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WHAT DOES THE CHICAGO SCHOOL TEACH ABOUT INTERNET SEARCH AND THE ANTITRUST TREATMENT OF GOOGLE?

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ABSTRACT

Antitrust agencies in the United States and the European Union began investigating Google's search practices in 2010. Google's critics have consisted mainly of its competitors, particularly Microsoft, Yelp, TripAdvisor, and other search engines. They have alleged that Google is making it more difficult for them to compete by including specialized search results in general search pages and limiting access to search inputs, including "scale," Google content, and the Android platform. Those claims contradict real-world experiences in search. They demonstrate competitors' efforts to compete not by investing in efficiency, quality, or innovation, but by using antitrust law to punish the successful competitor. The Chicago School of law and economics teaches—and the Supreme Court has long affirmed—that antitrust law exists to protect consumers, not competitors. Penalizing Google's practices as anticompetitive would violate that principle, reduce dynamic competition in search, and harm the consumers that the antitrust laws are intended to protect.

JEL: A12; D40; D43; K21; L13; L20; L40; O31

I. INTRODUCTION

Thanks to the contribution of the Chicago School of law and economics, the courts have emphasized since the late 1970s that antitrust law protects consumers by protecting the competitive process.[1] That process necessarily

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[1] *See* Reiter v. Sonotone Corp., 442 U.S. 330, 343 (1979) ("Congress designed the Sherman Act as a 'consumer welfare prescription.'" (quoting ROBERT H. BORK, THE ANTITRUST PARADOX 66 (Free Press 1978))) (cited in National Collegiate Athletic Ass'n v. Bd. of Regents of Univ. of Oklahoma, 468 U.S. 85, 107 (1984)); Spectrum Sports, Inc. v. McQuillan, 506 U.S. 447, 458 (1993) ("The purpose of the [Sherman] Act is not to protect businesses from the working of the market; it is to protect the public from the failure of the market. The law directs itself not against conduct which is competitive, even severely

entails certain competitors losing customers or exiting the market while other competitors gain customers. In particular, the Chicago School has helped to clarify the Supreme Court's ruling that a monopolization claim under section 2 of the Sherman Act requires, in addition to the possession of monopoly power in the relevant market, "the willful acquisition or maintenance of that power *as distinguished from growth or development as a consequence of a superior product, business acumen, or historic accident*."[2] This distinction between monopolization through unlawful means and growth from meritorious rivalry is crucial to examining the search practices for which antitrust agencies in the United States and Europe have been investigating Google since 2010.

Google's competitors claim that its ranking methodologies and search algorithms are unfair. Critics have focused on whether Google's ranking of its specialized search results harms competitors and whether Google excludes competitors by limiting access to search inputs. Unlike general search results, which provide links to other websites, specialized search results provide direct responses to the user's query based on the type of media pertinent to the query, such as images, videos, maps, local places, products, and real-time news.[3] But it is difficult to see how anything that Google does in search and ranking algorithms is unfair. Google bases its business on developing search and ranking algorithms that facilitate consumer searches. Google would employ a particular ranking methodology only if it helps to attract and retain search engine users. Google's competitors do the same thing, including offering specialized search. Courts have long recognized that a practice likely has "redeeming competitive virtues" when all competitors use it.[4] Moreover, that Google has gained market share, even at the expense of its competitors, from its questioned practices does not justify antitrust intervention. Judge Frank Easterbrook has

so, but against conduct which unfairly tends to destroy competition itself."); Brook Group Ltd. v. Brown & Williamson Tobacco Corp., 509 U.S. 209, 224 (1993) ("It is axiomatic that the antitrust laws were passed for 'the protection of *competition*, not *competitors*.'" (quoting Brown Shoe Co. v. United States, 370 U.S. 294, 320 (1962) (emphasis in original))). The Courts of Appeals have applied this principle many times. *See, e.g.*, United States v. Microsoft Corp., 253 F.3d 34, 58 (D.C. Cir. 2001) (per curiam) ("[T]o be condemned as exclusionary, a monopolist's act must... harm the competitive *process* and thereby harm consumers. In contrast, harm to one or more *competitors* will not suffice.") (emphasis in original); Ball Memorial Hosp., Inc. v. Mutual Hosp. Inc., 784 F.2d 1325, 1338 (7th Cir. 1986) (Easterbrook, J.) ("The deeper the injury to rivals, the greater the potential benefit. These injuries to rivals are byproducts of vigorous competition, and the antitrust laws are not balm for rivals' wounds.").

[2] United States v. Grinnell Corp., 384 U.S. 563, 570-71 (1966) (emphasis added).

[3] *See, e.g.*, Microsoft and Experts Agree: Search Is Evolving Beyond Links (Sept. 9, 2012), http://googlecompetition.blogspot.com/2012/09/microsoft-and-experts-agree-search-is.html.

[4] Rothery Storage & Van Co. v. Atlas Van Lines, Inc., 792 F.2d 210, 226 (D.C. Cir. 1986) (Bork, J.).

explained that "every successful competitive practice has victims. The more successful a new method of making and distributing a product, the more victims, the deeper the victims' injury."[5] Such is the nature of competition. To question every practice that produces victims would be counterproductive.

Punishing Google for being the most effective search competitor would harm consumers and thus contradict the recognized purpose of antitrust law. ("Consumers" of search include both search engine users and advertisers, but for ease of exposition, we use "consumer" to refer only to search engine users.) Search engines epitomize dynamic competition—the virtuous cycle in which innovation drives competition, which further drives consumer-welfare-enhancing innovation.[6] Dynamic competition in search enhances the user experience, increasing the value of search services to both consumers and advertisers. Antitrust intervention that would prohibit or circumscribe Google's practices would punish and therefore deter the same welfare-enhancing innovations that have made Google an effective competitor. Such use of antitrust law would weaken dynamic competition, as only successful firms would need to worry about being penalized for being winners. Losers do not face monopolization suits for having lacked a superior product, business acumen, or the benefits of a historic accident.

In this article, we bring the tools of the Chicago School to bear on various criticisms of Google raised by its competitors. Although the European Commission and other nations' competition authorities have also begun investigating Google's search practices, this article encompasses only U.S. law. The principles explained in this article nonetheless apply to the investigations in other countries. In Part II, we refute the claim that Google is the "gateway" to the Internet. We first explain the two-sided market for Internet search: Internet users have demand for free search, and advertisers have demand for viewers. The two-sided nature of Internet search is crucial to understanding how Google's incentives align with promoting competition and consumer welfare. Google's largest source of revenue is from advertising, and demand from advertisers depends on consumers' demand for Google. That consumers can switch to substitute search engines instantaneously and at zero cost constrains Google's ability and incentive to act anticompetitively. Consumers can also navigate directly to any competing search engine due to the Internet's open architecture.

In Part III, we explain why Google's ranking of its specialized search results is not anticompetitive. Google's specialized search is a product

[5] Frank H. Easterbrook, *The Limits of Antitrust*, 63 TEX. L. REV. 1, 5 (1984).

[6] *See, e.g.*, JOSEPH A. SCHUMPETER, CAPITALISM, SOCIALISM AND DEMOCRACY 83 (1942) (explaining how "gales of destructive competition" could overturn the existing order); J. Gregory Sidak & David J. Teece, *Dynamic Competition in Antitrust Law*, 5 J. COMPETITION L. & ECON. 581 (2009).

improvement in search. Effectively supplying that innovation requires allowing consumers to identify those specialized search results easily. This innovation adds value to Google search from the perspective of both consumers and advertisers. Google's critics have attempted to cast this innovation as a form of foreclosure—that Google uses market power in general search to foreclose vertical search providers (such as Amazon, Yelp, and Nextag) from the market by ranking its own specialized search results higher.[7] As a matter of economic analysis, however, Google has no incentive to foreclose competitors from search because doing so is unlikely to offer additional profit at the potential cost of driving away consumers. Nonetheless, FairSearch.org, a coalition of Google's competitors alleging that Google is acting anticompetitively,[8] and other critics urge the Federal Trade Commission (FTC) to require Google to rank specialized results the same way it ranks links to other web pages—which would defeat the purpose of specialized search. To declare this product improvement anticompetitive would tell all search providers that innovations will be suspect and possibly punished.

Google's critics have also invoked the essential facilities doctrine. They argue that Google's ranking of its specialized results above competitors' results deprives competitors of an essential facility: being displayed high on a Google search results page. However, in no way is being placed high on a Google search results page an essential facility under American antitrust law. Moreover, a mandate that Google provide its competitors access to the top Google search positions through antitrust injunction or consent decree would be virtually impossible to enforce.

In Part IV, we explain why allegations that Google deprives search competitors of scale are incorrect. First, scale is not a necessary input to compete in search. Google was not the incumbent search engine. It surpassed Yahoo, just as Yahoo surpassed others before it. Google's critics therefore exaggerate the importance of scale to being able to compete in search. Second, the argument that Google deprives competitors of search inputs, such as crawl access to YouTube videos and advertisers' campaign data, is not credible. Third, complaints that Google has made it more difficult for competitors to supply their search services to consumers are misguided. Google's terms and conditions for its AdWords application programming interface (API) limit porting and comingling of advertising data by third parties only. Moreover, there is no evidence that Google's terms and conditions have reduced competition, even if one assumes (contrary to fact, for the sake of argument)

[7] A "vertical" monopoly has monopolies over both the market for the upstream input and the market for the downstream retail product. A "horizontal" monopoly gains its monopoly by acquiring or excluding its direct competitors.

[8] FairSearch.org, About FairSearch.org, http://www.fairsearch.org/about-fairsearch/ (last visited Sept. 18, 2012).

that those terms and conditions raise the costs of competitors. Consequently, those terms and conditions cannot be anticompetitive.

II. IS GOOGLE THE GATEWAY TO THE INTERNET?

The investigation of Google's search practices under antitrust law presumes that Google is the "gateway" to the Internet—that is, Google is the sole path for consumers to access websites. This portrayal of Google contradicts real-world experiences. Consumers can switch to other search engines at zero cost. Consumers can also navigate directly to websites. The two-sided nature of search also constrains the ability of Google to act anticompetitively—as the Internet's gatekeeper. Instead, search users' and advertisers' joint demand for search creates a powerful incentive for Google to compete by continuously enhancing the quality of its search services.

A. The Two-Sided Market for Internet Search

Free Internet search creates immense benefits to both consumers and advertisers. Search users value the information freely available on the Internet; advertisers value access to search users. A McKinsey study estimated that the global value of search reached $780 billion in 2009.[9] Internet search can be considered an intermediary platform that brings together two parties—the search user and the advertiser—to an exchange that occurs over the Internet. In a "two-sided" market of this sort, the demand that one party has for the product is complementary to the demand that the other party has for the same product.[10] Internet search is inherently two-sided because of the intensity of, and payoffs to, finely granulated search that brings advertisers (and producers) in touch with potential consumers of a product. McKinsey found that 48 percent of online advertising expenditure in the United States was allocated to paid search advertising.[11] Complementary demand for Internet search also enables search providers to offer search at zero cost to the consumer. Google sells highly focused advertising that

[9] Jacques Bughin, Laura Corb, James Manyika, Olivia Nottebohm, Michael Chul, Borja de Muller Barbat & Remi Said, *The Impact of Internet Technologies: Search*, at 5 (McKinsey & Co., July 2011) [hereinafter McKinsey 2011 Report on Search].

[10] *See, e.g.*, David S. Evans, *The Antitrust Economics of Multi-Sided Platform Markets*, 20 YALE J. ON REG. 325 (2003); Jean-Charles Rochet & Jean Tirole, *Platform Competition in Two-Sided Markets*, 4 J. EUR. ECON. ASS'N 990 (2003). The seminal article on two-sided markets is William F. Baxter, *Bank Interchange of Transactional Paper: Legal and Economic Perspectives*, 26 J.L. & ECON. 541 (1983).

[11] McKinsey 2011 Report on Search, *supra* note 9, at 23.

responds to the interests revealed by the Internet user's search request. Those revenues subsidize the cost of providing free search to consumers.[12]

Accounting for the two-sided demand for Internet search is crucial in assessing whether Google's or any search provider's practices are anticompetitive. The vast majority of Google's revenues depend on advertising,[13] and attracting advertisers requires attracting consumers. Therefore, Google's economic incentive is to provide consumers with a superior search experience—its product must be user-oriented. When Google increases user demand for its search engine, advertising on Google search becomes more valuable. Google can therefore increase the demand for advertising on its search platform by improving the end-user experience.

If Google or any search provider caters too much to advertisers—by, for instance, ranking natural search results according to payments from advertisers—it risks losing search engine users who are not finding the results they prefer. Additionally, Google's competitors in search can easily observe Google's results and advertise to users that their results are better. Although the search engine may gain advertising revenue in the short run, in the long run, the subsequent decline in end-user demand would lower demand from advertisers, which would reduce ad revenues. The search engine would diminish in value on *both* sides of the market. In this way, the two-sided nature of the market for Internet search constrains search providers' incentives to degrade the end-user experience in an attempt to secure greater advertising revenue.

Indeed, in this two-sided market, search providers compete for advertisers by competing for search users. Search engines are disciplined by competition among themselves, by advertisers seeking the most effective means of reaching relevant consumers, and, most important, by people interested in good search results, not in the engine that generates them. It is therefore not surprising that Google's, Bing's, and other search engine's general (and specialized) search results are unpaid results.[14] Google ranks unpaid search

[12] *See, e.g.*, Google Inc., Facts About Google and Competition, About Ads, http://www.google.com/competition/howgoogleadswork.html (last visited May 3, 2012) [hereinafter Google, About Ads].

[13] In 2011, 96 percent of Google's revenues were from advertising. GOOGLE INC., ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934 FOR THE FISCAL YEAR ENDED DECEMBER 31, 2011 (SEC FORM 10-K), at 10 (filed Jan. 26, 2012) [hereinafter GOOGLE 2011 ANNUAL REPORT].

[14] *See, e.g.*, Google, About Ads, *supra* note 12; Google Inc., 2004 Founders' IPO Letter: "An Owner's Manual" for Google's Shareholders (filed in SEC FORM S-1 REGISTRATION STATEMENT Apr. 29, 2004), *available at* http://investor.google.com/corporate/2004/ipo-founders-letter.html [hereinafter Google Founders' IPO Letter] ("Our search results. . . .are unbiased and objective, and we do not accept payment for them or for inclusion or more frequent updating. We also display advertising, which we work hard to make relevant, and we label it clearly."); Search Engine Land, What Is SEO/Search Engine Optimization?, http://searchengineland.com/guide/what-is-seo (last visited May 3, 2012).

results using algorithms that place the most accurate or relevant results at the top of the page.[15] To signal to consumers that natural search results are returned based on relevance only, Google, Bing, and other search engines clearly distinguish unpaid search results from paid advertisements.[16] Google further enhances the end-user experience by ranking advertisements according to their relevance to the user's search.[17] This practice also stems from the two-sided demand for search. Because Google earns advertising revenue *only* when the user clicks on an advertisement,[18] Google has the incentive to ensure that advertisements are actually useful to consumers. The evolution of search engines shows how search users' and advertisers' complementary demand for Internet search force Google and other search providers to compete on the quality of their search products.

B. The Claim That Google Is the Gateway the Internet

Google, or any search engine, cannot be a gateway to the Internet. First, Internet users can navigate directly to websites due to the open architecture of the Internet. Innovations in web-browser customization have provided consumers with more tools that allow them to forgo search engines when accessing content. Second, there are numerous search engines on the Internet, and consumers can—and frequently do—switch among search engines at zero cost. Mobile apps provide yet another way to directly access other search providers. No technical limitations exist that force consumers to perform searches only on Google.

1. Direct Navigation to Websites

The World Wide Web exists as a network of information that is coded by individual uniform resource locators (URLs) and viewed as web pages. Consumers navigate the Internet by accessing URLs through a web browser,

[15] *See* Google Inc., Webmaster Tools, Ranking, http://support.google.com/webmasters/bin/answer.py?hl=en&answer=34432 (last visited Sept. 18, 2012); Google Inc., Facts About Google and Competition, About Search, http://www.google.com/competition/howgooglesearchworks.html (last visited May 3, 2012). *See also* Bing Webmaster Central FAQs, at 8, *available at* http://www.bing.com/toolbox/home/ (last visited May 3, 2012); Bing, How Bing Delivers Search Results, http://onlinehelp.microsoft.com/en-us/bing/ff808447.aspx (last visited May 3, 2012).

[16] *See, e.g.*, Google Founders' IPO Letter, *supra* note 14; Google, About Ads, *supra* note 12; Google Inc., Search Engine Optimization Starter Guide, at 3 (2010), *available at* http://static.googleusercontent.com/external_content/untrusted_dlcp/www.google.com/en/us/webmasters/docs/search-engine-optimization-starter-guide.pdf; Bing, Search Advertising, http://advertising.microsoft.com/small-business/bing-yahoo-search (last visited May 3, 2012); Bing, How Ads Affect Bing Search Results, http://onlinehelp.microsoft.com/en-us/bing/gg276361.aspx (last visited May 3, 2012).

[17] *See, e.g.*, Google, About Ads, *supra* note 12.

[18] *See, e.g.*, Google Ads, Search Ads, http://www.google.com/ads/searchads/ (last visited May 3, 2012).

a ubiquitously available tool that directs the interaction between the user and content.[19] The web browser and additional navigation mechanisms geared toward site-specific or subject-specific material, such as browser bookmarks, history, auto-complete, and customizable add-ons, support search functionality and connect consumers directly with content, obviating an intermediary—such as a search engine.

How consumers access information depends on their Internet browsing abilities and frequency of use. Search methods can vary, from using an operational technique such as entering the page URL in the browser's location bar to a content-focused method, such as selecting a website on a search engine.[20] The more familiar a user becomes with the Internet, the more strategic her search will be, and the more efficiently she will achieve a search goal. The degree of knowledge about a particular subject will thus influence Internet users' behavior.[21]

Tasks also influence the method used to navigate the Internet. For example, a 2005 field study analyzing the navigation behavior of university students found that participants selected a method of navigation that supported characteristics of one of four categories of immediate tasks: fact finding, information gathering, browsing, and transactions.[22] Not surprisingly, participants used search engines for search-based tasks such as fact finding and information gathering. However, the most common method of initiating a new task was typing a URL, which accounted for 33.5 percent of fact finding, 26.3 percent of information gathering, and 30.8 percent of browsing. Although typing URLs accounted for 34.8 percent of transactions, use of browser bookmarks was the dominant mechanism for transactions.[23] Shared characteristics between transactions and browsing, and between fact finding and information gathering, led researchers to the observation that navigation of the former two task groups was based on revisitation of websites and navigation of the latter was based on search. Additionally, repeated tasks favored navigating directly to websites through URLs or browser bookmarks—or using mobile apps. Clearly, the characterization of Google as the

[19] *See, e.g.*, Dominique Guinard, Vkad Trifa & Erik Wilde, *Architecting a Mashable Open World Wide Web of Things*, at 1 (ETC Zurich, Technical Report No. 663, 2010).

[20] *See, e.g.*, Alexander J.A.M van Deursen, Jan A.G.M. van Dijk & Oscar Peters, *Rethinking Internet Skills: The Contribution of Gender, Age, Education, Internet Experience, and Hours Online to Medium- and Content-Related Internet Skills*, 39 POETICS 125, 128 (2011).

[21] For example, one study of user behavior and information foraging found that participants seeking information in unfamiliar domains relied heavily on page content for navigational cues, in contrast to the strategic interaction exhibited by experts with technical knowledge specific to a domain. Peter Pirolli & Wai-Tat Fu, *SNIF-ACT: A Model of Information Foraging on the World Wide Web*, at 9, presented at the 9th Int'l Conference on User Modeling (June 2003).

[22] Melanie Kellar, Carolyn Watters & Michael Shepherd, *The Impact of Task on the Usage of Web Browser Navigation Mechanisms*, 2006 GRAPHICS INTERFACE 235, 236-37, 240 (2006).

[23] *Id.* at 239.

gateway to the Internet is false, as consumers can forgo search engines entirely when accessing content.

2. *Low Switching Costs Between Search Engines*

Today, there are hundreds of search engines available to consumers.[24] Search engines such as Google, Bing, Yahoo, Blekko, DuckDuckGo, and others[25] provide access to a vast index of information across the Internet. In addition, "vertical search" engines offer search specific to a segment of online content. Use of sites specific to travel (such as Kayak) or to real estate (such as Trulia) has increased in the past decade.[26] Strategies that influence user behavior and attract traffic, such as the "viral marketing" effects of social networking sites,[27] will likely increase competition in vertical search engines. Furthermore, Facebook—whose IPO was valued at $104 billion on May 18, 2012 when the company went public[28]—initiated work in early 2012 on a search engine of its own.[29]

The probability that a user will switch between search engines increases with the length of a search session.[30] Because the use of a search engine is free, users can easily switch from one engine to another if they are dissatisfied with the results provided.[31] Therefore, search engine quality is correlated with the expected time it takes for a user to receive a satisfactory result for a specific query.[32] A survey analyzing switching behavior documented that 70.5 percent of respondents switched to a different engine during a

[24] *See* Rahul Telang, Uday Rajan & Tridas Mukhopadhyay, *The Market Structure for Internet Search Engines*, 21 J. MGMT. INFO. SYS. 137, 138 (2004).

[25] *See* Ryen W. White & Susan T. Dumais, *Characterizing and Predicting Search Engine Switching Behavior* 3, presented at the 18th ACM Conference on Information and Knowledge Management (2009); Blekko, About Blekko, http://blekko.com/about (last visited June 1, 2012); DuckDuckGo, About DuckDuckGo, http://duckduckgo.com/about.html (last visited June 1, 2012).

[26] *See* Brian Regienczuk, 10 Top Digital Trends to Watch For 2020, ExperienceRethink (posted Nov. 4, 2010), http://experiencerethink.com/10-top-digital-trends-to-watch-for-2020/.

[27] *See* Jure Lesovec, Ajit Singh & Jon Kleinberg, *Patterns of Influence in a Recommendation Network*, at 2, presented at the Pacific-Asia Conference on Knowledge Discovery and Data Mining (2006).

[28] Lee Spears & Sarah Frier, *Facebook Set for Public Debut After IPO Seals $104 Billion Value*, BLOOMBERG, May 18, 2012, http://www.bloomberg.com/news/2012-05-18/facebook-set-for-public-debut-after-ipo-seals-104-billion-value.html.

[29] Douglas MacMillan & Brad Stone, *Facebook Delves Deeper Into Search*, BUS. WK., Mar. 29, 2012, http://www.businessweek.com/articles/2012-03-28/facebook-delves-deeper-into-search.

[30] White & Dumais, *supra* note 25, at 3.

[31] Telang, Rajan & Mukopadhyay, *supra* note 24, at 150.

[32] Cédric Argenton & Jens Prüfer, *Search Engine Competition with Network Externalities*, 8 J. COMPETITION L. & ECON. 73, 76 (2012).

session or in between sessions.[33] Of those users, 66.8 percent reported switching search engines within one session at least "sometimes," and 24.4 percent said they switched "often" or "always."[34] The study concluded that users switched for a variety of reasons, including perceived poor quality of products or services on the original search engine, desire for verification of information or additional coverage, and user preferences.[35]

It is clear that consumers can find information and websites through various means other than Google search. They can—and do—use other search engines at zero switching cost and navigate directly to websites. Therefore, Google is not a gateway to the Internet.

III. DOES GOOGLE'S RANKING OF ITS SPECIALIZED SEARCH RESULTS HARM CONSUMERS?

Google's display of specialized search results in general search pages is a product improvement upon its general search engine. Google has no ability to reduce competition from competing vertical search engines, since the openness of the Internet always allows consumers to sample competing sites. Ranking specialized search results the same way that general search results are ranked would destroy the value associated with specialized search. An antitrust intervention requiring Google to do so would harm consumers by degrading the quality of Google search. It would also chill innovation in search in general. The argument that Google's ranking of specialized search results harms competition depends on a conclusion that top placement on a Google search page is an essential facility. Because that conclusion is insupportable, the antitrust theory of harm surrounding Google's ranking of specialized search collapses.

A. Google's Ranking of Specialized Search as a Product Improvement

The FTC and other parties are not challenging Google's specialized search function as anticompetitive. They are instead challenging Google's practice of incorporating specialized search results into general search results pages and displaying specialized search results grouped together at the top or in the middle of the page. Figure 1 shows the difference between specialized and general search results for a search for "smoothies Washington DC." The specialized search results provide direct links to smoothie vendors in Washington, DC, and locations of the vendors. Those results are grouped

[33] White & Dumais, *supra* note 25, at 3. A "session" of web use was determined by having the same task information. A 30-minute period of inactivity was used to demarcate sessions. *Id.* at 2, 7.
[34] *Id.* at 3.
[35] *Id.*

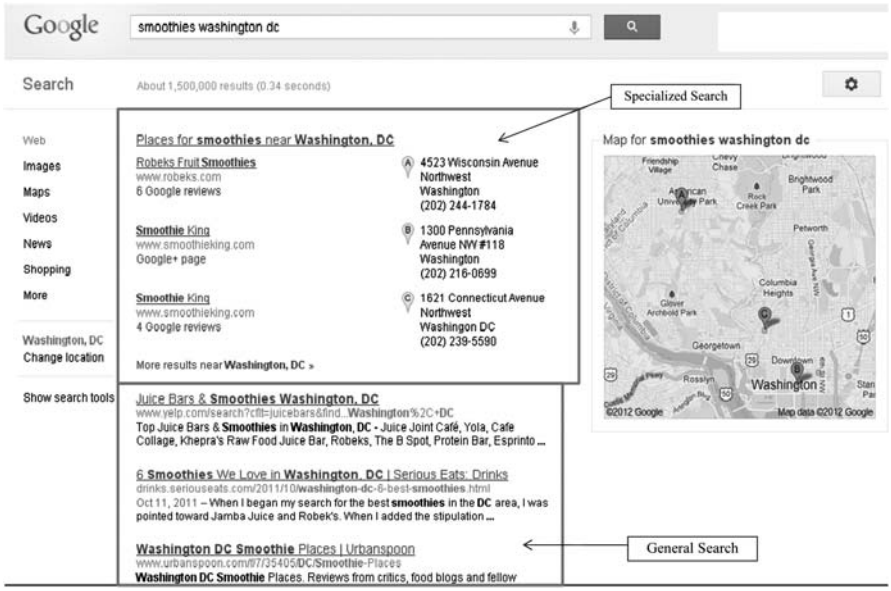

Figure 1. Specialized versus general search results

together. The general search results appear below the specialized search results; they provide links to vertical search engines, including Yelp.

The prominent presentation of specialized results is itself a product improvement that consumers value. Displaying specialized search results in a general search results page is an integral step to improving search for consumers. Microsoft launched Bing with this exact intention—specifically, "to build on the benefits of today's search engines but . . . move beyond this experience with a new approach to user experience and intuitive tools to help customers make better decisions, focusing initially on four key *vertical* areas: making a purchase decision, planning a trip, researching a health condition or finding a local business."[36] For specialized results to be useful to consumers, they must be easy to find and consistently situated in a similar location on the search results page. For consumers who demand the sorts of answers to queries that specialized results provide, a prominent display of specialized results may be useful.

Displaying specialized search results prominently within general results pages is consistent across competitors in general search. In *Rothery*, the U.S. Court of Appeals for the D.C. Circuit identified that a "challenged practice . . . 'may have redeeming competitive virtues' . . . by the fact that all [competitors]

[36] Press Release, Microsoft Corp., *Microsoft's New Search at Bing.com Helps People Make Better Decisions* (May 28, 2009), http://www.microsoft.com/en-us/news/press/2009/may09/05-28newsearchpr.aspx (emphasis added).

use the practice."[37] Indeed, Bing, Yahoo, and Ask.com all produce general search results pages that also include specialized search results grouped together near the top or middle of the first results page. Therefore, it is reasonable to infer that this display has "competitive virtues"—it reflects consumer preferences. If consumers did not prefer this display of specialized results, then any competing search engine could increase its number of users by presenting only general search results or by interspersing specialized results within general search results. The fact that *no* major search engine does so indicates that consumers prefer specialized results to be grouped together near the top or middle of general search results pages.

The economics of two-sided markets cannot be over-emphasized in this case. Google is competing with numerous firms (including large integrated firms such as Microsoft and Facebook) in the market for selling online advertising. Twitter reportedly had advertising revenues of $139.5 million in 2011.[38] In 2011, 85 percent of Facebook's revenues (or, about $3.2 billion) came from advertising.[39] If Google does not provide consumers with the products that they demand, Google will lose traffic, which will lower advertising revenue. Therefore, placing specialized search results prominently within general search results provides a service of value to consumers.

Finally, Google has invested substantially in bringing this new service to consumers. Nothing in antitrust law prohibits a business from promoting its own innovation.

B. The Absence of Google's Incentive to Exclude Vertical Search Providers

It is not plausible that Google is displaying specialized search results only to exclude competing vertical search providers and increase advertising revenue, because the costs of that strategy outweigh its benefits. Google's placement of specialized results is a product improvement upon its general search that reflects consumer preferences. Suppose, contrary to fact, that consumers were averse to viewing specialized results at the top or middle of a general search results page, but Google nonetheless displayed specialized results in that manner to try to increase traffic to specialized search pages. This strategy would be risky for Google. If consumers did not prefer specialized results to appear on general search pages, they would switch to

[37] *Rothery*, 792 F.2d at 227 (citing Rothery Storage & Van Co. v. Atlas Van Lines, Inc., 597 F. Supp 217, 222 (D.D.C. 1984)).

[38] Cotton Delo, *Twitter Ad Revenue to Reach $139.5M in 2011: Report*, AD AGE DIGITAL, Sept. 28, 2011, http://adage.com/article/digital/twitter-ad-revenue-reach-139-5m-2011-report/230096/.

[39] FACEBOOK, INC., REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933 (SEC FORM S-1), at 9, 12 (filed Feb. 1, 2012) [hereinafter FACEBOOK S-1] (reporting that Facebook's total revenues for 2011 were $3.7 billion).

different search engines. Google would lose general search traffic and, consequently, advertising revenue. In addition, if Google were to lose general search traffic, it would lose traffic to its specialized results pages as well. Google would incur substantial risk by ignoring consumer preferences in general search.

In contrast, the benefits to Google of ignoring consumer preferences in general search and artificially ranking specialized results are minimal. Critics of Google have suggested that Google is trying to direct consumers to specialized results so that it can extract additional revenue from advertisements on specialized search results pages.[40] Implicit in this criticism is the assumption that the relationship between general search and specialized search is vertical, such that consumers first search on a general term and then continue to a specialized search. We disagree with the assumption that, as a matter of antitrust law, general search and specialized search are separate markets. However, even if one were to treat them as different markets for the sake of argument, Google still would not have an incentive to "extend" its purported market power in general search into specialized search. This monopolization argument ignores the implications of the single-monopoly-profit theorem, which the Chicago school established.[41]

The single-monopoly-profit theorem shows that, in a vertical chain of production, the vertically integrated monopolist can earn monopoly profit only in one of the markets—either the upstream or downstream market, but not both. Different stages in the vertical process are complements to one another. If retailers increase the markup on a particular product, the manufacturer's profits will fall. Likewise, when a manufacturer increases the wholesale price of a product, the retailers' profits will fall. Firms within a vertical process maximize profit when every other stage of the process is as competitive as possible. If a monopolist controlled both the manufacturing and retailing of a particular product, it would maximize profits by charging the monopoly price in one of the stages of the vertical process and the competitive price in the other stage. In this way, vertical integration avoids efficiency losses from double marginalization, which occurs when two separate firms with a vertical supplier-customer relationship each set their own prices above the competitive level to maximize their individual profit. When the upstream supplier begins producing the downstream product, it will increase

[40] *See, e.g.*, Transcript of *Hearing on Competition in Online Markets/Internet Search Issues Before the Senate Judiciary Subcommittee on Antitrust, Competition Policy and Consumer Rights* (Sept. 21, 2011) (oral testimony of Thomas O. Barnett, Covington & Burling LLP, at 37) [hereinafter Barnett Oral Testimony].

[41] *See* ROBERT H. BORK, THE ANTITRUST PARADOX: A POLICY AT WAR WITH ITSELF 229 (2d ed., Basic Books, Inc. & Free Press 1993); 3A PHILLIP E. AREEDA & HERBERT HOVENKAMP, ANTITRUST LAW ¶ 758b at 30 (2d ed. 2002); Aaron Director & Edward H. Levi, *Law and the Future: Trade Regulation*, 51 Nw. U. L. REV. 281, 290 (1956); Richard A. Posner, *The Chicago School of Antitrust Analysis*, 127 U. PA. L. REV. 925, 926-27 (1979).

its joint profits by lowering the price of the downstream product.[42] Total profits cannot exceed the monopoly profits from any one stage. Consequentially, under the (hypothetical) framework that general search is an "upstream" monopoly and vertical search is the competitive downstream market, if Google were already earning monopoly rents in general search, it could not increase its total profits by acquiring market power in specialized search. Google therefore has no incentive to limit competition in vertical search.

In horizontal applications, the single-monopoly-profit theorem implies that firms typically cannot extend monopoly power over one product to other products without sacrificing total profit.[43] Applied to Google's general and specialized search products, the single-monopoly-profit theorem implies that using its market share in general search to increase its market share in specialized search would decrease Google's total profits.[44] By the logic of Google's critics, Google is trying to "leverage" market power in general search to increase the share of users of its specialized search. That is, Google is supposedly altering its search results and driving away some general search users, so as to encourage a larger percentage of its remaining users to use Google's specialized search. Under this strategy Google would lose advertising revenue from general search. For this strategy to be profitable, however, the increased advertising revenue from Google's specialized search would need to more than compensate for the lost revenue from the

[42] *See, e.g.*, DENNIS W. CARLTON & JEFFREY M. PERLOFF, MODERN INDUSTRIAL ORGANIZATION 398-401 (3d ed., Addison-Wesley 2000); Jerry A. Hausman, Gregory K. Leonard & J. Gregory Sidak, *Does Bell Company Entry into Long-Distance Telecommunications Benefit Consumers?*, 70 ANTITRUST L.J. 463, 482-84 (2002).

[43] *See* Posner, *The Chicago School of Antitrust Analysis*, *supra* note 41, at 928 ("From these various analyses, a conclusion of great significance for antitrust policy emerges: firms cannot in general obtain or enhance monopoly power by unilateral action—unless, of course, they are irrationally willing to trade profits for position.").

[44] Einer Elhauge has challenged the horizontal application of the single-monopoly-profit theorem in *Tying, Bundled Discounts, and the Death of the Single Monopoly Profit Theorem*, 123 HARV. L. REV. 397 (2009). Other scholars have subsequently questioned Elhauge's conclusions. *See, e.g.*, Paul Seabright, *The Undead? A Comment on Professor Elhauge's Paper*, 5 COMPETITION POL'Y INT'L 243 (2009); Daniel Crane & Joshua Wright, *Can Bundled Discounting Increase Consumer Prices Without Excluding Rivals?*, 5 COMPETITION POL'Y INT'L 209 (2009). Regardless of whether we accept Elhauge's conclusions, his exceptions to the single-monopoly-profit theorem rest on particular cases of metering ties, imperfect price discrimination, or bundling, none of which is present with respect to Google. In addition, Elhauge does not dispute the vertical application of the single-monopoly-profit theorem at all. Therefore, although Elhauge attempted to narrow the range of scenarios in which the single-monopoly-profit theorem applies, his conclusions do not preclude application of the single-monopoly-profit theorem to Google's practices. More generally, the form of tying that Google's critics allege is that, for consumers, Google ties specialized search to general search. A more general tying analysis is therefore irrelevant: with consumers paying a price of zero, there is no risk of Google using monopoly power in general search to charge a higher price to consumers in specialized search. Both are free to consumers.

decreased use of Google's general search. This outcome would be unlikely, because (under the critics' assumption that Google monopolizes general search) Google would be losing a *monopolist's* advertising profit on its lost searches. It would be difficult to cover those loses by increasing its market share in the specialized search market, which is smaller and more competitive than general search. The competitive nature of vertical search prevents Google from earning a monopoly profit from advertising in specialized search. Therefore, the argument against Google collapses to the following nonsensical proposition: Google is sacrificing a monopoly profit in general search to gain market share in a more competitive market. This strategy is economic nonsense because it would lower Google's total profits. In addition, as Google reduces its share in general search, it will reduce its ability to direct consumers to its specialized search products. That behavior is not likely to be profitable.

Ultimately, the notion that Google is manipulating general search results to expand its market share in specialized search[45] is not plausible. For Google, this practice would entail great risk and little reward. There is no reason to believe that Google is doing anything beyond competing in the search market. In 2009, Microsoft said that incorporating specialized search results into general searches was the next iteration in the evolution of search engines.[46] Google is providing a product that Microsoft would agree consumers value.

C. The Chilling Effects on Innovation from Declaring Google's Specialized Search Anticompetitive and Requiring Google to Rank Specialized Search Results with the Same Algorithm Used to Rank General Search Results

Google, Bing, Yahoo, and Ask.com all display specialized search results in various positions on their general search results pages. That all search competitors provide this product improvement is market-based evidence that consumers prefer specialized results. Nonetheless, FairSearch.org has proposed that the FTC require Google to rank specialized results using the same algorithm that it uses to rank general search results. Using this method, specialized results would not appear where they are most relevant. This intervention would destroy value. Contradicting long-established antitrust jurisprudence, it would subordinate consumer welfare to competitor welfare. It would deny consumers a product improvement that they value. It would stifle competition and innovation in both general and specialized searches.

[45] *See* Jeffrey Katz, *Google's Monopoly and Internet Freedom*, WALL ST. J., June 8, 2012, at A15.
[46] Microsoft, *Microsoft's New Search at Bing.com Helps People Make Better Decisions*, *supra* note 36.

In the short run, the proposed intervention would stifle competition in the search market. Search engines all charge a price of zero to consumers. Consequentially, search engines compete with one another on quality alone. Ease of use, speed, and quality of results will determine which consumers prefer which search engines. By prohibiting Google from providing its consumer-welfare-enhancing innovation of displaying specialized search results prominently, this intervention would regulate the quality of search. The proposed intervention would thereby limit Google's ability to compete with other search providers. Less competition in search would reduce not only Google's incentives to innovate, but also Google's competitors' incentives to innovate. Regulatory constraints on product differentiation promote product homogenization—which, in a dynamic market, will retard competition. Would Bing and Yahoo have introduced specialized results similar to Google's if Google had never provided its own specialized search product in the first place? When one competitor stops innovating, its rivals feel less pressure to innovate.

Prohibiting Google's product improvement in search would harm consumers in the long run as well. It is accepted law that "a competitor does not commit the offense of attempting to monopolize by attempting to grow through efficiency."[47] However, FairSearch.org's proposed intervention would signal to all search competitors that innovations developed by lawful means will nonetheless face antitrust scrutiny. The social cost of false condemnation in antitrust is particularly high. Judge Frank Easterbrook has stated that, "[i]f the court errs by condemning a beneficial practice, the benefits may be lost for good. Any other firm that uses the condemned practice faces sanctions in the name of stare decisis, no matter the benefits."[48] The potential for antitrust intervention adds to the risks that accompany any investment; that added risk would deter search providers from investing in the first place. Dynamic competition would diminish, and consumers would suffer.

D. Inappropriate Application of the Essential Facilities Doctrine

Antitrust intervention could be justified only if top placement on a Google search page is an essential facility. However, none of the four conditions of the essential facilities doctrine is met with respect to Google's ranking of specialized search results. Furthermore, it would also be impossible for an antitrust injunction or a consent decree to regulate how Google would provide mandatory access to the purportedly "essential" facility of top placement on a Google search page. Attempting to regulate search ranking

[47] Neumann v. Reinforced Earth Co., 786 F.2d 424, 427 (D.C. Cir. 1986) (Bork, J.).
[48] Easterbrook, *supra* note 5, at 2.

algorithms would impose high regulatory costs on society and deter innovation in search.

1. *Is Being Displayed at the Top of a Google Search Results Page an Essential Facility?*

One string of attack on Google's ranking of specialized search results assumes that being displayed on the top of a general search page is an essential facility.[49] The essential facilities doctrine is the unicorn of antitrust law. Everyone knows what an essential facility looks like, but precious few have seen one in the flesh. The Supreme Court has taken pains never to endorse the doctrine;[50] and, even in the relatively few cases in which the lower federal courts have found liability under the doctrine, there have been even fewer reported decisions explaining what the prices, terms, and conditions of forced access shall be and how the court will enforce them over time.[51]

The essential facilities doctrine requires that the following four elements are met to establish liability: (1) control of the facility by a monopolist; (2) a competitor's inability practically or reasonably to duplicate the facility; (3) the denial of the use of the facility to a competitor; and (4) the feasibility of providing the facility.[52] None of these four elements is satisfied with respect to Google's ranking of its specialized search results.

a. *Control of the Facility by a Monopolist*

The top results on a Google general search page are not an essential facility controlled by a monopolist. Google is not a monopolist. Although Google is the only company that can produce results from a Google search, it would be a tautology to conclude on that basis that Google is a monopolist. Google faces significant competitors in search, such as Bing and Yahoo. For vertical search engines, Google is only one source of traffic. Consumers can navigate directly to vertical search websites. Many vertical search providers also use offline advertisements to attract traffic to their websites.[53]

[49] *See, e.g.*, *Hearing on Competition in Online Markets/Internet Search Issues Before the Senate Judiciary Subcommittee on Antitrust, Competition Policy and Consumer Rights* (Sept. 21, 2011) (written statement of Jeffrey Katz, Chief Executive Officer, Nextag, Inc., at 3); Transcript of *Hearing on Competition in Online Markets/Internet Search Issues Before the Senate Judiciary Subcommittee on Antitrust, Competition Policy and Consumer Rights* (Sept. 21, 2011) (oral testimony of Jeremy Stoppelman, Chief Executive Officer, Yelp Inc.).

[50] Verizon Commc'ns Inc. v. Law Offices of Curtis V. Trinko, LLP, 540 U.S. 398, 410-11 (2004) (Scalia, J.).

[51] *See* Abbott B. Lipsky, Jr. & J. Gregory Sidak, *Essential Facilities*, 51 STAN. L. REV. 1187, 1195 (1999).

[52] MCI Commc'ns Corp. v. Am. Tel. & Tel. Co., 708 F.2d 1081, 1132-33 (7th Cir. 1983).

[53] *See, e.g.*, EfficientFrontier, *The Value of a Super Bowl Ad: A Performance Marketer's Perspective* (Feb. 3, 2011) http://blogs.adobe.com/digitalmarketing/digital-marketing/the-value-of-a-super-bowl-ad-a-performance-marketers-perspective/ (finding a 60- to 80-percent increase in brand searches during a television advertising campaign).

In addition, being displayed as a top result in a Google search page is not nearly so critical as some commentators have maintained. The only evidence of the purported essentiality of top placement in a Google search that FairSearch.org has provided is that 88 percent of users' clicks are on the top three links on search pages.[54] We explain below why this figure is not empirically reliable. There is, however, a more flagrant error in FairSearch.org's logic. This argument ignores the fact that Google is competing in the market for search. Consumers do not blindly click links that are ranked highly. A study of click-through rates (CTRs) by SlingshotSEO found that the top three search results generated clicks in 35.5 percent of Google searches and 17.9 percent of Bing searches.[55] If consumers blindly clicked on the top results, then those rates should be the same across search engines. Google's algorithm ranks the links with the highest probability of providing the best answer to a user's query at the top of search results. Google competes by making search faster and more effective for consumers. If Google's top search results get a high percentage of clicks, then that fact indicates that Google is doing its job well. Moreover, Google's specialized search results are not always displayed at the top; they "float"—interspersed within general search results—based on relevance.[56] The relevance of a particular result to a particular query is a subjective measure, so results including specialized results will change as Google refines its search algorithm.

The 88 percent figure that FairSearch.org cites is also not robust as a piece of empirical evidence.[57] The source that FairSearch.org cites to obtain this 88 percent figure itself cites to a paper that examined search engine user

[54] FairSearch.org, Google and Investigations into Internet Competition 2 (citing SEO Scientist, *Google Ranking and CTR – How Clicks Distribute Over Different Rankings on Google* (July 12, 2009), http://www.seo-scientist.com/google-ranking-ctr-click-distribution-over-serps.html).

[55] SlingshotSEO, *A Tale of Two Studies: Establishing Google and Bing Click-Through Rates*, at 10-12, (Apr. 27, 2012), *available at* http://www.slingshotseo.com/wp-content/uploads/2011/07/Google-vs-Bing-CTR-Study-2012.pdf.

[56] *See Hearing on "The Power of Google: Serving Consumers or Threatening Competition?": Before the S. Comm. on the Judiciary Subcomm. on Antitrust, Competition Policy, and Consumer Rights* (Sept. 21, 2011) (response of Eric Schmidt, Executive Chairman, Google Inc., at 1), *available at* http://www.mobilemarketer.com/cms/lib/13296.pdf [hereinafter Schmidt Response in Hearing on "The Power of Google"] ("With the introduction of 'universal search,' [Google] began to allow these thematic results to 'float' from the top position to positions in the middle and bottom of the page, based on [its] assessment of how relevant conventional and thematic results were to the user's query.").

[57] We raise, but do not answer, the question of whether this 88-percent figure would be admissible by an expert as a piece of economic evidence under the *Daubert* standard. Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993). The *Daubert* standard has been developing sharper teeth with respect to the admissibility of economic evidence. *See, e.g.*, Opinion and Order of May 22, 2012, Apple, Inc. v. Motorola, Inc., Case No. 1:11-cv-08540 (May 22, 2012).

behavior in an *experimental* setting.[58] There are at least two problems with using these data as the basis of determining, as a matter of antitrust law, that access to the top of a Google search results page is an essential facility.

First, relative to click data by actual users, CTRs in the study that FairSearch.org cited are higher than the CTRs in past studies.[59] A more recent examination by SlingshotSEO of click data from Google and Bing suggests much lower CTRs for the top results.[60] This more recent study focuses on non-branded search terms and finds a CTR of 18.2 percent for the first result, 10.1 percent for the second result, and 7.2 percent for the third result in a Google search and 9.7 percent for the first result, 5.5 percent for the second result, and 2.7 percent for the third result in a Bing search.[61] These rates are calculated using the percentage of searches that lead to a click, whereas the 88 percent figure that FairSearch.org cited is the percentage of clicks on the top results. Because not all searches will result in clicks, this figure used by FairSearch.org will be higher than the sum of the CTR of the top three results.

Second, and more significantly, the SlingshotSEO study also compares queries when they include specialized search results and queries when they do not. The study compares the CTRs of specific search result positions when specialized search results were and were not included.[62] The study did not find any statistically significant difference between the two types of searches. In both scenarios, 36.3 percent of searches resulted in click-throughs on the top three results.[63] This evidence strongly repudiates any claim that having a high search result position on a page without specialized search results is an essential facility for any website. For example, the CTRs cited for search positions four through ten are slightly higher in searches when specialized search results are included than in searches when specialized results are not included.[64]

b. A Competitor's Inability Practically or Reasonably to Duplicate the Facility

For the essential facilities doctrine to apply to Google's ranking of search results, it must be the case that Google's competitors cannot practically or reasonably duplicate the facility. Being highly ranked in Google's search

[58] Lori Lorigo, Maya Haridasan, Hronn Brynjarsdóttir, Ling Xia, Thorsten Joachims, Geri Gay, Laura Granka, Fabio Pellacini & Bing Pan, *Eye Tracking and Online Search: Lessons Learned and Challenges Ahead*, 59 J. AM. SOC. INF. SCI. 1041 (2008).

[59] SEO Scientist, *Google Ranking and CTR – How Clicks Distribute Over Different Rankings on Google* (July 12, 2009), http://www.seo-scientist.com/google-ranking-ctr-click-distribution-over-serps.html.

[60] *See* SlingshotSEO, *A Tale of Two Studies: Establishing Google and Bing Click-Through Rates*, *supra* note 55.

[61] *Id.* at 10-12.

[62] *Id.* at 15.

[63] *Id.*

[64] *Id.*

results may have the effect of driving traffic to a website selling a product to consumers, but this process can be duplicated through a number of means.

First, there are competitors to Google that offer similar "facilities." Microsoft, Yahoo, and Ask.com all offer search engines with significant user volume.[65] In March 2012, there were more than 500 million searches on Ask.com, more than 2.5 billion searches on Yahoo, and more than 2.8 billion searches on Microsoft sites.[66] Each of these competitors can direct consumers to a website in the same manner as Google. Non-search online advertisement is also significant. As noted earlier, in 2011, 85 percent of Facebook's $3.7 billion in revenue (approximately $3.2 billion) was derived from advertising.[67]

In addition, there are other means of driving traffic to a website or promoting a product. A number of vertical search providers have significant offline advertising budgets designed specifically to serve this purpose. For example, in 2011, Amazon spent approximately $1.6 billion on marketing, which included sponsored search, email marketing, print and television advertising, and other methods.[68]

For firms that wish to promote their products or drive traffic to their websites, online search results are simply one marketing tool.[69] Other search providers offer a reasonable duplication of the benefits of being highly ranked on a Google search results page. In addition, other online and offline options can also serve this purpose.

c. The Denial of a Competitor's Use of the Facility

The third necessary element for the application of the essential facilities doctrine is the denial of a competitor's use of the facility. The concept of ranking itself means that not everyone can occupy the top position. For a competitor not to be ranked within the top search results does not imply that Google has denied access to this spot. It simply means that Google's algorithm has determined that other links are more likely to answer a consumer's particular query. Google competes in a two-sided market. Any competitor can become a top search result by providing the site that consumers want to visit the most. Ultimately, although Google presents the search

[65] Press Release, comScore, comScore Releases March 2012 U.S. Search Engine Rankings (Apr. 11, 2012), http://www.comscore.com/Press_Events/Press_Releases/2012/4/comScore_Releases_March_2012_U.S._Search_Engine_Rankings (last visited May 4, 2012).

[66] *Id.*

[67] FACEBOOK S-1, *supra* note 39, at 9, 12.

[68] AMAZON.COM, INC., ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934 FOR THE FISCAL YEAR ENDED DECEMBER 31, 2011 (SEC FORM 10-K), at 28 (filed Feb. 1, 2012).

[69] *See* Avi Goldfarb & Catherine Tucker, *Advertising Bans and the Substitutability of Online and Offline Advertising*, 48 MKTG. RES. 207 (2011).

results to consumers, it is consumers themselves who determine the ranking of the results.

d. The Feasibility of Providing Access to the Facility to Competitors

The fourth necessary element for the application of the essential facilities doctrine is that it must be feasible for the facility owner to provide competitors with access to the facility. If the "facility" is top results in a Google search page, this "facility" cannot be provided simultaneously to all the firms that desire it. It is technologically impossible—and it is inconsistent with the very notion of ranking. Not everyone can appear in the top result. Competitors must *earn* the top spots in search results pages. If competitors are given access without earning a top spot, then Google's results will deviate from an accurate depiction of user preferences. As this deviation occurs, consumers will substitute from Google to other search engines, and the supposed essentiality of top placement in Google's search results will disappear.

e. Summary

There are four elements to the application of the essential facilities doctrine. If any one element fails, then the doctrine does not apply. In this case, every individual element of the doctrine fails. Being highly ranked in Google search is valuable to a company. However, a company is not entitled to this placement and must earn it. There are other methods for driving traffic to a website, and there are usually many competitors for the top Google results. Simply being useful does not make a highly placed search result essential as a matter of antitrust law.

2. Regulation of the Price, Terms, and Conditions of Forced Access to Google's Top Search Results Through an Antitrust Injunction or Consent Decree

An antitrust intervention or consent decree could not feasibly regulate the placement of Google's search results. The essential facility would be the top search results in a Google search. Courts typically mandate that an essential facility be shared with competitors.[70] However, how would a top search result be "shared" among websites? There is no possible way for Google to guarantee a highly ranked result to each website for which a high ranking would be deemed "essential." It is both technically and economically infeasible.

a. Mandated Access to Top Rankings on a Google Search Page

Absent antitrust intervention, having a high placement on Google search results has a positive cost: firms must maintain high quality websites that consumers wish to visit. Otherwise, those websites will fall in the search

[70] *See, e.g.*, AT&T Corp. v. Iowa Util. Bd., 525 U.S. 366, 371 (1999).

rankings. Due to the costs of investing in website quality as a means to ensure high search rankings, firms may choose to allocate marketing expenditures across multiple platforms. Google's unpaid search results are only one way to direct traffic to a website, and these search results compete with many other forms of marketing. Some firms may rely upon Google search, while others will rely heavily upon other online advertising or print or television advertising. For example, Kayak increased marketing expenses by $23.8 million from 2007 to 2009, and it spent $15.4 million in 2009 on brand marketing as a means to "bring[] more people to [Kayak's] websites and mobile applications."[71]

If the government mandates high placement on Google search for certain rivals (such as Yelp), then marketing based on Google search would be virtually costless for those rivals. Guaranteeing a highly ranked result to certain websites would consequently encourage more firms to free ride on Google search as a low-cost marketing device. A growing number of firms would have an incentive to employ a search-heavy marketing strategy and forgo other forms of marketing. This strategy would ensure that a high result is "essential" to these firms. Google search would appear to be an even more essential facility to a growing number of firms. There would end up being more firms for which top placement is "essential" than there are top placements available.

A fixed placement high within Google's results pages for existing firms would also reduce competition on the Internet. Forced sharing of this essential facility would create a barrier to entry for new firms. New entrants would be denied access to the top results on the basis of merit and instead would need to spend more on marketing than the highly ranked firms, giving a clear competitive advantage to the incumbent firms. Consequently, mandated access to top search results could reduce competition not only in search markets, but also in any industry where search is an important part of attracting consumers.

b. Ranking Specialized Search Results Using the Same Algorithm as General Searches

In addition to the likelihood that too many firms would change their marketing strategies to be dependent upon Google search, there is a fundamental question that must first be answered to implement any forced access to the top Google search results. How should the top places be allocated? FairSearch.org's proposed intervention suggests allocating rankings using Google's search algorithm. Under this scenario, specialized search results

[71] KAYAK SOFTWARE CORP., REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933 (SEC FORM S-1), at 36 (filed Nov. 17, 2010).

would be ranked using the same algorithm as every other site and not grouped together.[72] This approach would be problematic. First, it is not feasible. There is not merely "one algorithm" that Google can apply to all searches. Rather, Google uses multiple algorithms in concert to generate the most accurate result. Some algorithms rank results, but others determine whether specialized results will be useful for a query and, if so, where those results should be placed.[73] It is too simplistic to insist that Google "adjust its algorithm."

Second, to apply this intervention, it would almost certainly be the case that Google would need to disclose its (patented) algorithm publicly. The public release of Google's search algorithm raises another problem with this antitrust intervention. Google is constantly adjusting its algorithms, having implemented 516 improvements to search in 2010 alone.[74] With an average of more than one revision per day, it would almost always be the case that shortly after the algorithm was made public, it would be outdated. In addition, releasing Google's algorithms publicly would aid spammers and malicious websites who seek to game Google's results.[75] A public algorithm would deter innovation in search. Once Google's algorithm is public, nothing stops Google's competitors from free riding on Google's innovations. Such free riding would dampen Google's incentive to improve its algorithm.[76] Furthermore, once Google's algorithm is public, the process of matching keywords and advertisements would be compromised.[77] Together, free riding and the threat to Google's ability to match advertisements to keyword searches would impair Google's incentive and ability to improve its product. Once one major competitor in search stops innovating, other competitors have less incentive to innovate as well.

[72] FairSearch.org, Google and Investigations into Internet Competition, *supra* note 54, at 4.

[73] Google, Facts About Google and Competition, About Search, http://www.google.com/competition/howgooglesearchworks.html (last visited May 29, 2012); Google, Facts About Google and Competition, Better Answers, http://www.google.com/competition/betteranswers.html (last visited May 29, 2012); Jonathan M. Jacobson, Should Google's Efforts to Make Search Better for Users Be Considered an Antitrust Offense?, at 20, presented at the Stanford Law School (Oct. 6, 2011).

[74] Google, Facts About Google and Competition, http://www.google.com/competition/howgooglesearchworks.html (last visited May 9, 2012).

[75] *See* Schmidt Response in Hearing on "The Power of Google," *supra* note 56, at 13.

[76] *See Rothery*, 792 F.2d at 212-13 ("The free ride can become a serious problem. . . because the party that provides capital and services without receiving compensation has a strong incentive to provide less.").

[77] Geoffrey A. Manne & Joshua D. Wright, *If Search Neutrality Is the Answer, What's the Question?*, at 73 (Int'l Center for Law & Econ., Antitrust & Consumer Protection Program White Paper Series, 2011) ("there is an obvious pro-competitive justification for keeping the quality score metric secret: Google's success in matching keywords to ads will be compromised by disclosure of the algorithm because it would open opportunities to game the auction process").

c. Search "Neutrality"

Another proposed intervention to ensure "neutral" search is to prohibit Google from adjusting the ranking of websites that may score high in its algorithm but provide little original content or improved functionality.[78] Some parties have complained that those adjustments are Google's attempt to reduce competition in vertical search.[79] Government intervention in favor of search "neutrality" would require that those websites receive a high Google search ranking. The Supreme Court rejected in *Trinko* exactly this sort of antitrust intervention.[80] The Court said that "[e]nforced sharing . . . requires antitrust courts to act as central planners, identifying the proper price, quantity, and other terms of dealing—a role for which they are ill suited."[81] Again, it is unclear how one would "share" the top search result. In situations such as the removal of Google's adjustments for low-quality websites, any legal solution would require specific actions by Google with respect to each downgraded website. Consequently, following the Supreme Court's reasoning in *Trinko*, the role of the court would be "supervision of an ongoing commercial relationship, a function that courts are not equipped to perform effectively."[82] The courts would ultimately be creating a property right in highly ranked Google search results.[83] The property right would not be endowed with Google, the company that created the underlying property. Instead, the property right would be conferred to the beneficiaries of Google's top rankings.[84] This regulation of Google search would retard improvements in search technology.

It would also be virtually impossible to determine exactly what constitutes a neutral search standard. Google generally ranks a website lower because it considers the website to be less relevant to the user's search. By virtually any understanding of what comprises an algorithm for ranking websites, the share of content on a website that is original would qualify as part of that algorithm. The suggestion that Google display search results without adjusting

[78] *See, e.g.*, Oren Bracha & Frank Pasquale, *Federal Search Commission? Access, Fairness, and Accountability in the Law of Search*, 93 CORNELL L. REV. 1149 (2007). For a critique of search neutrality, see *id.*; Marvin Ammori & Luke Pelican, *Proposed Remedies for Search Bias: "Search Neutrality" and Other Proposals in the Google Inquiry*, presented at the Second Annual Conference on Competition, Search, and Social Media (May 16, 2012); James Grimmelmann, *Some Skepticism About Search Neutrality*, *in* THE NEXT DIGITAL AGE: ESSAYS ON THE FUTURE OF THE INTERNET 435 (Berin Szoka & Adam Marcus eds., TechFreedom 2011).

[79] *See, e.g.*, TradeComet.com LLC v. Google Inc., 693 F. Supp. 2d 370 (S.D.N.Y. 2010).

[80] *Trinko*, 540 U.S. at 408.

[81] *Id.*

[82] RICHARD A. POSNER, ANTITRUST LAW 242 (2d ed., Univ. of Chicago Press 2001).

[83] Grimmelmann, *supra* note 78, at 449.

[84] *Id.* ("The search engine that ranks a site highly has conferred a benefit on it; turning that gratuitous benefit into a permanent entitlement gets the ethics of the situation exactly backwards.").

for unoriginal or low-quality content is not implementable, because it is impossible to determine which parts of Google's ranking algorithm would fall within the critics' (varying) definitions of an acceptable algorithm. Google's critics are not asking for "neutral" search results. Rather, they want the search results that serve them best.

In short, an essential facilities regime for Google search results would be very costly. Its benefits would be negligible or nonexistent. The proposed interventions are neither technically nor economically feasible. Courts are rarely cited as institutions known for their dynamism and alacrity. In an industry where Google changes its product more than once per day, the courts would be unable to keep up with the pace of innovation. The courts could only slow the pace of innovation.

IV. DOES GOOGLE DEPRIVE COMPETITORS OF THE NECESSARY SCALE TO COMPETE IN SEARCH?

The FTC is investigating whether Google is making it more difficult for other search engines to compete by impeding their ability to reach "scale." As a matter of economic and legal analysis, scale refers to the level of output in a given period of time—not output accumulated over time. In contrast, Google's competitors use "scale" to refer to cumulative output over time, measured by the cumulative number of searches or amount of user traffic. But does any evidence exist that supports the claim that Google is preventing its competitors from reaching the minimum efficient scale or minimum efficient cumulative output? The necessary scale to compete in search is small—it is certainly smaller than Google's scale. Contrary to the complaints, Google is neither blocking access to Google content, such as YouTube, nor preventing the porting and comingling of AdWords data. Google also has not excluded search competitors from the original equipment manufacturer (OEM) market.

A. Is Scale a Necessary Input to Compete in Search?

Critics argue that Google makes it difficult for competing search engines to achieve the scale "necessary to succeed."[85] It bears emphasis at the outset that "necessary to succeed" is a different standard from "necessary to compete." No principle in antitrust law remotely imposes a duty on a firm to ensure the profitability of a rival.[86]

[85] *See, e.g.*, *Hearing on Competition in Online Markets/Internet Search Issues: Before the Senate Judiciary Subcommittee on Antitrust, Competition Policy and Consumer Rights* (Sept. 21, 2011) (written statement of Thomas O. Barnett, Covington & Burling LLP, at 13).

[86] Brief of Amici Curiae Professors and Scholars in Law and Economics in Support of the Petitioners, Pac. Bell Tel. Co. v. linkLine Commc'ns, Inc., No. 07-152, at 4 (filed Sept. 2008) ("It is not possible to advance consumer welfare with an antitrust rule that punishes a

Beyond harboring this legal misconception, this argument assumes as a matter of economics that scale is necessary to compete in Internet search. However, this premise is incorrect. Presumably, the more traffic a search engine has accumulated, the more user data the search engine has, which the search provider uses to refine its search algorithms and improve the quality of its search services.[87] Product improvements attract more user traffic, which further enables the search engine to improve its search tools. This process is, essentially, the efficiency of experience, which economists call "learning by doing."[88]

In addition, critics argue that the two-sided nature of Internet search increases the importance of scale for a search engine's ability to compete. The logic is that, as a search engine's scale increases, advertisers' demand for that search engine will increase. The search engine then gains advertising revenues as a product of its scale, and those revenues can fund further research and development in innovations. This latter effect is termed an "indirect network effect": end-user consumption of a search engine increases the advertisers' demand for the search engine.[89]

Those two arguments question whether search engines with significantly less user traffic than Google can continuously improve the quality of their search services and innovate (which, implicitly, enables search engines to compete). We first address whether an amount of user data comparable to Google's is necessary for a competitor to engage in learning by doing. We then address whether having advertising revenues comparable to Google's is necessary for a competitor to fund innovative activity in search.

1. *Is an Accumulation of User Traffic Comparable to Google's Necessary to Compete?*

Critics argue that scale is necessary to compete in the search market. Thomas Barnett, former Assistant Attorney General for Antitrust and outside counsel to Microsoft, has said: "You need the scale, the volume of

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firm for failing to ensure its competitors' profitability."). *See also* J. Gregory Sidak, *Abolishing the Price Squeeze as a Theory of Antitrust Liability*, 4 J. COMPETITION L. & ECON. 279, 294 (2008).

87 *See, e.g.*, FairSearch.org, Google & Investigations into Internet Competition, *supra* note 54, at n.xiii ("With more scale, a search engine is better able to conduct experiments to tune its search algorithm, to improve the relevancy of its search results, and ultimately to offer better and more features for users.").

88 The seminal article on learning by doing is Armen Alchian, *Reliability of Progress Curves in Airframe Production*, 31 ECONOMETRICA 679 (1963).

89 *See, e.g.*, Initiative for a Competitive Online Marketplace, Google Under the Antitrust Microscope, at 30-31 (Oct. 2011), *available at* http://www.i-comp.org/resources/white_papers [hereinafter ICOMP].

traffic that Google has[,] to tune the engine, and it's an ongoing process. Nobody else is going to catch Google, even if you had access to their algorithm today."[90] However, actual experiences in the Internet search market indicate otherwise. Microsoft's CEO himself asserted in June 2012 that Microsoft "will beat Google in all markets."[91]

Before explaining why the critics' argument is incorrect, it is essential to clarify, in precise economic terms, the critics' argument about scale being a barrier to entry. The critics are conflating the economic concepts of entry barriers, economies of scale, and learning by doing. An entry barrier, as defined by Nobel laureate George Stigler, is "a cost of producing (at some or every rate of output) which must be borne by a firm which seeks to enter an industry but is *not borne* by firms already in the industry."[92] It appears that the critics' notion of "scale" actually refers to a search provider's *cumulative* output (measured by the accumulated number of searches), as opposed to the output in a given period of time, which is what scale means as an economic term.[93] Critics assert that, as a search engine's cumulative number of searches and volume of user data increase, the cost of improving the search engine falls. This process describes learning by doing. Thus, critics' argument—that "scale" is necessary to "tune" an engine and be competitive—raises the question: How many searches must consumers conduct on a search engine to enable the search engine to begin learning by doing?

Market evidence suggests that the number of necessary searches is low—certainly lower than Google's accumulated number of searches.[94] According to Barnett, Google is "a dominant company [in search] because they got there first."[95] That assertion is wrong. Google was not the incumbent search provider. Search engines existing before Google included Yahoo, Infoseek, Lycos, Excite, AltaVista, Webcrawler, About, Looksmart, and Ask.com (previously Ask Jeeves).[96] Yahoo entered the search market in

[90] Barnett Oral Testimony, *supra* note 40, at 36.

[91] *Microsoft Will Beat Google in All Markets: Steve Ballmer*, INDIA TODAY, June 6, 2012, http://indiatoday.intoday.in/story/will-beat-google-in-all-markets-microsofts-steve-ballmer/1/199378.html (quoting Steve Ballmer, chief executive officer of Microsoft).

[92] GEORGE J. STIGLER, THE ORGANIZATION OF INDUSTRY 70 (Univ. of Chicago Press 1968) (emphasis added).

[93] *See* CARLTON & PERLOFF, *supra* note 42, at 35.

[94] Others have asserted that "learning by doing" is not necessary to improve a search algorithm. Rather "learning by copying" suffices. *See, e.g.*, Geoffrey Manne, Microsoft Undermines Its Own Case, Truth on the Market (posted Feb. 4, 2011), http://truthonthemarket.com/2011/02/04/microsoft-undermines-its-own-case/.

[95] Barnett Oral Testimony, *supra* note 40, at 43.

[96] *See, e.g.*, JOHN BATTELLE, THE SEARCH: HOW GOOGLE AND ITS RIVALS REWROTE THE RULES OF BUSINESS AND TRANSFORMED OUR CULTURE 49-63 (Penguin Group 2005); Urs Gasser, *Regulating Search Engines: Taking Stock and Looking Ahead*, 9 YALE J.L. & TECH. 201, 203-08 (2006); IAC Website, Our Business, Ask.com, http://www.iac.com/

1994[97] and became the dominant search engine, with approximately 34 percent of the search market (consisting of 14.8 million unique users) in August 1997.[98] Google entered in 1998, four years after Yahoo had begun operating.[99] If scale were a barrier to entry, then Yahoo would have maintained its market dominance because it entered the market before Google. Yahoo would have had the first-mover advantage. Yet, Google *surpassed* Yahoo in terms of monthly active users by late 2002.[100] Google's ability to enter the market after Yahoo "got there first"—and eventually to surpass Yahoo in only four years—is real-world evidence that an entrant in search need not "catch up" to Google's current number of searches to provide competitive search results.

FairSearch.org has asserted that scale "enables the dominant search provider to grow its lead over time *regardless of investment and innovation by other providers*."[101] This assertion is wrong. In March 2003, not long after Google had surpassed Yahoo, Google had only 42.9 million unique visitors[102]—65 percent fewer than Bing's monthly unique users as of June 2012.[103] A competitor's market share may be below Google's because its product quality has been insufficient to attract consumers away from Google. Antitrust law, however, is not intended to punish Google for its competitors' shortcomings, bad luck, or improvident business strategies.

Our-Businesses/Ask.com (last visited Apr. 24, 2012); Search Engine History, http://www.searchenginehistory.com/ (lat visited Apr. 24, 2012).

97 Yahoo! News Center, Company Info, The Roots, http://pressroom.yahoo.net/pr/ycorp/history.aspx (last visited Apr. 24, 2012).

98 Neil Gandal, *The Dynamics of Competition in the Internet Search Engine Market*, 19 INT'L J. INDUS. ORG. 1103, 1107 tbl.1 (2001).

99 Google, Our History in Depth, http://www.google.com/about/company/history/ (last visited Apr. 24, 2012).

100 Press Release, WebSideStory, Top Search Engine Opens Ups Widest Lead Yet (Mar. 30, 2004), *available at* http://www.prnewswire.com/news-releases/googles-search-referral-market-share-reaches-an-all-time-high-according-to-websidestory-72254467.html (reporting that in March 2002, Google had 28.9 percent and Yahoo had 36.7 percent of the search market and that in March 2003, Google had 36.0 percent and Yahoo had 31.0 percent); Loren Baker, *Google Domain Grows as Top Search Referral, Distancing from Yahoo and MSN*, SEARCH ENGINE J., Mar. 31, 2004, http://www.searchenginejournal.com/google-domain-grows-as-top-search-referral-distancing-from-yahoo-and-msn/411.

101 FairSearch.org, Google's Transformation from Gate*way* to Gate*keeper*: How Google's Exclusionary and Anticompetitive Conduct Restricts Innovation and Deceives Consumers, at 14 (Oct. 11, 2011), *available at* http://www.fairsearch.org/wp-content/uploads/2011/11/Googles-Transformation-from-Gateway-to-Gatekeeper-Edited.pdf (emphasis added).

102 Kevin Ryan, *Google's Path to Domination*, SEARCH ENGINE WATCH, July 16, 2008, http://searchenginewatch.com/article/2064170/Googles-Path-to-Domination (citing Nielsen/NetRatings).

103 Bing had 122 million monthly unique users as of June 2012. Tom Simonite, *As Google Tinkers with Search, Upstarts Gain Ground*, TECH. REV., June 4, 2012, http://www.technologyreview.com/news/428066/as-google-tinkers-with-search-upstarts-gain/.

The question that follows is whether learning by doing is an entry barrier in the search market. Again, a barrier to entry is a cost borne *only* by entrants and *not* by existing competitors in the market. Thus, even if an incumbent made a large investment to enter the market and another entrant must make a similarly large investment to enter the market at a later time, the later entrant's investment is not an entry barrier. Stigler explained that, because "existing firms also have to meet [capital] requirements, [capital requirements] are not a barrier" to entry.[104] *All* search providers started with zero searches and had to endure the process of learning by doing. The fact that learning by doing is a necessary process to compete in search does not make it a barrier to entry.

2. Are Advertising Revenues Comparable to Google's Necessary for Innovation?

Google's critics argue that reaching "scale" is necessary to earn advertising revenues necessary to compete. Without scale, the critics claim, search engines cannot attract advertising revenues, and without advertising revenues, search engines cannot fund investments needed to attract consumers. There are at least two flaws in this argument.

First, to the extent that advertising revenues are used to fund product improvements, reaching Google's scale is not necessary to gain substantial advertising revenues. The amount of paid advertising on competing search platforms such as Yahoo, Bing, Yelp, Kayak, Amazon and others is evidence that advertisers are willing to pay to advertise on other search sites. For example, Yelp experienced a *91-percent increase* in local advertising revenue from 2011 to 2012.[105] Furthermore, factors other than the number of active users—such as time spent on a web page—can increase click-through rates. Advertisers decide where to advertise based on the return on investment (ROI) of the advertisement, not purely on the scale of the platform.[106] Google's number of users does not necessarily reduce the ROI of advertising on Yelp. If Yelp can deliver a positive ROI, an advertiser would be willing to advertise on Yelp, regardless of its scale. Thus, scale is not necessary to ensure sufficient advertising-related funds for product improvements.

Second, the argument that earning advertising revenues comparable to Google's is necessary to obtain sufficient funding for innovative activity is

[104] STIGLER, *supra* note 92, at 70. *See also* George J. Stigler, *Monopoly and Oligopoly by Merger*, 40 AM. ECON. REV. 23, 27 (1950) ("These costs of building up a going business are legitimate investment expenses, and, unless historical changes take place in the market, they must be equal for both established and new firms.").

[105] Yelp's local advertising revenue increased from $11.2 million in the three months ending March 31, 2011 to $21.5 million in the three months ending March 31, 2012. YELP INC., QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934 FOR THE QUARTERLY PERIOD ENDED MARCH 31, 2012 (SEC FORM 10-Q), at 16 (filed May 4, 2012).

[106] *See, e.g.*, Google, AdWords Help, Return on Investment (ROI), http://support.google.com/adwords/bin/answer.py?hl=en&answer=14090 (last visited May 29, 2012).

incorrect and misleading. The question at the heart of this argument is whether smaller entrants in search can obtain the funding needed to innovate. Advertising revenues—or, more generally, internal net cash flow generated by the search provider's existing supply of search services—is only one source of funding. Funding by the capital markets or by other firms provides a patently obvious additional source of investment. There is no indication of market failure in the funding of new Internet content and applications. To the contrary, Internet ventures have proven remarkably adept and resilient at raising funds for innovative content and applications.[107] DuckDuckGo, a search engine founded in 2008, reportedly raised $3 million in investment funding in 2011.[108] If the expected returns to a search service or an innovation are sufficient, investors will invest in it. The scale of the search engine is not the sole determinant of whether the engine will have funding to invest in innovations. Scale is therefore not an entry barrier in search.

Because scale is not necessary to generate substantial advertising revenues and because advertising revenues are not necessary to obtain funding for product improvements, indirect network effects do not create a barrier to entry. Search engines that do not benefit from indirect network effects to the same degree that Google supposedly does still can earn advertising revenues and still can fund innovative activity. Put simply, search engines operating at substantially smaller scale than Google still have the means to compete in search.

B. Does Google Make It Difficult for Competitors to Access Search Inputs?

According to critics, Google hinders competitors' ability to compete in search by blocking access to search inputs, such as video content on YouTube and scanned books in Google Books. Critics also claim that Google blocks access to advertising campaign data stored in its ad servers. Critics claim that, if advertisers have difficulty synchronizing their ad campaign data across multiple search platforms, they will choose not to advertise on competing platforms. Competitors that earn less advertising revenue as a result would be less able to improve their search services.

This argument is not persuasive. Even if Google makes certain search inputs (such as content and advertising data) more difficult to access, it

[107] *See, e.g.*, FACEBOOK, INC., REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933 (SEC FORM S-8) (filed May 21, 2012); Union Square Ventures, Duck Duck Go, http://www.usv.com/2011/10/duck-duck-go.php (last visited May 28, 2012); Mike Masnick, If Google's Upstart Competitors Aren't Afraid Of Google, Why Is Washington Upset?, TechDirt (posted Sept. 21, 2011), http://www.techdirt.com/articles/20110920/17171916034/if-googles-upstart-competitors-arent-afraid-google-why-is-washington-upset.shtml.

[108] Simonite, *supra* note 103.

does not block access to those inputs. Moreover, Google's limitations on accessing those inputs (to the extent that they exist) do not actually reduce rival search providers' ability to compete.

1. Does Google Prevent Competitors from Accessing Its Content?

Critics, including Microsoft's general counsel, have alleged that Google is restricting search competitors from accessing search inputs—in particular, video content in YouTube and scanned books in Google Books.[109] That alleged conduct is purportedly "preventing competing search engines from returning relevant results" as well as "raising [their] costs and hampering their ability to offer competitive services."[110] Contrary to those complaints, Google does *not* block competing search engines from accessing content that Google owns, including YouTube videos. Bing and Yahoo both produce YouTube video search results in their general search pages. Likewise, critics disregard the fact that Google invested millions of dollars scanning books to create Google Books.[111] Forcing Google to give its competitors free access to that content would permit Microsoft and others to free ride on Google's investment. Such free riding would discourage future product development.

Even if Google had technical limitations in place that made it more difficult or time-consuming for rival search engines to access YouTube content—and it does not[112]—that effect alone would not warrant antitrust scrutiny. Judge Easterbrook has explained that "'intent to harm rivals' is not a useful standard in antitrust . . . .Vigorous competitors intend to harm rivals . . . .To penalize this intent is to penalize competition."[113] To warrant antitrust scrutiny, Google's terms and conditions must actually diminish competition. However, actual search results reveal that Google's terms and conditions for crawling do *not* cause consumers to perceive any significant difference in search quality between Google and competing search engines. For example, video searches produce nearly identical results across Google, Bing, and Yahoo. As of September 2012, a search on each of those three search engines for "Obama's Inaugural Address Video" returns the same video as the first video result.[114] Because Google's terms and conditions for

[109] ICOMP, *supra* note 89, at 14; Brad Smith, Adding Our Voice to Concerns About Search in Europe (Mar. 30, 2011), http://blogs.technet.com/b/microsoft_on_the_issues/archive/2011/03/30/adding-our-voice-to-concerns-about-search-in-europe.aspx (alleging that Google has "put in place a growing number of technical measures to restrict competing search engines from properly accessing [YouTube] for their search results").

[110] ICOMP, *supra* note 89, at 14.

[111] *See, e.g.*, Quenten Hardy, *In Defense of Google Books*, FORBES, Sept. 25, 2009, http://www.forbes.com/2009/09/25/books-copyright-internet-intelligent-technology-google.html.

[112] Schmidt Response in Hearing on "The Power of Google," *supra* note 56, at 8.

[113] *Ball Memorial*, 784 F.2d at 1338-39.

[114] The first video result on Google, Bing, and Yahoo was C-SPAN: President Barack Obama 2009 Inauguration and Address, *available at* http://www.youtube.com/watch?v=VjnygQ02aW4 (last visited Sept. 17, 2012).

crawling Google content do not degrade the quality of competitors' search engines, those terms and conditions do not actually affect competitors' ability to compete. Consequently, critics' complaints regarding Google's terms and conditions for crawling Google content do not justify antitrust scrutiny.

The other potential theory of antitrust harm is that Google's terms and conditions for crawling Google content raise rivals' costs by making crawling Google content more difficult. However, raising rivals' costs becomes an antitrust concern only when it harms consumers.[115] For example, consumers suffer when raising a rival's costs causes the rival to reduce its output, which enables the dominant firm to increase prices. Alternatively, raising a rival's costs can force the rival to charge higher prices, which can either permit the dominant firm to charge a higher price as well or enable the dominant firm to price the rival out of the market—without pricing below cost.[116] Clearly, the additional steps or limitations to access Google content do not raise the cost of accessing that content so much that competitors exit the search market. Search is free for consumers, so search providers compete on quality. As we explained, Google's terms and conditions for crawling Google content do not impose on the consumer any perceptible reduction in the quality of competing search results. Consumers experience neither less choice nor lower quality in search as a result of Google's terms and conditions on crawling Google content.

2. *Does Google Prevent Competitors from Attracting Advertising by Restricting Advertisers' Ability to Compare Campaign Data Across Multiple Platforms?*

Critics also accuse Google of restricting advertisers' ability to "multi-home"—the practice of synchronizing ad campaign data in Google's ad servers with data in other search platforms, such as Microsoft's adCenter.[117] The Google AdWords application programming interface (API) allows advertisers to "build applications that interact directly with the AdWords platform" and "manage their large or complex AdWords accounts and

[115] *Ball Memorial*, 784 F.2d at 1338 ("Action that injures rivals *may* ultimately injure consumers, but it is also perfectly consistent with competition, and to deter aggressive conduct is to deter competition.") (emphasis in original); *Trinko*, 540 U.S. at 410 (stating that the "alleged insufficient assistance in the provision of service to rivals is not a recognized antitrust claim"); Pac. Bell Tel. v. linkLine Commc'n, 129 S. Ct. 1109, 1119 (2009) (Roberts, C.J.) ("if a firm has no antitrust duty to deal with its competitors at wholesale, it certainly has no duty to deal under terms and conditions that the rivals find commercially advantageous").

[116] *See, e.g.*, Steven C. Salop & David T. Scheffman, *Raising Rivals' Costs*, 73 AM. ECON. REV. 267 (1983); Thomas G. Krattenmaker & Steven C. Salop, *Anticompetitive Exclusion: Raising Rivals' Costs to Achieve Power over Price*, 96 YALE L.J. 209 (1986); *Ball Memorial*, 784 F.2d at 1340.

[117] Smith, *supra* note 109; ICOMP, *supra* note 89, at 14; Fairsearch.org, Google and Investigations into Internet Competition, *supra* note 54.

campaigns."[118] According to critics, Google's AdWords API terms and conditions involving multi-homing[119] raise the cost to advertise on competing search platforms, which supposedly reduces competition in search advertising. In the words of Microsoft's general counsel, "most advertisers figure that they have to advertise first with Google. If it's too expensive to port their advertising campaign data to competing advertising platforms, many won't do it."[120] However, market evidence undermines the assumption that advertisers "figure they have to advertise first with Google." Advertisers have many options for advertising effectively online, and there is no evidence that Google is necessarily the first choice for all advertisers.

Google is not preventing advertisers from multi-homing. AdWords API prevents only *third parties*, such as intermediaries between AdWords and the advertiser,[121] from porting full Google AdWords data and comingling the data with data from other search engines.[122] Advertisers can still port and transfer their advertising campaign data from AdWords to data from other search engines.[123] The technological justification for prohibiting third parties from porting AdWords data using AdWords API is that certain quality advantages of AdWords are stripped away when third parties port and comingle advertisers' data.[124] Google's limitation on third parties' ability to port advertisers' AdWords data is designed to ensure a level of quality of service in consumers' search experience. Moreover, if a third party wants to port and transfer an advertiser's data, it can do so through

[118] Google Developers, AdWords API, What Is the Google AdWords API?, https://developers.google.com/adwords/api/ (last visited Apr. 25, 2012).

[119] Google Developers, AdWords API, Terms & Conditions, https://developers.google.com/adwords/api/docs/terms (last visited Apr. 25, 2012).

[120] *See* Smith, *supra* note 109.

[121] Google Developers, AdWords API Terms & Conditions, https://developers.google.com/adwords/api/docs/terms (last visited May 7, 2012) (defining "third party" as "a party other than Google or you [the advertiser] and includes without limitation any database, software or service owned by or under the control of a party other than Google or you").

[122] *Id.* ("You may not use any Third Party Developer Token in an AdWords API Client unless permitted in writing by Google.").

[123] *Id.* (providing that section III(2)(c) on limits to co-mingling of AdWords API data "does not apply to End-Advertiser-Only AdWords API Clients[,]" and that an end-advertiser-only AdWords API client refers to a "Custom AdWords API Client (a) developed only for one party who (together with its Affiliates) will be the sole user and owner (other than ownership of open source code) of the AdWords API Client (the "Owner"), and (b) which is used only to manage advertising for the Owner's own products and services (e.g., not an agency or reseller managing or purchasing advertising for other parties)").

[124] For example, a Google search for "Toys R Us" on September 18, 2012 returns a Toys R Us advertisement with six links beneath the link to the Toys R Us official website: "Buy Online Pick Up In Store," "Red Hot Clearance – 70% Savings," "Free Shipping On Orders $49+," "Birthday Sale – Buy 2 Get 3rd Free," "Holiday Hot Toy Reservation," and "Trick R Treat – Halloween Shop." A search for "Toys R Us" in Bing returns a Toys R Us advertisement that does not have such additional links. That stripping away of information is a result of third-party porting and comingling of AdWords data.

AdWords Editor.[125] The vice president of marketing for Marin Software, an online advertising management platform, has said that Google's limitations to transferring campaign data to AdCenter "'hasn't been a problem' for its clients, who have been able to do it manually."[126] Microsoft has also made it easier for advertisers to transfer ad campaign data from Google AdWords Editor to Bing's adCenter.[127]

Even if one assumes, contrary to the facts and solely for the sake of argument, that Google makes multi-homing more time-consuming for advertisers and third parties, one cannot conclude that Google is acting anticompetitively. Added time to multi-home is effectively a price increase to advertise on Google. Critics argue that the purported added cost to compare campaign data on multiple platforms discourages advertisers from advertising on rivals' platforms. It is equally plausible, however, that such an added cost discourages advertisers from advertising on Google. If advertisers are not willing to bear added costs from Google's AdWords API terms and conditions, then they can advertise on other online platforms. If, however, they have voluntarily agreed to advertise on Google, they are willing to incur added costs of the AdWords API terms and conditions. There is no legitimate reason in antitrust law to punish Google for advertisers' willingness to accept Google's AdWords API terms and conditions.

The only claimed harm to competition and consumers from Google's AdWords API terms and conditions on multi-homing is that competing search engines would generate less advertising revenue to fund ongoing search investments. Allegedly, because competing search engines "are left with less relevant ads"[128] on competing search engines, they earn less revenue. However, as we explained in Part III.A, advertising revenues is not a necessary source of funds for search investment. There is no evidence that restricting advertisers' ability to transfer their AdWords data directly to competing search platforms harms innovation or competition.

C. Does Google Make It Difficult for Consumers to Access Competitors' Search Services?

According to its critics, Google prevents competitors from reaching "scale" (that is, cumulative number of searches) by excluding competitors' search

[125] Google AdWords Editor, http://www.google.com/intl/en/adwordseditor/ (last visited May 7, 2012).

[126] Amir Efrati, *Google Seems Ready to Cope with Three of Four EU "Concerns"*, WALL ST. J., May 21, 2012, http://blogs.wsj.com/digits/2012/05/21/google-seems-ready-to-cope-with-three-of-four-eu-concerns/?KEYWORDS=marin+software.

[127] *See* Bing, Export Campaigns from Google AdWords Editor, http://advertising.microsoft.com/small-business/product-help/adcenter/topic?query=MOONSHOT_PROC_ExportGoogleDesktopCampaign.htm (last visited June 7, 2012).

[128] Smith, *supra* note 109.

products, so that consumers cannot access those products. In Part II, we explained why Google does not exclude competing vertical search engines from search. In this part, we explain why Google is not harming competition in search through its agreements with OEMs and its Android Compatibility Program.

1. Do Google's Default Agreements with OEMs Reduce Competition?

Google's critics argue that it has limited consumer access to competing mobile search engines through its deals with OEMs of personal computers and mobile devices. In those deals, OEMs have agreed to use Google as the default search engine, and Google has agreed to revenue-sharing terms.[129] It is ironic that Microsoft has argued that Google's default agreements with OEMs threaten competition in search, because Microsoft has its own default agreements with OEMs. As of October 2011, over 71 percent of personal computers were using Microsoft's search function as the default.[130] Bing was at that time the default on all HP, Dell, Acer Group, ASUS, Lenovo (business), and Samsung personal computers.[131] In contrast, Google was the default search engine on Toshiba, Apple Computer, and Lenovo (home) personal computers, constituting approximately 20 percent of personal computers.[132] Google clearly faces significant competition from Microsoft over the supply of default search engines to OEMs of personal computers.

Moreover, Google's agreements are not *exclusive* deals, but only default deals.[133] The use of Google as a default search engine does not *exclude* competing search engines from search. By definition, *some* search engine must be the consumer's default search engine on computers and devices, because consumers value having a pre-installed search function on their newly purchased computers or phones. Including a default search engine is also efficient, because it reduces the transaction costs of purchasing a computer or phone. For the same reason, a given car model is sold with one—or at most a few—radio models pre-installed.[134] If consumers do not want to use

[129] FairSearch.org., Google's Transformation from Gate*way* to Gate*keeper*, *supra* note 101, at 35; Phil Nickinson, *Google Clarifies Revenue-Sharing Report, Says It Only Pays on Search, Not Apps*, ANDROID CENTRAL, Mar 28, 2010, http://www.androidcentral.com/google-clarifies-revenue-sharing-report-says-it-only-pays-search-not-apps; Clint Boulton, *Google Denies Revenue Sharing for Android Mobile Apps*, EWEEK, Mar. 28, 2010, http://www.eweek.com/c/a/Mobile-and-Wireless/Google-Denies-Revenue-Sharing-For-Android-Mobile-Apps-336067/.

[130] Jacobson, *supra* note 73.

[131] *Id.*

[132] *Id.*

[133] Transcript of *Hearing on Google Competition Policy Before the Senate Judiciary Subcommittee on Antitrust, Competition Policy and Consumer Rights*, at 36 (Sept. 21, 2011) (oral testimony of Susan Creighton, outside counsel for Google).

[134] *See, e.g.*, Dennis W. Carlton & Michael Waldman, *Tying*, *in* 3 ISSUES IN COMPETITION LAW AND POLICY 1859 (Am. Bar Ass'n Section of Antitrust Law 2008).

Google search, though, they can download Bing or a different search engine in less than 30 seconds, at a price of zero. Google's default agreements with OEMs therefore do not reduce competition in mobile search by excluding other search applications.

Further evidence of competition in search is Google's revenue-sharing terms in its default agreements. Critics claim that the revenue-sharing agreements indicate Google's ability to leverage its so-called monopoly in search. That assessment is incorrect. First, the revenue-sharing agreements are merely a product of Google's superior product and business strategy. For Google to draw upon its own profitability to offer favorable terms to OEMs does not violate antitrust law. Second, the fact that OEMs only agreed to use Google search as the default search engine conditional upon Google's offering of revenue sharing is evidence of competition in search. If Google search truly were dominant, then Google would not need to induce OEMs to use Google search by offering such revenue-sharing agreements. Google's default agreements with OEMs do not threaten competition; they are a product of competition.

2. *Is Google Excluding Competing Search Applications by Tying Its Search Function to Android?*

According to its critics, Google forces OEMs to pre-install Google search on Android devices.[135] This claim is false. OEMs execute contracts with Google and other search providers that establish the default search engine on their devices. Those contracts result from *voluntary* transactions, which are inherently mutually beneficial to the parties to the exchange.[136] Moreover, some Android devices have Bing pre-installed as their default search engine.[137] Kindle Fire uses the Android platform, but it does not include Google search.[138] Market evidence does not support the claim that Google forces OEMs to pre-install Google search on Android devices.

As a matter of antitrust analysis, Google's critics are implying that OEMs' choice to pre-install Google search on Android devices constitutes tying. Tying occurs when a seller conditions the sale of a product with market

[135] *See* FairSearch.org., Google's Transformation from Gate*way* to Gate*keeper*, *supra* note 101, at 35.

[136] *See, e.g.*, ROBERT S. PINDYCK & DANIEL L. RUBINFELD, MICROECONOMICS 584 (6th ed., Pearson Education, Inc. 2005).

[137] Bonnie Cha, *Bing to Be on Some, Not All Verizon Android Phones*, CNET, Sept. 9, 2010, http://www.cnet.com/8301-19736_1-20015979-251.html; Andrew Kameka, *Bing! Now for Non-Verizon Android Phones, Too*, ANDROINICA, Nov. 11, 2010, http://androinica.com/2010/11/bing-now-for-non-verizon-android-phones-too/.

[138] Greg Sterling, *Amazon "Fire" Android Tablet Undermines Google*, SEARCH ENGINE LAND, Sept. 28, 2011, http://searchengineland.com/amazon-android-tablet-undermines-google-94664.

power on the purchase of another product.[139] The latter product is thus tied to the monopolized product. For tying to reduce competition, the tying product must have market power.[140] Otherwise, the buyer can simply purchase a substitute for the tying product without the tied product. Thus, in the critics' tying argument, Google search is the tied product, and Android is the tying product, which supposedly enables Google to force OEMs to pre-install Google search on Android devices, to the exclusion of competing search applications.[141]

That tying theory lacks economic coherence, because Google has no incentive to exclude competing search applications from Android. Android was created and is marketed as "a free, fully open source mobile software platform that any developer can use to create applications for mobile devices and any handset manufacturer can install on a device."[142] Much of Android's value depends on its being open source. Closing off Android to applications would reduce its value—especially since Android competes against Apple's operating system and other platforms. Similar to the market for Internet search, the market for mobile operating systems is two-sided. Consumers have demand for unlimited applications, and application developers want the most consumers to use their applications. Mobile operating systems are a platform that connects consumers to application developers. Android provides application developers a low-cost way to bring their applications to a large market, and it provides consumers access to a virtually unlimited supply of applications.

If Google were to exclude applications from Android (other than applications that are unlawful, harmful, or truly incompatible with Android), it would reduce consumer choice and degrade the quality of Android. Consumers would lose demand for Android. As a result, developers of new applications would begin to supply their applications on a different platform. Competing providers of mobile operating systems would capitalize on any reduction in demand for Android—potentially by innovating a competing open source mobile platform and attracting new applications. As application developers switch to the competing operating system, OEMs would follow. OEMs would consequently produce fewer Android devices. Such an outcome would reduce Google's firm value. Due to the complementary

[139] *See, e.g.*, United Shoe Mach. Corp. v. United States, 258 U.S. 451, 457-58 (1922); Standard Oil Co. of Cal. v. United States, 337 U.S. 293, 306 (1949); Northern Pac. Ry. Co. v. United States, 356 U.S. 1, 5-6 (1958).

[140] *See, e.g.*, *Standard Oil*, 337 U.S. at 306; *Northern Pac. Ry.*, 356 U.S. at 6-7 ("Of course where the seller has no control or dominance over the tying product, so that it does not represent an effectual weapon to pressure buyers into taking the tied item, any restraint of trade attributable to such tying arrangements would obviously be insignificant, at most.").

[141] FairSearch.org, Google's Transformation from Gate*way* to Gate*keeper*, *supra* note 101, at 35.

[142] GOOGLE 2011 ANNUAL REPORT, *supra* note 13, at 5.

demand for Android among consumers and application developers, Google has no incentive to exclude competing applications from Android.

The presence of these powerful demand complementarities significantly calls into question antitrust concern over Google's treatment of search applications on Android. A provider of a platform such as a mobile operating system will "often take pains 'not to compete with customers' so as to minimize any ill effects of integration on independent applications."[143] Thus, even if one were to assume (contrary to fact) that Google were a vertically integrated monopoly provider of mobile operating systems, it would still "prefer that applications—the *complements* to its product—be cheaply, innovatively, and efficiently supplied"[144] on its Android platform. Thus, Google has no incentive to deter innovation and market entry of independent content and application developers. Critics' fear that Google will exclude competing search applications from Android has no basis.

V. CONCLUSION

None of the purported antitrust problems that Google's critics have raised indicates that Google is behaving anticompetitively. Google's ranking of specialized search results in general search pages is not an attempt to monopolize vertical search. Rather, it is a product improvement that enhances value for consumers. The characterization of top placement on a Google search page as an essential facility lacks any foundation in antitrust law. The claims that Google has hindered the ability of rival search engines to compete for users, advertisers, and OEMs by reaching minimum efficient scale are false. Moreover, one cannot reasonably conclude that the necessary scale to compete in search approaches Google's scale.

Given the serious factual, logical, and economic flaws in the antitrust complaints about Google's practices, one can reasonably conclude only that Google's competitors are seeking to use antitrust law to protect their own market positions. However, punishing Google for being a successful competitor would stifle innovation and dynamic competition. A "successful prosecution" of Google for its search practices would necessitate regulation of search algorithms and product improvements, which would retard the current pace of innovation in Internet search that has created enormous gains in consumer welfare. The choice left for Google and all search providers would be either to innovate—and subsequently be subject to antitrust scrutiny once the innovation has achieved widespread adoption—or to avoid antitrust scrutiny by not innovating. Such use of antitrust law undermines its unequivocal purpose—to protect consumers.

[143] Joseph Farrell & Phil Weiser, *Modularity, Vertical Integration, and Open Access Policies: Towards a Convergence of Antitrust and Regulation in the Internet Age*, 17 HARV. J.L. & TECH. 85, 100 (2003).

[144] *Id.* at 101 (emphasis added).