OLD LESSONS DIE HARD: WHY THE ESSENTIAL FACILITIES DOCTRINE PROVIDES COURTS THE ABILITY TO EFFECTUATE COMPETITIVE BALANCE IN HIGH TECHNOLOGY MARKETS

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Introduction

The rapid rise in technological, scientific, and electronic markets leave the state of United States antitrust laws in a perplexing position: can the one hundred plus years of antitrust jurisprudence, an area of law that began in the era of Standard Oil, be used to regulate these unseen economies? On one side of the debate, there are those who contend that antitrust law should not, and frankly cannot, effectively regulate the development of modern technological economies. Likewise, there are also those who contend that antitrust law is needed now more than ever to protect society from the dangers of monopolies.

This note aims to look past these exaggerated fears and argues that antitrust regulation, should be, and in fact, can be, applied to modern technological and scientific fields where innovation is key. Specifically, the focus of this note will be that the essential facilities doctrine, a doctrine deemed largely dormant by the U.S. Supreme Court’s recent treatment of it, is a practical solution that can assist antitrust regulation in this new age.

Parts I.A and I.B summarize monopolization jurisprudence pursuant to § 2 of the 1890 Sherman Act. Part I.C summarizes the development of the essential facilities doctrine in antitrust law and its recent treatment by courts as to New Economies. Part II.A defines “New Economies” and provides an overview of the characteristics that differentiate them from traditional economies. Part II.B provides an overview of the ongoing debate as to
whether antitrust can and should be applied to New Economies. Part III.A argues why the essential facilities doctrine should be a tool that courts should use to regulate New Economies as needed. Part III.B provides a proposed elemental test to assist courts in determining the applicability of the essential facilities doctrine to a particular plaintiff’s antitrust claim.

I. History

A. Antitrust Statutory Provisions

Congress passed the 1890 Sherman Act upon a platform of populist concern to combat the effects of a non-regulated industrial revolution that effectively bottled up the national economy.\(^1\) Two separate, yet intertwined, provisions constitute the Act.\(^2\) While initially interpreted to condemn all restraints of trade,\(^3\) § 1

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\(^1\) See Philip Areeda & Louis Kaplow, Antitrust Analysis: Problems, Text, and Cases 41-43 (5th ed. 1997) (explaining populist thought). The authors describe the populist thought during this time as:

[M]any people in the United States had come to feel that private enterprise, which sometimes acted “in combination, ha[d] developed with unexpected strength in unexpected ways, overshadowing individuals and even communities, and showing that the very freedom of association ... may, under the shelter of law, ripen into a new form of tyranny.”

*Id.* at 42.

\(^2\) See 15 U.S.C. §§ 1, 2 (2004) (enumerating the two provisions of the Act). Section 1 states “[e]very contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations, is declared to be illegal.” *Id.* § 1. Section 2 states “[e]very person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty of a felony ...” *Id.* § 2.

\(^3\) See United States v. Trans-Missouri Freight Ass’n., 166 U.S. 290, 312 (1897) (declaring “[w]e see no escape from the conclusion that, if any agreement of such a nature does restrain [trade or commerce], the agreement is condemned by this act”). But see *id.* at 345 (White, J., dissenting) (arguing § 1 condemns
condemns only those restraints deemed unreasonable. Additionally, § 2 makes monopolization or attempts to monopolize distinct illegal acts. Congress also passed other statutory provisions after the Sherman Act, such as the Clayton Act and the Robinson-Patman Act.

B. Monopolization Jurisprudence

The statutory language of § 1 and § 2 of the Sherman Act left much for the early courts to determine. As briefly mentioned supra, § 1 condemns unreasonable restraints of trade. Section 2 makes two distinct acts illegal: 1) monopolization and 2) any attempt to monopolize, either unilaterally or through a

only those restraints deemed unreasonable as established by the common law).

4 See Standard Oil Co. v. United States, 221 U.S. 1, 60 (1911) (creating and applying the “rule of reason” analysis that weighs the pro-competitive effects of a restraint against the anti-competitive effects). While Standard Oil created the rule of reason test, the Court also noted that in certain circumstances a restraint would be so innately anti-competitive in nature, and therefore unreasonable, that they would be condemned as a per se matter of law. See id. at 64-65. Compare Bd. of Trade of City of Chicago v. United States, 246 U.S. 231, 241 (1918) (applying the rule of reason test to determine the reasonableness of the trade restraint imposed by the board of trade), with United States v. Socony-Vacuum Oil Co., 310 U.S. 150, 212-13 (1940) (declaring that any conspiracy to fix prices is per se unreasonable, even for the purpose of stabilizing a market).


8 See David McGowan, Innovation, Uncertainty, and Stability in Antitrust Law, 16 BERKELEY TECH. L.J. 729, 749 (2001) (quoting Senator John Sherman: “I admit that it is difficult to define in legal language the precise line between lawful and unlawful. This must be left for the courts to determine in each particular case.”) (quoting 21 CONG. REC. 2455 (March 21, 1890) (statement of Sen. John Sherman)).

9 See Standard Oil, 221 U.S. at 60 (establishing that § 1 only condemns those trade restraints deemed unreasonable).
conspiracy.10 Much like with § 1, the early courts struggled to determine the meaning of § 2 and its relationship to § 1.11 In modern monopolization analysis, a firm violates § 2 if it possesses monopoly power in the relevant market, and it willfully acquired or maintains this power through exclusionary acts.12 While this two-step analysis seems simple, the Court struggled to develop this test due to the need of balancing a firm’s right to compete and reap profits from healthy competition, along with the need of protecting the economy from monopoly power.13

The Court first addressed a § 2 monopolization issue in Standard Oil v. United States,14 a seminal case in which the U.S. government sought to break apart John Rockefeller’s Standard Oil Trust.15 At the time of this case, the Standard Oil trust engulfed the American economy.16 The Court in Standard Oil determined that § 2 should be treated as a “compliment” to § 1, thereby applying the rule of reason test developed for § 1 analysis.17 While contemporary monopolization analysis is distinct from § 1 analysis,18 Standard Oil is significant for two main reasons.19 First, Standard Oil stands for the proposition that a § 2

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10 See 15 U.S.C. § 2 (stating that any person that monopolizes or attempts to monopolize trade or commerce is guilty of a felony).
11 See Sullivan & Harrison, supra note 5, at 249 (describing the early Courts’ struggle with § 2 as a “dilemma”).
13 See Sullivan & Harrison, supra note 5, at 249 (noting that this evolutionary process has not yielded a totally predictive result for § 2 jurisprudence).
14 See 221 U.S. 1, at 48-49 (1911) (analyzing the meaning of the second section of the anti-trust act).
15 See id. at 32-43 (summarizing the government’s charges in detail against John D. and William Rockefeller’s Standard Oil Trust).
16 See id. (describing in detail the effects of the defendants’ actions to the petroleum industry).
17 See id. at 61-62 (explaining the relationship between the sections and describing § 2’s purpose as making § 1’s prohibitions “all the more complete”).
18 See Grinnell, 384 U.S. at 570-71 (stating the modern monopolization test that is independent of § 1 analysis).
19 See Standard Oil, 221 U.S. at 61 (stating that any act falling under the definition of “to monopolize” and “monopolize,” as defined in the section
monopolization claim potentially arises from any act that brings about the monopolization, thereby intertwining § 2 with other antitrust provisions that condemn certain practices. Second, the Court did not weaken § 2 by making a blanket reduction in its potential application in future cases. Instead, however, the Court did not expressly preclude a broader application of § 2. Even though the Court was not accustomed to applying § 2 to the business of the era, it constantly kept in mind the dangers § 2 aimed to prevent or mitigate and acted accordingly. The Court continued this sentiment by also not expressly precluding the possibility of a broader application in United States v. American Tobacco, another antitrust case decided in the same term that treated § 1 and § 2 as complimentary sections.

The ambiguous language of § 2 also forced the Court to determine whether a firm’s size alone would be sufficient for a monopolization violation. In United States v. United States Steel Corp., the Court determined that a monopolization claim re-

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20 See Standard Oil, 221 U.S. at 61 (defining “to monopolize” and “monopolize” as reaching “every act bringing about the prohibited results”).
21 See Sullivan & Harrison, supra note 5, at 253 (analyzing the effects of the Standard Oil decision on subsequent § 2 issues).
22 See Sullivan & Harrison, supra note 5, at 252-53 (describing why the Court left the door open for an expanded application of § 2 in future cases).
23 See Standard Oil, 221 U.S. at 75 (justifying its affirmation of the lower courts’ findings of antitrust violations because Standard Oil’s power was an “inevitable result of . . . new means of combination which were resorted to in order that greater power might be added than would otherwise have arisen had normal methods been followed . . .”); see also Sullivan & Harrison, supra note 5, at 252-53 (arguing that the Court took note of the evil to be avoided by the Sherman Act in its analysis because Standard Oil obviously possessed monopoly power and engaged in anticompetitive conduct).
24 See 221 U.S. 106, 184 (1911) (concluding that the Court’s ruling was specific to the facts of that case only).
25 See Sullivan & Harrison, supra note 5, at 253 (pointing out the Court’s consistency in this respective term).
26 See Sullivan & Harrison, supra note 5, at 252 (presenting one of the biggest questions as whether § 2 outlawed “bigness per se”).
27 251 U.S. 417 (1920).
quired a firm to commit some sort of overt act in order for condemnation under § 2. While the Court did not explicitly close the door on a per se rule against a firm’s size, it did sufficiently set precedent stressed by later Court decisions stating a firm must perform some overt action in violation of the Sherman Act’s policy in order to find a § 2 violation. Although the Court was divided on applying the monopolization standard to U.S. Steel Corporation’s actions, it acted consistently by suggesting a close parallel between the conduct outlawed by § 1 and the overt acts required for condemnation under § 2.

The first modern monopolization case that removed § 2 from the shadow of § 1 was United States v. Aluminum Co. of America (Alcoa). The U.S. government brought forth a § 1 and § 2 claim against Alcoa, arguing that Alcoa’s acts constituted the monopolization of the entire aluminum ingot market. Writing for the court, Judge Learned Hand ruled that a firm must have both the sufficient power to monopolize and the intent to monopolize. Advancing the Court’s holding in United States Steel Corp. regarding the requirement of overt acts, Judge Hand also

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28 See United States Steel Corp., 251 U.S. at 451 (establishing that the law requires some sort of overt act for condemnation under § 2).
29 See Sullivan & Harrison, supra note 5, at 253 (explaining that even later cases did not completely eliminate the question of whether § 2 could be a response to a firm’s bigness alone).
30 See Sullivan & Harrison, supra note 5, at 253 (summarizing the divide between the majority and dissent in United States Steel Corp. and pointing out the Court’s consistency with viewing § 2 as a compliment to § 1).
31 See 148 F.2d 416, 423 [hereinafter Alcoa] (2nd Cir. 1945) (analyzing violations of §1 separately from violations of §2). The Second Circuit Court of Appeals heard this case after four members of the Supreme Court disqualified themselves. See Sullivan & Harrison, supra note 5, at 253.
32 See Alcoa, 148 F.2d at 422 (analyzing whether Alcoa monopolized when it bolstered its dominance by entering into agreements with foreign competitors to limit competition and with power companies to restrict power access to any potential domestic producers after it possessed a legal patent on the production of aluminum from 1888 to 1909).
33 See id. at 432 (extrapolating this two part test after discussing the question of intent); see also Sullivan & Harrison, supra note 5, at 254-55 (putting aside Judge Hand’s specific analysis of the Alcoa facts to emphasis the importance of his structural analysis).
declared that a firm’s size must be the product of unnatural forces in order to find a monopolization violation under §2.\textsuperscript{34} This was a significant ruling because it meant that a monopoly due to “skill, foresight and industry” did not constitute an unnatural force and would not satisfy a monopolization violation.\textsuperscript{35} In an even more significant ruling, Judge Hand decided that evidence of a firm’s overt acts, otherwise known as exclusionary acts, satisfies the intent requirement of his analysis because “no monopolist monopolizes unconscious of what he is doing.”\textsuperscript{36} This ruling is significant because it takes away the need for the showing of a specific intent to monopolize,\textsuperscript{37} thereby rejecting any notion that a § 2 analysis mirrors criminal law’s requirement of specific intent.\textsuperscript{38} The Court approved Judge Hand’s Alcoa analysis in American Tobacco Co. v. United States,\textsuperscript{39} where it readily drew guidance in determining whether actual exclusion was a necessary element of monopolization.\textsuperscript{40}

Even after Alcoa and American Tobacco, the Court still analyzed § 2 monopolization claims under a vague standard that combined different analyses from previous cases.\textsuperscript{41} Finally, in

\textsuperscript{34} See Alcoa, 148 F.2d at 429 (stating “size does not determine guilt... there must be some ‘exclusion’ of competitors... the growth must be something else than ‘natural’ or ‘normal’”).

\textsuperscript{35} See id. at 430 (recognizing that a firm should not be punished if it competes properly and “wins”); see also SULLIVAN & HARRISON, supra note 5, at 255 (describing Alcoa’s lesson and quoting the opinion indicating “[l]iability would not attach to a monopolist which had power ‘thrust upon it,’ or which gained its power by ‘force of accident,’ or was a ‘passive beneficiary.’”)

\textsuperscript{36} See Alcoa, 148 F.2d at 432 (stating that “no monopolist monopolizes unconscious of what he is doing.”)

\textsuperscript{37} See id. (explaining that the only intent that is required is the intent “to bring about the forbidden act.”).

\textsuperscript{38} See SULLIVAN & HARRISON, supra note 5, at 256 (explaining the significance of Judge Hand’s rejection of a specific intent requirement).

\textsuperscript{39} 328 U.S. 781, 813 (1946) (endorsing Judge Hand’s analysis).

\textsuperscript{40} See id. at 814-15 (quoting Judge Hand’s analysis to determine that American Tobacco violated § 2); see also SULLIVAN & HARRISON, supra note 5, at 256 (describing how the Court ruled that § 2 did not require actual exclusion as a necessary element).

1966, the Court formally defined the § 2 monopolization test as a two-element analysis. Under this standard, a firm is guilty of monopolization in violation of § 2 when it: 1) possesses monopoly power in the relevant market; and 2) acquires or maintains that monopoly power through means other than “from growth or development as a consequence of a superior product, business acumen, or historic accident.”

While these two elements comprise the modern monopolization test, there is a specific process in determining whether a firm is guilty of monopolization in violation of § 2. First, in order to show monopoly power in the relevant market, a plaintiff must bring forth a full market analysis that defines the relevant product and geographic market. The relevant product market is a survey of all relative substitutes for a firm’s particular good or service. Specifically, the relevant product market includes all products “reasonably interchangeable by consumers for the same purposes” as the products provided for by the alleged monopolist. The geographic market reflects the geographic extent to which a firm’s reach, or alleged market power, extends. Sometimes in high technology markets the relevant product market is unnecessary to choose between the...approaches, or, taken as a whole, the evidence satisfies the tests laid down in both [United States v. Griffith, 334 U.S. 100 (1948)] and [Alcoa].”

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42 See Grinnell, 384 U.S. at 570-71 (outlining the modern monopolization test).
43 See id. (utilizing this two part test in the Court’s analysis and quoting Judge Learned Hand).
44 See id. at 571 (describing the United States’ evidence in support of their allegation of monopolization).
45 See, e.g., id. (stating that the defendant possessed 87% of the accredited central station service business).
46 See id. (explaining “substitute products must also be considered, as customers may turn to them if there is a slight increase in the price of the main product.”).
48 See, e.g., Aspen Skiing Co. v. Aspen Highlands Skiing Corp., 472 U.S. 585, 596 n.20 (1985) (determining that the geographic market at issue included only four mountains in the immediate Aspen, Colorado area, as opposed to including other mountains in the surrounding Rocky Mountain range due to restrictions on developing more mountains).
the only market definition needed because the product market adequately reflects the geographic market.49

Once the relevant market is defined, the monopolization analysis turns to whether a firm possesses monopoly power.50 A firm possesses monopoly power either when it has the power to raise prices above what they would be in a competitive market, or when it has the power to exclude competition in the relevant market.51 Courts will virtually always accept circumstantial evidence of monopoly power because direct evidence is difficult to obtain.52 The most common form of circumstantial evidence of market power is a firm possessing a predominant share of the relative market, along with other factors like barriers to entry.53 Although no exact number dictates the percentage of the relevant market a firm must control before monopoly power exists, approximately 80% control is typically regarded as sufficient to show monopoly power in a well-defined market with some sort of entry barriers.54

Once the analyzing court is satisfied with the requisite monopoly power in the given relevant market, the next step in the monopolization analysis looks towards the source of the monopoly power.55 The analyzing court looks at whether the firm

49 See United States v. Microsoft Corp., 253 F.3d 34, 51 (D.C. Cir. 2001) (omitting a discussion of the geographic market because the relevant product market analysis dealt with “all Intel-compatible PC operating systems worldwide”).
50 See, e.g., Grinnell, 384 U.S. at 571 (analyzing monopoly power).
51 See id. (defining monopoly power).
52 See id. (describing the difficulties with providing direct evidence).
53 See id. (explaining the most powerful and generally accepted circumstantial evidence).
54 See id. (finding an 87% market share sufficient for monopoly power); American Tobacco, 328 U.S. at 797 (finding an 80% market share sufficient for monopoly power); Microsoft, 253 F.3d. at 51 (finding a 95% market share sufficient for monopoly power); Alcoa, 148 F.2d at 424 (finding a 90% market share sufficient for monopoly power, but that a 60-64% market share would be doubtful and a 33% share would certainly not suffice). 
55 See Grinnell, 384 U.S. at 570-71 (determining the source of the firm’s monopoly power).
acquired or maintained its monopoly power willfully, or whether the firm acquired or maintained this power “as a consequence of a superior product, business judgment, or historical accident.”

Behavior aimed at acquiring or maintaining monopoly power, known as exclusionary acts, is sufficient to distinguish a firm’s possession of monopoly power as stemming from a willful acquisition or maintenance from monopoly power as a result of a superior product or business.

Specific examples of exclusionary acts include producing and storing excess supply, drafting very exclusive leasing agreements, using tying arrangements to lever a firm’s monopoly onto another market, and refusing to deal with competitors under certain circumstances without a valid business justification.

Although these are just some examples of behavior analyzed in a § 2 context, any behavior that possibly violates any antitrust statute can be the source of possible § 2 exclusionary conduct. As a guiding principle, a firm participates in exclusionary conduct if the conduct is calculated to “serve the

56 See id. (discussing various paths to obtain power).
57 See Alcoa, 148 F.2d at 429 (discussing the requirements of exclusion); see also SULLIVAN & HARRISON, supra note 5, at 259-60 (explaining the degree of difficulty in determining exclusionary acts increases significantly when a firm stops acting in a predacious manner towards its competitors and instead begins to take actions to avoid any act that assists a competitor).
58 See Alcoa, 148 F.2d at 431 (finding the keeping of excess supply as exclusionary conduct).
59 See United Shoe Mach. Corp., 110 F. Supp. at 345-46 (upholding district court’s determination that United Shoe’s very restrictive lease agreements created substantial barriers to entry aimed at maintaining its monopoly power over the shoe manufacturing industry).
60 See Int’l Salt Co., Inc. v. United States, 332 U.S. 392, 396-97 (1947) (tying the sale of salt to the use of its salt processing equipment). A firm conducts “tying” when it makes the sale of a good or service it offers contingent upon the buyer first purchasing another good or service it offers that is not in demand as the primary good. See SULLIVAN & HARRISON, supra note 5, at 226.
61 See Aspen Skiing, 472 U.S. at 605 (holding that a monopolist must put forth valid business justifications to support an inference that its refusal to deal is not predatory in nature).
62 See SULLIVAN & HARRISON, supra note 5, at 260 (reiterating that in many monopolization cases the conduct at issue may also be examined in another antitrust provision).
benefit of the firm only by virtue of the harm it does to its competitors.”

Although courts have found the preceding acts exclusionary, modern monopolization analysis requires the plaintiff to put forth evidence showing an act’s anticompetitive effects. An act has an anticompetitive effect if it harms competitive process, and thereby harms consumers, rather than just harming one or more competitors. If a plaintiff successfully demonstrates an exclusionary act’s anticompetitive effects, a defendant may put forth any pro-competitive justification forward to the court to defend its actions. A procompetitive justification is a “nonpretextual claim that [the] conduct is indeed a form of competition on the merits.” The analyzing court determines the plausibility of any pro-competitive justification. If plausible, the burden shifts back to the plaintiff to rebut the claim of pro-competitiveness. If the defendant’s procompetitive justification remains unrebutted, then the plaintiff must put forth evidence showing that the exclusionary act’s anti-competitive effects outweighs the pro-competitive justification.

63 See Sullivan & Harrison, supra note 5, at 259 (discussing the difficulties in distinguishing between conduct that should and should not be condemned by antitrust laws).
64 See, e.g., Microsoft, 253 F.3d at 58-59 (recognizing conduct that is harmful to competitors alone is insufficient to establish anticompetitive behavior).
65 See id. at 58 (explaining purpose of the Sherman Act is to encourage competition, and limit conduct with destroys it).
66 See id. at 59 (outlining the process of bringing forth a monopolization claim).
67 Id.
68 See id. (listing procompetitive justifications, such as greater efficiency or enhanced consumer appeal).
69 See id. (shifting the burden for rebuttal).
70 See Microsoft, 253 F.3d at 59 (applying a balancing approach). It is interesting to note that this is similar to the rule of reason test applicable to § 1 analysis. See, e.g., Standard Oil, 221 U.S. at 60 (describing the rule of reason analysis). In addition, intent is only evidence to the extent it assists a court in understanding the likely effect of an act because § 2 analysis focuses on the effect of an act. See Microsoft, 253 F.3d at 59; see also Chicago Bd. of Trade v. U.S., 246 U.S. 232, 238 (1918) (describing intent as a tool to help courts predict an act’s consequences).
An appropriate example of a modern monopolization analysis can be seen by reviewing the D.C. Circuit Court’s decision in United States v. Microsoft. After Microsoft allegedly failed to comply with a consent decree it entered into with the Justice Department, the United States and a group of state plaintiffs filed separate, but soon consolidated, complaints against Microsoft for various antitrust claims. The consolidated complaint against Microsoft alleged four distinct violations of the Sherman Act.

The subsequent discussion of Microsoft will focus on count-three, Microsoft’s alleged unlawful maintenance of a monopoly in the PC operating system market in violation of § 2. In determining whether Microsoft possessed monopoly power, the D.C. Circuit applied the traditional analysis to determine the relative market. The D.C. Circuit Court upheld the district court’s determination that the relative market did not include Apple computers, non-PC information devices such as handheld devices.

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71 253 F.3d at 58-59 (discussing the phases of analysis).
72 See id. at 47 (describing procedural history of a previous Microsoft case). In July 1994, the Department of Justice filed suit against Microsoft, alleging that it was unlawfully maintaining a monopoly over the operating system through its licensing and agreements with software developers. See id. The parties entered into a consent decree and avoided a trial on the merits. See id. Three years later, the Department of Justice alleged Microsoft violated terms of this consent decree. See id. The D.C. Circuit found that Microsoft did not violate the consent decree. See id.
73 See Microsoft, 253 F.3d at 47 (elaborating on the procedural history leading up to the instant case).
74 See id. (listing the alleged violations in order). The four alleged violations were: "1) unlawful exclusive dealing arrangements in violation of § 1; 2) unlawful tying of [Internet Explorer] to Windows 95 and Windows 98 in violation of § 1; 3) unlawful maintenance of a monopoly in the PC operating system market in violation of § 2; and 4) unlawful attempted monopolization of the internet browser market in violation of § 2." Id.
75 See id. at 52 (citing United States v. E.I. Du Pont de Nemours & Co., 351 U.S. 391, 394-95) (describing the relevant market as including all products “reasonably interchangeable by consumers for the same purposes.”).
76 See id. at 52 (concluding that the costs and learning curve in switching to Apple supported the district court’s conclusion that Apple’s systems were not a ready substitute for Windows-based operating system).
or middleware software.\textsuperscript{78} Thus, the D.C. Court upheld the district court’s determination that Microsoft possessed a 95\% share in the PC operating systems market.\textsuperscript{79} The court also noted that even if it included Apple computers in the relevant product market, Microsoft still maintained an 80\% market share in the relevant product market.\textsuperscript{80}

In addition to being an appropriate example of a modern monopolization analysis, the court’s analysis in \textit{Microsoft} also illustrates the current struggle in thought regarding applying previous antitrust precedent to New Economies.\textsuperscript{81} For example, Microsoft argued that a high market share in such a “dynamic” industry should not be accepted as circumstantial evidence of monopoly power.\textsuperscript{82} Instead of accepting circumstantial evidence of monopoly power, Microsoft urged the court to require direct evidence that it behaved like a monopolist in order to prove it possessed monopoly power in the relevant product market.\textsuperscript{83} Significantly, the D.C. Court refused to create such a new rule for

\textsuperscript{77} See id. (agreeing with the district court that information devices were not an adequate substitute for Windows-based operating system).
\textsuperscript{78} See id. at 53 (affirming district court’s determination that middleware was not an adequate substitute for Windows-based operating system).
“Middleware” refers to software products that support their own Application Programming Interfaces (“APIs”). See id. The significance of middleware is that it allows program developers to write programs that function on the middleware, as opposed to writing programs that function on the base operating system. See id. Thus, middleware increases the ability for software developers to write programs that could work over a variety of operating system platforms. See id. This would lower the overall costs and difficulty in producing programs for a variety of operating systems, for example between Windows and Apple’s operating system. See id.
\textsuperscript{79} See \textit{Microsoft}, 253 F.3d at 54 (noting Microsoft’s argument that there was a possibility of competition from new entrants).
\textsuperscript{80} See id. at 54 (providing the outcome if the court chose to include Apple computers in the relevant product market).
\textsuperscript{81} See id. at 57 (expressing that the structural approach is functional in a changing market).
\textsuperscript{82} See id. (arguing that monopoly power should be proven directly in the software industry).
\textsuperscript{83} See id. at 56-57 (summarizing Microsoft’s rationale in its contention).
Microsoft. The court discussed that even if the operating system market is dynamic, traditional market share analysis is still capable of determining a firm’s monopoly power in such markets. This is significant because the court made clear and emphasized that traditional market share analysis can readily identify potential substitutes that constrain a firm’s ability to charge prices above the competitive level because it is a structural analysis, even in such a high technology market that Microsoft described as dynamic. Upon this determination, the court upheld the district court’s findings that Microsoft violated the § 2 prohibition on monopolization for a variety of exclusionary acts, namely its licensing and contractual agreements with software developers, exclusive dealing arrangements with Apple, and threats made directly to Intel. As such, while the D.C. Circuit chose to reject Microsoft’s argument for such a change in the monopolization analysis, it did not halt the struggle between these two different viewpoints.

C. The Essential Facilities Doctrine Under Antitrust Law

The Essential Facilities Doctrine represents an often misunderstood, and currently virtually dormant doctrine in United States Antitrust law. The misunderstanding of the doctrine is evidenced by the fact that although most commentators agree that

84 See id. at 56-57 (describing why Microsoft’s argument fails, even assuming that the software market is “uniquely dynamic in the long term”).
85 See Microsoft, 253 F.3d at 57 (pointing out the advantages of having a structural analysis).
86 See id. at 54-55 (recognizing that although market share can be misleading because it only represents today’s market share and not the future, it found that the barriers to entry existing in the operating systems market supported a finding that Microsoft possessed monopoly power because the barriers protected it from competitors).
87 See SULLIVAN & HARRISON, supra note 5, at 275 (summarizing the court’s analysis).
88 See infra Section II.B (summarizing the ongoing dispute between Marketeers and Interventionists).
the Court first applied the doctrine in 1912, commentators did not term the doctrine “essential facilities” until 1970.

Three U.S. Supreme Court decisions represent the creation of the doctrine, despite the fact that the Court did not specifically term the phrase “essential facilities” or describe the logic behind the cases as a distinct actionable doctrine. In *United States v. Terminal Railroad*, the Court analyzed whether a group of railroads controlling all railway bridges and switching yards into and out of St. Louis via the Mississippi River could unilaterally refuse access to competitors. The Court held that the defendants’ actions in this instance constituted both an illegal restraint of trade and an attempt to monopolize on the basis that the “control and possession [of this facility] constitutes such a grip upon the commerce of St. Louis and commerce which must cross the river.” As a result of this, the Court ordered the defendants to allow open and equal access to all competitors.

Second, in *United States v. Associated Press*, the Court considered whether Associated Press’ exclusion of non-member newspapers from carrying its wire reports violated both § 1 and § 2 of the Sherman Act. While the Court specifically rejected

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91 See id. at 361 (describing these court cases as the “de facto” application of the doctrine).
92 224 U.S. 383 (1912).
93 See id. at 393-94 (presenting issue after summarizing facts).
94 See id. at 410 (discussing why the defendants violated both § 1 and § 2 of the Sherman Act).
95 See id. at 411-13 (granting remedy).
96 See 326 U.S. 1 (1945).
97 See id. at 4 (describing the Associated Press’ alleged conduct as either constituting a combination and conspiracy in restraint of trade and/or an attempt to monopolize a part of that trade). Specifically, Associated Press created and maintained by-laws that required all members to not only contribute news stories to be shared with its members, but more importantly,
any indication that it was deciding the decision based upon a 
public utility theory,\textsuperscript{98} the Court affirmed the district court’s rul-
ing that Associated Press could not adopt by-laws that restricted 
competing non-members from obtaining its wire reports,\textsuperscript{99} thereby “[e]ffectively treating [Associated Press] wire reports as 
an essential facility.”\textsuperscript{100}

Third, in \textit{Otter Tail Power Co. v. United States},\textsuperscript{101} the Court 
considered whether the defendant, a vertically-integrated elec-
tricity firm, could unilaterally refuse to allow competitors to use 
its transmission lines.\textsuperscript{102} As a vertically-integrated electricity 
firm, Otter Tail Power both generated and transmitted electricity 
to areas of Minnesota and the Dakotas.\textsuperscript{103} Some towns, however, 
cancelled their exclusive contracts with Otter Tail Power and 
sought to use a cooperative to purchase electricity from other 
sources and distribute it to their communities.\textsuperscript{104} At issue, how-
ever, was the fact that the cooperative, while it could purchase 
electricity without issue, could not transfer the electricity with-
out access to Otter Tail Power’s transmission lines.\textsuperscript{105} Otter Tail 
Power, however, refused to allow the towns access to its trans-
mision lines.\textsuperscript{106} In essence, Otter Tail Power differed signif-
antly from \textit{Associated Press} and \textit{Terminal Railroad} because the Court 
had to determine whether a single firm could refuse downstream

\textsuperscript{98} See id. at 20 (stating underlying rationales of holding).
\textsuperscript{99} See id. at 21 (approving the district court’s decree despite contention that it 
was indefinite and vague).
\textsuperscript{100} Sandeep Vaheesan, \textit{Reviving an Epithet: A New Way Forward for the 
\textsuperscript{101} 410 U.S. 366 (1973).
\textsuperscript{102} See id. at 368 (providing the district court’s findings).
\textsuperscript{103} See id. (relaying underlying facts of Otter Tail Power’s business).
\textsuperscript{104} See id. at 371 (detailing the critical events).
\textsuperscript{105} See id. (noting Otter Tail refused to “wheel” power from other suppliers of 
wholesale energy).
\textsuperscript{106} See id. (describing how Otter Tail refused to wheel energy from other 
suppliers, despite its ability to do so).
access to competitors to an alleged essential facility. The Court ruled that Otter Tail had used its “natural monopoly” over electric transmission lines to eliminate competition in the retail market for electricity generation. Otter Tail’s importance is twofold, it established that: 1) a refusal to allow access to an essential facility could constitute a cause of action for antitrust liability; and 2) the doctrine focuses on the “economic characteristics of the asset at issue rather than its ownership structure.”

While commentators view the above cases as the Court’s unofficial application of the doctrine, the essential facilities doctrine did not undergo an elemental description until the Seventh Circuit’s treatment in the 1982 case of MCI Communications Corp. v. AT&T Co. In this case, AT&T maintained monopoly control of the local-phone systems in the majority of markets, but faced rising competition in the long-distance market by MCI. In order to effectively compete in the long-distance telephone market, however, MCI required access to the “local loop” that connected the phone lines in consumers’ homes to the telephone network, facilities that AT&T solely controlled and refused the firms from accessing. MCI brought forth an antitrust claim against AT&T,

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107 See Vaheesan, supra note 100, at 920 (providing overview of case).
108 See Otter Tail, 410 U.S. at 377 (stating that “[t]he record makes abundantly clear that Otter Tail used its monopoly power in the towns in its service area to foreclose competition or gain a competitive advantage, or to destroy a competitor, all in violation of the antitrust laws.”).
109 See Vaheesan, supra note 100, at 920 (noting the extension of the doctrine in light of Terminal Railroad and Associated Press, which deal with concerted refusals to deal rather than that of a single firm refusing to deal).
110 See 708 F.2d 1081, 1132-33 (7th Cir. 1982) (articulating four elements that comprise the doctrine); Vaheesan, supra 100, at 920 (explaining MCI was the first instance of the four-part essential facilities test).
111 See MCI, 708 F.2d at 1093-94 (providing background facts to case and noting the immense capital needed and raised by MCI to even start competing with AT&T); see also Marina Lao, Networks, Access, and “Essential Facilities”: From Terminal Railroad to Microsoft, 62 SMU L. REV. 557, 564 (2009) (discussing MCI and its importance to the essential facilities doctrine’s development as a actionable cause of action).
112 See MCI, 708 F.2d at 1096-98 (summarizing the disputes between AT&T and MCI regarding connections).
arguing that AT&T’s unjustified refusal to allow MCI access to these facilities violated § 2 of the Sherman Act. ¹¹³

The Seventh Circuit affirmed the district court’s finding of liability,¹¹⁴ and enumerated the essential facilities doctrine in a four-part test:

The case law sets forth four elements necessary to establish liability under the essential facilities doctrine: (1) control of the essential facility by a monopolist; (2) a competitor’s inability practically or reasonably to duplicate the essential facility; (3) the denial of the use of the facility to a competitor; and (4) the feasibility of providing the facility.¹¹⁵

The court additionally took notice of AT&T’s failure to bring forth or show any legitimate business or technical justification to justify its denial of the requested facilities.¹¹⁶ The court viewed the evidence presented at trial to the jury as sufficient for the jury to conclude that “it was technically and economically feasible for AT&T to have provided the requested interconnections, and that AT&T’s refusal to do so constituted an action of monopolization.”¹¹⁷ After the court’s ruling, the telecommunications industry innovated at a tremendous pace that had never been seen

¹¹³ See id. at 1092 (listing MCI’s claims and its request for $900 million in damages).
¹¹⁴ See id. at 1174 (affirming the jury’s verdict on AT&T’s liability but setting aside the jury’s specific award of damages and ordering a new trial on the damages issue).
¹¹⁵ Id. at 1132-33.
¹¹⁶ See id. at 1133 (contrasting the present case to a First Circuit case that allowed denial of access due to financial inability of the defendant to allow such access).
¹¹⁷ Id.
before while AT&T maintained complete control over its network.\textsuperscript{118}

In the period after \textit{MCI}, the essential facilities became a common cause of actions for plaintiffs, despite the fact that recovery was very rare on the doctrine alone.\textsuperscript{119} An example of the ambiguity following \textit{MCI} is \textit{Aspen Skiing Co. v. Aspen Highlands Skiing Corp.},\textsuperscript{120} described by commentators as the most controversial essential facilities case.\textsuperscript{121} In \textit{Aspen Skiing}, the defendant controlled three out of four skiing mountains in the Aspen, Colorado area.\textsuperscript{122} The plaintiff, owner of the fourth mountain, and the defendant worked together for numerous years to offer visitors the option of a single pass for all four mountains.\textsuperscript{123} The defendant terminated the all-Aspen ticket option and eventually, the two companies ceased to do any business together.\textsuperscript{124} The plaintiff succeeded at trial in its § 2 monopolization charge against the

\begin{itemize}
  \item \textsuperscript{118} See Susan Landau, \textit{Surveillance or Security?: The Risks Posed by New Wiretapping Technologies} 81 (2010) (describing the “climate of innovation” in the telecommunications industry created after \textit{MCI}).
  \item \textsuperscript{119} See Waller, \textit{supra} note 90, at 364 (noting how while lower courts widely embraced the \textit{MCI} test for essential facilities, plaintiff victories on this doctrine were rare and courts often imposed liability under other theories); see also Lao, \textit{supra} note 111, at 564-65 (describing the rare instance of a plaintiff succeeding on essential facilities following \textit{MCI}).
  \item \textsuperscript{120} 472 U.S. 585 (1985).
  \item \textsuperscript{121} See Lao, \textit{supra} note 111, at 564 (describing \textit{Aspen Skiing} as “the best known and most controversial” essential facilities case).
  \item \textsuperscript{122} See \textit{Aspen Skiing}, 472 U.S. at 588-91 (providing factual background to the case). It is significant to note that practical and regulatory obstacles stood in the way of the development of more skiable mountains in this area. See \textit{id.}
  \item \textsuperscript{123} See \textit{id.} at 590 (discussing the development of this “around the neck” all-Aspen ticket and its advantageous nature to a visiting skier).
  \item \textsuperscript{124} See \textit{id.} at 592-95 (providing overview of how, why, and when the all-Aspen ticket was discontinued and the effect of this on the plaintiff’s market share). Specifically, the plaintiff’s market share for skiing in the relevant market declined from 20.5% in 1976-1977 (the last year the four-mountain ticket existed), to 11% in 1980-81. See \textit{id.} at 594-595.
\end{itemize}
defendant for monopolization of the downhill skiing market in Aspen.\footnote{125}{See id. at 595 (describing complaint and verdict finding the defendant guilty of monopolization under § 2 of the Sherman Act and calculating actual damages at $2.5 million).}

The difficulty with Aspen Skiing, and indeed its controversy, is the fact that the Court affirmed the lower court’s verdict for the plaintiff, but did so without expressly discussing the essential facilities doctrine.\footnote{126}{See Waller, supra note 90, at 363 (noting how the plaintiffs ultimately prevailed in the Supreme Court but not on the essential facilities doctrine that the lower court had used).} Instead of focusing on whether the plaintiff proved the elements of the essential facilities doctrine expressed in MCI, the Court focused on whether a monopolist has a duty to deal with a competitor,\footnote{127}{See Aspen Skiing, 472 U.S. at 587 (announcing “[t]he question presented is whether [the jury’s finding of monopolization] is erroneous as a matter of law because it rests on an assumption that a firm with monopoly power has a duty to cooperate with its smaller rivals in a marketing arrangement in order to avoid violating § 2 of the Sherman Act.”).} and in the face of such a refusal, whether there is a valid business justification.\footnote{128}{See id. at 610-11 (determining that the defendant’s refusal to deal was not passed on any efficiency concerns and that “it was willing to sacrifice short-run benefits and consumer goodwill in exchange for a perceived long-run impact on its smaller rival”).} In its analysis, the Court did not address the defendant’s argument on appeal that the court of appeals erred in affirming the trial court’s verdict on the basis of the essential facilities doctrine.\footnote{129}{See id. at 599 (summarizing the Court of Appeal’s analysis). The Court of Appeals rejected the defendant’s appellate arguments by characterizing the multiday, multi-area ticket “as an ‘essential facility’” and finding that its conduct was sufficient to find an abuse of monopoly power. See id. See also Aspen Highlands Skiing Corp. v. Aspen Skiing Co., 738 F.2d 1509, 1520-21 (10th Cir. 1984), aff’d 472 U.S. 585 (1985) (applying the MCI test to the facts on appeal and affirming the trial court’s verdict).} In essence, the Court’s affirmation of the result, but not of the essential facilities analysis, thereby narrowed the doctrine, but simultaneously placed the doctrine in an unknown place to be determined at a
later time. As a result, the essential facilities doctrine “has never been a plaintiff’s panacea” and actual verdicts determined on its basis were far and few between. Moreover, the doctrine came under intense criticism beginning in the 1990’s as a result of Professor Phillip Areeda’s commentary.

The criticism against the essential facilities as a fundamental doctrine in antitrust came to a head in Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, L.L.P. (Trinko). In Trinko, a class action was brought suit against Verizon on the basis of Verizon’s refusal to share its network with rivals as mandated by the Telecommunications Act of 1996. The sole issue upon the Court was whether Verizon’s failure to abide by the statutory obligation provided grounds to reinstate its § 2 antitrust claims. Rather than just addressing this relatively narrow point of law, Justice Scalia, writing for the Court, delved into a discussion of the essential facilities doctrine, which has largely become Trinko’s legacy. As to essential facilities, the Court de-

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130 See Lao, supra note 111, at 565 (proffering that lower courts have since construed the doctrine narrowly).
131 See Waller, supra note 90, at 364 (noting that after MCI it was very rare for a plaintiff to succeed on the essential facilities doctrine).
132 See Waller, supra note 90, at 364 (dedicating article to determining how Professor Areeda’s criticism influenced future treatment of the doctrine); see also Phillip Areeda, Essential Facilities: An Epithet in Need of Limiting Principles, 58 Antitrust L.J. 841, 848-50 (1990) (analyzing the impact of Aspen Skiing on the essential facilities doctrine and proffering a need for limitation to the doctrine).
134 See id. at 404-05 (providing overview of applicable regulations on Verizon and the class action suit filed).
135 See id. at 405 (noting district court dismissed plaintiff’s antitrust claim and the appellate court reinstated the antitrust count).
136 See id. at 410 (determining that Verizon’s behavior was not recognized claim); see also Spencer Weber Waller, Microsoft and Trinko: A Tale of Two Courts, 2006 Utah L. Rev. 741, 748 (2006) (noting that “[o]nce the Trinko court concluded that no antitrust cause of action existed, the Court was done . . . [and should] have just signed off. Instead, Trinko embarked on a discursive essay on [section 2 jurisprudence] . . . and why courts are likely to do more harm than good in the antitrust area”).
clared that “we have never recognized such a doctrine,” refused to recognize it, and described it as a mere creation of lower courts. Moreover, the Court dismissed the essential facilities doctrine as a possible theory in this case, even if it did recognize it, because the FCC act already mandated access to Verizon’s network.

The state of the essential facilities doctrine after *Trinko* is a complex one. On the one hand, there are still plaintiffs who attempt to bring forth antitrust liability based upon the doctrine, despite the fact that the facts do not comply with the term “essential” as defined by the doctrine’s historical past. More concerning, however, is the fact that *Trinko’s* discussion of the doctrine, despite being mere dicta, is greatly influencing courts’ overall perception of the doctrine and lessening a plaintiff’s ability to argue it, even with arguably sufficient facts. Moreover, the relationship between the essential facilities doctrine and § 1 and § 2

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137 *See Trinko*, 540 U.S. at 411 (dismissing the essential facilities doctrine as a possible theory for the plaintiff’s action). In its treatment of the essential facilities doctrine, the Court cites to Professor Areeda’s article. *See id.* at 410-411 (citing Areeda, *supra* note 132, at 848-50).

138 *See Trinko*, 540 U.S. at 411 (considering Areeda’s article in concluding the FCC act controlled).

139 *See* Eatoni Ergonomics, Inc. v. Research In Motion Corp., 826 F. Supp. 2d 705, 710 (S.D.N.Y. Dec. 5, 2011) (dismissing plaintiff’s essential facilities claim against Research In Motion for denial of access to the Blackberry due to the plethora of smartphone developers, such as Samsung, HTC, Sony Ericsson, Nokia, and T-Mobile).

140 *See id.* (elaborating on the term “essential”).

141 *See, e.g.*, Intergraph Corp. v. Intel Corp., 195 F.3d 1346, 1357-58 (reversing the district court’s application of the essential facilities doctrine in an injunction to force Intel to provide technical information); Havens v. Mobex Network Servs., LLC, No. 11-993 (KSH), 2011 U.S. Dist. LEXIS 148654, at *35-*36 (D.N.J. Dec. 22, 2011) (noting the presence of agency regulation in dismissing plaintiff’s section two claims based on the essential facilities doctrine and citing *Trinko*). *But see* Loren Data Corp. v. GXS, Inc., No. DKC 10-3474, 2011 U.S. Dist. LEXIS 88222, at *29-*32 (D. Md. Aug. 9, 2011) (bringing forth essential facilities doctrine and discussing it on basis of *MCI* test and determining that plaintiff did not allege sufficient facts to establish liability pursuant to doctrine).
of the Sherman Act is far from clear.\textsuperscript{142} Last, with the rise of New Economies and their continued prevalence as discussed \textit{infra}, the essential facilities doctrine is now at odds with intellectual property rights such as those arising from patents.\textsuperscript{143}

\section*{II. New Economies}

\textit{A. What are New Economies?}

The post-Civil War American economy can be split into three specific industrial revolutions.\textsuperscript{144} The first industrial revolution occurred in the late nineteenth century and is characterized by the “spawn of iron production, steam engines, [and] railroads.”\textsuperscript{145} The second industrial revolution occurred in the years

\textsuperscript{142} \textit{See}, \textit{e.g.}, \textit{Havens}, 2011 U.S. Dist. LEXIS 148654, at *34 (dismissing plaintiff’s § 2 claim against defendant after assuming that the information at issue was an essential facility because the plaintiff’s claim did not “set forth a case that defendants are monopolists, have established a monopoly, or are attempting to establish a monopoly. Indeed, a claim of attempted monopolization is largely inconsistent with the overall theory of plaintiff’s case”).

\textsuperscript{143} \textit{See}, \textit{e.g.}, \textit{Daisy Mountain Fire Dist. v. Microsoft Corp.}, 547 F. Supp. 2d 475, 489 (D. Md. 2008) (granting Microsoft’s motion to dismiss on the grounds that the essential facilities doctrine should not apply to technological information or innovations as a matter of law). The court expressed its concern that the application of the essential facilities doctrine to these fields would not only chill innovation, but also be unpractical due to the markets’ dynamic nature. \textit{See id. See also SCM Corp. v. Xerox Corp.}, 645 F.2d 1195, 1204 (2d Cir. 1981) (explaining that “the antitrust laws [do not] require a patent holder to forfeit the exclusionary power inherent in his patent”); \textit{Eatoni, F. Supp. 2d}, at 710 (reasoning that plaintiff’s claims first fail because Research In Motion was not required to share its intellectual property); \textit{Applera Corp. v. MJ Research, Inc.}, 349 F. Supp. 2d 338, 348 (D. Conn. 2004) (stating that “[t]o find a patent an ‘essential facility’ to which [a company] must provide access would subvert the plain meaning and purpose of the Patent Act”); \textit{In re Microsoft Corp. Antitrust Litigation}, 274 F. Supp. 2d 743, 744 (D. Md. 2003) (granting summary judgment in favor of Microsoft on grounds that the essential facilities doctrine should not be applied to cases involving technological innovations or information).

\textsuperscript{144} \textit{See} Sunny Woan, \textit{Antitrust in Wonderland: Regulating Markets of Innovation}, 27 TEMP, SCI. TECH. & ENVT. L. 53, 56 (2008) (describing the first industrial revolution as that of iron, steel, steam engines, oil, and railroad production and the second industrial revolution as the rise in telecommunications).

\textsuperscript{145} \textit{See id.} (summarizing the first industrial revolution).
following the first revolution, where the origins of current sophisticated telecommunications system developed, including the innovation and growth of the telephone and electric industries.  

The third industrial revolution, now characterized by commentators as the "New Economy," also known as markets of innovation or network industries, began in the 1990's with the exponential expansion of personal computers, Internet based services, biotechnology, and revolutionized telecommunications.  

Four characteristics categorize new economies 1) the presence of network effects; 2) the rapid rate of technological change; 3) the existence of high fixed costs for research and development but low variable costs for production; and 4) the presence of "knowledge spillover."  

Network effects refer to the phenomena where the value of a specific product increases with the number of consumers purchasing and using the product. Network effects play an important role in New Economies because these effects "touch on the most basic antitrust inquiries into market definition," meaning that the focus on research and development, along with the high intellectual property component, leads to concentrated

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146 See id. at 56 & n.18 (discussing the second industrial revolution).  
147 See id. at 56 (contrasting the New Economy with the two previous industrial revolution).  
148 See id. at 59 (defining network effects as the phenomenon where a product’s value increases with the number of consumers purchasing or using the product).  
149 See id. at 61-62 (contrasting New Economies’ rapid technological change with traditional economies).  
150 See Woan, supra note 144, at 62-63 (noting how New Economy firms must invest heavily in research and development in order to create a new product or service and then can offer that product to the market for a much lower production cost).  
151 See Woan, supra note 144, at 63 (defining knowledge spillover as the trend in New Economies that a firm’s research and development benefits the firm’s competitions and society at large). Knowledge spillover is a significant characteristic of new economies because firms tend to form alliances to share information, thereby effectively concentrating a particular market. See Woan, supra note 144, at 63.  
152 See Woan, supra note 144, at 59 (defining network effects).
market structures. These concentrated market structures can cause the dominance of single firms without those firms intentionally aiming to hold such significant dominance.

The rapid rate of technological change is another characteristic that separates New Economies from traditional industries. The rapid rate of technological change associated with New Economies inherently makes antitrust regulation much more difficult because “the king-size firms of today [can] become the technological guppies of tomorrow.”

This phenomenon can be seen today by taking into consideration the fact that Microsoft’s Internet Explorer browser, a significant point of the Department of Justice’s argument against Microsoft in the 2003 decision, has below a fifty percent market share in the internet browser market now in 2011. The “classic” IBM case also illustrates this point. In the early 1970’s, the Department of Justice began an investigated into IBM for possible antitrust violations due to its monopoly market share. However, IBM’s drastic decline in market share by the 1980’s forced the government to dismiss the investigation. This classic example illustrates how the “natural

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153 See Woan, supra note 144, at 59 (describing effect of network effects).
154 See Woan, supra note 144, at 59 (explaining the possible concentrated market structure inherent with industries of innovation); see also Thomas A. Piraino, Jr., An Antitrust Remedy or Monopoly Leveraging by Electronic Networks, 93 Nw. U. L. Rev. 1, 14 (1998) (noting that monopolies in electronic network markets “tend to form quickly, and once formed, are durable and long-lasting.”).
155 See Woan, supra note 144, at 61 (delving into discussion regarding technological change in New Economies).
156 See Erika Morphy, Minuscule Mobile Presence Puts IE Market Share Below 50 Percent, Nov. 6, 2011, archived at www.webcitation.org/630MYau8e (discussing the possible reasons why Internet Explorer has a below fifty percent market share and how this figure may change upon future technological change).
157 See Woan, supra note 144, at 62 (explaining importance of the IBM example).
158 See Woan, supra note 144, at 62 (describing IBM’s significant market share).
159 See Woan, supra note 144, at 62 (recounting the government’s decision to dismiss).
monopolies” of New Economies are “almost always short-lived.”

The next characteristic of New Economies is that of high fixed costs, but low variable costs. New Economies, due to their need for significant research and development, require high fixed costs up front to support this research and development, which requires large investments prior to the development of any goods or service, or even any goods or services that return the investment. However, once a firm creates a successful product or service, the variable cost, or the cost for reproduction, is relatively marginal in comparison to the upfront fixed costs. This stands in opposition to traditional product markets that are characterized by low fixed costs and higher variable costs.

The last characteristic associated with New Economies is that of “knowledge spillover.” Knowledge spillover refers to the trend where firms investing in research and development often create knowledge that benefits society at large, including the firm’s direct and indirect competitors. This spillover effect gives firms incentive to form alliances with other firms to share this information, rather than simply allowing the general public

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160 See Woan, supra note 144, at 62 (summarizing lessons of the IBM “debacle”).
161 See Woan, supra note 144, at 62 (discussing how New Economies require high fixed costs up front).
162 See Woan, supra note 144, at 62-63+ (delving into the effects of this characteristic).
163 See Woan, supra note 144, at 62 (stating why lower variable costs exist); see also Lao, supra note 111, at 579 (describing Microsoft Windows as having high fixed costs for research and development and marginal costs of distribution as minimal).
164 See Woan, supra note 144, at 62 (juxtaposing the costs associated with traditional markets with those of New Economies).
165 See Woan, supra note 144, at 63 (starting explanation of knowledge spillovers).
166 See Woan, supra note 144, at 63 (explaining the protections afforded by intellectual property rights are not enough to prevent knowledge spillover).
to use the information.\textsuperscript{167} Thus, this incentive to form alliance to share such information can lead to concentrated market conditions more so than if this knowledge spillover did not exist.\textsuperscript{168}

In addition, New Economies feature much more intellectual property aspects than traditional markets.\textsuperscript{169} This is a significant characteristic of New Economies because intellectual property rights generally grant a legal monopoly to a firm.\textsuperscript{170} This component adds another dimension to antitrust’s treatment of these industries.\textsuperscript{171}

\textbf{B. Can New Economies \& Antitrust Co-Exist?}

The characteristics of New Economies, along with the rise of efficiency-driven economic theory in the realm of antitrust scholarship and practice,\textsuperscript{172} has led to a significant debate regarding antitrust’s applicability to New Economies and its ability to chill or promote innovation.\textsuperscript{173} The discussion ranges from those

\begin{itemize}
  \item \textsuperscript{167} See Woan, supra note 144, at 63 (describing the concentration of markets as a result of knowledge spillover).
  \item \textsuperscript{168} See Woan, supra note 144, at 63 (reiterating fear of concentrated markets structures).
  \item \textsuperscript{169} See Woan, supra note 144, at 56 (listing examples of such embodiments, such as a new line of computer code, a new connecting device, and new knowledge regarding genetic profiling).
  \item \textsuperscript{170} See Herbert Hovenkamp, Innovation and the Domain of Competition Policy, 60 ALA. L. REV. 103, 107 (2008) (describing briefly the source and applicability of intellectual property laws).
  \item \textsuperscript{171} See Hovenkamp, supra note 170, at 106 (arguing price fixing in patent licenses increases returns on innovation); see also Woan, supra note 144, at 56 (balancing the legal monopoly granted to owners of intellectual property rights with antitrust regulation, and explaining that it presents a hotly contested issue).
  \item \textsuperscript{172} See Richard A. Posner, The Chicago School of Antitrust Analysis, 127 U. PA. L. REV. 925, 932 (1979) (describing basic facet of Chicago School stating, “the proper lens for viewing antitrust problems is price theory.”). This rise in price theory and an efficiency-based foundation to antitrust analysis is commonly referred to as the “Chicago School” of thought. See id.
  \item \textsuperscript{173} See Microsoft, 253 F.3d at 50 (noting that “there is no consensus among commentators on the question of whether, and to what extent, current monopolization doctrine should be amended to account for competition in technologically dynamic markets characterized by network effects.”); see also
\end{itemize}
who believe that antitrust should not apply whatsoever, to those who believe that antitrust must be applied in a way that takes into consideration New Economies’ specific characteristics. This section provides a brief synopsis of this discussion.

First is the view that the current economy has no need for antitrust regulation. The “Marketeers” argue that antitrust should not be applied to New Economies in order to sufficiently protect innovation and growth. By eliminating antitrust regulation, firms will invest more readily in heavy research and development because they will be able to reap the potential monopolist benefits derived from their investment. The prime monopolist benefit these firms seek is the ability to charge above equilibrium prices, without sacrificing consumption. These above equilibrium prices represent incentive for these firms because this allows vast latitude in obtaining the money needed to pay for the high fixed prices inherent in these industries.

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McGovern, _supra_ note 8, at 732 (framing issue as, “[n]or are we certain about which market structure best facilitates innovation.”).

174 Compare Fred L. Smith, Jr., _First Principles: Is There a Role for Antitrust Law? The Case for Reforming the Antitrust Regulations (If Repeal is Not an Option),_ 23 _Harv. J.L. & Pub. Pol’y_ 23, 46 (1999) (arguing that antitrust significantly chills innovation and entrepreneurship in markets of innovation), _with_ Woan, _supra_ note 144, at 63 (arguing that the distinctions between New Economies and traditional markets should be seen as factors in antitrust analysis, not as an “oversimplified pretext” for rejecting antitrust regulation).

175 See Piraino, Jr., _supra_ note 154, at 2 (describing the Marketeers’ main argument stating, “the ‘Marketeers[]’ argue that such networks should not be bound by ‘old antitrust ground rules that date to the late nineteenth century and smoke-filled rail cars.’”); _see also_ Smith, Jr., _supra_ note 174, at 56 (arguing that “antitrust” must be repealed in order to have true innovation).

176 See McGowan, _supra_ note 8, at 731-33 (observing two simplified ways to address this problem).

177 See Woan, _supra_ note 144, at 62 (discussing the high fixed costs for New Economies and the need for vast assets for research and development).

178 See McGowan, _supra_ note 8, at 732 (reflecting the importance of market power to reap the benefits needed to support heavy research and development).
In particular, this economic perspective bases its assertion that antitrust should not be applied to New Economies because monopolies can, and often do have, many beneficial effects.\(^\text{179}\) First, monopolies in network industries can help establish a uniform standard that thereby allows multiple firms to build upon the network and allow it to grow.\(^\text{180}\) A second argument from this perspective is that monopolies do not always cause consumer prices to increase, but rather, economies of high scale can actually reduce their costs more readily, and therefore, pass this savings on to consumers.\(^\text{181}\) Under this theory, antitrust regulation can actually lead to higher consumer prices because regulation interferes with this process.\(^\text{182}\) Lastly, proponents also argue that the excessive returns generated by monopolies actually spur more motivation to innovate.\(^\text{183}\) This motivation to be a winner in the “winner-take-all” industries will then offset any social costs of the higher prices that a monopolist can charge.\(^\text{184}\)

Moreover, Marketeers view the existence of monopolies as a product of consumer demands.\(^\text{185}\) Since a monopolist’s power stems from consumer demands, a monopolistic firm will only remain a monopoly as long as consumer demand exists for their

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\(^{180}\) See id. (explaining the effects of monopoly as to a network industry). A network industry is one where any system “that structures and facilitates the exchange of information, money, goods, or services among individuals or firms.” See id.

\(^{181}\) See id. at 816-17 (noting the importance of price competition).

\(^{182}\) See id. at 817 (stating the possible effects of regulation).

\(^{183}\) See id. (explaining the belief that monopoly status can give more motivation to innovate); see also Trinko, 540 U.S. at 407 (describing the opportunity to charge monopoly prices for at least some time as a cornerstone of the free-market system).

\(^{184}\) See Piraino, Jr. - Illegal Conduct, supra note 179, at 817 (summarizing beliefs regarding motivation caused by monopoly status).

\(^{185}\) See Piraino, Jr., supra note 154, at 54 (arguing that consumer preferences play a large role in the creation and maintenance of monopolies).
product. Thus, antitrust regulation only stifles natural market forces, thereby stifling innovation and growth. Furthermore, consumer demands will sweep away any monopolies faster than any antitrust regulations because under this perspective, firms gain their monopoly power solely through consumer demands.

In sharp contrast are the “Interventionists,” who argue that New Economies need antitrust regulation even more so than traditional markets. Interventionists believe that the inherent highly-concentrated market structure brought about by New Economies promote monopoly standards, which are at odds with antitrust’s goal of promoting competition. Moreover, the presence of network effects gives these monopolies the distinct ability to embed themselves into the economy and take away consumer choice more so than traditional market monopolies.

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186 See Piraino, Jr., supra note 154, at 37-38 (specifying that this effect is particularly accurate in network industries).
187 See Piraino, Jr., supra note 154 at 2 (explaining why consumer demands have this effect).
188 See Piraino, Jr., supra note 154, at 48-50 (summarizing arguments for allowing consumer demands to act as a natural regulation of monopolies rather than governmental regulation).
189 See Piraino, Jr., supra note 154, at 3 (describing Interventionists); see also Woan, supra note 144, at 63 (arguing that critics of antitrust patrol in new economies at times hyperbolize these characteristics as justifications to remove antitrust regulation).
190 See Hovenkamp, supra note 170, at 103 (declaring that “[i]n our capitalist economy, the domain of competition is very large . . . competition [is] the default rule”); Areeda & Kaplow, supra note 1, at 41 (describing the pre-antitrust American economy and the acceptance of competition). Contra McGowan, supra note 173, at 749 (opining historical evidence suggests that the senators drafting the Act were not clear on the practical terms of “monopoly” or “competition”); Hovenkamp, supra note 170, at 115 (stating, “[t]he history of the Sherman Act suggests that Congress may not have favored ‘competition’ or efficiency in the abstract, but rather the protection of small businesses that were threatened by large, aggressive, low cost rivals such as Standard Oil.”). But see Trinko, 540 U.S. at 407 (describing the opportunity to charge monopoly prices for at least some time as a cornerstone of the free-market system).
191 See Piraino Jr., supra note 154 at 1, 3 (noting the presence of network effects and their market staying power); see also Woan, supra note 144, at 59
Without the effective use of antitrust to regulate these new economies and promote competition among firms, the pervasive monopolies will stagger the development of new technology and standards that may ultimately prove to be more efficient or demanded at a higher rate by consumers.\textsuperscript{192}

The Interventionists base their beliefs on a few key economic principles regarding monopolies. First and foremost, they believe that monopolies misallocate and waste economic resources,\textsuperscript{193} as opposed to complete efficiency present in perfect competition.\textsuperscript{194} The inefficiency in a monopolistic market exists because by charging higher than market prices on goods, a monopolist takes away wealth from the consumer and transfers that wealth to itself.\textsuperscript{195}

Even more concerning, however, is the phenomena of "deadweight loss."\textsuperscript{196} Deadweight loss refers to the phenomena where because a monopolist has the ability to reduce its output in order to increase prices, the profits that would have been made but for this intentional lowered output are not transferred

\textsuperscript{192} See Piraino Jr., supra note 154, at 3 (outlining Interventionists’ argument that without regulation, network owners will prevent development of new standards); see also McGowan, supra note 8, at 732 (discussing the theory supported by Interventionists that monopolies tend to prefer innovation at an incremental rate, and do so in response to new ideas developed from smaller firms).

\textsuperscript{193} See Piraino, Jr. – Illegal Conduct, supra note 179, at 814 (discussing harmful effects of monopolies).

\textsuperscript{194} See Sullivan & Harrison, supra note 5, at 21 (comparing graphical representation of consumer surplus in perfect competition versus that in monopolistic market).

\textsuperscript{195} See Piraino, Jr. – Illegal Conduct, supra note 179, at 814 (explaining the underlying economic theory regarding economic waste); see also Sullivan & Harrison, supra note 5, at 20-21 (providing graphical representation and explanation of inefficiencies associated with monopolies).

\textsuperscript{196} See Piraino, Jr. – Illegal Conduct, supra note 179, at 814 (discussing “deadweight loss”).
to any party and are said to have been lost.197 Moreover, a similar outcome can occur when a monopolist acts inefficiently in other ways, such as when it spends its resources to unnaturally obtain, maintain, or expand its monopoly, as opposed to dedicating those resources to innovation and natural growth.198

Many proponents of antitrust regulation also believe that monopolists have less incentive to engage in product development than firms that lack such significant market power.199 This is significant because under this economic perspective, competition is more critical to long-term economic efficiency and innovation than is price competition.200 Lastly, a non-economical implication of monopoly is the cost associated with allowing firms to have highly concentrated economic power.201 Examples of these societal costs include disproportionate access to media, lobbying activities, and other political implications.202

III. Analysis

The following analysis discusses why courts should apply the essential facilities doctrine to New Economies and provides a proposed elemental prima facie test to determine whether the doctrine can be applied in a given circumstance. The aim of the proposed elemental test is to effectively balance between the need of recognizing the doctrine’s use in New Economies, while at the same time, preventing frivolous claims from wasting a

197 See Piraino, Jr. – Illegal Conduct, supra note 179, at 814 (recounting underlying theory).
198 See Piraino, Jr. – Illegal Conduct, supra note 179, at 814-15 (defining concept of “rent-seeking”).
199 See Piraino, Jr. – Illegal Conduct, supra note 179, at 815 (discussing innovation concerns as to monopolists); see also Alcoa, 148 F.2d at 427 (stating that monopoly “deadens initiative, discourages thrift [J] and depresses energy”).
200 See Piraino, Jr. – Illegal Conduct, supra note 179, at 815 (summarizing economic theory).
201 See SULLIVAN & HARRISON, supra note 5, at 21 (reminding reader to consider non-economical implications of monopoly power).
202 See SULLIVAN & HARRISON, supra note 5, at 21 (delving into non-economic costs associated with monopolies).
court’s resources and preventing any undue hindrance on competition.

A. Why Should Courts Apply The Essential Facilities Doctrine To New Economies?

This note analyzes the situation in which a New Economy firm refuses to deal with others, namely, refuses to license its products, services, or even vital programming information. Under normal circumstances, there is no general duty to deal with one’s competitors, and therefore, there is no antitrust remedy for a firm that is upset that another firm refused to deal with them. However, an antitrust issue may arise when a firm’s refusal to deal either creates a monopoly or maintains the firm’s monopoly over the market because when a firm does so, it is unnaturally affecting the market. In addition, an antitrust issue also may arise when a firm’s unilateral refusal to deal leverages its monopoly power in one market to another market, also known as a secondary or downstream market. It is in these situations where courts can use the essential facilities doctrine to spur innovation by forcing a monopolist who is refusing to deal in order to either create a monopoly, maintain its monopoly, or leverage itself into a position of monopoly in a downstream market, to share the information, facility, or service that is needed for

203 See, e.g., Vaheesan, supra note 100, at 951-55 (giving examples of Microsoft’s refusal to disclose vital application programming interfaces in its attempt to weaken its competitors, Netscape and Sun Microsystems).

204 See Aspen Skiing, 472 U.S. at 600-01 (noting that firms have the general right to either deal with, or refuse to deal with, whomever they see fit and that antitrust laws do not create an affirmative duty to deal).

205 See id. at 601-02 (describing the right to refuse to deal is not unqualified and specifically stating that it is in violation of § 2 to refuse to deal to create or maintain a monopoly); see also Alcoa, 148 F.2d at 429 (laying down the fundamental rule that antitrust laws prohibit the use of a firm’s size to unnaturally affect the market); Pitofsky et. al., supra note 89, at 448 (noting that the essential facilities doctrine is not an independent cause of action, but is rather a type of monopolization claim).

206 See Vaheesan, supra note 100, at 943 (recounting how exclusivity of IP rights can impact downstream markets).
healthy competition, so long as a few key characteristics are met.\textsuperscript{207}

First, the essential facilities doctrine should be applied when the market at hand demonstrates tendencies of natural monopolies.\textsuperscript{208} Courts can apply the essential facilities doctrine in such a circumstance because the characteristics of New Economies are very similar with the characteristics of instances where the doctrine has been applied in the past.\textsuperscript{209} All the key essential facilities doctrine cases dealt with facilities that had natural monopoly characteristics or were part of a critical network.\textsuperscript{210} Natural monopoly characteristics in a facility means that a facility has high fixed costs and low marginal costs – namely that it is infeasible, or at very least very socially wasteful, to duplicate the facility.\textsuperscript{211}

As discussed \textit{supra}, New Economies tend to have this exact same natural monopoly characteristic of high fixed costs and

\textsuperscript{207} See City of Malden, Mo. v. Union Elec. Co., 887 F.2d 157, 160 (8th Cir. 1989) (announcing the inherent fairness of having a monopolist share facilities which cannot practically be duplicated with their competitors).

\textsuperscript{208} See, e.g. Delaware Health Care, Inc. v. MCD Holding Co., 957 F. Supp. 535, 547 (Del. 1997) \textit{aff'd}, 141 F.3d 1153 (3rd Cir. 1998) (finding no natural monopoly in a health care system, and as such no essential facility under the strict \textit{Areeda} doctrine).

\textsuperscript{209} See \textit{id.} (providing an overview of essential facilities analysis combined with new economy principles).

\textsuperscript{210} See \textit{Aspen Skiing}, 472 U.S. at 592-95 (analyzing the issue where the defendant controlled three out of four ski mountains in Aspen area and restrictions prevented the development of a new ski mountain in the geographic market); \textit{MCI}, 708 F.2d at 1132-33 (discussing AT&T's refusal of access to its local telephone lines); \textit{Associated Press}, 326 U.S. at 4, 54-56 (describing exclusive arrangements with members to provide wire reports); \textit{Otter Tail}, 410 U.S. at 368, 377 (determining antitrust liability where a firm used its natural monopoly over electrical transmission lines); \textit{Terminal Railroad}, 224 U.S. at 394, 395-401 (analyzing firms' exclusive usage of their natural monopoly over a railroad bridge); Lao, \textit{supra} 111, at 567 (noting the natural monopoly characteristics of these preceding essential facilities cases).

\textsuperscript{211} See Lao, \textit{supra} note 111, at 567 (defining natural monopoly).
low marginal costs.\textsuperscript{212} The presence of network effects in New Economies also strengthens the field’s natural monopoly characteristic because as the facilities’ popularity and use increases, so does its importance and niche in its relevant market.\textsuperscript{213} The essential facilities doctrine should not be used in order to punish a firm’s success as to their particular product or service that exhibits natural monopoly tendencies, such as developing a key piece of technology that becomes vitally important to its own or other industries.\textsuperscript{214} The essential facilities doctrine, however, can be implemented to prevent the monopolist from using these natural monopoly tendencies to affect competition in an unnatural way by simply unilaterally refusing to allow access to its facilities.\textsuperscript{215}

A practical result of the doctrine’s use in New Economies, especially those that show the most natural monopolistic characteristics and network effects, is that open access to the facilities will allow uniform standards to establish themselves as a product of competition, thereby establishing an efficiency-based justification for applying the doctrine when needed.\textsuperscript{216} The facial differences between the natural monopolies of the past with the natural monopolies of today should not be the basis that antitrust law simply dismisses the essential facilities doctrine as applicable to a certain case.\textsuperscript{217}

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\textsuperscript{212} See supra section II.A (defining New Economies and their characteristics); see also Woan, supra note 144 at 62-63 (relating the presence of high fixed costs and low marginal costs in high technology fields).

\textsuperscript{213} See Woan, supra note 144 at 59 (describing network effects).

\textsuperscript{214} See Alcoa, 148 F.2d at 429-30 (establishing that the law should not punish a monopolist who gains its monopoly status due natural practices).

\textsuperscript{215} See Piraino, Jr., supra note 154, at 30-31 (comparing modern electronic networks to the critical networks at issue in the doctrinal essential facilities cases).

\textsuperscript{216} See Woan, supra note 144, at 59 (explaining the basic facets of network effects). This efficiency-based justification should answer critiques from the Chicago School and Marketeer point of view, which place the greatest emphasis on efficiency-based justifications for removing antitrust regulation. See Posner, supra note 172, at 932.

\textsuperscript{217} See, e.g., Daisy Fire, 547 F. Supp. 2d at 489 (declining to decide if the essential facilities doctrine could be a viable option as a matter of law after determining the case dealt with intangible facilities).
\end{flushleft}
the 7th Circuit did not apply the essential facilities doctrine how it had in *MCI* merely because the telecommunications industry seemed a few degrees separated from “traditional” markets such as railways and electrical power? Simply and accurately stated, the telecommunications industry would not have innovated as it had and society would pay a significant price for this – both in terms of cost efficiency and technological development.\(^\text{218}\) Therefore, it is clear that facial differences between traditional economies and New Economies should not be the determining factor of the doctrine’s applicability; rather, courts need to look at the specific economic characteristics of each industry and take into account the presence of natural monopolistic characteristics and network effects.\(^\text{219}\)

In addition to network effects, the doctrine should also be applied in instances where there is danger presented to downstream markets. First, the danger of monopoly leveraging can arise from a monopolist’s unilateral refusal to deal an essential facility.\(^\text{220}\) This monopoly leveraging of downstream markets, a danger present in the “old school” essential facilities cases dealing with tangible assets, is equally potentially present in New Economies.\(^\text{221}\) An example of this is patented genetic sequences where a firm with total control of a particular genetic sequence can use its power to control or leverage itself into secondary markets that would rely upon the access to the controlled genetic sequence.\(^\text{222}\) As a result, courts should take into consideration

\(^{218}\) See LANDAU, supra note 118 (commenting how tremendous innovation occurred after the *MCI* case and how this brought about many changes to the telecommunications industry that created the base for the current advanced state of the industry).

\(^{219}\) See Lao, supra note 111 at 567 (articulating, “[a] common feature in the key essential facilities cases is that they all involve networks and/or natural monopolies that provide necessities or form part of society’s infrastructure”).

\(^{220}\) See Lao, supra note 111, at 570 (discussing the dangers to downstream markets).

\(^{221}\) See Lao, supra note 111, at 567 (describing that a common feature in key cases was when denial of access would “likely have effects that extend[ed] beyond harm to competition in the immediate . . . market”).

\(^{222}\) See Vaheesan, supra note 100, at 948-50 (providing example of patented genetic sequences as an instance where the danger of monopoly leveraging is
the potential dangers to downstream markets in their analysis of whether the doctrine can be applied in a certain instance.

Another circumstance that strengthens the applicability of the doctrine to New Economies is where intellectual property rights are involved. As discussed above, New Economies are constituted by a large amount of intangible, intellectual property. Due to this, antitrust regulation can appear at odds with the protections afforded to intellectual property owners through tools such as patents, copyrights, and trademarks. A majority of the time, however, licensing agreements will be the vehicle that will foster innovation because parties can agree to share information needed to build upon past inventions.

However, an issue arises when a party unilaterally refuses to license an essential facility with intellectual property protection, which can consist of either a tangible facility or an intangible facility. Although intellectual property rights are necessary in order to protect one’s ideas and inventions, overcompensating an intellectual property holder may actually impede innovation by denying competitors and users the access needed to build upon one’s idea. This issue arises from the fact that New Economies tend to grow and innovate as a result of building upon what someone has done before – i.e., using a past innovator’s invention.

great). The example of patented genetic sequences is significant because allowing unqualified control of this field could have drastic impacts upon innovation in the field because genes play a necessary role in numerous sectors of the biotechnological and pharmaceutical economic sectors. See Vaheesan, supra note 100, at 949.

223 See supra Part IIA (describing in detail the intellectual property characteristics of New Economies); Lao, supra note 111, at 589 (discussing the tensions of the essential facilities doctrine with intellectual property laws).

224 See Lao, supra note 111, at 589-90 (discussing inherent tensions between the two fields).

225 See Woan, supra note 144, at 63 (noting that the presence of knowledge spillover presents incentive for parties to enter into licensing agreements).

226 See Lao, supra note 111, at 590 (noting issues with overcompensating IP holders).
or process as a building block for further progress.\textsuperscript{227} As a result, IP protection should not be a complete affirmative defense to a firm’s decision to unilaterally refuse to deal an asset deemed “essential.”\textsuperscript{228} Courts need to recognize that IP and antitrust must work together to achieve a healthy balance between competition and incentives for creation.\textsuperscript{229} The essential facilities doctrine, therefore, represents a way in which courts can effectuate this healthy balance.

These preceding economic rationales for the doctrine’s application remain true despite considering the Court’s most recent treatment of the doctrine. In \textit{Trinko}, the Court slammed the doctrine as a creation of lower courts, and a doctrine that the Court itself had never formally implemented it in any of its cases.\textsuperscript{230} While lower courts have used \textit{Trinko} to justify not applying the doctrine as a matter of law,\textsuperscript{231} they seem to be forgetting one key thing about \textit{Trinko}: the treatment of the essential facilities doctrine...

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\textsuperscript{227} See Lao, supra note 111, at 590 (repeating commentary that “to be intellectually productive, we necessarily borrow and share” and that “[c]onstruing too liberally the right of exclusivity under the intellectual property laws will block the borrowing and sharing that is part and parcel of the process of creation, invention, and innovation to a far greater extent than is necessary or desirable.”).

\textsuperscript{228} See Lao, supra note 111, at 590 (emphasizing the dangers between allowing IP rights to extend beyond the bounds created by antitrust laws).

\textsuperscript{229} See Lao, supra note 111, at 590 (discussing how borrowing and sharing ideas combined with competition help foster innovation).

\textsuperscript{230} See \textit{Trinko}, 540 U.S. at 410-411 (dismissing the essential facilities doctrine as a possible theory for the plaintiff’s action).

\textsuperscript{231} See, e.g., \textit{Daisy Fire}, 547 F. Supp. 2d at 490 (holding that the essential facilities doctrine does not translate to a “duty to disclose technological information or innovation”); \textit{Applera Corp.}, 349 F. Supp. 2d at 348 (“To find a patent an ‘essential facility’ to which [a company] must provide access would subvert the plain meaning and purpose of the Patent Act.”); \textit{Eatoni}, 826 F. Supp. 2d at 710 (reasoning that plaintiff’s claims first fail because Research In Motion was not required to share its intellectual property); \textit{In re Microsoft Corp.}, 274 F. Supp. 2d at 744-45 (granting summary judgment in favor of Microsoft on grounds that the essential facilities doctrine should not be applied to cases involving technological innovations or information).}

doctrine was solely dicta. As a result, Trinko does not provide any significant justification for its treatment of the doctrine, and does not provide any economic or efficiency based answer to the reasons why the doctrine should be applied discussed supra.

B. What is the best way to apply the doctrine?

As discussed supra, it is clear that the essential facilities doctrine is something that carries significance and is needed in New Economies under certain market circumstances. That being said, however, it is equally important to recognize that not every issue where a firm refuses to deal brings about the significant policy and economic reasons needed to justify the doctrine’s application. As a result, this section aims to provide an approach to applying the doctrine to New Economies that can increase innovation, while at the same time ensuring that a general duty to deal is not created in all circumstances where a party believes they are being deprived of a facility deemed essential in their eyes.

First and foremost in determining the best way to apply the doctrine, courts should not rule that intangible assets, such as intellectual property rights that make up a large percentage of New Economies, are not subject to the essential facilities doctrine as a matter of law. Following that courts should not dismiss the doctrine as a matter of law, the real question arises: How should courts approach the doctrine and potentially apply it? The proposed test is as follows:

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232 See Waller, supra note 136, at 753, 759 (arguing the Court’s treatment of the Essential Facilities Doctrine was flawed and warning against the dangers of dicta). In its treatment of the essential facilities doctrine, the Trinko Court cited to Professor Areeda’s treatment of the doctrine but did not develop the economic rationales behind its dicta and merely accepted Professor Areeda’s view on the matter. See Trinko, 540 U.S. at 410-411.

233 See Waller, supra note 136, at 753 (emphasizing the Court did not provide any grounded reasons for its treatment of the doctrine).

234 See supra Part III.A (analyzing why courts should apply essential facilities doctrine to New Economies).

235 See supra Part III.A (summarizing the view that the doctrine should not apply to intellectual property).
1. A party bringing forth a claim pursuant to an antitrust provision and arguing for the application of the essential facilities doctrine should be able to make a prima facie case by showing the following:

   a. The four elements of the MCI test:

      i. Control of the essential facility by a monopolist;

      ii. A competitor's inability practically or reasonably to duplicate the essential facility;

      iii. The denial of the use of the facility to a competitor; and

      iv. The feasibility of providing the facility.\textsuperscript{236}

   b. and either one of two additional criteria:

      i. That the asset is a "societal necessity." Stated another way, that the asset is something "essential" for the well being of society as a whole,\textsuperscript{237} or

      ii. The asset represents a significant necessity for a particular market, natural monopolistic characteristics are present in the particular market, and that there is a real danger of monopoly leveraging into downstream markets.

   This proposed test brings forth a compromise between proponents and opponents of the doctrine for the following reasons.

\textsuperscript{236} See MCI, 708 F.2d at 1132-33 (reciting the four elements necessary to establish liability).

\textsuperscript{237} See Lao, supra note 111, at 567 (arguing that this requirement is necessary to balance the application of the essential facilities doctrine in addition to the four elements of the MCI test).
First, the use of the MCI test is important because it is the elemental test created by the Seventh Circuit after analyzing the key essential facility cases. More importantly, however, this elemental test applied to traditional economies, and as discussed supra, it would not be wise to completely remove New Economies from the precedent created in traditional markets.

More important to the future of the doctrine is the additional two elements listed above, the first of which is the societal necessity element. Societal necessity requires that the asset at issue be so significant to society that a monopolist could not unilaterally deny access to the facility to the detriment of competition and society as a whole. Prime examples of societal necessity can be seen from key essential facilities cases, such as the electrical transmission lines in Otter Tail to the local loops in MCI. Requiring an asset to be a societal necessity is important because it closes the door on frivolous claims from attempting to access the doctrine, but simultaneously allows for the doctrine to potentially be applied in instances where it is indeed warranted. Courts should consider that assets in New Economies could qualify as societal necessities due to the presence of significant network effects and the importance a specific asset may be to socie-

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238 See MCI, 708 F.2d at 1132-33 (outlining the elemental test by analyzing case law).
239 See supra Part III.A (reiterating analysis supporting essential facilities doctrine’s applicability to traditional economies and New Economies).
240 See Lao, supra note 111, at 567 (arguing that necessity be a required element for the essential facilities doctrine and arguing that “[a] common feature in key essential facilities cases is that they all involved networks and/or natural monopolies that provide necessities or form part of society’s infrastructure.”); see also Waller, supra note 90, at 386 (contending the essential facilities doctrine can be applied under the lens of “infrastructure theory” and that this theory “creates a path to [apply the doctrine] that better ties open access to traditional and nontraditional infrastructure on a nondiscriminatory basis. . .”).
241 See Lao, supra note 111, at 569 (describing the common themes in Otter Tail and MCI).
242 See Waller, supra note 90, at 386 (concluding that the essential facilities doctrine should be celebrated and but applied with definition, rigorous application).
ty’s way of existence. Examples of potential societal necessities in New Economies include the Internet and even vital computer program’s communications protocols. Last, the societal necessity element provides a strong argument against opponents of the doctrine because it would be very difficult to argue against the nondiscriminatory access to such essential assets that society as a whole requires to function.

A plaintiff should also be allowed to present a prima facie case in the instances where they cannot show a societal necessity, but can still show a substantial market necessity for the asset, so long as they could also bring forth evidence of the market’s natural monopolistic tendencies and some danger of monopoly leveraging. As discussed supra, it is wise to take into consideration a market’s natural monopolistic tendencies, as the traditional essential facilities cases all shared key monopolistic tendencies. This second avenue into potential essential facilities application is justified by the fact that monopoly leveraging is a real phenomenon, despite the Chicago School’s dismissal of the concept.

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243 See Woan, supra note 144, at 59 (noting the presence of network effects in New Economies); see also Lao, supra note 111, at 579-80 (providing overview of how technological assets can be needed for society to function).

244 See Lao, supra note 111, at 578-80 (analyzing the European case against Microsoft and arguing why the Court of First Instance’s correctly used Europe’s own version of the essential facilities doctrine). Specifically, Lao argues that Microsoft’s Window’s communications protocols were essential because without them, competitors in the server markets could not create servers fully functional with Windows operating systems. See Lao, supra note 111, at 579-80. The consequence of not compelling access would be that Microsoft could leverage its monopoly status in the personal PC market to the market of servers. See Lao, supra note 111, at 580-81.

245 See Lao, supra note 111, at 580 (stating that “[w]hile necessity of the end product is not an element of the essential facilities doctrine under the MCI test . . . [f]ew people would dispute the notion that personal computers and the Internet are modern day necessities and are an integral part of the social fabric of society.”).

246 See supra PartIII.A (reiterating the argument for taking natural monopolistic tendencies into consideration).

247 See Lao, supra note 111, at 588 (stating that “in most cases involving monopoly leveraging claims, there is no validity to the [Chicago School] assumption that consumers are unaffected. . . ”).
Monopoly leveraging in New Economies is a significant threat because of the higher instance of network effects, which can lead to a much more concentrated market share of a particular downstream market. However, such concentrated market share from network effects as a result of monopoly leveraging by refusing access to an essential facilities is not a consequence of a superior product or business, it is a result from one’s monopoly power – an illegal act going back to Alcoa. The purpose of allowing a plaintiff to fulfill its prima facie case with this element is to allow for the instances where an asset may not yet rise to the level of societal necessity, but still represents a vitally important asset to a particular market with natural monopolistic tendencies and the danger of monopoly leveraging exists.

Upon meeting the proposed elements, a court would not be required to automatically apply the essential facilities doctrine. Rather, a plaintiff’s fulfillment of the elements simply should allow the court to consider the application of the doctrine in the wake of analyzing all the evidence produced by both sides. A defendant, for example, could easily rebut the application of the doctrine and monopolization charges by showing the financial infeasibility of allowing access to its tangible or intangible assets, or even a pro-competitive business justification for this refusal.

248 See Woan, supra note 144, at 59 (noting that concentrated market structures are a result of network effects).
249 See Alcoa, 148 F.2d at 429 (laying the foundation of § 2 monopolization jurisprudence).
250 See Aspen Skiing, 472 U.S. at 599 (upholding the lower court’s finding of liability on the basis of the essential facilities doctrine in circumstance where skiing mountains arguably did not meet the requirements of a societal necessity). Although the Court in Aspen Skiing did not specifically address the essential facilities doctrine by name, such treatment is not inconsistent with the doctrine’s vague application and focus on the results of a particular case. See Lao, supra note 111, at 580.
251 See Aspen Skiing, 472 U.S. at 599 (discussing the essential facilities doctrine).
252 See, e.g., MCI, 708 F.2d at 1133 (contrasting the present case to a 1st Circuit case that allowed denial of access due to financial inability of the defendant to allow such access).
that is grounded in evidence.\textsuperscript{253} Furthermore, it is important to remember that using the essential facilities doctrine does not mean a monopolist must provide free access; the doctrine only requires access, even if at monopoly prices.\textsuperscript{254} Therefore, the proposed elements above simply create a more structured approach to determining whether the doctrine could apply and allows the court to delve into the factual analysis that historically makes up essential facilities cases. Most importantly, the above test represents a significant shift in current treatment of the doctrine as to New Economies because it would not allow courts to simply dismiss the doctrine as a matter of law, as something meant for only tangible assets. Rather, the test will allow the court to look at each case separately and determine what is in the competitive market’s best interest.

**Conclusion**

The rise of New Economies has created a significant gap in antitrust regulation. As a result, the tear between those opposed to antitrust regulation and those for antitrust regulation to this new sector of the economy is significantly affecting the ability of antitrust to do its job: to protect and promote competition. Although monopolies are not of themselves illegal, the use of monopoly power to unnaturally affect competition has always been, and continues to be illegal. In light of New Economies, however, this age-old proposition is undergoing drastic challenges.

New Economies, however, are not a radically different beast from traditional economies and the lessons from over one hundred years of antitrust jurisprudence are still helpful to a modern court. Specifically, the essential facilities doctrine can be a tool used by the courts to effectuate a balance between granting

\textsuperscript{253} See *Aspen Skiing*, 472 U.S. at 610-11 (dissmissing the defendant’s business justification and holding that “the evidence supports an inference that [the defendant] was not motivated by efficiency concerns and that it was willing to sacrifice short-run benefits and consumer goodwill in exchange for a perceived long-run impact...”).

\textsuperscript{254} See *Waller*, supra note 90, at 377 (noting that access under the doctrine is not free and that “even access at the existing monopoly price helps”).
an inventor any intellectual property rights they deserve, ensuring that competition remains present, and ensuring that the proper combination of incentive and protection is present in order to promote innovation. Most important of all, courts should not blindly dismiss the doctrine as never applying to New Economies, but should be encouraged to remember the doctrine and apply it when necessary. The use of the essential facilities doctrine on New Economies will effectuate the objectives of antitrust laws that began in an era much long passed, but surprisingly, not too far gone to provide guidance for the future.