NETWORK LAW REVIEW

ARTICLE

A New Paradigm for Antitrust in the Digital Sector

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The Network Law Review is pleased to present you with a special issue curated by the Dynamic Competition Initiative ("DCI"). Co-sponsored by UC Berkeley and the EUI, the DCI seeks to develop and advance innovation-based dynamic competition theories, tools, and policy processes adapted to the nature and pace of innovation in the 21st century. This special issue brings together contributions from speakers and panelists who participated in DCI's second annual conference in October 2024. This article is authored by Diana L. Moss, Vice President and Director of Competition Policy, Progressive Policy Institute.

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1. Introduction

Competition policy has a difficult relationship with the digital sector. Rates of innovation and productivity are some of the highest across the U.S. economy and ongoing advancements in technology (e.g., artificial intelligence (AI)) threaten to displace incumbent business models.[1] On the other hand, the digital ecosystems grow rapidly through acquisition, and many exhibit economic characteristics that foster market concentration. Until recently, antitrust enforcement in the U.S. has been reluctant to address market power in the digital sector. But it is now working

[1] Brian C. Albrecht and Ryan A. Decker, Rising Markups and Declining Business Dynamism: Evidence From the Industry Cross Section, Board of Governors of the Federal Reserve (Mar. 8, 2024), https://www.federalreserve.gov/econres/notes/feds-notes/rising-markups-and-declining-business-dynamism-evidence-from-the-industry-cross-section-20240308.html..

overtime, with several unsuccessful merger challenges and pending monopolization cases that, when all is said and done, will take years to resolve.[2]

This article asks how antitrust's history informs the debate over which models of competition—static, dynamic, or a hybrid approach—are fit for purpose in the digital sector.[3] The static model's focus on efficiency in narrowly-defined equilibrium markets appears increasingly out of sync with the pace of innovation, unique economics, and new product development, especially for the digital ecosystems. This article explores the notion that U.S. antitrust enforcers, knowingly or not, put more weight on dynamic competition principles during the rise of the digital ecosystems but reverted more recently to a static competition framework.

2. Complexity: The Digital Ecosystem Model

The digital ecosystem is a complex business model, featuring economic-engineering integration across three major components.[4] One is a multi-sided market or platform (e.g., social media, search and advertising) that connects users and providers. A second is cloud infrastructure and computing that powers the ecosystem by applying data analytics, AI, and machine learning to vast troves of user data. A third feature is a constellation of applications, connected to and supported by the ecosystem, such as fintech, healthtech, and e-Commerce.

Complex ecosystem integration challenges antitrust's narrow market approach. That is, under the consumer welfare standard, antitrust considers the effects of anticompetitive consolidation and business practices on prices, but potentially also on quality and innovation, within a narrowly defined market. Of course, antitrust has long tackled vertical competitive problems such as integration and contracting across adjacent markets. But recent cases demonstrate that even vertical merger and potential competition theories are controversial in digital markets.[5] This does not bode well for multi-sided platforms and theories of anticompetitive information

[2] The U.S. v. AT&T monopolization case (United States v. AT&T, 552 F. Supp. 131 (1982)) took eight years to resolve. See, e.g., The Breakup of "Ma Bell": United States v. AT&T, Federal Judicial Center, https://www.fjc.gov/history/spotlight-judicial-history/breakup-ma-bell. The government filed the initial complaint in U.S. v. Google (Google LLC (1:20-cv-03010) in 2020 and is currently in the remedies phase five years later.

[3] The Stanford Center for Legal Informatic's Computational Antitrust program is a leading forum for exploring this question. See, https://law.stanford.edu/computationalantitrust.

[4] Diana L. Moss, Gregory T. Gundlach, and Riley T. Krotz, Market Power and Digital Business Ecosystems: Assessing the Impact of Economic and Business Complexity on Competition Analysis and Remedies, Am. Antitrust Inst. (Jun. 1, 2021), at Section III, https://www.antitrustinstitute.org/wp-content/uploads/2021/06/AAI_digital-ecosystems_FINALV5.pdf.

[5] See, e.g., the FTC's loss in Meta-Within (potential competition) and the DOJ's loss in UnitedHealth Group-Change Healthcare (information sharing on a digital platform).

sharing and leveraging market power that could surface in antitrust cases involving the digital ecosystems.

To complicate matters, the digital ecosystems exhibit economic features that foster market concentration. Market outcomes are also hard to disentangle from the strategic consolidation and behavior that antitrust is supposed to police. For example, there are significant economies of scale in cloud infrastructure and data externalities (i.e., extrapolating user behaviors to large groups), both of which lower costs for a large firm.[6] Some digital ecosystems also exhibit powerful network effects, which increase the value of a service as more users adopt or join, prompting markets to tip to a single provider or technology.

The digital ecosystems also display significant information asymmetries. Users often do not know how their data are used and are inconsistent in stating and following their data privacy preferences.[7] Moreover, the value proposition in many digital ecosystems rests on collecting, enriching, and monetizing user data through algorithmically-driven suggestions and advertising, with the goal of retaining users and discouraging switching to competing systems.[8]

These unique features, along with the diversity of digital players, foster what dynamic competition experts call 'broad-spectrum competition that cuts across markets.' This framing of competition involving the digital ecosystems challenges the conventional static competition model favored by antitrust.[9] As discussed next, rapid growth through acquisition poses additional questions around how antitrust approaches the digital sector.

3. Rapid Growth: Digital Expansion by Acquisition

Companies typically grow in two major ways. One is through organic, R&D-generated growth and another is acquisitive growth, or expansion by

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[6] See, e.g., W. Brian Arthur, The second economy, McKinsey Quarter (Oct. 1, 2011), https://www.mckinsey.com/capabilities/strategy-and-corporate-finance/our-insights/the-second-economy#/.
See also, What is cloud economics? Vmware.com, queried Feb. 17, 2025, https://www.vmware.com/docs/vmware-faq.

[7] See, e.g., Shota Ichihashi, Online Privacy and Information Disclosure by Consumers, 110 Am. Econ. Rev. 569 (2020), at 2 and Diane Coyle, Practical Competition Policy Implications of Digital Platforms, 82 Antitrust Law J. 835 (2019).

[8] See, e.g., Garces, Eliana, The Dynamics of Platform Business Value Creation (Aug. 2017), CPI Antitrust Chronicle (Aug. 2017), https://ssrn.com/abstract=3138924.

[9] Nicolas Petit and David J. Teece, Innovating Big Tech firms and competition policy: favoring dynamic over static competition, (30) Industrial and Corporate Change (2021), pp. 1168–1198, https://doi.org/10.1093/icc/dtab049.

acquisition.[10] Acquisitive growth is faster than its organic counterpart and can quickly facilitate economies of scale and coordination, rapid market penetration, and expansion of market share.[11] The digital sector has a voracious appetite for growth by acquisition, which continues to fuel the global market for digital transformation. Valued at about $990 billion in 2024, that market is expected to grow at about 24% annually through 2030.[12]

Acquisitive growth in the digital sector has delivered blockbuster results. A recent study reveals, for example, that non-digital firms are, on average, up to 64% less acquisitive and 57% lower in value than digital firms.[13] It is not surprising, therefore, that major slices of the digital sector have completed two major cycles of acquisition-driven expansion since the mid-1990s, to produce some of the most valuable companies in the U.S. The first cycle encompassed the build-out of large first-generation digital business ecosystems between 1995 and 2023. During this time, Google, Amazon, Apple, Meta, and Microsoft made almost 900 acquisitions.[14] The ramp down in acquisitions after the peak in 2014-2015 likely signaled some combination of ecosystem maturation, a decline in available takeover targets, and growing regulatory risk.

A second cycle of expansion in the digital sector spanned the years 2005-2023 and was focused on the build-out of cloud infrastructure and AI capability.[15] The largest cloud providers and AI "specializers," such as Qualcomm, Meta, Intel, Nvidia, and Genesys, made about 280 acquisitions over this period. While the cycle peaked in 2018-2019, advancement in generative AI models continues to drive strong demand for cloud computing capability and will likely generate further cycles of acquisition.[16]

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[10] Diana L. Moss and David Hummel, Anticipating the Next Generation of Powerful Digital Players: Implications for Competition Policy, Am. Antitrust Inst. (Jan. 18, 2022), https://www.antitrustinstitute.org/wp-content/uploads/2022/01/NextGenDigitalAAIReport.1.18.22-1.pdf.

[11] Martin Weiss, Dominic Herrmann, Theodore A. Khoury, Markus Kreutzer, and Marc Hummel, The boundary conditions for growth: Exploring the non-linear relationship between organic and acquisitive growth and profitability, 56 Long Range Planning 102291 (2023), https://doi.org/10.1016/j.lrp.2022.102291.

[12] Digital Transformation Market, MarketsandMarkets (Aug. 2024), https://www.marketsandmarkets.com/Market-Reports/digital-transformation-market-43010479.html.

[13] Moss and Hummel, supra note 11.

[14] Acquisitions data sourced from Crunchbase.com.

[15] Diana L. Moss, In Search of a Competition Policy for the Digital Sector, Progressive Policy Institute (Oct. 2024), https://www.progressivepolicy.org/wp-content/uploads/2024/10/PPI-Digital-Competition-Nov24.pdf.

[16] Id. See also, Jeffrey Erickson, The Role and Benefits of AI in Cloud Computing, OCI (Jun. 21, 2024), https://www.oracle.com/artificial-intelligence/ai-cloud-computing/.

Antitrust's response to these massive cycles of consolidation was muted, at best. For example, the rate at which the U.S. Department of Justice (DOJ) and Federal Trade Commission (FTC), challenged digital mergers in the web search portal and data processing services sector (NAICS 518) between 2001-2023 was over four times lower than the average across all sectors.[17] Some competition analysts suggest that enforcers erred by not more vigorously enforcing mergers at this early stage. To be sure, the incipiency standard in Section 7 of the Clayton Act is the first line of defense against the emergence of dominant firms and oligopolies.[18] But enforcement data may not support a hypothesis that there was under-enforcement of digital mergers.

For example, the combined rate of second requests, or early stage investigations, by the DOJ and FTC for NAICS 518 from 2001-2023 is 25% higher than across all sectors.[19] This pattern of more intense early-stage scrutiny but the rare merger challenge makes more sense when we consider the implications of broader macroeconomic indicators. Firm markups in NAICS 518 were on the rise between 1980-2016 and the rate at which new firms was in decline.[20] Labor productivity in the sector, however, was orders of magnitude higher than for the U.S. non-farm sector as a whole.[21] Moreover, in Europe, total factor productivity for firms was higher in the digital sector than the non-digital sector.[22]

Some argue that the pattern of digital merger enforcement in the U.S. reflects antitrust conservatism, or the minimization of 'over-enforcement' risk beginning in the 1980s.[23] This is unlikely. The pattern of vigorous early-stage merger investigations but few challenges for a major category of digital mergers is observed during the wane of the Chicago School's influence. It more likely indicates that enforcers were instead taking a "wait-and-see" approach in a nascent and innovative, rapidly expanding sector.

4. Antitrust's Struggle to Catch Up to the Digital Sector

[17] Annual Reports to Congress Pursuant to the Hart-Scott-Rodino Antitrust Improvements Act of 1976, Table X (detail on NAICS Code 518), 2001-2024, https://www.ftc.gov/policy/reports/policy-reports/annual-competition-reportshttps://www.ftc.gov/policy/reports/policy-reports/annual-competition-reports.

[18] U.S. Dept. of Justice and Fed. Trade Commn., Merger Guidelines (Dec. 18, 2023), at 1.

[19] Annual Reports to Congress, supra note 19.

[20] Albrecht and Decker, supra note 2.

[21] Data Finder 1.1, U.S. Bureau of Labor Statistics, https://data.bls.gov/dataQuery/find?fq=survey:%5Bip%5D&s=popularity:D.

[22] Robert Anderton, Vasco Botelho, and Paul Reimers, More digital, more productive? Evidence from European firms, European Central Bank Blog (Jun. 21, 2023), https://www.ecb.europa.eu/press/blog/date/2023/html/ecb.blog230621~3c2f72aa70.en.html.

[23] See, e.g., Jonathan B. Baker, Taking The Error Out Of "Error Cost" Analysis, 80 Antitrust Law J. (2015), at 1.

After decades of latent merger control and growing concerns about the market power of large digital players, the Biden antitrust enforcers broke rank. For example, the DOJ and FTC brought three merger challenges in 2022 alone: Meta-Within (virtual reality fitness apps), Microsoft-Activision (video gaming), and UnitedHealth Group-Change Healthcare (claims processing). The Trump and Biden enforcers also filed monopolization cases against Google, Apple, Meta, and Amazon, an algorithmic collusion case against the RealPage digital rental housing platform, and launched probes into AI chips and ownership stakes in leading AI developers.[24]

In 2020, the European Commission shifted strategy in the digital sector to a regulatory compliance regime under the Digital Markets Act (DMA).[25] Designed to promote intra-platform competition, or limiting self-preferencing by a platform owner, the long game for the DMA is actually inter-system competition, or spurring entry by easing consumer switching to competing services. Much like the U.S. antitrust approach, the DMA is not without flaws. The 2024 Draghi report notes, for example, that "[r]egulatory barriers to scaling up are particularly onerous in the tech sector" and work to hamper innovation.[26]

Antitrust's efforts to catch up with the digital sector reveal much about the static model of competition. For example, the merger cases filed in 2022 were all unsuccessful, largely because of weak theories of competitive harm or inadequate evidence to support them. A major downside of those losses is that they may deter future, stronger digital antitrust cases that could invoke some combination of static and dynamic competition principles.

The U.S. v. Google search case, currently in the remedies phase, will be a test balloon for structural remedies in digital ecosystems, particularly their impact on ecosystem integration, user service quality, and data privacy and security.[27] The proposed conduct remedies regarding search data sharing resemble a form of 'access' regulation—conditions that may invite workarounds and require ongoing

[24] David McCabe, U.S. Clears Way for Antitrust Inquiries of Nvidia, Microsoft and OpenAI, New York Times (Jun. 5, 2024), https://www.nytimes.com/2024/06/05/technology/nvidia-microsoft-openai-antitrust-doj-ftc.html.

[25] The Digital Markets Act: ensuring fair and open digital markets, European Commission, https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/digital-markets-act-ensuring-fair-and-open-digital-markets_en. See also, Fiona Scott-Morton, Digital Platforms: Market Structure and Competition, Yale School of Management (Jul. 2019), https://www.cresse.info/wp-content/uploads/2020/02/2019_keynote-lecture-Scott.pdf.

[26] The future of European competitiveness: Part A: A competitiveness strategy for Europe (Sep. 2024), at 26, https://commission.europa.eu/document/download/97e481fd-2dc3-412d-be4c-f152a8232961_en?filename=The%20future%20of%20European%20competitiveness%20_%20A%20competitiveness%20strategy%20for%20Europe.pdf,%20at%2026.

[27] United States, et al. v. Google, LLC, No. 20-cv-3010 (APM) (D.D.C. Aug. 5, 2024), Docket No. 1033.

monitoring and compliance.[28] Recent interventions in the remedies phase of the case are indicative of the complexity of the digital business ecosystems. Namely, parties that are interconnected with the Google search ecosystem via hardware, software, or business model integration have a large stake in the outcome. This is less likely to be symptomatic of a threat to monopoly rent-sharing than genuine spillover effects of a remedy on other businesses.

5. Conclusions

As the U.S. experiment in digital antitrust progresses, new cycles of acquisition and expansion will continue to emerge, along with newer players and business models. While we cannot predict every repercussion of the U.S. approach, we do know that unwinding market power long after it has been entrenched is not a particularly efficient use of antitrust. We also know that allowing market power to persist, on the assumption that a new business model or technology will eventually displace incumbent firms, is not a viable public policy solution for promoting competition and protecting consumers.[29]

Digital antitrust moving forward will, therefore, necessarily be defined by controlling the market power of large digital players, against the backdrop of rapid innovation and new product development. Reconciling with this reality could produce approaches that give more weight to dynamic competition considerations in antitrust or regulatory frameworks. More work is needed to facilitate this dialogue.

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References:

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[28] See, e.g., John E. Kwoka and Diana L. Moss, Behavioral Merger Remedies: Evaluation and Implications for Antitrust Enforcement, 57 Antitrust Bulletin (2012), https://doi.org/10.1177/0003603X1205700410.

[29] See e.g., Danny Godwin, AI search is gaining traction, but it isn't replacing Google: Survey, Search Engine Land (Feb. 6, 2025), https://searchengineland.com/ai-search-gaining-traction-not-replacing-google-survey-451667.