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Licensing of IP Rights and Competition Law

Background Note by the Secretariat

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More documentation related to this discussion can be found at http://www.oecd.org/daf/competition/licensing-of-ip-rights-and-competition-law.htm

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Licensing of IP Rights and Competition Law

Background Note by the Secretariat[*]

Licensing is a fundamental tool for diffusing innovation, for allowing innovators to be rewarded for their efforts, and to promote co-operation and follow-on innovation during IP rights' period of exclusivity. On the other hand, licensing agreements can also have anticompetitive effects, such as facilitating cartelisation or anticompetitive foreclosure. The main challenge for competition enforcers is to determine whether a particular agreement is likely to help or hurt competition. There is, in any event, an increasing international agreement that IP licensing has the potential for pro-competitive effects. With the exception of hard-core collusive conduct, the finding that an IP licensing arrangement infringes competition will typically require evidence of anticompetitive harm following an effects-based assessment that will need to the balance pro- and anticompetitive effects of individual licensing practices.

[*] This paper was prepared by Pedro Caro de Sousa of the OECD Competition Division. The document benefitted from comments from Antonio Capobianco and Ruben Maximiano.

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1. Introduction

1. This paper deals with the intersection between intellectual property (IP) licensing and competition. IP rights seek to promote innovation and creativity by striking a balance between protecting the inventor or creator's rights and fostering follow-on or cumulative developments. They do this by granting inventors and creators an exclusive right to exploit their inventions and creations during a certain period, and by delineating the scope of that exclusive right.[1]

Box 1. Main Types of Intellectual Property Rights

IP rights are exclusive rights held by the owners of a variety of knowledge-based assets that qualify for legal protection. IP rights foster innovation, creativity, entrepreneurship, investment in knowledge-based assets and growth. Types of IP, and the incentives they bring about, include:

Patents and utility models, i.e. products or processes that provide new ways of doing something or that offer new technical solutions to problems. Patents stimulate innovation by assuring inventors that qualifying inventions will not be used or sold legally without their permission for a certain period (usually 20 years), thereby enabling inventors (potentially) to recoup their investments and to profit from them, e.g. by licensing them. To obtain a patent, one must disclose the technical knowledge behind the invention, thereby creating the potential for further follow-on technological developments.

Copyright protects and rewards literary, artistic and scientific works (including, in some jurisdictions, computer software and databases), whatever may be their mode or form of expression. Copyrights stimulate creativity by assuring individuals and businesses that the original, expressive material they create will not be reproduced, adapted, communicated to the public, displayed, distributed or performed without their permission, or otherwise used in a manner that violates their exclusive rights. Copyright laws allow authors to obtain compensation, profit from, and take credit for the material they create. Copyright law's protections typically last 50-70 years after the death of the creator, or shorter periods for works whose term is established by reference to the date of fixation or communication to the public.

Design rights protect new and/or original ornamental or aesthetic aspects of articles rather than their technical features. By providing a measure of protection against unlicensed imitations, design rights promote investments in proprietary designs that create value for both consumers and businesses. Registered designs are generally valid for up to 15 years, but they are renewable up to a maximum of 25 years in some jurisdictions.

Trade secrets comprise confidential business and technical information and know-how with economic value that a firm makes reasonable efforts to keep secret. Trade secrets do not have a fixed duration and can potentially last indefinitely. By offering a measure of protection for valuable information, and thereby relieving businesses of the need to invest in more costly security measures, trade secret laws may encourage businesses to invest in the development of such information. Trade secret laws may also encourage businesses to engage in wider, though limited, dissemination of information than they otherwise would, e.g. by sharing sensitive information with business partners (subject to confidentiality agreements), thereby increasing the likelihood of knowledge spill-overs.

Trademarks are distinctive words, symbols and brand names that help customers identify and purchase products or services that meet their needs and expectations, e.g. in terms of quality or price. By protecting such words and symbols, trademark laws encourage businesses to invest not only in developing brand names, but also in building strong reputations associated with those brands. Trademarks can usually be renewed indefinitely.

Geographical indications are signs used on goods having specific geographical origins and possessing qualities or reputations that are essentially attributable to their place of origin. Geographical indications differ from other types of IP rights in that they are a collective right rather than a unique right held by a particular individual or business. Geographical indication protection can be renewed indefinitely.

Source: (OECD, 2015, p. 15[1])

2. Understanding the competitive effects of different IP rights, and their particular importance for certain economic sectors, would be valuable in the context of individual competition cases, in setting enforcement priorities, and in advocacy efforts concerning IP regimes. In practice, however, the impact of individual IP rights in competition assessments is normally subject to a case-by-case approach. It is for this reason that the Scoping Note on Competition and Intellectual Property Rights as a long-term theme for 2019-2020 (OECD, 2018[2]) suggested, in its para. 20, that a possible area of work '*concerns the competitive implications of different IP rights and how their impact may vary across economic sectors'*.[2] As such, this paper will address licensing in general, without focusing on individual IP rights.

3. Licensing is a fundamental tool for diffusing innovation and for helping innovators be rewarded for their efforts, and to promote co-operation and follow-on innovation even during an IP right's period of exclusivity (OECD, 2006, p. 20[3]). On the other hand, licensing agreements can also serve to cartelise an industry or to foreclose markets. The problem for competition authorities is to determine whether a particular agreement is likely to help or hurt competition; a determination made particularly challenging by the fact that a restrictive clause in a licensing agreement can be either pro- or anticompetitive, depending on the circumstances (OECD, 1989, p. 3[4]).

4. This background paper seeks to shed some light on the challenges created by IP licensing for competition law and policy, and is structured as follows. A first part will provide a high-level overview of how competition law approaches IP licensing. Section 2 will review the long history of competition law's engagement with licensing practices and provide a succinct overview of the increasingly important role that IP rights play in the contemporary economy. Given the importance of economic analysis to the identification of anticompetitive licensing practices, section 3 discusses the economics of licensing.

5. A second part of this paper is devoted to the detailed treatment of various types of licensing practices. It begins with a section on common clauses in licensing agreements that are subject to widely agreed competition law approaches around the world. It then addresses progressively more controversial topics. Section 5 deals with licensing in technological co-operation contexts, with a focus on cross-licensing, patent pools and standard essential patents, before section 6 turning to the perennial debate on refusals to license and compulsory licensing. Section 7 concludes.

6. In short, this paper identifies an increasing international agreement that IP licensing has the potential for pro-competitive effects. With the exception of hard-core collusive conduct, the finding that an IP licensing arrangement infringes competition will typically require evidence of anticompetitive harm following an effects-based assessment which will need to balance the pro- and anticompetitive effects of licensing practices.

7. While there are some differences in the competition treatment of licensing arrangements, these seem to flow from different baseline assumptions about the likelihood of pro- and anticompetitive effects of certain licensing practices in certain contexts. This is particularly clear in the context of the debates regarding whether certain practices related to the licensing of SEPs are more likely to have anticompetitive effects as a result of patent holdup or holdout, and regarding the potential for anticompetitive effects of refusals to license IP rights. These areas of controversy pale in comparison to the increasing level of agreement that has been achieved over the last century regarding the balance of IP and competition laws, and the correct approach by competition law to IP licensing practices.

2. Competition Law and IP Licensing in the Modern Economy

2.1. Innovation, IP Rights and Competition Law

8. Innovation and technological progress are the single most important determinants of economic growth (Brodley, 1987[5]). Studies show that the social returns on investment in R&D significantly exceed private returns, which suggests that policies that promote innovation can pay large dividends to society (Gilbert, 2006[6]). Nonetheless, there is still debate regarding the relationships between IP and innovation, competition and innovation, and, more importantly for our purposes here, between competition and IP law.

9. Concerning the relationship between IP and innovation, IP rights are perceived to be a crucial tool to promote innovation. Nonetheless, the literature is divided on whether stronger, broader patent rights lead to more innovation, and the evidence that IP rights, and particularly patents, stimulate innovation is mixed. The effects of patents on innovation vary substantially from industry to industry. Several surveys have shown that patents are not considered to be very effective in protecting innovations outside a small number of sectors, and that patents are among the least used methods for protecting the returns on innovation. (OECD, 2015, pp. 10, 31-32[1]).

10. Similarly, economic theory on the expected outcomes of strengthening IP rights is inconclusive. Stronger IP rights may motivate stakeholders to increase both innovation and access to innovation, expanding markets to the benefit of users as well as producers of intellectual property. On the other hand, stronger rights might create or increase market power such that IP right holders have an incentive to constrain access to and/or retard further innovations, possibly with little economic benefit to society as a whole (OECD, 2015, p. 39[1]).

11. There is also a thriving literature on the relationship between innovation and competition policy.[3] Some authors predict a negative relationship between competition and innovation, because incentives to innovate depend on the prospect of future monopoly rents (Schumpeter, 1942[7]).[4] A contrary view holds that innovation incentives arise from the need to outperform competitors, and thus predict a positive relationship between competition and innovation (Arrow, 1962[8]).

12. A middle ground, with some empirical backing, focuses on how innovation outcomes depend on specific market structures. This approach posits an inverted-U relationship between competition and innovation, i.e. too little or too much competition can be negative for innovation (Aghion et al., 2005[9]). This view posits a positive, if limited, role for competition enforcement, because most such enforcement takes place in relatively concentrated markets, i.e. markets where more competition can lead to increased innovation. By addressing and eliminating anticompetitive restraints, competition authorities can create space and opportunities for innovation and growth (OECD, 2013, p. 13[10]).

13. However, the relation between competition and innovation remains unsettled, with views varying depending on modelling assumptions[5] and market structures (OECD, 2006, p. 18[3]; OECD, 2013, pp. 9-11[10]). This debate has had an impact on discussions regarding the appropriate relationship between competition law and IP rights.

14. Intellectual property law may seem to be in conflict with competition law, since IP rights protect innovators from some forms of competition, thereby allowing them to price at supra-competitive levels for a time (OECD, 2004, p. 17[11]). It is now widely understood that this conflict is more apparent than real, however, as both policies seek to promote consumer welfare, economic growth and innovation (OECD, 2013, p. 18[10]).[6]

15. At the same time, there are questions regarding the extent to which competition law should be able to interfere with IP rights, which arise from the trade-off between the benefits of increased competition in the short-term and the gains from further innovation in the long-run. Such a trade-off lies outside the mandate of patent office, and is inherently difficult for competition agencies to make (OECD, 1997, p. 6[12]). The magnitude of the challenges faced by competition enforcers when balancing these trade-offs is apparent in how approaches to competition law to IP licensing have evolved over time.

2.1.1. The Evolution of Competition Law approaches to IP Licensing

16. Approaches to the relationship between competition and IP laws have evolved over time, moving from the application of formalistic rules to a contemporary focus on the effects of IP-related practices. Even following these developments, new challenges regarding the interface between competition and IP laws keep arising as the economy evolves, new business practices develop and companies adopt new types of anticompetitive conducts.

17. The tensions between antitrust and IP laws has been apparent since the adoption of the first competition regimes in North America. Early US cases tried to separate the two domains, concluding that patents and agreements related to patents were simply beyond the reach of antitrust laws.[7] This absolute immunity for IP-related practices allowed companies to circumvent antitrust law through licensing, e.g. competitors were able to fix prices by agreeing to enter into cross-licences. Given this, US courts progressively restricted the scope of the patent immunity doctrine and held that antitrust law is free to operate when patent holders reach beyond the boundaries inherent in the patent grant.[8]

18. Early approaches to licensing by competition law followed formalistic rules. By the early 1970's, an approach had crystallised which was succinctly captured in the US Department of Justice Antitrust Division's prohibition of "Nine No-No's", which amounted to a collective condemnation of vertical patent licensing practices as *per se* illegal (Wilson, 1970[13]).[9] A strict approach to licensing could also be found in Europe, which in the 1970s applied a rigid approach that identified "white-listed", "grey-listed" and "black-listed" conduct (Whish and Bailey, 2018, p. 791[14]).

19. Over recent decades, jurisdictions around the world recognised the potentially pro-competitive effects of licensing practices that were previously prohibited *per se*, and started requiring effects-based assessments before concluding that a licensing practice is anticompetitive. In 1988, the US Department of Justice's Antitrust Division formally shifted from absolute (*per se*) opposition to certain licensing practices to a "rule of reason" approach that balanced pro- and anticompetitive effects of licensing.[10] In Europe, an effects-based approach to licensing was also adopted.[11] Similar approaches are apparent in guidance issued by competition agencies around the world, as in Canada, Korea and Japan.[12]

20. Such developments are evident in the evolution of the OECD's recommendations on competition and IP law.

Box 2. The OECD IP Recommendations

The OECD Council has two Recommendations on competition law and IP rights, which also deal with licensing issues (the 'OECD IP Recommendations').

The older OECD IP Recommendation is the *Recommendation of the Council concerning Action against Restrictive Business Practices relating to the Use of Trademarks and Trademark Licences* C(78)40/FINAL, adopted in 1978. This short Recommendation notes that it is necessary to remedy the harmful effects of certain restrictive business practices related to the use of trademarks, to the extent that such practices are not essential to the legitimate protection of the trademark owner's exclusive right. As such, it recommends that Governments adopt a number of measures, including: (i) eliminating restrictions on the importation of a product legitimately marked abroad with the same trademark, where the purpose of such restrictions is to maintain artificially high prices or is otherwise anticompetitive; (ii) prohibiting a number of restrictive practices involving the use of trademarks in national or international trade. The practices that should be prohibited include horizontal market division agreements among competitors, trademark-related restraints of sales or resales by licensees, tying arrangements, and price maintenance agreements involving licensees or distributors.

The more recent instrument, the *Recommendation of the Council concerning the Application of Competition Laws and Policy to Patent and Know-How Licensing Agreements* C(89)32/FINAL (the 'OECD Licensing Recommendation'), was adopted in 1989 to replace the Council Recommendation of 22 January 1974 concerning Action Against Restrictive Business Practices Relating to the Use of Patents and Licences [C(73)238(Final)]. The 1974 Recommendation adopted a formalistic approach that prohibited a number of licensing practices such as fixing resale prices, exclusive territorial restrictions, restricting output, restricting fields of use, and tying. However, by 1989 it was acknowledged that '*long-standing notions about conflict between intellectual property rights and competition policy should be reconsidered. Intellectual property rights, like rights in other forms of property, are necessary for the functioning of a competitive, market-based economy*'.[1] The 1989 Recommendation acknowledged that IP rights, and particularly their licensing, was generally procompetitive, even though the licensing of intellectual property rights, like other agreements between enterprises, contains a risk of anti-competitive effects. Thus, the 1989 Recommendation recognised that the risk of anti-competitive effects of licensing arrangements cannot, apart from purely cartelising agreements, be assessed except on a case-by-case basis, and that the assessment of licensing practices under competition law should have a sound basis on economic analysis.

1 (OECD, 1989, p. 98[4])

21. The principles outlined in the OECD IP Licensing Recommendation are still applicable to the assessment of many licensing arrangements, as will be clear from the discussion of specific licensing practices pursued below. That discussion will also make clear, however, that this Recommendation needs to be updated to reflect developments that took place since it was adopted thirty years ago.

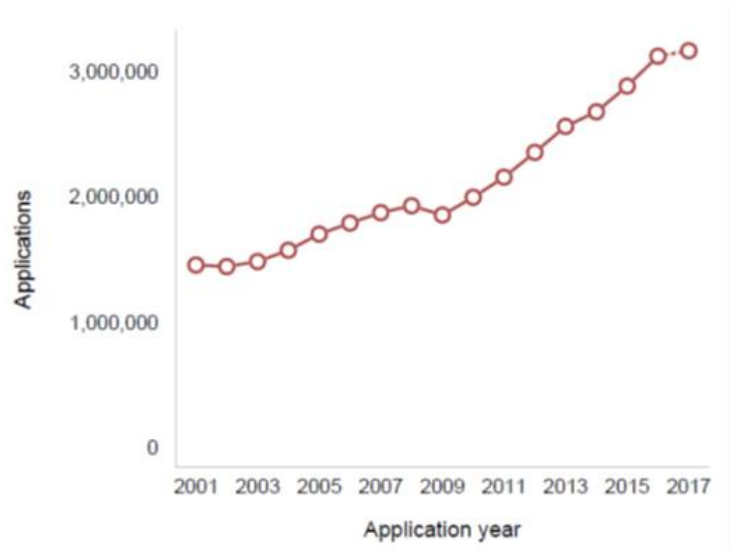
2.1.2. The Growing Importance of IP Rights

22. Over the past 20 years or so, patent rights have generally become broader and stronger, and there has been a surge in the number of patents granted. More types of inventions and creations have become eligible for protection, the duration of copyright protection has been lengthened and additional rights and measures designed to improve IP protection have been adopted. Some of these developments have resulted from obligations found in international agreements, such as TRIPS, the WIPO Copyright Treaty and the WIPO Performances and Phonogram Treaty (OECD, 2015, pp. 10, 18[1]).

23. Reasons for this reinforcement of IP rights are the growth of the Internet and the digitalisation of the economy. Knowledge-based capital has become more prevalent in OECD economies. It has not only spread across many different industries, but also grown over time and turned into the largest form of business investment in an increasing number of countries. Given that IP rights protect knowledge-based capital, it is no surprise that IP-protected capital has taken on an increasingly prominent and extensive role in economic activity as well.[13] Accordingly, IP is now a mainstream factor that has a substantial influence on economic performance in virtually every sector (OECD, 2015, pp. 13, 18, 26-28[1]).

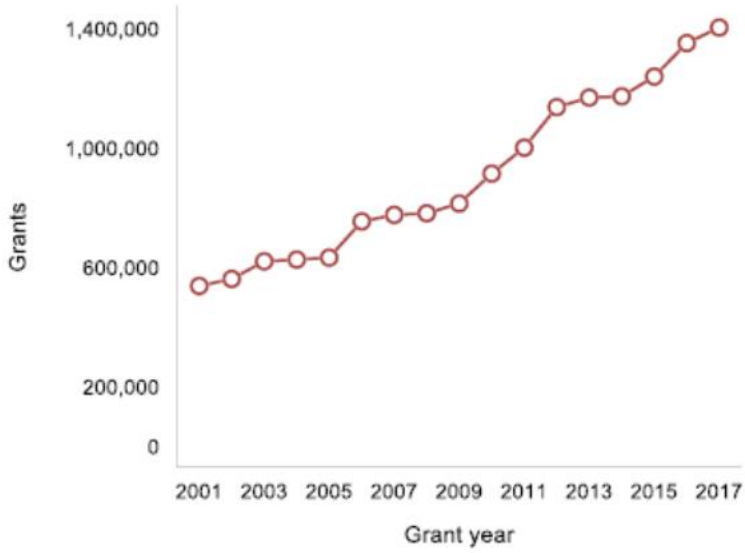
24. Another reason for increased IP rights' protection is globalisation, which forced IP systems to accommodate to more geographically diverse processes that businesses use to develop, manufacture, and distribute their products. In addition, globalisation has encouraged more companies that sell globally to file for IP protection in multiple jurisdictions, or to obtain copyright protection in the increased number of separate territories in which a creative work may need to be protected (OECD, 2015, pp. 20-21[1]). For example, the long-term trend shows that patent applications worldwide have grown every year since 2003, with the exception of 2009 when they decreased by 3.8% due to the financial crisis. About half of all patent applications are initial filings and half are repeat applications in other jurisdictions. (WIPO, 2018, p. 24[15]).

Figure 1. Evolution of Patent Applications



Source: WIPO, World Intellectual Property Indicators 2018.

Figure 2. Evolution of Patent Grants



Source: WIPO, World Intellectual Property Indicators 2018.

25. Patents have received far more scholarly attention than other IP rights (WIPO, 2011, p. 75[16]). However, copyright, trademarks and trade secrets are the most economically significant forms of IP rights in some respects. [14] Copyright's performance excels in terms of the magnitude of investment it attracts, the growth rate of that investment, and its impact on employment and gross value added (US Department of Commerce, 2012, pp. 40-41[17]; OECD, 2015, pp. 30-31, 40-41[1]). Furthermore, copyright's economic importance seems to be increasing. In addition to broadcasting,

artistic and user-content, copyright protects a significant amount of software investment in much of the world, especially where software is not patentable (OECD, 2015, p. 10[1]).

26. This growing importance of copyright is reflected in the level of attention currently devoted to it. In a 2015 study of 12 jurisdictions, the OECD found that all of them had amended, or were considering amending, their copyright exemption frameworks in light of the changes brought about by digitalisation and the Internet. Some countries have also adjusted their copyright frameworks in light of the higher incidence of piracy that digitalisation and the Internet allow. Several countries have enacted or proposed amendments to their copyright laws that create an ancillary copyright to the benefit of online publishers (OECD, 2015, pp. 46, 232-303[1]).

Box 3. Recent Copyright Reforms

There have been many examples of initiatives to update and reform copyright regimes in recent years. Examples from OECD countries reviewed in (OECD, 2015[1]) are provided below:

- In Australia, the Law Reform Commission conducted an inquiry on copyright exceptions in the digital economy in 2014. In 2016, the Productivity Commission's Report on Intellectual Property Arrangements supported this proposal and suggested further amendments. A number of legislative acts have also been adopted recently, including the Copyright Amendment (Online Infringement) Act 2015, the Copyright Amendment (Disabilities and Other Measures) Act 2017, the Copyright Amendment (Online Infringement) Act 2018, and the Copyright Amendment (Service Providers) Act 2018.
- Canada reformed its copyright law in 2012 to better account for the impact of the Internet and digitisation by means of the Copyright Modernisation Act.
- In Chile, its law was reformed in 2010 with the goal of countering digital piracy and protect the rights of content creators given recent technological changes.
- The European Union has been working for some time on amending its copyright legal framework to make it fit-for-purpose in today's digital environment. In early April 2019, it reformed its copyright regime by means of a Directive on copyright and related rights in the Digital Single Market.
- Japan has amended its copyright law several times in recent years. In 2012, the law was amended to regulate the so-called incidental use of copyrighted material and to strengthen the protection of copyright and related rights in order to counter piracy. In 2018, a further reform was enacted with the goal of expanding the scope of free use of copyrighted works without the copyright owner's permission in order to remove obstacles to the development of AI.
- In Switzerland, the Federal Council has prepared a draft bill to amend the Swiss Copyright Act which was accepted by the National Council in December 2018. The draft bill proposes various amendments to the Copyright Act and intends, among other things, to adopt a more forceful approach to tackling internet piracy.
- Earlier in the decade, the Hargreaves Report in the UK looked into ways that the copyright regime might be reformed to work more effectively in the digital era.

The government implemented several of those reforms in 2014, including new exceptions for text and data mining for non-commercial research and for personal copying for private use and parody, character and pastiche, and an extended exception for quotations. More recent reforms were implemented in the context of the Digital Economy Act 2017.

- In the United States, the Copyright Act has recently been amended by the Unlocking Consumer Choice and Wireless Competition Act 2014, the Music Modernisation Act 2018 and the Marrakesh Treaty Implementation Act.

27. However, no OECD Recommendation, including the OECD IP Recommendations', currently addresses copyright. The 1989 Recommendation on Patent and Know-How Licensing Arrangements expressly states that it does not extend to areas of protected artistic expression such as copyright, or to trademark and franchising matters (OECD, 1989, p. 98[4]). Further, the 1978 Recommendation of the Council concerning Action against Restrictive Business Practices relating to the Use of Trademarks and Trademark Licences does not reflect either these developments nor the current understanding that an effects-based analysis is required for the assessment of licences[15] – thereby not reflecting the evolution of how competition law addresses licensing practices that took place over past decades.

28. In short, the interface between IP rights and competition has become increasingly prominent with the growth of the digital economy, and its expansion beyond information goods and services to other areas of the economy. Consequently, competition issues arising in the digital economy have become increasingly significant for competition authorities, many of which raise questions concerning licensing (OECD, 2012[18]).

29. There is, in any event, a consensus that licensing practices should be assessed by reference to their effects. This requires the pursuit of economic analysis, which will be the subject of the next section.

3. The Economics of IP Licensing

30. At least some of the uneasiness of competition policy with respect to IP rights can be traced to the notion that the creation of an IP right conveys an economic monopoly along with its bundle of exclusive legal rights. In the US, it was for a long time assumed that a patent confers a monopoly in the antitrust sense of the word. Courts spoke explicitly in terms of "the patent monopoly" and found the existence of a valid patent or copyright sufficient to establish market power in antitrust cases.[16] However, it is now widely accepted that an IP right does not necessarily equate with market power.[17] The reason for this conclusion is simple, yet powerful: although an intellectual property right confers the power to exclude with respect to the specific product, process or work in question, there will often be sufficient actual or potential close substitutes for such product, process, or work to prevent the exercise of market power (Anderson and Kovacic, 2017, pp. 7-8[19]).[18]

31. Furthermore, the existence of market power by the licensor does not necessarily raise anticompetitive concerns – restrictions which operate merely to help the licensor capture the surplus inherent in the innovation are in line with the incentive scheme set up by the IP regime. Instead, the question is whether business practices involving IP rights are globally pro- or anticompetitive, taking into account innovation incentives. This requires a balancing of the various potential effects of licensing arrangements.

3.1. The Pro-Competitive Effects of IP Licensing

32. After an IP right is created, the dissemination and disclosure of the innovation protected by the IP right is socially optimal. However, if dissemination or disclosure are mandatory, then the innovation protected by the IP right may not be created in the first place. It follows that, while an IP right may lead to the less-than-optimal use of an innovation in the short-run, this is the price that has to be paid to secure improved long-term dynamic resource efficiency through increased levels of research and innovation. (OECD, 1989, p. 98[4])

33. At the same time, the short-run misallocation caused by IP rights may be limited through licensing. Licensing contributes to the dissemination and utilization of protected innovations and creations, and promote competition for their distribution, despite the relevant IP rights still being in place. Furthermore, since an IP right holder will only decide to license when licensing revenues exceed the profits the IP owner could obtain by excluding rivals, the ability to license increases prospective IP right holders' incentives to invest *ex ante*.[19] Therefore, IP licensing contracts will generally be procompetitive, fostering both competition *ex pos*t and innovation *ex ante* (OECD, 1989, pp. 11, 17[4]; Padilla, Ginsburg and Wong-Ervin, 2019, pp. 8-9[20]).

34. A number of pro-competitive effects have been ascribed to licensing agreements. These include: (i) allowing the innovator to maximise profits in proportion to the increase in consumer welfare flowing from its innovation, thereby incentivising innovation more generally; (ii) allowing an innovator to promote one's intellectual property while limiting free riding by would-be IP infringers; (iii) facilitating risk management and reducing transaction costs in commercialising an innovation; (iv) protecting and maintaining goodwill, such as a reputation for quality; and (v) promoting productive efficiency by the licensee (OECD, 1989, pp. 18-21[4]).

35. These pro-competitive effects reflect the fact that most licensing agreements are vertical contracts linking a firm operating in an upstream technology market (the licensor) and a firm operating in a downstream market (the licensee) (OECD, 1989, p. 21[4]).[20] An IP right is typically an input that derives value from its combination with complementary factors. Often, the IP right holder finds it most efficient to contract with others for these factors, rather than supplying these complementary factors itself. Economists have concluded that most vertical agreements are procompetitive or benign (OECD, 2013, p. 10[21]). The same reasoning applies to many licensing agreements.[21] Licensing allows the integration of the licensed property with complementary factors of production, leading to more efficient exploitation of IP, and benefiting consumers through the reduction of costs and the introduction of new products.[22]

3.2. The Anti-Competitive Effects of IP Licensing

36. Licensing arrangements can nonetheless pose competitive risks. Foremost among these is the risk of cartelisation, which can arise whenever the agreement is between actual or potential competitors in a given market. Collusion can take place in the market for products manufactured using the licensed technology or in the market for the licensed technology itself. In the market for products manufactured using the licensed technology, cartel agreements between licensees can be implemented by ostensibly vertical distribution agreements, e.g. by inducing licensors to impose resale price maintenance and thus fixing prices at the licensee level. Vertical price fixing may also contribute to the stability of a cartel arrangement at the licensor level by making the licensors' retail prices more transparent and stable (OECD, 1989, pp. 22-23, 100[4]; Padilla, Ginsburg and Wong-Ervin, 2019, pp. 20-21[20]).

37. A second competition concern is that a licence agreement may lead to anticompetitive foreclosure – e.g. through vertical restrictions that substantially raise barriers to entry by requiring entry at more than one level. However, anticompetitive effects on consumers from vertical restraints are likely to arise only under a limited set of market conditions. The first is a high degree of concentration in the market at the licensor level, with the larger licensors using the same or similar restraints. Second, a large proportion of the licensee market must be subject to the restraint. Finally, entry in the restrained market must be difficult (OECD, 1989, pp. 23-24, 101[4]).[23]

3.3. Balancing Pro- and Anticompetitive Effects

38. The preceding sections identified a number of major pro- and anticompetitive aspects of IP licensing agreements. The presence of both types of effects in licensing contexts explains why determining licensing agreement's compatibility with antitrust laws cannot rely exclusively upon formalistic criteria. Licensing arrangements, looked at in isolation, are neither "good" nor "bad" from the point of view of competition policy. A particular type of licensing clause can be used for a variety of different purposes and have varied effects on competition. This points to the importance of an inquiry into the purpose and likely effect of licensing clauses in their economic context (OECD, 1989, p. 25[4]).

39. In line with the evolution of competition law as regards IP licensing outlined at section 2.1 above, it is now widely accepted that competition agencies need to determine the likely competitive effect of licensing arrangements by balancing pro- and anticompetitive effects (Anderson et al., 2018, p. 64[22]). This is reflected in a number of competition agency guidelines.

Box 4. Effects Analysis in IP Guidelines

Canada's IP Guidelines set out that licensing is pro-competitive in the vast majority of cases because it facilitates the broader use of a valuable IP right by additional parties. The Competition Bureau will not consider licensing agreements involving IP to be anti-competitive unless they reduce competition substantially relative to that which would have likely existed in the absence of the licence's potentially anti-competitive term. IP related conduct that creates horizontal effects may be anti-competitive. However, there may be instances in which restrictions on competition can lead to a more efficient use of resources. This may be particularly true of agreements, arrangements and transactions involving IP that are inherently vertical and combine complementary factors. As a rule, in assessing whether conduct involving IP is for an anti-competitive purpose, the Competition Bureau considers any pro-competitive rationale for the conduct.[1]

In the EU, the Technology Transfer Guidelines set out that if an agreement is not restrictive of competition by object it is necessary to examine whether it has restrictive effects on competition. Account must be taken of both actual and potential anticompetitive effects. However, licence agreements may also have substantial pro-competitive potential, and the vast majority of those agreements are indeed pro-competitive. Thus, where a licence agreement has restrictive effects on competition, these must be balanced with the pro-competitive effects of the agreement.[2]

In Korea, the anti-competitive effects that the exercise of intellectual property rights have on the relevant markets may be determined by comprehensively considering concerns over price increases, output reductions, reduced diversity of goods and services, hampered innovation, foreclosure effects or increased costs shouldered by competitors. If the exercise of an IP right gives rise to efficiencies, however, such effects shall be considered in deciding whether the conduct is illegal. If the efficiency exceeds the conduct's restrictive effects, the conduct will not be deemed illegal.[3]

The Japanese IP Guidelines set out that whether restrictions pertaining to the use of technology reduce competition in the market is determined by fully considering the nature of the restrictions and their effects, and whether or not there are any reasonable grounds for imposing the restrictions, as well as their effects on incentives for research, development and licensing.[4]

In the US, the IP Licensing Guidelines set out that certain types of conduct with respect to intellectual property may have anticompetitive effects against which the antitrust laws can and do protect. While intellectual property licensing arrangements are typically welfare-enhancing and procompetitive, antitrust concerns may nonetheless arise. In the vast majority of cases, restraints in intellectual property licensing arrangements are evaluated under the rule of reason, i.e. it must be established whether the investigated restraint is likely to have anticompetitive effects and, if so, whether the restraint is reasonably necessary to achieve procompetitive benefits that outweigh those anticompetitive effects.[5]

Similar approaches have also been adopted beyond the OECD.[6] For example, in People's Republic of China (hereafter 'China') the IP misuse guidelines adopted a case-by-case approach which is, on the surface, akin to a rule-of-reason.[7] In South Africa, the Competition Commission has recognised that IP rights may yield long-term pro-competitive benefits which are to be weighed against short-term anti-competitive effects.[8]

Notes:
1 Canada IP Guidelines, paras. 34, 69-73.
2 EU Technology Transfer Guidelines, paras. 15-18.
3 Korea IP Guidelines § II.3.B. See also (Anderson et al., 2018, p. 37[22]).
4 Japan IP Guidelines § 2.3. See also (Anderson et al., 2018, pp. 31-32.[22]).
5 US Licensing Guidelines § 2.1, 3.4.
6 The main exception to this may be India, where, although the importance of a 'rule of reason' approach has been recognised in some recent competition cases, India still generally follows a 'per se' approach, as evidenced in the limited jurisprudence on the competition policy-IP interface. See (Anderson et al., 2018, p. 52[22])
7 See Section I(i) of NDRC Guidelines and Art. 4(2) and 15 of SAIC Guidelines. See also Draft Anti-Monopoly Guidelines on the Abuse of Intellectual Property Rights (the Draft Guidelines), released for public consultations on 23 March 2017 (in Chinese); (He Jing and Hou Lei, 2016[23]); and (Anderson et al., 2018, p. 47[22]).
8 Competition Commission of South Africa, Intellectual Property and Competition Law, Competition News, edition 4 June 2001. Available at http://www.compcom.co.za/wp-content/uploads/2014/09/June-01-Newsletter.pdf. See also (Anderson et al., 2018, pp. 60-61[22])

40. In effect, distinguishing procompetitive from anticompetitive licensing practices has been the focus of competition enforcement over the years. Given this experience, it is not surprising that principled approaches to certain licensing practices have been adopted which provide greater guidance and streamline competition analysis by comparison to pursuing a full-blown effects analysis in each case (OECD, 2017, pp. 8-11, 16-19[24]). The next sections outline the treatment that competition law has adopted for a number of such practices.

4. Typical Clauses in Licensing Agreements

41. This section provides an overview of some of the clauses in licensing agreements most commonly subject to competitive analysis. The clauses discussed in this section are not exhaustive examples of all types of potentially anticompetitive licensing provisions – other practices are covered in many national guidelines. As we shall see, there is widespread international agreement about how to address most licensing clauses, reflecting consensus regarding their effects and the circumstances in which they may give rise to anticompetitive outcomes.

42. The discussion of the competitive effects of these licensing clauses typically occurs as if the same considerations apply to the licensing of all types of IP rights. This reflects the fact that, although there are clear and important differences in the purpose, extent, and duration of protection provided for different IP rights – e.g. patent, copyright, and trade secrets – the governing antitrust principles are the same. Nonetheless, antitrust analysis takes differences among these forms of IP into account in the competitive assessment of individual licensing clauses.[24]

4.1. Pricing Arrangements and Output Restraints

43. Clauses in licensing arrangements that set prices or that restrain output can amount to collusive arrangements to fix prices or restrict output, in which case they will be prohibited. If the conduct does not amount to cartelisation, however, such restraints may be ancillary to pro-competitive licensing agreements.

44. Price agreements can guarantee margins to licensees, inducing them to invest in the production and promotion of innovation, and promoting interbrand competition. Such clauses can also preserve returns to the licensor, increasing the returns on innovation and

the incentives both to innovate and to license. Similar to price agreements, output restraints may seek to preserve licensees' margins and their incentive to promote the protected innovation. Such restraints can also serve to preserve the licensor's profits, especially where it too produces in the same market, thereby enhancing his incentives to license the protected innovation.[25] Between non-competitors, the main anti-competitive risk flowing from a licensor imposing output restrictions on licensees is reduced intra-technology competition between licensees (OECD, 1989, p. 102[4]).[26] An effects-based assessment is the internationally accepted approach to the assessment of non-collusive price agreements and output restraints in the context of licensing agreements.[27]

45. The one area where one can observe different approaches across jurisdictions concern minimum resale prices, broadly reflecting different approaches to this type of clauses in vertical agreements. Some jurisdictions consider that all agreements where a licensor conditions a licensee on the resale price of the product incorporating the licensed technology – including minimum resale price conditions – should be subject to an effects-based analysis.[28] In other jurisdictions, however, while maximum or recommended sale price conditions imposed on a licensee will be subject to an effects-based analysis, minimum resale pricing conditions are generally prohibited.[29]

Box 5. Sports Broadcasting (Poland)

The Polish competition authority investigated agreements whereby SportFive granted a non-exclusive licence to broadcast two World Cup 2014 qualifying matches of the Polish national team to 11 broadcasters. The investigation revealed that each agreement included a clause imposing a minimum price to be charged to viewers of 20 PLN (approximately €5). The clause was first introduced by Cyfrowy Polsat, one of the main providers of digital multichannel television in Poland and the first broadcaster to sign a licensing agreement with SportFive, and was subsequently included in the agreements with the other broadcasters.

The authority concluded that, although the relevant non-exclusive licensing agreements were of a vertical nature, taken together they amounted to a horizontal agreement between the licensees to fix minimum resale prices, coordinated and supervised by SportFive. In other words, the practice was very similar to a hub-and-spoke agreement, and amounted to a restriction of competition by object.[1]

1 Polish Competition Authority, Decision DOK-2/2013 Sports Broadcasting of 21 August 2013.

4.2. Exclusivity

46. A licensing arrangement may involve different types of exclusivity. For example, under a first type of exclusivity, a licensor will constrain its ability to license to others or even to explore its own IP right. A second type of exclusivity arises when a licence prevents or restrains the licensee from licensing, selling, distributing, or using competing technologies (i.e. exclusive dealing).[30]

4.2.1. Field-of-Use, Customer and Territorial Restraints

47. When a licensor constrains its ability to license to others or even to explore its own IP right by granting exclusive licences to licensees, such arrangements are often hedged by reference to certain territories, fields-of-use or customer groups.

48. Under a field-of-use restriction, the licence is either limited to one or more technical fields of application, or to one or more product markets or industrial sectors. This limits the exploitation of the licensed technology by the licensee to one or more particular fields of use without limiting the licensor's ability to exploit the licensed technology.[31] Field of use restrictions may have pro-competitive effects by encouraging the licensor to license its technology for applications that fall outside its main area of focus. If the licensor could not prevent licensees from operating in fields where it exploits the technology itself or in fields where the value of the technology is not yet well established, this could create a disincentive for the IP right holder to license or lead it to charge higher royalties.[32] Thus, field-of-use restraints can work in conjunction with other restraints to permit a licensor to decrease the price at which it licenses its IP right and to increase output in particular fields-of-use (OECD, 1989, p. 102[4]).

49. Territorial restraints can be used to preserve margins of both the licensor and the licensee by limiting intrabrand competition within a given territory. This restraint is susceptible to induce investment in the use and promotion of new technologies or protected content, and thus work to increase their diffusion. Territorial restraints can also help the establishment of different prices in different markets in response to local demand functions. The outcome of such price differences can be procompetitive in that it results in a lower price where consumers have a higher cross-elasticity of demand, leading to higher overall output than if the licensor were limited to a single monopoly price across all territories. Similar consideration apply to restraints regards the customer groups to whom the licensed product may be sold (OECD, 1989, p. 102[4]).[33]

50. Field-of-use, territorial or customer exclusivity raise antitrust concerns mainly if there is a horizontal relationship among licensors, among licensees, or between the licensor and its licensee(s). At the same time, and as we just saw, it is widely accepted that such restraints may serve procompetitive ends. It follows that a finding of whether such clauses infringe competition law depends on the balancing of pro- and anticompetitive effects.[34]

51. Some jurisdictions may nonetheless prohibit certain types of absolute territorial restraints. The EU has adopted a strict approach to limitations based purely on the geographical scope of the underlying IP right, particularly as regards passive sales (Lianos, 2019, pp. 53, 56[25]; Vinje, 2018, p. 49[26]). This is apparent both from the case law[35] and from the legislative instruments issued by the European institutions, which set out that restrictions on passive sales may restrict competition by object.[36] This concern with preventing absolute territorial restraints in the EU may reflect a specific concern with preventing market partitioning and the single market imperative (OECD, 2013, pp. 25, 77[21]; Whish and Bailey, 2018, p. 771[14]).[37]

Box 6. Absolute Territorial Restrictions (EU and Switzerland)

The EU's concern with absolute territorial restrictions is apparent in a number of recent cases. The most recent one concerns the sanctioning of Nike for banning traders from selling licensed merchandise to other countries within the EEA.[1] Licensed merchandising products carry one or more logos or images protected by IP rights, such as trademarks or copyright. The European Commission found that Nike's non-exclusive licensing and distribution agreements concerning these products restricted out-of-territory sales by licensees, thereby partitioning the European single market and preventing licensees in Europe from selling products cross-border.

Another notable case concerned the broadcasting of English Premier League football games. The Premier League imposed in its licensing contracts a condition preventing broadcasters from offering their services to subscribers outside the Member State for which they held the licence. The European courts found that whilst the Premier League could grant rights on a territorial basis, the relevant provisions in its broadcasting licence agreements could not prevent the supply of decoding devices outside the contracted territory because this would make that territorial exclusivity 'absolute,' and hence contrary to European competition law.[2]

Following this, the European Commission opened a competition investigation concerning the cross-border provision of pay TV services – in particular, the use of absolute territorial restrictions in the licensing agreements between a number of US film studios and EU Pay-TV broadcasters. These investigations concluded with commitments offered by Disney, NBC Universal, Sony Pictures, Warner Bros. and Sky regarding licensing clauses precluding consumers outside the UK and Ireland to subscribe to Sky UK's Pay-TV services to access films via satellite or online. The investigated parties committed not to apply these clauses in existing film licensing contracts for Pay-TV with any broadcaster in the European Economic Area (EEA). They have also committed to refrain from (re)introducing such clauses in film licensing contracts for Pay-TV with any broadcaster in the EEA.[3]

Recently, the Swiss Supreme Court upheld a decision by the Swiss Competition Commission to impose a penalty of 4.8 million Swiss Franc against Gaba because Gaba had contractually obliged its Austrian licensee (Gebro) not to export certain products out of Austria. According to COMCO, the agreement significantly restricts competition in Switzerland. The Swiss Federal Supreme Court held that price-fixing, market-allocation and output restraints pose significant restriction to competition because of their nature (object). Such agreements are prohibited and can be sanctioned unless they are justified on grounds of economic efficiency.[4]

Notes:
1 Case AT.40436 *Nike*, decision of 25 March 2019.
2 Joined Cases C-403 & 429/08 *Football Association Premier League Ltd and Others v QC Leisure and Others & Karen Murphy v Media Protection Services Ltd* ECLI:EU:C:2011:631.
3 Case AT.40023 *Disney, NBCUniversal, Sony Pictures, Warner Bros. and Sk*y, decision of 7 March 2019. See also Case T-873/16 *Groupe Canal+* ECLI:EU:T:2018:904, concerning similar commitments offered by Paramount in the same case in a decision of 26 July 2016.
4 *Colgate-Palmolive Europa Sàrl* (former Gaba International AG), judgment of 21 April 2017 of the Swiss Federal Supreme Court.

4.2.2. Exclusive Dealing

52. Exclusive dealing occurs when a licensor prevents or restrains the licensee from licensing, selling, distributing, or using competing technologies. Exclusivity may be achieved either by an explicit exclusive dealing clause or implicitly, e.g. by adopting compensation terms or other economic incentives for exclusive dealing.

53. From the point of view of the licensor, a commitment by the licensee to deal exclusively in the technology or content of the licensor provides assurance that the licensee will devote its best efforts to the promotion of the licensor's technology or content. In this way, the exclusivity provision will allow the licensor to exploit its IP rights efficiently and preserve its incentive to innovate in the first place. This can be coupled with exclusivity protections granted by the licensor in terms of commercialisation of the products of the licensed technology, which would provide the licensee with a greater incentive to invest in the commercialisation, distribution, and improvement of licensed technology by removing the concern that other licensees might free-ride on its investments (Delrahim, 2005, p. 266[27]).

54. At the same time, exclusivity clauses can be used anti-competitively to exclude competing licensors. Exclusivity in distribution can deny a competing licensed product access to a distribution network, potentially raising barriers to entry if the competitor then faces slow or costly entry at the distribution level. Exclusivity in the use of a technology can likewise foreclose technology markets to competing licensors and may reduce their incentive to engage in efforts to develop competing technologies. Furthermore, exclusivity arrangements may amount to market sharing in the context of cross-licensing agreements between competitors, since they prevent the affected party from selling actively and passively into territories and customer groups which it served or could realistically have served in the absence of the agreement (OECD, 1989, pp. 100-102[4]) .

55. As with other licensing restraints, it is now widely accepted that exclusivity arrangements should be subject to an effects-based analysis (Delrahim, 2005, p. 267[27]). The likelihood that exclusive dealing may have anticompetitive effects relates, *inter alia*, to the degree of foreclosure created by the exclusive dealing clause in the relevant market, the duration of the exclusive dealing arrangement, and other characteristics of the input and output markets – such as concentration, barriers to entry, and the responsiveness of supply and demand to changes in price in the relevant markets.[38]

Box 7. Fila Sport Oceania (Australia)

In Australia, the Australian Football League (AFL) licensed various companies to supply apparel to AFL teams and their supporters. In response to the AFL's restructuring of its licensing system, Fila Sport implemented a selective distribution policy under which Fila would not supply retailers with licensed apparel if a retailer stocked some types of Fila-sponsored team apparel that was manufactured by another licensee. The Federal Court found in *ACCC v Fila Sport Oceania* [2004] FCA 376 that this amounted to anticompetitive exclusive dealing.

4.3. Grant-Back Obligations

56. A grant-back is an arrangement under which a licensee agrees to extend to the IP licensor the right to use the licensee's improvements to the licensed technology. Grant-back clauses make it less risky for a firm to license its technology by assuring it that it will be able to use or appropriate any improvements developed by the licensee.

57. The main theory of harm related to grant-backs is that such clauses may have a negative impact on the licensee's innovation and R&D incentives, which may affect the overall competitive process. Exclusive grant-back clauses, in particular, can work to reduce the incentives to a licensee to develop a competing technology, while also working to maintain or increase the market power of the licensor. Non-exclusive grant-back clauses are unlikely to result in harm to innovation or the competitive process (OECD, 1989, p. 100[4]).

58. At the same time, grant-back clauses have a number of potentially pro-competitive effects. First, grant-back clauses encourage patent holders to license (more advanced) technology by eliminating the concern that a licensee will ultimately "leapfrog" and exclude the licensor from technology based on its own IP right. Second, grant-back clauses provide a means for the licensee and the licensor to share risks, and to reward the licensor for making possible further innovation that is based on or informed by the licensed technology. In this way, grant-back clauses may incentivise the pursuit of innovation and its subsequent licensing (Padilla, Ginsburg and Wong-Ervin, 2019, pp. 35-36[20]).

59. Given the possibility of both pro- and anticompetitive effects, it is common practice to pursue an effects-based analysis for the assessment of grant-back clauses.[39] At the same time, while some jurisdictions nonetheless look suspiciously at exclusive grant-back clauses,[40] non-exclusive grant-back clauses may fall within a safe harbour exempting them from antitrust scrutiny in others.[41]

Box 8. Pro- and Anti-Competitive Grant-Back Clauses (Germany and China)

In Germany, the Higher Regional Court of Celle evaluated a number of contractual restrictions imposed in the context of an agreement between two parties in the sugar beet cultivation sector. One of the parties granted access to its germplasm and technology in exchange for a licence fee. It was agreed that the licensor would be proprietor of all germplasm and technology used and developed by the licensee. The agreement further contained non-competition clauses and prohibited the licensee from co-operating with third parties. The court found that while these restraints may amount to hard-core restrictions under competition law, in this case these clauses were ancillary to a pro-competitive agreement and were thus not anticompetitive.[1]

On March 2, 2015, China's National Development and Reform Commission ("NDRC"), the agency responsible for investigating price-related violations of China's Anti-Monopoly Law (the "AML") found that a number of Qualcomm's licensing practices regarding baseband chipsets to Chinese manufacturers were anticompetitive. These practices included, among others, the imposition of royalty-free patent licence grant backs. The NDRC expressly pointed out that grant-back requirements are not illegal *per se*. However, the grant-back requirement was problematic in this case because it required licensees to grant back their patents and waive their right to enforce them free of charge.

By imposing such grant-back obligations free of charge, Qualcomm could benefit from illegitimate competitive advantages while suppressing the licensees' innovation impetus.[2]

Notes:
1 Higher Regional Court of Celle, decision of October 14, 2016, case 13 Sch 1/15 (Kart.)
2 NDRC Administrative Sanction Decision No. 1 [2015] (Mar. 2, 2015), available at: http://www.ndrc.gov.cn/gzdt/201503/t20150302_666209.html

4.4. No-Challenge Provisions

60. A no-challenge clause imposes direct or indirect obligations not to challenge the validity of the licensor's intellectual property right. Such clauses may conflict with the overriding interest of ensuring that IP rights are lawful. Invalid intellectual property rights should be eliminated because it stifles innovation rather than promoting it. Since licensees are often the parties with the greatest technical ability and economic incentive to challenge improperly granted IP rights, it is appropriate to impose limitations on no-challenge clauses (OECD, 1989, p. 100[4]).

61. It is widely accepted that no-challenge clauses may be anticompetitive when they are adopted for the sake of ensuring the continued existence of invalid IP rights. The extent to which such no-challenge provisions are anticompetitive will typically depend on the nature of the underlying licensing relationship, which will have to be assessed on a case-by-case basis.[42]

62. The anticompetitive effects of no-challenge clauses are likely to be greatest in the context of non-exclusive licensing arrangements, where they may have the effect of stifling innovation and restricting the diffusion of technologies not protected by IP rights.[43] Similar effects may attach to clauses allowing the licensor to terminate a licensing agreement if the licensee challenges the underlying IP right. Where the licensee has incurred sunk costs or where the licensor's technology is a necessary input for the licensee's production, such a termination right may deter the licensee from challenging the validity of the IP right.[44]

63. Non-challenge clauses and termination clauses with similar effects are less likely to be anticompetitive in the context of exclusive licensing agreements. This is because, once the licence is granted, the licensee may be the only source of revenue for the licensor. Incentives for innovation and for licensing innovations could be undermined if, for example, the licensor were to be locked into an agreement with an exclusive licensee, which is challenging its IP rights and is no longer making significant efforts to develop, produce or market goods or services incorporating the licensed IP rights.[45] This reduced impact on competition of no-challenge and termination clauses in exclusive licensing contexts has led some jurisdictions to adopt safe harbours for such clauses in the context of exclusive licensing agreements.[46]

Box 9. Non-Challenge Clauses (China and UK)

China's NRDC found that Qualcomm violated competition law by imposing unreasonable licensing terms in its contracts for the supply of baseband chipsets to Chinese manufacturers. These terms set out that Qualcomm could terminate the supply of chips if the licensee initiated litigation against it. The NDRC characterised this a no-challenge clause because the termination of supply was enough of deter Qualcomm's customers from challenging the underlying IP and, thus, functioned as an outright prohibition to challenge that IP.[1]

In an earlier case in the UK, two large German brake systems manufacturers were involved in a dispute regarding whether one had breached the other's German patents for a type of brake valve.[2] This dispute was settled by a settlement agreement containing a no-challenge clause whereby the infringing party agreed not to challenge the identified patents. That party then developed its own brake valve, and applied to the UK court for a non-infringement declaration. The UK High Court considered, among other matters, whether the no-challenge clause contained in the settlement agreement was void because it infringed competition law. The court found that given the circumstances – i.e. the parties were part of an oligopoly in the field of braking systems for commercial vehicles, and the technology could not be obtained on a free licence nor was it outdated – there was at least a good arguable case that the no-challenge clause could be contrary to competition law.

Notes:
1 NDRC Administrative Sanction Decision No. 1 [2015] (Mar. 2, 2015), available at: http://www.ndrc.gov.cn/gzdt/201503/t20150302_666209.html
2 *Knorr-Bremse Systems for Commercial Vehicles Limited and Haldex Brake Products GmbH* [2008] EWHC 156.

5. Licensing in Technological Co-operation Contexts

64. While there are some minor differences between jurisdictions, the treatment of typical clauses in licensing agreements such as the ones reviewed above is broadly agreed. Such clauses, and the licensing agreements containing them, can have both pro- and anticompetitive effects, and thus should be subject to a case-by-case analysis in line with broadly shared principles and starting from widely shared assumptions. This is reflected in the content of the OECD 1989 Licensing Recommendation, which advanced just such an approach to these types of licensing arrangements.

65. Since the adoption of this Recommendation, however, a number of developments have taken place that have proved more controversial. These developments are mainly connected with technological co-operation and with standard-setting contexts in particular.

5.1. Cross-Licences and Patent Pools

66. Two practices that are often mentioned together in discussions of competition concerns raised by technological co-operation mechanisms are cross-licensing and patent pooling. Cross-licensing agreements give two or more parties the rights to use each other's intellectual property. A patent pool is a combination of patents from multiple IP rights' holders that are then licensed to third parties.

67. It is generally accepted that patent pools and cross-licences may benefit both IP owners and consumers, provided they are limited to complementary and/or blocking patents – i.e. situations where each of two or more patents cannot be effectively practiced without infringing the other(s) (OECD, 2013, p. 25[10]). If, for example, two IP right owners control blocking patents (a vertical relationship), they ought to be encouraged to combine their IP rights by licensing each other or forming a pool; without such an arrangement, neither could use the technology, and society would be worse off (Rai, 1999[28]). Patent pools and cross-licences also reduce the risks of patent infringement litigation that may result from technology use, thus enhancing the efficiency of related markets and promoting the use of technology.[47]

68. Pooling complementary IP rights and making them available under a single licence can also have other pro-competitive effects, such as integrating complementary technologies, reducing transaction costs and clearing blocking patents.[48] As a result, the licence fee for the patent pool may well be lower than what a licensee would cumulatively pay by having to negotiate licences with each of the right holders that contributed to the pool (Delrahim, 2005, p. 261[27]; Vinje, 2018, p. 51[26]). The pro-competitive effects of such arrangements are such that they may even benefit from a safe harbour.[49]

69. The main concern regarding cross-licensing and pooling arrangements is that they can be used to cover up a collusive agreement by mechanisms such as the joint marketing of pooled intellectual property rights with collective price setting or coordinated output restrictions that do not contribute to an efficiency-enhancing integration of economic activity among the participants. Such anticompetitive effects are more likely to occur when the IP rights being cross-licensed or pooled comprise substitute technologies, i.e. the IP rights' holders are potential competitors in a horizontal relationship.[50] Other competitive risks include reducing competition in horizontal technology markets, particularly when patents are substitutes and not blocking; foreclosing competing technologies; and reducing the incentives to innovate (OECD, 2004, p. 32[11]).

Box 10. Investigations into Patent Pools (Japan and US)

In Japan, the JFTC investigated a situation whereby a patent management company (Nittokuren) and the licensees of Nittokuren who were members of Japan Game Machine League (NYK), manufacturers of Pachinko machines, formed a patent and utility models pool. Their share in the Pachinko machine market suggested that the patent pool was a major player in that market. Nittokuren controlled the price and output of Pachinko machines and, with the pool members, adopted a policy of not allowing any new entry in this market without a licence from that pool. The JFTC concluded that the pool's refusal to license new entrants constituted monopolisation. In this case, the JFTC considered that the exercise of IP rights acquired from the third party could constitute exclusionary private monopolisation.[1]

A contemporaneous example can be observed in the US, where the FTC challenged a pool of patents relating to the manufacture and use of lasers employed in performing eye surgeries in 1998. The two companies comprising the pool were the only firms whose laser equipment had obtained the marketing approval from the U.S. Food and Drug Administration for performing the surgery. Through the pool, Summit and VISX relinquished the right to license their patents unilaterally, but each received the right to prohibit the pool from licensing any third party.

The pool issued no third-party licences over its six-year existence. In addition, the pool agreement required the payment of a minimum fee for each procedure performed with its laser equipment, i.e. the pool set a price floor for the "per-procedure fee" that each company charged ophthalmologists using its equipment. The FTC alleged that the pool eliminated competition between the pool members in the sale or leasing of the laser equipment and in the licensing of related technology. The FTC's allegations concerning the pool were settled through consent orders that dissolved the agreement.[2]

Notes:
1 Pachinko Patent Pool (JFTC Recommendation Decision, 6 August 1997), described in (Hiroko, 2014, p. 49[29])
2 DoJ and FTC, Antitrust Enforcement and Intellectual Property Rights: Promoting Innovation and Competition, Chapter 3 Antitrust Analysis of Portfolio Cross-Licensing Agreements and Patent Pools

70. More complex situations arise when the arrangement is partly vertical and partly horizontal. What if, absent a cross-licence or patent pool, two companies would have been able to compete with each other, but their products would not have been quite as good? Should a trivial improvement entitle parties that otherwise would be competitors to form a highly restrictive pool that fixes prices at the joint monopoly profit-maximising level? Conversely, should the mere possibility that the parties could have produced some product on their own, even though greatly inferior, prevent them from forming a more efficient pooling arrangement? Or, recognising that a wide variety of arrangements go under the name “pooling”, should competition authorities seek a middle ground, perhaps requiring some degree of proportionality between the restraint and the legitimate end to be achieved? (OECD, 1997, pp. 27-28[12])

71. Throughout the years, competition enforcers have increasingly faced such complex scenarios, and have developed largely similar criteria for analysing cross-licences and patent pools. These criteria focus mainly on whether the pooled technologies are substitutes or complements, but also take into account other considerations designed to filter out arrangements that are likely to reduce competition (OECD, 2004, pp. 32-34[11]). In short, competition agencies will seek to determine whether the restrictions inherent to cross-licensing or patent pooling arrangements are necessary to the achievement of efficiencies and to balance pro- and anticompetitive effects, except when there is evidence of collusive conduct prohibited *per se* or by object.[51] The need for a balancing of pro- and anti-competitive effects will be particularly strong for situations of ambiguity regarding whether the cross-licensed/pooled technologies are substitutable or complementary.[52]

5.2. Standards and Standard Essential Patents

72. An area of particular controversy as regards the interface between competition law and IP licensing concerns standards, and particularly the licensing of standard essential patents (SEPs).

73. Patent thickets – i.e. overlapping sets of patent rights required by those seeking to commercialise new technologies – are common today in industries such as biotechnology, semiconductors, computing and telecommunications, although patent thickets are by no means limited to those sectors (Shapiro, 2001, p. 119[30]). Standards have become particularly valuable in the modern economy as they allow interoperability and therefore make networks, such as the Internet, more valuable. In information and communications technology markets, standards often rely on proprietary technology protected by patents and cannot be implemented without access to that technology (OECD, 2014, p. 3[31]).

74. While there is no inherent link between technology pools and standards, the technologies in a pool often support, in whole or in part, a *de facto* or *de jure* industry standard. Because essential patents are mutually complementary, competition among the patented technologies is usually not restricted when only the essential patents are pooled and licensing conditions are fixed.[53] Instead, pools of patents essential for adopting certain functions and uses (namely, "essential patents") are usually procompetitive. The benefits of standards, and of the patent pools underpinning them, include facilitating the adoption of a technology, achieving economies of scale and improving firms' incentives to innovate and invest (OECD, 2014, p. 3[31]).

75. Nonetheless, standards – and the patent pools underpinning them – may also give rise to competition concerns, which may take various forms and which are undergoing rapid development (Lemley, 2002[32]).[54] A first type of problematic practice concerns patent ambushes in the context of Standard Setting Organisations (SSOs) through the non-disclosure of patents or patent applications, which are later claimed to be relevant to the adopted standard. A second type of practice concerns exclusionary behaviour, e.g. manipulation of the standard-setting process to choose one standard over another[55] (OECD, 2014, p. 4[31]).

Box 11. Rambus (EU and US)

The US-based standards organisation JEDEC developed an industry-wide standard for "Dynamic Random Access Memory" chips (DRAMs) used to store data temporarily. JEDEC-compliant DRAMs accounted for around 95% of the market and were used in virtually all personal computers. Investigations were pursued on both sides of the Atlantic to determine whether Rambus had engaged in anticompetitive patent ambush – i.e. whether Rambus had intentionally concealed that it owned patents and patent applications during JEDEC's development of the DRAM computer memory standards, and later asserted patent claims against firms employing these near-universal industry standards. Those investigations led to contrasting outcomes.

In Europe, the European Commission's statement of objections held not only that Rambus' conduct had led to higher royalties but also that it undermined confidence in the standard-setting process, given that an effective standard-setting process was, in the relevant sector, a precondition for technical development and the development of the market in general to the benefit of consumers. The investigation concluded with the adoption of a decision that rendered legally binding commitments offered by Rambus and, in particular, put a cap on its royalty rates for certain patents for DRAMs.[1]

In the US, the FTC unanimously concluded that Rambus had, by its conduct, engaged in unlawful monopolisation. The FTC found that Rambus's manipulation of the JEDEC standard-setting process allowed it to gain monopoly power by comparison to a hypothetical "but for world" in which Rambus made all required patent-related disclosures to JEDEC.[2] However, on appeal the D.C. Circuit reversed the FTC's decision, holding that in the but-for world Rambus would have negotiated ex ante licensing commitments with JEDEC entitling Rambus to royalties.[3] It followed that '*Rambus's alleged deception [could not] be said to have had an effect on competition in violation of the antitrust laws.*'

Notes:
1 Commission Decision of 9 December 2009, Case COMP/38.636 – Rambus.

2 In the Matter of Rambus, Inc., FTC Docket No. 9032 (July 31, 2006), Section IV. B., available at: https://www.ftc.gov/sites/default/files/documents/cases/ 2006/08/060802commissionopinion.pdf.
3 Rambus Inc. v. FTC, 522 F.3d 456 (D.C. Cir. 2008) at 466-467.

76. However, nowhere is debate livelier than as regards obligations to license SEPs on fair, reasonable and non-discriminatory (FRAND) terms. The main anticompetitive concern is with the possibility of a SEP holder excluding certain firms from using its patented technology, and therefore from implementing a given standard, e.g., by refusing to license, by refusing to license on "reasonable" terms, or by seeking an injunction (OECD, 2014, p. 4[31]). Given the market power of standards, and of holders of patents essential to such standards, SEP owners could opportunistically engage in patent holdup, taking advantage of the fact that the firms and users adopting the standard become individually and collectively locked into the standard over time. This enables SEP holders to obtain royalties far in excess of the royalties that they could earn in a competitive market. Given that numerous patents may be essential to a standard, and that various patent holders may thus be able to engage in holdup, this could lead to royalty stacking – i.e. situations in which a single product potentially infringes many patents, and thus may bear multiple royalty burdens (Lemley and Shapiro, 2007[33]).

77. To address this issue, SSOs typically require participants that own SEPs to make certain commitments, including to license standard essential patents on FRAND terms. FRAND commitments, which operate by force of contract, should prevent (or at least reduce) the extent of ex post opportunism and monopoly pricing by SEP holders.

78. In theory, FRAND commitments are important for competition purposes because ex post monopoly pricing by SEP holders harms consumers by raising the cost of products that comply with a standard (Melamed and Shapiro, 2018, pp. 2111-2118[34]). In practice, a number of market developments have led to more intense litigation on SEPs and on FRAND licensing, with a concomitant increase in claims that antitrust should intervene to prevent monopolistic practices such as patent holdup and impose FRAND licensing conditions as regards SEPs. These market developments include a substantial increase in SEP declarations and in the number of patents relevant to marketed products, such as smartphones; greater reliance on standards in a wider range of products; and an increase in the valuations of SEPs as business assets (OECD, 2014, p. 4[31]).

79. On the other hand, it has been argued that competition law should not intervene to impose FRAND licensing conditions (Galetovic, Haber and Levine, 2015[35]; Epstein and Noroozi, 2017[36]). The main reasons advanced for this are that there is no empirical support for patent holdup and royalty stacking being a problem; and that competition interventions to impose FRAND licensing unduly favour technology implementers to the detriment of innovators, leading to under-compensation and holdout on the part of innovators. Holdout (or reverse patent holdup) occurs when an implementer refuses to negotiate in good faith with an innovator for the licence of a valid patent, and instead infringes the patent and forces the innovator to either undertake significant litigation costs and time delays to extract a licensing payment through a court order, or else simply to drop the matter. This may lead patent holders to receive lower returns than the value of their patent, which may in turn deter them from innovating or including their technologies in a standard.

80. The different approaches to competition enforcement in this area seem to reflect the different positions in the debate on whether the licensing of SEPs on FRAND terms is a competition issue.

Box 12. Competing Approaches to SEP Licensing

Many jurisdictions engage in competition enforcement in the context of SEP licensing. At the same time, competition enforcers are reluctant to sanction licensing conduct solely because royalties are excessive, and the risk that potential licensees may seek to take advantage of FRAND commitments by infringing a patent and "holding out" for a particular (lower) royalty, or simply not undertaking licensing negotiations in good faith, is acknowledged.

Given this, competition enquiries focus on evidence regarding whether the parties comply with licensing requirements and how the negotiation took place.[1] A particular competition concern in this context is with injunction requests by SEP holders against firms that are "locked-in" to the standard and face prohibitive costs to switch to alternative technologies. SEP holders can thus "hold up" potential licensees and demand higher royalties.

Some jurisdictions acknowledge that it is usually legitimate for a patent holder to request an injunction for patent infringement, but find that a SEP holder requesting a patent injunction against an implementer can nonetheless be anticompetitive.[2] The most prominent example of which is arguably the EU. Two European Commission decisions concluded that it might be anticompetitive for an SEP holder to request an injunction against a licensee.[3] This conclusion was then refined by the European courts, which found that recourse to injunctions may be anticompetitive where a potential licensee is willing to negotiate a licence on FRAND terms and the injunction proceeding is liable to prevent products complying with the standard from appearing or remaining in the market. Having placed the focus of the competition assessment on the behaviour of the negotiating parties, the European courts then prescribed a process for assessing whether strategies for negotiating a FRAND licence, and requesting injunctions for the infringement of SEPs, are anticompetitive.[4]

The jurisdiction where the debate about the suitability of pursuing antitrust cases as regards SEP licensing has been more intense is the US. No court has ever found a SEP holder to have violated the Sherman Act by requesting an injunction or an exclusion order against a SEP infringer. On the other hand, a 2011 FTC Report stated: *"[a]t the time a manufacturer faces an infringement allegation, switching to an alternative technology may be very expensive if it has sunk costs in product design and production using the patented technology*."[5] The FTC has initiated several investigations against SEP holders that have asked for an injunction against an infringer, but those investigations resulted in consent orders and, consequently, did not establish whether and under what conditions a SEP holder's request for an injunction would violate the Sherman Act. Likewise, the Department of Justice pursued one investigation on the topic, but eventually archived it.[6]

More recently, the US Department of Justice has argued that competition enforcers should only act as regards the licensing of SEPs in exceptional circumstances. Standard setting typically occurs against the backdrop of negotiations between innovators, who develop technologies through private investment and own IP rights, and implementers, who hope to market and use the innovators' technology through a licence. It has been argued that patent holdout poses as large a risk as hold-up, and that, as a result, competition law should pay attention not only to the concerns of implementers but also of innovators. This points towards limited competition enforcement, particularly inasmuch as the contractual mechanisms governing standard-setting organisation provide an appropriate answer to those issues that will arise in most situations.[7]

Notes:
1 Canada IP Guidelines, paras. 203-205; in Europe, see Case C-170/13 *Huawei Technologies Co. Ltd v ZTE Corp. and ZTE Deutschland GmbH* ECLI:EU:C:2015:477; Korea IP Guidelines § III.5.A; Japan FTC (2005) 'Guidelines on Standardization and Patent Pool Arrangements' § 3.1.
2 Canada IP Guidelines, para. 204; Korea IP Guidelines § III.5.B; Case 2013 (Ne) 10043 *Samsung Electronics Co., Ltd. vs. Apple Japan LLC* (decision by Japanese Intellectual Property High Court of 2014), Tokyo District Court, Case No. 2138(wa) of 2013, Order dated 18 February 2017, and Japan IP Guidelines§ 3.1.(i) e) and 4.2.(iv).
3 Case AT.39939 — *Samsung* C(2014) 2891 and Case AT.39985 — *Motorola GRPS Standard* 2014 O.J. C 344.
4 Case C-170/13 *Huawei Technologies Co. Ltd v ZTE Corp. and ZTE Deutschland GmbH* ECLI:EU:C:2015:477.
5 FTC (2011) 'Report on the Evolving IP Marketplace', p. 58.
6 US Dep't of Justice, Statement Of The Department Of Justice Antitrust Division On Its Decision To Close Its Investigation Of Samsung's Use Of Its Standards-Essential Patents (2014), https://www.justice.gov/opa/pr/statement-department-justice-antitrust-division-its-decision-close-its-investigation-samsung.
7 Makan Delrahim, Assistant Att'y Gen., Antitrust Div., Dep't of Justice, Remarks at the USC Gould School of Law's Center for Transnational Law and Business Conference (Nov. 10, 2017), available at http://www.justice.gov/opa/speech/assistant-attorney-general-makan-delrahim-delivers-remarks-usc-gould-school-laws-center.

81. It is widely acknowledged that the problems concerning the licensing of SEPs go beyond competition, and may be best addressed by IP and contract law. It is thus unsurprising that there are a number of initiatives afoot to try to address the controversies that surround SEP licensing which do not involve competition law.

Box 13. Alternative Mechanisms Concerning SEPs

Two main types of initiatives are currently being pursued to address the concerns surrounding SEP licensing: governmental initiatives and industry initiatives.

Starting with governmental initiatives, the Japanese Intellectual Property Office (JPO) unveiled guidelines on the licensing of SEPs in June 2018.[1] It also extended its advisory opinion (*hantei*) system to the essentiality of patents in April 2018.[2] Under the *hantei* model, the patent office can render an official, non-binding opinion regarding the technical scope of the patented invention.[3] This system will help avoid patent disputes and is particularly useful for small and medium-sized enterprises who may struggle with legal expenses.

In Europe, the European Commission published a communication on 'Setting out the EU approach to Standard Essential Patents'. The Communication attempts to tackle three main problems regarding SEPs: (1) opaque information about SEP exposure; (2) unclear valuation of patented technologies in the context of FRAND; and (3) uncertainty in the enforcement framework.[4] In order to increase transparency on SEP exposure, the Communication recommends the improvement of the quality and accessibility of information on SSO databases, and that a new information tool is developed and used during licensing negotiations. To manage diverging interpretations on FRAND, the Communication sets out key signposts for its determination based on public consultation, an analysis of best practices, studies and national case law.[5] Further, the European Commission is pursuing an essentiality pilot project along the lines of the Japanese *hantei* in co-operation with Europe's key standards setting bodies, intellectual property offices, and a variety of stakeholders.[6]

A second type of initiatives is being pursued by industry. Two sets of competing SEP licensing guidelines have been proposed by influential industry organisations – one by IP Europe, an alliance of companies with licensing as their key business;[7] and another by the Washington D.C.-based app association ACT and the Fair Standards Alliance (FSA), an industry body that counts Google, Apple, Intel and BMW, among others, as its members.[8] Furthermore, the Next Generation Mobile Networks (NGMN) Alliance – a group that focuses on 5G mobile standards comprising telecommunications operators with over 200 networks serving more than 60% of all global customers – has organised discussions on licensing practices in different industry segments and on how to identify requirements and/or constraints that potential licensing administrators of a 5G patent pool framework should take into account.[9]

Notes:
1 Guide to Licensing Negotiations Involving Standard Essential Patents, available at https://www.jpo.go.jp/e/system/laws/rule/guideline/patent/document/seps-tebiki/guide-seps-en.pdf. See also (Bharadwaj and Yoshioka-Kobayashi, 2018, p. 204[37])
2 See Manual of "Hantei" (Advisory Opinion) for Essentiality Check, available at https://www.jpo.go.jp/e/support/general/sep_portal/document/index/01_e.pdf.
3 See https://www.jpo.go.jp/e/system/trial_appeal/shubetu-hantei/index.html.
4 Available at https://ec.europa.eu/docsroom/documents/26583. See p. 2.
5 (Vinje, 2018, p. 46[26])
6 Call for Tenders JRC/SVQ/2018/B.6/0024/OC Pilot project for essentiality checks of Standard Essential Patents.
7 CWA 'Principles and guidance for licensing Standard Essential Patents in 5G and the Internet of Things (IoT), 6 including the Industrial Internet' available at ftp://ftp.cencenelec.eu/EN/News/WS/2018/SEP/CWA-for-public-comments.pdf.
8 Core Principles and Approaches for Licensing of Standard Essential Patents, available at ftp://ftp.cencenelec.eu/EN/News/WS/2019/SEP2/WS-SEP2-CWA95000-final-draft.pdf.
9 See https://www.ngmn.org/news/ngmn-news-and-press-releases/ngmn-news-and-press-releases-details/ngmn-paves-the-way-for-the-development-of-5g-patent-licensing-practices-across-industry-segments.html

6. Refusal to License and Compulsory Licensing as a Remedy

82. Many of the competitive concerns posed by SEPs relate to strategic licensing practices that may fall foul of competition doctrines such as excessive pricing and (constructive) refusals to licence. Furthermore, the appropriate remedy to instances of patent holdup or holdout may be compulsory licensing under FRAND terms. These are all controversial enforcement areas for competition law (OECD, 2007[38]; OECD, 2011[39]; OECD, 2018[40]). Refusal to license and compulsory licensing, in particular, have long been some of the most challenging and controversial topics at the interface of competition law and IP licensing.

6.1. Refusal to License

83. Imposing a duty to license can limit the value of legitimate IP rights, diminish the returns to innovation, work at odds with IP systems and, ultimately, stifle innovation (Shapiro and Teece, 1994, p. 158[41]; Shapiro, 1995, pp. 502-503[42]). Moreover, a number of the potentially procompetitive effects of IP and its licensing stem from the licensor's ability to limit the number of firms permitted to deal in the new technology. It is widely acknowledged that, as far as competition policy is concerned, the licensor should generally be free to refuse to license other firms, and to limit exploitation of the innovation either to itself or to its selected licensee(s) (OECD, 1989, p. 103[4]; OECD, 2004, pp. 39-40[11])

84. Nonetheless, and as we saw above as regards SEP licensing, there are situations where a refusal to license can have anticompetitive consequences. Potential anticompetitive consequences may arise where a refusal to license prevents the development of products for which there is potential demand and impedes competition from developing in downstream markets. Further, IP mechanisms to address situations of refusal to license are not uncommon, usually for grounds related to lack of exploitation, dependency or public health (Hemphill, 2017, pp. 889-890[43]; European Patent Office (EPO), 2018[44]).[56] While the legitimate interest of a nation to order compulsory licensing in appropriate circumstances cannot be doubted, in practice such licences are granted rarely (European Patent Office (EPO), 2018[44]).[57]

85. In short, there is disagreement about whether unilateral refusals to license IP should ever be deemed anti-competitive and, if so, how to remedy them. In a number of jurisdictions, refusal to license is not an actionable competition harm. In other jurisdictions, however, it is possible for a unilateral refusal to license IP to violate competition laws in certain circumstances (OECD, 2004, p. 9[11]).

Box 14. Refusal to License around the World

Over 100 years ago, the US Supreme Court held that a patent holder's refusal to license a patent cannot form the basis of an antitrust claim.[1] The principle that a bare unilateral refusal to license IP is beyond the reach of antitrust law has endured in the US. In 2004, the US Supreme Court emphasised, in a decision adopted outside the IP context but which has ramifications for IP licensing, that firms may acquire monopoly power by establishing an infrastructure that renders them uniquely suited to serve their customers. Compelling such firms to share the source of their advantage is in tension with the underlying purpose of antitrust law, since it may lessen the incentive for the monopolist, the rival, or both to invest in those economically beneficial facilities.[2] As a result, antitrust laws generally do not impose liability for unilateral refusal to deal, in part because doing so may undermine incentives for investment and innovation.[3]

Elsewhere, refusal to license an IP right may trigger competition concerns. In Canada, the Attorney General may ask the Federal Court to make remedial orders to remedy an undue lessening or prevention of competition involving the exercise of statutory IP rights. In practice, the Attorney General likely would seek a remedial order under the Act only on the recommendation of the Competition Commissioner. Intervention regarding refusal to license IP will only occur if it adversely affected competition to a degree that would be considered substantial in a relevant market that is different or significantly larger than the subject matter of the IP. Only in very rare circumstances would the conditions for imposing special remedies be satisfied – in effect, no remedial order has ever been awarded.[4]

Refusing to grant a license is usually legitimate but may exceptionally infringe competition law in Korea and Japan.[5] In 2016, the Korean Fair Trade Commission found that Qualcomm had infringed competition law by refusing or restricting the licensing of mobile communications SEPs that are essential in manufacturing and selling chipsets.[6]

In Europe, refusals to license will be deemed lawful in most circumstances. However, an express or constructive refusal to license may amount to an abuse of a dominant position in certain exceptional circumstances – in particular where, without an objective justification, a dominant firm refuses to license IP rights indispensable to the exercise of a particular activity on a downstream market, eliminating effective competition in that market and leading to consumer harm.[7]

Notes:
1 *Continental Paper Bag Co. v. Eastern Paper Bag Co*., 210 US 405 (1908) at 426-30.
2 *Verizon Communs., Inc. v. Law Offices of Curtis V. Trinko*, LLP 540 US 398 (2004) at 407–408.
3 US Licensing Guidelines § 2.1.
4 S. 32 of the Competition Act; Canada IP Guidelines, para. 47-55.
5 Korea IP Guidelines § III.3.B.; Japan IP Guidelines§ 3.1.(i) and 4(2).
6 KFTC's decision of 20 January 2017 (Qualcomm), Case number 2015Sigam2118, translated by the American Consumer Institute Center for Citizen Research, www.theamericanconsumer.org/wpcontent/uploads/2017/03/2017-01-20_KFTC-Decision_2017-0-25.pdf)
7 Case C-238/87 *Volvo v Veng* ECLI:EU:C:1988:477 (registered designs); Cases C-241/91P & C-242/91P *RTE and ITP v Commission* ("Magill") ECLI:EU:C:1995:98 (copyright); Case C-418/01 *IMS Health v NDC Health* ECLI:EU:C:2004:257 (copyright); Case T-201/04 *Microsoft v Commission* ECLI:EU:T:2007:289 (IP and trade secrets). See also Communication from the Commission — Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings [2009] OJ C 45/7, para 75-90. Similar principles apply under the national competition law of a number of Member states. See, e.g. the decision of the Italian Competition Authority of 20 December 2017 in A503—*Società Iniziative Editoriali/Servizi di Rassegna Stampa nella Provincia di Trento* (copyright).

6.2. Compulsory Licensing

86. A typical remedy in the context of refusals to license is compulsory licensing. There are two circumstances in which licences can be imposed as remedies: mergers and antitrust cases. Licensing commitments as part of merger control are relatively uncontroversial, perhaps because they are entered into voluntarily or with the consent of the merging parties. Compulsory licensing as an antitrust remedy is more controversial (Delrahim, 2004[45]).

87. Whether compulsory licensing is an appropriate remedy for competition law infringements has become an important topic in discussions about how to regulate those industries that are the building blocks of the new, information-based economy. These industries often require common access to unique facilities, build on standards that may comprise IP rights, and are may be characterised by 'tipping' and 'competition for market'. The risk of anticompetitive exercise of market power may be particularly high in these industries and these risks compound when market power builds on IP rights. This has led some authors to suggest that assets protected by intellectual property, which are critical to accessing a network, should be treated as 'essential facilities' under competition law. It would follow that IP rights might be subject to mandatory rights of access in circumstances where a refusal to license meets the general requirements of the essential facilities doctrine (Church and Ware, 1998, pp. 227, 230-239[46]).

88. Furthermore, compulsory licensing may increase competition in the short-term, thus contributing to increased consumer welfare, by: (1) eliminating the deadweight loss of market power; and (2) forcing firms to price at marginal costs. Compulsory licensing may also have a positive effect on consumer welfare in the long run if it facilitates the development of new products for which there is potential demand (Padilla, Ginsburg and Wong-Ervin, 2019, p. 11[20]).

89. On the other hand, a number of arguments have been made against the deployment of compulsory licensing as a remedy. The first is that a poorly designed compulsory licence can stifle innovation by undercutting the possibility to reap the rewards granted by the IP system. Excessive use of compulsory licensing could lead to increased secrecy and lower investment in R&D. It may also lead to innovations not being registered as IP rights. This is important because, to the extent that innovations are held in the form of secret know-how rather than as registered IP rights, their diffusion is

likely to be restricted – both by disclosure not occurring as would be the case with patents, and by negotiation concerning potential disclosure being more costly (OECD, 1989, p. 12[4]).

90. Secondly, the normal risks of false-positives in competition enforcement is compounded by competition agencies imposing a duty to deal similar to that of a regulatory agency without benefitting from expert knowledge and, in the absence of a party's commitment, adequate party input. In order to minimise this risk as regards compulsory licensing, competition enforcers will need to address a number of challenges, such as how to define the scope and terms of the licence adequately, how to determine the impact of a compulsory licensing remedy on research and innovation, and how to monitor compliance with the compulsory licence (Delrahim, 2004, pp. 1065-1068[45]).

91. In practice, it is close to impossible accurately to balance the welfare increasing and welfare decreasing effects of compulsory licensing (Padilla, Ginsburg and Wong-Ervin, 2019, p. 11[20]). As a result, the main question is whether, and when, compulsory licensing is justified in the antitrust context. The most widely accepted answer is that compulsory licences should only be deployed in exceptional circumstances when no other, simpler remedy is available.[58]

92. Reflecting this, most jurisdictions consider compulsory licensing to be a possible remedy. At the same time, the imposition of such a remedy will require a case-by-case analysis that also takes into account whether there are other potential, preferable, intervention mechanisms.

Box 15. Compulsory Licensing around the World

In the US, courts have long recognised that compulsory licensing can be a remedy in antitrust cases.[1] At the same time, since the 1980s courts have expressed some scepticism about such remedies because they may undercut the incentives that IP rights, and concomitant right to exclude, are supposed to provide.[2] In any event, compulsory licensing is not a remedy that necessarily relates to refusal to supply because, as we saw above, refusal to supply does not amount to an antitrust infringement in the US.[3]

Elsewhere, compulsory licensing is closely related to cases of refusal to supply. In Canada, s. 32 of the Competition Law makes it theoretically possible for courts to order compulsory licensing if a refusal to license adversely affects competition to a degree that would be considered substantial in a relevant market that is different or significantly larger than the subject matter of the IP right.[4] In Europe, cases of refusal to supply access to IP rights often led to the imposition of compulsory licensing orders.[5] In Korea, the KTCF found that Qualcomm had unlawfully refused to license mobile communications SEPs, and ordered Qualcomm to license them on FRAND terms.[6]

Notes:
1 *US v Besser* 343 US 444 (1952); *US v General Electric Co* 115 F Supp 835 (DNJ, 1953); *US v Glaxo Group* 410 US 52 (1973); *US v. Microsoft* 231 FSupp d 133 (DDC, 2002) (decision conditionally approving the consent decree).
2 *Dawson Chem v Rhom & Haas Co*. 448 US 176 (1980)
3 (Delrahim, 2004, pp. 1063-1064[45])
4 Only two cases have ever been laid under this provision, in 1969 and 1970, both of which settled. See Canada IP Guidelines, para. 52. No compulsory licensing order has ever been issued.

5 (Whish and Bailey, 2018, pp. 797-802[14]). See, for example, Case T-201/04 *Microsoft v Commission* [2007] ECLI:EU:T:2007:289, which led to the imposition of sanctions by Commission Decision C(2008) 764 for failing to grant access to, and authorise the use of, the interoperability information on reasonable and non-discriminatory terms. This decision was then upheld on appeal in Case T-167/08 *Microsoft v Commission* ECLI:EU:T:2012:323.

6 KFTC's decision of 20 January 2017 (Qualcomm), Case number 2015Sigam2118, translated by the American Consumer Institute Center for Citizen Research, www.theamericanconsumer.org/wpcontent/uploads/2017/03/2017-01-20_KFTC-Decision_2017-0-25.pdf).

93. Compulsory licences can raise challenges concerning their appropriate territorial scope. The markets for which IP rights matter the most are often regional, and even global. This is apparent in how many technological standards and patent pools are subject to a single standard licence agreement applicable across the world, and in how royalty regimes often provide access to all the patents in the pool on a worldwide basis. This represents a very convenient and efficient access arrangement for companies. As such, it is common for FRAND licenses to be granted on a worldwide basis (OECD, 2017, pp. 6-7[47]).[59]

94. The multijurisdictional nature of IP-affected markets poses problems for competition enforcement. It may occur that a compulsory licensing remedy, in order to be effective, needs to extend beyond the territorial scope of the jurisdiction which adopts that remedy. [60] Such a remedy raises issues of international comity and co-operation, reflecting the tension between the territorial scope of domestic patents and the extra-territorial aspects of anticompetitive IP-related conduct. This tension creates recurring challenges in academic debates and enforcement practice – e.g. regarding the appropriate design of competition remedies for international licensing practices, or whether co-operation mechanisms should be implemented to address the unavoidable tensions that may arise in this regard (OECD, 2017, pp. 8-9[48]).

7. Conclusion

95. This background paper reflects increasing international agreement as regards the competitive effects of IP licensing. OECD countries start from the assumption that IP licensing has the potential to have pro-competitive effects, unless licensing practices amount to hard-core collusive conduct. A number of consequences flow from this, which are widely shared around the world.

96. The finding that an IP licensing arrangement infringes competition will typically require evidence of anticompetitive harm following an effects-based assessment. Practically every type of restrictive licensing clause may operate to promote or reduce competition, depending on the circumstances. Thus, leaving aside cartelisation conduct, licensing agreements will normally be assessed on a case-by-case basis.

97. When assessing the likely effects of licensing agreements, efforts should be made to treat the various types of licensing clauses and practices coherently. That is, licensing clauses and practices with similar purposes or likely effects should be, insofar as possible, treated similarly. Reflecting this, competition agencies around the world have adopted guidance instruments that allow firms to assess the legality of their licensing conduct. Furthermore, given the underlying assumption of pro-competitive effects, it is common for OECD jurisdictions to adopt explicit or implicit safe harbours for certain licensing agreements.

98. While there is no absolute convergence of approaches as regards every IP licensing arrangement or practice, there is an underlying consensus about the interaction of IP and competition law, and the need to balance pro- and anticompetitive effects of licensing practices.

99. The differences in treatment of licensing agreements and practices identified throughout this background paper seem to flow from different jurisdictions adopting different baseline assumptions about the likelihood of pro- and anticompetitive effects of certain licensing practices in certain contexts. This is particularly clear in the context of the debates regarding whether certain practices related to the licensing of SEPs are more likely to have anticompetitive effects as a result of patent holdup or holdout, and regarding the potential for anticompetitive effects of refusals to licence IP rights. These differences appear to be a consequence of the absence of definite empirical evidence regarding where the balance of competitive effects lies. Other potential explanations are different conditions prevailing in certain markets and different regulatory traditions.

100. While the attention of the competition community has been – naturally – on these areas of controversy, they should not distract us from the much larger area of consensus that has been achieved over the last century regarding the balance of IP and competition laws, and the correct approach by competition law to IP licensing practices. This consensus is reflected in the principles adopted by the OECD IP Recommendations.

101. At the same time, the OECD IP Recommendations do not address the latest developments on the interaction between IP licensing and competition. Such developments include the increasing importance of IP rights in the economy as it digitalises – and particularly of IP rights which are not addressed by the Recommendations, such as copyright or industrial design –, the challenges raised by pools and standard setting arrangements, and the debate on the correct role for antitrust in the context of FRAND licensing. Nonetheless, the principles of sound economic analysis and effects-based approach that underpin the OECD IP Licensing Recommendation could apply to such developments. Lastly, the IP Recommendations are silent on the controversial topic of refusal to license and compulsory licensing – where, despite diverging opinions regarding its usefulness as antitrust doctrines, there is nonetheless widespread agreement that such doctrines should in any event only be used in exceptional circumstances following a case-by-case analysis.

Endnotes

[1] The scope of an IP rights touches on matters such as its object, the types of conduct it protects, its duration, and exceptions to it.

[2] (OECD, 1989, p. 103[4]), briefly touches on this by saying that its analysis of patent licensing should also extend to know-how – but that there are also reasons to treat know-how agreements more liberally since know-how enjoys less protection than patents and the need to prevent post-agreement exploitation is stronger.

[3] For a comprehensive – yet slightly outdated – overview, see (OECD, 2006, pp. 42-48[3]).

[4] However, this view does not necessarily imply that antitrust has no role in protecting innovation. According to some authors who advance this view, antitrust can have a role in ensuring that the process of creative destruction is not impeded by the dominant firms at risk of being destroyed – see (Shelanski, 2013, p. 1693[49]) and (OECD, 2015, p. 5[50]).

[5] The relevant assumptions are concerned with matters such as the appropriability of innovations, the type of innovation, the specific characteristics of the industry in question, and changes in the intensity of rivalry associated with innovation.

[6] A number of instruments issued by competition agencies recognises this. See Communication from the Commission — Guidelines on the application of Article 101 of the Treaty on the Functioning of the European Union to technology transfer agreements (Guidelines) Official Journal C89, 28.03.2014 (the 'EU Technology Transfer Guidelines'), p.3-50, para. 7; US DoJ and FTC, Antitrust Guidelines for the Licensing of Intellectual Property ('US Licensing Guidelines), p. 1-2.

[7] *E. Bennett & Sons v. National Harrow Co*., 186 US 70 (1902) – the general rule was the "*absolute freedom in the use or sale of rights under the patent laws… The very object of these laws is monopoly*." *Henry v. A.B. Dick Co*., 224 US 1 (1912) (tying); *Carbice Corp. v. Am. Patents Dev. Corp*., 283 US 27 (1931).

[8] See, e.g. *Carbice Corp. v. Am. Patents Dev. Corp*., 283 US 27, 34 n.4 (1931) 34 n.4 (noting that an attempt to use a patent to unreasonably restrain commerce is both beyond the scope of the patent and a direct violation of the antitrust laws). See also *United States v. Masonite Corp*., 316 US 265 (1942); *Morton Salt Co. v. G.S. Suppiger Co*., 314 US 488 (1942); *Mercoid Corp. v. Mid-Continent Inv. Co*., 320 US 661 (1944); *Int'l Salt Co. v. United States*, 332 US 392 (1947).

[9] These nine 'No-no's' prohibited: 1. Tying of purchase of unpatented materials as a condition of a patent licence. 2. Requiring the licensee to assign back or grant an exclusive grant-back licence of subsequent patents obtained by the licensee. 3. Restricting the right of the purchaser of the product in the resale of the product. 4. Restricting the licensee's ability to deal in products outside the scope of the patent. 5. Promising a licensee that the licensor would not grant further licences. 6. Mandating that the licensee take a "package licence". 7. Imposing royalty provisions not reasonably related to the licensee's sales. 8. Restricting a licensee's use of a product made by a patented process. 9. Requiring a minimum resale price for licensed products.

[10] US Dep't. Justice, Antitrust Enforcement Guidelines for International Operations (Nov. 10, 1988).

[11] EU Technology Transfer Guidelines, particularly paras. 189-203. See also (Whish and Bailey, 2018, p. 792[14]).

[12] See Canadian Competition Bureau (2019) 'Intellectual Property Enforcement Guidelines' (Canada IP Guidelines); Korean FTC (2016) 'Guidelines on Unfair Exercise of Intellectual Property Rights' (Korea IP Guidelines); and Japanese FTC (2016) 'Guidelines for the Use of Intellectual Property under the Antimonopoly Act' ('Japan IP Guidelines').

[13] In the US, the value added by IP-intensive industries increased substantially in both total amount and GDP share between 2010 and 2014. IP-intensive industries accounted for USD 6.6 trillion in value added in 2014, an increase

of more than USD 1.5 trillion (30%) from USD 5.06 trillion in 2010. Accordingly, the share of total US GDP attributable to IP-intensive industries increased from 34.8% in 2010 to 38.2% in 2014. Further, the merchandise exports of IP-intensive industries made up 52% of total US merchandise exports. See (Economics and Statistics Administration and US Patent and Trademark Office, 2016, p. 1[51]).

[14] For example, as of 2011, copyright was by far the largest component of IP-protected investment (putting trade secrets aside as a possible exception), drawing more than twice the amounts invested in unregistered design and trademarks, respectively. In the UK, 47% of all investment in IP rights was in copyright, 22% in trademarks, 18% in unregistered design rights, 10% in patents, and 3% in assets protected by registered design rights – in other words, patents was just 21% of the investment in copyright. See (OECD, 2015, p. 29[1]).

[15] Recommendation of the Council concerning Action against Restrictive Business Practices relating to the Use of Trademarks and Trademark Licences C(78)40/FINAL.

[16] *Int'l Salt Co. v. United States, 332 US 392, 395* (1947); *United States v. Loew's Inc*., 371 US 38, 46 (1962); *Fortner Enters., Inc. v. US Steel Corp*., 394 US 495, 505 n.2 (1969); *US Steel Corp. v. Fortner Enters., Inc*., 429 US 610, 619 (1977).

[17] For the US, see *Independent Ink*, 547 US 28 (2006) at 45-46. See also (Feldman, 2008, p. 13[52]). For Europe, see Case C-78/70 *Deutsche Grammophon Gesellschaft mbH v Metro-SB-Grossmarketete GmbH & Co.* ECLI:EU:C:1971:59, para 16; Joined Cases C-241/91 and C-242/91 *Radio Telefis Eireann v Commission (Magill)* ECLI:EU:C:1995:98, para 46; and (Lianos, 2019, p. 20[25]).

[18] See also US Licensing Guidelines § 2.2; and Canada IP Guidelines, para. 32.

[19] This view borrows from (Nordhaus, 1969[53]) and (Arrow, 1962[54]).

[20] See, for a discussion of efficiencies flowing from vertical agreements, (OECD, 2013, pp. 13-14[21]).

[21] EU Technology Transfer Guidelines, para. 9.

[22] US Licensing Guidelines § 2.3; EU Technology Transfer Guidelines, para. 17; Korea IP Guidelines § II.2.E.

[23] Again, these are the types of concerns that normally arise as regards vertical restraints more generally – see (OECD, 2013, pp. 14-15[21])

[24] See, e.g. US Licensing Guidelines, p. 3; Canada IP Guidelines, para. 32.

[25] The EU Technology Transfer Guidelines, para. 104, note that an IP right holder may increase total output through licensing another firm even if it limits that firm's output, e.g. by pursuing integration of complementary technologies or an efficiency enhancing integration of the licensor's superior technology with the licensee's productive assets,

[26] EU Technology Transfer Guidelines, paras. 204-205.

[27] EU Technology Transfer Guidelines, paras. 204, 207; Korea IP Guidelines § III.3.C; Japan IP Guidelines § 3.1.(iii), 4.3.(ii)(b).

[28] US Licensing Guidelines § 5.2. For maximum resale prices, see *State Oil Co. v. Khan* 522 US 3 (1997), overruling *Albrecht v. Herald Co*., 390 US 145 (1968). For minimum resale prices, see L*eegin Creative Leather Products, Inc. v. PSKS, Inc.*, 551 US 877 (2007), where the Supreme Court overruled its nearly century-old opinion in *Dr Miles Medical Co. v. John D. Park & Sons Co*., 220 US 373 (1911).

[29] EU Commission Regulation No 316/2014 ('EU Block Exemption for categories of Technology Transfer Agreements') Art. 4(2)(a); EU Technology Transfer Guidelines, para. 118; Korea IP Guidelines' § III.3.D.1.

[30] US Licensing Guidelines § 4.1.2 (Jan. 12, 2017). The EU Technology Transfer Guidelines, para. 189 adopts a slightly different distinction based on whether the restrictions concern production within a given territory (exclusive or sole licences) and restrictions on the sale of products incorporating the licensed technology into a given territory and to a given customer group (sales restrictions).

[31] EU Technology Transfer Guidelines, para. 211.

[32] EU Technology Transfer Guidelines, para. 212.

[33] Furthermore, some IP rights, such as copyright, are inherently national in scope, as they remain nationally defined rights. Right holders are, therefore, normally permitted to license their relevant rights on a national basis, and to prohibit licensees from marketing the licensed subject matter outside the licensed territory. See (Vinje, 2018, p. 48[26]).

[34] US Licensing Guidelines § 2.3 and § 4.1.2; EU Block Exemption for categories of Technology Transfer Agreements, Art. 4(1)(c)(i), and EU Technology Transfer Guidelines, paras. 108-113, 193-195, 214; Korea IP Guidelines § III.3.D.3; Japanese FTC (2015) 'Guidelines for the Use of Intellectual Property under the Antimonopoly Act' § 3.1.(ii) and 4(3) and (4).

[35]See Case C-258/78 *L.C. Nungesser KG and Kurt Eisele v Commission* ECLI:EU:C:1982:211, paras 53, 57–58, 60–63 and 68–79 (concerning plant breeder's rights); Case C-403 & 429/08 *Football Association Premier League Ltd and Others v QC Leisure and Others & Karen Murphy v Media Protection Services Ltd* ECLI:EU:C:2011:631, para. 141-142 (concerning copyrighted content).

[36] EU Block Exemption for categories of Technology Transfer Agreements Art. 4(2)(b), and EU Technology Transfer Guidelines, paras. 119-127. The definition of passive sales can be found at the Guidelines on Vertical Restraints OJ C 130, 19.5.2010, para. 51. Restrictions on passive sales may be allowed as regards restrictions on the sales of the licensor (para. 120), sales to areas restricted to the licensor (para. 121), and as regards wholesalers restricted to selling exclusively to end-consumers (para. 124).

[37] Nonetheless, EU law has become more generous in this regard recently. For example, it now allows restrictions on passive sales for a certain period if the restraints are objectively necessary for the protected licensee to penetrate a new market – see EU Technology Transfer Guidelines, para. 126. The old Block Exemption only provided an exception for a restriction on passive sales by licensees to exclusive territories or customer groups reserved to another licensee for two years from the time when the protected licensee first put the product on the market, and possibly protected the territory of an exclusive distributor.

[38] US Licensing Guidelines § 5.4 (Jan. 12, 2017); Canada IP Guidelines, paras. 83-99; EU Technology Transfer Guidelines, paras. 198—203 and 231-233; Japan IP Guidelines§ 2.1.

[39] US Licensing Guidelines § 5.6.3; EU Technology Transfer Guidelines, paras. 129-131; Korea IP Guidelines § III.1.B.; Japan IP Guidelines§ 4.5. (viii).

[40] According to the Japan IP Guidelines§ 4.5. (viii) '*Normally it is not thought that there is any justifiable reason for instituting [exclusive grant-back clause]. In principle, it constitutes an unfair trade practice to impose any such obligation*.'

[41] See Art. 5(1)(a) of the EU Block Exemption for categories of Technology Transfer Agreements.

[42] EU Technology Transfer Guidelines, para. 134; Korea IP Guidelines § III.3.D.6.; Japan IP Guidelines§ 4.4.(vii). Up until now, it seems that US courts have never ruled on the legality of no challenge clauses in licensing arrangements – see (Cheng, 2016, p. 440[55]).

[43] EU Technology Transfer Guidelines, para. 134; Korea IP Guidelines § III.3.D.6.

[44] EU Technology Transfer Guidelines, paras. 136-137.

[45] EU Technology Transfer Guidelines, para. 139-140.

[46] See Art. 5(1)(b) of the Block Exemption for categories of Technology Transfer Agreements.

[47] Korea IP Guidelines § III.3.D.4.A.

[48] US Licensing Guidelines § 5.5; Canada IP Guidelines, para. 108; EU Technology Transfer Guidelines, paras. 99-104.

[49] EU Technology Transfer Guidelines, para. 261. See also Guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union to horizontal co-operation agreements OJ C 11, 14.1.201, paras. 263.

[50] US Licensing Guidelines § 5.5. (Jan. 12, 2017); Canada IP Guidelines, para. 109; EU Technology Transfer Guidelines, para. 246; Korea IP Guidelines § III.3.D.4.A; Japan IP Guidelines§ 3.2.(i)(b) and (c) and (iii).

[51] U US Licensing Guidelines § 5.5; Canada IP Guidelines, para. 108; EU Technology Transfer Guidelines, paras. 262-265; Korea IP Guidelines § III.3.D.4.A.

[52] EU Technology Transfer Guidelines, paras. 262, 264

[53] EU Technology Transfer Guidelines, paras 256-257; Japan FTC (2005) 'Guidelines on Standardization and Patent Pool Arrangements' § 2.1.(a).

[54] Canada IP Guidelines, para. 197.

[55] See, for example, *Allied Tube v. Indian Head, Inc.* 486 US 492 (1988).

[56] At the international level, see Article 31 of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) and Arts. 11*bis*(2) and 13 Berne Convention. At the national level, see, for example, sections 133 and 135 of the Australian Patents Act 1990 (Cth); sections 92 and 93 of Japan's Patent Act; section 46(2) of the New Zealand Patents Act 1953; and, for 38 European countries, (European Patent Office (EPO), 2018[44]).

[57] This report provides an overview of compulsory licensing rules and practices adopted by the members of the European Patent Convention. It notes that '*Compulsory licensing of patents is not frequently used throughout Europe*' (European Patent Office (EPO), 2018, p. 3[44]).

[58] (Padilla, Ginsburg and Wong-Ervin, 2019, p. 14[20]),argue that this will be the case when particular: when: (a) the IP is indispensable to compete; and (b) the refusal to license (i) causes the exclusion of all competition from the downstream market, and (ii) prevents the emergence of markets for new products for which there is substantial demand. (Delrahim, 2004, p. 1069[45]) identified three circumstances where it may be appropriate: (i) in a merger context; (ii) as an alternative to a divestiture; (iii) where no other remedy is available, and the licence is drawn as narrowly as possible.

[59] See the judgments in *Unwired Planet International Ltd v Huawei Technologies Co Ltd* [2018] EWCA Civ 2344 (UK), and *TCL Communication Technology Holdings Ltd v Telefonaktiebolaget LM Ericsson*, Nos 8:14-CV-00341 JVS-DFMx, 2:15-CV-02370 JVS-DFMx (CD Cal Sept 21, 2017) (US).

[60] For example, in a recent case against *Qualcomm* the KFTC followed the logic of such licensing schemes and imposed a licensing remedy that applied beyond Korea – see (OECD, 2017, pp. 6-8[47]).

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