

N O R T H W E S T E R N
JOURNAL OF TECHNOLOGY
AND
INTELLECTUAL PROPERTY

**Legal Turbulence After *Leegin*: New Possibilities for Patent
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By Jonathan Hillel*

¶1 In *Leegin Creative Leather Products, Inc. v. PSKS, Inc.*,¹ the Supreme Court overruled nearly 100 years of antitrust precedent, and rewrote a rule that had become intertwined in numerous branches of the law. In his dissent, Justice Breyer predicted that the decision would “create considerable legal turbulence.”² This article explores the fears of the four dissenting Justices, and examines the jurisprudential disturbances created by *Leegin* in the area of patent licensing. Specifically, this article focuses on the multi-billion dollar industry of technology transfer at research universities,³ and investigates possibilities created by the *Leegin* rule.

¶2 In *Leegin*, the Supreme Court held that resale price maintenance agreements between a product manufacturer and independent resellers would no longer constitute *per se* violations of the antitrust laws. Rather, courts must apply the rule of reason, and invalidate such agreements only if net anticompetitive effects have been proven.⁴

¶3 This paper posits a novel licensing practice for research patentees,⁵ to maximize royalty streams while simultaneously benefiting the upstream research community and downstream consumers. Specifically, the use of temporary price maintenance across multiple non-exclusive licenses could simultaneously meet the needs of research patentees and manufacturing licensees, while alleviating the burdens created by exclusive licensing practices on upstream research and downstream prices.⁶ However, the opacity of the law governing price restraints in patent licenses threatens to stifle development of new transactional methods.⁷ Therefore, this discussion is acutely important to stimulate development of new practices in the wake of *Leegin*.

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¹ 127 S. Ct. 2705 (2007).

² *Id.* at 2737.

³ See Lorelei Ritchie de Larena, *The Price of Progress: Are Universities Adding to the Cost?*, 43 HOUS. L. REV. 1373, 1375 (2007).

⁴ *Leegin*, 127 S. Ct. at 2710.

⁵ The term “research patentees” will be used to denote entities like research universities who prosecute patents, but do not manufacture products.

⁶ See Rebecca S. Eisenberg, *Public Research and Private Development: Patents and Technology Transfer in Government-Sponsored Research*, 82 VA. L. REV. 1663, 1709–10 (1996) (“[Exclusive licensing] provid[es] the means of excluding competitors from the market for the product. . . . [B]y charging monopoly prices without facing competition, . . . the firm preserves for itself the rents from product development.”).

⁷ David F. Ryan, *Current “Patent-Antitrust Interface” Issues and Their Potential Effect on Patent Litigation*, 923 P.L.I. PAT. 235, 253 (2008) (describing the “absence of a clearly controlling Supreme Court precedent” on whether price restraints are allowed in manufacturing patent licenses, thus counseling that “sound practice requires avoiding price-fixing terms”).

¶4 This article argues that price restraints in patent licenses issued by research patentees should be treated leniently under the antitrust laws, according to both the reasoning applied in *Leegin* and the economic incentives of these licensors. In fact, due to the procompetitive benefits such price restraints could create, they should predominantly withstand antitrust scrutiny under the rule of reason. Finally, given the inefficiencies of exclusive licensing currently used by university Technology Transfer Offices (TTOs), this alternative could at once prove profitable and broadly beneficial to government-funded research in the United States.⁸

¶5 Part I summarizes the *Leegin* decision and identifies its limits, underscoring the open questions still faced by research patentees. Part II looks for answers in the historical jurisprudence of patent license price restraints, from initial roots in the *Dr. Miles* rule to later manifestations. Notably, much of this case law was premised upon horizontal patent licensing arrangements and is principally inapposite to vertical licenses. Part III explicates the turbulent effects of *Leegin* on such precedent, and posits an approach for research patentees to capitalize on this chaos. Given the substantial procompetitive advantages of the proposed licensing practice, analysis reveals that this approach should pass muster under the rule of reason. Part IV concludes by introducing the real-world context of technology licensing at research universities. It argues that the proposed methodology comports with the purposes of the Bayh-Dole Act,⁹ and could yield benefits to patentees, other researchers, and the public in general.

I. *LEEGIN*—THE NEW RULE AND ITS LIMITS

¶6 The Supreme Court in *Leegin* held that resale price maintenance (RPM) agreements would now be adjudicated on a case-by-case basis under the rule of reason, rather than constitute categorical violations of Section 1 of the Sherman Act.¹⁰ An RPM agreement is a contract between a manufacturer and reseller to fix minimum prices at resale.¹¹ It is a “vertical” contract, made between parties at different levels of the supply chain.¹²

¶7 The Court found that vertical price restraints could have socially beneficial uses, such as deterring free-riding by resellers and spurring non-price competition.¹³ Furthermore, a purely upstream manufacturer has economic incentives to *reduce* market prices and increase the quantity of its goods sold.¹⁴ Hence, whereas entities engaged in retail are more likely to have anticompetitive incentives for fixing prices, upstream entities are motivated by “special reason[s]” unrelated to extracting monopoly rents from consumers.¹⁵ Thus, the more permissive rule of reason, which enables a defendant to

⁸ See, e.g., Gary Pulsinelli, *Share and Share Alike: Increasing Access to Government-Funded Inventions Under the Bayh-Dole Act*, 7 MINN. J. L. SCI. & TECH. 393, 442–43 (2006) (“[University] researchers . . . should have a limited, royalty-free license . . . [to ensure that] those who need access to the basic technology covered by these patents will have it.”).

⁹ See 35 U.S.C. § 200 (2000).

¹⁰ *Leegin Creative Leather Prods., Inc. v. PSKS, Inc.*, 127 S. Ct. 2705, 2710 (2007).

¹¹ *Id.*

¹² *Id.* at 2714 (noting the “differences in economic effect” between horizontal and vertical price restraints).

¹³ *Id.* at 2715–16.

¹⁴ *Id.* at 2718 (“[I]n general, the interests of manufacturers and consumers are aligned with respect to retailer profit margins.”).

¹⁵ *Id.* at 2729 (Breyer, J., dissenting).

explain its reasons for using the restraint and the procompetitive benefits resulting, is appropriate for RPM agreements.

¶8 From the 1911 decision in *Dr. Miles* until the recent *Leegin* decision, RPM contracts had constituted *per se* violations of § 1 of the Sherman Act.¹⁶ Mere agreement on price levels at resale, regardless of efficacy or negative impact, could incur civil liability, attorney's fees, treble damages, and even criminal charges.¹⁷ Understandably, *per se* treatment had a chilling effect on business practices seeking to experiment with or circumvent the rule.¹⁸

¶9 The rule of reason is now the “prevailing standard of antitrust analysis,”¹⁹ and in many ways the *Leegin* decision simply followed in the footsteps of other precedent that had gradually phased out *per se* treatment of vertical restraints.²⁰ However, due to the long incumbency of the *Dr. Miles* rule and the special treatment of price maintenance by courts,²¹ *Leegin* has resounding ramifications beyond the sphere of RPM contracts alone.

¶10 The licensing of intellectual property is one affected area. In the patent licensing context prior to *Leegin*, there was a narrow avenue of categorical *legality* for a patentee to set the *first sale* price of a product licensed to a competing manufacturer.²² Around this “doughnut hole,” the Supreme Court and various Circuit Courts erected numerous barriers, precluding price control under a host of circumstances.²³ This article focuses on the situation where a research patentee holds a patent but does not engage in product manufacturing, and wishes to control the sale price of the patented technology.

¶11 Importantly, these are not *resale* price restraints, as the licensee transacts the *first sale* of the patented product.²⁴ However, the absence of direct competition between patentee and licensee, and the economic perspective of each party, establish these licenses as purely vertical contracts.²⁵ Hence, the *Leegin* rule should apply, and price restraints in these licenses should be adjudicated under the rule of reason.

¶12 As one practitioner noted in anticipation of the *Leegin* decision, “companies wishing to exercise price maintenance in . . . licenses of intellectual property . . . without manufacturing [products] . . . would gain important new support.”²⁶ Courts have

¹⁶ See *Dr. Miles Med. Co. v. John D. Park & Sons Co.*, 220 U.S. 373 (1911).

¹⁷ See 15 U.S.C. §§ 1, 15 (2000).

¹⁸ See William F. Baxter, *The Viability of Vertical Restraints Doctrine*, 75 CAL. L. REV. 933, 936 (1987) (“No one can know how many more enterprises would have availed themselves of resale price control agreements . . .”).

¹⁹ *Cont'l T.V., Inc. v. GTE Sylvania, Inc.*, 433 U.S. 36, 49 (1977).

²⁰ See *id.* (vertical non-price restraints); see also *State Oil Co. v. Khan*, 522 U.S. 3 (1977) (maximum resale price fixing).

²¹ See, e.g., *Khan*, 522 U.S. at 15–17 (“[W]e find it difficult to maintain that vertically imposed maximum prices could harm consumers or competition to the extent necessary to justify their *per se* invalidation . . . arrangements to fix minimum prices . . . remain illegal *per se*.”).

²² *United States v. Gen. Elec. Co.*, 272 U.S. 476, 478–79 (1926).

²³ Robert A. Lipstein & Ryan C. Tisch, *RPM in IP: RIP to Per Se?*, COMPETITION LAW 360 (Portfolio Media, Inc., New York, N.Y.), Apr. 9, 2007, at 2, http://www.law360.com/registrations/user_registration?article_id=22238 (“[C]ourts have nibbled away at [*General Electric*], leaving it a narrow rule surrounded entirely by wide exceptions . . .”).

²⁴ See FTC, Antitrust Guidelines for the Licensing of Intellectual Property § 5.2 (1995) [hereinafter “IP Guidelines”].

²⁵ See *County Materials Corp. v. Allan Block Corp.*, 502 F.3d 730, 736 (7th Cir. 2007) (“[V]ertical restrictions [occur] . . . when a patent owner (which does not compete in the manufacturing sector) imposes restraints on a manufacturing licensee.”).

²⁶ Lipstein & Tisch, *supra* note 23, at 3.

recognized the vertical nature of patent licenses between research patentees and manufacturing licensees.²⁷ Nonetheless, as the Practising Law Institute recently noted, “sound practice [still] requires avoiding price-fixing terms in manufacturing licenses,” because even after *Leegin*, there is no precedent clearly on point.²⁸ Furthermore, the Supreme Court’s prior decisions circumscribing the rights of patentees have not been overruled, deterring experimental business practices under the specter of *per se* liability.²⁹

II. THE HISTORIC ILLEGALITY OF PATENT LICENSE PRICE RESTRAINTS

¶13 The origins of the rules governing patent license price restraints are convoluted, and *Dr. Miles* and other old cases surface at various points. Also, the changes brought about by modern antitrust rules like *Leegin* are unclear—*Leegin* made no mention of patented products or price maintenance in licenses.³⁰ This part traces patent licensing jurisprudence, to ascertain the changes effected by *Leegin* and modern antitrust analysis.

A. The *Dr. Miles* Rule

¶14 *Dr. Miles* involved unpatented medicinal products on which the manufacturer had imposed minimum prices for resale by its independent distributors.³¹ The manufacturer sued one retailer for breach of the contractual price provision, and the defendant challenged the validity of the contract under the antitrust laws.³² The Supreme Court invalidated the contract, holding that minimum resale price restraints constituted a *per se* violation of §1 of the Sherman Act.³³ Under *per se* treatment, liability is incurred by the mere agreement on prices, regardless of the actual effects on competition or consumers.

¶15 Notably, the *Dr. Miles* majority distinguished patented products and reserved the question for later adjudication. Since “complainant ha[d] not seen fit to [obtain a patent],”³⁴ the Court did not address the “extent of the [patent] right.”³⁵

¶16 This question was resolved two years later, when the Court concluded that first sale of a patented product would “exhaust the right to sell as to which a [patent] monopoly was given,” hence *resale* price fixing of a patented product would also incur liability *per se* under the Sherman Act.³⁶ In fact, this principle originated before *Dr. Miles* in the patent misuse doctrine, under which resale price provisions in patent licenses were deemed unenforceable.³⁷ Under the Sherman Act, however, a patentee would additionally face liability for actual and treble damages, and suits could be brought by a licensee or the federal government.³⁸

²⁷ See, e.g., *id.*

²⁸ Ryan, *supra* note 7, at 253.

²⁹ See Baxter, *supra* note 18, at 936.

³⁰ See *Leegin Creative Leather Prods., Inc. v. PSKS, Inc.*, 127 S. Ct. 2705 (2007).

³¹ *Dr. Miles Med. Co. v. John D. Park & Sons Co.*, 220 U.S. 373, 394 (1911).

³² *Id.* at 382, 395.

³³ *Id.* at 408–09.

³⁴ *Id.* at 402.

³⁵ *Id.*

³⁶ *Boston Store of Chicago v. Am. Graphophone Co.*, 246 U.S. 8, 22–23 (1918) (citing *Bauer v. O'Donnell*, 229 U.S. 1 (1913)).

³⁷ See *Adams v. Burke*, 84 U.S. 453 (1873).

³⁸ See Clayton Act § 4, 15 U.S.C. § 15 (2000) (providing for private actions).

¶17 Prior to the *Leegin* decision, the *per se* rule was still in effect, as evidenced by the Guidelines published by the Federal Trade Commission (FTC) and Department of Justice (DOJ).³⁹ The Guidelines cited *United States v. Univis Lens Co.*, which concerned the sale of patented eyeglass lenses, under license for customization and resale at minimum prices.⁴⁰ The Court unequivocally held that regardless of the patent rights, the price restraint “must stand on the same footing under the Sherman Act as like stipulations with respect to unpatented commodities.”⁴¹ Because *Leegin* changes this “footing under the Sherman Act” for RPM contracts generally, such restraints are no longer *per se* illegal, whether or not a patent applies.

B. Patent Licenses and the General Electric Rule

¶18 The situation is more complicated regarding price restraints on the *first sale* of a patented product. Fifteen years after *Dr. Miles*, the Supreme Court addressed government claims against General Electric, which manufactured its patented light-bulbs and sold them to consumers via agents, and also licensed Westinghouse to make and sell the bulbs at fixed minimum prices.⁴² Considering the license provisions, the Court reasoned that the question directly implicated the “[scope of the] patentee’s monopoly.”⁴³ Unlike unlawful tying arrangements, which require licensees to use or sell the patented invention in combination with unpatented materials,⁴⁴ the Court reasoned that “[t]he price at which a patented article sells . . . [has] more direct relation . . . to the rights of the patentee.” Practically speaking, General Electric’s right to exclude competitors would be devalued if Westinghouse could undercut its prices and capture market share under a patent license.

¶19 Though this language is broad, other parts of the decision and the underlying facts of the case have been invoked to limit the holding to its specific context.⁴⁵ GE had issued a single license to its direct competitor, Westinghouse, and had used the price restriction to prevent the latter from undercutting its own sale prices.⁴⁶ The Court noted that a “valuable element[] of the exclusive right of a patentee is to acquire [monopoly] profit.”⁴⁷ Hence, “[w]hen the patentee licenses another to make and vend and retains the right to continue to make and vend on his own account,” it may preclude price competition.⁴⁸

¶20 This phrase has been construed to exclude licenses issued by multiple patentees under pooling arrangements,⁴⁹ as well as price restraints imposed on multiple licensees of

³⁹ IP Guidelines, *supra* note 24, § 5.2 (“[T]he Agencies will enforce the *per se* rule against resale price maintenance in the intellectual property context.”).

⁴⁰ *Id.* (citing *United States v. Univis Lens Co.*, 316 U.S. 241 (1942)).

⁴¹ *Univis Lens*, 316 U.S. at 251 (citing *Ethyl Gasoline Corp. v. United States*, 309 U.S. 436 (1940)).

⁴² *United States v. Gen. Elec. Co.*, 272 U.S. 476, 478–79 (1926).

⁴³ *Id.* at 489–90.

⁴⁴ *See Motion Picture Patents Co. v. Universal Film Co.*, 243 U.S. 502 (1917).

⁴⁵ *See, e.g., United States v. Line Material Co.*, 333 U.S. 287, 304 (1948) (“[*General Electric* held only that] where a conspiracy to restrain trade . . . is not involved, a patentee may license another to make and vend the patented device with a provision [fixing] the licensee’s sale price . . .”).

⁴⁶ *Gen. Elec.*, 272 U.S. at 490.

⁴⁷ *Id.*

⁴⁸ *Id.* This reasoning seems to recognize that it is better to have more than one manufacturer in the market even if prices are fixed, than to allow exclusive control by a single monopolist.

⁴⁹ *See Line Material*, 333 U.S. 287.

a single patent.⁵⁰ Notably, these limitations were all articulated in the context of *horizontal* agreements between patentees and licensees who each manufacture and sell products. As recognized in *Leegin*, while horizontal arrangements may often be anticompetitive and lead to higher prices, vertical agreements can benefit consumers.⁵¹ Accordingly, although the cases interpreting *General Electric* did not differentiate between horizontal and vertical licenses, modern adjudication would likely be more precise.

C. Patent Pools Under the Line Material Rule

¶21 The *General Electric* decision came under fire by the Supreme Court in *United States v. Line Material Co.*, a case involving multiple patentees who had cross-licensed (or “pooled”) their patents to facilitate product development.⁵² In *Line Material*, the patentees each manufactured and sold the patented circuit-breaker devices, and further fixed minimum sale prices in licenses to other manufacturers.⁵³ The District Court had upheld the price restraints under *General Electric*, and on appeal, the Government urged the Supreme Court to overrule its precedent.⁵⁴

¶22 The Justices split on the issue of overruling, and held: “[W]hen patentees [agree to] prices on their *several products*, . . . [it] is unlawful per se under the Sherman Act.”⁵⁵ This limitation has proven effective. For example, the Fifth Circuit cited *Line Material* for the rule: “[*General Electric*] is unavailable where two or more patentees fix the prices of products incorporating several independently owned patents.”⁵⁶

¶23 More recently, however, the Supreme Court has issued other antitrust decisions that counsel against *per se* treatment under similar scenarios. In *Broadcast Music, Inc. v. Columbia Broadcasting System*, the Supreme Court applied the rule of reason to blanket licenses issued by record companies, which fixed the prices for broad collections of copyrighted songs.⁵⁷ It recognized that *per se* treatment was inappropriate, even though the pooling of copyrights constituted horizontal price fixing. This was allowed because it would be “impossible for . . . individual copyright owners to negotiate with and license the users.”⁵⁸

¶24 The DOJ also recognizes the “benefits . . . from combining complementary inventions.”⁵⁹ Yet, *Line Material* has not been overruled, and the specter of *per se* condemnation persists.

¶25 However, even assuming *Line Material* remains valid, the rule does not apply directly to vertical agreements, where multiple research patentees have pooled their rights and collectively licensed manufacturers. In *Line Material*, both patentees in the patent

⁵⁰ See *Newburgh Moire Co. v. Superior Moire Co.*, 237 F.2d 283 (3d Cir. 1956).

⁵¹ *Leegin Creative Leather Prods., Inc. v. PSKS, Inc.*, 127 S. Ct. 2705, 2715–16 (2007).

⁵² 333 U.S. 287 (1948). An interference involving the two patentees had assigned the claims in a way that product development would have been impossible without cross-licensing. *Id.* at 291.

⁵³ *Id.* at 293–95.

⁵⁴ *Id.* at 298–99.

⁵⁵ *Id.* at 314 (emphasis added).

⁵⁶ *In re Yarn Processing Patent Validity Litigation*, 541 F.2d 1127, 1135–36 (5th Cir. 1976).

⁵⁷ 441 U.S. 1 (1979).

⁵⁸ *Id.* at 5.

⁵⁹ Joel I. Klein, Acting Assistant Att’y Gen., DOJ Antitrust Div., Cross-Licensing and Antitrust Law, Address Before the American Intellectual Property Law Ass’n. 2 (May 2, 1997), 1997 WL 1187720.

pool competed with the licensees at the retail level.⁶⁰ The patent pool thus constituted a horizontal conspiracy to eliminate price competition, purposed to allow the patentees to jointly reap monopoly profits. “The unlawful element is the use of the control that such cross-licensing gives to fix prices.”⁶¹ When the agreements are purely vertical, the concerns over horizontal price fixing are inapplicable.

¶26 Additionally, the doctrinal foundations of the *Line Material* decision have been shifted by the *Leegin* rule. The *Line Material* Court stated that “[outside of the patent monopoly], a contract to fix or maintain prices in interstate commerce has long been recognized as illegal per se under the Sherman Act.”⁶² It cited *both* horizontal price fixing precedent and the *Dr. Miles* line of cases for support.⁶³ After *Leegin*, only price fixing between direct competitors remains *per se* illegal, and vertical price maintenance in the non-patent context requires rule of reason treatment. Hence, the premise in *Line Material* for vertical licenses now favors the rule of reason.

D. Price Restraints Across Multiple Licenses

¶27 Other courts have asserted an additional limitation on *General Electric*, holding the rule inapplicable where a “mere plurality” of licenses has been granted.⁶⁴ The Third Circuit addressed the issue of a manufacturing patentee who had licensed two of its four competitors in a segment of the textile industry to use its patented method.⁶⁵ Citing the numerous prior limitations imposed by the Supreme Court on the *General Electric* rule, it instituted yet another—one based more in linguistics than in logic. The Third Circuit read the Supreme Court’s interpretation of the patent laws as “giving a patentee a right to license ‘another to make and vend at a fixed price’”⁶⁶ to permit only *one other* license with price restraints.⁶⁷ Hence, it held a “mere plurality” of licenses with price maintenance terms to *per se* violate the Sherman Act.⁶⁸

¶28 The *Newburgh Moire* decision has received widespread criticism, both scholarly and judicial. Bound by the precedent, a district judge commented that “[t]here is much that could be said for and against the [decision].”⁶⁹ At the time it was issued, a number of journal articles criticized the reasoning and normative propriety of the holding.⁷⁰ Even today, citations to the opinion are typically accompanied by an epitaph like: “[the decision] arguably turned patent and antitrust principles on their heads.”⁷¹ Indeed, by deterring issuance of multiple licenses, the rule inhibits competition and confounds the

⁶⁰ *Line Material*, 333 U.S. at 293–95.

⁶¹ *Id.* at 315.

⁶² *Id.* at 307–08.

⁶³ *Id.* at 308 n.21.

⁶⁴ *Newburgh Moire Co. v. Superior Moire Co.*, 237 F.2d 283, 292 (3d Cir. 1956).

⁶⁵ *Id.* at 291.

⁶⁶ *Newburgh Moire*, 237 F.2d at 292 (emphasis added) (citing *Line Material*, 333 U.S. at 312).

⁶⁷ *Newburgh Moire*, 237 F.2d at 292 (affirming the lower court’s reasoning).

⁶⁸ *Id.* at 293–94.

⁶⁹ *Tinnerman Prods., Inc., v. George K. Garrett Co.*, 185 F. Supp. 151, 158 (E.D. Pa. 1960).

⁷⁰ See, e.g., *Patent Price Restrictions and the Antitrust Laws: A Balance Upset*, 67 YALE L.J. 700, 704 (“[The] single-licensee interpretation appears technically unwarranted.”).

⁷¹ 2 WILLIAM C. HOLMES, INTELLECTUAL PROPERTY AND ANTITRUST LAW § 16:6 (2007).

goals of antitrust law.⁷² Yet, the rule is not dead, and could impede research patentees licensing multiple manufacturers.

¶129 Closer analysis reveals, however, that despite its sweeping language, the *Newburgh Moire* rule should not apply to vertical licenses. As in *Line Material*, the circumstances of this case involved a patentee licensing its *competitors* to use and sell products of the patented method above maintained price levels.⁷³ Furthermore, the precedents that the Third Circuit relied upon all involved *horizontal* conspiracies between competitors seeking to exploit their patent rights for the purposes of price fixing.

¶130 One leading precedent was *United States v. U.S. Gypsum Co.*, where the Supreme Court addressed price-restraining licenses promulgated among “virtually all” drywall sellers.⁷⁴ The Court found that such licenses facilitated a conspiracy among direct competitors to “organize the [entire] industry and stabilize prices.”⁷⁵ Indeed, the Court reserved the question of whether a “mere plurality” of licenses involving price restraints could alone prove a price fixing conspiracy.⁷⁶ Necessarily, illegality required the finding of a conspiracy, and the number of licenses issued was a factor towards this.⁷⁷ In contrast, the *Newburgh Moire* Court obviated the requisite conspiratorial foundations.

¶131 Additionally, the *Gypsum* Court held that “[i]t is well settled that price fixing . . . is illegal, per se,”⁷⁸ citing footnote 21 of *Line Material*. As discussed, that footnote listed both horizontal and vertical price fixing cases, only the former now remain *per se* illegal. Hence, the foundations of *Gypsum* no longer support *per se* illegality for vertical licenses.

¶132 This point is illustrated by the *United States v. New Wrinkle, Inc.* decision,⁷⁹ which was heavily relied upon in *Newburgh Moire*.⁸⁰ In *New Wrinkle*, the Supreme Court dealt with facially vertical arrangements between a patent holding company and manufacturing licensees to fix sale prices of commodities produced under the patented method. In finding the practice illegal, the Court stated that “the fact that New Wrinkle is exclusively a patent holding company [is] of no legal significance.”⁸¹

¶133 However, as with *Gypsum*, this decision must be read in its context. Here, though the holding company was a distinct legal entity and was vertically separated from the manufacturers competing in the industry, it had actually been formed by two of those competitors, who had colluded in order to fix retail prices. The new company then proceeded to license, with price maintenance restraints, each of the more than 200 competitors in the industry.⁸² Explicitly, the Court’s holding rested on the horizontal nature of the conspiracy involving the original patent holders. “An arrangement was made between patent holders to pool their patents and fix prices on the products *for*

⁷² *Id.*

⁷³ *Newburgh Moire*, 237 F.2d at 291.

⁷⁴ 333 U.S. 364, 371 (1948).

⁷⁵ *Id.* at 401.

⁷⁶ See *United States v. U.S. Gypsum Co.*, 340 U.S. 76, 84 (1950) (“There was no holding in our first opinion in *Gypsum* that mere multiple licensing violated the Sherman Act.”).

⁷⁷ *Id.* (“[O]ur judgment [was] squarely on the basis that . . . ‘[defendants] had acted in concert to restrain commerce . . . [using] patent licenses.’”).

⁷⁸ *U.S. Gypsum Co.*, 333 U.S. at 400.

⁷⁹ 342 U.S. 371 (1952).

⁸⁰ *Newburgh Moire Co. v. Superior Moire Co.*, 237 F.2d 283, 293 (3d Cir. 1956).

⁸¹ *New Wrinkle*, 342 U.S. at 379.

⁸² *Id.* at 374.

themselves and their licensees. The purpose and result plainly violate the Sherman Act.”⁸³ There was no mention of whether *truly vertical* price maintenance licenses would warrant *per se* treatment. Again, under *Leegin*, a truly vertical arrangement should formally be accorded rule of reason treatment.

¶34 Thus, the *Newburgh Moire* decision was overly broad in its holding, and overlooked the important distinction between vertical and horizontal price restraints. Today, vertical price restraints not involving patent licenses are judged under the rule of reason.⁸⁴ As explained below, it is illogical to impose a *per se* standard on a patentee, when the underlying transaction remains vertical in nature. Under *Leegin*, the *Newburgh Moire* rule should not apply to research patentees imposing price maintenance upon multiple manufacturing patentees.

E. Non-Manufacturing Patentees

¶35 A final case of note from the Ninth Circuit questioned, in dicta, whether a “nonmanufacturing patentee [could] . . . fix[] its licensee’s prices of the patented product.”⁸⁵ The Ninth Circuit reasoned that while *General Electric* permitted a patentee to fix its competitor’s sale prices via a license, the Supreme Court has not answered whether a “nonmanufacturing patentee” falls within this rule. The Ninth Circuit found it unnecessary to rule on the issue.⁸⁶

¶36 Indeed, the litany of Supreme Court and other cases limiting the *General Electric* holding suggest that nothing more than its narrowest construction survives.⁸⁷ However, *General Electric* established a rule of *antitrust immunity* for price restraints in the patent license involved.⁸⁸ That is, even if *General Electric* does not apply to non-manufacturing patentees, as vertical agreements, rule of reason treatment should be accorded. Read broadly, the *Leegin* decision can apply to all vertical price maintenance, whether involving resale or first sale under a patent license.⁸⁹ Hence, research patentees should be judged by the rule of reason, as with any upstream party licensing those downstream to make or sell its products.

F. Modern Antitrust Doctrine

¶37 The trajectory of modern antitrust jurisprudence has drastically departed from *per se* treatment, favoring the rule of reason as “the prevailing standard of analysis.”⁹⁰ The Supreme Court has established that “there is a presumption in favor of a rule-of-reason standard,”⁹¹ and application of *per se* illegality “[is] appropriate only when [relating] to

⁸³ *Id.* at 380 (emphasis added).

⁸⁴ *Leegin Creative Leather Prods., Inc. v. PSKS, Inc.*, 127 S. Ct. 2705, 2710 (2007).

⁸⁵ *Royal Indus. v. St. Regis Paper Co.*, 420 F.2d 449, 452 (9th Cir. 1969).

⁸⁶ *Id.* at 453.

⁸⁷ Lipstein & Tisch, *supra* note 23, at 2 (“[C]ourts have nibbled away at [*General Electric*], leaving it a narrow rule . . .”).

⁸⁸ *United States v. Gen. Elec. Co.*, 272 U.S. 476, 490 (1926) (“[Patentee] may [use price restraints] . . . to secure pecuniary reward.”) (emphasis added).

⁸⁹ See Arnold B. Calmann, *Antitrust Issues in Licensing*, 915 P.L.I. PAT. 449, 481 (2007) (“*Leegin* represents the overturning of the last vestige of *per se* rules in vertical arrangements.”).

⁹⁰ *Cont’l T.V., Inc. v. GTE Sylvania, Inc.*, 433 U.S. 36, 49 (1977).

⁹¹ *Bus. Elecs. Corp. v. Sharp Elecs. Corp.*, 485 U.S. 717, 726 (1988).

conduct that is *manifestly anticompetitive* . . . “[with a] pernicious effect on competition and lack of any redeeming virtue.”⁹² This modern approach has been applied across the board to vertical restraints, including price⁹³ and non-price conditions.⁹⁴

¶38 Especially for research patentees, there are several reasons why *per se* treatment of licenses is inappropriate. First, as the Court noted in *Leegin*, “the *per se* rule is appropriate only after courts have had considerable experience with the type of restraint at issue.”⁹⁵ However, the industry of upstream research and patenting without also manufacturing the inventions is relatively nascent. Indeed, the Bayh-Dole Act, passed in 1980,⁹⁶ effectively established the licensing industry that now exists at research universities.⁹⁷ For such “business relationships where the economic impact of certain practices is not immediately obvious,” the rule of reason should apply.⁹⁸

¶39 Second, research patentees engage in purely vertical arrangements with their manufacturing licensees, as the parties to each transaction exist at “different levels of distribution.”⁹⁹ Modern Supreme Court cases have repeatedly recognized the “differences in economic effect between vertical and horizontal agreements,” which preclude “reliance on rules governing horizontal restraints when defining rules applicable to vertical ones.”¹⁰⁰ Hence, the cases discussed above, all involving horizontal agreements, should be inapposite to vertical price restraints imposed by research patentees.

G. Economic Incentives of Research Patentees

¶40 There are also two significant economic reasons why price restraints imposed by research patentees are more likely to benefit than hurt consumers, and can result in competitive rather than monopolistic prices at market. First, generally accepted economic theory explains that a monopolist derives the benefits of exclusivity from a single market.¹⁰¹ As per the “Single Monopoly Profit” theory, an upstream monopolist extracts its entire rents from those it sells to directly, and derives no further profit by controlling the resale market.¹⁰² Hence, even the dissent in *Leegin* recognized that an upstream monopolist must have “special reasons” for imposing RPM contracts, other

⁹² *Sylvania*, 433 U.S. at 50 (emphasis added) (citations omitted).

⁹³ See *State Oil Co. v. Khan*, 522 U.S. 3 (1997) (maximum prices); see also *Leegin Creative Leather Prods., Inc. v. PSKS, Inc.*, 127 S. Ct. 2705 (2007) (RPM).

⁹⁴ *Sylvania*, 433 U.S. 36 (vertical non-price restraints).

⁹⁵ *Leegin*, 127 S. Ct. at 2713.

⁹⁶ See de Larena, *supra* note 3, at 1374–75.

⁹⁷ Bayh-Dole has facilitated widespread emergence of licensing. See *id.*

⁹⁸ *Leegin*, 127 S. Ct. at 2713 (citing *Kahn*, 522 U.S. 3).

⁹⁹ *Bus. Elecs. Corp. v. Sharp Elecs. Corp.*, 485 U.S. 717, 730 (1988); see *County Materials Corp. v. Allan Block Corp.*, 502 F.3d 730, 736 (7th Cir. 2007).

¹⁰⁰ *Leegin*, 127 S. Ct. at 2714.

¹⁰¹ See, e.g., Steven C. Salop & R. Craig Romaine, *Preserving Monopoly: Economic Analysis, Legal Standards, and Microsoft*, 7 GEO. MASON L. REV. 617, 624–25 (1999) (describing the single monopoly profit theory).

¹⁰² See *Concord v. Boston Edison Co.*, 915 F.2d 17, 23 (1st Cir. 1990) (“[T]he extension of monopoly power from one to two levels does not necessarily, nor in an obvious way, give . . . added power to raise prices.”) (emphasis in original).

than an anticompetitive desire to extract additional returns.¹⁰³ The research patentee will similarly derive no added benefits from maintaining monopolistic prices at retail.

¶41 In fact, the economic incentives of a research patentee align with those of consumers, and the licensor benefits from *lower* prices at retail. Like the manufacturer in *Leegin*, the research patentee generally has incentives to lower prices in order to increase product distribution and generate more royalty revenues from sales.¹⁰⁴ Indeed, its incentives to boost sales may even be stronger than those of product manufacturers in the RPM context. Unlike producers, research patentees are not subject to product liability,¹⁰⁵ nor do they incur marginal costs for materials or production expenses.¹⁰⁶ Rather, once development, patent prosecution, and transaction cost overheads are paid, the research patentee faces “near-zero” costs per unit licensed.¹⁰⁷ Hence, it has few reasons, if any, to limit retail output.

¶42 Conversely, royalty revenues may *increase* with product distribution, as royalty rates need not be tied to product price,¹⁰⁸ and are often scalable with increased commercial success of the product.¹⁰⁹ Hence, research patentees have incentives to boost sales as much as possible at the retail level, and will benefit from lower, non-monopolistic prices to consumers.¹¹⁰ As the Court recognized in *Leegin*, when “the interests of manufacturers and consumers are aligned with respect to retailer profit margins,” the rule of reason is appropriate. In turn, it should apply to research patentees.¹¹¹

III. BENEFITS OF PRICE RESTRAINTS TO RESEARCH PATENTEES

¶43 As vertical restraints, price maintenance in licenses by research patentees should be assessed under the rule of reason. This section explicates a specific methodology that research patentees could use to enhance product distribution and licensing revenues from their patented technologies. Applying rule of reason analysis, this part finds that the

¹⁰³ Of course, as the author of the *Boston Edison* decision, it is no surprise that Justice Breyer conceded this point.

¹⁰⁴ 127 S. Ct. at 2718 (“[I]n general, the interests of manufacturers and consumers are aligned . . .”). Of course, countervailing interests might at times require raising retail prices via RPM contracts or patent license restraints.

¹⁰⁵ See *Cont’l T.V., Inc. v. GTE Sylvania, Inc.*, 433 U.S. 36, 55 n.23 (1977) (“[S]ociety increasingly demands that manufacturers assume direct responsibility for the safety and quality of their products.”).

¹⁰⁶ See Willard K. Tom, *The DOJ/FTC Report on Antitrust Enforcement and Intellectual Property Rights*, 21 ANTITRUST 35, 35 (2007) (“[F]ixed costs are high and marginal costs are near zero . . . [for] intellectual property . . .”).

¹⁰⁷ *Id.*

¹⁰⁸ Royalties can be charged as a fixed amount per unit sold or as a percentage of sale revenues. See Sergio Garcia et al., *An Introduction to Licensing Technology from Universities* at 3, FENWICK & WEST LLP, Jan. 6, 2006, available at http://www.fenwick.com/docstore/Publications/IP/university_licensing.pdf.

¹⁰⁹ *Id.* (“Some of the more common payment structures [include] . . . royalty structures that scale with your increasing success in the marketplace.”).

¹¹⁰ An analogous situation was addressed by the Eighth Circuit, sitting *en banc*, in relation to the economic incentives of newspaper publishers. See *Paschall v. Kansas City Star Co.*, 727 F.2d 692, 701 (8th Cir. 1984) (*en banc*). Since advertising revenues increased with circulation, the Court concluded that the publisher has incentives “to keep the retail price as low as possible,” and consumer interests will thereby be promoted. *Id.*

¹¹¹ 127 S. Ct. at 2718.

methodology proposed has significant procompetitive benefits that should outweigh any anticompetitive effects of price control.

A. *A Method to Utilize Price Maintenance in Patent Licensing*

¶44 Patents procured by research institutions are often licensed on an exclusive basis for product development and distribution.¹¹² Exclusive licensing shields a licensee from competition over the patented product, allowing it to recoup development costs and further reap monopoly profits until the end of the patent term.¹¹³ Notably, industry licensees are not simply being greedy when they seek exclusive licensing from research patentees.¹¹⁴ Inventions at research institutions often require further development to mature into commercial products,¹¹⁵ and there is inherent risk in new technologies as it is difficult to assess commercial potential.¹¹⁶ These are valid reasons for licensees to desire immunity from competition.¹¹⁷

¶45 However, exclusive licensing also causes real problems. Once a product has been fully developed and costs recouped, the exclusive licensee will continue to reap monopoly profits at the expense of consumers.¹¹⁸ Furthermore, upon entering an exclusive licensing agreement, the patentee may be barred from licensing to other research institutions, and may even be restricted from using the invention in its own endeavors.¹¹⁹ Many scholars in the field have lamented the impediments thus imposed on research.¹²⁰

¶46 Hence, there is a genuine need to shield the products of research inventions from competition during their inception stages and the periods required to recoup fixed costs. Yet, there are equally pressing reasons to avoid exclusive licensing, and to allow consumers to realize the benefits of price competition within a shorter timeframe than the full patent term. Temporary vertical price maintenance imposed by a research patentee may offer a practical balance between these competing interests.

¶47 The proposed methodology comprehends two phases in the lifecycles of products derived from the inventions of research patentees.¹²¹ In Phase I, the patented subject matter is further developed, production techniques are refined, distribution methods are established, and fixed costs are recouped. In Phase II, proceeds from sales cover the

¹¹² See de Larena, *supra* note 3, at 1423–24 (“[I]n practice [universities] frequently grant exclusive licenses to companies . . .”).

¹¹³ See Eisenberg, *supra* note 6, 1709–10 (“[B]y charging monopoly prices without facing competition . . . [a manufacturing licensee] preserves for itself the rents from product development.”).

¹¹⁴ See generally de Larena, *supra* note 3, at 1385–86 (“[C]ommercial licensees pressure their university licensors for exclusive licenses.”).

¹¹⁵ See *id.* at 1414 (“[Typically], the [initial licensee] runs some experiments, [and] further develops the technology . . .”).

¹¹⁶ See *id.* at 1381 (“[M]ost university inventions are never picked up by a licensee, and even fewer generate big income . . .”).

¹¹⁷ See Pulsinelli, *supra* note 8, at 398 (“[F]irms . . . worry that their competitors [will] wait for them to develop the markets and work out kinks in the technology, and then steal their markets . . .”).

¹¹⁸ See Eisenberg, *supra* note 6, at 1709–10.

¹¹⁹ de Larena, *supra* note 3, at 1386 (“[Exclusive licensees] typically use their . . . rights to block research by others, even sometimes within the very university that holds the patent.”).

¹²⁰ See, e.g., Pulsinelli, *supra* note 8, at 430–31.

¹²¹ de Larena, *supra* note 3, at 1414 (describing a typical model of further development of the patented technology, followed by product manufacture and distribution).

manufacturer's marginal costs, and royalties are paid to the patentee until the term expires. As mentioned, during Phase I, licensees want insulation from price competition in order to mitigate risks and secure a profitable return on investment. During Phase II, exclusive licensees are able to exploit their rights by reaping monopoly rents from consumers in excess of development investments. This exploitation is also inefficient for the patentee. By restricting output to meet demand at the monopoly retail price, the licensee curtails potential royalty revenues, whereas the patentee would benefit from increased distribution.¹²²

¶48 Thus, this article proposes that research patentees could impose *temporary* price restraints across multiple *non-exclusive* licenses. The initial price floor would be sufficient for multiple licensees to recoup development costs.¹²³ However, research patentees would not grant exclusive licenses, and would actively seek multiple licensees for product development. Once Phase I is complete, the research patentee would terminate or gradually reduce the price restraint, allowing price competition between the licensees. Hence, during Phase II, competition would drive down costs to consumers, in advance of the patent's expiration. Royalty revenues could similarly increase, as more products are demanded by consumers at the lower prices.

B. Rule of Reason Analysis of the Proposed Method

¶49 The rule of reason is the "prevailing standard of analysis" in antitrust, and requires the fact finder to assess the totality of circumstances at hand in order to determine whether the practice constitutes an "unreasonable restraint on competition."¹²⁴ Relevant factors include nature of the business, reason for the restraint, and effect on competition.¹²⁵ The central determination is whether a practice has "anticompetitive effect[s] that [harm] the consumer[,] [or] stimulat[es] competition . . . in the consumer's best interest."¹²⁶

¶50 The first step in rule of reason analysis is to determine whether the party imposing the restraint has "market power."¹²⁷ Simply put, this is the power to control prices, "the ability *profitably* to maintain prices above, or output below, competitive levels for a significant period of time."¹²⁸ Without market power, ordinary competition will deter any attempts to restrain trade in a manner harmful to consumers.¹²⁹ Until recently, patent owners were presumed to have market power, due to consumers' "inability to buy the

¹²² In the manufacturer-retailer model, this is known as the successive monopoly problem. One strong incentive for a firm to vertically-integrate is to avoid a monopoly at the distribution level sapping its profits from the monopoly at the manufacturing level. *See Concord v. Boston Edison Co.*, 915 F.2d 17, 24 (1st Cir. 1990).

¹²³ Concededly, this may be infeasible for some products or industries, if a licensee's development costs can only be recouped by selling exclusively at maximal profits for the entire patent term.

¹²⁴ *Cont'l T.V., Inc. v. GTE Sylvania, Inc.*, 433 U.S. 36, 49 (1977).

¹²⁵ *Leegin Creative Leather Prods., Inc. v. PSKS, Inc.*, 127 S. Ct. 2705, 2712 (2007) (citing *State Oil v. Khan*, 522 U.S. 3 (1977)).

¹²⁶ *Id.* at 2713.

¹²⁷ *Id.* at 2720 ("[Possible anticompetitive impact] may not be a serious concern unless the relevant entity has market power.").

¹²⁸ IP Guidelines, *supra* note 24, § 2.2 (emphasis added).

¹²⁹ *See* CHARLES J. GOETZ & FRED S. MCCHESENEY, *ANTITRUST LAW: INTERPRETATION AND IMPLEMENTATION* 56–58 (3d ed. 2006).

product elsewhere.”¹³⁰ In *Illinois Tool Works v. Independent Ink*, the Supreme Court invalidated this presumption, instead aligning with “the vast majority of academic literature recogniz[ing] that a patent does not necessarily confer market power.”¹³¹ The proper inquiry is whether substitutes exist for the patented product.¹³²

¶51 Proving market power involves a highly factual inquiry into the specific markets at issue, and consideration of substitutability at both the supply (production) and demand (consumption) levels.¹³³ As such, it cannot be assessed in the abstract. To ensure objectivity of this discussion, it will be assumed that the research patentee has market power. Nonetheless, substantial procompetitive benefits serve to validate the proposed method.

¶52 The procompetitive benefits arising from the proposed approach overwhelmingly outweigh the disadvantages of maintaining supra-competitive prices. First, the imposition of temporary price maintenance during product development, followed by free competition between manufacturers, would be used as an alternative to the exclusive licensing practices that prevail today.¹³⁴ In the exclusive licensing context, monopoly rents are imposed upon consumers by the exclusive manufacturer for the duration of the patent term. Furthermore, royalties charged by the patentee only add to the final retail price, and impose no constraints on an exclusive manufacturer.¹³⁵

¶53 In contrast, the proposed method introduces two forms of beneficial competition. During Phase I, manufacturers engage in non-price competition and have incentives to develop the highest quality products and the most efficient production and distribution lines. In Phase II, consumer benefit is twofold. First, price competition drives retail prices to marginal cost levels, prior to patent expiration. Second, the actual marginal cost levels should be lower and the product quality improved, due to the non-price competition during Phase I.

¶54 Indeed, non-price competition in Phase I may also lead to differentiation of products covered by the same patent. As the Supreme Court has recognized, promoting product differentiation is a legitimate procompetitive justification, as it benefits consumers by increasing variety.¹³⁶ As manufacturers seek to establish market share during Phase I, they may develop different variations of the same product, or invest in further innovations to the underlying invention. Hence, even while the price restraint is in effect, significant gains are realized by avoiding exclusive licensing and attracting multiple licensees.

¹³⁰ *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 16 (1984) (citing *United States v. Lowe’s Inc.*, 371 U.S. 38, 45–47 (1962)).

¹³¹ *Ill. Tool Works Inc. v. Indep. Ink, Inc.*, 547 U.S. 28, 44 (2006).

¹³² *Blue Cross & Blue Shield United of Wis. v. Marshfield Clinic*, 65 F.3d 1406, 1410 (7th Cir. 1995) (“[T]he definition of a market depends on substitutability on the supply side as well as on the demand side.”).

¹³³ *Id.*

¹³⁴ *See de Larena, supra* note 3, at 1423–24 (“[I]n practice [universities] frequently grant exclusive licenses to companies . . .”).

¹³⁵ *See Eisenberg, supra* note 6, at 1709 (“Any royalty obligation that the firm incurs under the patent . . . is merely a tax on product development that increases costs and reduces profits.”).

¹³⁶ *See Nat’l Collegiate Athletic Ass’n v. Bd. of Regents of the Univ. of Okla.*, 468 U.S. 85, 101–02 (1984) (“[I]n [differentiating its product], [NCAA’s] actions widen consumer choice . . . and hence [are] procompetitive.”).

¶55 The goal of inducing market entry is itself a recognized procompetitive justification. Even the dissent in *Leegin* conceded the utility of vertical price maintenance to facilitate new entry.¹³⁷ Describing the situation of a new manufacturer maintaining resale prices in order to give retailers incentives to take up its product, Justice Breyer described how the restraints enable entry by assuring entrants that they “will later *recoup their investment*.”¹³⁸ As discussed, price maintenance imposed by the research patentee in Phase I similarly entices new manufacturers to enter licenses and invest in the technology by assuring their returns on investment. In light of this important benefit, Justice Breyer conceded that he “might agree that the *per se* rule should be slightly modified to allow an exception for . . . ‘new entry.’”¹³⁹ The purpose and effect of the proposed methodology to promote entry of multiple manufacturing licensees weighs strongly in favor of legality.

¶56 Finally, the temporary nature of the restraint and its control by the research patentee counsels strongly for legality. The *Leegin* Court recognized that the “source of the restraint” is an important factor in the rule of reason analysis.¹⁴⁰ Here, the determination of when to release or reduce the price restraint will be at the patentee’s discretion. Given its economic incentives, a research patentee will relax restraints at the optimal point to enhance competition and product distribution.

¶57 As the Supreme Court has recognized, “manufacturers have an economic interest in maintaining as much intrabrand competition as is consistent with the efficient distribution of their products.”¹⁴¹ Economic theory largely recognizes that “the manufacturer’s interest necessarily corresponds with that of the public,”¹⁴² in that “a lower retail price means increased sales and higher manufacturer revenues.”¹⁴³ As reiterated in *Leegin*, where the manufacturer (analogously, patentee) initiates the restraint, “there is a special reason to believe . . . benefits exist.”¹⁴⁴ Since the patentee initiates and controls the price restraint, precedent and economic principles favor legality.

C. Practical Feasibility

¶58 The proposed transactional method might well face higher practical hurdles than legal ones. While non-exclusive licensing by this approach will benefit research patentees and consumers, corporate manufacturers arguably have less incentive to give up the monopolies they currently enjoy over the length of the patent term. This section briefly addresses this point.

¶59 One area of licensee benefit is initial cost savings. Instead of prompting a price war to win exclusive rights, up-front fees should be greatly reduced under this scheme. Given

¹³⁷ *Leegin Creative Leather Prods., Inc. v. PSKS, Inc.*, 127 S. Ct. 2705, 2728 (2007).

¹³⁸ *Id.* (emphasis added).

¹³⁹ *Id.* at 2731.

¹⁴⁰ *Id.* at 2719.

¹⁴¹ *Cont’l T.V., Inc. v. GTE Sylvania, Inc.*, 433 U.S. 36, 56 (1977).

¹⁴² *Id.* (citations omitted).

¹⁴³ *Id.* at 57 n.24 (citing *Antitrust Laws—Sherman Act—Vertical Restraints: Enforcement of Resale Location Restrictions Is a Per Se Violation of Section One of the Sherman Act*, 88 HARV. L. REV. 636, 641 (1975)).

¹⁴⁴ *Leegin*, 127 S. Ct. at 2729 (Breyer, J., dissenting).

the speculative nature of these technologies,¹⁴⁵ the ability to license these inherently risky inventions for lower up-front fees should be viewed favorably by corporate executives.

¶60 Furthermore, a non-exclusive licensing structure could allow companies to enter at later stages of product development, with less commitment and greater expectations of success. Those who licensed earlier could in turn benefit from these late entries, by licensing their trade secrets regarding manufacturing processes and product improvements to the newcomers. Thus, licensees with the greatest investment could recoup the greatest returns, and others could license for lower commitment at less risk and correspondingly lower returns.

¶61 Finally, by outsourcing product development to the initial licensees, subsequent licensees could improve their business models. Rather than investing heavily in development and initial licensing in hopes for “blockbuster” products,¹⁴⁶ later licensees could invest as a means of diversifying existing product lines. This could hedge the risks involved with primary product lines.

IV. PATENTING AT RESEARCH UNIVERSITIES

¶62 Any discussion of patenting and licensing at universities must consider the requirements and implications of the Bayh-Dole Act.¹⁴⁷ Before its enactment, universities were largely excluded from the patent system.¹⁴⁸ Now, in return for federal funding and the ability to patent their inventions, universities must license on “reasonable terms,” designed to achieve commercial practice of the inventions.¹⁴⁹ The Act has spurred a dramatic increase in patenting by universities and the proliferation of TTOs for portfolio management and licensing.¹⁵⁰

¶63 Nonetheless, there are many problems and inefficiencies created by Bayh-Dole. One arises from exclusive licensing, which imposes innovation-retarding restrictions on access to patented technologies.¹⁵¹ This offends one of the general purposes of the Act itself, “to ensure that inventions . . . are used in a manner to promote free competition and enterprise *without unduly encumbering future research and discovery.*”¹⁵² Also, in many instances, exclusive licensing has not proven profitable for universities. As Professor de Larena explains, “most schools do not make money from technology transfer.”¹⁵³ In contrast, “[s]ome of the most commonly acclaimed success stories for university

¹⁴⁵ See de Larena, *supra* note 3, at 1381 (“[M]ost university inventions . . . [do not] generate big income . . .”).

¹⁴⁶ This business model has threatened the viability of pharmaceutical giants. See Gary P. Pisano, *Can Science Be a Business? Lessons from Biotech*, HARV. BUS. REV., Oct. 2006, at 117 (describing the “shortage of potential blockbuster drugs” that “threatened established pharmaceutical companies”).

¹⁴⁷ 35 U.S.C. § 201(f) (2000).

¹⁴⁸ Pulsinelli, *supra* note 8, at 394.

¹⁴⁹ Peter S. Arno & Michael H. Davis, *Why Don't We Enforce Existing Drug Price Controls? The Unrecognized and Unenforced Reasonable Pricing Requirements Imposed upon Patents Deriving in Whole or in Part from Federally Funded Research*, 75 TUL. L. REV. 631, 682 (2001) (citing 35 U.S.C. § 201(f) (1994)).

¹⁵⁰ de Larena, *supra* note 3, at 1412.

¹⁵¹ See, e.g., *id.* at 1376 (“[T]he existence of the blocking rights may deter important follow-on research . . .”).

¹⁵² 35 U.S.C. § 200 (2000) (emphasis added).

¹⁵³ de Larena, *supra* note 3, at 1385.

technology transfer involve patents that yield substantial royalty payments through nonexclusive licenses”¹⁵⁴

¶164 Many have argued that consumers are the real losers from exclusive licensing under Bayh-Dole.¹⁵⁵ Taxpayers front the initial research expenses provided through federal funding.¹⁵⁶ The university obtains a patent, thereby securing the right to obtain monopoly profits from the invention. Under the framework of exclusive licensing, the manufacturing licensee obtains a successive monopoly to the technology, and reaps monopoly rents from consumers.¹⁵⁷ Consumers thus pay for the upstream research, and again for the downstream product at monopoly prices.¹⁵⁸

¶165 Nonetheless, Bayh-Dole expressly requires licensing on “reasonable terms,”¹⁵⁹ which has been interpreted by some scholars to encompass pricing at reasonable, non-monopolistic levels.¹⁶⁰ Scholarship splits as to whether the present subjugation of this provision stems from under-enforcement by the government,¹⁶¹ industry pressure and bad faith by universities,¹⁶² or structural deficiencies in the Act itself.¹⁶³

¶166 As discussed, economic theory suggests that downstream pricing on “reasonable terms” is indeed in universities’ best interests, given their situation as research patentees realizing revenues from royalty payments. The methodology outlined above, which balances industry interests with those of universities and consumers, could mitigate these problems by providing a contractual alternative to exclusive licensing. Temporary price maintenance by research patentees could serve the purposes of the Bayh-Dole Act by facilitating competitive downstream pricing of the federally-funded, patented technologies.

¶167 Non-exclusive licensing via the proposed method may also generate additional benefits for the research patentees. The FTC has long recognized the benefits of liberal licensing practices, both as economic boons and as tending to “promote the progress of science.”¹⁶⁴ Former Commissioner Mary Azcuenaga remarked that “intellectual property licensing can . . . help integrate complementary intellectual property.”¹⁶⁵ Often, individual patents represent one component of an overall product, and widespread licensing facilitates “combination with complementary factors” towards the development of diverse products.¹⁶⁶ While exclusive licensing locks the technology into the particular

¹⁵⁴ Eisenberg, *supra* note 6, at 1710.

¹⁵⁵ *See, e.g., id.* at 1709.

¹⁵⁶ de Larena, *supra* note 3, at 1389.

¹⁵⁷ *See* Eisenberg, *supra* note 6, at 1709–10.

¹⁵⁸ de Larena, *supra* note 3, at 1389–90 (“[R]oyalty cost is . . . passed on to the consumer along with the monopoly rents on the resulting product.”).

¹⁵⁹ 35 U.S.C. § 201(f) (2000).

¹⁶⁰ *See* Arno & Davis, *supra* note 149, at 649–51 (arguing that “reasonable terms” includes pricing); *but see* John H. Raubitschek, *Reasonable Pricing—A New Twist for March-In Rights Under the Bayh-Dole Act*, 22 SANTA CLARA COMPUTER & HIGH TECH. L.J. 149, 162–63 (arguing against Arno & Davis).

¹⁶¹ *See generally* Arno & Davis, *supra* note 149.

¹⁶² *See* de Larena, *supra* note 3, at 1385–86, 1417–18.

¹⁶³ *See* Pulsinelli, *supra* note 8, at 481 (“[Federally-funded] researchers . . . should have a limited, royalty-free license to make and use for research purposes all inventions developed with federal funds.”).

¹⁶⁴ U.S. CONST. art. I, § 8, cl. 8.

¹⁶⁵ Mary L. Azcuenaga, FTC Commissioner, *Antitrust/Intellectual Property Claims in High Technology Markets*, 1995 WL 50293 at 3 (Jan. 26, 1995).

¹⁶⁶ IP Guidelines, *supra* note 24, § 2.3.

use applied by the patentee, liberal licensing “potentially *increas[es]* the expected returns from intellectual property.”¹⁶⁷

¶168 Furthermore, widespread licensing and distribution of the patented invention can promote further innovation and the development of improvement technologies. Patents are available on incremental improvements,¹⁶⁸ which can be highly profitable. However, practicing the subject matter of an improvement patent often requires a license for the original technology.¹⁶⁹ If the original is exclusively licensed, improvements may be deterred.

¶169 Finally, for major research universities in particular, widespread distribution of patented technologies adds to their prestige and renown. Indeed, patenting prowess is a hot area of competition among research institutions.¹⁷⁰ By restricting distribution, exclusive licensing could undermine this prestige.

¶170 By abandoning exclusive licensing practices, university patentees accommodate the purposes of the Bayh-Dole Act, while realizing economic and non-monetary benefits. The proposed methodology may offer research patentees a viable contractual alternative to exclusive licensing.

V. CONCLUSION

¶171 As the dust settles from the “legal turbulence” caused by *Leegin*, it becomes clear that price maintenance by research patentees should be judged under the rule of reason. Due to the substantial procompetitive benefits that may inure from temporary, patentee-controlled price restraints, their legality should be assured under the antitrust laws. Such license provisions facilitate non-price competition at the manufacturing level, leading to enhanced quality, efficiency, and product differentiation. In turn, they enable competitive prices at market, in advance of patent expiration.

¶172 Finally, this approach may balance the interests of university patentees and industry licensees, and steer negotiations away from the inefficient exclusive licensing practices that prevail today. Thus, the express purposes of the Bayh-Dole Act can be served, and current obstacles impeding research and precluding availability of new technologies can be overcome. In conclusion, this article retorts to the *Leegin* dissent: “Bring on the turbulence, and let it unsettle the laws of patent licensing!”

¹⁶⁷ *Id.* (emphasis added).

¹⁶⁸ 35 U.S.C. § 101 (2005).

¹⁶⁹ See Pulsinelli, *supra* note 8, at 413–15 (discussing blocking patents).

¹⁷⁰ See de Larena, *supra* note 3, at 1381 (noting the prestige from patenting).