

Abuse Of Dominance By Patentees: A Pro-Innovation Perspective

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Antitrust issues (referred to interchangeably here as competition issues) are an increasingly important consideration for intellectual property (IP) owners. Such issues can arise in numerous transactions involving IP rights, including from refusals to license, exclusive licenses, royalty provisions, field of use restrictions, territorial and customer limitations, exclusive dealing, tying arrangements, restrictions affecting research and development, non-challenge provisions, cross-licenses, and patent pools, among other arrangements. Over the past three decades antitrust jurisprudence has evolved significantly in the United States, Europe, and the rest of the world. Central themes of this evolution are the application of economic analysis and greater reliance on case-by-case evaluations rather than inflexible per se rules of prohibition.

Patent and other IP laws provide incentives for innovation and its dissemination and commercialization by establishing enforceable property rights for the creators of new and useful products, more efficient processes, and original works of expression. Antitrust laws promote innovation and consumer welfare by prohibiting certain actions that may harm competition with respect to either existing or new consumer goods and services.

It is well recognized today that patent licensing is an efficient way to disseminate technology and to provide greater incentives for innovation (often enabling follow-on patents and technological improvements), while also allowing for specialization in manufacture (mass production) and distribution. Accordingly, modern antitrust assessment of patent licensing restrictions generally takes into account these procompetitive efficiency-enhancing features when assessing particular restrictions, weighing them on a case-by-case basis against their anticompetitive potential. This was not always the case. Indeed, prior to the 1980s, United States antitrust enforcers viewed restrictions in licensing agreements as inherently suspect under the antitrust law. The Department of Justice's decision in the early 1980s to rescind the statement on the "Nine No-Nos" of licensing reflected the infusion of new economic thinking (particularly Chicago School and transaction cost economics) into U.S. antitrust enforcement.¹ Although other major jurisdictions did not follow suit at first, the rigid antitrust formalism that had restricted IP licensing eventually led to a change of view first in the United States, then around the world.

In this article I comment on the evolution of U.S. competition law and its treatment of alleged exclusionary conduct by patentees in light of contemporary law and economics. I conclude that an appropriate policy, directed toward promoting competition and consumer welfare, should not attack business arrangements by patent owners that merely seek to maximize returns within the

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¹ See generally Timothy J. Muris, Chairman, Fed. Trade Comm'n, Improving the Economic Foundations of Competition Policy, Remarks Before George Mason University Law Review's Winter Antitrust Symposium (Jan. 15, 2003), available at <http://www.ftc.gov/public-statements/2003/01/improving-economic-foundations-competition-policy>.

legitimate scope of the patent right. Rather, antitrust should challenge only actions that threaten to reduce competition among competing technologies or to artificially inflate the value of a particular technology. This approach comports with recent academic research that underscores the economic benefits of a strong patent system.

Antitrust-IP Principles In The United States

Antitrust Treatment of Intellectual Property: Early Historical Development. Since the enactment of the Sherman Antitrust Act² in 1890, the legal treatment of licensing practices based on patent rights has oscillated between absolute freedom in licensing and significant limitations.³ In the early 1900s the patent laws were considered to give “absolute freedom in the use or sale of rights.”⁴ However, in the ensuing decades, the courts recognized limitations on the extent of a patent owner’s rights in licensing. In *United States v. Line Material Co.*, the U.S. Supreme Court emphasized that inventors must stay within their statutory exclusive rights. The Court pointed out that “[a]s long as the inventors kept within their statutory exclusive rights, they were not engaging in unreasonable restraints of trade violating the Sherman Act.”⁵ The Court adopted a narrow interpretation of patent law rights in favor of the antitrust laws, noting in *Sears, Roebuck & Co. v. Stiffel Co.*, that “[o]nce the patent issues, it is strictly construed[.] [I]t cannot be used to secure any monopoly beyond that contained in the patent, the patentee’s control over the product when it leaves his hands is sharply limited, and the patent monopoly may not be used in disregard of the antitrust laws.”⁶

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The Court’s jurisprudence defined certain types of conduct to be per se violations of the antitrust laws. In *Mercoird Corp. v. Mid-Continent Investment Co.*, the Court held that tying arrangements involving patents always constituted antitrust violations. The Court stated:

When the patentee ties something else to his invention, he acts only by virtue of his right as the owner of property to make contracts concerning it and not otherwise. He then is subject to all the limitations upon that right which the general law imposes upon such contracts. The contract is not saved by anything in the patent laws because it relates to the invention.⁷

In *United States v. Arnold, Schwinn & Co.* the Court held that vertical territorial restrictions were per se unlawful.⁸

The Nine No-Nos. In the 1970s, the Antitrust Division of the Department of Justice went beyond existing case law and delineated nine sorts of patent licensing restrictions that it would challenge, without regard to their potential efficiencies: the “Nine No-Nos” of licensing. The “Nine No-Nos” were a list of licensing practices that the Antitrust Division of the Department of Justice stated it would treat as facially anticompetitive.⁹ They are:

² 15 U.S.C. §§ 1–7.

³ Herbert J. Hovenkamp, *Antitrust and the Patent System: A Reexamination* 1–4 (U Iowa Legal Stud. Res. Paper No. 14-27, Sept. 2014), available at <http://ssrn.com/abstract=2486633>.

⁴ *Bement v. Nat’l Harrow Co.*, 186 U.S. 70, 92 (1902).

⁵ *United States v. Line Material Co.*, 333 U.S. 287, 341 (1948).

⁶ 376 U.S. 225, 230 (1964) (internal citations omitted). As I note subsequently, the Supreme Court later rejected the view that a patent is necessarily associated with monopoly power in *Illinois Toolworks Inc. v. Independent Ink, Inc.*, 547 U.S. 28, 46 (2007).

⁷ 320 U.S. 661, 666 (1944).

⁸ 388 U.S. 365, 379 (1967).

⁹ Abbott B. Lipsky, Jr., *Current Antitrust Division Views on Patent Licensing Practices*, 50 ANTITRUST L.J. 515, 517–24 (1982).

- (1) Royalties not reasonably related to sales of the patented products;
- (2) Restraints on licensees' commerce outside the scope of the patent (tie-outs);
- (3) Requiring the licensee to purchase unpatented materials from the licensor (tie ins);
- (4) Mandatory package licensing;
- (5) Requiring the licensee to assign to the patentee patents that may be issued to the licensee after the licensing arrangement is executed (exclusive grantbacks);
- (6) Licensee veto power over grants of further licenses;
- (7) Restraints on sales of unpatented products made with a patented process;
- (8) Post-sale restraints on resale; and
- (9) Setting minimum prices on resale of the patented products.

In actual practice, only a few of the IP-related cases filed by the Antitrust Division addressed any of these nine practices, and most of those cases were litigated under the rule of reason rather than a per se standard.¹⁰ Nevertheless, the existence of such a highly publicized list undoubtedly discouraged potentially efficient, welfare-increasing patent licensing transactions.

The 1980s—The Pendulum Swings Toward a Rule of Reason Approach. Beginning in 1981, under the Reagan Administration, U.S. antitrust authorities changed course and took the position that patents are fully legitimate property rights and that patent licensing restraints may enhance efficiency. In so doing, they rejected the Nine No-Nos¹¹ and broad presumptions of illegality concerning licensing. Specifically, the joint U.S. Department of Justice and Federal Trade Commission Antitrust Enforcement Guidelines for International Operations (issued in 1988 and slightly revised in 1995)¹² adopted a rule-of-reason approach to patent licensing that allowed for a balancing of the procompetitive effects of licensing against possible anticompetitive effects in related markets.

The Guidelines' rule-of-reason framework set out a three-part test: (1) What harm to competition results or may result from the collaborators' activities? (2) What is the objective they are trying to achieve and is it a legitimate and significant one? That is, what are the nature and magnitude of the "redeeming virtues" of the challenged collaboration? (3) Are there other and better ways by which the collaborators can achieve their legitimate objectives with less harm to competition? That is, are there "less restrictive alternatives" to the challenged restraint? This adoption of the rule-of-reason analysis in an IP context was followed by the landmark 1995 joint DOJ-FTC Guidelines (Antitrust-IP Guidelines, discussed immediately below) that set forth an economic-based framework for antitrust analysis of IP licensing.¹³

The 1995 Antitrust-IP Guidelines. The 1995 Antitrust-IP Guidelines recognized that intellectual property laws and antitrust laws share the common purpose of promoting innovation and enhancing consumer welfare.¹⁴ Under the 1995 Guidelines, licensing restrictions do not run afoul of the

¹⁰ Richard Gilbert & Carl Shapiro, *Antitrust Issues in the Licensing of Intellectual Property: The Nine No-No's Meet the Nineties*, in BROOKINGS PAPERS: MICROECONOMICS 283, 286 (1997).

¹¹ Lipsky, *supra* note 9.

¹² U.S. Dep't of Justice & Fed. Trade Comm'n, Antitrust Enforcement Guidelines for International Operations (1995), available at <http://www.justice.gov/atr/public/guidelines/internat.htm>.

¹³ U.S. Dep't of Justice & Fed. Trade Comm'n, Antitrust Guidelines for the Licensing of Intellectual Property (1995), available at <http://www.justice.gov/atr/public/guidelines/0558.htm>. Although these Guidelines are applicable to the full panoply of IP rights, the following discussion focuses exclusively on their relevance to patents.

¹⁴ *Id.*

antitrust law unless they create market power greater than the power the IP holder could have exercised without licensing (say, by refusing to license and directly producing and selling products covered by its patents).

The 1995 IP Guidelines embody three important general principles:

- (1) For the purpose of antitrust analysis, the DOJ and FTC (Agencies) regard intellectual property as being essentially comparable to any other form of property.
- (2) The Agencies do not presume that intellectual property creates market power in the antitrust context.
- (3) The Agencies recognize that intellectual property licensing allows firms to combine complementary factors of production and is generally procompetitive.¹⁵

IP Is Comparable to Any Other Form of Property. While intellectual property may differ in some respects from other forms of property, the same general approach can be used in antitrust analysis while taking the different characteristics into account. In short, the Guidelines recognized that the governing antitrust principles are the same: The IP owner's rights to exclude are similar to the rights of owners of other forms of private property, and IP is neither particularly free from scrutiny under the antitrust laws, nor particularly suspect under them.

Market Power. While intellectual property rights give owners the right to exclude others from using the protected rights, not all such rights give rise to market power. Economists have defined market power as the ability to "profitably charge prices above the competitive level for a sustained period of time."¹⁶

The Antitrust-IP Guidelines recognized that market power does not impose on the intellectual property owner an obligation to license the use of that property to others. However, market power could be used to harm competition through unreasonable conduct. Determination of whether a party has market power is crucial in antitrust cases involving intellectual property rights. Consistent with the Guidelines, the Supreme Court subsequently concluded in *Independent Ink* that "the antitrust enforcement agencies, and most economists have all reached the conclusion that a patent does not necessarily confer market power upon the patentee."¹⁷ In turn, the Court held that "in all cases involving a tying arrangement, the plaintiff must prove that the defendant has market power in the tying product."¹⁸

Market power is also an important consideration in cases involving resale price maintenance agreements. As the Supreme Court noted in *Leegin Creative Leather Products*, the fact "that a dominant manufacturer or retailer can abuse resale price maintenance for anticompetitive purposes may not be a serious concern unless the relevant entity has market power."¹⁹ As such, market power is an important factor to consider when a company that has significant dominance in any industry enters into licensing agreements.

Procompetitive Effects of IP Licensing. The Antitrust-IP Guidelines state that IP licensing transactions in general can lead to more efficient exploitation of the intellectual property, benefiting consumers through the reduction of costs and the introduction of new products. Such licensing trans-

¹⁵ *Id.*

¹⁶ ABA SECTION OF ANTITRUST LAW, MARKET POWER HANDBOOK 1 (2005) (emphasis and citations omitted).

¹⁷ *Ill. Tool Works Inc. v. Independent Ink, Inc.*, 547 U.S. 28, 45 (2006).

¹⁸ *Id.* at 46.

¹⁹ *Leegin Creative Leather Prods., Inc. v. PSKS, Inc.*, 551 U.S. 877 (2007).

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actions can increase the value of intellectual property to consumers and to the developers of the technology. Furthermore, the increased exploitation of IP rights through licensing can lead to increased incentives for research and development. The Supreme Court has included the beneficial economic effects of IP licensing under rule of reason analysis: “In determining the lawfulness of particular practices, courts often apply a ‘rule of reason.’ They examine both a practice’s likely anticompetitive effects and its beneficial business justifications.”²⁰

2007 DOJ-FTC Report on Antitrust Enforcement and IP Rights. Following FTC and DOJ hearings in the early 2000s on the intersection of antitrust and IP, the two agencies jointly issued a report on antitrust enforcement and IP rights (2007 Report).²¹ The 2007 Report in essence reaffirmed and expanded upon the 1995 Antitrust-IP Guidelines’ general approach to the antitrust analysis of patent licensing. The 2007 Report reflected the strong influence of the Bush Administration’s Antitrust Division leadership at the DOJ, which enthusiastically supported IP rights in its public pronouncements and its enforcement agenda. Specifically, the 2007 Report delved into significant detail on such issues as unilateral refusals to license, standard setting, portfolio cross-licenses and patent pooling, variations on IP licensing practices (including grantbacks, non-assertion clauses, and reach-through licensing), tying and bundling of IP rights, and contractual practices that extend beyond the patent term (long-term exclusivity and royalty contracts, bundling patents with trade secrets). While the Report placed major emphasis on the efficiencies arising from such transactions, it also surveyed theories of anticompetitive harm, reflecting case law and economic literature developments since 1995.

Of particular note, the 2007 Report stated that antitrust liability for mere unilateral, unconditional refusals to license a patent would “not play a meaningful role in the interface between patent rights and antitrust protections.” This formulation was in harmony with the U.S. Supreme Court’s *Trinko*²² decision, which held that U.S. antitrust law highly disfavors requiring firms to deal with third parties. The *Trinko* decision also emphasized that the Supreme Court had never approved of the antitrust “essential facilities” doctrine (requiring a party owning a facility “essential” to competition to grant third-party access), and may fairly be read to view that doctrine as highly problematic, consistent with the views of some mainstream U.S. antitrust scholars.²³ Some U.S. scholars have viewed antitrust rules that mandate third-party access to one’s property (in the case of patents and compulsory licensing) as creating disincentives to invest in innovation and as undermining vigorous, welfare-enhancing competition. (Parties that know they are guaranteed access to a competitor’s property have a reduced incentive to compete effectively.)

The 2007 Report also highlighted the problem of “hold-up” by patentees that could seek to obtain additional market power as a result of the inclusion of their patents in standards.²⁴ In so

²⁰ *Id.* at 648.

²¹ U.S. DEP’T OF JUSTICE & FED. TRADE COMM’N, ANTITRUST ENFORCEMENT AND INTELLECTUAL PROPERTY RIGHTS: PROMOTING INNOVATION AND COMPETITION (2007) [hereinafter 2007 Report], available at <http://www.justice.gov/atr/public/hearings/ip/222655.pdf>.

²² Verizon Commc’ns Inc. v. Law Office of Curtis V. Trinko LLP, 540 U.S. 398 (2004).

²³ See, e.g., Phillip J. Areeda, *Essential Facilities: An Epithet in Need of Limiting Principles*, 58 ANTITRUST L.J. 841 (1989).

²⁴ It merits noting, however, that some scholars question the seriousness (even the existence) of the hold-up problem. See, e.g., Richard A. Epstein, F. Scott Kieff & Daniel F. Spulber, *The FTC, IP, and SSOs: Government Hold-Up Replacing Private Coordination*, 8 J. COMPETITION L. & ECON. 1, 18–23, 43–45 (2012). Also, some commentators have suggested that the problem of “reverse hold-up,” whereby technology implementers use legal rules to artificially depress payments to patent holders, may be serious or more serious than hold-up. See, e.g., Peter Camesasca et al., *Injunctions for Standard Essential Patents: Justice Is Not Blind*, 9 J. COMPETITION L. & ECON. 285 (2013). Furthermore, one leading economist argues that the entire notion that the creation of standards raises ex post competitive problems by con-

doing, it also signaled a willingness to allow standard-setting organizations some leeway in developing policies to prevent hold-up, such as ex ante patent disclosure rules and RAND (“reasonable and non-discriminatory”)²⁵ licensing terms for patents that “read on” (are required to comply with) standards.

The discussion of standard setting in effect gave competition policy cover for joint efforts to limit returns on patents in the special case of standard setting, which the Report recognized as having efficiency-enhancing potential. It also cited the FTC’s *Rambus* case,²⁶ in which the Commission held that the exercise of additional patent-specific market power gained by manipulation of the standard-setting process through deception would not reflect legitimate returns to property rights, but, rather, illegitimate returns resulting from exclusionary behavior.²⁷

Some very recent signs, however, indicate that U.S. federal antitrust enforcers are beginning to consider novel antitrust theories to challenge what they view as the inappropriate exercise of individual patent rights, such as efforts to obtain “excessive” returns on patents that have been deemed “essential” in the context of standard setting.²⁸ Such theories would impose limitations on patent holders’ ability to maximize the value of their patents and to exercise core statutory rights, such as the right to seek an injunction for patent infringement. A review of relevant economic literature is warranted to determine whether such a significant shift in antitrust enforcement emphasis is advisable.

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Should Antitrust Be Applied to Restrict Returns Within the Legitimate Scope of a Patent Right?

As explained below, the answer to this question is an unequivocal “no.”

The traditional justification for patents stemmed from the notion that creating an exclusive time-limited property right through the patent system would spur private parties to promote the

fering “unearned” market power on standard essential patents (patents that “read on” standards) may reflect a complete misunderstanding of innovation economics. He maintains that technology standards emerge through a dynamic process that reflects innovative efficiencies generated by competition and cooperation among inventors and producers. Daniel F. Spulber, *Innovation Economics: The Interplay Among Technology Standards, Competitive Conduct, and Economic Performance*, 9 J. COMPETITION L. & ECON. 777 (2013).

²⁵ Also known as FRAND, or “fair, reasonable, and non-discriminatory.”

²⁶ See *Broadcom Corp. v. Qualcomm Inc.*, 501 F.3d 297 (3d Cir. 2007) (holding deceptive conduct by a member of a standard-setting organization during the standard-setting process can be anticompetitive and violate the antitrust laws when it leads to the illicit acquisition of market power). *But cf. Rambus Inc. v. FTC*, 522 F.3d 456 (D.C. Cir. 2008) (reversing the FTC’s holding that Rambus had engaged in anticompetitive monopolization, based on the FTC’s failure to prove that Rambus’s monopoly power would not have existed but for the deceit).

²⁷ 2007 Report, *supra* note 21, at 44.

²⁸ FTC Commissioner Joshua Wright has articulated concerns that recent FTC antitrust enforcement initiatives directed at alleged unilateral patent right abuses run the risk of returning to a regime that is excessively hostile toward the exercise and exchange of patent rights. In particular, he cites FTC scrutiny of patentees’ efforts to seek injunctions to enforce patents that “read on” standards, and patentees’ purported failure to honor commitments to standard-setting organizations. See Joshua D. Wright, Commissioner, Fed. Trade Comm’n, Does the FTC Have a New IP Agenda, Remarks Before the New York City Bar Ass’n (Mar. 11, 2014), available at http://www.ftc.gov/system/files/documents/public_statements/288861/140311ipagenda.pdf. Moreover, Commissioner Wright indicated that he had similar concerns about recent DOJ statements bearing on antitrust enforcement policy toward patents. See also Joshua D. Wright & Douglas H. Ginsburg, *Whither Symmetry? Antitrust Analysis of Intellectual Property Rights at the FTC and DOJ*, 9 COMPETITION POL’Y INT’L, No. 2, Fall 2013, George Mason Law & Economics Research Paper No. 13-71, at 15 (Dec. 2013), available at <http://ssrn.com/abstract=2365577>; Joanna Tsai & Joshua D. Wright, *Standard Setting, Intellectual Property Rights, and the Role of Antitrust in Regulating Incomplete Contracts*, 80 ANTITRUST L.J. (forthcoming 2015) (concluding that the “incompleteness” of some standard setting contracts does not justify antitrust intervention), Working Paper, July 17, 2014), available at <http://leconcurrentialiste.files.wordpress.com/2014/08/standard-setting-intellectual-property-rights-and-the-role-of-antitrust.pdf>.

progress of science and the “useful” arts.²⁹ In modern welfare economics terms, the implicit presumption is that whatever welfare losses might stem from the patent-induced short-term exercise of monopoly power, such losses would be substantially outweighed by welfare gains due to the patent-induced improvements in innovation, which would bestow major benefits on consumers and producers over time. (Third parties would also benefit by being given access to new technological methods embodied in public patent filings.)

Empirical evidence that patents are not particularly effective in spurring innovation could, of course, seriously undermine this justification. Research by Richard Levin and others in the 1980s—a survey of 650 executives responsible for research and development (R&D) in 130 different industries—revealed that patents were deemed the most effective means of appropriating returns from R&D only in the pharmaceutical and chemical industries.³⁰ High returns in the latter two industries reflected the specific and discrete nature of patents that covered particular molecules and chemical formulations, enabling pharmaceutical and chemical firms to exercise significant market power. By contrast, in other high technology sectors, such as computers, telecommunications, and microelectronics, the survey showed that innovation was cumulative rather than discrete, with far-reaching cross-licenses, not specific patents, being key to technological progress. Being first to market innovative products supported by strong marketing and customer service was far more effective than particular patents in protecting competitive advantage due to R&D. A survey conducted in the late 1990s confirmed these findings.³¹

The research by Levin and his colleagues could have been viewed as undermining the importance of ensuring robust patent protection—at least outside the chemical and pharmaceutical industries. Subsequent work by Professors Carl Shapiro and Mark Lemley on “probabilistic patents” more explicitly made a public policy case for weakening patent protection.³² Concluding that rights granted to patent holders are “highly uncertain” (and nearly half of patents litigated to final judgment are invalidated)³³ and represent only a legal right to exclude, Shapiro and Lemley argued for a fundamental rethinking of patent policy in four areas: (1) the system for granting patents; (2) the patent litigation system; (3) the incentives of patent holders to use cross licenses or licenses to settle patent disputes rather than fully litigating them; and (4) the antitrust assessment of agreements among rivals to settle actual or threatened patent litigation. Shapiro and Lemley stressed that the scope and validity of patent rights (most of which are not litigated) are uncertain, patents are merely contingent property rights, and “weak” patents can command unjustified premiums. Implicit in this analysis was the premise that the current patent system unnecessarily restricts competition and imposes excessive costs on society. As such, they argue that

²⁹ Professor Lemley has stated that this “incentive theory” has been “the model for 200 years.” Mark A. Lemley, *Reconceiving Patents in the Age of Venture Capital*, 4 J. SMALL & EMERGING BUS. L. 137, 139 (2000). See also Robert W. Hahn, *The Economics of Patent Protection: Policy Implications from the Literature* 4 (AEI-Brookings Joint Center for Reg. Stud. 2003) (“In general, classical theory supports a positive view—that patents, while exacting a price from society, provide incentives to innovate.”).

³⁰ See, e.g., Richard C. Levin, *Appropriability, R&D Spending, and Technological Performance*, 78 AM. ECON. REV. 424 (1988).

³¹ See Wesley M. Cohen, Richard R. Nelson & John P. Walsh, *Protecting Their Intellectual Assets: Appropriability Conditions and Why U.S. Manufacturing Firms Patent (or Not)*, National Bureau of Economic Research No. 7552 (2000), available at <http://www.nber.org/papers/w7552>.

³² See generally Mark A. Lemley & Carl Shapiro, *Probabilistic Patents*, 19 J. ECON. PERSP., Apr. 2005, at 75.

³³ That roughly half of fully litigated patents are invalidated should not be surprising, however, since presumably those cases that are deemed worthy by both sides as justifying such a resource commitment inherently involve matters the outcome of which is very much in doubt (classic “50-50” situations). Since most patents are not fully litigated, these unsurprising litigation results say nothing about the quality of patents overall.

antitrust, patent grant, and patent litigation policy should be reoriented to reduce patent grants (with a focus on higher “quality”) and subject patents to greater legal restrictions, including easier limitation and invalidation. By raising the probability that patent applications will be denied and by injecting additional uncertainty into the evaluation of existing patents, these changes, if implemented, would lower the marginal incentive to patent and cause some socially beneficial (not just “bad” or “inappropriate” patents) not to be pursued.³⁴

Nevertheless, the research that appears to support limiting returns to individual patents is unconvincing. This research focuses on the alleged deficiencies of individual patents, including their costs, weaknesses, and limitations in promoting returns to innovative activity. If, however, the patent system promotes other sorts of welfare-enhancing activities, new policies that curb the exercise of patents may be socially counterproductive. Indeed, other scholarship, summarized below, suggests alternative welfare-enhancing explanations for patenting that indicate the research by Levin, Shapiro, and Lemley (and others who share their perspective) may miss the mark.

The advantages of the patent system in spurring economic growth and innovation, quite apart from the value or quality of individual patents, have been highlighted by various academics since the 1970s, if not before.

The advantages of the patent system in spurring economic growth and innovation, quite apart from the value or quality of individual patents, have been highlighted by various academics since the 1970s, if not before. Professor Edmund Kitch argued that patent law increases the output from resources used for technological innovation by bringing those resources to bear on an array of “prospects” through a system of exclusive publicly recorded rights, akin to the American mineral claim system for public lands.³⁵ This justification was entirely separate from the traditional “reward theory,” which viewed patent law solely as a vehicle that enables the investor to capture rewards from its investment in an invention (a theory which Levin and his colleagues found wanting in industries other than pharmaceuticals and chemicals).

Subsequently, other scholars brought forth additional theories supportive of the patent system as an engine of economic growth and innovation. Professor Clarisa Long explained that patenting serves the key role of lowering information costs to firms, allowing firms to signal to capital markets their R&D capabilities and human capital, and promoting beneficial licensing.³⁶ Professor Paul Heald propounded a somewhat different theory, under which patent ownership rules establish a title registration system for certain information assets, thereby significantly lowering transaction costs compared to the available alternative systems of trade secrecy and contract law.³⁷ Professor Scott Kieff argued that enforcing patents with a strong property rule (as opposed to a liability rule) that allows the owner to exclude could avoid a socially suboptimal level of use of patented technology and thus is preferable to government grants, tax credits, or other regulatory vehicles to spur innovation.³⁸ Kieff and James Daily critiqued recent U.S. Supreme Court decisions narrowing the scope of patentable subject matter, arguing that these changes undermined

³⁴ Some “strong” as well as “weak” or “poor” patents would be erroneously rejected or struck down due to inevitable error costs associated with patent application reviews and with judicial review of litigated patents.

³⁵ Edmund W. Kitch, *The Nature and Function of the Patent System*, 20 J.L. & ECON. 265 (1977).

³⁶ Clarisa Long, *Patent Signals*, 69 U. CHI. L. REV. 625, 626–27 (2002).

³⁷ Paul J. Heald, *A Transaction Costs Theory of Patent Law*, 66 OHIO ST. L.J. 473 (2005). According to Heald, “[E]ven if empirical evidence were to show that the costs of patenting and the value of simulated innovation offset each other, the transaction costs theory suggests that the patent registration system should nonetheless be maintained as providing a net economic benefit.” *Id.* at 476.

³⁸ F. Scott Kieff, *Property Rights and Property Rules for Commercializing Inventions*, 85 MINN. L. REV. 697 (2001).

the goals of invention commercialization and competition.³⁹ Most recently, Professor Daniel Spulber produced a broad overview of three important ways in which patents support the market for inventions: (1) they enhance transaction efficiencies and competition by providing exclusion, transferability, disclosure, certification, standardization, and divisibility; (2) they helpfully transform the market for inventions into a market for innovative control by spurring invention, innovation, and investment in complementary assets; and (3) they promote the financing of invention and innovation.⁴⁰

This scholarship appears not to have been addressed by antitrust enforcement officials, who are weighing efforts to limit returns to individual “powerful” patents.⁴¹ In short, the existence of robust countervailing theoretical academic work that supports a “strong” patent regime demonstrates that the case for weakening individual patents through new antitrust initiatives has not been proven.

Who has the better “real-world” case? On balance, recent empirical research finding stronger patent policies to be associated with faster economic growth may be seen as bolstering the argument in favor of maintaining a strong pro-patent policy tilt.⁴² Of particular interest, a recently published peer-reviewed cross-sectional study covering many countries over two decades finds a strong association among patent rights, economic growth, and increased productivity:

[W]e study the impact of changes in effective patent rights within panels of up to 54 manufacturing industries in up to 72 countries between 1981–2000. Stronger patent rights were associated with faster growth in more patent-intensive industries, and the effect was larger in higher-income countries. Between 1991–1995, an increase in the level of effective patent rights from Turkey to Singapore was associated with the average growth of the other chemicals and leather industries being respectively 1/6 and 1/17 higher. Patent rights were associated with faster growth through both factor accumulation and raising productivity. Our findings were robust to alternative measures of patent rights and patent intensity.⁴³

Over the last decade, a variety of OECD studies found a positive association between the strengthening of IP rights (including patents) and important economic indicators, as well as a positive relationship between the strengthening of patent rights and increased innovation.⁴⁴ Various other recent empirical investigations have also found associations between patents and economic

³⁹ James E. Daily & F. Scott Kieff, *Anything Under the Sun Made by Humans: Patent Law Doctrines as Endogenous Institutions for Commercializing Innovation*, 62 EMORY L.J. 967 (2013).

⁴⁰ See Daniel F. Spulber, *How Patents Provide the Foundation of the Market for Invention* (June 2014), available at http://www.law.northwestern.edu/research-faculty/searlecenter/events/roundtable/documents/Spulber_Patents_and_the_Market_for_Inventions.pdf.

⁴¹ FTC Commissioner Joshua Wright, for example, has expressed his concerns about the FTC’s actions in this regard. See Wright, *Does the FTC Have a New IP Agenda*, *supra* note 28.

⁴² For a good summary treatment of somewhat earlier research suggesting that strong patent protection is associated with higher rates of prosperity and economic growth, particularly in the developing world, see SHANKER SINGHAM, *A GENERAL THEORY OF TRADE AND COMPETITION: TRADE LIBERALIZATION AND COMPETITIVE MARKETS* 320–30 (2007).

⁴³ Albert G.Z. Hu & I.P.L. Ng, *Patent Rights and Economic Growth: Evidence from Cross-Country Panels of Manufacturing Industries*, 65 OXFORD ECON. PAPERS 675 (2013). The authors, professors at the National University of Singapore, discuss their statistical methods at length and provide a good literature survey on the relationship among patent laws, economic growth, and innovative activities.

⁴⁴ See, e.g., Douglas Lippoldt, *Do Stronger IPRs Deliver the Goods (and Services) in Developing Countries?*, INT’L POLICY NETWORK 9–10 (2010), available at http://www.ecipe.org/media/publication_pdfs/Lippoldt_Stronger_IPRs12102010.pdf.

growth and innovation.⁴⁵ Although scholarly opinion admittedly is not unanimous,⁴⁶ and correlation does not necessarily imply causation, I believe that the weight of recent empirical findings by and large lend solid support for strong patent protection.

Claims that the increased antitrust scrutiny of patent transactions does not necessarily undermine a strong patent system are unconvincing. They might be true were antitrust aimed only at abuses that extended market power beyond the defensible scope of the patent property right—abuses that lie at the core of the 1995 Antitrust-IP Guidelines. But seeking to limit returns to certain assertions of presumptively valid patents on antitrust policy grounds would be an antitrust sea change that would tend *ex ante* to lower expected returns to valid patent invocations, and, thus, reduce incentives on the margin to invest in legitimate patenting (and patentable) activities. Such an evolution in antitrust philosophy may be socially detrimental to the extent a “strong patenting climate” is indeed conducive to economic growth and innovation. Reforms in patent law administration may be appropriate, and may (if appropriately formulated) be consistent with protection for strong patents. But even if there is a need for further *patent law* reforms,⁴⁷ that provides no justification for the more onerous application of *antitrust law* to the exercise of market power flowing from individual patents.

Error cost considerations also militate against “peering behind” individual patents to see if they have been “illegitimately” deployed in a manner that yields “excessive” returns to the property right (for example, because the patents are “weak” or “poor quality” in probabilistic terms, or because “undue” market power has been conferred *ex post* through standard setting). Consistent with decision theory,⁴⁸ optimal antitrust rules should be designed to minimize the sum of (1) welfare losses due to the discouragement of welfare-promoting behavior, (2) false positives, (3) false negatives, and (4) the administrative costs of employing the antitrust system. More onerous antitrust scrutiny of market power generated by individual patents is likely to generate (1) substantial welfare losses due to reduced innovative activity, (2) significant false positive costs due to the prosecution of efficiency-seeking behavior, and (3) significant administrative costs due to

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⁴⁵ See, e.g., Yingying Go & Bo Wang, *Study on the Economic Growth of Patent Output in the High-tech Industry*, 3 J. MGMT. & SUSTAINABILITY 103 (2013) (finding a significant long-run equilibrium relationship between patent output and economic growth); Dushko Josheski & Cane Koteski, *The Causal Relationship Between Patent Growth and Growth of GDP with Quarterly Data in the G7 Countries: Cointegration, ARDL and Error Correction Models*, MPRA Paper No. 33153 (Sept. 2011), available at http://mpra.ub.uni-muenchen.de/33153/1/MPRA_paper_33153.pdf (showing positive relationships between patent growth and GDP growth in G7 countries); Dipendra Sinha, *Patents, Innovations, and Economic Growth in Japan and South Korea: Evidence from Individual Country and Panel Data*, 8 APPLIED ECONOMETRICS & INT'L DEV. 181 (2008) (finding a two-way causality between the growth of real GDP and growth of the number of patents in Japan); José M. Ortiz-Villajos, *Patents and Economic Growth in the Long Term: A Quantitative Approach*, 52 BRUSSELS ECON. REV. 305 (2009) (cross-sectional regressions showing a strong positive relationship between patenting and per capita income growth, based on patent data of over 20 countries from the beginning of the 19th century until the end of the 20th century).

⁴⁶ See, e.g., Petra Moser, *Patents and Innovation: Evidence from Economic History*, J. ECON. PERSP., Winter 2013, at 23 (concluding from an examination of historical evidence that most innovations occur outside the patent system, that patent policies that grant strong intellectual property rights to early inventors may discourage innovation, that compulsory patent licensing may increase innovation in the licensing countries, and that policies that modify patent laws to facilitate entry and encourage competition may encourage innovation).

⁴⁷ I take no position on whether there is such a need. The U.S. Patent and Trademark Office already has undertaken and continues to undertake administrative improvements in the patent area, and reforms are being implemented pursuant to the America Invents Act of 2011, P.L. 112-29, 125 Stat. 284–341. Moreover, the Obama Administration is pursuing additional reforms. See, e.g., The White House, FACT SHEET: White House Task Force on High-Tech Patent Issues (June 4, 2013), <http://www.whitehouse.gov/the-press-office/2013/06/04/fact-sheet-white-house-task-force-high-tech-patent-issues>.

⁴⁸ Decision theory describes a methodology “for making factual determinations and decisions when information is imperfect and costly.” This methodology is well suited to deriving optimal antitrust rules, given informational constraints. See, e.g., C. Frederick Beckner III & Steven C. Salop, *Decision Theory and Antitrust Rules*, 67 ANTITRUST L.J. 41, 41–42 (1999).

increases in antitrust investigations and prosecutions (including costly and potentially erroneous efforts to gauge the “strength” of a patent based on settlement terms, types of royalty requests, and other matter-specific factual information). Weighed against these significant costs is the reduction in false negatives due to the prosecution of “illegitimate” efforts by patent holders to garner significant royalties from individual patents. Based on the previous discussion, there is good reason to believe that the incidence of this false negative is low. Thus, on balance, error cost analysis strongly suggests that welfare will diminish if more onerous antitrust scrutiny is directed at alleged exploitation of “excessive” market power associated with the invocation of core patent rights.

Consistent with this analysis, I believe that U.S. antitrust enforcers should drop their emphasis on alleged single patent antitrust “abuses” and focus instead on the framework set forth in the 1995 Antitrust-IP Guidelines, supplemented by the 2007 Report. This framework recognizes that licensing programs aimed at maximizing returns to the patent right (including, for example, field of use and geographic restrictions, bundling, and other arrangements which may effectuate efficient price discrimination) are generally welfare-enhancing and appropriate, and raise problems only if they serve as a cover for a welfare-reducing horizontal restraint (say, a conspiracy among patent licensees to divide markets). This framework also recognizes the general right of the patent holder not to license (the essence of a property right is the right to exclude), and the inappropriateness of applying the “essential facilities doctrine” to patents. (If a jurisdiction decides to pursue compulsory patent licensing due to paramount public policy considerations, such as a medical emergency requiring a patented drug, it should use authority other than competition law to achieve this end, and ensure that the patentee is fully compensated.) Adopting such a framework would provide appropriate incentives for welfare-enhancing innovation and economic growth, while at the same time ensuring that anticompetitive restrictions among competing technologies are avoided.

Conclusion

Patent-antitrust enforcement should “stick to its knitting” and focus on transactions that lessen competition among rival technologies or on wrongful actions (not competition on the merits) designed to artificially inflate the market value of a patent beyond its legitimate scope. New antitrust enforcement initiatives that seek to limit returns within the legitimate scope of the patent are unwise. Even if they appeared to restrain licensing fees in the short term, economic theory and evidence suggests that such “creative antitrust enforcement” would undermine incentives to invest in patenting, thereby weakening the patent system and tending to slow innovation and economic growth. Nations seeking to spur their economies would be well advised to avoid such antitrust adventurism. ●