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## An Alternative Focus for Antitrust: Addressing Harmful Competitive Advantage

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# An Alternative Focus for Antitrust: Addressing Harmful Competitive Advantage

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By MARK JAMISON \*

*This paper suggests that antitrust authorities should focus on harmful competitive advantages. These are largely Porterian and Smithian advantages created by firms seeking to disadvantage rivals, governments inadvertently hindering competition, and governments protecting favored stakeholders and partisans without corresponding improvements in economic efficiency. The proposed approach is intended to enable antitrust to get to the heart of market power rather than address symptoms, address market power concerns in dynamic situations, and to make up for antitrust's tendency to ignore competition problems created by governments. This approach would reorient some antitrust resources away from investigating and prosecuting cases and towards investigations that identify problems and develop solutions before harms occur.*

Keywords: antitrust; market definition; competitive advantage; regulation

JEL codes: K21, L12, L22, L4

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Antitrust analysis has for years has rested on a two-step process for finding market power, namely first defining “market” and then seeing if the firm in question has “power,” i.e., the ability to price and produce without worrying about customers seeking and finding alternatives within that market. Rapid changes in technology are undermining the legitimacy of this process. This became apparent for all to see during court hearings in the U.S. in 2025 regarding remedies for Google having been convicted of unlawfully maintaining its near monopoly in internet search in the U.S. During discussions, the judge observed that the rapid pace of technology change meant that restraints on Google would quickly outlive their legitimacy. This raised a question: If remedies cannot survive the dynamics of technology change, is the conviction itself legitimate?

This challenge has always been with us, but it is growing in importance. An early occurrence in antitrust was the 1956 Consent Decree<sup>1</sup> between AT&T and the Department of Justice under which AT&T agreed stay out of the data processing business. The impracticality of this became evident in the Federal Communications Commission’s (FCC) computer inquiries<sup>2</sup> in the 1960s, 70s, and 80s in which the agency tried to draw bright lines between telephony and information services. In 1969 the Department of Justice filed suit against IBM for allegedly monopolizing the market for mainframe computers but dropped the case several years later when new computer technologies made the case irrelevant.<sup>3</sup> In 2001 the Federal Communications Commission (FCC) worried that the merged Time Warner and

<sup>1</sup> *United States v. Western Electric Co.*, 1956 Trade Cas. (CCH) 68,246 (D.N.J. 1956).

<sup>2</sup> *In re Regulatory & Policy Problems Presented by the Interdependence of Computer and Communication Services & Facilities*, Notice of Inquiry, 7 FCC 2d 11 (1966); *Second Computer Inquiry, Tentative Decision and Further Notice of Inquiry and Rulemaking*, 72 FCC2d 358 (1979); and *Amendment of Sections 64.702 of the Comm’n’s Rules and Regs. (Third Computer Inquiry)*, Report and Order, CC Docket No 85-229, 104 F.C.C.2d 958, 60 Rad. Reg.2d (P & F) 603 (1986).

<sup>3</sup> *United States v. IBM*, 1997-1 Trade Cas. (CCH) ¶ 71,786 (S.D.N.Y. 1997) (“It has been established beyond any real question that, whereas IBM formerly had a great degree of market power in an antitrust sense, that market power has been substantially diminished, and is continuing to diminish, to the point of its disappearance in the sense of a threat of antitrust violation.”), *aff’d* 1998 U.S. App. Lexis 32577 (2d Cir. Dec. 30, 1998); *ILC Peripherals Leasing Corp. v. IBM*, 458 F.Supp. 423, 430-31 (N.D. Cal.1978) (granting directed verdict to IBM where declining market share showed that IBM lacked monopoly power), *aff’d per curiam sub nom. Memorex Corp. v. IBM*, 636 F.2d 1188 (9th Cir. 1980).

America Online (AOL) would extend AOL's dominance in instant messaging (IM) and so conditioned its approval on the merged company providing interoperability.<sup>4</sup> But technologies evolved quickly and by 2011 AOL's IM provided less than one percent of the industry supply of messaging services.<sup>5</sup>

When technologies constantly change, so do market boundaries. As a result, by time antitrust authorities have identified a market within which they believe a company possesses and abuses market power, the world is already moving on.

The challenge of rapid technology change in antitrust is but one factor making problematic antitrust regulators' reliance on market definition. Antitrust defines markets by looking for product or geographic boundaries that customers are reluctant to cross when looking for alternatives to current products. The overlap between this approach and the method for identifying power implies an incoherence in the two-step process. Furthermore, when change is occurring rapidly, business strategy tends to emphasize competing for the future, not for customers using current products. This implies a need to focus on dynamic competition, which emphasizes innovation. Dynamic change also implies a need to stop emphasizing market power of firms – which is at best ephemeral -- and focus on competition for resources and talents, perhaps within industries or related industries. Making these changes necessitates a reorientation of antitrust.

<sup>4</sup> *Applications of America Online, Inc. and Time Warner, Inc. for Transfers of Control*, CS Docket No. 00-30, Order ("AOL Time Warner Order"), FCC 01-12 (adopted Jan. 11, 2001).

<sup>5</sup> Panko, B. (2017, October 6). The sharp rise and steep descent of AOL Instant Messenger. *Smithsonian Magazine*. <https://www.smithsonianmag.com/smart-news/pioneering-aol-instant-messenger-end-180965152/>.

This paper presents an alternative to current practices. Leveraging the work of Crane,<sup>6</sup> Teece and Teece & Coleman,<sup>7</sup> and Hauge & Jamison,<sup>8</sup> this paper suggests diminishing and in many instances eliminating analyzing individual firms and their transitory markets by focusing on circumstances that lead to sustained power, i.e., the ability to avoid competitive pressure despite rivals offering greater efficiencies and greater value. In this alternative, antitrust regulators would conduct industry and regulatory studies to identify and address harmful competitive advantages before they manifest themselves as market power. This approach has several advantages over today's approaches that emphasize discovering market power by examining symptoms case by case. The proposed approach also emphasizes allowing market forces to determine business winners and losers.

## **I. Foundations of U.S. Antitrust**

### *A. Statutory Foundations and Historical Context*

U.S. antitrust law rests on three primary statutes enacted between 1890 and 1914: the Sherman Antitrust Act (1890), the Clayton Act (1914), and the Federal Trade Commission Act (1914).<sup>9</sup> These laws were passed in part as responses to rapid industrial growth during the late 19th and early 20th centuries.

<sup>6</sup> Daniel A. Crane, *Market Power Without Market Definition*, 90 Notre Dame L. Rev. 31 (2014), available at <https://repository.law.umich.edu/articles/1386>.

<sup>7</sup> David J. Teece & M. Coleman, *The Meaning of Monopoly: Antitrust Analysis in High-Technology Industries*, 43 Antitrust Bull. 801 (1998). David J. Teece, *Understanding Dynamic Competition: New Perspectives on Potential Competition, "Monopoly," and Market Power*, 86 Antitrust L.J. 3 (Antitrust L. Sec., Am. Bar Ass'n 2023).

<sup>8</sup> Janice Hauge & Mark Jamison, *Identifying Market Power in Times of Constant Change* (Univ. of Fla., Warrington Coll. of Bus., PURC Working Paper, 2016).

<sup>9</sup> Sherman Antitrust Act of 1890, 15 U.S.C. §§ 1–7 (1890); Clayton Act of 1914, 15 U.S.C. §§ 12–27, 29 U.S.C. §§ 52–53 (1914); and Federal Trade Commission Act of 1914, 15 U.S.C. §§ 41–58 (1914).

The Sherman Act<sup>10</sup> prohibits “[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.” Its broad language has been understood to grant courts wide discretion to determine what constitutes illegal conduct. The Clayton Act<sup>11</sup> supplemented this framework. In seeking “to protect trade and commerce against unlawful restraints and monopolies,” it targeted specific practices—such as exclusive dealing, tying, and mergers achieved through stock acquisition—that were seen as precursors to monopoly. The FTC Act,<sup>12</sup> in turn, created the Federal Trade Commission as an expert administrative body empowered to prevent “unfair methods of competition in or affecting commerce, and unfair or deceptive acts or practices in or affecting commerce.”

Much has been written on how to best understand these laws.<sup>13</sup> Hovenkamp<sup>14</sup> argues that the Progressive Era, roughly from 1900 into the early 1930s, was the formative age of antitrust policy where the work of courts and Progressive scholars developed nearly all the analytic tools used today—including ideas of barriers to entry, horizontal and vertical relationships, imperfect competition, and partial equilibrium analysis, which provided the foundation for the idea of “relevant market”—despite eventual swings to what he views left and right policy swings. These concepts were already available over a century earlier from economists

<sup>10</sup> Sherman Antitrust Act of 1890, 15 U.S.C. §§ 1–7 (1890).

<sup>11</sup> Clayton Act of 1914, 15 U.S.C. §§ 12–27, 29 U.S.C. §§ 52–53 (1914).

<sup>12</sup> Federal Trade Commission Act of 1914, 15 U.S.C. §§ 41–58 (1914).

<sup>13</sup> See, for example, Robert Pitofsky, *The Political Content of Antitrust*, 127 U. Pa. L. Rev. 1051 (1979); Richard A. Posner, *The Chicago School of Antitrust Analysis*, 127 U. Pa. L. Rev. 925 (1979); William E. Kovacic & Carl Shapiro, *Antitrust Policy: A Century of Economic and Legal Thinking*, 14 J. ECON. PERSP. 43 (2000); and Herbert Hovenkamp, *The Invention of Antitrust*, 96 S. Cal. L. Rev. 129 (2023).

<sup>14</sup> Herbert Hovenkamp, *The Invention of Antitrust*, 96 S. Cal. L. Rev. 129 (2023).

Adam Smith, Antoine Cournot, John Stuart Mill,<sup>15</sup> but had not necessarily been addressed in courts.

The three acts did not define critical terms like “competition,” “trade,” and “commerce.” Perhaps they did not need to as dictionaries and court cases of the time appear in alignment. Dictionaries<sup>16</sup> treated “trade” and “commerce” as synonyms, except that commerce meant trade at scale, implying that large enterprises and small ones were to be treated by antitrust without bias. “Fair” referred to processes, not outcomes that a coercive government might rebalance. “Fair trade” meant trade in free markets, apparently as Smith would have seen them. And “competition” meant striving for a prize, which in the case of trade and commerce, is customer purchases.

These definitions are consistent with legal decisions of the era. In *Standard Oil Co. v. United States* (1911),<sup>17</sup> the Court judged business actions based on their actual or probable effects on competition. Acts were considered “unfair” or to “suppress” or “diminish” competition if they enhanced prices, which was equated with monopolization. Business practices that, “from the beginning soon begot an intent and purpose to exclude others...[and] necessarily involved the intent to drive others from the field, and to exclude them from their right to trade” were considered illegal. Earlier, in *Addyston Pipe* (1899),<sup>18</sup> the Court found that contracts amongst businesses had the “direct and immediate effect ... to destroy competition between them and others” was a restraint of trade that would “deprive the public of the

<sup>15</sup> Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations* (W. Strahan & T. Cadell 1776); Antoine Cournot, *Researches into the Mathematical Principles of the Theory of Wealth* (N.T. Bacon trans., Macmillan 1929) (1838); and John Stuart Mill, *Principles of Political Economy* (J.W. Parker 1848).

<sup>16</sup> See, for example, *Modern Dictionary of the English Language* (Amalgamated Press Ltd. ed., London, Amalgamated Press Ltd. circa 1932), <https://archive.org/details/moderndictionary00londuoft>; and H.W. Fowler & F.G. Fowler, eds., *The Concise Oxford Dictionary of Current English* (Clarendon Press 1911), <https://archive.org/details/con00ciseoxforddicfowrich>.

<sup>17</sup> *Standard Oil Co. of New Jersey v. United States*, 221 U.S. 1 (1911).

<sup>18</sup> *Addyston Pipe & Steel Co. v. United States*, 175 U.S. 211 (1899).

advantages which flow from free competition."<sup>19</sup> Based on the words chosen and their usage at the time, it appears that the laws meant to prohibit behaviors whose intent was to limit others' abilities to engage in a free market.

### *B. Economic Foundations*

Economists were often skeptical of antitrust in its earliest days,<sup>20</sup> but didn't shy from examining the issues. Lerner<sup>21</sup> provided a definition of monopoly—a firm that can set its price, subject only to consumer demand—leading to the Lerner index, an early attempt to measure monopoly power.

Gordon<sup>22</sup> and Demsetz<sup>23</sup> explain that the economic foundations developed early as a debate between the political motivations for antitrust and economic analysis. The work of Louis Brandeis provided much of the energy and many of the notions stirring the political motivations.<sup>24</sup> His reasoning appears to reflect his preference for autonomous individualism and his animosity towards large institutions, both business and government.<sup>25</sup> His opposition to big business was based in part on his belief that small businesses are inherently more efficient than large businesses because the latter was impossible to manage. In his view the only way a business

<sup>19</sup> For this last phrase, the Court was quoting *United States v. E. C. Knight Co.*, 156 U.S. 1 (1895).

<sup>20</sup> William E. Kovacic & Carl Shapiro, *Antitrust Policy: A Century of Economic and Legal Thinking*, 14 J. ECON. PERSP. 43 (2000).

<sup>21</sup> Abba P. Lerner, *The Concept of Monopoly and the Measurement of Monopoly Power*, 1 Rev. Econ. Stud. 157 (1934).

<sup>22</sup> RICHARD L. GORDON, ANTITRUST ABUSE IN THE NEW ECONOMY 1–11 (2002).

<sup>23</sup> See generally Harold Demsetz, *Two Systems of Belief About Monopoly*, in *INDUSTRIAL CONCENTRATION: THE NEW LEARNING*, 161–84 (Harvey J. Goldschmid, H. Michael Mann, and J. Fred Weston eds., 1974) (describing two competing theories of monopoly: a belief that conceives of monopolistic power as obtainable by a firm without aid from the government, or an interventionism theory that sees monopolistic power derived from government intervention).

<sup>24</sup> See, e.g., Louis D. Brandeis, *Cutthroat Prices: The Competition That Kills*, 58 HARPER'S WKLY 2969, 10–12 (1913) [hereinafter Brandeis, *Cutthroat Pricing*]; LOUIS D. BRANDEIS, *OTHER PEOPLE'S MONEY AND HOW THE BANKERS USE IT* (1914) [hereinafter, BRANDEIS, *OTHER PEOPLE'S MONEY*].

<sup>25</sup> *Whitney v. California*, 274 U.S. 357, 375–76 (1927) (Brandeis, J., concurring).



can become large and endure is by buying rivals, colluding with rivals, or dropping prices to drive out rivals that cannot be bought or bought off.<sup>26</sup>

Although the political motivations for antitrust are generally associated with populist sentiments and fears,<sup>27</sup> economists such as Mason<sup>28</sup> and Bain<sup>29</sup> provided economic arguments, such as the view that certain industries naturally bend towards monopoly and market power.<sup>30</sup> Based on a paradigm that industry structure drives firm conduct, which in turn drives sector performance, Mason and Bain emphasized scale economies, barriers to entry, and collusion.<sup>31</sup>

Beginning in the 1970s, antitrust underwent what many consider a major transformation due to the rise of the Chicago School and its emphasis on economic efficiency.<sup>32</sup> A pivotal influence was Robert Bork's *The Antitrust Paradox* (1978),<sup>33</sup> which argued that antitrust enforcement should be guided by a single goal: consumer welfare, understood as the maximization of total social wealth through allocative and productive efficiency. Bork's framework was embraced by both courts and agencies.<sup>34</sup> Since the 1990s, antitrust has evolved toward what some call

<sup>26</sup> *Control of Corporations, Persons, and Firms Engaged in Interstate Commerce Before the S. Comm. on Interstate Commerce*, 62nd Cong. 1146 (1911) (Statement of Louis D. Brandeis); BRANDEIS ET AL., *THE CURSE OF BIGNESS*, *supra* note **Error! Bookmark not defined.**; Brandeis, *Cutthroat Pricing*, *supra* note 24.

<sup>27</sup> MCCRAW, *supra* note **Error! Bookmark not defined.**

<sup>28</sup> See generally EDWARD S. MASON, *ECONOMIC CONCENTRATION AND THE MONOPOLY PROBLEM* (1957) (describing the problems of large firms and monopolies from the 1940s through the '50s and re-examining the practices and positions of large firms and the consequences thereof).

<sup>29</sup> See generally JOE S. BAIN, *BARRIERS TO NEW COMPETITION: THEIR CHARACTER AND CONSEQUENCES IN MANUFACTURING INDUSTRIES* (1956) [hereinafter BAIN, *BARRIERS TO NEW COMPETITION*]; JOE S. BAIN, *INDUSTRIAL ORGANIZATION* (2<sup>nd</sup> ed., 1968) [hereinafter BAIN, *INDUSTRIAL ORGANIZATION*] (exploring the organization and inner workings of U.S. markets); Joe S. Bain, *A Note on Pricing in Monopoly and Oligopoly*, 39 AM. ECON. REV. 448 (1949) [hereinafter Bain, *A Note*] (examining modifications of theory of monopoly prices by accounting for the relation of present price to future profit and accounting for the impact of threat of entry).

<sup>30</sup> Mason and Bain used case studies and models of monopoly. See MASON, *supra* note 28; BAIN, *BARRIERS TO NEW COMPETITION*, *supra* note 29.

<sup>31</sup> MILL, *supra* note **Error! Bookmark not defined.**

<sup>32</sup> Richard A. Posner, *The Chicago School of Antitrust Analysis*, 127 U. Pa. L. Rev. 925 (1979); William E. Kovacic & Carl Shapiro, *Antitrust Policy: A Century of Economic and Legal Thinking*, 14 J. ECON. PERSP. 43 (2000).

<sup>33</sup> Robert H. Bork, *The Antitrust Paradox: A Policy at War with Itself* (Basic Books 1978).

<sup>34</sup> William E. Kovacic & Carl Shapiro, *Antitrust Policy: A Century of Economic and Legal Thinking*, 14 J. ECON. PERSP. 43 (2000).

a post-Chicago synthesis, incorporating both Chicago School insights and more complex models of strategic behavior, information asymmetry, and innovation.<sup>35</sup>

More recently a neo-Brandeisian movement largely rejects economics, holding its analyses to be no more than a political tool for amassing power.<sup>36</sup> Adherents tend to hold that large firms inherently harm the economy and democracy and so should be constrained by antitrust.<sup>37</sup>

## **II. Foundations of Market Definition**

### *A. The Role of Market Definition in Antitrust*

Defining the relevant market emerged as a foundational step in antitrust enforcement, often shaping the outcome of litigation and regulatory decisions. The goal of market definition is to identify the boundaries within which competition takes place—both in terms of the products involved and the geographic areas where firms compete. Although the United States has followed a broadly consistent framework for decades, the process remains complex and occasionally controversial.

Market definition is generally thought to be essential because it frames the assessment of market power. If the relevant market is drawn too narrowly, it can exaggerate the degree of market power held by a firm, leading to a false positive in antitrust enforcement. Conversely, if defined too broadly, market power may be obscured, resulting in under-enforcement.

The U.S. framework evaluates markets along two dimensions: product and geography. In the product dimension, authorities identify goods or services that

<sup>35</sup> William E. Kovacic & Carl Shapiro, *Antitrust Policy: A Century of Economic and Legal Thinking*, 14 J. ECON. PERSP. 43 (2000).

<sup>36</sup> Zephyr Teachout & Lina Khan, *Market Structure and Political Law: A Taxonomy of Power*, 9 Duke J. Const. L. & Pub. Pol'y 37 (2014).

<sup>37</sup> Tim Wu, *The Curse of Bigness: Antitrust in the New Gilded Age* (Columbia Global Reports 2018).

consumers view as close substitutes. In the geographic dimension, they assess whether customers are meaningfully constrained by location when choosing among suppliers. Both dimensions are analyzed using the hypothetical monopolist test, a tool that asks whether a single seller of all the products in a candidate market could profitably impose a small but significant non-transitory increase in price (commonly abbreviated as SSNIP). If such a price increase would drive too many customers to alternatives outside the candidate market, the market definition is deemed too narrow, and the analysis is expanded.

The theoretical underpinnings of the hypothetical monopolist test are generally traced back to work by Areeda and Turner,<sup>38</sup> Sullivan,<sup>39</sup> and a 1978 Department of Justice report to Congress. Today, this test remains central to both merger guidelines and monopolization cases. As Jonathan Baker<sup>40</sup> has observed, market definition has historically played a decisive role in determining antitrust case outcomes in the U.S.

Traditionally, a key characteristic of U.S. market definition is its focus on demand-side substitutability—that is, on the willingness and ability of consumers to switch between products in response to price changes. Supply-side substitutability, which considers whether producers can quickly and credibly shift production into a market in response to price changes, is handled separately. While the European Commission integrates both demand and supply factors into market definition, U.S. agencies consider supply-side substitution later, as part of evaluating competitive constraints, market participants, and entry barriers.

<sup>38</sup> P. Areeda & D. Turner, *Antitrust Law* (1978, 1980 & Areeda Supp. 1982).

<sup>39</sup> Lawrence Anthony Sullivan, *Handbook of the Law of Antitrust* 64 (1977).

<sup>40</sup> **Jonathan B. Baker**, *Market Definition: An Analytical Overview*, 74 *Antitrust L.J.* 129 (2007).

Once the market is defined, then antitrust authorities and courts proceed to determine if the firm in question has power, i.e., the ability to act without much worry of competitive responses.

### *B. The Development of Market Definition Practices in the U.S.*

The development of practical methods for defining relevant markets in antitrust law has been heavily influenced by the evolution of the DOJ and FTC Merger Guidelines. Although the concept of a “relevant market” existed in earlier case law and economic thought, the Guidelines have served as the primary mechanism through which abstract principles have been operationalized into structured tools for antitrust enforcement.

The economic logic underpinning market definition predates the Guidelines. Early economic writings by Alfred Marshall and George Stigler described markets as spaces where prices are constrained by arbitrage, implying that substitution across space and products naturally limits monopoly pricing. Later, Edward Bane introduced the use of cross-elasticity of demand to define industries in terms of substitutability among products, while Fritz Machlup added supply-side substitution as a relevant consideration. These ideas would later be incorporated—albeit selectively—into formal market definition protocols.

The 1968 Merger Guidelines were the first comprehensive attempt by the DOJ to standardize antitrust enforcement. Though rooted in the structuralist approach dominant in the courts at the time, these guidelines marked a turning point by formally articulating the concept of a “relevant market” as the analytical space within which market power would be assessed. This innovation provided a practical frame for the otherwise ambiguous legal concept of market power and began to shape the way courts and enforcers structured their inquiries.

A more transformative step came with the 1982 Merger Guidelines, which introduced the now-standard hypothetical monopolist test and associated SSNIP test. The 1982 Guidelines also made an important distinction between demand-side substitution, which became the primary focus of market definition, and supply-side substitution, which was addressed separately when identifying market participants and assessing entry. This separation aligned the analytical framework more closely with practical enforcement needs while reflecting the influence of the Chicago School's emphasis on price theory and consumer welfare.

Subsequent revisions to the Guidelines refined and extended these methods. The 1992 Guidelines, issued jointly by the DOJ and FTC, emphasized empirical evidence of buyer behavior in response to price changes, including elasticity estimates, past switching behavior, and buyer perceptions of substitutability. This reinforced the idea that market definition was not a formalistic exercise, but an empirical inquiry grounded in how customers actually respond to changes in price, quality, or service.

The 2010 Merger Guidelines represented a further evolution. While reaffirming the relevance of the hypothetical monopolist test, they acknowledged that market definition is often a simplification—particularly in differentiated product markets where competition occurs along a spectrum of substitutability. The 2010 Guidelines also formalized the idea that competitive effects analysis can, in some cases, proceed without precise market definition, particularly when direct evidence of anticompetitive harm is available. Nevertheless, the Guidelines maintained market definition as a useful tool for identifying market participants, estimating shares and concentration, and structuring the competitive analysis.

The DOJ and FTC revised their merger guidelines again in 2023, which included revisions to policies on market definition.<sup>41</sup> In general, market definition is more arbitrary and less important than before. Product substitutability appears less important in defining a market. The new guidelines state that they may define a narrow group of products as the relevant market even if there are competitive constraints from significant substitutes outside that narrow group and that “[r]elevant markets need not have precise metes and bounds.”<sup>42</sup> Indeed, market boundaries may be fuzzy.<sup>43</sup> At the regulators’ option, they might define markets arbitrarily: “Defining a relevant market sometimes requires a line-drawing exercise around product features, such as size, quality, distances, customer segment, or prices,” and “There can be many places to draw that line and properly define a relevant market.”<sup>44</sup> And sometimes the market can be arbitrarily small: “the product’s peculiar characteristics and uses, unique production facilities, distinct customers, distinct prices, sensitivity to price changes, and specialized vendors.”<sup>45</sup>

The agencies also expanded the SSNIP test to examine not just “a small but significant and non-transitory increase in price,” but also a “other worsening of terms (“SSNIPT”) for at least one product in the group” of products under examination.<sup>46</sup> In conducting the SSNIPT, the agencies will benchmark how “the

<sup>41</sup> U.S. Dep’t of Justice & Fed. Trade Comm’n, *2023 Merger Guidelines* (2023), <https://www.justice.gov/atr/2023-merger-guidelines>.

<sup>42</sup> U.S. Dep’t of Justice & Fed. Trade Comm’n, *2023 Merger Guidelines* (2023), <https://www.justice.gov/atr/2023-merger-guidelines>. “There may be effective competition among a narrow group of products, and the loss of that competition may be harmful, making the narrow group a relevant market, even if competitive constraints from significant substitutes are outside the group.” “Some substitutes may be closer, and others more distant, and defining a market necessarily requires including some substitutes and excluding others.” P. 40.

<sup>43</sup> U.S. Dep’t of Justice & Fed. Trade Comm’n, *2023 Merger Guidelines* (2023), <https://www.justice.gov/atr/2023-merger-guidelines>. P. 41.

<sup>44</sup> U.S. Dep’t of Justice & Fed. Trade Comm’n, *2023 Merger Guidelines* (2023), <https://www.justice.gov/atr/2023-merger-guidelines>. P. 40.

<sup>45</sup> U.S. Dep’t of Justice & Fed. Trade Comm’n, *2023 Merger Guidelines* (2023), <https://www.justice.gov/atr/2023-merger-guidelines>. P. 41.

<sup>46</sup> U.S. Dep’t of Justice & Fed. Trade Comm’n, *2023 Merger Guidelines* (2023), <https://www.justice.gov/atr/2023-merger-guidelines>. pp. 41-42.

hypothetical monopolist likely would worsen terms relative to those that likely would prevail absent the proposed merger” and have the option to use, as the benchmark, outcomes that existed prior to the merger or “anticipated future outcomes...or a benchmark that reflects conditions that would arise if [supplier] coordination were to break down.”<sup>47</sup>

### **III. Conceptual and Practical Problems with Market Definition**

The DOJ’s and FTC’s revisions to what passes for market definition presents challenges for businesses as the changes permit the agencies considerable discretion, potentially leading to situations where the agencies choose their market definitions to fit preconceived conclusions. But even without these changes, market definition often faces conceptual and practical limitations.

Carlton<sup>48</sup> argues that data are often limited and the resulting reliance on approximations makes the process perilous, recommending that market definition be used primarily as a screening tool to rule out cases where market power is clearly absent. This concern is amplified in dynamic or complex markets where relevant evidence is limited or hard to interpret. In these contexts, attempts to apply traditional models may yield unreliable conclusions.

These challenges become more acute in two-sided markets, where interdependencies between user groups create feedback effects and pricing asymmetries that invalidate many assumptions of conventional antitrust tools. In such settings—common in digital platforms and network industries—the profit structure often relies on subsidizing one side of the market to attract participation from the other. As a result, applying traditional measures such as price-cost margins

<sup>47</sup> U.S. Dep’t of Justice & Fed. Trade Comm’n, *2023 Merger Guidelines* (2023), <https://www.justice.gov/atr/2023-merger-guidelines>. P. 42.

<sup>48</sup> Dennis W. Carlton, *Does Antitrust Need to Be Modernized?* 21 *J. Econ. Persp.* 155 (2007).

or demand elasticities can understate or misstate market power and competitive effects. Standard tools developed for single-sided markets must be modified or replaced to account for these complexities.

Market definition is also complicated by changing industry structures and technological shifts. Hauge and Jamison (2014) point out that mergers are often responses to future market opportunities rather than exercises in exploiting current market power. In such cases—particularly in rapidly evolving sectors like information technology—applying market definitions based on static or historical market conditions risks overlooking the role of innovation and dynamic competition. Similarly, Stockdale (2011) highlights how uneven technological adoption and evolving substitutability in telecommunications make market boundaries fluid. Analysts must increasingly rely on proxy data, evolving parameters, and sensitivity testing to approximate market structure, and even then, the results should be interpreted cautiously.

Hauge and Jamison (2016) explore the challenge of data decay. Today's ICT markets are characterized by constant, rapid change. Analytics for market definition require significant amounts of data. This creates the problem that, by time sufficient data are available to define markets, the data have decayed in their relevance, giving the antitrust regulators and courts false information on market definition.

Louis Kaplow argues that the market definition–market share paradigm is economically incoherent and should be abandoned altogether. A central problem arises when antitrust analysis attempts to infer market power based on shares within a "redefined" market—the market identified through the hypothetical monopolist test, which redefines market boundaries until substitutability cannot be found—that includes substitute products. Traditional economic measures, such as the Lerner Index or demand elasticity-based formulas, apply only in homogeneous goods markets. But the market identification process aggregates differentiated products, so the assumption of product homogeneity collapses, rendering the tools



inapplicable. Kaplow points out that to draw meaningful inferences, one would have to reverse the market redefinition and analyze the homogeneous market alone—a concept not recognized in industrial organization economics outside of antitrust law.

Joseph Farrell and Carl Shapiro challenge the traditional antitrust reliance on market definition and market concentration, particularly in cases involving horizontal mergers of firms offering differentiated products. They argue that this conventional approach is often clumsy, economically imprecise, and poorly suited to analyzing unilateral effects. In markets with differentiated goods, defining the relevant market requires artificial boundary-setting—deciding which products are “in” or “out”—despite the absence of natural dividing lines. This line-drawing can lead to outcomes that hinge more on the definition itself than on the competitive effects of the merger. Examples such as the Whole Foods/Wild Oats and Oracle/PeopleSoft mergers illustrate how contested and economically unsatisfying these definitions can be. They further criticize the hypothetical monopolist test as an unreliable screening tool, noting that it may exclude relevant competitors and generate misleadingly narrow markets, especially in the presence of high margins.

Kaplow further critiques the logical foundation of market share analysis—which is central to findings of market power—by highlighting the absence of a well-defined reference point. Comparisons of market shares presuppose the existence of a “standard reference market” that provides context for evaluating whether a particular share implies significant market power. Yet, this reference framework is never specified, indeed it is hotly debated in antitrust cases, making share-based inferences effectively arbitrary. More deeply, Kaplow exposes a circularity at the heart of the market definition process. Determining which market definition is “correct” depends on prior knowledge of the firm’s market power, a’ la the cellophane fallacy—the very thing the process purports to uncover. To choose among candidate definitions, one must evaluate which yields the most accurate

estimate of market power, which requires already knowing the correct estimate. This reverses the logical order of analysis and raises the question of why market definition is needed at all if a superior method of assessing market power is already available.

Finally, Kaplow challenges the antitrust system's reliance on cross-elasticities of demand in defining market boundaries. He contends that what truly matters for understanding market power is the market elasticity of demand—a measure of how overall sales respond to price changes—not the isolated cross-elasticity between individual pairs of products. While market elasticity can be decomposed into a weighted average of cross-elasticities, the weights (revenue shares) are often ignored in legal practice, leading to distorted assessments. Market definition, as commonly applied, prioritizes a subset of potentially relevant information and in doing so introduces error rather than clarity. Kaplow concludes that the effort to define markets does not just complicate antitrust analysis—it misleads it. A more coherent approach would focus directly on competitive effects and demand responsiveness, even if such analyses are more empirically demanding.

Building on Kaplow's work, Daniel A. Crane<sup>49</sup> contends that the traditional method of establishing market power through market definition and market share analysis—often referred to as the “indirect” or “structural” approach—is conceptually flawed and increasingly untenable. He characterizes the current framework as intellectually incoherent and argues that it fails to meaningfully reflect competitive dynamics, particularly in complex or modern markets.

Focusing on antitrust concepts and tools emerging from the structural approach, Crane criticizes using high margins (e.g., the Lerner Index) to infer market power, arguing that perfect competition is an unworkable baseline and that high accounting

<sup>49</sup> Daniel A. Crane, *Market Power Without Market Definition*, 90 Notre Dame L. Rev. 31 (2014), available at <https://repository.law.umich.edu/articles/1386>.

profits can reflect non-monopoly factors like managerial efficiency or Ricardian rents from scarce resources.

He is also critical of focusing on entry barriers. Markets with high entry barriers should not incentivize anticompetitive conduct. Furthermore, he finds the reasoning tying exclusionary conduct and market power to be circular: Firms may exclude rivals for reasons unrelated to market power, and many exclusionary acts don't require market power to execute.

Teece<sup>50</sup> rejects the market definition approach to antitrust as being static, relying upon an intellectual framework rather than as competition exists in the real world. He suggests emphasizing dynamic competition, which he defines as “new entrants and incumbents alike engag[ing] in research and development (R&D) and the development[ment] of new products, processes, and new business models.”<sup>51</sup>

#### **IV. Alternatives to Using Market Definition in Antitrust**

Alternatives to using market definition, including alternatives to the DOJ's and FTC's recent more ambiguous approach, should provide businesses with clarity, have little susceptibility to data limitations and decay, be intellectually coherent, and provide reliable insights despite constant market and technology evolution.

There have been several proposals. Farrell and Shapiro<sup>52</sup> propose an Upward Pricing Pressure (UPP) approach, which directly assesses the economic incentives a merged firm would face to raise prices. Rather than depending on market shares or formal market boundaries, the UPP method uses pre-merger margins and

<sup>50</sup> David J. Teece, *Understanding Dynamic Competition: New Perspectives on Potential Competition, “Monopoly,” and Market Power*, 86 Antitrust L.J. 3 (Antitrust L. Sec., Am. Bar Ass'n 2023).

<sup>51</sup> David J. Teece, *Understanding Dynamic Competition: New Perspectives on Potential Competition, “Monopoly,” and Market Power*, 86 Antitrust L.J. 3 (Antitrust L. Sec., Am. Bar Ass'n 2023), p. 741.

<sup>52</sup> Joseph Farrell & Carl Shapiro, *Antitrust Evaluation of Horizontal Mergers: An Economic Alternative to Market Definition*, 10 B.E. J. Theoretical Econ. (Pol'y & Persp.) art. 9 (2010).

diversion ratios to estimate the extent of post-merger pricing pressure, offset by any marginal-cost efficiencies. They argue this approach offers a more disciplined and economically grounded framework, particularly for mergers involving differentiated products. Unlike tools reliant on market definition, UPP is rooted in the logic of unilateral effects and aligns closely with standard economic models, such as firms competing on price, but with differentiated products. While it provides greater clarity than the DOJ-FTC 2023 guidelines, UPP does not entirely replace market definition in all contexts, and it suffers from substantial data needs and data decay.

Crane<sup>53</sup> believes the Farrell-Shapiro<sup>54</sup> analysis is a step in the right direction, but still relying too much on the traditional framework, which he finds unworkable. Rather than offering a single, fully formed substitute, Crane proposes a reorientation of the concept of market power itself. Rejecting idealized notions based on deviations from perfect competition, which are often ill-suited to markets with differentiated products and high fixed costs, he defines market power as the difference between the firm's actual or likely competitive position and a plausible competitive counterfactual—that is, the state of the market as it could reasonably exist absent the alleged anticompetitive conduct. This counterfactual must reflect real-world technological, institutional, and behavioral constraints rather than a stylized model of competition.

The counterfactual would leverage assessments of unilateral effects, such as diversion ratios to quantify the proportion of sales lost by one product that are captured by a competing product, providing a continuous measure of competitive proximity.

<sup>53</sup> Daniel A. Crane, *Market Power Without Market Definition*, 90 Notre Dame L. Rev. 31 (2014), available at <https://repository.law.umich.edu/articles/1386>.

<sup>54</sup> Joseph Farrell & Carl Shapiro, Antitrust Evaluation of Horizontal Mergers: An Economic Alternative to Market Definition, 10 B.E. J. Theoretical Econ. (Pol'y & Persp.) art. 9 (2010).

Crane's competitive counterfactual emphasizes a benchmark that allows analysts to ask whether a firm's conduct or position deviates significantly from what would plausibly occur in a competitive environment, given existing constraints. He argues that this perspective aligns better with real-world competitive dynamics and provides a clearer standard for evaluating both conduct and outcomes. Crane does not claim to have a comprehensive replacement for the current framework. Instead, he calls for a conceptual shift—away from static, formalistic rules and toward contextual, economically-informed analysis. He envisions a reconstructed antitrust methodology that builds on tools like diversion ratios, direct price effects, and plausible competitive benchmarks.

Teece suggests using indicia of policy-relevant market power.<sup>55</sup> The emphasis is on innovation. In Teece's dynamic competition framework, indicators of monopoly or market power include the ability to sustain market leadership without innovating, having high non-Shumpeterian profits and non-Ricardian profits (i.e., profits not resulting from innovation in products or processes, nor from resource scarcity), and little investment for future innovation. Likewise, he offers indicia of competition in the dynamic framework. These include robust innovation ecosystems, new entry, innovations that replace old business competencies with new ones, competition to create new (future) markets and competition for and in those markets, high R&D, high rates of new enterprise formation, constant repurposing of assets and active mergers and acquisitions activity, renewal and restructuring, experimentation, heterogeneous competitors and complementors, and positive profits.

<sup>55</sup> David J. Teece, *Understanding Dynamic Competition: New Perspectives on Potential Competition, "Monopoly," and Market Power*, 86 Antitrust L.J. 3 (Antitrust L. Sec., Am. Bar Ass'n 2023), p. 750-752.

## **V. Harmful Competitive Advantage Approach**

This section explains a different approach for antitrust, namely focusing on and eliminating harmful competitive advantages. The essence of this approach is to examine innovation and profits across industries to detect situations where existing firms are not facing competitive pressure. Once a such a potential is identified, antitrust regulators would study the situations to see if such advantages exist, and, if they do, adopt strategies for eliminating them.

As previously explained, current antitrust practices do not align with today's industries nor with the most important competition issues. Today's businesses and markets are constantly changing. Consider, for example, the case of Alphabet. Formed in the late 1990s, the company and its products have constantly evolved, making the concept of market power a misnomer and the idea of defining markets incoherent. Tables 1 and 2 illustrate the situation. Table 1 summarizes Alphabet's product mix evolution, illustrating both successes and pivots. Over the 27 years since the company's founding as Google, the table shows 21 major steps in its product mix evolution, including extensions of its search services, additional platforms, hardware explorations, and cloud and AI. Apply the competencies model,<sup>56</sup> this evolution implies that the company's core abilities include its ability to learn, adapt to changing circumstances, create partners, and experiment, choosing to keep a product in its portfolio that succeeds or choosing to drop on that fails. These capabilities apply primarily to the space of software-driven services. As does any organization, it has missed opportunities and attempted products that did not fit its core capabilities. It missed the importance of Transformer, an approach to AI that enabled the success of large language models, like ChatGPT.

<sup>56</sup> Cite Rose and Teece.

Google employees developed the concept for Transformer,<sup>57</sup> and the company developed BERT<sup>58</sup> based on Transformer, but not before OpenAI had created GPT, taking the industry lead. Alphabet also ventured into computer hardware with its attempts at smartphones, but hardware turned out to not be one of its core competencies.

**Table 1. Evolution of Google<sup>59</sup>**

<b>Timeline of Major Google Developments</b>
<b>1997–2004: Founding and Early Innovation</b>
1997 – Domain <i>google.com</i> is registered.
1998 – Google is officially founded by Larry Page and Sergey Brin.
1998 – Launches the first Google Doodle.
2000 – Introduces Google AdWords, revolutionizing online advertising.
2001 – Launches Google Image Search.
2004 – Announces Gmail, offering unprecedented email storage.
<b>2005–2010: Expansion and Platform Development</b>
2005 – Launches Google Maps, transforming navigation.
2005 – Forms a research partnership with NASA.
2006 – Acquires YouTube, now the world’s largest video platform.
2007 – Buys DoubleClick, expanding its ad tech footprint.
2007 – Introduces Google Street View.
2008 – Launches Google Chrome browser.
2008 – Releases the Android operating system, soon to dominate smartphones.
2010 – Releases the Nexus One, Google’s first branded smartphone.
<b>2011–2016: Strategic Shifts and Hardware Moves</b>
2014 – Sells Motorola Mobility to Lenovo; invests in smart home tech via Nest Labs.
2016 – Introduces Tensor Processing Units (TPUs) to accelerate AI workloads.
2016 – Launches the first Google Pixel phone.
<b>2017–2024: AI and Cloud Expansion</b>
2018 – Develops BERT, a breakthrough in natural language processing.
2019 – Launches Stadia, a cloud gaming platform.
2022 – Adds Privacy Guide to Chrome, enhancing user data control.
2023 – Introduces Bard, Google’s conversational AI platform.
2024 – Rebrands Bard as Gemini, integrating it across products and services.

<sup>57</sup> Cite "Attention Is All You Need."

<sup>58</sup> <https://medium.com/@lmpo/a-brief-history-of-lmms-from-transformers-2017-to-deepseek-r1-2025-dae75dd3f59a>

<sup>59</sup> <https://www.officetimeline.com/blog/google-history-timeline>.

As Alphabet’s product mix evolved, so did the essential natures of the products, making a product like search, which was Alphabet’s founding product, to constantly change according to the value it provides to users and advertisers. Table 2 illustrates search’s evolution from a finder of web pages to an interpreter and presenter of information. These changes are merely part of Google’s constant innovation in this space. Google changes its algorithms 500 – 600 times each year,<sup>60</sup> but most of these are effectively tweaks that make only minor improvements. Core updates, which are broad changes that users experience as significant, occur less frequently, but still happen several times a year.<sup>61</sup>

Tables 1 and 2 illustrate two challenges for traditional antitrust. One is that attempting to define market boundaries by measuring product substitutability is futile. Consider, for example, the DOJ’s monopolization case against Alphabet for Google search. The DOJ defined the market in general technological terms, declining to do the hard work of examining substitutability. While the DOJ does not explain its motivations for this approach, it might well be because it could not measure substitutability as data gathered in 2015-2020, for example, is clearly irrelevant for subsequent years as the incorporation of AI created intersections between search and GPT-like models. Also, the years under which Google had the contracts that became the focus of the court’s decision against Google—2010-2020—saw the service evolve substantially, changing the nature of competition between Alphabet and rivals such as Facebook, Microsoft, DuckDuckGo, Yelp, and eventually TikTok. While a market exists at any point in time because customers and suppliers are making choices about engagement and with whom to engage, the

<sup>60</sup> <https://www.linkedin.com/pulse/impact-googles-frequent-algorithm-changes-seo-amy-pierquet-puq9c/>

<sup>61</sup> <https://developers.google.com/search/updates/core-updates>



value propositions change constantly, making substitutability an inherently unstable market feature.

**Table 2. Evolution of Google Search<sup>62</sup>**

<b>Timeline of Major Google Search Developments</b>
<b>Early Innovations (1998–2014)</b>
<b>1998 – PageRank:</b> Revolutionary algorithm ranking webpages by relevance and authority.
<b>2001 – Google Image Search:</b> Searching for visual content.
<b>2011 – Panda:</b> Penalized content deemed low-quality, unhelpful, and duplicative.
<b>2012 – Penguin:</b> Targeted link-building practices, called link farming.
<b>2012 – Knowledge Graph:</b> Semantic search to understand entities (people, places, things) and their relationships.
<b>2013 – Hummingbird:</b> Algorithm update to grasp meaning behind complex queries.
<b>2014 – Pigeon:</b> Enhanced local search incorporating user proximity.
<b>AI and Machine Learning Integration (2015–2025)</b>
<b>2015 – RankBrain:</b> First use of machine learning in search to interpret unclear queries and refine results based on user interactions.
<b>2019 – BERT:</b> Natural language processing model to understand word context.
<b>2024 (Launch) / 2025 (Rollout) – AI Overviews:</b> AI-generated summaries.
<b>2025 – AI Mode (Gemini-based):</b> Comprehensive AI search experience.
<b>Other Notable Enhancements</b>
<b>2018 – Medic:</b> Emphasized expertise and authority for medical-related content.
<b>2020 – Mobile-First Indexing:</b> Made mobile version of a site the primary basis for ranking and indexing.
<b>2022 – Helpful Content Update:</b> Prioritized people-first content over content designed primarily for search engine optimization.
<b>Ongoing – Spam Policies and Updates:</b> Continuous evolution.
<b>Ongoing – Beyond Text:</b> Adding voice search, visual search with Lens, and identification of key moments in videos.

As critics of current antitrust practices often point out, accepted instruments like those used for market definition, are based on a static economic model. The neo-Brandeisian model suffers from a similar fallacy, resting on political economy ideas

<sup>62</sup> <https://aicontentfy.com/en/blog/evolution-of-google-search-from-algorithms-to-advanced-technologies;>  
[https://itworks.agency/from-pagerank-to-ai-a-history-of-google-search-over-the-years/;](https://itworks.agency/from-pagerank-to-ai-a-history-of-google-search-over-the-years/)  
<https://www.officetimeline.com/blog/google-history-timeline;>  
[https://www.bounteous.com/insights/2024/05/30/understanding-googles-ai-overview-impact-organic-search-and-business-strategies/;](https://www.bounteous.com/insights/2024/05/30/understanding-googles-ai-overview-impact-organic-search-and-business-strategies/) [https://blog.google/products/search/google-search-ai-mode-update/;](https://blog.google/products/search/google-search-ai-mode-update/) <https://blog.google/products/search/google-search-breakthroughs-over-25-years;> [https://blog.google/products/search/google-search-update-march-2024/;](https://blog.google/products/search/google-search-update-march-2024/)  
[https://www.searchenginejournal.com/google-algorithm-history/;](https://www.searchenginejournal.com/google-algorithm-history/) [https://www.321webmarketing.com/blog/how-often-does-google-update-their-search-algorithm/..](https://www.321webmarketing.com/blog/how-often-does-google-update-their-search-algorithm/)

that emphasize market shares and firm size. Teece and his co-authors are correct that industries are dynamic and should be understood in that context.

Reflecting on this reality of constantly changing businesses, customers, and markets, it becomes clear that market power is about affecting the trajectories of change in ways that inappropriately inhibit free participation. But understanding market power in this way requires definitions of trajectory, free participation, and inappropriate inhibition.

Understanding trajectories requires changing one's mindset from static observation to dynamic, ongoing change. The language used in antitrust reflects that used in other areas of commercial law and typically used in economics, business strategy, accounting, and finance, viewing a firm as offering a set of products over a period of time with associated costs of supply and customer demand. Standard economics, accounting, and finance models inherently imply motion: Marginal costs are a measurement of the effect of changing the rate of production, income and cash flow statements represent activity over time, and many financial instrument values are based on anticipation of future activity. However, these lack clear representations of businesses continuously changing their processes, products, and relationships. What appear as static representations of economic and business realities—graphs or numerical representations of supply and demand, discrete financial statements, and the like—have facilitated antitrust practitioners falling into the trap of viewing the world as stable with reliable and enduring assessments of price- and cross-elasticities, market shares, and the like.

In place of these firm-level assessments should be industry-level of analyses of change. This is hard to do precisely for several reasons. One is that industry categories are defined by data collection institutions, which may have objectives that do not align with antitrust, meaning that their categorization will be slow to change and primarily reflect the interests of macro economists, tax authorities, and the like. Also, “industry” is hard to define well in an ever-changing economy, so

analyses should be conducted for various mixes of industry categories. And the topic of interest is hinderance to valuable change, so studies should emphasize rates and direction of change of dynamic industry indicators, which are discussed next.

The dynamic indicators should serve as signals regarding free participation. Recall that the words chosen in the US antitrust statutes<sup>63</sup> imply that large enterprises and small ones were to be treated without bias, that trade and commerce are to be viewed as processes, not outcomes, and that antitrust is meant to protect trade in free markets as Smith would have seen them. So, the indicators of whether a trade in an industry is free in this sense would include measures of innovation and attraction of capital. These indicators tell us whether firms are free to provide competitive pressure. They would not include what some have considered dynamism, namely the degree of firm turnover. There is no particular attraction of firms failing and being replaced by startups, all other things being equal.

Recent economics papers have explored various approaches to measuring innovation across industries and firms. Rammer & Es-Sadki<sup>64</sup> review the use of big data sources like websites and social media to generate firm-level innovation indicators, addressing limitations of traditional survey methods. He & Tian<sup>65</sup> identify measures of innovation to examine how institutional factors, including culture, demographics, market development, laws, and government policies, influence innovation processes and outcomes. Cirera & Muzi<sup>66</sup> investigate issues in measuring innovation through firm-level surveys in developing countries, highlighting differences in self-reported innovation rates due to framing and

<sup>63</sup> Sherman Antitrust Act of 1890, 15 U.S.C. §§ 1–7 (1890); Clayton Act of 1914, 15 U.S.C. §§ 12–27, 29 U.S.C. §§ 52–53 (1914); and Federal Trade Commission Act of 1914, 15 U.S.C. §§ 41–58 (1914).

<sup>64</sup> Rammer, C., & Es-Sadki, N. (2023). Using big data for generating firm-level innovation indicators - a literature review. *Technological Forecasting and Social Change*.

<sup>65</sup> He, J., & Tian, X. (2020). Institutions and Innovation: A Review of Recent Literature. *ERN: Institutions*.

<sup>66</sup> Cirera, X., & Muzi, S. (2020). Measuring innovation using firm-level surveys: Evidence from developing countries☆. *Research Policy*, 49, 103912.

cognitive factors. The development of accepted innovation indicators is work that needs to be done. The application of such indicators would be to identify where innovation appears inexplicably hindered, indicating that deeper research should be done to find the underlying reasons.

Identifying barriers to capital attraction would largely be a comparison of profits across industries with investment to enter the industry. Jamison<sup>67</sup> suggests examining whether firms' profits in a sector attract the funding of rivals seeking to achieve the next episodic disruption or to innovate within the current business ecosystem. He suggests creating benchmarks for comparison based on what he called the profit elasticity of investment, i.e., the percentage change in sector investment divided by the percentage change in expected profits of the leading firms. This elasticity should be estimated controlling for factors that influence it but that should be largely unrelated to market power, such as sector capital intensity, turnover, risk, and growth. This benchmark should be compared to the profit elasticity of sector investment for the industry being studied. Its elasticity would be measured as the change in expected sector investment divided by the change in the studied firms' expected profits.

A profit index could have many false positives and false negatives and so should be measured over time and with several sector definitions. The false positives and negatives occur in part because there are many influences on profits.

The HCA framework finds its intellectual roots in classical political economy. Adam Smith warned against monopolies granted by government favor, such as that given to the British East India Company, while John Stuart Mill criticized barriers to entry and the privileged control of scarce resources. More recently, Teece and

<sup>67</sup> Jamison, M.A. (2020b). Towards a Theory of Market Power. Arizona State University Corporate and Business Law Journal 1(2): 1-22.

Coleman<sup>68</sup> cataloged sources of competitive advantage, offering a useful typology that classifies these advantages into four categories: Ricardian, Schumpeterian, Porterian, and Smithian.

Ricardian advantages stem from access to scarce, idiosyncratic resources—such as unique natural assets or proprietary knowledge—that are not easily replicated. These advantages are generally benign from an antitrust perspective, particularly when their benefits are subject to eventual erosion through imitation or technological advancement. Schumpeterian advantages arise from innovation, whether in products or production processes. Such advantages may confer temporary market power but are essential to driving dynamic efficiency. Antitrust should not be concerned with disciplining firms for achieving success through innovation, even when this leads to high and perhaps durable rents. Indeed, as Rajgopal, Srivastava, and Zhao<sup>69</sup> have shown, the potential for large returns is necessary to attract capital in industries characterized by high rates of startup failure.

Another source is Schumpeterian or entrepreneurial rents. There are two types: Those from product innovations and those from process (routine) innovation. The product rents can be from a new product that is protected by a patent or other legal barrier to imitation, or that is protected by a superior ability to produce the new product for some period of time. Likewise, a process innovation can be protected for some time by a legal instrument or by the time it takes for rivals to learn to imitate. It is not necessary that rivals actually imitate the innovation as they might find it more profitable to close, sell some or all of their business to another firm, or buy or develop another innovation that supplants the innovation in question.

<sup>68</sup> David J. Teece & M. Coleman, *The Meaning of Monopoly: Antitrust Analysis in High-Technology Industries*, 43 Antitrust Bull. 801 (1998).

<sup>69</sup> Rajgopal S, Srivastava A, Zhao R (2023) Do digital technology firms earn excess profits? Alternative perspectives. *Accounting Rev.* 98(4):321–344.

Another source is Porterian rents, which result from the firm creating barriers to rivals providing competitive pressure. Porterian advantages merit greater scrutiny. These result when firms raise rivals' costs or restrict their access to key markets or technologies through exclusionary conduct that lacks efficiency justifications. While exclusionary strategies can sometimes be competitively neutral or even beneficial, in many cases they reflect deliberate attempts to shape market conditions in favor of incumbents at the expense of new entrants. Evaluating Porterian advantages requires distinguishing between short-run allocative concerns and long-run innovation incentives. For instance, a digital platform's asymmetric treatment of users, including rivals, may appear harmful in static terms, yet it may also spur investment in high-risk, high-reward innovation.

Perhaps the most neglected advantages category—Smithian advantages—derives from government-created barriers to competition. These include a broad array of regulatory constraints, such as occupational licensing, price controls, market entry restrictions, product standards, subsidies, and economic development incentives. These policies can create artificial advantages for select firms or industries, distorting market outcomes and entrenching incumbents. Smithian advantages are rarely the subject of antitrust scrutiny, despite their widespread and persistent influence on competition. This may reflect political sensitivities: governments are reluctant to investigate the anticompetitive effects of their own regulations, particularly when these benefit politically favored constituencies.

Nonetheless, the scale of modern government intervention makes such inquiry imperative. Recent legislation—including the Coronavirus Aid, Relief, and Economic Security (CARES) Act, the American Rescue Plan, and the Infrastructure Investment and Jobs Act—collectively injected trillions of dollars into the economy, often targeting benefits to specific sectors or firms. While such interventions may serve legitimate policy goals, they also risk creating competitive distortions. A commitment to antitrust reform should include transparent

investigations into the distributional effects and competitive consequences of these interventions.

There is extensive literature on Smithian advantages. Stigler's<sup>70</sup> seminal work argued that, as a rule, regulation is acquired by the industry and is designed and operated primarily for its benefit. Firms, being concentrated and highly motivated, will outmaneuver the diffuse public interest to "capture" regulatory agencies. The competitive advantages conferred—such as barriers to entry for new rivals, price controls, and direct subsidies—are the spoils of this capture. Three years later, Krueger<sup>71</sup> introduced and defined the concept of rent-seeking. She demonstrated that when governments have the power to grant economic privileges (e.g., import licenses, monopolies), firms will expend resources not on producing better products, but on lobbying and influencing officials to gain these valuable rents in a competition for government favor. Following Krueger, Fisman<sup>72</sup> measured the value of political ties in Indonesia, demonstrating that connections with then-President Suharto constituted a quantifiable asset that gave firms a tangible market advantage. Djankov et al.'s<sup>73</sup> cross-country study found that countries creating heavier regulation of entry, enabling greater corruption and larger unofficial economies, serving as major competitive advantages for incumbent firms. Faccio et al.'s<sup>74</sup> cross-country study shows that politically connected firms are significantly more likely to be bailed out by the government when they are in financial distress, lowering these firms' perceived risk and cost of capital.

<sup>70</sup> George J. Stigler, *The Theory of Economic Regulation*, 2 Bell J. Econ. & Mgmt. Sci. 3 (1971).

<sup>71</sup> Anne O. Krueger, *The Political Economy of the Rent-Seeking Society*, 64 Am. Econ. Rev. 291 (1974).

<sup>72</sup> Raymond Fisman, *Estimating the Value of Political Connections*, 91 Am. Econ. Rev. 1095 (2001).

<sup>73</sup> Simeon Djankov, Rafael La Porta, Florencio Lopez-de-Silanes & Andrei Shleifer, *The Regulation of Entry*, 117 Q.J. Econ. 1 (2002).

<sup>74</sup> Mara Faccio, Ronald W. Masulis & John J. McConnell, *The Impact of Political Connections on Government Contracting*, 61 J. Fin. 1931 (2006).

We might also observe profits or losses that arise because of problems of timing. Because firms make production decisions in the context of imperfect beliefs, expected profits may not equal actual profits. So even in situations where an investor might have expectations of zero profits over the lifetime of the firm, reality might be different, resulting in actual economic losses or profits. We call these differences unanticipated profits.

Another source of false signals is temporal rents, which are strictly positive profits received over some period of the firm's lifetime. They may appear to be another form of rent absent full investigation, but that is illusory because they result from choosing a time period that omits periods of strictly negative profits that offset the temporal rents.

## **VI. Conclusion**

This paper suggests that antitrust authorities should focus on harmful competitive advantages. These are largely Porterian and Smithian advantages created by firms seeking to disadvantage rivals, governments inadvertently hindering competition, and governments protecting favored stakeholders and partisans without corresponding improvements in economic efficiency. The proposed approach is intended to enable antitrust to get to the heart of market power rather than address symptoms, address market power concerns in dynamic situations, and to make up for antitrust's tendency to ignore competition problems created by governments. This approach would reorient some antitrust resources away from investigating and prosecuting cases and towards investigations that identify problems and develop solutions before harms occur.