at setting commonly agreed prices for the (competing) products and services incorporating those technologies ⁽¹³⁾. These resemble closely those

⁽¹²⁾ For example, in the “*Antitrust Guidelines for the Licensing of Intellectual Property*”, issued in 1995 jointly by the US Department of Justice and the Federal Trade Commission, it is stated that “*The Agencies apply the same general antitrust principles to conduct involving intellectual property that they apply to conduct involving any other form of tangible or intangible property. That is not to say that intellectual property is in all respects the same as any other form of property. These characteristics can be taken into account by standard antitrust analysis, however, and do not require the application of fundamentally different principles*”.

⁽¹³⁾ Agreements aimed at sharing markets, and restricting output have similar anti-competitive effects.

agreements, not necessarily confined to the intellectual property area, which are considered by most jurisdictions as the most harmful forms of anti-competitive behavior.

Other types of horizontal agreements among holders of competing technologies such as joint ventures can also adversely affect competition. These types of agreements, however, are more likely to be associated with efficiencies (the realization of economies of scale, elimination of duplication in R & D etc.), resulting in a net welfare benefit. Competition authorities, similarly to their approach vis-a-vis other horizontal practices, evaluate these types of agreements on the basis of the specific circumstances of the case, analyzing the underlying market conditions, such as the degree of concentration and the relative intensity of barriers to market entry. Particularly important in the analysis is usually the market share held by the firms involved in the licensing practices. When licensors hold limited market shares, negative effects on competition are less likely.

Vertical arrangements (i.e., restrictions between holders of IPRs and firms using those rights as input for their activities), on the other hand, are often viewed as tools to coordinate the incentives of downstream licensees with the interest of upstream licensors, so as to reduce transaction costs, opportunistic behavior and free-riding opportunities by either upstream or downstream firms ⁽¹⁴⁾. A general exception to the generally more lenient stance vis-a-vis vertical licensing arrangements applies, in almost all jurisdictions, to practices aimed at fixing the resale price of goods or services incorporating intellectual property. Vertical price fixing (resale price maintenance) is banned in most jurisdictions, also in the context of technology licensing arrangements. Vertical arrangements can be expected to result in anticompetitive and welfare reducing effects when they are imposed on downstream firms by companies holding a strong and unrivaled market position. To be considered vertical, a licensing agreement needs to involve firms which are not actual or potential competitors. This assessment is often difficult to make as often licensees may have the necessary capabilities for developing independently new technologies and therefore be, in reality, potential competitors.

⁽¹⁴⁾ See "Competition Policy and Vertical Restraints" UNCTAD/ITCD/CLP/Misc.8 1999.

The role that competition policy plays in monitoring abusive exploitation of market power in connection with the exercise of IPRs is particularly important in the review of the anticompetitive effects of licensing contracts (regulating the transfer or exchange of rights to the use of intellectual property), containing exclusivity or restrictive clauses. It is commonly agreed that the licensing of intellectual property generally has beneficial effects. It facilitates the diffusion of technological innovation and know-how and their exploitation by firms which may have a greater comparative advantage. Production can be made more efficient and product quality enhanced when technologies are used in a complementary manner. Also, licensing patented technology may increase the return to IPRs holders, increasing therefore firms' incentives to pursue investment in R & D. In fact, welfare would be reduced if innovators and IPRs holders were forced to enter into direct production and commercialization and not be allowed to license their know-how to third parties, better positioned to manufacture and market licensed goods and services.

Nevertheless, the transfer of patented technology may involve excessive and unnecessary restrictions to competition, depending on the specific contractual arrangements and market conditions. An overview of the procompetitive and anticompetitive effects of four frequently used types of contractual restrictions is presented below. These restrictions are territorial exclusivities, exclusive dealing, tying requirements, and grant-back requirements. They are often used as tools to facilitate the transfer of technology. However, under some circumstances, they may also lead to an undue restriction of competition.

A general principle considered when reviewing licensing restrictions is always to assess what would be the consequences for the concerned markets if such restrictions were prohibited. In fact, prohibiting contractual restrictions might simply lead licensors to decide to no longer license the concerned technologies, preferring to vertically integrate into direct production, or deciding altogether not to exploit them commercially. The alternative predictable outcome, for example forcing the licensor to enter into downstream activities, may ultimately lead to a reduction in welfare. As part of the analysis of competition authorities, an assessment of the likely alternative scenarios in case of prohibition of contractual restrictions is often conducted.

Territorial exclusivity and parallel imports

When dividing up markets into separate territories and blocking or sufficiently limiting trade flows to avoid arbitration is feasible, licensors may choose to assign in exclusivity areas (a region, a city, or an entire country) to single licensees. Two different types of territorial exclusivity exist: an “open” and a “closed” version. Open territorial exclusivity refers to the contractual right of being the exclusive licensee in a given area, without protection from competition by parallel importers getting their products from licensees of other areas⁽¹⁵⁾. Closed territorial exclusivity refers to the complete exclusive right to any sale within a territory. With closed territorial exclusivity, parallel imports are barred and stop representing a source of competition to the products distributed by the local exclusive licensee.

It has been observed⁽¹⁶⁾ that a holder of IPRs which divides up the market among different licensees, each being reserved an exclusive territory, does not create additional monopoly power. He already holds, in fact, exclusive rights in each area (or country) where local territorial exclusivities are set up. Territorial exclusivities, in fact, may be created for different reasons, some of them unrelated to anticompetitive behavior, which can promote efficiency and consumer welfare. In fact, the reduction in intra-brand competition (competition among distributors of the same good) may be a necessary condition to enhance inter-brand competition (competition among different brands). Local licensees, for example, may need to incur substantial investments in order to promote new products recently introduced in the market, still unknown to most consumers. They might do so, for example, through advertising campaigns, distribution of free samples of the products, showrooms, etc. or through an improvement of the

⁽¹⁵⁾ This is the case for example within the European Union where barring parallel importation of goods and services supplied by foreign manufacturers is prohibited. Allowing open territorial exclusivities but barring closed territorial exclusivities is referred to as the exhaustion principle.

⁽¹⁶⁾ See, for example, PATRICK REY and RALPH A. WINTER, *Exclusivity Restrictions and Intellectual Property*, printed in *Competition Policy and Intellectual Property Rights in the Knowledge-Based Economy*, (General Editors: Robert D. Anderson and Nancy T. Gallini), 1998.

licensed products, adapting them to local demand. Territorial exclusivity may avoid free-riding opportunities on these investments by other licensees⁽¹⁷⁾.

For a limited number of products, open territorial exclusivities may determine a sufficient return for the investments incurred by local exclusive licensees. Nevertheless, when trade barriers are limited and transportation costs are non-substantial, significant free-riding can occur through sales by parallel importers which undermine the possibility of local licensees to recover local costs. Closed territorial exclusivities might, on the other hand, lead to excessive double markups by licensees, hurting the interests of IPR licensors. Licensees with downstream monopoly power, in fact, may reduce outputs and charge prices excessively high, to the detriment of the whole vertical structure: lower prices deriving from greater vertical coordination would lead to greater profits for both licensors and licensees. With parallel imports, exclusive licensees are constrained in their ability of imposing excessive markups. If prices become too high, parallel imports can exert downward pressure on prices.

Another important reason for IP right holders to enter into territorial exclusivities is to profit from price discrimination. Particularly when regions or countries have different demand elasticities, charging different prices in the different areas would lead to an increase in total profitability. More specifically, total profits are maximized by charging higher prices in areas where demand is more inelastic. With international price discrimination, national objectives of competition policy, i.e., the maximization of the welfare of its own citizens might, however, diverge from the achievement of global welfare. From an international welfare perspective, exclusive licenses across countries can be employed, as mentioned, to achieve price discrimination and therefore be associated with efficiency-enhancing effects, because of the resulting worldwide expansion in output. However, from the perspective of the country in which higher prices are charged, an elimination of territorial exclusivities (or at least of the ban on parallel imports) may bring about net benefits, particularly when the holders of IPRs are located abroad. In fact, competition will bring down prices, entirely to the benefit of national welfare, while the costs of reduced

⁽¹⁷⁾ Without repression of free-riding behaviour, licensees would not invest in local markets and ultimately consumers would not have access to their goods.

incentives to innovate will be spread among all countries. This is particularly true for countries which are net importers of technology. Such is the case for most developing countries. It might therefore be a totally rational choice to prohibit territorial and other forms of licensing restrictions.

It is important, however, to consider the consequences of attempts to impede international price discrimination: TNCs might opt to block licensing their technologies altogether. Also, it has been argued ⁽¹⁸⁾, that international price discrimination and the ban on parallel imports benefit mainly developing countries because enterprises from more industrialized (and wealthier) countries can charge lower prices in poorer markets without being forced to lower their prices in rich markets as well. In this way, TNCs supply markets which would not have been serviced in case of forced uniform pricing ⁽¹⁹⁾.

An additional consequence of territorial exclusivities is that they can also facilitate the implementation of disguised cartel arrangements. For example, competing firms holding a significant amount of the total patents specific to a particular class of products could agree on issuing exclusive licenses to a jointly owned corporation, which would then divide up the

⁽¹⁸⁾ See DAVID A. MALUEG and MARIUS SCHWARTZ, *Parallel Imports, Demand Dispersion and International Price Discrimination*, Economic Analysis Group Discussion Paper, US Department of Justice, Antitrust Division, August 25, 1993.

⁽¹⁹⁾ A criticism to the arguments brought forward in the article by Malueg and Schwartz illustrating the benefits for developing countries from international price discrimination can be found in FREDERICK M. ABBOTT, *First Report (Final) to the Committee on International Trade Law of the International Law Association on the Subject of Parallel Importation*, *Journal of International Economic Law* (1998). It is stated that "... (Malueg and Schwartz).. do not consider the impact of an international price discrimination system on developing country producers and consumers acting outside the field of the monopolist's product. Most importantly, they do not consider the broader effects of an international price discrimination system on the international allocation of resources. If developed country producers are not pressured to become more efficient as a consequence of price competition, this will distort the efficient allocation of resources in the developed countries. If developing country producers/licensees are limited in the profitability of their operations, this will limit developing country investments in future production. If the profit-making potential of capital investments in developing countries is limited, this will encourage developing countries to continue to rely on capital intensive developed country exports..." It is also noted that "...A substantial part of international trade is in goods that are not protected by IPRs, particularly in the commodities and unfinished goods sectors. Developing countries are not unserved with these products. Developing country buyers may be served with lower-priced IPRs-protected goods through product differentiation.

market among the associated firms through territorial exclusivities. Such an agreement would clearly lead to a substantial reduction in competition because it would concern firms which would have otherwise (in the absence of the licensing agreement) competed head-to-head with each other and would not involve firms operating at different levels of the vertical production chain.

Assigning territorial exclusivities may also be a direct tool to facilitate collusion among competing licensors, by making easier to monitor downstream violations to cartel agreements. Competing licensors, in fact, may find obstacles to agree on prices for royalties regarding licensed technologies and may find easier to agree on prices of the final products supplied by their licensees. Territorial exclusivities allow for an easier monitoring of licensees' final prices. The treatment by competition policy makers of territorial restrictions clearly depends on what is the prevailing motivation for their use in each specific case and their likely effect. Particularly when these arrangements do not appear to lead to any sizeable efficiency but rather are part of a scheme to ensure market cartelization, their impact on competition and welfare can be expected to be negative. If, on the other hand, they are used to overcome free-riding, to cope with asymmetries in information between licensors and licensees or to ensure price discrimination, their impact on welfare is more ambiguous and depends largely on market concentration and barriers to entry.

Exclusive dealing

Exclusive dealing arrangements prevent licensees from manufacturing products which employ technologies supplied by competitors of the licensor. This parallels exclusive dealing arrangements in distribution agreements whereby retailers are not allowed to carry competing brands. The rationale for entering into exclusive dealing restrictions in intellectual property licensing is similar to that applying to product markets: to avoid free riding opportunities between competing

licensors and to promote the development of relationship-specific technologies by both licensors and licensees ⁽²⁰⁾.

Licensors transferring know-how to licensees also manufacturing goods under license of other firms, may risk leakage of information and misappropriation of their patented knowledge. The development of exclusive relationships with licensees can be a way to overcome this potential free-riding situation. Also, exclusive dealing may increase the return on specific investment because the likelihood of licensees interrupting a consolidated relationship with the licensor is reduced. Exclusive dealing arrangements may, however, also result in market-foreclosing effects to the detriment of rival licensors and restrict competition in the market, particularly when the firms entering into such arrangements already hold a large share of the relevant product market. The foreclosing effect depends to a large degree on the availability of alternative manufacturing capacity for existing or new licensors.

Tying requirements

Tying refers to a contractual obligation whereby a manufacturer agrees to sell a certain good only to buyers which agree to buy other, unrelated products(s). Tying can be used for purposes which may increase welfare such as to protect the reputation of licensed technology. For example, a manufacturer of a new model of photocopy machines may require that buyers of the new model purchase spare parts and repair services from the manufacturer. This requirement may be used to ensure that the perceived quality of the machine to users is not reduced by low-quality maintenance services or spare parts. Tying may also reduce the risk inherent in the licensing of innovation whose commercial value is still uncertain. This can be achieved by charging less for the innovation and tying it to an additional good whose demand is correlated with the use of the innovation.

⁽²⁰⁾ See PATRICK REY and RALPH A. WINTER, *Exclusivity Restrictions and Intellectual Property*, printed in, *Competition Policy and Intellectual Property Rights in the Knowledge-Based Economy* (General Editors: Robert D. Anderson and Nancy T. Gallini), 1998.

More generally, tying is used to price discriminate between consumers which use products or technologies with varying intensity. For example, photocopy machines may be leased to customers on the condition that paper used be bought from the leaseholder. Price discrimination, as noted earlier, can promote welfare because it may lead to an expansion of output, making available products to those who would not have otherwise been supplied, because of monopoly output restrictions associated with uniform pricing. Tying, however, can also result in clearly welfare-reducing effects when it is employed as a tool to foreclose other markets. This can be achieved if the licensor holds considerable market power in the tying product and has the ability to extend its market power in the tied product, due to favourable market conditions (high entry barriers, etc).

Exclusive grant-backs

This type of restriction refers to the situation whereby licensors request to receive all the rights on new technologies developed by licensees through improvements on the licensed technology. While it may facilitate the transfer of technologies to licensees, it may also affect negatively licensees' incentive to engage in R & D. Nonexclusive grant-back clauses, whereby licensees are allowed to deal with other buyers of their incremental inventions, are less likely to reduce competition while maintaining adequate incentives to license new technologies.

4. The TRIPS Agreement, competition policy and intellectual property rights

The recognition of the contribution of intellectual property protection in fostering economic growth is one of the main tenets of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) negotiated during the Uruguay Round. The agreement has introduced common minimum standards of protection and enforcement of IPRs in the international trading system which are binding for all member countries. It is expressly stated that the protection and enforcement of IPRs

should contribute to the promotion of technological innovation and to the transfer and dissemination of technology (arts.7 and 8). IPRs should contribute to the mutual advantage of producers and users of technological knowledge and in a manner conducive to social and economic welfare and to a balance of rights and obligations.

The role of competition policy in ensuring that IPRs promote economic growth and innovation is expressly stated in the TRIPS Agreement: “*nothing in this Agreement shall prevent Members from specifying in their legislation licensing practices or conditions that may in particular cases constitute an abuse of intellectual property rights having an adverse effect on competition in the relevant market*” (article 40.2). It allows Member countries “*to adopt, consistently with the other provisions of this Agreement, appropriate measures to prevent or control such practices.. in the light of the relevant laws and regulations of that Member.*” The repression of anticompetitive practices associated with IPRs is, therefore assigned to national competition laws and policies. Nevertheless, the need for international cooperation is also emphasized. In particular, consultations among Member countries are envisaged ⁽²¹⁾, inter alia through the supply of publicly available non-confidential information.

5. Conclusions

A greater convergence of competition law and policy enforcement principles vis-a-vis the exercise of intellectual property rights may be expected to enhance global welfare, by reducing inconsistencies and preventing friction in the international trading system. To advance this long-term objective, a major step would consist in strengthening the mutual understanding of national approaches, including commonalities and divergencies. This learning process would particularly profit those countries

⁽²¹⁾ “*Each Member shall enter, upon request, into consultations with any other Member which has cause to believe that an intellectual property right owner that is national or domiciliary of the Member to which the request for consultations has been addressed is undertaking practices in violation of the requesting Member’s laws and regulations on the subject matter of this Section, and which wishes to secure compliance with such legislation, without prejudice to any action under the law and to the full freedom of an ultimate decision of either Member.*” TRIPS Agreement, Article 40.3

having only recently created institutions charged with the enforcement of competition policy and intellectual property protection ⁽²²⁾, lacking therefore enforcement experience.

The specific problems facing developing countries in the application of competition policy in the area of intellectual property rights - due to their constraints in terms of specialized personnel - have been identified in a 1996 UNCTAD report ⁽²³⁾ looking on the consequences for developing countries deriving from the TRIPS Agreement. The importance of this learning process is directly linked to the fact that the assessment of the anticompetitive effects of most IPR licensing practices is best conducted by taking into account both welfare enhancing and welfare reducing effects. Competition authorities of jurisdictions having already developed experience in this area (including countries at different stages of economic development), will play, therefore, an extremely important role by providing assistance to those countries with less experience in dealing with competition cases in the intellectual property area.

Massimiliano Gangi

⁽²²⁾ In some countries, the two functions (competition policy and intellectual property protection) are assigned to a single agency. This is the case, for example, in Peru.

⁽²³⁾ "UNCTAD, *The TRIPS Agreement and Developing Countries*". New York and Geneva, 1996 (United Nations publication, sales no. 96.II.D.10).