



FACULTY OF LAW  
University of Lund

Erik Ohlsson

# Improvements in licensed technology

The evaluation of grant-back obligations  
under EC competition law

Master thesis  
20 points

Hans Henrik Lidgard

EC Competition Law

Spring 2006

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# Summary

The existence of patent protection is motivated by a number of economic theories; *inter alia*, the need to create incentives for inventors by offering a limited period of exclusivity in the commercial exploitation of the protected product or process. Economic studies, which have evaluated this rationale by examining the importance of the patent system for research and development activities, indicate that this motivation is justified in certain industrial sectors, where the presence of patent system promotes investments in research and development. In these sectors, investments in innovation are necessary to maintain and improve market positions, and patent protection offers the possibility of recoupment of such investments. Patent protection thus exerts significant importance in industries characterized by innovation-based competition.

Licensing, *i.e.* a contractual grant to utilize, or produce on the basis of, patented technology, often constitutes the most effective method of realizing the economic potential of patented technology by combining complementary resources of the licensor and the licensee. Although the patented technology constitutes the primary subject matter of the license agreement, it is common that the licensed technology is improved or applied in a new way by the licensee. Licensing agreements thus often contain clauses, which grant the licensor the right to future improvements in licensed technology.

The newly reformed EC competition regime regarding technology transfer agreements, implemented by the 2004 Technology Transfer Block Exemption Regulation, is based on the recognition of the complimentary goals shared by technology licensing and competition law, *i.e.* the diffusion of technology, stimulation of research and development, and efficient allocation and utilization of economic resources. In addition, the new regime employs an economic approach in evaluating licensing agreements. Instead of focusing on the formal appearance of licensing agreements and individual stipulations, their combined effects on competition will determine the competitive analysis.

Grant-back obligations have the potential of negatively affecting competition on innovation markets. By transferring the right to improvements made by the licensee to the licensor, incentives to continuously improve licensed technology may be reduced, in particular where the licensee's own right to make independent use of the improvement is restricted. However, grant-back obligations also display pro-competitive effects. By providing access to improvements of its own technology, grant-back obligations can increase the incentives of licensor in their initial creation and subsequent licensing of patented technology. This effect is all the more noticeable in sectors defined by innovation-based competition.

# Acknowledgements

I would like to extend my deepest thanks to my supervisor, Professor Hans Henrik Lidgard, for your guidance and the inspiration you provided in earlier courses, and Alexandra Belmonte, course administrator, for all the help with the practical details. Special thanks to my wife Casey and my families in Sweden and Tulsa for your incredible support, not only during the writing of this thesis, but throughout my studies.

Tulsa, Oklahoma, May 9, 2006

*Erik Ohlsson*

# Abbreviations

Cert.	Certiorari
Circ.	Circuit
CPR	Canadian Patent Reporter
DAFFE/CLP	Directorate for Financial, Fiscal and Enterprise Affairs/Committee on Competition Law and Policy
DOJ	Department of Justice
EC	European Community
ECJ	European Court of Justice
ECR	European Court Reports
EU	European Union
F.2d	Federal Reports
FTC	Federal Trade Commission
IPR	Intellectual Property Right
OECD	Organisation for Economic Co-operation and Development
OJ	Official Journal of the European Union
R&D	Research and Development
Rev'd	Reversed
RPC	Reports of Patent Cases
SCLR	Scottish Council of Law Reporting
SME	Small and Medium-sized Enterprise
TTBER	Technology Transfer Block Exemption Regulation

U.S.

United States Reports

U.S.C.

United States Code

U.S.P.Q.

United States Patents Quarterly

# 1 Introduction

## 1.1 Background

R&D of new technology is associated with uncertainty and high costs. In return for public disclosure, the proprietor of the developed technology is awarded statutory exclusivity through national IPR legislation to prevent others from exploiting the new technology. Awarding a temporary exclusive market position is considered necessary to promote incentives to innovation by granting the IPR holder the prospect of earning sufficient returns for investing in R&D.

In order to maximize economic profits, the IPR holder will strive for the most optimal commercial exploitation of the newly developed technology. Individual exploitation of the technology is a viable option if the rights holder possesses the necessary production development and distribution capabilities to place the technology, or a product incorporating the technology, on the market. However, many research-based companies do not possess adequate means for individual exploitation of their protected IPR. In such a situation, a licensing agreement provides the possibility for the rights holder, the licensor, to assign or transfer the exclusive exploitation rights to a company, the licensee, which has the means to realize the commercial potential of the licensed technology. A licensing agreement is consequently intended to provide the licensee with the same protection that the licensor would have enjoyed in the case of individual exploitation.

It is not uncommon that the licensee develops improvements or discovers superior methods of application when exploiting the licensed technology. The licensor has a clear incentive to preserve his exclusive position in regards to the licensed technology and any improvements of it in order to maintain its competitiveness. Accordingly, most licensing agreements contain grant-back obligations, *i.e.* contractual mechanisms, which provide the licensor access to improvements made by the licensee in the licensed technology.

Licensing agreements in general, and grant-back obligations in particular, are concerned with extending exclusive market positions in the licensed technology and improvements thereof. This raises anti-competitive concerns, which necessitates an examination of the compatibility of grant-back clauses with competition law.

## 1.2 Purpose

The purpose of this thesis is to provide a thorough analysis of the competitive evaluation of grant-back obligations in licensing agreements under EC competition law.

More specifically, an examination of the interface between the rationale behind IPR protection and competition law will shed light on what competitive concerns grant-back obligations raise and how those competitive restraints are handled within the framework of EC competition policy.

In this regard, this thesis will specifically investigate the existence and nature of pro-competitive effects created by grant-back obligations and their potential of providing a counterbalance to anti-competitive effects. Another principal task will be to examine whether such counterbalancing effects are sufficiently recognized with the EC competition system concerning the evaluation of grant-back obligations.

## 1.3 Method

Providing a meaningful analysis of the legal questions raised above implies placing them in a proper methodical framework. A traditional legal approach will be utilized in examining the assessment of grant-back provisions within the EC competition framework. This will provide insight into the rationale behind the regulatory system and how it operates in practice.

In order to place the evaluation of anti-competitive effects of grant-back provisions in the European Community in perspective, this study will also employ a comparative legal method. By examining the assessment of grant-back clauses in the American antitrust context, which has exerted strong influence on the current European regulation, a deeper understanding will be reached of the European system of assessing pro-, and anti-competitive effects of grant-back obligations. Also, grant-back clauses in licensing agreements have frequently been made the subject of litigation under several common law jurisdictions, which warrants examination of such case law.

As will be further examined below, EC competition policy and IPR licensing policy ultimately pursue the same objective, *i.e.* a strong European market characterized by dynamic economic growth, competitiveness, and an efficient allocation of resources. It is imperative to apply economic methodical analysis to discern whether the current regulatory framework constitutes the optimal legal solution for promoting these economic goals.

## **1.4 Material**

For the purposes of this thesis, the legal sources of the European Community are of central importance. Relevant provisions in the EC Treaty in terms of competition regulation include art. 81(1) and (3) EC. The recently adopted 2004 Technology Transfer Block Exemption Regulation and its accompanying guidelines will be of critical importance in analyzing the evaluation of competitive constraints in licensing agreements. Due to the regulation's recent adaptation, there are, as of yet, neither cases from the Community Courts nor decisions from the Commission concerning its interpretation. Case law and decisions pertaining to the interpretation to preceding legislative instruments will therefore be examined. The absence recent interpretations will further necessitate close scrutiny of legal doctrine.

The legal sources used in this thesis for comparative purposes include relevant provisions of the American antitrust legislation and accompanying case law. In addition, the Antitrust Guidelines for the Licensing of Intellectual Property, issued by the U.S Department of Justice and the Federal Trade Commission in 1995, and legal doctrine will also be examined. Case law of other common law jurisdictions, primarily that of the United Kingdom, will be utilized in discerning the components and contractual functions of grant-back clauses.

## **1.5 Delimitations**

As stated above, this study will examine the interplay between contractual extension of IPR exclusivity through the use of grant-back clauses and EC competition law. Accordingly, the grant of IPR protection will fall outside the scope of this thesis, which will only examine its rationale and exercise by contractual means. Art. 5 of the 2004 Technology Transfer Block Exemption Regulation, which contains the main rule in the competitive assessment of grant-back clauses regarding improvements in licensed technology, is the central provision of this investigation.

The 2004 Technology Transfer Block Exemption Regulation is concerned with patent and software licensing, of which patent licensing will be the relevant IPR for the purpose of this thesis. Accordingly, the terms 'technology' and 'IPR' should be read as referring to patents. Given the narrow scope an in-depth analysis of this thesis, it is assumed that the reader will be somewhat familiar with competition law and its basic economic theories.

## **1.6 Disposition**

Since grant-back obligations are features of technology licensing agreements, chapter 2 will examine the rationale and economic importance of patent protection, as well as its exploitation through licensing. Further,

chapter 3 will deal with the contractual scope and function of grant-back obligations as interpreted through litigation.

Chapter 4 focuses on the EC competition system and its relationship with IPR and technology licensing, more specifically how patent licensing agreements are evaluated under EC Competition law. In addition, technology licensing under U.S. antitrust law will be examined. An in-depth examination of grant-back obligations under EC competition law will be carried out under chapter 5, which will address specific pro-, and anti competitive aspects of such obligations. Once again, the U.S. approach in grant-back evaluation will be examined.

Finally, chapter 6 will provide an analysis of grant-back obligations in EC competition law, including a comparison with U.S. antitrust regulation, based on underlying economic considerations and competitive effects of technology licensing and grant-back obligations.

## 2 Economic impact of patent protection and technology licensing

Technological development is critical for maintaining and improving societal welfare.<sup>1</sup> Consequently, society has a clear incentive to promote innovative efforts, which put novel ideas into practical use. In order to achieve this, the innovator must be offered the prospect of earning returns that are proportionate to the risk taken through the innovative project.

Although there are many conceivable ways through which the process of innovation can be encouraged, any efficient solution must be built on the premise that the innovator can appropriate sufficient resources to R&D and other innovative activities or aggregate sufficient resources through external arrangements, should the innovator lack such means.<sup>2</sup>

### 2.1 Rationale behind patent rights

The most developed method of stimulating innovation is undoubtedly the legislative creation of an intangible property right, *e.g.* a patent, which gives the holder the right to exclude others from using the protected technology, thus offering a statutory monopoly for commercial exploitation by the right-holder.<sup>3</sup>

#### 2.1.1 Rewarding innovation

The main rationale behind the patent is the beneficial economic consequences that arise from being able to exclude others from exploiting the patented technology. Should the patentee be denied this possibility, others could take advantage of the newly developed technology without having incurred any expenses in connection with its development. By preventing such ‘free-riding’ of innovative efforts, innovation in society as a whole will be stimulated and the individual efforts of the patentee appropriately rewarded.<sup>4</sup>

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<sup>1</sup> Scherer et al., *Industrial Market Structure and Economic Performance*, 1990, pp. 613-614.

<sup>2</sup> Gutterman, *Innovation and Competition Policy*, p. 1.

<sup>3</sup> Tritton, *Intellectual Property in Europe*, p. 571.

<sup>4</sup> This patent function has been the subject of extensive analysis and received numerous definitions. See *e.g.* Gutterman, *supra* note 2, at p. 37 (“Incentive-to-Invent Theory”), Pretnar, “The Economic Impact of Patents in a Knowledge-Based Economy”, p. 895, according to whom the principal economic function of a patent is to establish innovation-based competition by limiting any cost advantage on the basis of free riding.

Critics of this rationale argue that patent protection may lead to over-investments in attempts to research around a patent, thereby producing detrimental effects through waste of resources.<sup>5</sup> This view has been contended with the argument that inventing around a patent would not have been considered a viable alternative unless the process would expect to produce superior substitutes.<sup>6</sup>

Empirical studies have evaluated the economic importance of patent protection in securing benefits for R&D activities. Researchers at the University of Cambridge conducted a study of 44 British and multi-national companies involved in industrial sectors such as pharmaceuticals, electronic engineering and mechanical engineering. A question of special significance was what impact the removal of patent protection would have on their annual R&D expenditure. The findings indicate that most respondents would commit 5% or less in R&D expenditures if patent protection had not been available, indicating that patent protection exercises marginal impact on innovation. However, there appears to be industries where patent protection plays a significant role in determining R&D expenditures and innovation policy, such as the pharmaceutical industry.<sup>7</sup>

The findings were supported by a subsequent study by Levin et al., where respondents found patents to be relatively inefficient in capturing and protecting the competitive advantage of new and improved production processes and products, except the respondents that represented pharmaceutical and chemical industries.<sup>8</sup>

An economic analysis of the empirical data above suggests that patent protection exerts little influence on determining R&D expenditures in most industries. However, the studies indicate that patent protection is more efficient in some industries than other, e.g. the pharmaceutical industry. Plausible explanations for a higher efficiency-rate in this sector are, *inter alia*, the grant of strong patents and the difficulty in inventing around a pharmaceutical patent.<sup>9</sup>

## 2.1.2 Promoting disclosure

Sometimes referred to as the public-good effect of a patent,<sup>10</sup> the requirement to fully disclose all relevant information pertaining to the patent is also believed to be an important purpose of patent protection. Upon the grant of a patent, the protected technology is available as a free input into further innovation, even during the validity of the patent. This effect of

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<sup>5</sup> Scherer, *Industrial Market Structure and Economic Performance*, 1970, pp. 379-399.

<sup>6</sup> Bowman, *Patent and Antitrust Law: A Legal and Economic Appraisal*, pp. 21-22.

<sup>7</sup> Taylor and Silberston, *The Economic Impact of the Patent System: A study of the British Experience*, Table 9.1, p. 197.

<sup>8</sup> Levin, "A New Look at the Patent System", p. 200.

<sup>9</sup> Von Hippel, *The Sources of Innovation*, p. 52.

<sup>10</sup> See e.g. Tritton, *supra* note 3, Pretnar, *supra* note 4, at p. 890.

patent protection arguably discourages secrecy and leads to diffusion of knowledge, which reduces wasteful duplicative innovation.<sup>11</sup>

As regards the claim that patents promotes disclosure of technology, which would otherwise have been kept secret, critics contend that the patent system will only be used where protection through alternative means is impractical, for example by the use of trade secrets.<sup>12</sup> Consequently, certain conditions have been deemed necessary for patents to create incentives to disclosure. Firstly, other forms of protection, such as trade secrets, are regarded as less efficient than patent protection. Secondly, patents may be considered of value if there is reason to believe that competitors can easily be legally discovered. Third, if the inventor believes that the term of the patent exceeds the time under which it is estimated that the invention can be maintained as a trade secret, patent protection. Finally, choosing patent protection over keeping the innovation secret may be a function of uncertainties in proving misappropriation.<sup>13</sup>

Free access to disclosed patented technology provides for more rational and efficient R&D activities. Knowledge of patented products or processes enables companies to focus their R&D efforts on improvements or alternative solutions to technical problems, and make strategic decisions in obtaining a license from a patent holder.<sup>14</sup>

Studies regarding the use of patented information as an information source reveal that such use is rare and often confined to areas where the technical information is substantially outside the expertise of researchers. Participants expressed a belief that patent literature was intentionally drafted in vague terms in order to mislead the reader.<sup>15</sup>

### **2.1.3 Activities following invention**

It has been argued that the exclusivity granted by patent protection exerts its greatest importance in activities that follow the inventive stage (herein referred to as ‘continued innovation’). Such activities include further R&D, preparation of equipment and manufacturing specifications, and promotional considerations.<sup>16</sup> Accordingly, the role of the patent is considered to extend beyond the inventive phase and promote further investments. This view is based on the Schumpeterian notion of economic development, which holds that the monopoly conditions created by the patent promotes continued innovation on a far more efficient scale than competition.<sup>17</sup>

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<sup>11</sup> Gutterman, *supra* note 2, at p. 46.

<sup>12</sup> Cornish, *Intellectual Property: Patents, Copyright, Trade Marks and Allied Rights*, p. 84.

<sup>13</sup> Gutterman, *supra* note 2, at pp. 47-48.

<sup>14</sup> *Ibid*, p. 49.

<sup>15</sup> Eisenschitz, “The value of Patent Information”, published in Phillips, Jeremy (ed.): *Patents in Perspective: a collection of essays*, p. 47.

<sup>16</sup> Ko, “An Economic Analysis of Biotechnology Patent Protection”, p. 799.

<sup>17</sup> Schumpeter, *Capitalism, Socialism and Democracy*, p. 88.

This assumption has been challenged with the contention that competition provides more incentives for innovation. It is argued, *inter alia*, that companies under competitive pressure will have more market shares to gain through innovation, and that products derived through innovation will not cannibalize the company's own market, which would happen under a monopoly.<sup>18</sup>

It has also been questioned whether patents constitute effective means to exclude competition in relation to continued innovation. For instance, a patent holder may not be able to exploit the patent without infringing a blocking patent, a situation common to industries with rapid technological developments, which might make cross-licensing the only reasonable solution.<sup>19</sup>

Although the function of patent protection to determine the characteristics of competition seems to differ between industrial sectors, patent protection appears to exert stronger influence in certain industries, such as the pharmaceutical industry. Here, the need to continuously develop products and processes is necessary in order to defend market positions, making it the primary incentive for continued innovation.<sup>20</sup>

## **2.2 Contractual extension of patent rights**

Patented technologies can be exploited in many different ways. If the proprietor possesses the necessary production facilities, equipment needed for product development, distribution networks, and marketing capabilities, the technology can be individually exploited. However, individual exploitation is not always an option. A company may lack the internal resources needed to successfully produce, develop, and launch a patented product or process, individual exploitation may not constitute the most optimal financial exploitation of the protected technology. Should this be the case, the patent holder can enter into a contract with a company that possesses the production capabilities and marketing skills needed for commercial exploitation.

### **2.2.1 Assignment and license**

Such a contract can stipulate for a complete transfer of ownership of the protected technology in return for a lump sum and/or royalties, *i.e.* an assignment. By contrast, a licensing agreement is created when the technology proprietor, the licensor, grants the other party, the licensee, the right to exploit the protected technology. Consequently, a licensing agreement does not confer any proprietary interest but merely authorizes the licensee to exploit the technology, which could have brought about an

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<sup>18</sup> Arrow, "Economic Welfare and the Allocation of Resources for Invention", in "The Rate and Direction of Inventive Activity: Economic and Social Factors", pp. 609-626.

<sup>19</sup> Von Hippel, *supra* note 9, at pp. 51-52.

<sup>20</sup> Gutterman, *supra* note 2, at p. 55.

infringement suit in the absence of the license.<sup>21</sup> As such, a licensing agreement can be compared to a rental agreement, which specifies the object that is to be exploited. The level of compensation will be negotiated based on the returns expected by the licensor to cover R&D expenses and an estimate by the licensee on how much will be saved compared to developing an alternative technology.<sup>22</sup>

## **2.2.2 Potential benefits of licensing agreements**

As noted above, the licensing of patented technology enables the contracting parties to access complementary resources necessary for commercial exploitation and by doing so maximizing their joint resources and minimizing their individual weaknesses.

From the licensor's perspective, a licensing agreement can provide access to resources and expertise needed for commercialization which it does not possess itself. For example, the licensor might have the technical skills needed to develop the products but lacks the means for large-scale production. In addition, the licensor often lacks the distribution network needed to put the product on the market or penetrate new markets. Licensing a distributor with good distribution channels and inside knowledge of specific geographic and product markets will increase revenue for the licensor.<sup>23</sup> In industries characterized by rapid technological development, cross-licensing arrangements will provide access to complementary technologies. Licensing competing technologies may in such cases be the only way to legally exercise a patented technology without being exposed to an infringement suit.<sup>24</sup>

The primary interest of the licensee is the acquisition of technology due to limitations of its own R&D potential, since it might prove difficult to maintain a competitive edge in all areas of R&D. Also, the time needed to develop an alternative comparable technology may be more time consuming than permitted by the corporate strategy.<sup>25</sup>

## **2.2.3 Disadvantages of licensing agreements**

There are inherent difficulties in negotiating efficient licensing agreements of intellectual property. Agreements may include assignments or licensing of partial legal rights, whose observance often requires continuous monitoring and re-evaluation. Determining the cost of a license may be one of the most challenging tasks facing the licensing parties, given

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<sup>21</sup> Byrne et al., *Licensing Technology-Negotiating and Drafting Technology Transfer Agreements*, p. 20.

<sup>22</sup> Gutterman, *supra* note 2, at p. 121.

<sup>23</sup> *Ibid*, p. 126.

<sup>24</sup> Byrne et al., *supra* note 21, at p. 64.

<sup>25</sup> *Ibid*.

uncertainties of potential yields, especially so where the licensed technology is of a unique nature.<sup>26</sup>

Reliance on the complementary resources and expertise provided by the counterpart in a licensing agreement inevitably creates dependency. Accordingly, the licensor is counting on the licensee to make the necessary developments and take the steps needed to successfully commercialize the technology. If this fails, the licensor will not recoup its investments in R&D. This issue is especially prevalent where the contracting companies are of different size and maturity on the market. For instance, a small and newly established company might rely heavily on one developed technology, while its larger partner might grant it lower priority.<sup>27</sup>

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<sup>26</sup> Lemley, “The Economics of Improvement in Intellectual Property Law”, p. 1053.

<sup>27</sup> See discussion by Gutterman, *supra* note 2, at p. 128, who points out that if the licensed technology is one among several competing technologies in the licensee’s possession, it will be in the licensor’s interest to negotiate the inclusion of contractual mechanisms guaranteeing best efforts or due diligence from the licensee with respect to the licensor’s technology.

## 3 Improvements in licensed technology

Even though a licensing agreement is concerned with contractual extension of the use regarding the protected technology developed by the licensor, it is very common that either the licensor or the licensee develops improvements in the licensed technology. If the licensee holds the capabilities and the resources necessary for such activities and it is anticipated by the contracting parties that such activities will be carried out, the licensor has a natural incentive to protect the integrity of his technology and maintain its competitiveness. The licensee will be equally inclined to retain the result of its innovative efforts.

It is therefore common that negotiations concerning improvements of licensed technology results in an obligation where one party agrees to provide access to such improvements to the other contracting party or a reciprocal obligation of the same nature.

### 3.1 What is an ‘improvement’?

In the context of technology licensing, it is clear that the term ‘improvement’ implies some sort of technical advance from the licensed object. There is no settled definition of what constitutes an improvement and contracts do not always provide for a definition. Consequently, the concept has inevitably lead to litigation over the definition and whether a technical advance can be classified as an improvement.<sup>28</sup>

In a case before the English Court of Appeal, it was held that the question whether the defendant had made an improvement on the plaintiff’s invention depended on if the defendant’s exploitation of the improvement without a license from the plaintiff would constitute an infringement on the plaintiff’s patent, assuming of course that the plaintiff’s patent was valid.<sup>29</sup> According to this definition, any development falling within the scope of the claims of the patented technology in the licensing agreement and which, consequently, infringe the protected technology is classified as an improvement.<sup>30</sup>

By contrast, in *Linotype & Machinery Ltd v. Hopkins*, the English High Court articulated that an improvement of a patented machine included machines which retained essential or characteristic elements of the patented machine, but in addition produced better results through any type of

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<sup>28</sup> Byrne et al, *supra* note 21, at p. 104.

<sup>29</sup> *Davis v. Curtis & Harvey Ltd*, (1903) 20 RPC 561.

<sup>30</sup> The classification of improvements in licensed technology in regard to possible infringements thereof is also of relevance for the analysis of improvements under EC competition law, which will be discussed further below under Chapter 5.1.

alteration, irrespective of whether the improvement infringed the patented machine or not.<sup>31</sup>

In *U.S. Industries, Inc v. Camco, Inc*, Judge Brown expressed the view that, in determining the definition of an ‘improvement’, it is not necessary to establish whether it possesses the essential characteristics of a patentable novelty over a preexisting device. Rather, as used in the contract, it referred to changes, betterments, modifications, or adaptations disclosed outside of the original patent.<sup>32</sup>

A licensing agreement contains many unknown variables at the time of its conclusion, especially the question of future improvements. This raises the question whether it is possible to provide for a single uniform definition of what constitutes an ‘improvement’.<sup>33</sup>

## **3.2 Contractual ambit of grant-back obligations**

Although a development of the original technology might be classified as an improvement, this does not necessarily mean that the improvement is subject to transfer in accordance with a grant-back clause. The scope of the grant-back obligation and its interpretation in accordance with the intention of the contracting parties will determine whether an obligation to grant back an improvement is at hand.

### **3.2.1 Time frame of agreement**

The question whether an improvement had been developed inside or outside the time frame of a license agreement was raised in proceedings between National Broach & Machine Company (National) and Churchill Gear Machines Limited (C.R.).<sup>34</sup> National, the licensor, granted C.R., the licensee, the non-exclusive right to manufacture gear shaving machines in the United Kingdom and Ireland, and in accordance with patents and know-how provided by National. According to clause 10 of the agreement, C.R. was obliged to communicate to National all details of any improvements in gear shaving machines developed by C.R. during the subsistence of the agreement.

The agreement was terminated by C.R. upon six months of prior notice, during which C.R. developed a new gear shaving machine for which they sought patent protection after the expiry of the licensing agreement.

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<sup>31</sup> (1908) 25 RPC 349.

<sup>32</sup> (1960) 277 F.2d 292, 125 U.S.P.Q. 216.

<sup>33</sup> See *Dyform Engineering Ltd v. Ittup Hollowcore Ltd.*, 71 CPR (2d) 72 [1982], para. 55, where Justice MacKinnon argues that an improvement should be interpreted in its ordinary meaning within the context of the agreement as intended by the contracting parties.

<sup>34</sup> (1967) *National Broach & Machine Company v. Churchill Gear Machines Limited*, RPC 99.

National brought an action against, C.R., relying on the wording of clause 10, whereas C.R. contended that the obligation stipulated in clause 10 provided for communication once the development had reached a certain stage, which it claimed was not the case during the time frame of the agreement.

The preceding Lord Upjohn, with whom the House of Lords unanimously concurred, held that, although terms such as ‘improvement’ and ‘developed’ must be construed through the eyes of a reasonable man reasonably skilled in the relevant field, clause 10 was drafted in perfectly ordinary words of the English language, which were not capable of further interpretation. Consequently, C.R. was held to have failed in its obligation under clause 10 of the agreement.

### **3.2.2 Improvement within scope of underlying patent**

In *Buchanan v. Alba Diagnostics Ltd.*, Mr. Buchanan and his company Liquid Levers Ltd. assigned to Mr. Mills their respective interests in certain patent rights pertaining to break fluid analyzers, as security for a loan. It was stipulated that the assignors “assign to [Mr. Mills]... their whole right, title and interest past, present and future in and to the Patents and the Applications... and all improvements, prolongations and extensions... relating therein and thereto...”.<sup>35</sup> Subsequent to the agreement, Liquid Lever went into receivership and Mr. Mills transferred his rights to Alba Diagnostics Ltd. (Hereinafter “Alba”).

One of the applications contained in the assignment was patent 311, which disclosed an invention for a device designed to measure the boiling point of brake fluids. However, if the device was lowered too deeply into the liquid, the reliability of the reading was jeopardized. Several years after the assignment, Mr. Buchanan developed an invention that corrected this problem, which was patented as patent 321. Meanwhile, Alba had developed its own brake fluid meter to address the drawback of patent 311, which caused Mr. Buchanan to sue Alba for infringement of patent 321.

One of the legal issues raised was whether patent 321 constituted an improvement of the disclosed invention in patent 311 and, by consequence, included in the assignment. Lord Hoffman noted that the term ‘improvement’ could have wider or narrower meanings depending on the context. In this case, the purpose of including the right to improvements in the assignment was to preserve the value of the right forming the security, *i.e.* the application for patent 311. Consequently, the term ‘improvement’ should be given a broad and commercial meaning.<sup>36</sup>

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<sup>35</sup> *Buchanan v. Alba Diagnostics Ltd.*, (2004) RPC 34, para. 6.

<sup>36</sup> *Ibid*, para. 30.

In applying this reasoning to the circumstances at hand, it was unanimously held by the House of Lords that patent 321 was indeed an improvement of patent 311, both of which contained the invention of a brake fluid meter. In a technical sense, the distinguishing feature in patent 321 was a rearrangement of the inlet in order to retain air, thereby guaranteeing the correct depth needed for a reliable reading. This amounted to an improvement, since it made possible the manufacture of a more efficient brake fluid meter.<sup>37</sup>

### 3.3 Ownership and rights to improvements

The issue of ownership over improvements to licensed technology is an important issue in negotiating a licensing agreement, and it is often influenced by how the contracting parties perceive the activities of improving the licensed technology.

If the licensor is anxious to maintain the competitiveness of the licensed technology by retaining ownership of any improvements thereof developed by the licensee, a concession in the form of, *e.g.* a lower royalty rate might prove to be necessary. Conversely, should any improvements made by the licensee be unexpected, partially unrelated to the licensed technology, or only made possible due to individual expertise, it might be considered natural that the licensee retains ownership under such circumstances.<sup>38</sup>

Should the licensee retain ownership of its improvements in the licensed technology, it is very common that the licensing agreement stipulates an obligation on the licensee to grant a license to the licensor for the right to use the improvements, *i.e.* a grant-back clause. Depending on its form and the economic context in which it operates, a grant-back clause can have significant consequences regarding the licensee's incentive to improve the original licensed technology.<sup>39</sup>

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<sup>37</sup> *Ibid*, para. 32. See also the preceding case which was later appealed to the House of Lords; *Buchanan v. Alba Diagnostics Ltd* (2001) SCLR 307, where Lord Clarke points out that "By providing for the stabilising of the fluid whose temperature is to be measured, the patent in suit achieves, in a better way, the same result as the invention which was the subject-matter of application 311(...) When, however, the differences are of such a character as to make the resulting machine a quite distinct thing, then one has moved from the world of improvement--and the world of differences in feature or features--to the world of differences in kind.", quoted from paras. 37-38.

<sup>38</sup> Gutterman, *supra* note 2, at p. 140.

<sup>39</sup> *Ibid*.

# 4 Technology licensing and EC competition law

As noted above, there is much that suggests that the limited period of patent exclusivity granted to an inventor for exploitation of the invention is a necessary incentive in certain industries for R&D expenditure and investment in innovative efforts. Should innovator lack the resources necessary to achieve this goal, the statutory exclusivity of a patent can be extended by way of a licensing agreement. Extension of such exclusivity raises anti-competitive concerns quite distinct from individual exploitation.

## 4.1 The EC competition system

### 4.1.1 Treaty provisions

According to the wording of the Treaty, by establishing a common market and an economic and monetary union, one of the principle tasks of the European Community is to promote a “high degree of competitiveness and convergence of economic performance (...)”<sup>40</sup> For this purpose, the activities of the Community include the creation of “a system ensuring that competition in the internal market is not distorted (...)”<sup>41</sup>

This system is implemented in part through art. 81(1) EC, which provides that all agreements, decisions, or concerted practices between undertakings which may affect trade between Member States and which have as their object or effect the prevention, restriction or distortion of competition shall be prohibited within the common market. According to art. 81(3) EC, subparagraph (1) may be declared inapplicable to agreements, decisions, or concerted practices, which fulfill four cumulative conditions. They must:

1. contribute to the production or distribution of goods, or promote technical or economic progress;
2. allow consumers a fair share of the resulting benefits;
3. do not contain restrictions which are not necessary to the attainment of these objectives, and;
4. do not afford the possibility for the undertakings the possibility of eliminating competition in respect of a substantial part of of the products in question

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<sup>40</sup> Treaty Establishing the European Community, as amended in accordance with the Treaty of Nice Consolidated Version, OJ 2002 C 325/1, (Hereinafter cited as “EC”), art. 2.

<sup>41</sup> Art. 3(1)(g) EC.

## 4.1.2 Principles of EC competition law

EC competition policy is based on a number of principles, which are of crucial importance in understanding the EC competition system. They are traditionally classified as effective competition, protection of small and medium sized enterprises, including consumers, and the creation of a single European market.<sup>42</sup>

### 4.1.2.1 Effective competition

The relationship between competition and economic efficiency is recognized in art. 2 EC, and is based on the economic premise that the presence of a system ensuring ‘workable competition’ will induce companies to produce at the most efficient level.

Workable competition, while not amounting to perfect competition, still incorporates the functions necessary to create the effects of a competitive economy.<sup>43</sup> One of these features is the contentious view that the pressure of competition will lead to increased innovation.<sup>44</sup> This correlation is firmly acknowledged in the EC competition system, which is based on the premise that a competitive market constitutes the best guarantee for European companies to increase their economic efficiency and innovative potential.<sup>45</sup>

The price mechanism is the key tool in creating economic efficiency in competition. When companies are faced with competitive pressure, prices will be reduced and companies are thus forced to produce near optimal costs. As a result, competition policy is particularly concerned with preventing economic behavior with adverse effects on the price mechanism, such as agreements and cartels between companies with the aim or effect of fixing prices, reducing output, and/or controlling markets.<sup>46</sup>

### 4.1.2.2 Protection of SME’s and consumers

The protection of SME’s as a competitive strategy was introduced in *United Brands*, in which a company occupying a dominant position, United Brands, stopped supplying a long-standing distributor due to the distributor’s practice of advertising a competing product.<sup>47</sup> The ECJ held that the decision to stop supplies amounted to an abuse of a dominant position, in accordance with art. 86 EC (now art. 82 EC), since it would limit markets to the prejudice of consumers and would amount to discrimination that might eliminate a trading partner from the relevant market.<sup>48</sup>

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<sup>42</sup> Craig and De Búrca, *EU Law. Text, Cases, and Materials*, pp. 936-937.

<sup>43</sup> See Case 26/76, *Metro v. Commission* [1977] ECR 1875, para. 20.

<sup>44</sup> See discussion under Chapter 2.1.3 above.

<sup>45</sup> See e.g. Commission communication: A pro-active Competition Policy for a Competitive Europe, COM (2004) 293 Final, p. 1. According to the Commission, evidence does suggest that the likelihood of innovation is higher among industries in competitive markets, p. 5.

<sup>46</sup> Craig and De Búrca, *supra* note 42.

<sup>47</sup> Case 27/76, *United Brands Company v. EC Commission* [1978] ECR 207, paras. 163-164.

<sup>48</sup> *Ibid*, para. 183.

In examining whether the refusal to supply was a proportionate response to the actions by the distributor, the Court noted specifically that the action constituted a serious infringement on the independence on SME's and their right to market competitive goods. It was held to have serious anti-competitive effects since it would only allow companies dependent on the dominant company to stay in business.<sup>49</sup>

A similar line of reasoning was expressed in *ECS/AKZO*, where the Commission stated that any unfair practices exerted by dominant undertakings by which it intends to eliminate, discipline or deter smaller competitors would fall under art. 82 EC, if the other conditions for its applications were fulfilled. The Commission clearly emphasizes that competition between a dominant undertaking and an SME or a new market entrant is not *per se* regarded as an anti-competitive practice, but may become so under certain circumstances by stating that “The maintenance of a system of effective competition does however require that a small competitor be protected against behavior by dominant undertakings designed to exclude it from the market not by virtue of greater efficiency or superior performance but by an abuse of market power.”<sup>50</sup>

As noted above, effective competition will induce companies to produce at near optimal costs, which puts downward pressure on prices. Competition in innovation and R&D will lead to the development of more diverse and efficient production processes and products. All these effects benefit consumers, who will have access to a greater range of products at lower prices.

#### **4.1.2.3 Establishing an internal market**

In the seminal case *Consten & Grundig*, the ECJ prohibited Consten, acting as the exclusive distributor for Grundig products in France, from enforcing a trademark obtained by contract from Grundig in order to prevent the parallel import of electronic products manufactured by Grundig into France from other Member States.<sup>51</sup> One of the principal arguments behind the prohibition of absolute territorial protection by way of agreement was the objective of achieving an internal market:

“An agreement(...)which might tend to restore the national divisions in trade between Member States might be such as to frustrate the most fundamental objections of the Community. The Treaty, whose preamble and content aim at abolishing the barriers between States, and which in several provisions gives evidence of a stern attitude with regard to their reappearance, could not allow undertakings to reconstruct such barriers. Article 85(1) is designed to pursue this aim, even in the case of agreements between undertakings placed at different levels in the economic process.”<sup>52</sup>

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<sup>49</sup> *Ibid*, paras. 193-194.

<sup>50</sup> 85/609/EEC, *ECS/AKZO*, OJ 1985 L374/1, para. 74, quote at para. 81.

<sup>51</sup> Cases 56 & 58/64, *Consten and Grundig v. Commission* [1966] ECR 299.

<sup>52</sup> *Ibid*, ECR p. 340. See also Case 15/81, *Gaston Schul Douane Expeditieur BV v. Inspecteur der Invoerrechten en Accijnzen, Roosendaal* [1982] ECR 1409, para. 33.

### 4.1.3 Implementation of art. 81 EC

The implementation of the rules on competition in art. 81 EC was, prior to May 1 2004, governed by Council Regulation 17/62.<sup>53</sup> According to art. 4(1), agreements falling within art. 81(1) EC, which the contracting parties sought to have exempted through art. 81(3) EC had to be notified to the Commission, who had exclusive competence to grant exemption. The rationale for this exclusivity was threefold: providing greater information to the supervisory authorities, guaranteeing a sufficiently uniform regime for the application of art. 81, and creating conditions of legal certainty for business.<sup>54</sup>

Not surprisingly, the monopoly to grant exemptions flooded the Commission with notifications, leading to the adoption of council regulations, which provided for the standardized application of art. 81(3) to categories of agreements, *i.e.* block exemption regulations.

While recognizing the early benefits of a centralized notification system established through Reg. 17/62, especially the creation of a ‘culture of competition’ in Europe, which was considered essential for the functioning of the internal market, the Commission began to evaluate the EC competition system in the light of increased integration and enlargement of the Community. The principal reasons for reform were outlined in the White Paper on Modernisation. Decentralizing the application of the competition rules was regarded as a necessity in order to ease the workload on the Commission. Such a move would in turn result in a more efficient administration by allowing the Commission to concentrate their efforts on particularly grave infringement of EC competition law.<sup>55</sup>

As a result of the evaluation, The Council adopted Regulation 1/2003, which accordingly replaced Reg. 17/62 as the principal instrument for implementing the Community competition rules.<sup>56</sup> The monopoly enjoyed by the Commission in terms of granting exemptions is abolished and, according to articles 5 and 6, national competition authorities are granted the power to apply art. 81 EC in full. The principal reason cited for the decentralization is administrative efficiency, which is made possible due to the dissemination of a competition culture within the Community.<sup>57</sup>

According to art. 1(2), agreements, decisions and concerted practices caught by art. 81(1) EC which satisfy the conditions in art. 81(3) EC shall not be

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<sup>53</sup> EEC Council: Regulation No. 17: First Regulation implementing Articles 85 and 86 of the Treaty OJ 1962 13/204, (Hereinafter cited as “Reg. 17/62”).

<sup>54</sup> Commission Programme No 99/027, White Paper on Modernisation of the Rules Implementing Articles 85 and 86 of the EC Treaty, para. 14, (Hereinafter cited as “White Paper on Modernisation”).

<sup>55</sup> *Ibid*, paras. 3, 4, 45-46.

<sup>56</sup> Council regulation (EC) No. 1/2003 of 16 December 2002 on the Implementation of the rules on competition laid down in Articles 81 and 82 of the treaty, OJ 2003 L 1/1, (Hereinafter cited as “Reg. 1/2003”).

<sup>57</sup> *Ibid*, recitals (1) and (3).

prohibited, no prior decision to that effect being required. Consequently, Reg. 1/2003 abolishes the requirement to apply for notification in order to benefit from art. 81(3) EC, and implements a system for self-assessment by any party who seeks to benefit from the exemption in art. 81(3).<sup>58</sup>

The shift from a notification system to a self-assessment regime inevitably reduces legal certainty for companies seeking to benefit from the exemption in art. 81(3) EC or a block exemption regulation. Reg. 1/2003 was adopted with the objective of maintaining a reasonable level of legal certainty, making legislative tools of great importance. For this reason, block exemption regulations must be interpreted in a uniform manner and, should an agreement qualify for exemption, not be overridden by national legislation.<sup>59</sup>

## 4.2 The relationship between IPR protection and EC competition law

### 4.2.1 General policy framework

The interface between IPR and competition law is often characterized as contentious due to the nature of their objectives. IPR protection provides exclusive market positions, which shields the rights holder from competition for a limited time, in order to promote R&D and innovation. Competition law, on the other hand, is concerned with creating economic efficiency and consumer welfare through effective competition.<sup>60</sup>

Despite the apparent friction between competition law and intellectual property law, it is now widely recognized that the two bodies of law can be reconciled. In this regard, reference is made to the overarching goals shared by competition law and intellectual property law, *i.e.* improved economic efficiency, incentives for innovation, and diffusion of technology. This will lead to an increased amount of products and, consequently, product competition on the market.<sup>61</sup>

Although intellectual property law and competition policy share the same objectives, they are not purely complementary in nature. While IPR protection often does provide pro-competitive effects in the long term, the short-term effects include a trade-off between beneficial increase of competition and gains from innovation. In addition, the exploitation of IPR

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<sup>58</sup> *Ibid*, recital (5).

<sup>59</sup> *Ibid*, art. 3(2). See also White Paper on Modernisation, *supra* note 54, at paras. 51, 84-85.

<sup>60</sup> An elaborate discussion is provided by the United States Court of Appeal in *SCM Corp. v. Xerox Corp.*, 645 F.2d 1195, 1203, *cert. denied* 454 U.S. 1016 (1982).

<sup>61</sup> Commission Regulation (EC) No 772/2004 of 27 April 2004 on the Application of Article 81(3) of the Treaty to categories of technology Transfer Agreements, OJ 2004 L123/11 (Hereinafter cited as “TTBER”), recital (5). See also *Loctite Corp. v. Ultraseal Ltd.*, 781 F.2d 861, 876-877, 228 U.S.P.Q. 90.

protection for anti-competitive purposes or in ways which produce anti-competitive effects go beyond the intended scope of the IPR.<sup>62</sup>

Consequently, the interface between competition policy and IPR protection has rightly been characterized as a continuous process of reconciliation between the statutory exclusivity created by IPR protection and the interest of unrestricted competition.<sup>63</sup>

## 4.2.2 Existence and exercise

According to art. 295 EC, the Treaty shall not interfere with national legislation in the Member States governing the system of property ownership. Accordingly, there is no Community interest in regulating the conditions under which IPR protection is granted under the laws of the Member States. This view was first expressed in *Consten & Grundig*, where the ECJ noted that, in the enforcement of art. 81 EC, “the injunction (...) to refrain from using rights under national trade-mark law in order to set an obstacle in the way of parallel imports does not affect the grant of those rights but only limits their exercise to the extent necessary to give effect to the prohibition under art. 85(1).”<sup>64</sup>

In a subsequent ruling, the ECJ confirmed the distinction between ‘grant’ and ‘exercise’ by holding that a patent, taken by itself and independently of any agreement, is an expression of a legal status granted by national legislation. Nonetheless, a patent used in an agreement between undertakings may bring about a situation regulated in art. 81(1) EC, making the exercise of the patent falling within art. 81(1) EC.<sup>65</sup>

These rulings provide that, although the grant and existence of an IPR does not give rise to anti-competitive concerns, the exercise of IPR through contractual extension may fall within the scope of art. 81(1) EC. EC competition law, including case law of the Community Courts and Commission decisions, thus constitutes a regulatory framework for assessing the outer limits of permitted exercise of IPR by way of licensing.<sup>66</sup>

In *Parke, Davis v. Probel*, the ECJ stated that the exercise of the rights arising under a patent does not, *in itself*, constitute an infringement of the rules on competition in the Treaty.<sup>67</sup> Accordingly, the ECJ not only asserts the principle that EC competition law regulates the exploitation of IPR, but also seems to allude to a range of permitted forms of exploitation of IPR.

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<sup>62</sup> OECD report (1998), *Competition Policy and Intellectual Property Rights*, DAF/CLP(98)18, p. 7.

<sup>63</sup> Gutterman, *supra* note 2, at p. 12.

<sup>64</sup> See *Consten & Grundig*, *supra* note 51, at p. 345.

<sup>65</sup> Case 24/67, *Parke, Davis v. Probel* [1968] ECR 55, para. 71.

<sup>66</sup> Anderman, *EC Competition Law and Intellectual Property Rights. The regulation of Innovation*, pp. 3-4.

<sup>67</sup> See *Parke, Davis v. Probel*, *supra* note 65.

## **4.3 Evaluation of licensing agreements under art. 81 EC**

### **4.3.1 Restriction of competition and technology licensing**

Although the ECJ has held that art. 81(1) EC does apply to IPR licensing agreements, even by way of concerted practice,<sup>68</sup> it must fulfill the conditions of that article to fall within its scope. This implies, firstly, an agreement or concerted practice concerning the IPR between two undertakings. Secondly, the agreement or practice must affect intra-Community trade. Thirdly, the agreement or practice must have the object or effect of preventing, restricting or distorting competition.

As held by the ECJ, a licensing agreement in itself is not a restriction of competition, but if it is made the subject, means or consequence of, or alternatively gives effect to, a commercial practice with anti-competitive effects, the criteria concerning restriction of competition is fulfilled.<sup>69</sup> The Commission and the Community Courts have interpreted this requisite for more than 40 years, during which the assessment of the pro- and anticompetitive nature of IPR licensing agreements has undergone significant changes.

### **4.3.2 Inherent subject matter of the licensed right**

Early on, the Commission found many restrictions in licensing agreements to fall outside the scope of art. 81(1) EC, provided that they did not deviate from the scope of the underlying patent. This attitude was exemplified in art. 4.2(2)(b) of Reg. 17/62, which stated that notification was not required for agreements between two parties that restricted the assignee or user of intellectual property rights. Further, in its ‘Christmas Message’, the Commission stated that restrictions such as non-exclusive grant-backs, field of use, technical application, quantity of manufactured products, and allotting exclusive licensees for particular territories fell outside of art. 81(1) EC. This was motivated by characterizing the restriction as a division of the rights holder’s exclusive rights.<sup>70</sup>

IPR licensing was thus sheltered from the application of art. 81(1) EC through a formalistic approach based on the rationale of IPR legislation,

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<sup>68</sup> See Cases 110, 241 & 242/88, *Lucazeau v. SACEM* [1989] ECR 2811, para. 17.

<sup>69</sup> Case 78/70, *Deutsche Grammophon* [1971] ECR 487, para. 6, Case 262/81, *Coditel II* [1982] ECR 3381, para. 14.

<sup>70</sup> Commission Notice of 24 December on patent licensing agreements, OJ 1962 139/2922.

specifically the scope of the patent-doctrine, with little analysis of economic effects.<sup>71</sup>

### 4.3.3 An increasingly restrictive attitude

The judgment in *Consten & Grundig* constitutes a turning point in the evaluation of competitive restraints in licensing agreements. Recognizing the potential harmful effects of IPR licensing agreements, the ECJ departed from previous policy by interpreting art. 81(1) EC to include attempts by a licensor and a licensee to absolute territorial protection through the grant of an exclusive licensing agreement by means of an exportation ban and trade mark protection against parallel traders. Such a partitioning of the internal market was regarded as a measure, which distorted competition.<sup>72</sup>

The applicants argued that the Court should apply an economic approach and consider the agreement's impact on intra-brand competition (*i.e.* competition between different brands) through adding a competitor on the French market.<sup>73</sup> However, the Court found the interest of interstate commerce and parallel trade to outweigh arguments concerning the necessity of absolute territorial protection to induce the licensee to develop and market products in new territories, even to such an extent that the restriction was prohibited *per se*, *i.e.* without the possibility of exemption under art. 81(3) EC.<sup>74</sup>

Consequently, *Consten & Grundig* prompted closer scrutiny of networks of parallel licensing agreements. In these networks, the licensor awards exclusive territories for its licensees with imposed territorial sales restrictions, which effectively blocks any parallel trade to the detriment of competition between the licensees. In *Davidson Rubber*, the Commission declared a network of exclusive licenses to fall within the scope of art. 81(1) EC, since the restriction on the licensor to appoint other licensees prevented other suppliers from exporting the licensed goods. The Commission noted that art. 81 (1) EC could be declared applicable by virtue of art. 81(3) EC, especially so where the exclusivity stimulates the licensee to penetrate a territorial or product market, which is inaccessible and unexplored to the licensee.<sup>75</sup>

The scope of the patent doctrine was also modified by the Commission in terms of various other restrictions in licensing agreements. In *AOIP/Beyrard*, the Commission declared that a non-challenge clause, a non-competition clause, and an obligation to pay royalties after the expiration of the patents in force when the agreement was made and the licensee is not

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<sup>71</sup> Anderman, *supra* note 66, at. pp. 54-55.

<sup>72</sup> See *Consten & Grundig*, *supra* note 51, at p. 343.

<sup>73</sup> *Ibid*, at p. 342.

<sup>74</sup> *Ibid*, at p. 349. See also chapter 4.1.2.3 above.

<sup>75</sup> 72/237/EEC, *Davidson Rubber Company*, OJ L 143/31, at p. 31 et. seq. See also 76/29/EEC, *AOIP/Beyrard*, OJ L 6/8.

making use of those patents, all fell within the scope of art. 81(1) EC and were non-exemptible under art. 81(3) EC.<sup>76</sup>

It has been suggested that the *per se* attitude towards non-territorial restraints can be linked to a set of administrative principles announced by officials at the Antitrust Division of the U.S. Department of Justice in the 1970's. These were referred to as the 'Nine No No's', i.e. nine restrictions which were considered always to lead to adverse effects on competition:

1. Tie-ins;
2. Tie-outs;
3. Royalties not reasonably related to the licensees' sales of the patented product;
4. Licensee vetoes;
5. Mandatory package licenses, price restrictions on sales of a licensed product;
6. Restrictions on the sale of an unpatented product manufactured with a patented process;
7. Resale restraints;
8. Price restrictions on sales of a licensed product; and
9. exclusive grant-backs.<sup>77</sup>

#### **4.3.4 Balancing technology transfer and competition**

The increased restriction of exclusivity came at the expense of the interest of promoting the proliferation of technology, leading the ECJ to adopt a more nuanced approach in *Nungesser*. Here, the Court held that a license for a territorial exclusive right to manufacture and sell the licensed object was not inherently included in the scope of art. 81(1) EC, but was subject to appraisal under art. 81(3) EC.<sup>78</sup> In this respect, the Court noted that in the case of a newly developed product, an exclusive license might prove necessary to induce a licensee to develop and market the new product. Such a result would damage the dissemination of technology and, consequently, competition.<sup>79</sup>

However, the Court made a critical distinction by declaring that an 'open exclusive license', where the licensor undertakes not to grant other licensees for the relevant territory or compete there himself with the licensee, did not in itself fall within art. 81(1) EC. By contrast, an agreement stipulating absolute territorial protection, *i.e.* where the parties agree to eliminate all competition from third parties, such as parallel traders or licensee's in other territories, was deemed contrary to the Treaty.<sup>80</sup>

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<sup>76</sup> *Ibid.*

<sup>77</sup> See Anderman, *supra* note 66, at pp. 61-62.

<sup>78</sup> Case 258/78, *Nungesser v. Commission* [1982] ECR 2015.

<sup>79</sup> *Ibid.*, para. 57.

<sup>80</sup> *Ibid.*, para. 53.

### 4.3.5 Non-territorial restraints

As noted above, restrictions in licensing agreements of a non-territorial nature were judged based on the subject matter of the underlying patent doctrine. During the 1970's, the doctrine of ancillary restraints was developed. According to this doctrine, restraints in a pro-competitive agreement deemed objectively indispensable to achieve the objective of the agreement could be regarded as not restrictive of competition.<sup>81</sup>

In *Windsurfing*, the ECJ upheld its restrictive attitude towards non-territorial restraints. The case concerned an American corporation, Windsurfing, which had granted patent licenses to German licensees pertaining to its invention: a board with an affixed rig and fittings. However, the ECJ concurred with the Commission's findings that the German patents covered only the rig and the fittings, whereas the licensing agreement included provisions covering the board as well.<sup>82</sup> As a result, the ancillary restraints in the licensing agreement which related to the whole sailboard or parts of it not covered by the German patents would fall outside of the scope of the patent and thus not be indispensable to achieve the objective of the licensing agreement.<sup>83</sup>

Consequently, the ECJ found that a restriction on the licensee to exploit the invention only in connection with certain types of boards was, in the absence of any objective criteria laid down in advance, restrictive of competition in accordance with art. 81(1) EC.<sup>84</sup> Similarly, the ECJ found an obligation to sell the components covered by the German patent only together with certain boards approved by the licensor to restrict competition for the reasons set out above.<sup>85</sup> Other restrictions deemed dispensable were, *inter alia*, the obligation on the licensees to restrict production to a specific location in Germany, which the Court ruled to extend the patent protection granted in respect to Germany to other territories where no such protection existed,<sup>86</sup> and a non-challenge clause, given the public economic interest of removing erroneous patents.<sup>87</sup>

## 4.4 Block exemption regulations

### 4.4.1 Background

The policy objectives in shaping block exemption regulations are formulating generalized exemptions through art. 81(3) EC while simultaneously not allowing anti-competitive agreements to benefit from the

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<sup>81</sup> See Tritton, *supra* note 3, at p. 570, Anderman, *supra* note 66, at p. 73.

<sup>82</sup> Case 193/83, *Windsurfing v. Commission* [1986] ECR 611, paras. 2, 4-5, 34-35.

<sup>83</sup> *Ibid*, para. 36.

<sup>84</sup> *Ibid*, paras. 38, 46, 51.

<sup>85</sup> *Ibid*, para. 57.

<sup>86</sup> *Ibid*, paras. 82, 85.

<sup>87</sup> *Ibid*, paras. 89, 92.

exemption. The statutory competence rests with the Commission, which according to Council Regulation 19/65 is empowered to adopt block exemptions for, *inter alia*, vertical and technology transfer agreements, the latter category being of particular significance for the purposes of this study.<sup>88</sup> This Council regulation led to the adoption of Commission Regulation 2349/84 on Patent Licensing Agreements<sup>89</sup> and 556/89 on Know-How Licensing Agreements,<sup>90</sup> which were subsequently replaced by Regulation 240/96 on the application of Art. 85(3) of the Treaty to certain categories of technology transfer agreements.<sup>91</sup>

#### 4.4.2 Reg. 240/96

Like its predecessors, Reg. 240/96 was based on a formalistic approach, where exemption, to great extent, rested with how the terms in a licensing agreement were phrased. Art. 2 of the Regulation included a number of clauses that would not fall within the scope of art. 81(1) EC (the “white list”), while the inclusion of any clause listed under art. 3 would bring the entire agreement outside of the scope of the Regulation (the “black list”). Art. 4 contained a residual way of examination for unlisted clauses. They were made subject to a case by case-analysis, which were exempted if the agreement was notified to the Commission and the Commission did not oppose the exemption within four months.

Art. 12 of Reg. 240/96 provided for an assessment of its application, which was delivered in 2001.<sup>92</sup> The main source of criticism in the Evaluation Report centered around the formalistic approach of Reg. 240/96 with the concern that the use of lists of exemptible and non-exemptible clauses would impose a legal straight-jacket on European industry, thereby negatively affecting its competitiveness.<sup>93</sup> Reference was also made to a more effects-oriented and economic approach inherent in adjacent block exemption regulations, such as Regulation 2790/1999 on vertical agreements and Regulation 2659/2000 on R&D agreements. In addition, the reform of Reg. 17/62, and in particular the proposed abolition of the

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<sup>88</sup> Council Regulation 19/65/EEC on application of art. 85(3) of the treaty to certain categories of agreements and concerted practices, OJ 36 6.3.1965, p. 533. According to art. 1(b), the Commission was authorized to declare that art. 81(1) did not apply to categories of agreements between two parties, which include restrictions in relation to the acquisition of or use of, *inter alia*, patents.

<sup>89</sup> Commission Regulation (EC) No. 2349/84 on the application of Article 85(3) of the Treaty to certain categories of patent licensing agreements, OJ 1984 L219/15, (Hereinafter cited as “Patent Licensing Regulation”).

<sup>90</sup> Commission Regulation (EC) No. 556/89 on the application of Article 85(3) of the Treaty to certain categories of know-how licensing agreements, OJ 1989 L61/1.

<sup>91</sup> Commission Regulation (EC) No. 240/96 of 31 January 1996 on the application of Article 85(3) of the Treaty to certain categories of technology transfer agreements, OJ 1996 L 31/2, (Hereinafter cited as “Reg. 240/96”).

<sup>92</sup> European Commission: “Commission Evaluation Report on the Transfer of Technology Block Exemption Regulation No. 240/96 of 20 December 2001”, COM (2001) 786 final (Hereinafter cited as “Evaluation Report”).

<sup>93</sup> *Ibid*, paras. 3-4.

notification system, necessitated a review of the policy approach to technology licensing.<sup>94</sup>

### 4.4.3 The new TTBER

On May 1, 2004, Reg. 240/96 was replaced by a new block exemption regulation for technology transfer agreements,<sup>95</sup> accompanied by non-binding guidelines on its application.<sup>96</sup>

According to the preamble, the objective of the TTBER is to move away from a formal approach of listed exempted clauses to a more economics based method of exempting agreements up to a specific level of market power. The fundamental rationale is that the level of market power of the contracting parties, especially the level of inter-brand competition they face, will determine whether the pro-competitive aspects of the agreement will outweigh contractual restraints with anti-competitive effects.<sup>97</sup>

#### 4.4.3.1 Scope

Art. 2 of the TTBER stipulates that the regulation covers technology transfer agreements between two undertakings concerning the production of contract products, *i.e.* products that either incorporate or are produced with the licensed technology. Consequently, the license must permit the licensee to exploit the licensed technology for production of goods and services.<sup>98</sup>

The ‘technology transfer agreements’ covered by the TTBER is listed in art. 1(1)(b) and include patent licensing agreements, know-how licensing agreements, software copyright licensing agreements, or a mixed patent, know-how or software copyright licensing agreement.

The TTBER applies on condition that the agreement in question has as its ‘primary object’ the transfer of technology, and not the purchase of goods or services. Should the license be accompanied by the sale of equipment or other inputs tailored for more efficient exploitation of the licensed technology and thus be directly linked to the application of the licensed technology, such a transaction will be covered by the TTBER.<sup>99</sup>

#### 4.4.3.2 Competitors v. non-competitors

The focus on inter-brand competition as an important parameter in the evaluation of licensing agreement has lead to a differentiation between agreements between competitors and agreements between non-competitors. Consequently, defining the competitive relationship between the contracting parties is the first step in competitive analysis under the TTBER. The

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<sup>94</sup> *Ibid*, paras. 6-7.

<sup>95</sup> TTBER, *supra* note 61.

<sup>96</sup> Commission Notice: Guidelines on the application of art. 81(1) of the EC Treaty to technology Transfer agreements, OJ 2004 C101/02 (Hereinafter cited as “ Guidelines”)

<sup>97</sup> TTBER, *supra* note 61, at recitals (4), (6).

<sup>98</sup> Guidelines, *supra* note 96, at para, 41.

<sup>99</sup> *Ibid*, para. 49.

competitive relationship between the contracting parties depends on whether the parties would have been actual or potential competitors on the relevant market in the absence of the agreement.<sup>100</sup>

The classification of the competitive relationship presupposes a definition of a relevant market. For this purpose, the Commission's guidelines on market definition provide the relevant rules,<sup>101</sup> complemented by additional rules in the Guidelines. The TTBER provides two categories of relevant market definitions. The relevant technology market is defined as the licensed technology and technologies which are regarded as interchangeable by the licensees. The relevant product market comprises products using the licensed technology and interchangeable substitutes.<sup>102</sup>

Undertakings are considered to be *actual* competitors on the *relevant product market* if, in the absence of the agreement, they are active on the same relevant product and geographic market on which the contract products are sold without infringing each other's IPR. Companies are considered *potential* competitors on the product market that, in the absence of the agreement, they would likely have undertaken additional investment to enter the relevant market in response to a small but permanent increase in product prices.<sup>103</sup>

*Actual* competitors on the *relevant technology market* are those companies which license out competing technologies without infringing each other's IPR. Undertakings are considered *potential* competitors when they own substitutable technologies and, in the specific case, the licensee is not licensing its own technology, but would be likely to do so in response to a small but permanent increase in technology prices. For the purposes of applying the TTBER, this situation is not taken into account, i.e. the parties are considered non-competitors.<sup>104</sup>

A non-competitive relationship on the technology market exists when the parties' technologies block each other. According to the Guidelines, a one-way blocking situation exists where one technology cannot be exploited without infringing another, e.g. one patent covering an improvement of another patent. A two-way blocking situation occurs where neither of the technologies can be exploited without infringing the other.<sup>105</sup>

Although the licensor and licensee produce competing technologies, they are regarded as non-competitors on the relevant product- and technology market if the licensed technology constitutes such a drastic breakthrough that the licensee's technology becomes uncompetitive. This must be

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<sup>100</sup> *Ibid*, para. 27.

<sup>101</sup> Commission notice on the definition of the relevant market for the purposes of Community Competition law, OJ C372/5.

<sup>102</sup> TTBER, *supra* note 61, at art. 1(1)(j) (i) and (ii).

<sup>103</sup> Guidelines, *supra* note 96, at paras. 28-29.

<sup>104</sup> *Ibid*, para. 28.

<sup>105</sup> *Ibid*, para. 32.

established at the time of conclusion of the licensing agreement. Since such a breakthrough often becomes apparent after its commercial launch, the parties will be deemed competitors unless there is obvious proof that the breakthrough renders its competition obsolete.<sup>106</sup>

#### **4.4.3.3 Market-share threshold**

The TTBER exempts technology transfer agreements through the use of market share thresholds, thus creating a ‘safe harbor’ for agreements falling below the thresholds. Outside the safe harbor, individual assessment is required.<sup>107</sup> According to art. 3(1), agreements between competing undertakings will be exempted under art. 2, provided that the *combined* market share does not exceed 20% on the relevant product and technology market. Conversely, art. 3(2) stipulates a 30% limit for *each* of non-competing undertakings on both the relevant product-, and technology market.

The calculation of the licensor’s market-shares on the technology market is based on the sales of the licensor and all its licensees of products, which incorporate the licensed technology, separately for each relevant market.<sup>108</sup> If the technology is new and has yet to generate sales, a zero share is assigned to the technology.<sup>109</sup>

According to art. 8(1) of the TTBER, market shares are to be calculated on the basis of market sales value data and, in the absence of such data, other reliable market information. In addition, market-shares are to be calculated based on data relating to the preceding calendar year. It is not uncommon that market-shares change, especially in industries characterized by a high rate of innovation and economic growth. Accordingly, art. 8(2) provides for an extended period of exemption of two calendar years should the market share rise above the threshold in art. 3(1) or (2) subsequent to the conclusion of the agreement.

## **4.5 Technology licensing under U.S. antitrust law**

### **4.5.1 Federal antitrust statutes**

As opposed to the EC competition system, there is no legally adopted instrument for assessing the effects of technology licensing agreements on competition. Accordingly, the federal antitrust legislation, its interpretation

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<sup>106</sup> *Ibid*, para. 33.

<sup>107</sup> Guidelines, *supra* note 96, at para. 65.

<sup>108</sup> TTBER, *supra* note 61, at art. 3(3).

<sup>109</sup> Guidelines, *supra* note 96, at para. 70.

by the courts, and comments by the federal antitrust enforcement, provide the basic regulatory framework.<sup>110</sup>

The federal antitrust legislation includes section 1 of the Sherman Act, according to which “Every contract, combination in the form of trust, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations, is declared to be illegal.”<sup>111</sup> Section 2 stipulates “Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty of a felony,(...)”.<sup>112</sup>

Section 7 of the Clayton Act prohibits persons engaged in commerce to acquire stock, share capital, or assets of another person engaged in commerce, where the effects of such an acquisition may substantially lessen competition.<sup>113</sup>

In interpreting section 1 of the Sherman Act, the Supreme Court has held that while the prohibition is all encompassing, it only precludes contracts with an unreasonable effect on competition.<sup>114</sup> However, certain agreements, which due to their detrimental effects on competition, are deemed to be unreasonable and therefore prohibited, without the need for further investigation into the precise harm caused by these restraints. This is the principle of *per se* unreasonableness.<sup>115</sup> By contrast, the large majority of agreements are ruled under a *rule of reason* approach, where all the circumstances are weighed in order to determine whether a restrictive practice imposes an unreasonable restraint on competition.<sup>116</sup> Licensing agreements, though not specifically mentioned in section 1 of the Sherman Act, may constitute a contract in restraint of U.S. commerce.<sup>117</sup>

## 4.5.2 Early antitrust policy on licensing agreements

During the first decades of the twentieth century, the U.S. courts granted leeway to the patentee’s exercise of their patent rights, reasoning that the right to exclude others from exploiting the patented technology did not violate antitrust considerations, provided that the exploitation fell within the field covered by the patent.<sup>118</sup>

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<sup>110</sup> Feil, “The New Block Exemption Regulation on Technology Transfer Agreements in the Light of the U.S. Antitrust Regime on the Licensing of Intellectual Property”, p. 37.

<sup>111</sup> 15 U.S.C., § 1.

<sup>112</sup> 15 U.S.C., § 2.

<sup>113</sup> 15 U.S.C., § 18.

<sup>114</sup> *Chicago Board of Trade v. United States*, 246 U.S. 231, 238 (1918).

<sup>115</sup> *Northern Pacific Railway Company v. United States*, 356 U.S. 1, 4 (1958).

<sup>116</sup> *Continental v. GTE Sylvania Inc.*, 433 U.S. 36, 49 (1977).

<sup>117</sup> Gutterman, *supra* note 2, at p. 72.

<sup>118</sup> *United States v. United States Shoe Manufacturing Co. of New Jersey*, 247 U.S. 32, 57 (1918). See also *United States v. General Electric*, 72 U.S. 476, 489-490 (1926), where the Supreme Court commented favorably on restrictions imposed by the patent holder intended

This approach subsequently gave way to the conception that the exploitation of patents was limited by antitrust considerations. Accordingly, should the licensing restraint go beyond the proper scope of the patent, antitrust analysis would be applied. The ‘scope of the patent’-evaluation was often influenced by the ‘exhaustion of monopoly doctrine’, according to which the patent holder receives consideration through the sale of the patented goods and, by doing so, parts with the right to restrict its further use.<sup>119</sup>

Another theory specifically tailored to address antitrust concerns in licensing agreements was the ‘patent misuse doctrine’, which limited the patent holder’s attempts to gain commercial benefits through activities with negative effects on competition, such as tying arrangements.<sup>120</sup>

### 4.5.3 Policy of federal antitrust enforcement agencies

Federal antitrust enforcement agencies, notably the DOJ and the FTC, play an important role in shaping U.S. antitrust policy on technology licensing. This is mainly because companies tend to conform to policy guidelines in order to avoid costs of challenges and litigation, but also because of the guidance the policy offers to courts in their evaluation of IPR and antitrust issues.<sup>121</sup>

One of the most important recent publications by the DOJ and FTC is the Antitrust Guidelines for the Licensing of Intellectual Property, issued in 1995.<sup>122</sup> The basic premise is that intellectual property law and antitrust law share the same objective of promoting innovation and consumer welfare.

The I.P.Guidelines identify three general principles, which influence the analysis of technology transfer agreements. Firstly, IPR is regarded as essentially comparable to any other form of property. Although IPR are recognized to possess characteristics distinct from other types of property, such differences can be taken into account in traditional antitrust analysis.<sup>123</sup> Secondly, there is no presumption that IPR creates market power. If an IPR does confer market power through, *e.g.* superior product development and business organization, this will raise no antitrust concerns, provided that the acquired power is not obtained illegally.<sup>124</sup> The third principle recognizes

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to guarantee profit returns on the patent as a legitimate exercise of the patent holder’s monopoly. This included controlling the resale price of the patented goods.

<sup>119</sup> *Adams v. Burke*, 84 U.S. 453 (1873). The doctrine was applied by the Supreme Court in *United States v. Unis Lens Co.*, 316 U.S. 241, 250 (1942).

<sup>120</sup> See *e.g. Morton Salt Co. v. G.S. Suppiger Co.*, 314 U.S. 488, 491 (1942).

<sup>121</sup> Gutterman, *supra* note 2, at p. 74.

<sup>122</sup> Antitrust Guidelines for the Licensing of Intellectual Property, Issued by the U.S. Department of Justice and the Federal Trade Commission, April 6, 1995, available at: <http://www.usdoj.gov/atr/public/guidelines/0558.pdf> (last visited on 04.09.06) (Hereinafter cited as “I.P.Guidelines”).

<sup>123</sup> *Ibid.*, § 2.1.

<sup>124</sup> *Ibid.*, § 2.2.

the pro-competitive effects of technology licensing, specifically the integration of complementary resources. This will often serve to increase the expected returns from the IPR. Consequently, licensing is recognized as a catalyst for investment in R&D.<sup>125</sup>

In analyzing the competitive effects of a licensing agreement, the DOJ and FTC define three markets, which might be negatively affected. The *goods markets* are the markets for final or intermediate goods manufactured with the licensed technology (downstream market), and markets where goods are used as inputs together with the licensed technology for the production of other goods (upstream market).<sup>126</sup>

The *technology markets* consist of the licensed technology and its close substitutes, *i.e.* goods or technologies that can sufficiently constrain the market power exerted by the licensed technology.<sup>127</sup>

The third market definition is *innovation markets*, and is delineated in order to analyze competitive restraints in licensing agreements, which discourage competition to develop new or improved products. An innovation market is delineated by R&D efforts directed towards new or improved products or processes, along with substitutable R&D efforts that can be linked to assets of specific companies. In assessing the present and potential competitors in an innovation market, market share data will be utilized, or in the absence of such information, the perceived competitiveness of the participants' innovative potential.<sup>128</sup>

The distinction between horizontal and vertical licensing agreements is clearly recognized in the I.P.Guidelines, which perceives the former to be of much greater concern than the latter.<sup>129</sup> A licensing agreement is deemed vertical if it is complementary in nature. If the contracting parties would be actual or potential competitors in the absence of the licensing agreement, the relationship is deemed to be horizontal. This reasoning implies direct competitors may be considered to be in a vertical relationship should the licensed technology be 'far superior' to the competitor's technology, and it is unlikely that any substitutes will be developed by the competitor that will not infringe the licensed IPR.<sup>130</sup>

Defining the market positions of the parties to an intellectual property license is critical in antitrust analysis, in order to ascertain the impact of a competitive restraint. The I.P.Guidelines utilizes a 'safety zone' to provide legal certainty and to promote licensing. It provides that a restraint in an intellectual property licensing agreement will not be challenged by the DOJ or the FTC, unless under extraordinary circumstances, if (1) the restraint is

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<sup>125</sup> *Ibid.*, § 2.3.

<sup>126</sup> *Ibid.*, § 3.2.1.

<sup>127</sup> *Ibid.*, § 3.2.2.

<sup>128</sup> *Ibid.*, § 3.2.3.

<sup>129</sup> *Ibid.*, § 3.1.

<sup>130</sup> *Ibid.*, § 3.3, Example 5.

not subject to *per se* treatment or otherwise almost always reduces output or increase prices, and (2) the licensor and the licensee(s) collectively do not account for more than 20% of each relevant market significantly affected.

Should an analysis of the goods market itself prove insufficient to address the effects on competition in technologies. In this respect, a restraint will not be challenged if there are four or more independently controlled competing technologies in addition to the technologies controlled by the contracting parties. In terms of competitive effects on R&D, four or more independently controlled entities which possess the necessary assets to engage in R&D that is considered a close substitute to the R&D of the contracting parties.<sup>131</sup>

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<sup>131</sup> *Ibid*, § 4.3.

# 5 Competitive evaluation of grant-back obligations

## 5.1 Scope

As noted above, a grant-back obligation is an arrangement through which the licensee grants a license for the use of its improvements on the licensor's technology. It can thus be characterized as a build-on license, where the roles are reversed, *i.e.* the original licensee becomes the licensor and vice versa.

Grant-back obligations vary in scope. They can stipulate an obligation on the licensee to grant-back an exclusive license for an improvement (exclusive grant-back), or a non-exclusive license, under which the licensee retains the right to use or license out the improvement (non-exclusive grant-back). In addition, a grant-back obligation can be reciprocal in nature, *i.e.* whereby the licensor is also required to grant a license to its own improvements to the licensee, or non-reciprocal, in which case no such obligation rests on the licensor.<sup>132</sup> A grant-back clause is also defined by the nature of the improvement to which it relates, in particular whether the improvement is severable from the licensor's original technology or not.<sup>133</sup>

## 5.2 Restrictive and beneficial effects on competition

The potentially wide functional and contractual scope of a grant-back obligation creates an additional licensing agreement with distinct effects on competition law.

Grant-back obligations have the potential of restricting competition by reducing the licensee's incentive to improve the licensed technology, especially so in the case of an exclusive and/or non-reciprocal grant-back or the grant-back of severable improvements, since the licensee is precluded from exploiting the benefits of its innovative activities.<sup>134</sup> Such a consequence will not only be detrimental to the diffusion of technology, but will also insulate the licensor's original technology from competition by the improved technology, thus restricting inter-technology competition.<sup>135</sup> The

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<sup>132</sup> Guidelines, *supra* note 96, at para. 109.

<sup>133</sup> See TTBER, *supra* note 61, at art.1(1)(n), Guidelines, *supra* note 96, at para. 109, according to which a 'severable improvement' is an improvement that can be exploited without infringing the licensed technology.

<sup>134</sup> Evaluation Report, *supra* note 92, at para. 166, Guidelines, *supra* note 96, at para. 109.

<sup>135</sup> Guidelines, *supra* note 96, at para. 11, where 'inter-technology competition' is defined as competition between undertakings using competing technologies.

negative effects of grant-back obligations on the incentive to innovate are particularly noteworthy in cross-licensing agreements between competitors. The mutual sharing of improvements may prevent any competitor from gaining a competitive advantage over the other.<sup>136</sup>

Conversely, there are characteristics of grant-back obligations, which are clearly beneficial to a competitive environment. For instance, including a grant-back obligation in a licensing agreement might induce a licensor to enter into an agreement, which the licensor might have otherwise rejected. Under such circumstances, a grant-back may thus actually increase the diffusion of technology and introduce new competitors on the market.<sup>137</sup>

## 5.3 Regulation under EC competition law

### 5.3.1 Commission decisions

The EC competition policy towards grant-back obligations was developed by a range of Commission decisions from the 1970's. In *Raymond/Nagoya*, the Commission ruled on an obligation on Nagoya, the licensee, to grant future rights to Raymond, the licensor. In its unaltered version, the agreement stipulated the assignment of any improvements in the licensed technology made by Nagoya to Raymond. After consulting the Commission, the obligation was modified to incorporate the grant of a non-exclusive license regarding any patents awarded to Nagoya for any improvements in the licensed technology.<sup>138</sup>

In *Davidson Rubber Company*, the licensees were obliged to license, on a non-exclusive basis, any patented improvements to the licensed process to the licensor, Davidson. The Commission found that this non-exclusive grant-back obligation did not fall within art. 81(1) EC, partly due to the non-exclusivity, and also due to a stipulation that Davidson was obliged to communicate new technical information to all its licensees.<sup>139</sup>

Another example of grant-back analysis is provided by the Commission in *Kabelmetal/Luchaire*. Here, the exclusive licensee Luchaire, a French Company, was under an obligation to grant-back a non-exclusive license for any improvements to Kabelmetal, the German licensor. However, Luchaire was obliged to license other exclusive licensees of Kabelmetal. Although such an arrangement would deprive Luchaire of its incentive to improve the

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<sup>136</sup> *Ibid*, para. 111.

<sup>137</sup> See e.g. Draft Commission regulation on the application of Article 81(3) of the EC Treaty to categories of technology transfer agreements, OJ C235/10 (Hereinafter cited as "Draft TTBER"), Comments by the American Intellectual Property Law Association, available at: [http://europa.eu.int/comm/competition/antitrust/technology\\_transfer\\_2/9\\_aipl\\_en.pdf](http://europa.eu.int/comm/competition/antitrust/technology_transfer_2/9_aipl_en.pdf), and the American Bar Association, available at: [http://europa.eu.int/comm/competition/antitrust/technology\\_transfer\\_2/15\\_aba\\_part2\\_en.pdf](http://europa.eu.int/comm/competition/antitrust/technology_transfer_2/15_aba_part2_en.pdf)

<sup>138</sup> 72/238/EEC, *Raymond/Nagoya*, OJ L143/39.

<sup>139</sup> 72/237/EEC, *Davidson Rubber Company*, OJ L/143/31.

licensed technology and a competitive advantage, it was noted that Luchaire was the only licensee in the European Community and that it was unlikely that other licensees would appear on the Common market during the term of the agreement.<sup>140</sup>

The Commission has also analyzed a grant-back obligation within a specialization scheme. Between 1969 and 1975, a series of agreements were concluded between two pharmaceutical companies; Bayer AG and Gist-Brocades, for the reciprocal supply of penicillin and a penicillin derivative, allowing for specialization of production and, consequently, economic efficiencies.<sup>141</sup> The agreements provided for an obligation on both companies to cross-license any improvements of the manufacturing process. The Commission found that the agreements fell within art. 81(1) EC, including the reciprocal grant-back obligation, since they would serve to shelter the two companies from competition between themselves.

However, the agreements, in alternated form, were exempted under art. 81(3) EC. The obligation to reciprocally grant-back licenses for improvements in existing manufacturing processes and entirely new manufacturing processes was deemed an indispensable provision for the specialization scheme, since it would permit the most optimal and efficient use of the manufacturing capabilities. A specific reason for this finding was the non-exclusive nature of the grant-back obligation, *i.e.* the improvements could be licensed to others.

Accordingly, an agreement stipulating a reciprocal obligation to grant-back a non-exclusive license for improvements made in licensed technology was considered by the Commission to fall outside the scope of art. 81(1) EC. By contrast, an exclusive license or outright assignment of improvements would not escape the ambit of art. 81(1) EC and would further be ineligible for exemption under art. 81(3) EC.

### 5.3.2 Patent Licensing Regulation

This attitude was to a large extent reflected in the Patent Licensing Regulation of 1984, in which art. 81(1) EC was declared inapplicable to agreements containing "an obligation on the parties to communicate to one and other any experience gained in exploiting the licensed invention and to grant one another a license in respect of inventions relating to improvements and new applications, *provided that such communication or license is non-exclusive*;"<sup>142</sup> When such communications or licenses provided for the assignment of rights in or patents for improvements from the licensee to the licensor, the exemption would cease to apply.<sup>143</sup>

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<sup>140</sup> 75/494/EEC, *Kabel und Metallwerke Neumeyer AG/Etablissement Luchaire SA*, OJ L222/34.

<sup>141</sup> 76/172/EEC, *Bayer/Gist-Brocades*, OJ 1976 L30/13.

<sup>142</sup> Patent Licensing Regulation, *supra* note 89, at art. 2(1)(10), emphasis added.

<sup>143</sup> *Ibid*, recital (24) and art. 3(8).

### 5.3.3 Reg. 240/96

According to art. 2(1)(4) of Reg. 240/96, a grant-back obligation was exempted, by virtue of art. 1, from art. 81(1) EC on two conditions. Firstly, in the case of severable improvements, the grant-back license had to be non-exclusive and thus allow the licensee to freely use or license third parties. Secondly, the licensor also had to agree to grant a license to the licensee for any improvements in the licensed technology. Similar to the Patent Licensing Regulation, an obligation on the licensee to assign rights or patents relating to severable or non-severable improvements in the licensed technology would be black listed.<sup>144</sup> There were no specific provisions regarding grant-back obligations, which were exclusive and non-reciprocal in nature, meaning that such obligations were subject to the opposition procedure in art. 4. This also applied to grant-back obligations concerning non-severable improvements.

### 5.3.4 TTBER

As of May 1, 2004, art. 5, TTBER provides the framework for the evaluation of grant-back obligations under EC competition law. The article provides that the exemption provided for in art. 2 shall not apply to an obligation on the licensee to grant an exclusive license to the licensor in respect of its own severable improvements to or new applications of the licensed technology. In addition, the exemption does not apply to an obligation on the licensee to assign to the licensor rights to its own severable improvements to or new applications of the licensed technology.<sup>145</sup> This marks a substantive change from Reg. 240/96, where all assign-back obligations were blacklisted. When the assign-back obligation relates to non-severable improvements, the Commission is of the view that such an arrangement does not violate art. 81(1) EC. Also, grant-back obligations for non-severable improvements are block exempted, regardless of whether they are exclusive or non-exclusive.<sup>146</sup> A final distinguishable feature from Reg. 240/96 is the fact that the TTBER exempts non-reciprocal grant-backs.

The excluded grant-back and assign-back obligations in art. 5 are potentially severable, meaning that should a licensing agreement contain such a restriction, which is deemed severable, only the restriction falls outside the scope of the TTBER, and thus made subject of individual assessment regarding its pro-, and anti-competitive effects.<sup>147</sup>

It is important to emphasize that the grant-back obligations included under art. 5, TTBER are not subject to automatic severability from the agreements in which they appear. Paragraph 107 of the Guidelines states that the rule of

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<sup>144</sup> Reg. 240/96, *supra* note 91, at art. 3(6). Although such an obligation could only be exempted by individual decision, its restrictive effects on competition was clearly recognized, see recitals (19) and (20).

<sup>145</sup> TTBER, *supra* note 61, at art. 5(1)(a) and (b),

<sup>146</sup> Guidelines, *supra* note 96, at para. 109.

<sup>147</sup> TTBER, *supra* note 61, at recital (14), see also Guidelines, *supra* note 96, at para. 107.

severability applies to the restrictions in art. 5, TTBER. The ECJ has concluded that severability of a clause in a licensing agreement, which infringes art. 81(1) EC, depends on whether it is severable from the whole contract. This is determined by the national court in accordance with national law.<sup>148</sup>

### **5.3.5 Individual assessment outside the scope of of the TTBER**

Concerning the individual assessment of exclusive grant-back obligations which fall outside the scope of the TTBER, the Commission states that the market position of the licensor on the relevant technology market and the market position of the licensor's technology will influence anti-competitive effects on the innovation market. The stronger the position of the licensor, or the licensor's technology, the more likely it is that the licensee's incentive to improve will be reduced, since the licensee's improvements will constitute an important source of innovation and future competition.<sup>149</sup>

Article 5 (1)(a) and (b) are explicitly designed to counteract agreements which reduce the incentives of licensees to innovate.<sup>150</sup> However, the Commission recognizes the existence of off-setting circumstances, which might lessen or even neutralize the competitive concerns caused by grant-back obligations on the licensee's incentive to improve the licensed technology. For instance, the licensor may offer economic considerations or accept a lower royalty rate in return for access to the licensee's improvements.<sup>151</sup> While not affecting the application of the TTBER, these off-setting effects may be relevant in an individual analysis under art. 81EC.

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<sup>148</sup> Fine, *The EC Competition Law on Technology Licensing*, p. 77, with reference to Case 319/82, *Société de Vente de Ciments et Bétons de l'Est SA v. Kerpen & Kerpen GmbH und Co. KG* [1983] ECR 4173, paras 11-12.

<sup>149</sup> Guidelines, *supra* note 96, at para. 110.

<sup>150</sup> *Ibid*, para. 108.

<sup>151</sup> *Ibid*, para. 110. See also Choi, "A Dynamic Analysis of Licensing: The "Boomerang" Effect and Grant-Back Clauses, p. 823, who argues that a reduction of the royalty rate constitutes a channel through which a grant-back clause can enhance efficiency. In addition, grant back clauses can promote efficient investment if there is excessive competition in the innovation market.

## 5.4 Specific issues of grant-back evaluation under the TTBER

### 5.4.1 Grant-back obligations and changes in the competitive relationship

Unlike the TTBER, Reg. 240/96 neither distinguished between competitors and non-competitors in licensing agreements nor provided for an approach to licensing between competitors.<sup>152</sup>

Since licensing agreements provide for the transfer of technology, the relationship between the contracting parties may change from vertical to horizontal, making the parties competitors instead of non-competitors. Article 4(3) of the TTBER provides that if the licensor and the licensee were not competing undertakings at the time of the conclusion of the contracting agreement but become competitors afterwards, shall be considered non-competitors for the duration of the agreement. Although art. 5 applies to horizontal and vertical relationships alike, the question that follows is whether grant-back obligations have different effects on competition depending on the competitive relationship between the licensor and the licensee. It has been noted that should the relationship develop into a horizontal one, a non-reciprocal grant-back, by eliminating the licensee's incentive to innovate, may have more serious adverse effects on competition.<sup>153</sup>

### 5.4.2 Severable and non-severable improvements

According to art. 5(1)(a), grant-backs to non-severable improvements, whether exclusive or non-exclusive in scope, are block exempted. Similarly, art. 5(1)(b) provides the same result in terms of non-severable assign-back obligations. The rationale is that that non-severable improvements cannot be exploited by the licensee without the licensor's consent.<sup>154</sup>

This form of regulation has specific implications regarding exclusive grant-back obligations concerning non-severable improvements, which are exempted under the TTBER and characterized as non-restrictive of competition. Since the rationale behind exemption of exclusive grant-backs to non-severable improvements presupposes that the licensor has a proprietary interest in the original licensed technology, which cannot be

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<sup>152</sup> Evaluation report, *supra* note 92, at para. 42.

<sup>153</sup> Ørstavik, "Technology Transfer Agreements: Grant-Backs and No-Challenge Clauses in the New EC Technology Transfer Regulation", p. 95. According to the Commission, the negative effects of grant-back obligations on innovation are more apparent in a horizontal relationship, since the reciprocal sharing of improvements between competitors may prevent either competitor from gaining a competitive advantage over the other, Guidelines, *supra* note 96, at para. 111.

<sup>154</sup> See note 133 above.

exploited by the licensee without the consent of the licensor, problems arise when the grant-back obligation exceeds the period of protection of the licensed technology. This would permit the licensor of the original technology to control the use of an improvement after the protection of original technology has expired. In such a case, the licensee would be deprived of exploiting the independent market value of its new improvement.<sup>155</sup> This had led to calls for abandoning the distinction between severable and non-severable improvements, which would exclude exclusive grant-back from exemption.<sup>156</sup> Another approach would be to limit grant-back obligations for non-severable improvements to the period of protection for the underlying technology. This approach has been adopted by the Commission in terms of severable improvements. In *Delta Chemie/DDD*, the Commission required the parties to modify a know-how agreement to prevent the licensor from exploiting the licensee's improvements after the expiry of the original technology.<sup>157</sup>

It has also been argued that distinguishing between severable and non-severable improvements is impractical in a newly reformed technology transfer licensing regime, which focuses on the effects of restrictions in licensing agreements, rather than allowing or prohibiting clauses based on the exclusivity of the IPR at hand. The distinction thus relates to whether a improved technology is substantial compared the existing technology and fails to acknowledge the improved technology's impact on competition. Such an impact can consist of the creation of a new market, where the improved technology is considered the 'new technology' or incorporated into the 'new' product, which encourages the diffusion of technology.<sup>158</sup>

In this regard, the argument made is that the current system for evaluating grant-back obligations does not consider the improvement's effect on market conditions by protecting all severable improvements from block exemption, irrespective of their market value. Meanwhile, grant-back obligations concerning non-severable improvements are block exempted, which would deprive the improver of potential market value if the obligation is exclusive. An alternative approach, which would encompass these considerations, would be to grant protection for 'new' products, *i.e.* improvements in licensed technology with a pro-competitive market impact.<sup>159</sup>

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<sup>155</sup> Draft TTBER, *supra* note 137, Comments by the Max Planck Institute, available at: [http://europa.eu.int/comm/competition/antitrust/technology\\_transfer\\_2/max\\_planck\\_en.pdf](http://europa.eu.int/comm/competition/antitrust/technology_transfer_2/max_planck_en.pdf)

<sup>156</sup> *Ibid.*

<sup>157</sup> 88/563/EEC, *Delta Chemie/DDD*, OJ L309/34. See also Keeling, *Intellectual Property Rights in EU Law. Volume 1. Free Movement and Competition Law*, p. 342, who argues that, in respect of severable improvements, the licensee should not have to let the licensor continue to use the improvement after the expiry of the original technology.

<sup>158</sup> Ørstavik, *supra* note 153, at p. 97.

<sup>159</sup> *Ibid.*, p. 98.

### 5.4.3 Network effects of grant-back obligations

A grant-back obligation may stipulate the right for the licensor to pass along an improvement made by a licensee to the other licensees in a network of licensing agreements.

Such a ‘feed-on’ arrangement clearly presents pro-competitive benefits. It provides for the diffusion of technology while strengthening the coherency of the licensing network, since all licensees will be on equal footing in terms of the technology used. This will also strengthen the competitiveness of the network and promote inter-technology competition with other networks.<sup>160</sup>

## 5.5 U.S. Antitrust regulation of grant-back obligations

The validity of grant-back obligations was first addressed by the Supreme Court in the case *Transparent-Wrap Machine Corporation v. Stokes & Smith Co.*<sup>161</sup> The Transwrap Corporation held a number of patents which were exclusively licensed to Stokes & Smith, on condition that the licensee assigned back the rights to patents for any improvements made to the licensed technology. The Supreme Court assessed the grant-back obligation under two legal theories.

The first one related to the conclusion reached by the Court of Appeals of the Second Circuit through an analogy with tie-in obligations. The argument was that a grant-back obligation violated the policy underlying the federal patents law by enabling the patentee to extend the scope of the lawful patent monopoly to cover improvements after the expiry of the original patent.<sup>162</sup> This reasoning implied a *per se* restriction on assign-back obligations. However, it indicated a favorable view of license-back obligations. No monopoly power could be exerted by the licensor after the expiry of the original patent, since the grant-back obligation conferred no transfer of ownership.<sup>163</sup>

The Supreme Court noted that Congress had explicitly sanctioned the assignment of patents without making any limitations. The Court continued by rejecting the tie-in analogy, stating that a patent for an improvement is a legalized monopoly, just like the basic patent, which can be bought and sold. Consequently, using one patent to acquire another did not amount to unlawful extension patent monopoly.<sup>164</sup>

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<sup>160</sup> Guidelines, *supra* note 96, at para. 109.

<sup>161</sup> *Transparent-Wrap Machine Corporation v. Stokes & Smith Co.*, 156 F.2d 198 (1946), *rev'd* 329 U.S. 637 (1947), 638-639.

<sup>162</sup> See 156 F.2d 198 (1946), 202-203.

<sup>163</sup> Schmalbeck, “The Validity of Grant-Back Clauses in Patent Licensing Agreements”, p. 737.

<sup>164</sup> 329 U.S. 637, 643-644.

The second theory concerned the compatibility of grant-back obligations with anti-trust law. In this regard, the Court addressed the potential negative impact on the incentive to innovate through limited analysis, holding that the potential impairment was “too conjectural(...)to appraise.”<sup>165</sup> However, the Court made it clear that grant-back obligations did not enjoy any immunity from anti-trust evaluation; in the case of grant-back provisions, they are not prohibited *per se*.<sup>166</sup>

The judgment established a rule of reason approach in analyzing the effects of grant-back obligations on anti-trust law. As note in chapter 4.3.3 above, American courts and policy makers in the 1970’s were concerned with the potential anti-competitive effects of licensing agreements, including grant-back obligations, without sufficiently considering economic benefits. This is exemplified by the Nine No No’s, which became the unofficial policy of the Antitrust Division of the U.S. Department of Justice. When reaching the courts, licensing restrictions, including grant-back obligations, were litigated under a rule of reason approach. Accordingly, the pro-, and anti-competitive effects were weighed against each other.<sup>167</sup>

This approach is now the official policy of the U.S. federal antitrust enforcement agencies. According to § 5.6 of the I.P.Guidelines, the agencies will analyze grant-back obligations under a rule of reason approach, which implies looking to its effects on the relevant markets.

In evaluating the effects of a grant-back obligation, the I.P.Guidelines makes an important distinction between exclusive versus non-exclusive grant-backs. The former is more likely to have anti-competitive effects, whereas the latter is almost always deemed pro-competitive. Should the agencies find that a grant-back obligation is likely to significantly reduce the licensee’s incentive to improve on the licensed technology, any pro-competitive effects will be considered, such as increasing the incentives of the licensor to disseminate the licensed technology and the licensor’s incentive to innovate in the first place.<sup>168</sup>

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<sup>165</sup> *Ibid*, 646.

<sup>166</sup> *Ibid*, 647.

<sup>167</sup> See Gilbert, et al.,”Antitrust Issues in the Licensing of Intellectual Property: The Nine No No’s Meet the Nineties”, pp. 6-7.

<sup>168</sup> I.P.Guidelines, *supra* note 122, at § 5.6.

# 6 Analysis

## 6.1 The importance of patent protection for innovation

As illustrated above, patent protection awards the patentee the prospect of earning sufficient returns for investments in R&D by granting him the right to exclude others from exploiting the invention. Indeed, stimulating and encouraging expenditure in R&D activities in order to promote innovation is arguably the single most important rationale behind patent protection. Economic studies carried out during the 1970's and 80's have investigated the validity of this rationale in various industrial sectors. They conclude that the presence or absence of patent protection exerts little influence over how much capital is deemed economically viable to spend on R&D activities, with the exception of the chemical and pharmaceutical industries.

The reasons for the varying significance of patent protection between different sectors appear when market conditions are compared. Product development in the pharmaceutical industry is characterized by substantial R&D efforts and financial investments. The time period between initial R&D activities and commercialization of the final product often span for several years. In addition, there are no guarantees that substantial R&D efforts will result in a commercially successful product. Under such conditions, investments into R&D, product development, and commercialization would be extremely hazardous without a system, which offers the prospect of regaining those expenditures. Other industrial sectors with similar characteristics that were not included in the economic studies presented above, but which have become enormously important during the last decade, include *e.g.* computer software, tele-communications, and biotechnology.

In these industrial sectors, which are characterized by dynamic economic growth and a high rate of R&D, continuous innovation is essential to maintain market positions. This further implies that companies are required to invest in R&D and continuously innovate if they are to survive. Consequently, patent protection has been regarded as encouraging such innovation-based competition, where the incentive to innovate is based on the desire to remain competitive on the market.<sup>169</sup>

It thus appears that patent protection exerts significant influence in dynamic industries characterized by strong innovation-based competition, such as the pharmaceutical sector. The temporary right to exclude others from exploiting the protected technology thus provides the possibility of

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<sup>169</sup> See Pretnar, *supra* note 4, at pp. 894, 905, Gutterman, *supra* note 2, at p. 55.

recoupment of R&D expenditures on a scale that would not have been possible in the absence of such protection.

## **6.2 The transfer of exclusivity and its maintenance**

Having established the importance of the patent system for innovation, the practical issue of converting the benefits of such protection becomes highly relevant.

Licensing patented technology is, for the reasons set out above, often considered a preferable way of exploiting patented technology, since it provides for the integration of complementary resources. However, a contractual transfer of rights in the patented technology will be an efficient solution only to the extent it is accompanied by the same level of exclusivity that the licensor would have enjoyed in the case of individual exploitation of the protected technology. Only then can the licensor appropriate comparable returns through royalties for investments in R&D. Similarly, the exclusivity is crucial to the licensee's activities in developing the licensed technology.

Companies involved in innovation-based competition will naturally try to maintain a competitive edge by constantly developing their technologies. There is a real risk facing the licensor that improvements made in the licensed technology by the licensee will render the original licensed technology obsolete and uncompetitive. A grant-back obligation thus serves a legitimate purpose for the licensor, who will not risk the future integrity of his patented technology by entering into a license agreement.

However, grant-back obligations are contractual means to extend exclusivity in potential future improvements of the licensed technology. As such, they provide for exclusive market positions regarding improvements outside the scope of the protected technology. By providing for the transfer of a right for the licensor to use such improvements, grant-back obligation may have restrictive effects on competition.

## **6.3 Grant-back obligations affecting innovation**

The economic rationale behind patent protection, as well as its exploitation through licensing, is reflected in the policy underlying competition law on technology licensing. The creation and diffusion of technology through innovation and continuous development of licensed technology, which is made possible through patent protection, leads to more efficient allocation of resources, rationalized utilization of such resources, and stronger inter-technology competition on the market.

Innovation is a dynamic and continuous process, which occurs at various stages. The creative process that results in a patented invention can be characterized as ‘primary’ innovation. When the product of this innovative effort, the patented invention, is subsequently licensed out, the licensee will engage in various product development activities. Such activities may result in the development of improvements in the licensed technology, or ‘secondary’ innovation. Both these stages of innovation are desirable from a competition law perspective, and need to be fully encouraged to achieve the policy considerations outlined above.

Although grant-back obligations are contractual mechanisms that are intended to regulate the right of use to improvements stemming from secondary innovation, their regulation under competition law can potentially affect primary innovation incentives. A technology licensing regime, which provides for a restrictive approach in terms of permitted grant-back obligations may increase a licensee’s incentives to innovate by awarding the licensee the right to exploit his improvement. However, the promotion of secondary innovation might come to jeopardize the licensor’s incentive to license the technology in the first place, should he be unable to obtain sufficient access to improvements made possible through the licensed technology. If licensing constitutes the only reasonable economic exploitation of the patented invention, the negative effects on primary innovation become even more apparent.

## **6.4 Balancing competitive effects of grant-back obligations**

By interpreting the level of importance attributed to parameters in grant-back evaluation, it is possible to discern patterns regarding what policy considerations are prioritized in the competitive evaluation of grant-back obligations.

The reduction of incentives for licensees to improve the licensed technology is undoubtedly the most pertinent anti-competitive effect of grant-back obligations, and has come to dominate grant-back evaluation under EC competition law. This is clearly demonstrated through the early decisions of the Commission and the Patent Licensing Regulation, which only exempted non-exclusive and reciprocal grant-back obligations. Very little, if any, economic analysis was applied in discerning any counterbalancing effects on the affected markets.

With Reg. 240/96 came the distinction between severable and non-severable improvements, implying that an obligation to grant-back a severable improvement to the original licensor had to be non-exclusive and reciprocal in nature to be subject to automatic exemption. According to the preamble, reciprocity in the communication of improvements was generally considered not restrictive of competition, and any grant-back obligation not possessing this characteristic would, at the very least, be made subject to the opposition

procedure. Much of the criticism directed to the formalistic approach of Reg. 240/96 applied to its grant-back evaluation, which, in line with its predecessor, focused almost exclusively on the anti-competitive effects on innovation incentives.

Against this background, the approach towards grant-back evaluation introduced by the TTBER and its accompanying guidelines marks a radical change in the balancing of pro-, and anti-competitive effects of grant-back obligations. The current EC technology licensing regime does not only exempt grant-back obligations whose pro-competitive effects are now considered to outweigh its anti-competitive effects, such as non-exclusive grant-back obligations, irrespective of reciprocity. In addition, it provides for more flexible and comprehensive recognition of the multi-competitive effects of grant-back obligations.

## **6.5 Potential problems in grant-back evaluation under the TTBER**

As noted above, the distinction between severable and non-severable improvements in delineating which grant-back obligations are exempted presents two problems. Firstly, the exemption of exclusive grant-back obligations regarding non-severable improvements without any regard to the possibility that the grant-back obligation might outlast the period during which the original licensed technology is protected, causes clear anti-competitive concerns, since it affords the licensor exclusive control of improvements to publicly available technology.

Secondly, it has been convincingly argued by Ørstavik that the concept of severability relates to patent law, more specifically whether an improvement to an existing patent is substantial enough to be awarded patent protection. Since patent law only evaluates whether an improvement is substantial enough compared to an existing patent, and fails to address the economic impact of a new technology on the market, it has no bearing on the improvement's impact on competition.<sup>170</sup> These considerations strongly suggest that the distinction between severable and non-severable improvements should be removed, given its inability to evaluate the effects of an improvement on market conditions.

Other difficulties with the application of the TTBER go beyond grant-back obligations. Despite the fact that there is no presumption that licensing agreements that are excluded from the TTBER are inherently anti-competitive, the individual assessment, which the contracting parties are required to carry out, presents distinct problems. The recent reforms of the EC competition system regarding the evaluation of technology transfer agreements have resulted in a significantly less predictable legal environment. Reg. 1/2003 granted national courts the jurisdiction to enforce

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<sup>170</sup> Ørstavik, *supra* note 153, at p. 97.

art. 81(1) EC in full. This implied the elimination of the Commission's monopoly to grant exemptions under art. 81(3) EC, and forced European industry to determine itself whether their commercial activities would violate EC competition law.

In addition, the new TTBER is based on an economic approach, which utilizes market share thresholds in determining the competitive evaluation of licensing agreements. This constitutes a sharp contrast to the formalistic method of exempting certain categories of licensing restraints, which characterized Reg. 240/96. Now, the market power of the contracting parties, and consequently their ability to produce anti-competitive effects through their agreement, will determine whether their licensing agreement will be exempted or not. Contracting parties arguably face even greater analytical difficulties outside the protective sphere of the TTBER in determining whether the agreement is caught by art. 81(1) EC and, if so, if art. 81(3) EC applies.

There is a real risk that misapplication or outright ignorance of the conditions in the TTBER will discourage contracting parties from seeking compliance with the TTBER, thereby causing unchecked anti-competitive behavior. Another serious problem would occur if licensing parties would forego legally permitted and commercially profitable contractual solutions because of limited capabilities of engaging in sufficiently detailed analysis.<sup>171</sup>

## 6.6 Comparison with U.S. antitrust analysis

U.S. anti-trust regulation of competitive restraints in technology licensing agreements, including grant-back obligations, has consistently utilized economic reasoning in determining the competitive effects of licensing agreements. The vast majority of licensing restraints are evaluated under a *rule of reason*- approach where the pro-, and anti-competitive effects on market conditions are weighed against each other.

Regarding grant-back analysis, the I.P. Guidelines clearly recognize the pro-competitive nature of grant-back obligations in creating incentives for innovation and licensing of patented inventions.<sup>172</sup> In addition, a competitive innovation market, *i.e.* the presence of four or more independently controlled entities in addition to the licensing parties, which hold the capabilities and incentives to engage in R&D efforts of a substitutable nature, will preclude a challenge to a licensing restraint, save in exceptional circumstances.

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<sup>171</sup> Fine, *supra* note 148, at p. 82.

<sup>172</sup> The pro-competitive effects of grant-back obligations are also recognized in statements made by the American Intellectual Property Law Association and the American Bar Association and the American Bar Association in connection with the Draft TTBER, *supra* note 137.

The newly reformed EC competition regime on technology licensing has been attributed to having been brought closer to the U.S. antitrust perspective, both in terms of general competitive analysis of technology licensing agreements, but also in terms of individual licensing clauses. Nonetheless, there are still persisting differences in the overall structure of regulatory instruments on technology licensing, such as non-binding guidelines in the U.S. compared with a legally binding TTBER in the EC competition system.<sup>173</sup>

There is also reason to believe that, under the current policy framework, grant-back analysis in U.S. antitrust law and in EC competition law do place different emphasis on the importance of grant-back obligations in creating incentives for the licensor to license the technology and to innovate in the first place. Such pro-competitive parameters are clearly recognized in the I.P.Guidelines, but not mentioned in the Guidelines to the TTBER.

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<sup>173</sup> Feil, *supra* note 110, at p. 62.

## 7 Concluding remarks

Much of the legal discussion concerning the competitive effects of grant-back obligations has centered around their anti-competitive effects on innovation markets. Within the EC legal framework, grant-back obligations have historically been categorized as detrimental to the licensee's incentives to improve licensed technology.

This study has sought to illustrate the multifaceted character of grant-back obligations. While the established anti-competitive effect of grant-back obligation is not disputed, grant-back obligations should be recognized as contractual mechanisms, which not only negatively affects incentives to improve licensed technology, but also stimulate the initial invention of patented technology and its subsequent licensing. Consequently, the competitive analysis should include both parameters in order to discern the full extent of the effects created by grant-back obligations.

Does the regulation of grant-back obligations under EC competition law achieve the necessary balance between primary and secondary innovation? It is, of course, a notoriously difficult question to answer, especially given the recent adoption of the TTBER and the lack of interpretation of its provisions. The absence of any legal discourse in the Guidelines on the multi-competitive effects on grant-back obligations indicates that insufficient weight is attributed to pro-competitive effects of grant-back obligations. However, under the new EC technology transfer regime, companies are required to conduct their own competitive assessment of grant-back obligations falling outside the scope of the TTBER, and it is far from certain that the Community institutions would automatically dismiss an assessment under which the pro-competitive effects of grant-back obligations outweigh anti-competitive effects.

U.S. antitrust evaluation has exerted significant influence over technology transfer evaluation under EC competition law. A comparison between the two legal systems reveals a similar approach in licensing analysis. This development is clearly beneficial, as it reduces transaction costs and other uncertainties, thus promoting efficient licensing negotiations between companies located in the EU and the U.S. From a long-term perspective, the convergence of technology licensing evaluation will facilitate increased diffusion of technology between international jurisdictions.

# Supplement

## Article 5(1)(a)-(b), TTBER

### *Article 5*

#### **Excluded restrictions**

1. The exemption provided for in Article 2 shall not apply to any of the following obligations contained in technology transfer agreements:

- (a) any direct or indirect obligation on the licensee to grant an exclusive license to the licensor or to a third party designated by the licensor in respect of its own severable improvements to or its own new applications of the licensed technology;
- (b) any direct or indirect obligation on the licensee to assign, in whole or in part, to the licensor or to a third party designated by the licensor, rights to its own severable improvements to or its own new applications of the licensed technology

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