

Business Model Innovation and Antitrust Law

Rachel S. Tennis[†] & Alexander Baier Schwab^{††}

Modern antitrust enforcement is premised on maximizing consumer welfare through an examination of two variables: unit price and total output. That inquiry suffices for static markets for relatively interchangeable goods, but it is ill-suited for more dynamic markets. While typically associated with technological innovation, dynamic markets can take many forms. A firm's business model, for instance, can exhibit all the same indicia of innovation and fluidity as the technological intricacy of its product. But by treating firms with innovative business models as though they inhabit a separate market from their more traditional competitors, antitrust law places those firms at a comparative disadvantage. Rather than reward firms for the increased consumer surplus that results from business model innovation, the enforcers of antitrust law have instead discouraged growth in innovative sectors. The result is economically harmful and doctrinally incoherent. This Article seeks to remedy that flaw. We examine the unique benefits provided by business model innovators, conclude that mergers between such firms yield underappreciated returns to consumer surplus, and offer some recommendations for policy reform.

Introduction	308
I. <i>FTC v. Whole Foods Market, Inc.</i>	310
A. <i>One Court's Difficulty</i>	311
B. <i>Legal and Policy Significance of the Judges' Views</i>	312
II. Dynamic Competition Theory and Antitrust Law	313
A. <i>The Law of Horizontal Mergers: A Brief History</i>	313
B. <i>Horizontal Merger Guidelines</i>	316
C. <i>Static Versus Dynamic Competition</i>	317
D. <i>Literature Critiquing the Doctrine</i>	318
1. <i>Identifying Anticompetitive Behavior in Dynamic Markets</i> ..	319
2. <i>Mergers in High-Technology Markets</i>	320
3. <i>Evaluating Mergers Using Nonprice Criteria</i>	321
E. <i>Revising the Horizontal Merger Guidelines</i>	323

[†] Associate, Steptoe & Johnson LLP; J.D., Yale Law School, 2011; B.A., Yale University, 2008.

^{††} Law Clerk to the Honorable Steven M. Colloton, U.S. Court of Appeals for the Eighth Circuit; J.D., Yale Law School, 2011; A.B., Harvard University, 2006.

The authors thank Daniel Schuker of the *Yale Journal on Regulation* for his thorough and well-considered editorial advice. They also thank George Priest and Brad Tennis for their thoughtful suggestions.

III. Dynamic Competition Theory and Business Model Innovation	326
A. <i>Business Megatrends and Innovation Premiums</i>	326
B. <i>The Difficulty of Identifying Substitutes for Business Models in Dynamic Markets</i>	327
IV. Advancing Innovation Through Mergers.....	329
A. <i>Competitive Incentives</i>	330
1. Mergers and Acquisitions as an Exit Strategy in Dynamic Industries	330
2. Comparing Mergers and Acquisitions with Alternate Forms of Competition	333
B. <i>Merger Efficiencies in Dynamic Markets</i>	335
1. The Special Efficiencies of Mergers in Innovative Sectors ...	337
C. <i>Business Innovation and Patent Law</i>	339
1. Business Method Patents After <i>Bilski</i>	340
2. The Benefits of Unpatentable Business Models	341
3. Market Consolidation as Incentive for Innovation	343
D. <i>The Competitive Asymmetries of the Status Quo</i>	344
1. Harms to Innovation.....	345
2. Harms to Innovators.....	346
3. Political Harms.....	347
V. Recommendations for Reform	348
Conclusion	350

Introduction

The accepted view in modern antitrust law is that a merger injunction is warranted when the acquiring company will be able to profit unduly from the limited availability of postmerger substitutes.¹ This approach raises few problems in traditional, static markets for interchangeable goods. But in more dynamic markets—those characterized by rapid innovation and a broad range

1. See U.S. DEP'T OF JUSTICE & FTC, HORIZONTAL MERGER GUIDELINES § 4, at 7 (Aug. 19, 2010) [hereinafter 2010 HORIZONTAL MERGER GUIDELINES] (“Market definition focuses solely on demand substitution factors . . .”), available at <http://www.justice.gov/atr/public/guidelines/hmg-2010.pdf>; *FTC Guide to the Antitrust Laws*, FTC, <http://www.ftc.gov/bc/antitrust/markets.shtm> (last visited Apr. 4, 2012); see also 2 JULIAN O. VON KALINOWSKI ET AL., ANTITRUST LAWS AND TRADE REGULATION § 30.03 (2011) (describing the factors courts consider when determining whether an acquisition creates a “reasonable probability” of anticompetitive consequences); Oliver Budzinski & Isabel Ruhmer, *Merger Simulation in Competition Policy: A Survey*, 6 J. COMPETITION L. & ECON. 277, 278 (2010) (describing “traditional structural merger analysis” as “mainly based on changes in market shares and concentration ratios”); Louis Kaplow, *Why (Ever) Define Markets?*, 124 HARV. L. REV. 437, 438-39 (2010) (describing how courts determine the effect of a merger on existing market power); James Langenfeld & Gregory G. Wrobel, *Upward Pricing Pressure Analysis Under the 2010 Horizontal Merger Guidelines*, ANTITRUST, Fall 2010, at 22, 22 (describing the market definition/market concentration approach as the “traditional” approach to evaluating the competitive effects of horizontal mergers).

of differentiated products—the usual assumptions of antitrust law become less reliable.

Dynamic markets take many forms. Perhaps the most obvious examples are in sectors driven by technological advancement. Yet high-technology markets account for only a fraction of the innovations occurring in the economy. For instance, during the second half of the 1990s—a period renowned for technology-driven growth—retail productivity rose at an annual rate of five percent, a development largely driven by Walmart’s exploitation of its “supercenter” innovation.² Other major retailers responded by “increasingly position[ing] themselves in relation to supercenter retailing, some trying to emulate it, others emphasizing what they do better or differently.”³ So profound have Walmart’s contributions to retail innovation been that one commentator has remarked, “The iPad is cool but over the last several decades the most important and productive firm has been Walmart.”⁴ Innovation extends to other arenas as well. “Fair-Trade” products have attracted an enormous customer base worldwide among consumers who deem them ethically superior to traditional goods. Average sales of fair-trade coffee in the United States, for example, grew around forty-eight percent annually from 2000 to 2002.⁵

Prior evaluations of antitrust law have discussed the effects of technological innovation on markets.⁶ This Article goes beyond previous scholarship to argue that current doctrine is an inappropriate tool for evaluating mergers in *any* market characterized by a high degree of creativity. Overreliance by enforcement agencies and courts on static economic theory risks discouraging socially desirable business model innovation.

To illustrate the phenomenon, we introduce the concept of the “business model innovator,” a firm whose business model, rather than its product, is its

2. See WILLIAM W. LEWIS, *THE POWER OF PRODUCTIVITY: WEALTH, POVERTY, AND THE THREAT TO GLOBAL STABILITY* 65 (2004); see also Alex Tabarrok, *Anti Chain Store Policies in India and America*, MARGINAL REVOLUTION (Dec. 19, 2011, 9:57 AM), <http://marginalrevolution.com/marginalrevolution/2011/12/chain-chain-chains-india-and-america.html> (“When we think of growth and innovation we often think first of high-tech sectors but in the United States during the roaring 1990s it was retail productivity growth, led by Walmart, that drove the country.”).

3. Misha Petrovic & Gary G. Hamilton, *Making Global Markets: Wal-Mart and Its Suppliers*, in *WAL-MART: THE FACE OF TWENTY-FIRST-CENTURY CAPITALISM* 107, 124 (Nelson Lichtenstein ed., 2011).

4. *TED Book Maps a New Age of Creativity and Invention: “Launching the Innovation Renaissance”*, TED BLOG (Dec. 1, 2011), <http://blog.ted.com/2011/12/01/ted-book-maps-a-new-age-of-creativity-and-invention-launching-the-innovation-renaissance> (quoting Alex Tabarrok, Associate Professor of Economics at George Mason University).

5. See GAVIN FRIDELL, *FAIR TRADE COFFEE: THE PROSPECTS AND PITFALLS OF MARKET-DRIVEN SOCIAL JUSTICE* 72 (2007).

6. See, e.g., Richard J. Gilbert & Steven C. Sunshine, *Incorporating Dynamic Efficiency Concerns in Merger Analysis: The Use of Innovation Markets*, 63 *ANTITRUST L.J.* 569 (1995); Geoffrey A. Manne & Joshua D. Wright, *Innovation and the Limits of Antitrust*, 6 *J. COMPETITION L. & ECON.* 153, 155 (2010); cf. Richard A. Posner, *Antitrust in the New Economy*, 68 *ANTITRUST L.J.* 925 (2001) (rejecting the idea that antitrust doctrine is ill-suited to the new economy, but arguing that enforcement is institutionally problematic).

chief means of creatively differentiating itself from competitor firms. We rely in particular on *FTC v. Whole Foods Market, Inc.*,⁷ a recent case in the U.S. Court Appeals for the D.C. Circuit that concerned a proposed merger between Whole Foods and Wild Oats, two “premium natural and organic supermarkets” (“PNOS”).⁸ The case presents two prototypical business model innovators and reveals the dangers of foisting traditional antitrust jurisprudence onto such firms without accounting for their unique contributions to innovation.

We begin our discussion in Part I by presenting the controversy in *Whole Foods* and identifying the theoretical disagreements underlying the decision’s three opinions. This Part lays the foundation for the analysis that follows. Part II then provides a short account of dynamic competition theory and shows that there is a growing recognition among commentators and regulators that dynamic considerations should figure more prominently in antitrust doctrine. Part III offers the basis for our theoretical analysis. In this Part, we argue that in much the same way a subtler approach to merger enforcement makes sense for high-technology markets, current antitrust enforcement is ill-suited to policing mergers between business model innovators. The business model in *Whole Foods* serves as our central example. Part IV explores how allowing mergers might protect and encourage socially beneficial business model innovation without introducing the concomitant harms to consumer welfare that antitrust law is meant to police. Relaxing antitrust enforcement in such cases may enhance competition, spur innovation, further efficiency, and eliminate some perverse asymmetries that occur in the current market. We conclude in Part V with recommendations for doctrinal reform.

I. *FTC v. Whole Foods Market, Inc.*

In 2008 the D.C. Circuit reversed a district court’s denial of a preliminary injunction against a merger between Whole Foods and Wild Oats.⁹ In arguing that the merger would decrease the availability of substitutes in a narrow product market, the Federal Trade Commission (FTC) relied on emails that Whole Foods’s CEO, John Mackey, had sent to other Whole Foods executives and directors, “suggesting the purpose of the merger was to eliminate a competitor.”¹⁰ Meanwhile, internal documents produced in the trial court indicated that Whole Foods believed it was facing “‘eroding product differentiation’ as other supermarkets continue[d] to stock many of the same products that Whole Foods offers.”¹¹ That evidence suggests that, even as Whole Foods was eliminating a competitor in Wild Oats, it was facing

7. 548 F.3d 1028 (D.C. Cir. 2008).

8. *Id.* at 1032.

9. *Id.* at 1032-33.

10. *Id.*

11. *FTC v. Whole Foods Mkt., Inc.*, 502 F. Supp. 2d 1, 24-25 (D.D.C. 2007).

increasing competition from other supermarkets attempting to duplicate the success of its innovative business model. *Whole Foods* thus implicates a central quandary in antitrust law: when should a merging company be subject to antitrust enforcement for diminishing the availability of substitutes, and when should it be allowed to reap the profits of transforming a market by benefiting from a merger?

A. *One Court's Difficulty*

The disagreement among the judges on the *Whole Foods* panel about how to define the relevant market demonstrates existing doctrinal confusion about how to deal with mergers in markets where business models are undergoing change. The basis for the suit was section 7 of the Clayton Act, which provides the legal basis for enjoining mergers whose effect “may be substantially to lessen competition.”¹² The FTC and the Justice Department explain that their goal in enforcing section 7 is to prevent mergers that are likely to enhance market power, defined in the 2010 Guidelines as the ability to “raise price, reduce output, diminish innovation, or otherwise harm customers as a result of diminished competitive constraints or incentives.”¹³

By a 2-1 vote, the *Whole Foods* panel ultimately held that the merger implicated section 7, thus warranting a preliminary injunction, but even the majority’s opinions offered differing analyses. Judge Brown’s opinion concluded that the *Whole Foods* merger should be enjoined on behalf of “core” consumers who would be harmed by a price increase because of their “commitment” to the PNOS model.¹⁴ This contrasts somewhat with the often-used test for market definition laid out in the Horizontal Merger Guidelines, which are jointly issued by the U.S. Department of Justice Antitrust Division and the FTC. These Guidelines focus on the likely behavior of *marginal* consumers. According to the Guidelines, when defining a market, “one asks whether a hypothetical monopolist controlling all suppliers in the proposed market could profit from a [small but significant nontransitory increase in price (SSNIP)]”¹⁵—usually five percent over a two-year period.¹⁶ “If a small price increase would drive consumers to an alternative product, then that product must be reasonably substitutable for those in the proposed market and must therefore be part of the market, properly defined.”¹⁷

12. Clayton Antitrust Act § 7, 15 U.S.C. § 18 (2006).

13. 2010 HORIZONTAL MERGER GUIDELINES, *supra* note 1, § 1. The 2010 Guidelines expanded the definition of “market power.” See 1992 Horizontal Merger Guidelines § 0.1, 57 Fed. Reg. 41,552, 41,553 (Sept. 10, 1992) (“Market power to a seller is the ability profitably to maintain prices above competitive levels for a significant period of time.”).

14. *FTC v. Whole Foods Mkt., Inc.*, 548 F.3d 1028, 1039 (D.C. Cir. 2008).

15. *Id.* at 1028, 1038 (citing 1992 Horizontal Merger Guidelines, 57 Fed. Reg. 41,552 (Sept. 10, 1992)).

16. See 2010 HORIZONTAL MERGER GUIDELINES, *supra* note 1, at §§ 4.1.1-2.

17. *Whole Foods*, 548 F.3d at 1038.

Judge Tatel, concurring in the judgment only, came closer to the Guidelines approach by emphasizing product interchangeability. Although he implied that a SSNIP analysis would be an appropriate basis for proving a section 7 violation, he concluded that it was not necessary to satisfy the standard for a preliminary injunction and instead invoked the looser approach of *Brown Shoe Co. v. United States*.¹⁸ Under *Brown Shoe*, the likely effect of a price increase is only “one of a non-exhaustive list of . . . ‘practical indicia’ that may be examined to determine whether a separate market exists.”¹⁹ Judge Tatel identified as practical indicia in *Whole Foods* (1) “‘industry or public recognition’ of the natural and organic market ‘as a separate economic entity’” and (2) “‘peculiar characteristics’” of PNOs—in particular, the sale of natural and organic goods—that distinguish them from the conventional market.²⁰

Judge Kavanaugh rejected both of those approaches in his dissent. He argued that concern for “core consumers” is an inappropriate basis for evaluating a merger because, “for a business to exert market power as a result of a merger, it must be able to increase prices (usually by five percent or more) while retaining enough customers to make that price increase profitable.”²¹ In other words, there is no reason to block a merger on behalf of “core” consumers if a price increase will drive away so many marginal consumers to available substitutes that the firm will be unable to extract monopoly profits. Judge Kavanaugh also rejected the “practical indicia” of *Brown Shoe* as doctrinally defunct and insufficiently rooted in modern economic analysis.²² He would therefore have affirmed the district court, approving its emphasis on the FTC’s failure to present evidence that Whole Foods would be able to sustain higher prices in the absence of Wild Oats stores.

B. *Legal and Policy Significance of the Judges’ Views*

Judge Brown’s analysis suggests that a merging company can be subject to antitrust enforcement any time there is a group of consumers whose demand for the product is highly inelastic. This contrasts with the view that, at least to the extent that “lessening competition” allows a firm to raise prices and reduce output, the primary beneficiary of section 7 is the marginal consumer: when a merger enhances market power, thus giving a firm the ability to charge monopoly prices, consumers who are low on the demand curve may lose their ability to purchase the product.

Judge Tatel and Judge Kavanaugh both accepted versions of the view that a merger injunction is warranted when the acquiring company will be able to

18. *Id.* at 1046 (Tatel, J., concurring in the judgment) (citing *Brown Shoe Co. v. United States*, 370 U.S. 294, 325 (1962)).

19. *Id.*

20. *Id.* at 1045 (quoting *Brown Shoe*, 370 U.S. at 325).

21. *Id.* at 1062 (Kavanaugh, J., dissenting).

22. *Id.* at 1058-59 (citing cases and commentary that reject the *Brown Shoe* approach).

profit from a limited availability of postmerger substitutes.²³ Judge Kavanaugh’s opinion, based on the Horizontal Merger Guidelines, is rooted in microeconomic theory and premised on the assumption that markets are relatively static.²⁴ Legal decisionmakers, in determining whether a merging firm is likely to be able to sustain a price increase, generally assess the availability of substitutes by surveying market data about already existing firms without taking into account whether innovations with the capacity to eliminate such profits are imminent or likely. The remainder of this Article considers whether static market analysis is in fact well-suited to cases like *Whole Foods*.

II. Dynamic Competition Theory and Antitrust Law

This Part begins with a brief history of the law of horizontal mergers. Next, it explains that existing doctrine is primarily concerned with preserving static, rather than dynamic, competition. Finally, it provides an overview of the literature that critiques merger doctrine as harmful to dynamic competition.

A. *The Law of Horizontal Mergers: A Brief History*

This Article addresses “horizontal” mergers, or mergers between companies that produce one or more closely related products in the same geographic market.²⁵ Horizontal mergers are regulated under three federal statutes: the Clayton Act, the Sherman Act, and the Federal Trade Commission Act.²⁶ As noted above, section 7 of the Clayton Act, the central enforcement vehicle,²⁷ bans mergers and acquisitions whose “effect . . . may be substantially to lessen competition, or tend to create a monopoly.”²⁸ Although there remains

23. See *supra* note 1 and accompanying text.

24. See, e.g., Maurice E. Stucke, *Better Competition Advocacy*, 82 ST. JOHN’S L. REV. 951, 979-80 (“The federal agencies’ Horizontal Merger Guidelines, like microeconomic theory generally, assume markets are characterized by a static equilibrium . . .”).

25. See, e.g., *Brown Shoe Co. v. United States*, 370 U.S. 294, 334 (1962) (explaining that any economic arrangement between companies performing similar functions in the production or sale of comparable goods or services may be characterized as “horizontal”). Horizontal mergers should be distinguished from vertical mergers, in which a company acquires a customer or supplier, and conglomerate mergers, in which the merged companies are neither competitors nor customers and suppliers of each other. 2 VON KALINOWSKI ET AL., *supra* note 1, § 30.02.

26. *Id.* § 29.01.

27. *Id.*; see also, e.g., 2010 HORIZONTAL MERGER GUIDELINES, *supra* note 1, § 1 (listing statutory provisions that apply to horizontal mergers and focusing “[m]ost particularly” on section 7 of the Clayton Antitrust Act); Daniel C. Fundakowski, *Health Care Reform & Antitrust Enforcement: A Cure for Health Plan Merger Market Definition Under a Post-Health Care Reform Regime*, 55 ST. LOUIS U. L.J. 1501, 1511 (“The primary statute on point for horizontal mergers is Section 7 of the Clayton Act.”).

28. Clayton Antitrust Act § 7, 15 U.S.C. § 18 (2006). Section 7 was the primary basis for the FTC’s suit to enjoin the Whole Foods-Wild Oats merger: the determination of whether the merger was likely “substantially to lessen competition” “‘hinge[d]’—almost entirely—‘on the proper definition of the relevant product market.’” *Whole Foods*, 548 F.3d at 1032, 1043 (quoting *FTC v. Staples, Inc.*, 970 F. Supp. 1066, 1073 (D.D.C. 1997)). The Sherman Antitrust Act, which bans unreasonable restraints of trade, monopolization, attempted monopolization, and conspiracies to monopolize, 15 U.S.C. § 7 (2006),

doctrinal ambiguity about how to determine whether a horizontal merger is likely “substantially to lessen competition,”²⁹ we understand the law to have developed in three essentially distinct stages.³⁰

The 1962 *Brown Shoe* decision introduced a “functional” approach,³¹ where market definition is considered a “necessary predicate” to evaluating a merger.³² The Court examines “practical indicia”—such as industry or public recognition of the submarket as a separate economic entity, the product’s peculiar characteristics and uses, unique production facilities, distinct customers, distinct prices, sensitivity to price changes, and specialized vendors.³³ After defining the market, the Court identifies market-specific factors to establish whether a merger is likely “substantially to lessen competition.” Market share is the “primary index of market power,” but “a further examination of the particular market” along with its “structure, history, and probable future” is considered necessary to determine the likely impact of a merger.³⁴

In a series of decisions in the 1960s,³⁵ the Court repudiated the functional approach of *Brown Shoe* and created a presumption of illegality for horizontal mergers considered likely to (1) produce a “firm controlling an undue

can also be used to police mergers. Unlike section 7 of the Clayton Antitrust Act, however, it does not look to probable future effects. See 2 VON KALINOWSKI ET AL., *supra* note 1, § 29.01. A merger that “may” have anticompetitive effects is therefore subject to enforcement under the Clayton Antitrust Act but not the Sherman Antitrust Act. See *FTC v. Whole Foods Mkt., Inc.*, 548 F.3d 1028, 1042 (D.C. Cir. 2008); see also 2 VON KALINOWSKI ET AL., *supra* note 1, § 30.01 (describing the grant of enforcement powers given to the antitrust enforcement agencies under the Clayton Antitrust Act). Finally, the Federal Trade Commission Act proscribes “unfair methods of competition,” 15 U.S.C. § 45(a), and is often used to challenge mergers that are not reached under section 7. 2 VON KALINOWSKI ET AL., *supra* note 1, § 29.01. Both the Clayton Antitrust Act and the Sherman Antitrust Act may be enforced by the U.S. Department of Justice’s Antitrust Division, the FTC, the states’ attorneys general, and private parties. *Id.* Only the FTC has authority to challenge mergers and acquisitions under section 5(a) of the Federal Trade Commission Act. *Id.*

29. That doctrinal ambiguity remains is evident from the differing approaches taken by the district court and the different judges on the D.C. Circuit panel in *Whole Foods*.

30. See, e.g., 2 VON KALINOWSKI ET AL., *supra* note 1, § 30.01 (describing three distinct doctrinal developments in determining when a merger may “substantially” lessen competition under section 7); Andrew Chin, Note, *Antitrust by Chance: A Unified Theory of Horizontal Merger Doctrine*, 106 YALE L.J. 1165, 1170 (1996) (discussing the Court’s introduction of presumptive illegality after *Brown Shoe* and noting that enforcement has since “evolved substantially”).

31. *Brown Shoe Co. v. United States*, 370 U.S. 294, 321-22 (1962) (finding that Congress had provided “no definite quantitative or qualitative tests by which enforcement agencies could gauge the effects of a given merger to determine whether it may ‘substantially’ lessen competition or tend toward monopoly,” but rather had “indicated plainly that a merger had to be functionally viewed, in the context of its particular industry”); see also 2 VON KALINOWSKI ET AL., *supra* note 1, § 30.01 (describing the *Brown Shoe* approach as “unstructured” and “functional”).

32. *Brown Shoe*, 370 U.S. at 369.

33. *Id.* at 325.

34. *Id.* at 370 n.38. In *Brown Shoe*, the Court considered that (1) the merger would create a strong national chain in a fragmented industry; (2) the chain’s retailer would be integrated with its manufacturer; (3) the industry at issue had a “history of tendency toward concentration”; and (4) the defendant had failed to present mitigating factors. *Id.* at 344-46.

35. 2 VON KALINOWSKI ET AL., *supra* note 1, § 29.01 (citing Donald I. Baker & William Blumenthal, *The 1982 Guidelines and Preexisting Law*, 71 CALIF. L. REV. 311, 337 (1983)).

percentage share of the relevant market,” and (2) result in “a significant increase in the concentration of firms in that market.”³⁶ The Court reasoned that because the “relevant economic data” in a section 7 analysis “are both complex and elusive,” judges must necessarily “simplify the test of illegality”; and that in doing so they should address “intense congressional concern with the trend toward concentration” by enjoining mergers in the “absence of evidence clearly showing that the merger is not likely to have such anticompetitive effects.”³⁷

Finally, beginning in the 1970s the Court relaxed its approach by taking a broader view of the kinds of evidence a section 7 defendant can present to rebut the presumption of illegality.³⁸ That shift has been interpreted as a return to the more flexible approach of *Brown Shoe*.³⁹ But the courts’ renewed willingness to consider market-specific factors arguably has a different impact in the modern cases because it operates in conjunction with an enforcement strategy that involves “more sophisticated” methods of economic analysis.⁴⁰ The Horizontal Merger Guidelines outline “analytical techniques, practices and the enforcement policy” of the agency and are intended to “assist the courts in developing an appropriate framework for interpreting and applying the antitrust laws in the horizontal merger context.”⁴¹ Although judges “are not bound” to apply the tests set out in agency guidelines, many courts have endorsed or applied them.⁴²

Since 1982, agencies and courts have used the “hypothetical monopolist” test⁴³ to define the relevant market.⁴⁴ Beyond a more rigorous approach to the threshold issue of market definition, the agencies have adopted a more

36. United States v. Phila. Nat’l Bank, 374 U.S. 321, 363 (1963).

37. *Id.*

38. 2 VON KALINOWSKI ET AL., *supra* note 1, § 30.01 (discussing *United States v. General Dynamics Corp.*, 415 U.S. 486, 501 (1974), which found that historical market shares did “not necessarily give a proper picture of a company’s future ability to compete”, and citing *Brown Shoe* for the proposition that industry-specific factors must be taken into account); *e.g.*, *United States v. Marine Bancorp.*, 418 U.S. 602 (1974); *see also* *United States v. Baker Hughes, Inc.*, 908 F.2d 981, 985 (D.C. Cir. 1990) (noting that “[i]n the wake of *General Dynamics*, the Supreme Court and lower courts have found section 7 defendants to have successfully rebutted the government’s *prima facie* case by presenting evidence on a variety of factors other than ease of entry,” and citing supportive cases).

39. *See, e.g.*, 2 VON KALINOWSKI ET AL., *supra* note 1, § 30.01 (stating that *General Dynamics* and *Marine Bancorp* have led most lower courts to follow *Brown Shoe*’s teaching and not rely solely on market share and concentration evidence in assessing the lawfulness of a merger, and citing supportive cases).

40. Jay Greenfield, *Beyond Herfindahl: Non-Structural Elements of Merger Analysis*, 53 ANTITRUST L.J. 229, 231 (1984); Chin, *supra* note 30, at 1167 (“Since 1982, horizontal merger analysis has relied heavily upon the Herfindahl-Hirschman Index (HHI) of market concentration.”).

41. 2010 HORIZONTAL MERGER GUIDELINES, *supra* note 1, § 1.

42. Gregory J. Werden, *The 1982 Merger Guidelines and the Ascent of the Hypothetical Monopolist Paradigm*, 71 ANTITRUST L.J. 253, 263-66 (2003) (discussing judicial approval of the hypothetical monopolist test and citing cases).

43. *See supra* Section I.A.

44. Werden, *supra* note 42, at 253-54 (noting that the hypothetical monopolist paradigm embodied in the 1982 Guidelines “gave way to widespread acceptance and application”); *see also id.* at 258 (explaining that after 1982 “the hypothetical monopolist paradigm . . . was the lens through which all evidence was to be viewed”).

sophisticated method of analyzing market power. Courts since 1982 have often relied on the agencies to perform Herfindahl-Hirschmann Index (HHI)⁴⁵ analysis of a merger's effect on the allocation of market power in establishing a prima facie case⁴⁶—an analysis the D.C. Circuit had approved prior to *Whole Foods*.⁴⁷ The use of these accepted analytical methods by the enforcement agencies and the courts forms the basis for modern merger doctrine.

B. *Horizontal Merger Guidelines*

The Justice Department's Antitrust Division and the FTC issued a new set of Guidelines in 2010. The agencies' enforcement strategy has therefore evolved somewhat since the *Whole Foods* decision. Whereas the previous Guidelines, issued in 1992, employed a five-step analysis to determine what mergers the agencies were likely to challenge, the 2010 Guidelines emphasize that "merger analysis does not consist of uniform application of a single methodology," but instead requires a "fact-specific process through which the Agencies, guided by their extensive experience, apply a range of analytical tools."⁴⁸

Although the agencies have abandoned the "uniform" five-step analysis, many of the considerations set forth in the 1992 Guidelines remain the same. Under the old Guidelines, the agencies would (1) ask "whether the merger would significantly increase concentration and result in a concentrated market"; (2) evaluate "potential adverse competitive effects" of the merger; (3) determine whether potential entry would be "timely, likely, and sufficient" to counteract anticompetitive effects; (4) analyze whether the merger would create "efficiency gains" that could not reasonably be achieved by the parties through less anticompetitive means; and (5) examine whether either party would likely fail absent the merger and exit the market as a result.⁴⁹ The "analytical tools" provided under the 2010 Guidelines largely track that strategy.

45. See *infra* Section II.B.

46. See, e.g., *FTC v. H.J. Heinz Co.*, 246 F.3d 708, 716 (D.C. Cir. 2001) ("Market concentration, or the lack thereof, is often measured by the [HHI]."); *FTC v. Univ. Health, Inc.*, 938 F.2d 1206, 1211 n.12 (11th Cir. 1991) ("The most prominent method of measuring market concentration is the [HHI]."). But see, e.g., *Marathon Oil Co. v. Mobil Oil Corp.*, 530 F. Supp. 315, 323 n.15 (N.D. Ohio 1981) (mentioning but not applying the HHI), *aff'd*, 669 F.2d 378 (6th Cir. 1981), *cert. denied*, 455 U.S. 982 (1982); *United States v. Black & Decker Mfg. Co.*, 430 F. Supp. 729, 748-49 n.38 (D. Md. 1976) (expressly rejecting the HHI). The Herfindahl-Hirschmann Index "is calculated by summing the squares of the individual firms' market shares, and thus gives proportionately greater weight to the larger market shares." 2010 HORIZONTAL MERGER GUIDELINES, *supra* note 1, § 5.3.

47. See *Heinz*, 246 F.3d at 716; see also *FTC v. Whole Foods Mkt., Inc.*, 548 F.3d 1028, 1058-59 (D.C. Cir. 2008) (Kavanaugh, J., dissenting) (arguing that *Brown Shoe* "no longer guides courts' merger analyses because it does not sufficiently account for the basic economic principles that, according to the Supreme Court, must be considered under modern antitrust doctrine" and citing, among other authorities, the *Heinz* case).

48. 2010 HORIZONTAL MERGER GUIDELINES, *supra* note 1, § 1.

49. 1992 Horizontal Merger Guidelines § 0.2, 57 Fed. Reg. 41,552, 41,554 (Sept. 10, 1992).

After identifying a potential competitive concern, the agencies may engage in a market definition analysis to “illuminate[] the merger’s likely competitive effects.”⁵⁰ Market definition under the 2010 Guidelines “focuses solely on demand substitution factors—that is, on customers’ ability and willingness to substitute away from one product to another in response to a price increase or non-price change, such as a reduction in product quality or service.”⁵¹ This inquiry is conducted through a “hypothetical monopolist,” or SSNIP, analysis.⁵²

Having determined the relevant market, the agencies “normally consider measures of market shares and market concentration as part of their evaluation of competitive effects.”⁵³ Market concentration, considered “one useful indicator of likely competitive effects,”⁵⁴ is “often” calculated using the HHI. A market’s HHI is calculated by summing the squares of the individual firms’ market shares, thus giving proportionately greater weight to the larger market shares.⁵⁵ The agencies consider the postmerger level of the HHI and the increase resulting from the merger.⁵⁶

The agencies may also consider “unilateral effects,” or whether the elimination of competition from the merging firms may alone constitute a substantial lessening in competition;⁵⁷ and “coordinated effects,” or whether the merger will enable collusion among firms in the relevant market.⁵⁸

Finally, the agencies may consider whether the market has any characteristics that might forestall anticompetitive effects flowing from the merger, such as the existence of “powerful buyers”⁵⁹ who can negotiate favorable terms with their suppliers; strong prospects of entry;⁶⁰ or merger-generated efficiencies that may “enhance competition by permitting two ineffective competitors to form a more effective competitor, e.g., by combining complementary assets.”⁶¹

C. *Static Versus Dynamic Competition*

In the classical view of competition, homogeneous firms compete to offer lower prices for a particular product until price equals marginal cost. The Horizontal Merger Guidelines are directed mainly toward preserving such

50. 2010 HORIZONTAL MERGER GUIDELINES, *supra* note 1, § 4.

51. *Id.*

52. *Id.* § 4.1.1.

53. *Id.* § 5.

54. *Id.* § 5.3.

55. *Id.*

56. *Id.*

57. *Id.* § 6.

58. *Id.* § 7.

59. *Id.* § 8.

60. *Id.* § 9.

61. *Id.* § 10.

competition. In considering whether a merger will create the opportunity to institute a SSNIP, legal decisionmakers conduct a “static” market analysis in which they review data about the existing market. For example, Judge Kavanaugh based his opinion in *Whole Foods* partly on market data showing that Whole Foods and Wild Oats stores did not have higher prices in areas lacking conventional grocery stores, and that Whole Foods stores had not increased prices in response to exit by Wild Oats.⁶²

By contrast, dynamic competition occurs when firms compete not to offer the same product at a lower price but to offer new products, processes, or—most important for this Article—business models. Dynamic competition is generally understood to occur in high-technology markets with modest capital requirements, high rates of innovation, and frequent entry and exit.⁶³ But dynamic competition can occur, and may have legal significance, in any market.

Evaluating the likely competitive effects of a merger along dynamic lines can be very difficult. The ability to institute price increases after a merger, for example, might have more to do with improvements in performance or the addition of new offerings by the merged company than with monopolization. The key for antitrust enforcement is to determine when a market displays dynamic competition sufficient to warrant a different approach to enforcement. We confront this task in Parts III and IV. In the following Section, we provide an account of existing literature that critiques antitrust law for being insufficiently concerned with preserving the social benefits of dynamic competition.

D. *Literature Critiquing the Doctrine*

Joseph Schumpeter famously argued that dynamic competition is more important than static competition for economic welfare.⁶⁴ Along these lines, more recent commentators have suggested that the existing doctrinal approaches in antitrust law may inappropriately discourage socially beneficial dynamic competition. This Section provides a basic overview of some of these arguments. The literature focuses on the alleged inappropriateness of applying standard modes of analysis to evaluate business practices in innovative markets, particularly those experiencing rapid technological innovation or those in which a considerable amount of resources is spent on research to develop breakthrough products.

62. *FTC v. Whole Foods Mkt., Inc.*, 548 F.3d 1028, 1053-54 (D.C. Cir. 2008).

63. Posner, *supra* note 6, at 926.

64. JOSEPH A. SCHUMPETER, CAPITALISM, SOCIALISM AND DEMOCRACY 119 (1942).

1. Identifying Anticompetitive Behavior in Dynamic Markets

A recent paper by Geoffrey Manne and Joshua Wright of the International Center for Law and Economics criticizes antitrust law generally for carrying especially high error costs in dynamic markets.⁶⁵ The basic argument is that antitrust economists, and in turn lawyers and judges, tend to treat novel products or business practices as anticompetitive.⁶⁶ Therefore, they are likely to decide cases wrongly in rapidly changing dynamic markets. In *United States v. Microsoft Corp.*,⁶⁷ for example, the D.C. Circuit treated Microsoft's indirect "network effect" of inducing programmers to write applications exclusively for Windows as a barrier to entry constituting a restraint of trade under section 2 of the Sherman Act.⁶⁸ The court relied on the "highly theoretical and mathematical" network effects literature to the exclusion of direct evidence on monopoly power.⁶⁹ The emergence of several major competitors since then suggests that this approach was a mistake.⁷⁰ Lawrence Lessig, one of the former special masters in the case, has asserted that he "blew it"—apparently because he did not understand the existing potential for innovative development in the software market.⁷¹

Not only is error particularly likely in enforcement actions against innovative companies, but the costs of error are also greater than in suits against companies that better fit the classical static model. That phenomenon arises because "the stakes are higher"⁷²: innovation—particularly technological innovation—is essential to economic growth and social welfare. Although an antitrust suit against an innovative company may prevent abuse of market power, an erroneous decision will deny large consumer benefits. This is true partly because a "false positive" may have long-lasting effects: in addition to removing the economic rewards of innovation for the target of the enforcement action, it may serve as a negative signal to other potential innovators or cement an economically problematic doctrinal development.⁷³ By contrast, a "false

65. Manne & Wright, *supra* note 6, at 153 (drawing on Judge Easterbrook's work on error-cost analysis); see also Frank H. Easterbrook, *The Limits of Antitrust*, 63 TEX. L. REV. 1, 16 (1984) ("[W]e should prefer the error of tolerating questionable conduct, which imposes losses over a part of the range of output, to the error of condemning beneficial conduct, which imposes losses over the whole range of output."); Frank H. Easterbrook, *Workable Antitrust Policy*, 84 MICH. L. REV. 1696, 1696 (1986) (arguing that it is difficult to tell whether business practices are competitive or anticompetitive).

66. See Manne & Wright, *supra* note 6, at 167 ("Because innovation involves new products and business practices, courts and economists' initial understanding of these practices will skew initial likelihoods that innovation is anticompetitive and the proper subject of antitrust scrutiny.").

67. 253 F.3d 34, 55 (D.C. Cir. 2001).

68. Manne & Wright, *supra* note 6, at 180.

69. *Id.*

70. *Id.*

71. *Id.* (citing Lawrence Lessig, *I Blew It on Microsoft*, WIRED MAG. (Jan. 2007), <http://www.wired.com/wired/archive/15.01/posts.html?pg=6>).

72. *Id.* at 167.

73. *Id.* ("[S]uccessfully challenging business or product innovations is likely to dampen innovation across the economy . . .").

negative”—i.e., the failure to find an antitrust violation where the firm did in fact have monopoly power—is likely to be at least partially self-correcting.⁷⁴ Monopoly may attract entry or other forms of competition.

2. Mergers in High-Technology Markets

Similar claims about judicial competence have been made in the context of merger analysis. Whereas Manne and Wright argue broadly that judges assume anticompetitive behavior in the face of uncertainty, David Teece and Christopher Pleatsikas contend that nonexpert judges are ill-suited to conduct market-share analysis in the specific case of high-technology markets.⁷⁵ Further, because price increases after mergers in dynamic markets may reflect changes in performance rather than consolidation of market power, the Guidelines approach of focusing on price signals is inappropriate.⁷⁶

Teece and Pleatsikas argue, first, that in projecting a firm's market power postmerger it may be difficult for nonexpert judges to determine what products should be viewed as substitutes (i.e., to “estimate the substitution elasticities”).⁷⁷ The overcurrent protection market, for example, contains three potential alternatives for rechargeable battery applications: PPTC devices, bimetallics, and Smart Power with a fuse backup.⁷⁸ Whether these products are really substitutes for each other depends on manufacturers' requirements regarding many performance-based factors: resistance, which affects battery life; and failure mode, which can affect warranty costs.⁷⁹ High-technology consumers require differing sets of specific electronic components and conduct detailed analyses when deciding what products satisfy their needs. Where products are highly differentiated, judges may focus too much on the differences and not the similarities between the products, and thus the define product markets too narrowly.

In addition, companies in high-technology industries compete on performance-based factors. Price changes may therefore be an inappropriate indicator of competitiveness, particularly in the case of “paradigm shifts” where a merging company offers major improvements in performance or

74. *Id.*

75. Christopher Pleatsikas & David Teece, *New Indicia for Antitrust Markets Experiencing Rapid Innovation*, in DYNAMIC COMPETITION AND PUBLIC POLICY: TECHNOLOGY, INNOVATION, AND ANTITRUST ISSUES 95, 108 (Jerry Ellig ed., 2001).

76. *Id.* at 111-12.

77. *Id.* at 108; *see also* Thomas M. Jorde & David A. Teece, *Introduction to ANTITRUST, INNOVATION, AND COMPETITIVENESS* 3, 7-13 (Thomas M. Jorde & David A. Teece eds., 1992) (noting that market definition is rooted in static competition theory); Kaplow, *supra* note 1, at 439 (noting that the market definition/market share paradigm is “normally employed and thought by some to be mandatory”).

78. Pleatsikas & Teece, *supra* note 75, at 108.

79. *Id.* at 109.

innovative product features.⁸⁰ A new-generation computer chip, for example, will be both more expensive and faster than the previous generation chip. A merger, moreover, may be necessary to consolidate the knowledge and expertise necessary to produce the improved product. Using a SSNIP analysis in a market where both prices and performance specifications are changing rapidly can be inappropriate. Especially where merging companies offer improved products, what should constitute a “small but significant” increase in price? Further, how long must the price increase remain in place to be considered “nontransitory”?

3. Evaluating Mergers Using Nonprice Criteria

The work discussed in the previous Subsection suggests that price may be an inappropriate indicator of monopolization in dynamic markets. The work discussed in this Subsection considers research and development (R&D) efforts as an alternative basis for evaluating mergers. It should be noted that this proposal pertains to markets in which firms compete to bring breakthrough, patentable products to market. Because there is no existing product market, it is impossible to use price as a measure of competitiveness. Further, the concept of “innovation markets” is in tension with the error-cost or judicial-competency critiques of antitrust enforcement in dynamic markets. Under an error-cost view, it generally makes sense to postpone or forgo enforcement until the relevant market (i.e., price) data can be gathered.⁸¹ Under an “innovation markets” approach, by contrast, enforcement authorities may challenge mergers before a product even exists. This literature is somewhat less useful than the papers already discussed to our overall project in that we are not generally concerned with firms in the premarket stage. It is nevertheless worth summarizing for two reasons. First, because many firms in dynamic markets have both market-ready products and R&D investments, it might add to the toolbox used to consider mergers in at least some kinds of dynamic markets. Second, and more importantly, it recognizes that some firms compete on nonprice factors and shows that it might be possible to evaluate mergers without relying wholly on price signals or falling back on the vague “practical indicia” of *Brown Shoe*: there might be a replacement for R&D as an indicator for innovative efforts in the business model context.

The FTC and the Justice Department introduced the idea of an “innovation market” in 1995 when they issued the Antitrust Guidelines for the

80. *Id.* at 111.

81. Manne and Wright, for instance, argue that there should be a “*per se*” rule of legality for new product introductions; further, only *consummated* mergers should be subject to challenge, and only then when enough time has passed to allow generation of market data relevant to the alleged anticompetitive effects. Manne & Wright, *supra* note 6, at 197-98.

Licensing of Intellectual Property.⁸² An innovation market, according to the agencies, “consists of the research and development directed to particular new or improved goods or processes, and the close substitutes for that research and development.”⁸³ The theory behind policing innovation markets under the antitrust laws is that, when there are few firms in the market, mergers between firms engaging in similar R&D might provide an incentive to suppress research paths. Antitrust enforcement agencies following this approach would consider not just whether a merger would allow a hypothetical monopolist to raise prices in an existing product market, but also whether it would allow the hypothetical monopolist to restrict the development of new products. The difficulty of measuring such an effect could be mitigated by equating innovation with R&D expenditures. Thus, a merger would be enjoined if a hypothetical monopolist would restrict R&D efforts in the relevant market—mirroring the SSNIP analysis, “a small but significant and nontransitory” reduction in R&D effort.⁸⁴ In a 1995 case, for example, the FTC entered into a consent decree with two merging companies that were both at a relatively advanced stage in developing noninjectable migraine-treatment drugs.⁸⁵ The agency’s main rationale for the enforcement action was that the merger would both decrease the number of R&D tracks and make it easier for the companies to reduce R&D on the remaining track.⁸⁶

Although innovation markets have not featured widely in the cases brought by the enforcement agencies,⁸⁷ they have sparked debate among commentators. Critics argue that the innovation-R&D conflation is a problematic oversimplification: concentration of firms conducting R&D does not necessarily lead to less R&D, and restricted R&D funding does not necessarily result in less innovation.⁸⁸ Moreover, focusing on R&D restricts the agencies’ consideration of dynamic effects to firms or industries engaging in identifiable R&D efforts.⁸⁹

82. U.S. DEP’T OF JUSTICE & FTC, ANTITRUST GUIDELINES FOR THE LICENSING OF INTELLECTUAL PROPERTY (Apr. 9, 1995), <http://www.usdoj.gov/atr/public/guidelines/0558.pdf>.

83. *Id.* ¶ 3.2.3, at 11.

84. *See, e.g.*, Gilbert & Sunshine, *supra* note 6, at 573 (arguing that innovation “warrants a more central role in antitrust analysis”).

85. MICHAEL A. CARRIER, INNOVATION FOR THE 21ST CENTURY: HARNESSING THE POWER OF INTELLECTUAL PROPERTY AND ANTITRUST LAW 314-15 (2009) (citing *In re Glaxo PLC*, 119 F.T.C. 815, 815-16 (1995)).

86. *Id.*

87. *Id.* at 297, 312-13 (noting that, as of 2009, there had been ten challenges to mergers in innovation markets, all of which were resolved by consent orders).

88. *See, e.g.*, Richard T. Rapp, *The Misapplication of the Innovation Market Approach to Merger Analysis*, 64 ANTITRUST L.J. 19, 20 (1995) (discussing problems with the innovation markets approach to merger analysis).

89. CARRIER, *supra* note 85, at 298-99 (acknowledging that it can be difficult to identify the relevant firms in an innovation market, but arguing that the objection does not apply to the pharmaceutical industry, where there are no “unknown innovators” or “garage inventors”).

E. Revising the Horizontal Merger Guidelines

The previous Section provided an overview of the commentary criticizing existing merger doctrine as ill-suited to dynamic markets. This Section provides an overview of statements made by legal and business stakeholders in the regulatory process. An overview of the public comments submitted to the FTC during its revision of the Horizontal Merger Guidelines suggests there is a growing sense in the legal community that the agencies ought to take better account of dynamic competition.

The FTC solicited input from the public at two main stages during its review of the Horizontal Merger Guidelines. It initially posed a set of targeted questions regarding potential revisions in 2009 and subsequently issued a draft version of the new guidelines for public comment in April 2010. One of the points on which the agency sought advice in 2009 was whether the new Guidelines should “address more explicitly . . . the effects of mergers on innovation.”⁹⁰ Prominently, both the American Bar Association (ABA) Antitrust Section and the American Antitrust Institute⁹¹ recommended a more explicit treatment of dynamic considerations in merger analysis.⁹² Several of the comments filed in response to the draft Guidelines issued in April 2010⁹³ expressed further concern that the agency was not taking sufficient account of dynamic competition concerns. Most notable were the submissions by the ABA,⁹⁴ the joint submission by Verizon, the Biotechnology Industry

90. FTC & U.S. DEP’T OF JUSTICE, HORIZONTAL MERGER GUIDELINES: QUESTIONS FOR PUBLIC COMMENT 5 (Sept. 23, 2009), available at <http://www.ftc.gov/bc/workshops/hmg/hmg-questions.pdf>.

91. The American Antitrust Institute is a Washington think tank that describes itself as a “counterweight to conservative influence” that is “dedicated to supporting a more aggressive antitrust agenda.” *About Us*, AM. ANTITRUST INST., <http://www.antitrustinstitute.org/content/about-us> (last visited Apr. 3, 2012).

92. # 319; *Project No. P092900; Horizontal Merger Guidelines Review Project: A Series of Five Joint FTC-DOJ Workshops: Public Comments*, FTC, <http://www.ftc.gov/os/comments/horizontalmergerguides/index.shtm> (last visited Apr. 3, 2012). The American Antitrust Institute suggested that the agencies should consider “reasoned predictions of how a market is expected to evolve within specified timeframes. Such predictions could rest on internal planning documents of industry participants, consensus of industry experts, or other methodologies determined to have significant forecasting value.” Am. Antitrust Inst., Fed. Trade Comm’n File No. 548050-00025, Pub. Comment No. P092900, Horizontal Merger Guidelines Review Project, FTC & U.S. DEP’T OF JUSTICE 10 (Nov. 9, 2009), available at <http://www.ftc.gov/os/comments/horizontalmergerguides/545095-00023.pdf>. Both the Institute and the ABA cited *United States v. General Dynamics Corp.*, 415 U.S. 486 (1974), as an example of predictive factor analysis. Am. Antitrust Inst., *supra*, at 10; Am. Bar Ass’n Section of Antitrust Law, Fed. Trade Comm’n File No. 545095-0010, Pub. Comment No. P092900, Horizontal Merger Guidelines Review Project, FTC & U.S. DEP’T OF JUSTICE 19 (Nov. 6, 2009), available at <http://www.ftc.gov/os/comments/horizontalmergerguides/545095-00010.pdf>.

93. FTC & U.S. DEP’T OF JUSTICE, HORIZONTAL MERGER GUIDELINES FOR PUBLIC COMMENT (Apr. 20, 2010) [hereinafter DRAFT GUIDELINES], available at <http://www.ftc.gov/os/2010/04/100420hmg.pdf>.

94. Am. Bar Ass’n Section of Antitrust Law, Fed. Trade Comm’n File No. P092900, Pub. Comment No. 548050-00026, Horizontal Merger Guidelines Review Project, FTC & U.S. DEP’T OF JUSTICE (June 4, 2010) [hereinafter ABA Submission], available at <http://www.ftc.gov/os/comments/hmgrevisedguides/548050-00026.html>.

Organization, the Financial Services Roundtable, Microsoft, the National Association of Manufacturers, and the U.S. Chamber of Commerce (“Verizon”);⁹⁵ and a companion paper to Verizon submitted by Professor Dennis W. Carlton at the University of Chicago (“Carlton”).⁹⁶ We will briefly discuss the main concerns expressed in these submissions.

ABA, Verizon, and Carlton all objected to the draft Guidelines’ alleged overemphasis on preserving short-term price efficiencies, arguing it could provide the wrong incentives to firms operating in dynamic markets. Verizon acknowledged that the draft Guidelines provided “an important step in the right direction” by (1) allowing enforcement agencies to “consider the effects of cognizable efficiencies with no short-term, direct effect on prices in the relevant market” and (2) acknowledging that fixed-cost efficiencies “can benefit customers in the longer run, e.g., if they make new product introduction less expensive.”⁹⁷ Yet according to Verizon, this positive step fell short. The Guidelines inappropriately continued both to accord “the most weight to” short-term efficiency benefits and to privilege efficiencies that prevent price increases over those that promote innovation.⁹⁸ ABA argued similarly that the agencies should focus not only on making new product introduction “less expensive” but also on making it “more likely.”⁹⁹

All three comments also objected to the agencies’ chosen methods of measuring competition—in particular their emphasis on “unilateral effects.” The draft Guidelines defined “unilateral effects” as the “elimination of competition between two firms that results from their merger [and that] may alone constitute a substantial lessening of competition.”¹⁰⁰ Where merging firms *A* and *T* produce differentiated products that function as substitutes, the acquiring firm can profit from raising the price of product *A* because it captures the shift in demand to product *T*. According to the draft Guidelines, the enforcement agencies will seek to determine the “upward pricing pressure” (UPP) on product *A* by calculating the firm’s “diversion ratio”: the fraction of unit sales lost by product *A* that would be diverted to product *T*.¹⁰¹ Carlton

95. Verizon Commc’ns, Inc., Biotechnology Indus. Org., Fin. Servs. Roundtable, Microsoft Corp., Nat’l Ass’n of Mfrs. & U.S. Chamber of Commerce, Fed. Trade Comm’n File No. P092900, Pub. Comment No. 548050-00022, Horizontal Merger Guidelines Review Project, FTC & U.S. DEP’T OF JUSTICE (June 4, 2010) [hereinafter Verizon Submission], available at <http://www.ftc.gov/os/comments/hmgrevisedguides/548050-00022.pdf>.

96. Dennis W. Carlton, Comment No. 548050-00034, Fed. Trade Comm’n File No. P090900, Horizontal Merger Guidelines Review Project, FTC & U.S. DEP’T OF JUSTICE (June 4, 2010) [hereinafter Carlton Submission], available at <http://www.ftc.gov/os/comments/hmgrevisedguides/548050-00034.pdf>.

97. Verizon Submission, *supra* note 95, at 4 (citing DRAFT GUIDELINES, *supra* note 93, § 10 n.12).

98. *Id.*

99. ABA Submission, *supra* note 94, at 25. This line of argument is closely related to literature on “innovation markets.”

100. DRAFT GUIDELINES, *supra* note 93, § 6.0.

101. *Id.* § 6.1.

noted that a potential problem with using UPP is its implicit assumption that all firms correspond to a static Bertrand pricing model, where firms simultaneously set prices taking one another's as fixed.¹⁰² Yet in an industry where several firms are competing to introduce new products (i.e., are competing on performance rather than price), a merger that lowers the cost of innovating may be pro-competitive even though the diversion ratio is high.¹⁰³ Thus, using UPP will tend not only to produce false positives¹⁰⁴ but also to discount the potential for competing innovative firms to reposition themselves in the market.¹⁰⁵

The Guidelines changed little between the April 2010 draft and the final version, which was issued in August 2010, after the comment period. The appearance of a few minor changes suggests that the agencies paid limited heed to the commentators' concerns. The current version of the Guidelines, which retains UPP analysis as the central methodology for measuring the competitive effects of a merger, adds an aside that "[f]urther analysis is required to account for repositioning, entry, and efficiencies."¹⁰⁶ The 2010 Guidelines thus demonstrate a peripheral recognition that the current doctrine is insufficient to assess an important class of merger cases. Yet the enforcement agencies as yet provide no indication of how they might take dynamic considerations into account.

It is worth pointing out that the comments did not provide much in the way of policy solutions, either. ABA's suggestions appeared in general terms: the agencies should "tak[e] into account" repositioning or nonprice efficiencies.¹⁰⁷ Carlton's recommendations were only slightly less generalized: first, enforcement agencies should avoid presuming a lack of competition in industries with high levels of R&D, associated high fixed costs, low marginal costs, and high short-run gross margins; and, second, they should avoid enjoining mergers that reduce fixed costs, thus enhancing firms' incentives to invest in R&D.¹⁰⁸

The main point here is that there is a shared conception among both academics and practitioners that something other than the conventional tests is needed to evaluate mergers in dynamic markets. Most of the literature has focused so far on high-technology or research-heavy markets. In the next two Parts, we argue that business model innovation brings many of the same economic benefits as dynamic product competition (Part III); and antitrust law

102. Carlton Submission, *supra* note 96, ¶¶ 30-32, at 14-15.

103. *Id.* ¶ 32, at 15.

104. Verizon Submission, *supra* note 95, at 2.

105. *Id.*; accord ABA Submission, *supra* note 94, at 14-16.

106. 2010 HORIZONTAL MERGER GUIDELINES, *supra* note 1, § 6.1.

107. ABA Submission, *supra* note 94, at 14.

108. See Carlton Submission, *supra* note 96, at 10.

is ill-suited for policing mergers in markets where business model innovation is prominent (Part IV).

III. Dynamic Competition Theory and Business Model Innovation

Rapid business model innovation is most likely to take place where there are broad shifts in consumer preferences. In such markets, it can be difficult to define the relevant market because it is not clear which products should be viewed as potential substitutes. In addition, it can be difficult to tell whether a projected postmerger price increase would constitute an abuse of market power or, rather, a desirable “premium” for competitive innovation: if dynamic conditions are likely to persist, a postmerger price increase is likely to be transitory even though a SSNIP analysis in the apparently relevant product market at the time of the merger might suggest otherwise.

A. Business Megatrends and Innovation Premiums

In the case of a “paradigm shift,” a firm’s ability to increase prices after a merger may not be the best indicator of competition in that market.¹⁰⁹ A paradigm shift need not be technologically oriented: indeed, technological innovation is only one of a number of market conditions that may change how companies compete. “[F]inancial crises, shifts in the social realities that define the marketplace, or the threat of conflict over resources” present new and “inescapable strategic imperatives for corporate leaders” that in turn provide new sources of value.¹¹⁰ As more and more firms revise their business models to respond to the new conditions, they participate in what David Lubin and Daniel Esty have called a business “megatrend.”¹¹¹ Firms that respond best to the values driving a megatrend capture a “premium” for successful business model innovation,¹¹² and it is the prospect of such a premium that fuels innovation.

Lubin and Esty provide several examples of historical megatrends. In the “quality revolution” of the 1970s, firms like Honda and Motorola redesigned manufacturing and product development processes to “reduce risks of product failures, functional inadequacies, and other inefficiencies.”¹¹³ Similarly, the 1980s and 1990s saw a revolution in the development and application of information technology as firms responded to the 1982 recession by using

109. See *supra* text accompanying note 80.

110. David A. Lubin & Daniel C. Esty, *The Sustainability Imperative: Lessons for Leaders from Previous Game-Changing Megatrends*, HARV. BUS. REV., May 2010, at 43, 44.

111. *Id.* This process can be described as “performance competition.” See Pleatsikas & Teece, *supra* note 75, at 111.

112. Lubin & Esty, *supra* note 110, at 46.

113. *Id.* at 45.

“emerging information technology innovations to drive cost savings.”¹¹⁴ American Airlines’s electronic reservation system is a “classic” example.¹¹⁵

Growing consumer concern with environmental or “green” values is a contemporary example. Lubin and Esty argue that this shift is so pronounced that it creates a “sustainability imperative”¹¹⁶: many businesses have found they must incorporate sustainability concerns into their business models in order to remain competitive. Successful innovators who reposition themselves in the marketplace capture an “eco-premium.”¹¹⁷ Widespread attempts to obtain such a benefit produce a “sustainability megatrend.”¹¹⁸

Whole Foods founder John Mackey told the *New York Times Magazine* in 2004, “Whole Foods benefits from the fact that our culture, and especially our food culture, is shifting profoundly.”¹¹⁹ The company has been able to capitalize on both the willingness of a “sizable portion” of consumers to pay more for organic food and broad changes in American eating habits and family composition: Americans today cook less, shop more often, and buy more prepared foods, while families consist increasingly of single parents and fewer children.¹²⁰ Whole Foods’s successful capitalization on this profound shift in market conditions might be viewed as an eco-premium.

B. The Difficulty of Identifying Substitutes for Business Models in Dynamic Markets

Capturing the available premium in the case of a paradigm shift or business megatrend requires successful business model innovation through identifying and responding to a particular set of unsatisfied consumer preferences. Firms operating in a dynamic market assemble preferences in different iterations and respond to the resulting bundles in different ways. As in the case of complex technologies,¹²¹ there are difficult-to-quantify tradeoffs among potential business model substitutes. Judges considering mergers between dynamically competitive companies may therefore have a difficult

114. *Id.* at 46.

115. *Id.*

116. *Id.*

117. *Id.* at 46, 48. Lubin and Esty provide several examples of firms that have successfully captured an eco-premium. *See id.* at 47 (discussing General Electric’s “Ecomagination” initiative).

118. *Id.* at 48.

119. Jon Gertner, *The Virtue in \$6 Heirloom Tomatoes*, N.Y. TIMES MAG., June 6, 2004, <http://www.nytimes.com/2004/06/06/magazine/the-virtue-in-6-heirloom-tomatoes.html>.

120. *Id.*; *see also* U.S. Census Bureau Reports *Men and Women Wait Longer To Marry*, U.S. CENSUS BUREAU (Nov. 10, 2010), http://www.census.gov/newsroom/releases/archives/families_households/cb10-174.html (reporting that average household size and the percentage of two-parent households declined from 2000 to 2010).

121. *See* Pleatsikas & Teece, *supra* note 75, at 108 (“With high-technology products, substitution analysis becomes much more difficult.”); *supra* text accompanying note 77.

time defining the relevant market, and consequently in estimating postmerger market shares or unilateral effects.¹²²

In order to define a market, judges must first determine which products are potential substitutes.¹²³ That inquiry is difficult where demand elasticities are inherently unpredictable, as in dynamic markets: different consumers may be more or less likely to substitute as new firms offering different business model variations enter the market or existing firms reposition themselves in response to changing conditions.

In the high-technology context:

The ability of customers to utilize specific high-technology products in their businesses is often based on whether that product satisfies arcane technical and economic criteria. Because data relevant to quantifying economic substitutability are incomplete or not available at all, it may be difficult to determine or even to estimate, with an acceptable degree of accuracy, the proportion of users who can avail themselves of existing substitution possibilities.¹²⁴

“Arcane technical and economic criteria” is simply one way to describe a set of consumer preferences that is difficult for judges to identify. Having limited technical knowledge is functionally the same as having a limited understanding of how a particular combination of characteristics might stack up against other combinations for consumers of the particular bundle in question.

The question of whether a conventional grocery store is a substitute for a PNOS illustrates the problem for business models. Consumers might make decisions about where to grocery-shop based on a number of considerations, including the prices of different goods, the store ambiance or overall shopping “experience,” and the firms’ commitment to environmental values. Where supermarkets are responding to different combinations of values in different ways, it will be particularly difficult for courts to determine which bundles are substitutes for which consumers.

The district and appellate courts in *Whole Foods* disagreed over whether conventional supermarkets with organic food aisles were competitors for Whole Foods and Wild Oats. The district court emphasized the repositioning of several supermarkets “to compete vigorously with Whole Foods and Wild Oats for the consumers’ premium natural and organic food business” in refusing to grant an injunction.¹²⁵ The D.C. Circuit, by contrast, discounted repositioning of stores that did not emphasize customer service, provide a “unique environment,” and focus on the “core values” of “health and ecological sustainability.”¹²⁶

122. 2 VON KALINOWSKI ET AL., *supra* note 1, § 30.03 (“Concentration, with its companion concept of market share, is still the most significant factor in assessing anticompetitive effects.”).

123. 2010 HORIZONTAL MERGER GUIDELINES, *supra* note 1, § 4.1.1.

124. Pleatsikas & Teece, *supra* note 75, at 108.

125. *FTC v. Whole Foods Mkt., Inc.*, 502 F. Supp. 2d 1, 48 (D.D.C. 2007).

126. *FTC v. Whole Foods Mkt., Inc.*, 548 F.3d 1028, 1039 (D.C. Cir. 2008).

The Guidelines suggest that the enforcement authorities will err against viewing products as substitutes in the face of uncertainty: “Although excluding more distant substitutes from the market inevitably understates their competitive significance to some degree, doing so often provides a more accurate indicator of the competitive effects of the merger than would the alternative of including them and overstating their competitive significance as proportional to their shares in an expanded market.”¹²⁷ Where uncertainty is trenchant, as in the case of rapid business model innovation, a conservative approach may cause the analysis to be error-prone. This is especially true where the market is undergoing a transformation. It may take time to see whether a new business model provides a substitute. Market data about an organic food aisle gathered directly after its opening, for instance, may counsel against treating it as a substitute; whereas better data gathered a year later might show that it in fact provides competition for the Whole Foods down the street.¹²⁸

IV. Advancing Innovation Through Mergers

The previous Parts have demonstrated that antitrust law is often ill-equipped to deal with the complexity and dynamism of business model innovators. What has yet to be explained, though, is why *mergers* like the one that occurred in *Whole Foods* deserve special attention. Why is it not enough to tolerate the single-player markets that arise naturally from business model innovation while still allowing the government to regulate the artificial concentration of market power through mergers? After all, the acquisition of market share by companies like Whole Foods is the byproduct of their innovation, not the cause of it. What about mergers among business model innovators meaningfully advances innovation?

In this Part, we provide the answers to those questions. We first discuss how dynamic market mergers create incentives for market entry that increase competition on the macro, if not the micro, level. The next Section then explains how mergers in dynamic markets create special synergies with unique value beyond the usual efficiencies associated with mergers. We then contrast business model innovation with technological innovation and argue that the general unavailability of patents for business model innovation provides support for laxer antitrust enforcement. Finally, we explore the asymmetries that result when antitrust regulators treat business model innovations as distinct submarkets.

127. 2010 HORIZONTAL MERGER GUIDELINES, *supra* note 1, § 4.0.

128. See *supra* note 62 and accompanying text.

A. *Competitive Incentives*

On the surface, mergers appear to reduce competition. A merger by definition reduces the number of competitors in a market and concentrates greater market power in fewer hands. This market power in turn produces restrained production, higher prices, lost consumer welfare, and greater potential for collusion among remaining competitors.¹²⁹ But while the *results* of mergers may diminish competition in a given market, the ongoing possibility of future mergers can also have effects that are decidedly pro-innovation and pro-competition. This Section explores the ways in which robust merger activity enhances both.

Of the various ways in which businesses compete, the use of mergers is among the best for fostering innovation in dynamic markets. Indeed, the very fact that the Federal Trade Commission Act regulates mergers through its prohibition on “unfair methods of competition”¹³⁰ acknowledges that, if nothing else, merger is a form of competition. True, the result of a merger is a single business where once there were two; but quite frequently that second business might not have existed but for the possibility of acquisition by a larger competitor. The next two Subsections explore how the potential for M&A induces entry into dynamic markets and how, compared with other mechanisms for competition, mergers and acquisitions are more favorable to innovation.

1. Mergers and Acquisitions as an Exit Strategy in Dynamic Industries

Entrepreneurship frequently depends on the existence of viable exit strategies; and nowhere is this fact more evident than in innovative sectors of the economy.¹³¹ New startup companies require the investment of considerable time, labor, and financial resources, and if entrepreneurs feel that they will be unable to extricate themselves from the businesses they start, they may hesitate in taking the initial plunge. Though these risks may not deter committed entrepreneurs from exerting the energy necessary to establish a new business, even true believers require startup capital to finance their nascent companies.

129. See 1 ABA SECTION OF ANTITRUST LAW, ANTITRUST LAW DEVELOPMENTS 327 (6th ed. 2007).

130. Federal Trade Commission Act § 5, 15 U.S.C. § 45 (2006).

131. In 2011, merger activity volume in North America was highest among industrials and chemicals; technology; business services; and pharmaceuticals, medical, and biotechnology—all sectors that place a premium on technological or service innovation. Meanwhile, merger activity was lowest among the comparatively less innovative agriculture and real estate sectors. See *Monthly M&A Insider: A Mergermarket Report on Global M&A Activity*, MERGERMARKET GRP. 15 (Dec. 22, 2011), available at http://www.mergermarket.com/PDF/MMAI_December_11.pdf. At the same time, traditional innovators have been active in acquiring other firms. For example, Google executed thirty-nine transactions between 2009 and the first half of 2011, and Microsoft paid over \$9 billion to acquire Skype Technologies SA. See *Half Year Mergers and Acquisitions Trends Report: Online & Mobile Industry*, BERKERYNOYES 1 (July 2011), available at <http://www.berkerynoyes.com/doc/trend/1h2011online.aspx>.

Acquiring this capital in turn requires the participation of venture capitalists and other financiers, entities even less likely to tolerate the risk of starting a new business without a viable exit strategy.

Initial public offerings (IPOs) have traditionally provided a mechanism through which entrepreneurs and their financial backers can continue to reap economic rewards while washing their hands of the continued risk and hard work required in running a business. In addition to the prestige and notoriety associated with going public, an IPO creates liquidity for the owners of the company's securities, allowing them to more freely sell their shares in a public market.¹³² As a result, when markets are strong, pre-IPO owners can utilize the IPO as a means of selling their stake in the company at a healthy premium.

Unfortunately, IPOs have limited usefulness as exit strategies. The cost of going public can be extravagant:

[L]egal fees can range from \$150,000 to \$450,000 depending on the size and complexity of the deal, accounting fees can range from \$100,000 to \$250,000, printing costs for the various registration documents can range from \$75,000 to \$175,000; and the underwriters will typically receive a cash commission of five to ten percent of the aggregate proceeds of the initial public offering. In an initial public offering in the \$10 million to \$50 million range, the total fees excluding the underwriter's commission range from \$400,000 to \$1 million.¹³³

Also discouraging are the oftentimes onerous registration and reporting requirements that companies must satisfy during and after the IPO process.¹³⁴ And, when market conditions are unfavorable (such as during a recession), finding an underwriter may be impracticable regardless of the soundness of a company's business model.¹³⁵ So although the IPO is an essential means of enabling exit, its economic feasibility frequently depends on exogenous factors.

Mergers and acquisitions, along with IPOs, provide the chief exit strategy of entrepreneurs and investors in startup companies.¹³⁶ Because IPOs are so often economically unviable, pursuit of an acquisition offer is often the only way in which a company's founders can avoid running and expanding the company indefinitely. But when excessive regulation of mergers and acquisitions in dynamic markets limits this exit option, it hampers the

132. See Richard A. Mann et al., *Starting from Scratch: A Lawyer's Guide To Representing a Start-Up Company*, 56 ARK. L. REV. 773, 840 (2004).

133. *Id.* at 841-42.

134. See *id.* ("Once public, the SEC requires the issuer to make annual, quarterly, and continuous reports of all material events. Although these reports may not be as detailed as the registration requirement for an initial public offering, the reports require the assistance of attorneys, accountants, and public relations professionals. Also, potential liability is connected with these disclosure requirements, placing a burden on public companies that is difficult to quantify. Finally, public companies are inherently transparent: regular filings and required public disclosures result in a significant loss of a company's confidentiality." (footnotes omitted) (internal quotation marks omitted)).

135. See THOMAS LEE HAZEN, *THE LAW OF SECURITIES REGULATION* 120 (4th ed. 2002).

136. See Arleen Jacobius, *Managers Get "No Exit" Sign*, PENSIONS & INV. (Aug. 22, 2005), <http://www.pionline.com/apps/pbcs.dll/article?AID=/20050822/PRINTSUB/508220728/1031/TOC>.

willingness of entrepreneurs to found new businesses, both in terms of quantity and quality.

As to quantity, many businesses would not (and likely do not) exist at all in the absence of acquisition as a viable exit strategy. While all entrepreneurs and startup investors value flexibility, this is “especially true for serial entrepreneurs who want to move on to their next venture.”¹³⁷ The case is even stronger for innovative startup companies. Because the business models of innovators are (by definition) untried, they will often be perceived as riskier (at least from an *ex ante* perspective), and the importance of a viable exit option is all the more important in compensating for the increased risk. But that exit option becomes decreasingly viable in the shadow of an antitrust regime that stymies mergers and acquisitions or, as was the case of the Whole Foods-Wild Oats merger, imposes costly delays and regulatory hurdles. Consequently, fewer and fewer innovative business models will find startup capital or the entrepreneurs willing to apply the elbow grease necessary to turn their visions into reality.

By erecting barriers to exit, intrusive antitrust regulation of mergers reduces not only the quantity of innovative business models, but also the quality. It does this in at least two ways: first, by influencing the kind of people who choose to create innovative business models; and, second, by artificially altering the form of the startup business.

“Serial entrepreneurs,” as described above, are unusually sensitive to exit strategy viability. Because the participation of serial entrepreneurs in dynamic markets is particularly valuable, that sensitivity is cause for concern.¹³⁸ An entrepreneur who has started a company that went public is statistically more likely to succeed in subsequent ventures than a first-timer.¹³⁹ Unlike other entrepreneurs with more singular visions, serial entrepreneurs often use the proceeds from selling one business to develop another, which suggests that their net impact on the economy and business innovation is likely greater.¹⁴⁰ Developing novel business ideas is the primary talent of the serial entrepreneur. By focusing on this comparative advantage, the serial entrepreneur more

137. See SERGIO D. YBANEZ, GROWTH STRATEGIES: HOW SOFTWARE START-UPS CAN LEVERAGE ALLIANCES, ACQUISITIONS, IPOs AND VENTURE CAPITAL 131 *tbl.5* (2007).

138. That sensitivity is also necessary, given the composition of the labor market for entrepreneurs. See Douglas G. Baird & Edward R. Morrison, *Serial Entrepreneurs and Small Business Bankruptcies*, 105 COLUM. L. REV. 2310, 2312 (2005) (“The owner-operator’s human capital is not tied to any particular business enterprise; it can be redeployed when opportunities outside the existing enterprise are more attractive than those inside, which is precisely why most entrepreneurs are *serial* entrepreneurs.”).

139. See Paul Gompers et al., *Skill vs. Luck in Entrepreneurship and Venture Capital: Evidence from Serial Entrepreneurs 2-3* (Nat’l Bureau of Econ. Research, Working Paper No. 12,592, 2006), available at <http://www.nber.org/papers/w12592>.

140. See Steve Taplin, *Serial Entrepreneurship: An In-Depth Look at the Phenomenon of Habitual Entrepreneurs*, in ENTREPRENEURSHIP: THE WAY AHEAD 239, 247 (Harold P. Welsch ed., 2004).

efficiently divides labor with those more adept in management.¹⁴¹ Finally, serial entrepreneurs, by their very nature, are more likely to have experience starting companies, allowing them quicker, defter navigation of the creative process.¹⁴² At least one study, for example, has found that the success of novice entrepreneurs often depends on whether they receive support from top-tier venture capital firms, while serial entrepreneurs show consistent performance regardless of the source of their venture capital financing.¹⁴³ Because a robust acquisition-exit option is necessary to attract serial entrepreneurs to risky but innovative markets, antitrust enforcement can be especially inefficient when applied to mergers in those markets.

Additionally, to the extent that the acquisition-exit option becomes less available, startup companies looking for an alternative will artificially favor IPOs. The effect is to perversely favor certain sorts of startups over others. For example, successful IPOs typically require vast overhead and proven revenue streams.¹⁴⁴ Accordingly, IPOs are best tailored to companies that have established records of success. Establishing such a record takes time, and the longer the expected time horizon for a startup company's exit strategy to come to fruition, the less willing investors will be to support risky yet innovative businesses. Even when an innovative startup company's business model is not economically viable over the long term (and therefore unfit for an IPO), it may still possess productive and innovative features worth incorporating into independently successful businesses. Again, a merger or acquisition allows for this incorporation, but an IPO does not. In comparison with IPOs, mergers and acquisitions often provide a better, more flexible exit strategy for innovative startup companies. Consequently, when antitrust laws are overenforced against mergers, dynamic industries suffer most.

2. Comparing Mergers and Acquisitions with Alternate Forms of Competition

An established business can choose among several options in dealing with an upstart competitor. One option is merging with or acquiring the competitor. Generally speaking, this course of action benefits the target competitor financially, while still protecting the interests of the acquirer, whose status in the market is preserved.¹⁴⁵ But although the merging companies may benefit, the same cannot always be said of third parties who are not privy to the merger,

141. Cf. Kirk Taylor, *What Is a Serial Entrepreneur?*, KIRK TAYLOR: ONLINE MARKETING ENTREPRENEUR (Feb. 23, 2011), <http://kirktaylor.com/what-is-a-serial-entrepreneur> ("Many entrepreneurs do not have the skills to manage large scale businesses, and by exiting and moving on, they are able to create new opportunities focusing on skills that fit their talents.").

142. *See id.*

143. *See* Gompers et al., *supra* note 139, at 1-2.

144. *See* YBANEZ, *supra* note 137, at 131.

145. Indeed, as will be shown, through incorporation of the innovative features of the target company, the acquiring company actually *enhances* its competitiveness. *See infra* Section IV.B.

such as consumers and additional competitors. Not surprisingly, this form of competition is regarded suspiciously under antitrust law.

In most cases, the alternative to merging with or acquiring another business is directly competing with that business. Ideally, that competition results in a decrease in prices and an increase in the quality of the goods and services provided, leading to consumer surplus. Unlike mergers and acquisitions, antitrust law usually looks favorably on the fruits of competition as generally beneficial. True, the potential acquirer and the potential target may miss out on economic gains through the loss of the merger option, but these losses are more than compensated for in gains to consumers and third-party competitors in the market. In the abstract, it seems that direct competition is preferable to market consolidation.

But this black-and-white static-model perspective oversimplifies markets. Although the *result* of a merger may be a less competitive end-state, the merger itself may serve competitive values. Consider an analogue: in the abstract, antitrust law opposes monopolization because single-competitor markets can reduce output while increasing price. But modern antitrust law allows for monopolization so long as it occurs, not through anticompetitive conduct, but rather as “a consequence of a superior product, business acumen, or historic accident.”¹⁴⁶ Otherwise, antitrust law would be self-defeating, sacrificing the benefits of competitive markets in the name of competition. As Judge Learned Hand famously quipped, “The successful competitor, having been urged to compete, must not be turned upon when he wins.”¹⁴⁷

Mergers and acquisitions can and do serve pro-competitive ends.¹⁴⁸ First, unlike traditional forms of competition, such as aggressive advertising and price-slashing, the prospect of acquisition can entice, rather than deter, entry into the market by new competitors.¹⁴⁹ Some academic literature argues, for example, that Microsoft’s market share and software bundling techniques, rather than quashing the entry of new competitors into the market, actually attracted competition.¹⁵⁰ Microsoft’s well-known policy of purchasing

146. *United States v. Grinnell Corp.*, 384 U.S. 563, 571 (1966).

147. *United States v. Aluminum Co. of Am.*, 148 F.2d 416, 430 (2d Cir. 1945).

148. Along with promoting competition, mergers and acquisitions can enhance efficiency and consumer welfare in other ways, such as the creation of economies of scale. *See infra* Section IV.B.

149. This argument is related to the exit strategy analysis provided above. *See supra* Subsection IV.A.1.

150. *See, e.g.,* RICHARD B. MCKENZIE, TRUST ON TRIAL: HOW THE MICROSOFT CASE IS REFRAMING THE RULES OF COMPETITION 121-22 (2000) (“Given Microsoft’s ability to market and distribute software products, it is very likely that it can outbid many other existing competitors for innovative products. As a consequence, Microsoft’s market superiority could be an important spur to all sorts of innovations”); David Croson & Adam Saunders, Competition and Cooperation in the Bundled Software Market 1 (Dec. 12, 2004) (unpublished manuscript), <http://opim.wharton.upenn.edu/wise2004/sun221.pdf> (“[T]he incentives for potential entrepreneurs to innovate in the face of competing bundles are not, in fact, destroyed, but instead grow stronger as bundles get larger.”). *But see id.* (suggesting that Microsoft’s market share may also discourage

competitors whose technological developments complemented its own therefore encouraged potential entrepreneurs to enter the market while also incorporating the entrants' innovations into Microsoft's own software products.¹⁵¹ The result: gains to Microsoft, gains to the target startup companies, and gains to consumers, who enjoy a superior product.

This final point bears emphasizing, since it demonstrates the special value of mergers and acquisitions in innovative markets. Not only does the prospect of an acquisition motivate entry into a market, thereby increasing competition, but it also enhances the innovation present in that market. An industry leader can crush an innovative competitor through direct competition or even deter it from entering the market in the first place, but doing so prevents the potential entrant from ever disseminating its innovations. Only truly inventive entrepreneurs will find it worthwhile to enter markets dominated by an established player, since only they offer innovations the dominant firm would benefit from adopting. In contrast, market entrants unable to offer anything unique "have little value and are discouraged" under this scenario.¹⁵²

These insights have major implications for antitrust enforcement. In dynamic markets that see constant innovation, whether in products, services, or business models, the use of merger and acquisition by dominant players encourages market entry and disseminates innovation. In these markets, courts should enforce antitrust laws with a lighter hand, so as not to thwart beneficial market activity. Conversely, acquisitions in more static markets are less likely to create the same positive incentives and warrant more active enforcement of antitrust regulations against market consolidation.

B. *Merger Efficiencies in Dynamic Markets*

In the modern era,¹⁵³ inquiries into the permissibility of mergers generally compare the harms resulting from the concentration of market power with the greater operating efficiencies of the resulting entity.¹⁵⁴ These operating

innovators who fear the software giant could simply duplicate potential products and sell them at lower prices).

151. *See id.*

152. *Id.* at 4.

153. Historically, antitrust law has been inconsistent in its treatment of merger efficiencies. *See* Robert M. Vernail, Comment, *One Step Forward, One Step Back: How the Pass-On Requirement for Efficiencies Benefits in FTC v. Staples Undermines the Revisions to the Horizontal Merger Guidelines Efficiencies Section*, 7 GEO. MASON L. REV. 133, 133 (1998) ("At different periods since the advent of antitrust law, policy makers have disregarded efficiencies considerations, have considered efficiencies against mergers, and have considered efficiencies in favor of mergers.").

154. *See* Herbert Hovenkamp, *Merger Actions for Damages*, 35 HASTINGS L.J. 937, 937 (1984) ("Mergers can have two different economic effects, one harmful to society and the other beneficial. A merger may give the post-merger firm more market power than that enjoyed by either pre-merger firm, encouraging reduced output and higher prices for consumers. For this reason, some mergers are illegal under the antitrust laws. Yet a merger may also benefit society by increasing the efficiency of the post-merger firm. Increased efficiency generally results in lower costs and lower consumer prices.").

efficiencies encompass a host of factors, including “economies of scale, resource allocation, technological complementarities, specialization in product line, reduction in transportation costs, and various kinds of transaction-cost economies.”¹⁵⁵ These benefits accrue not just to the postmerger firm, but also to consumers, who often enjoy these efficiency gains in the form of lower costs and higher-quality products.¹⁵⁶ Admittedly, artificial factors, such as tax avoidance, are often the driving force behind mergers; mature industries, for example, may invest in more rapidly growing sectors to transform income into capital gains, which are taxed at a lower rate.¹⁵⁷ But at least such mergers are not primarily motivated by the desire to consolidate market share.¹⁵⁸

Balancing a merger’s potential for anticompetitive effects with its resulting efficiencies to the postmerger firm can often prove to be a difficult inquiry.¹⁵⁹ In the past, courts have scrutinized mergers for disparities between a postmerger firm’s profit-maximizing price and its marginal cost of production. But, as argued by Professor Herbert Hovenkamp, a higher profit rate is the natural result of many successful business decisions, whether mergers, patented discoveries, or other innovations. Instead, he argues, courts should explore “whether the postmerger firm has the power profitably to restrict output to below the pre-merger level.”¹⁶⁰ While Hovenkamp’s view is a step in the right direction, we contend that when it comes to innovative markets, an examination of short-term effects on output cannot be the sole determinant of the market analysis. Rather, courts should scrutinize mergers between innovative firms in light of a more dynamic model, one that accounts for the special long-term efficiencies of such mergers as well as the competitive pressures that will continue to exist.

155. Alan A. Fisher & Robert H. Lande, *Efficiency Considerations in Merger Enforcement*, 71 CALIF. L. REV. 1580, 1599 (1983). Economies of scale may be the most-cited efficiency benefit of merger, but it has been argued that this is actually among the weaker considerations in favor of market consolidation, particularly in light of the fact that firms can replicate economies of scale through internal expansion. See Thomas A. Piraino, Jr., *A New Approach to the Antitrust Analysis of Mergers*, 83 B.U. L. REV. 785, 825 (2003) (“Economies of scale should be ranked at the lower end of the efficiencies analysis because they usually benefit producers more than consumers and can often be obtained through internal growth, which is less restrictive of competition than a merger.”).

156. See Pinar Karacan, *Differences in Merger Analysis Between the United States and the European Union, Highlighted in Context of the Boeing/McDonnell Douglas and GE/Honeywell Mergers*, 17 TRANSNAT’L LAW. 209, 244 (2004); see also *id.* at 246 (“According to the Merger Guidelines, mergers can generate significant efficiencies by permitting a better utilization of existing assets. This enables the combined firm to achieve lower costs in producing a given quality and quantity than either firm could have achieved without the proposed transaction.”). As a point of comparison, antitrust enforcement in the European Union accords merger efficiencies less weight, since an overriding goal of European antitrust law is to level the playing field, not maximizing consumer welfare. See *id.* at 243-44.

157. See Fisher & Lande, *supra* note 155, at 1602-03.

158. See *id.*

159. See Hovenkamp, *supra* note 154, at 943.

160. *Id.* at 947 n.45.

1. The Special Efficiencies of Mergers in Innovative Sectors

In the classic case of a merger, one imagines two firms, each of which produces widgets, joining forces to manufacture those widgets more efficiently: perhaps collectively, the two firms can purchase the materials that go into widget manufacturing in greater bulk in order to secure a discounted rate; the resulting firm may eliminate duplicate costs by consolidating corporate overhead or redundant facilities; or maybe the postmerger firm can divide widget production at separate facilities so that each can specialize in developing a unique kind of widget.¹⁶¹ The conventional narrative centers on the tangible aspects of production: economies of scale, division of labor, lines of production, etc. In more traditional sectors of the economy, such as manufacturing, that story explains much of the value of mergers.

But in dynamic fields governed by constant innovation, the narrative loses explanatory force. Perhaps most abstractly, mergers between innovative firms can create synergies in human capital. Recent business trends have stressed the “collaborative intelligence,” or “CQ,” that results from the cooperative work of innovative thinkers.¹⁶² According to these theories, groups of innovators benefit from greater problem-solving capabilities collectively than their constitutive members exercise independently. To put the matter more simply, the whole is greater than the sum of its parts (and by quite some measure). Indeed, many of the most innovative firms today, such as Google, are considered to be the foremost practitioners of collaborative intelligence, actively fostering collective innovation in the development of their services.¹⁶³ Antitrust scholarship already

161. See Piraino, *supra* note 155, at 823-24.

162. See generally STEPHEN JAMES JOYCE, *TEACHING AN ANTHILL TO FETCH: DEVELOPING COLLABORATIVE INTELLIGENCE @ WORK* (2011) (highlighting the phenomenon of collaborative intelligence and prescribing measures firms can take in order to foster greater CQ in their own businesses).

163. See, e.g., *Collaborative Intelligence: Google Exercising Its “CQ,”* GETTING CLEVER TOGETHER, <http://gettingclevertogogether.com/collaborative-intelligence/collaborative-intelligence-google-exercising-its-cq> (last visited Apr. 3, 2012) (dubbing Google “arguably the most collaboratively intelligent business on earth”); cf. Ethan Lyon, *Microsoft vs Google: Collaborative Intelligence in Computing*, SPARXOO (July 8, 2009), <http://sparxoo.com/2009/07/08/microsoft-vs-google-collaborative-intelligence-in-computing> (lauding Google for tapping the collaborative intelligence of its “legions of enthusiastic developer fans” in the development of its Chrome operating system). Other scholarship has condemned Google for acquiring other firms, such as DoubleClick, that offer complementary innovative products. See Kristine Laudadio Devine, *Preserving Competition in Multi-Sided Innovative Markets: How Do You Solve a Problem Like Google?*, 10 N.C. J.L. & TECH. 59 (2008). Vertical integration, like that described by Devine, raises issues separate from those addressed in this Article, but it does highlight analogous concerns. One might fear the potential for such mergers to constrict possible avenues for further innovation, as the resulting firm becomes committed to a single research path. See *id.* at 115; Gilbert & Sunshine, *supra* note 6, at 595-97. The concern may be a legitimate one, but it is inherently difficult to quantify against the countervailing benefits of collaborative synergies. At the very least, it supports a more holistic, individuated analysis in the enforcement of antitrust law than currently exists. See *infra* Part V. Moreover, the complementarity of two firms’ innovation agendas may itself allow for exactly the sorts of synergies described above; rather than jettisoning one avenue for innovation, the post-merger firm could better coordinate multiple paths so as to maximize their integration and mutually reinforcing effects.

recognizes this phenomenon in the more limited context of combining the research and development facilities of two tech firms.¹⁶⁴ But the same logic applies no less to innovation in business models, such as collaborating to determine the proper store aesthetic for one's organic food markets. Bringing together the most creative, insightful minds from two business model innovators can foster serious returns to innovation.

In the field of antitrust, policymakers have already recognized the synergistic benefits of collaboration between technological innovators. The National Cooperative Research Act of 1984,¹⁶⁵ which encourages joint research and development by liberalizing antitrust enforcement against joint ventures, provides evidence of Congress's "clear recognition of the priority to be accorded innovative efficiency."¹⁶⁶ Yet such legislation, while certainly positive, repeats the error of the antitrust scholarship by equating innovation with technological advancement.¹⁶⁷ No special protections exist to guard business model innovation from overzealous antitrust enforcement, and the FTC's decision to block the Whole Foods merger is evidence of this fact.

Collaborative intelligence is not the only human-capital synergy. Some antitrust literature points to the creation of "management efficiencies," which occur when two firms can choose among the best managers of both firms to supervise the activities of the postmerger business.¹⁶⁸ And because their profitability often depends on the uniqueness of their business models, business model innovators often jealously guard trade secrets and other proprietary information. Sharing these business strategies and techniques can foster synergistic growth, which allows the postmerger firm to draw from the best practices of both its predecessors.

Although synergies in collaborative human capital and shared proprietary information can result from any merger, these benefits apply most prominently in the case of innovative industries, in which such features are a more vital component of the business's success. Nonetheless, the comparative importance of these merger efficiencies to dynamic industries versus traditional industries is not merely an issue of degree, but also of kind. Efficiency gains among business model innovators reduce the costs of production and enhance the

164. See Fisher & Lande, *supra* note 155, at 1600.

165. 15 U.S.C. §§ 4301-4305 (2006).

166. Joseph F. Brodley, *The Economic Goals of Antitrust: Efficiency, Consumer Welfare, and Technological Progress*, 62 N.Y.U. L. REV. 1020, 1026 (1987).

167. See, e.g., Felix Oberholzer-Gee & Dennis A. Yao, *Antitrust—What Role for Strategic Management Expertise?*, 90 B.U. L. REV. 1457, 1466 (2010) (claiming that "despite a near-universal belief that innovative efficiency is important, there have been very few enforcement actions in which innovation markets played an important role" but restricting innovation to a purely technological definition).

168. See Fisher & Lande, *supra* note 155, at 1600.

quality of the goods and services provided.¹⁶⁹ In evaluating mergers in innovative sectors, then, courts must not only consider “[h]ow much of a decrease in costs would compensate for an x percent increase in price,” but also factor in the fact that we “expect quality to increase by y percent (or to decrease by z percent).”¹⁷⁰ As Professors Alan Fisher and Robert Lande argue, this multifactor calculus can pose an “enormously difficult” problem for those who must apply the antitrust laws to sectors where the quality of products changes constantly.¹⁷¹ But the status quo, which completely ignores how synergistic mergers can enhance the quality of a firm’s goods and services over time, is clearly insufficient.

C. *Business Innovation and Patent Law*

Thus far, Part IV has mainly analyzed dynamic markets without distinguishing between scientific innovation and business model innovation. This conflation has been largely intentional, as both sorts of creativity add a unique value for which antitrust law’s static models frequently fail to account.¹⁷² But key differences do exist between the two forms of innovation. The foremost of these, and the subject of this Section, is the availability of patents. While technological innovations (at least marketable ones) are generally patentable so long as they are novel, nonobvious, and useful,¹⁷³ the same is not true for so-called business method patents. This distinction is crucial, as the inability to patent most business models increases the competitive pressures rather than reducing them. Arguments for more permissive antitrust regulation of scientifically innovative firms should therefore apply *a fortiori* to business model innovators.

This Section begins by presenting a brief summary of the current state of business method patent law, specifically in light of the Supreme Court’s recent decision in *Bilski v. Kappos*.¹⁷⁴ After that, we note some of the public benefits arising from unpatentable business innovations. Finally, we contend that because patents are typically unavailable for business models, permitting some

169. Cf. Brodley, *supra* note 166, at 1026 (“Of the three types of efficiencies, innovation efficiency provides the greatest enhancement of social wealth, followed by production efficiency, with allocative efficiency—the main focus of current enforcement efforts—ranking last.”).

170. Fisher & Lande, *supra* note 155, at 1634; *see also id.* (“One of the most important qualifications to Williamson’s model is that merger efficiencies can affect product quality as well as costs. Once we recognize the possibility of quality changes, the tradeoff analysis must maximize welfare over three rather than two parameters, thereby vastly increasing the complexity of the analysis.”).

171. *See id.* at 1634-35.

172. For a thorough analysis of how merger policy frequently fails to account for technological innovation, see Michael L. Katz & Howard A. Shelanski, *Mergers and Innovation*, 74 ANTITRUST L.J. 1 (2007).

173. *See* 35 U.S.C. § 101 (2006) (“Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.”).

174. 130 S. Ct. 3218 (2010).

consolidation of market power may be essential in order to adequately motivate business model innovation.

1. Business Method Patents After *Bilski*

The line between patentable and unpatentable ideas has long been a hazy one. Before *Bilski*, dicta in Supreme Court opinions suggested that patents only extended to machines and processes that involved “[t]ransformation and reduction of an article ‘to a different state or thing.’”¹⁷⁵ The Federal Circuit took the Supreme Court at its word and established the “machine-or-transformation” test,¹⁷⁶ which amounted to a per se rule for determining whether a subject matter was appropriate for patenting. The result was that business method patents, such as the method for hedging risk in commodity sales at issue in *Bilski*,¹⁷⁷ were presumptively invalid. The Federal Circuit’s decision sought to curtail an intellectual property regime run amok, as the U.S. Patent Office commonly granted patents to processes that strained the rationales for intellectual property protection, such as patents for jury selection methods,¹⁷⁸ methods for selling merchandise on a golf course,¹⁷⁹ and methods for playing poker.¹⁸⁰

The Federal Circuit’s new test did not survive for long. Instead, the Supreme Court rejected the Federal Circuit’s formalistic rule (as it commonly does¹⁸¹) as merely “a useful and important clue” and adopted a more holistic standard.¹⁸² Concluding that section 100(b) of the Patent Act did not require the harsh strictures of the machine-or-transformation test, the majority left the door open for business method patents. It simultaneously reiterated, however, that an “abstract idea,” such as the hedging technique at issue, remains unpatentable.¹⁸³

Lower courts and businesses may be left wondering what business methods *are* patentable post-*Bilski*. That said, inchoate concepts like the PNOs model certainly fall outside the realm of patentability, even under the permissive regime that existed prior to *Bilski*. Individual aspects of PNOs—like the organization of store shelves, techniques for selecting inventory, and

175. See *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972) (quoting *Cochrane v. Deener*, 94 U.S. 780, 788 (1876)); see also *Parker v. Flook*, 437 U.S. 584, 589 n.9 (1978) (“An argument can be made [that the Supreme] Court has only recognized a process as within the statutory definition when it either was tied to a particular apparatus or operated to change materials to a ‘different state or thing.’”).

176. See *In re Bilski*, 545 F.3d 943 (Fed. Cir. 2008).

177. See *id.* at 949.

178. Sys. and Methods for Making Jury Selection Determinations, U.S. Patent No. 6,607,389 (filed Dec. 3, 2001).

179. Method of Selling Merch. on a Golf Course, U.S. Patent No. 6,457,317 (filed Jan. 22, 2001).

180. Card Game & Method of Playing Card Game, U.S. Patent No. 6,070,873 (filed Mar. 12, 1998).

181. See, e.g., Peter Lee, *Patent Law and the Two Cultures*, 120 YALE L.J. 2, 45 (2010).

182. *Bilski v. Kappos*, 130 S. Ct. 3218, 3227 (2010).

183. *Id.* at 3225 (citing *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980)).

methods for enhancing the customer experience—might arguably be akin to the “Method of Selling Merchandise on a Golf Course” variety of patents, but such patents are no longer acceptable under the current system. Nor does there exist any evidence that organic markets like Whole Foods would have sought to patent certain aspects of the PNOS model if given the opportunity. It is therefore probably safe to conclude that federal intellectual property law does not encompass innovations in business models.

2. The Benefits of Unpatentable Business Models

Intellectual property law does not extend patent protection to innovation in business models. But what implications can be drawn from this fact?

First, when compared with industries whose innovations center around patentable ideas, markets involving business model innovation should be comparatively more competitive. A patent grants its owner a state-endorsed monopoly over a certain product for a specific term. While the temporary monopoly granted by the patent is considered essential to creating incentives to innovate,¹⁸⁴ it entails the usual costs associated with monopolies, such as diminished production and higher prices for consumers.¹⁸⁵ In fact, the legal enforceability of these monopolies means that the costs they impose are particularly severe. Under ordinary circumstances, dominant firms are chastened by the specter of competition from newcomers who might one day enter the market. But when the government provides the monopoly, it erects an absolute barrier against market entry, thereby nullifying these mitigating factors. Indeed, scholars have for decades critiqued this seeming inconsistency of antitrust law and patent law.¹⁸⁶

When businesses like Whole Foods innovate, however, no such barrier to entry exists. Competitors—both present and future—are free to replicate the PNOS model wholesale or to cherry-pick its most worthwhile features. In fact, the form of market power the FTC accused Whole Foods of wielding is theoretically the least dangerous of all, since the only barrier to entry is the willingness of existing competitors to adapt their business model to a new megatrend. This adaptation presumably involves transaction costs. But given that PNOSs innovate from a traditional business model, the transaction costs required for regular supermarkets to replicate all or part of the model are relatively small. Contrast that form of market power with more dangerous forms of monopoly, such as government-sponsored monopolies or private firms that exercise exclusive control of a single resource. In these cases, real

184. See, e.g., 1 JAY DRATLER, JR. & STEPHEN M. MCJOHN, *LICENSING OF INTELLECTUAL PROPERTY* § 502[2], at 5-35 (2011).

185. See, e.g., STEPHEN A. MERRILL, RICHARD C. LEVIN & MARK B. MYERS, *A PATENT SYSTEM FOR THE 21ST CENTURY* 39 (2004).

186. See Donald F. Turner, *Patents, Antitrust, and Innovation*, 28 U. PITT. L. REV. 151 (1966).

anticompetitive barriers to entry exist because of either the threat of legal sanctions or the physical scarcity of some resource.¹⁸⁷

Dominance of the PNOS market is benign even in comparison with other cases of market power in industries with low barriers to entry. For example, if Microsoft decided to enter the fast food business, it would probably possess the resources necessary to do so. But unless Microsoft intended to compete only on a very basic level, the upfront costs would be extraordinary: real estate space, staff, advertising, management, strategy costs, etc. Those costs, even if surmountable, might still deter Microsoft from competing (and, indeed, they presumably do). A monopolist in the fast food industry might hesitate to exercise its market power for fear that abusive conduct will induce entry from new competitors, but the deterrence value of potential entry is partly mitigated by the monopolist's knowledge of these obstacles to starting a new business. A monopoly in the fast food industry can still threaten consumer surplus. But if Safeway decided, for example, to adopt the PNOS model, it could alter current stores and reallocate existing capital to successfully compete with organic food markets. These transitions would not be costless, but replication of the PNOS model would prove far easier than entry into a completely unrelated industry.

The general unavailability of patents for business model innovation also creates positive feedback loops for innovation by competing firms. Obviously, one firm's patent on a certain innovation precludes competitors from using that same innovation. To the extent that the patented idea is actually useful, the existence of the patent limits the extent to which the public can utilize its value.¹⁸⁸ Retail pioneer Walmart has managed to innovate its way to becoming the largest corporation in the world yet holds only seventy-five patents and patent applications.¹⁸⁹ Meanwhile, Walmart's innovations—one-stop shopping, rejection of high-low pricing, etc.¹⁹⁰—have been widely imitated by an array of competitors. At the same time, Walmart is itself a notorious imitator of its competitors' best practices; in an effort to attract higher-income customers, the retail giant has experimented with the PNOS model by expanding organic food offerings, among other changes.¹⁹¹

187. See N. GREGORY MANKIW, *PRINCIPLES OF MICROECONOMICS* 316-18 (3d ed. 2004). Mankiw also mentions natural monopolies as an instance where serious barriers to entry exist. However, natural monopolies are a special case, as they arise (at least theoretically) in situations in which it is more efficient for a single firm to exist rather than multiple firms.

188. See Turner, *supra* note 186, at 152.

189. See U.S. Patents and U.S. Patent Applications by Walmart, *FREE PATENTS ONLINE*, <http://www.freepatentsonline.com/search.html> (select "US Patents" and "US Patent Applications"; then search "AN/'wal mart"; then follow "Search" hyperlink) (last visited Apr. 3, 2012); see also *TED Book Maps a New Age of Creativity and Invention*, *supra* note 4 (remarking that "most innovations in most industries are not patented").

190. See CHARLES FISHMAN, *THE WAL-MART EFFECT: HOW THE WORLD'S MOST POWERFUL COMPANY REALLY WORKS—AND HOW IT'S TRANSFORMING THE AMERICAN ECONOMY* 61 (2006); see also *supra* text accompanying notes 2-4 (discussing Walmart's retail innovations).

191. See Mark Morrison, *Wal-Mart Fishes Upstream*, *BUSINESSWEEK*, Mar. 24, 2006, http://www.businessweek.com/investor/content/mar2006/pi20060324_117687.htm.

The ramifications for innovation extend beyond direct application. Most problematic, patents may undermine innovations that build upon existing dynamic business models:

The holding of a broad patent by one firm in some cases deters other firms from trying themselves to invent “in the neighborhood.” In particular, unless that patent is liberally licensed, other firms are deterred from themselves undertaking any of the wide variety of follow-on inventive work that improves, or variegates, on an initial invention.¹⁹²

But unpatentable business model innovations allow not only replications, but improvement as well. The PNOS model may tap into a megatrend in a way previous business models failed to achieve, but that in no way guarantees that it has done so optimally. Protecting the competitive viability of innovative business models not only enhances the amount of existing innovation; it also provides the foundation for future developments that perfect the innovation.

3. Market Consolidation as Incentive for Innovation

The previous Subsection focused on the negative aspects of patents. We argued that the unavailability of patents for business model innovations means that market power in such industries neither threatens competition nor excludes competitors from adopting and enhancing such innovations. But patents exist for a reason. The costs of the state-imposed monopoly—reduced output and higher prices—are necessary, it is argued, to properly incentivize innovations that would otherwise prove to be economically unviable. Thus, the importance of patents is at its peak in an industry like the pharmaceutical business, where fixed research and development costs are extremely high but the marginal cost of producing individual drugs is very low.¹⁹³ Without patent protection as a form of “reward” for an individual firm’s hard work, the fear that competitors would sell generic versions at rock-bottom prices would deter pharmaceutical companies from ever investing in research to begin with.

While we do not argue that the rationale for patents is strong enough to justify intellectual property protection for innovative business models, it does provide a useful reference point when enforcing antitrust law. Broadly speaking, patent law acknowledges that anticompetitive harms may be justified when they constitute a necessary prerequisite to innovation. The same logic may apply to businesses like Whole Foods. If Whole Foods realizes that government regulators will never allow it to reap the rewards of market dominance, it has less incentive to innovate and compete than it otherwise

192. Roberto Mazzoleni & Richard R. Nelson, *The Benefits and Costs of Strong Patent Protection: A Contribution to the Current Debate*, 27 RES. POL’Y 273, 275 (1998) (citations omitted); cf. Turner, *supra* note 186, at 152 (“[T]he patent system often forces competitors of the patent holders to invest resources in duplicating research, that is, to find other non-infringing ways of obtaining the same or nearly the same result.”).

193. See Mazzoleni & Nelson, *supra* note 192, at 275-76.

would. Indeed, if one's business model innovations may themselves define a new market for the purposes of antitrust regulation, then businesses may be deterred from innovating in the first place for fear of being pegged as wielding market power in these dynamic markets.¹⁹⁴ Much like a system in which patents are granted parsimoniously, rigorous enforcement of antitrust law may have pro-competitive effects at the cost of valuable innovation.

Throughout Part IV, we have generally argued that mergers of innovative firms in dynamic markets either (a) pose few threats to competition or (b) themselves enhance innovation and other efficiencies. But even if both (a) and (b) are empirically false, strict antitrust enforcement against mergers of innovative firms may still be imprudent policy. Lax antitrust regulation, insofar as it enables firms to reap the rewards of their innovations, may be essential simply as a mechanism for incentivizing socially optimal amounts of innovation. The goals of advancing competition and enhancing innovation may sometimes come into conflict, and a government that ignores the latter in pursuit of the former conducts a myopic economic policy.

D. *The Competitive Asymmetries of the Status Quo*

By permitting the FTC to define the PNOS model as a market distinct from traditional supermarkets, the *Whole Foods* case created an asymmetry between innovation at the firm level and innovation within a firm. According to the FTC's view, if Ralph's or Safeway adds an organic food section to its traditional grocery stores, it still competes with other standard supermarkets for the purpose of antitrust analysis. But when PNOSs like Whole Foods and Wild Oats focus primarily on the sale of organic food products, the FTC treats them as occupying a distinct market. The efforts of traditional grocery stores to corner the organic food market are therefore considered in light of competition in the larger supermarket industry, while PNOSs must survive antitrust scrutiny as players in a smaller submarket. The result is an antitrust regime that arbitrarily favors incremental innovation within the context of existing markets rather than the creation of innovative submarkets. This Section explores the harms of favoring business model innovation within established, traditional firms.¹⁹⁵

194. Cf. *FTC v. Whole Foods Mkt., Inc.*, 548 F.3d 1028, 1037 (D.C. Cir. 2008) (“[S]uccess turn[s] on whether there exist core customers, committed to PNOS, for whom one should consider PNOS a relevant market.”).

195. It is important to keep in mind that the perverse incentives discussed in this Section operate on the margins. While asymmetric enforcement of antitrust law will have effects on the quality and quantity of innovation, we make no empirical claim as to the size of such effects. Rather, we simply note that the existing shift in incentives tends toward comparatively less desirable outcomes.

1. Harms to Innovation

Whole Foods suggests that innovation occurring in a distinct submarket is subject to an antitrust inquiry separate from that applicable to innovation occurring within an existing market. At first glance, this may appear to weaken the argument of the Article. After all, if innovation will occur either way, what does it matter if it happens within existing traditional-model firms rather than firms whose entire business model is committed to a specific innovation? The *fact* of innovation does not change, merely its location.

But the source of innovation may itself be relevant to the quality and quantity of innovation that takes place. Asymmetrically preferring innovation occurring within a traditional-model firm may stifle creative developments in at least two ways. First, the organization of large, established corporations¹⁹⁶ is less conducive to business model innovation than that of companies that compete solely in dynamic submarkets. Long-existing businesses, particularly those operating under the traditional model, often face the threat of stagnation in their corporate cultures. The causes are myriad: aging personnel who become set in their ways; the establishment of a “rigid organizational structure” and an “increase [in] the number of rules over time”;¹⁹⁷ and the general susceptibility of corporate strategy to inertia.¹⁹⁸ Such companies are less amenable to major changes to their business models and become more reactive than proactive. Admittedly, even an innovative-model business like *Whole Foods* may eventually become susceptible to corporate culture stagnation. But if antitrust law holds such businesses to a higher standard, then fewer “vitalized” startups will be willing to enter dynamic submarkets to take their place.

Even if, as a matter of corporate culture, a traditional-model business is receptive to change, structural hurdles in the organization may thwart innovation. Established firms become hampered by over-bureaucratization, the result of the incremental accumulation of rules that, though initially the formalization of best practices, eventually emphasize the process over results.¹⁹⁹ Bureaucratization, in turn, obstructs firm-wide innovation, thereby limiting the extent to which a traditional firm can transform its business model.

Second, traditional firms have fewer incentives to focus their energies on continued business model innovation. In a traditional supermarket, the organic foods section is one component of the overall business model. While the

196. Admittedly, the size of some competitors in a dynamic submarket may be greater than that of many firms in the larger traditional market. However, given that one group of firms is defined as the dynamic submarket of the other, it is reasonable to assume (a) that dynamic market competitors are, by and large, younger than their traditional counterparts; and (b) that since traditional-market competitors have, on average, been around longer, they have had more time in which to attain greater size.

197. TOYOHIRO KONO & STEWART R. CLEGG, *TRANSFORMATIONS OF CORPORATE CULTURE: EXPERIENCES OF JAPANESE ENTERPRISES* 20 (1998).

198. *Id.* at 21.

199. *See id.*

supermarket has a vested stake in the sale of its natural and organic food products, it composes only a portion of its total inventory, so the success of the firm as a whole is not dependent on the success of its more innovative components. For PNOs, business in natural and organic foods is more than a single investment in the broader portfolio; that business *is* the portfolio. With its rise or fall utterly dependent on its success in tapping into a megatrend, a PNO must focus all of its energies in a single, innovative business model. Additionally, because megatrends are more susceptible to changes in consumer preferences than more traditional markets, firms competing in dynamic markets must not only sustain their original creative business model, but also evolve it to keep up with shifts in the megatrend. Traditional-model firms can still tap into megatrends, but unlike innovative-model firms, their survival is not dependent on doing so. They therefore lack the same incentives and structural capabilities that allow for optimal innovation.

2. Harms to Innovators

Asymmetric antitrust enforcement also has at least two ramifications for human capital: first, there is less financial incentive for creative people to engage in business model innovation in the first place; and second, those who still seek to innovate have an artificially greater incentive to do so within established traditional-model firms. The losses to innovation resulting from the first consequence are fairly obvious, and we have already discussed them in some detail.²⁰⁰ This Subsection focuses on the harms that occur when innovators are artificially induced to work within traditional corporate structures rather than participating in dynamic markets.

First, for reasons related to the previous Subsection, innovators working within traditional-model businesses are less likely to have a voice in the upper rungs of the corporate hierarchy. When a firm's past success has been predicated on a certain business model, its management may be hesitant to adopt risky innovations that depart from conventional behavior.²⁰¹ The innovations developed by creative individuals may also "disrupt," rather than "sustain," the existing business model in a way that appears threatening. Although a firm may enhance its long-run competitiveness by adapting to the disruptive model, in the short term, such innovations might undermine existing revenue streams.²⁰² (For example, imagine a supermarket that consistently profited from its junk food section suddenly shifting focus to the health benefits of its new natural and organic foods.) Because there will be fewer situations in which the firm will adopt their recommendations for business model

200. See *supra* Subsection IV.A.1.

201. See KONO & CLEGG, *supra* note 198, at 19.

202. Cf. CLAYTON M. CHRISTENSEN, *THE INNOVATOR'S DILEMMA*, at xi-xxxi (1998) (discussing business reactions to "sustaining" and "disruptive" technologies).

transformation, innovators will have comparatively fewer opportunities for advancement *within* the firm. Even a traditional-model firm that makes conscious efforts to reward its inventive employees will be hard pressed to compete with business model innovators in promoting such workers to upper-level management. Creative employees should disproportionately constitute the management of business model innovators, if for no other reason than that the establishment and initial expansion of such firms rests on their talents.

Second, there exist concerns of fairness. Current antitrust law establishes incentives that relegate innovators to secondary roles within firms. At the same time, innumerable sources list innovation as the most important of all the factors that make for a successful business in the modern economy.²⁰³ A system that discourages innovators from taking a central role is more than just inefficient; it is arguably perverse.

3. Political Harms

Asymmetric application of antitrust law has political, as well as economic, ramifications. By favoring traditional-model firms, the status quo advantages incumbent market participants, who are often larger than the newer firms that inhabit dynamic markets.²⁰⁴ But larger, more established firms—both because of their economic heft and their age—are more likely to possess political clout that they can leverage to their own advantage. That dynamic, in turn, can create problems, as “every industry or occupation that has enough political power to utilize the state will seek to control entry.”²⁰⁵ Under this account, powerful business interests will attempt to “capture” political apparatuses (such as administrative agencies) in order to use their regulatory powers for their own ends. Examples include the imposition of tariffs on competing foreign goods, licensing requirements for new market entrants, or even regulatory burdens that favor larger corporations with the economies of scale to satisfy these requirements.²⁰⁶

The irony is that antitrust measures intended to increase competition may ultimately have unintended anticompetitive effects. Asymmetric antitrust regulation of business model innovators may not necessarily consolidate market power, but it does facilitate the consolidation of political power.

203. See generally FRANCES HORIBE, *CREATING THE INNOVATION CULTURE: LEVERAGING VISIONARIES, DISSENTERS AND OTHER USEFUL TROUBLEMAKERS IN YOUR ORGANIZATION* (2001) (reporting consensus on this issue among *BusinessWeek*, *Harvard Business Review*, *Fortune*, and various CEOs of major corporations).

204. See *supra* note 196.

205. George J. Stigler, *The Theory of Economic Regulation*, in *THE POLITICAL ECONOMY: READINGS IN THE POLITICS AND ECONOMICS OF AMERICAN PUBLIC POLICY* 67, 69 (Thomas Ferguson & Joel Rogers eds., 1984).

206. See *id.* at 69-70.

V. Recommendations for Reform

This Article has argued that modern antitrust law fails to account properly for dynamic markets and business model innovation. In particular, the FTC's application of the Horizontal Merger Guidelines in cases such as *FTC v. Whole Foods Market, Inc.* considers short-term cost efficiencies without properly evaluating the returns to innovation that occur from allowing mergers. This Part offers some recommendations for reform to the Guidelines.

The history of American antitrust law has been a largely inexorable march from strict *per se* rules to a more permissive standards-based approach under the rule of reason.²⁰⁷ Some argue that adjudication by standards allows judges, government agencies, and other fact-finders wide discretion that may require them to “ramble through the wilds of economic theory in order to maintain a flexible approach.”²⁰⁸ At the same time, the uniqueness of antitrust law's “treble damages remedy, the close proximity of socially beneficial and harmful behavior, and the propensity of competitors to misuse antitrust lawsuits for strategic advantage” all favor a more moderate approach that evaluates an array of factors.²⁰⁹ This counsel is especially salient for enforcing antitrust law in dynamic markets, where precise quantification of the benefits of innovation may prove difficult.²¹⁰

We therefore believe that a standards-based approach is particularly appropriate in regulating mergers between business model innovators. In that light, we propose that the Horizontal Merger Guidelines be revised to allow for a more holistic consideration of the costs and benefits of a given merger. The FTC's evaluation should be governed not by any *per se* test, but by a set of qualitative and quantitative criteria. Specific measures such as SSNIP, while easy to administer, are also arbitrary, limited, and subject to manipulation. The obvious weakness of a standards-based approach is uncertainty in enforcement. Though this is a reasonable concern in the abstract, factual disagreements arise

207. See, e.g., Daniel A. Crane, *Rules Versus Standards in Antitrust Adjudication*, 64 WASH. & LEE L. REV. 49, 60 (2007) (“The transition from rules to standards did not take place solely due to a juridical shift of particular business practices from one category to another. Instead, the entire judicial rhetoric of antitrust has moved in a more nuanced, standard-based direction over the past few decades. With few exceptions, the courts have stopped creating new categories of *per se* illegal conduct” (footnote omitted)). See generally Carl Shapiro, *The 2010 Horizontal Merger Guidelines: From Hedgehog to Fox in Forty Years*, 77 ANTITRUST L.J. 49 (2010) (tracing the evolution of the Horizontal Merger Guidelines from a set of harsh, immutable rules to standards for fact-specific inquiry).

208. *United States v. Topco Assocs., Inc.*, 405 U.S. 596, 609-10 n.10 (1972).

209. See Crane, *supra* note 207, at 54.

210. See, e.g., Katz & Shelanski, *supra* note 172, 77-78 (arguing that, where technological innovation from research and development is at stake, a “case-by-case, fact-intensive inquir[y]” is superior to “systematic presumptions”).

even when applying supposedly objective rules;²¹¹ and, in any case, uncertain standards are still better than bad rules.

An appropriate set of Horizontal Mergers Guidelines would make the following changes:

- **Determine whether the merging firms are members of a dynamic market of business model innovators.** When the FTC determines that, because of the lack of substitute goods for certain products, those products occupy their own market, it should inquire into whether this market is truly distinct or merely a dynamic submarket of a larger static-model market. Factors should include the length of time the products have been generally available for purchase by the public, whether the market as a whole has seen significant size increases in recent years, and whether the products are similar in function to those of other markets but simply differ in quality. Given the cost of false positives,²¹² this inquiry should be especially flexible in order to allow a finding that the merging firms possess uniquely innovative business models.
- **Evaluate nontransitory increases in price more flexibly.** The threat that market power allows price increases is still an important consideration in the administration of antitrust law and the protection of consumer welfare. Currently, the SSNIP test looks to price increases in order to determine whether “a product market contain[s] enough substitute products so that it could be subject to postmerger exercise of market power significantly exceeding that existing absent the merger.”²¹³ The Guidelines should nevertheless be revised to reject the SSNIP test’s bright-line approach of a five-percent price increase.²¹⁴ Such a rule-based approach creates an unjustified presumption of anticompetitive behavior, even if that presumption is not intended to be dispositive. Instead, SSNIP analysis should be conducted, an estimate for the short but significant increase in price should be calculated, and this entire analysis should count as one factor among many for the ultimate determination. Indeed, critics have already challenged the five-percent bright-line approach in the context of high-technology markets, where quality-adjusted prices may drop twenty percent annually.²¹⁵
- **Once merging firms are determined to be business model innovators, presume, *ceteris paribus*, that the merger is reasonable.**

211. See, e.g., *FTC v. Whole Foods Mkt., Inc.*, 548 F.3d 1028, 1038 (D.C. Cir. 2008) (discussing disagreement between the two sides’ expert witnesses concerning proper application of SSNIP to the Whole Foods Merger).

212. See *supra* Subsection II.C.1.

213. 2010 HORIZONTAL MERGER GUIDELINES, *supra* note 1, § 4.1.1.

214. See *Whole Foods*, 548 F.3d at 1052 (Kavanaugh, J., dissenting).

215. See *Katz & Shelanski*, *supra* note 172, at 35.

- **Place the burden on the FTC to show that alleged merger efficiencies will not occur for mergers between business model innovators.** While section 10 of the Guidelines allows consideration of gains to efficiency that result from mergers, the FTC “credit[s] only those efficiencies likely to be accomplished with the proposed merger and unlikely to be accomplished in the absence of either the proposed merger or another means having comparable anticompetitive effects.”²¹⁶ As a result, the merging firms bear the burden of demonstrating to the FTC’s satisfaction that unique efficiencies can result *only* via merger and that these efficiency gains are not “vague, speculative” or unverifiable.²¹⁷ Because the precise results of any given merger are unpredictable, particularly when it comes to dynamic markets, section 10 places a major hurdle in the way of businesses that wish to merge. For instance, the FTC typically seeks “tangible evidence of the likelihood of entry,” which is notoriously difficult to provide.²¹⁸ Instead of applying “skepticism” to proposed mergers, the FTC should only challenge mergers when the alleged efficiency gains have no sound basis in fact or are contrary to existing evidence.

These suggestions for Guidelines reform are by no means meant to be exhaustive. But they are a starting point for a discussion about how federal antitrust enforcement can better account for the uniqueness of innovative business models in dynamic markets.

Conclusion

This Article advances two main ideas. First, technological advancement is not the only (or even chief) means through which firms innovate, and consumers readily benefit from a company’s innovative business model. As it is currently constructed, antitrust law does not adequately appreciate the market dynamics of dynamic markets. Second, regulators should not fear mergers between business model innovators. By tapping a host of efficiencies not necessarily available to more traditional firms, such mergers are likely to be pro-competitive.

We believe that the Horizontal Merger Guidelines should be revised to accommodate those observations, but they need not depart wholesale from the existing approach. While antitrust enforcers should continue to scrutinize price

216. 2010 HORIZONTAL MERGER GUIDELINES, *supra* note 1, § 10.

217. *Id.*

218. Katz & Shelanski, *supra* note 172, at 44. Katz and Shelanski argue that “[i]nvestments in R&D, as well as in specialized plant and equipment, may strongly indicate that the firms will shortly be entering the product market and, hence, that a merger analysis based on current market shares would overstate likely future concentration.” *Id.* at 44-45. But that solution is only available to *technologically* innovative firms, which, as we have argued, are not coextensive with firms relying on business model innovation.

increases when evaluating a merger, they should also analyze whether the relevant market is dynamic and thus requires less stringent policing of the merger. Certainly this inquiry will be difficult and subject to error. We believe this supplement to the Guidelines will at least ensure that judges and regulators are cognizant of the problem, and will provide decisionmakers an opportunity to develop a competency for evaluating competition involving innovative business models.

