



MARKET CONCENTRATION IN CLOUD SERVICES AND ITS IMPACT ON INVESTIGATIVE JOURNALISM



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Cloud services are the backbone to the modern economy and information systems, indispensable for the provision of digital products and services, from social media to artificial intelligence (“AI”) models. Yet the cloud market is becoming more concentrated in the hands of three giant corporations as businesses and governments have moved their operations to the cloud, and advances in AI reinforce its importance. This article explores the dynamics in the cloud sector that raise concerns about the concentration of power in a handful of dominant tech companies that have already forced journalism to adapt to a platform logic that constrains and shapes the political economy of news. Concentration in the cloud services market is likely to exacerbate already existing power imbalances between news media and dominant digital platform. We illustrate this by examining the infrastructural role cloud plays for watchdog journalism, like investigative and data journalism, which produce some of the most resource-intensive and impactful stories in the news media market. How we govern this infrastructure has profound repercussions for wide swaths of the economy and our information and communications systems, and regulators and policymakers should consider the effects on public interest journalism and implement policies to redress concentration and potentially anticompetitive practices in the cloud services market.

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01

INTRODUCTION

By providing critical infrastructure to many businesses, cloud services have become indispensable for the provision of digital products and services, from social media to artificial intelligence (“AI”) models. Despite its soft and fluffy connotation, cloud services are better thought of as the backbone to the modern economy and information systems. How we govern this core infrastructure of the digital age has profound repercussions for wide swaths of the economy and our information and communications systems.

The cloud market is becoming more concentrated in the hands of three giant corporations as businesses and governments have moved their operations to the cloud, and advances in AI reinforce its importance. At the end of 2023, Amazon, Microsoft, and Google together controlled 67 percent of the global cloud services market share.² Consumers deal with such tech behemoths even when they think they’re not. For example, popular platforms such as Netflix, Twitter, Zoom, and Slack depend on cloud infrastructure from Amazon Web Services.³

With the development of more sophisticated large language models (“LLMs”) that underpin generative AI applications, increased demand for cloud services is already exacerbating market concentration and harming fair competition.⁴

Public interest journalism is a keystone species of the information ecosystem because it informs the public, connects communities, and holds the powerful to account.⁵ Watchdog journalism, like data journalism and investigative journalism, is a particularly important subspecies that increasingly requires access to cloud services. Cloud is a critical resource to enable them to produce data intensive investigations involving terabytes of data and often hundreds of journalists sorting through enormous data sets with AI tools that help them uncover locally relevant stories and produce illuminating insights.

Such public interest journalism would not be possible without the cloud-based services and tools that enable real-time collaboration with other newsrooms, overcome language barriers, support large datasets, and conduct sophisticated network analysis. Thus, cloud services are essential for journalism to tackle complex international stories with a depth and rigor that would otherwise be impossible.

Enabling journalists from different countries and backgrounds to piece together complex international stories, make sense of seemingly unrelated information, and work together securely on highly sensitive projects has been game-changing. Over the past decade, pioneering watchdog journalism — Panama Papers, Pegasus Project, among others — have resulted in billions of dollars returned to public coffers, hundreds of people arrested, corrupt officials ousted, and new laws and regulations passed.⁶

Historically, the news media market has been regulated to serve the public interest, and there is substantive research on how dominant digital platforms intermediating information flows have disrupted such regulatory precedent.⁷ Although there has been extensive documentation on how platformi-

2 See Synergy Research Group, *Cloud Market Gets Its Mojo Back; AI Helps Push Q4 Increase in Cloud Spending to New Highs*, (2024), <https://www.srgresearch.com/articles/cloud-market-gets-its-mojo-back-q4-increase-in-cloud-spending-reaches-new-highs>.

3 See Daniel Hanley, *Zoom, Netflix, Slack: Amazon Is Behind All the Services We Use to Work From Home (and That’s a Problem)*, PROMARKET, Apr. 9, 2020, <https://www.promarket.org/2020/04/09/zoom-netflix-slack-amazon-is-behind-all-the-services-we-use-to-work-from-home-and-thats-a-problem/>.

4 See BARRY LYNN, MAX VON THUN & KARINA MONTOYA, *AI in the Public Interest: Confronting the Monopoly Threat*, (2023), <https://www.journalismliberty.org/publications/report-ai-in-the-public-interest-confronting-the-monopoly-threat>.

5 Courtney Radsch, *What Makes for a Healthy Information Ecosystem? New Visual Tool*, <https://taicollaborative.org/what-makes-for-a-healthy-information-ecosystem-new-visual-tool> (last visited Jan 19, 2024).; DANIEL HANLEY, *America’s Fourth Estate: History and Law*, (2023), <https://static1.squarespace.com/static/5e449c8c3ef68d752f3e70dc/t/654c530422fc887ad4a8ac59/1699500804942/America%E2%80%99s+Fourth+Estate+-+History+and+Law+v2%5B31%5D.pdf>.

6 See “Impact to Date.” Accessed March 7, 2024. <https://www.occrp.org/en/impact-to-date>. “Impact - Forbidden Stories.” Accessed March 7, 2024. <https://forbiddenstories.org/impact/>. JAMES HAMILTON. *Democracy’s Detectives: The Economics of Investigative Journalism*. Harvard University Press, 2016. <https://books.google.com/books?id=-sNADQAAQBAJ>.

7 See PHIL LONGMAN, *How to Fund Independent News Media in the 21st Century*, (2023), <https://static1.squarespace.com/static/5efcb64b1cf16e4c487b2f61/t/654c515ce3db0f13bb36ccae/1699500381206/OMI+-+How+to+Fund+Independent+News++Media+in+the+21st+Century+-+1123+-+WEB+UPDATE.pdf>.

zation erodes the viability of independent media and undermines journalism’s fundamental role in democracy,⁸ there has been no examination of how this dynamic is replicated in the cloud services market and its effect on the news media landscape in the U.S. and around the world.

In this Article, we begin by explaining dynamics in the cloud sector that raise concerns about the concentration of power in a handful of dominant tech companies, including those that have already forced journalism to adapt to a platform logic that constrains and shapes the political economy of news. We examine how concentration in the cloud services market is likely to exacerbate already existing power imbalances between news media and dominant digital platforms. We argue that such imbalances are especially detrimental to watchdog journalism, like investigative and data journalism, which produce some of the most resource-intensive and impactful stories in the news media market. Lastly, this Article makes a call for regulators and policymakers to consider the effects on public interest journalism and implement policies to redress concentration and potentially anticompetitive practices in the cloud services market.

02

DOMINANT DIGITAL PLATFORMS WIELD ENORMOUS POWER IN CLOUD SERVICES

The cloud services market is typically comprised of three overlapping levels of products.⁹ The first one is cloud infra-

structure (“IaaS”), which provides storage, networking, and computing capabilities. Next comes platform as a service (“PaaS”), which enables customers to develop and run applications. In the third layer, software as a service (“SaaS”), cloud providers offer full suites of applications that run on their proprietary IaaS and PaaS. Providers of IaaS and SaaS that offer their services on a pay-per-use or subscription basis, without the need to invest in and maintain physical hardware or worry as much about digital security, are particularly attractive to low-resourced sectors like journalism.

Global spending on cloud services is forecast to reach \$679 billion in 2024, up 20 percent from \$564 billion the previous year.¹⁰ The rapid development of generative AI technologies is driving this growth in spending, but only three players, known as the “hyperscalers,” benefit the most: Amazon, Google, and Microsoft. In the last quarter of 2023, Google and Microsoft grew their market share positions in comparison to Amazon, but combined, the three kept control of 67 percent of the global cloud market share.¹¹ Such dominance is more pronounced in the public cloud market¹² — relevant for news organizations — where they have a combined market share of 73 percent.¹³

Given such market concentration, competition regulators in the United States and Europe are assessing the need to litigate against anticompetitive practices in this market. Each regulator is at a different stage of this process. The U.S. Federal Trade Commission and the UK Competition and Markets Authority are in the public inquiry stage, while the French Competition Authority has already issued a market study opinion. Across the board, they have found common patterns of behavior by hyperscalers that showcase their outsized power over this market:

- **Discounts and minimum spend contracts.** Hyperscalers’ contracts commonly tie discounts to higher spending within one cloud ecosystem. Large clients typically sign contracts in which they commit to a

8 Bell, Emily, Taylor Owen, Peter D. Brown, Codi Hauka & Nushin Rashidian. “The Platform Press: How Silicon Valley Reengineered Journalism.” *Tow Center for Journalism*, May 26, 2017. <https://www.mediatechdemocracy.com/all-work/the-platform-press>; Radsch, Courtney C. “Platformization and Media Capture: A Framework for Regulatory Analysis of Media-Related Platform Regulations.” *UCLA Journal of Law & Technology, Platforms and the Press*, 28, no. 2 (Winter 2023): 175–223. <https://uclajolt.com/platformization-and-media-capture-a-framework-for-regulatory-analysis-of-media-related-platform-regulations/>.

9 See PETER MELL & TIMOTHY GRANCE, *The NIST Definition of Cloud Computing*, (2011), <https://nvlpubs.nist.gov/nistpubs/Legacy/SP/nistspecialpublication800-145.pdf> (last visited Feb 29, 2024).

10 See Gartner, *Gartner Forecasts Worldwide Public Cloud End-User Spending to Reach \$679 Billion in 2024*, (Nov. 13, 2023), <https://www.gartner.com/en/newsroom/press-releases/11-13-2023-gartner-forecasts-worldwide-public-cloud-end-user-spending-to-reach-679-billion-in-20240>.

11 See Synergy Research Group, *supra* note 2.

12 Public cloud is comprised of all three layers of IaaS, PaaS, and SaaS products that can be delivered to multiple customers through the internet, unlike private cloud, which is set up to be accessed only by members of a given organization through a private network.

13 *Id.*

minimum spend in exchange for a discount.¹⁴ But because data usage is hard to predict, many customers end up with “excess unused spend,” which is used to get more services from the same hyperscaler.¹⁵ For example, as part of Amazon’s cloud services discount program, clients who commit to large volumes of long-term spending are rewarded with major discounts on AWS various products, and up to a 50-percent discount on products sold by third-party merchants on the Amazon AWS Marketplace.¹⁶ The prospect of forgoing this steep discount discourages customers from using competing cloud providers.¹⁷ Thus, various stakeholders told regulators they see this contract design as a lock-in mechanism.¹⁸

- **High costs for switching or working with multiple cloud providers.** Customers have to pay an “egress fee” for transferring data out from one cloud environment to another, whether it is to another competitor or the customers’ on-premises cloud infrastructure.¹⁹ Hyperscalers’ egress fees can be 5 to 10 times higher than smaller competitors.²⁰ The costs of moving data are relevant not only when switching from one cloud provider to another, but when using multiple providers depending on a customer’s needs. For example, if a business uses servers and storage in one cloud but wants to use the analytics service of a rival cloud company that better suits its needs, this implies

moving data from one infrastructure to another on a regular basis. Furthermore, switching often requires pricey technical expertise. Thus, high egress fees (direct and in-direct) incentivize customers to centralize all of their cloud needs with one provider, even when such provider does not meet all their needs – which is essentially another way of locking-in customers.²¹

- **Tying and bundling.** During a virtual panel hosted by the FTC in 2023,²² some commentators referred to the cloud market as being “rife with tying and bundling” to fortify dominant positions. Tying and bundling refers to the practice of making the purchase or use of one product conditional on another through either a technical or economical relationship, even when the latter could be sold or used separately and not affect the quality of the prior.²³ Microsoft, for example, ties the use of its Teams chat application to an Office 365 subscription, which is part of Microsoft’s SaaS offer. Only recently, the corporation decided to unbundle Teams in Europe²⁴, which has prompted calls to the FTC to investigate whether Microsoft should be doing the same in the U.S. as well.²⁵ These practices are common among most of the dominant Big Tech firms.

As the French Competition Authority has stated, “Hyperscalers benefit from privileged, even exclusive, access to data that is difficult for their competitors to reproduce, and is likely

14 See Nick Jones, *Cloud Computing RFI: What We Heard and Learned*, FEDERAL TRADE COMMISSION (2023), <https://www.ftc.gov/policy/advocacy-research/tech-at-ftc/2023/11/cloud-computing-rfi-what-we-heard-learned>.

15 Cloudflare, *Cloudflare, Inc., Submission in Response to the Solicitation for Public Comments on the Business Practices of Cloud Computing Providers*, (2023), <https://www.regulations.gov/comment/FTC-2023-0028-0085>.

16 See Karina Montoya, *Generative AI Concerns Fuel Federal Trade Commission Scrutiny of Cloud Services*, CENTER FOR JOURNALISM & LIBERTY (May 25, 2023), <https://www.journalismliberty.org/publications/generative-ai-fuels-scrutiny-ftc-cloud-services>.

17 See OFCOM, *Ofcom’s Cloud Services Market Study*, (2023), https://www.ofcom.org.uk/__data/assets/pdf_file/0027/269127/Cloud-services-market-study-final-report.pdf.

18 See Jones, *supra* note 14.

19 *Id.*

20 See Ofcom, *supra* note 17, at 7.

21 See Autorité de la Concurrence, *Cloud Computing: The Autorité de La Concurrence Issues Its Market Study on Competition in the Cloud Sector*, (2023), <https://www.autoritedelaconcurrence.fr/en/press-release/cloud-computing-autorite-de-la-concurrence-issues-its-market-study-competition-cloud>.

22 Cloud Computing: Taking Stock and Looking Ahead, FEDERAL TRADE COMMISSION (May 11, 2023), <https://www.ftc.gov/news-events/events/2023/05/cloud-computing-taking-stock-looking-ahead>.

23 Gibbs Law Group, *Tying and Bundling: About Anticompetitive Tying and Bundling Arrangements*, <https://www.classlawgroup.com/anti-trust/unlawful-practices/tying-bundling> (last visited Mar 1, 2024).

24 Tom Warren, *Microsoft Is Unbundling Teams from Office in Europe to Address Regulator Concerns*, THE VERGE, Aug. 31, 2023, <https://www.theverge.com/2023/8/31/23853517/microsoft-teams-unbundling-europe>.

25 Brody Ford, *FTC Should Look at Microsoft Teams Bundle After EU Investigation, Zoom CEO Says*, BLOOMBERG, Sep. 5, 2023, <https://www.bloomberg.com/news/articles/2023-09-05/zoom-says-ftc-should-look-at-microsoft-teams-bundle?sref=ZvMMOKz>.

to give them a decisive, competitive edge.”²⁶ For instance, hyperscalers can exploit massive troves of customer data to better target sales or improve their products. Although this can be perceived as beneficial for customers, it can also lead to significant power imbalances between cloud providers.

The emergence of generative AI applications, which require vast storage and computational capabilities, risks further consolidating the hyperscalers’ influence over the cloud market and the direction that AI systems will take.²⁷ AI startups, in fact, depend deeply on the hyperscalers’ infrastructure, where they have outsized power to set contract terms. Furthermore, AI startups are either funded by or working in partnership with hyperscalers. Regulators also see cause for concern in this market dynamic, and they are starting to take action. In Europe, the OpenAI-Microsoft partnership is under investigation,²⁸ while a handful of other investments and partnerships involving hyperscalers and AI startups is also being probed in the U.S.²⁹

03

MARKET CONCENTRATION IN CLOUD SERVICES EXACERBATES POWER IMBALANCES FOR NEWS MEDIA AND INVESTIGATIVE JOURNALISM

Cloud services are infrastructural to journalism in the 21st century and likely to become even more important as AI is integrated more fully into newsrooms and the journalistic process. Based on the hyperscalers’ behavior, news media must

contend with not only the existing power imbalances stemming from Big Tech’s dominance over online search, social media, and digital advertising, but now also that of the highly concentrated cloud services market. The impacts on investigative journalism and data journalism offer a window into how these problems manifest and the threats they pose to the sustainability of a keystone species in an information ecosystem with increasingly hostile conditions to public interest media.

The growth of digital platforms such as Google and Meta — fueled in large part by lax antitrust enforcement — upended the entire value chain of journalism, from production to distribution to monetization.³⁰ As a result, these platforms wield their power over news media in multiple ways, from publishing formats that were foisted on news outlets — adding significant costs and little value to visibility and revenues³¹ — to content moderation. Google and Meta run a duopoly in the market of advertising technologies (Ad Tech), which underpin the digital advertising industry, that ultimately siphon ad revenue from news media (not to mention other types of valuable content).³² The Department of Justice has finally recognized the harms this monopoly dynamic poses in online search and Ad Tech markets and has sued Google for antitrust violations, as have the European Commission, the French Competition Authority, and private parties in the U.S. and Europe.

Data journalism and investigative journalism increasingly use cloud computing to handle massive troves of data and enable journalists from different newsrooms and regions to collaborate, share resources, and analyze data securely and efficiently. During the COVID-19 pandemic, journalists used AI tools to analyze massive datasets, uncover trends, and identify abnormalities that explain and localize complex phenomena and help them tell compelling stories. Transnational investigative collaboratives like the International Consortium of Investigative Journalists (ICIJ), the Organized Crime and Corruption Project (OCCRP), and Forbidden Stories rely on cloud-based infrastructure to securely store and share confidential documents with journalists and analysts around the world and coordinate the simultaneous release of stories.

26 See Autorité de la Concurrence, *supra* note 21.

27 See Lynn, Von Thun & Montoya, *supra* note 4.

28 Julia Tar, *EU Commission to Examine Microsoft-OpenAI Partnership*, EURACTIVE, Jan. 9, 2024, <https://www.euractiv.com/section/competition/news/eu-commission-to-examine-microsoft-openai-partnership/>.

29 Federal Trade Commission, *FTC Launches Inquiry into Generative AI Investments and Partnerships*, (Jan. 25, 2024), <https://www.ftc.gov/news-events/news/press-releases/2024/01/ftc-launches-inquiry-generative-ai-investments-partnerships>.

30 See Longman, *supra* note 7. Radsch, Courtney C. “URGENT: Understanding and Responding to Global Emerging News Threats.” *Internews*, March 2023. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4406895.

31 Courtney Radsch, *Testimony to the California Senate Judiciary Committee: Information Hearing on Issues Facing Digital News*, (2023), <https://www.openmarketsinstitute.org/publications/cjl-director-courtney-radsch-testifies-california-senate-judiciary-committee>.

32 See Longman, *supra* note 7.

Their cross-border reporting initiatives like the Panama Papers,³³ the Pegasus Project,³⁴ and Offshore Leaks³⁵ underscore how the power of distributed computing can drive pioneering journalism investigations into corruption, surveillance and corporate malfeasance. These projects involved millions of leaked documents and images and terabytes of data that had to be stored, which were then turned into digitally readable documents, translated, and analyzed by journalists around the world to find the stories that were relevant to their local audiences. This is the epitome of public interest journalism.

But like many customers of cloud services, news organizations are finding it hard to keep up with the high prices and contract terms of hyperscalers and worry about further increases. “The cost of this computing power is too big and increasing by the day as we have to process more data,” explained Paul Radu, co-founder and head of innovation at OCCRP. “We’re paying over \$12,000 per month at OCCRP alone and most centers around the world can’t even think about processing their own large volumes of information. This doesn’t even include being able to crunch video, which is a lot more demanding and costly.”

Investigative journalists anticipate needing more compute resources as the amount of data generated increases, the prevalence of document and data dumps increases, and the potential of developing proprietary and bespoke AI techniques and products for data processing, analysis and real-time analytics expand.

The integration of AI into newsrooms will require advanced storage and processing power that impose greater budget expenditures, further straining budgets and business models that are held hostage by platform intermediaries. IaaS and PaaS models offer scalability, flexibility, and cost-efficiency. They enable newsrooms to adjust resources based on their current needs without investing in physical infrastructure or additional digital security, meaning that journalists can scale their computational resources based on the demand of an investigation. Technically, cloud services make it easier to handle and analyze large data sets while avoiding the upfront and fixed costs of purchasing hardware or cybersecurity protections. But given the current concentration in the cloud services market, one in which newsrooms lack the power to negotiate contract terms, journalists worry they will have to reject some leaks and for-

go important reporting if they cannot obtain more favorable terms or get a handle on cloud compute costs.

A pilot survey of investigative journalism outlets around the world conducted earlier this year found that nearly everyone expected to increase their audio, video, and large imagery processing and expected to spend significantly more on cloud-based services, amounting to a 100 percent increase, on average, in spending over the next couple of years.³⁶ This includes the smallest newsrooms, which foresee annual expenditures for data storage and processing costs amounting to hundreds of thousands of dollars.

Similarly, at a convening of the world’s leading investigative journalists last year in Sweden, there was palpable concern over the rising costs of compute, the potential need for proprietary LLMs, and the difficulty of switching cloud providers, which are able to charge outsized fees at least in part due to limits on data portability and interoperability with alternative providers.

Furthermore, as newsrooms integrate generative AI into their newsrooms, cloud service and access to compute are set to become a bigger budget line item. Survey respondents cited financial constraints and the lack of financial resources as the primary barrier impacting their ability to manage increasing volumes of data, indicating that collective bargaining will be needed to pursue meaningful discounts or alternatives. The high costs of switching and limits on data portability mean that newsrooms may become locked into a given platform. Indeed, more than three quarters of the survey respondents had never switched cloud-service platforms.

Unpredictable workloads and inefficient use can also drive up costs and lead to unexpectedly high charges. Dependent news outlets have little influence over what they pay since there are limited options for transferring data to another service, but they lack the power to collectively bargain with cloud platforms for more favorable terms. While there is an array of efforts underway in the U.S. and around the world to allow newsrooms to collectively bargain with tech platforms that scrape, crawl, and display their content,³⁷ there are no legislative or regulatory frameworks to enable newsrooms to collectively bargain for favorable rates with cloud providers.

The reliance on cloud infrastructure imposes significant costs on newsrooms, which face few viable options given

33 International Consortium of Investigative Journalists, The Panama Papers, ICIJ.ORG, <https://www.icij.org/investigations/panama-papers/>.

34 Forbidden Stories, The Pegasus Project, FORBIDDENSTORIES.ORG, <https://forbiddenstories.org/case/the-pegasus-project/>.

35 International Consortium of Investigative Journalists, Offshore Leaks Database, ICIJ.ORG, <https://offshoreleaks.icij.org/>.

36 The pilot survey was conducted by the Global Forum for Media Development along with several organizations including the Center for Journalism & Liberty.

37 See Center for Journalism & Liberty, *Technology & Media Fair Compensation Frameworks*, (2023), <https://www.journalismliberty.org/tech-media-fair-compensation-frameworks> (last visited Dec 20, 2023).

the costs involved in setting up proprietary systems, hiring the expertise needed, and implementing robust digital security. Given the fact that the targets of investigative journalism are powerful governments, corporations, and individuals, security is a paramount concern and is a limiting factor when considering bespoke or proprietary cloud solutions. Using reputable, large cloud providers also means more robust defenses against cyberattacks and data backup support that is essential when working with whistleblowers or on adversarial investigations and for protecting sensitive information, but is more difficult for smaller, bespoke services to guarantee.

AWS and Google Cloud are among the most popular services in part because they have the security infrastructure and expertise to fend off external attacks. Data security and reliability are paramount in journalism, and more than half of investigative outlets surveyed said this was a top consideration when choosing computational and cloud services. But they are also concerned about confidential and sensitive data stored and processed by cloud providers that are also developing their own in-house AI foundation models, which both Amazon and Google are doing.

To get ahead of this bind, some of the world's largest news organizations like the AP, Axel Springer, Gannett, and News Corporation have signed licensing deals with AI companies like OpenAI, Microsoft and Google, though there is little transparency into the terms or whether they cover cloud and compute.

04

POSSIBLE SOLUTIONS

Regulators in the United States and Europe have started scrutinizing business practices in this market, and many of them have issued either market study reports or preliminary findings. Across the board, common issues related to competition range from the high costs of maintenance, to lack of interoperability, to risks of single points of failure – which affect smaller cloud competitors and businesses in legacy sectors that increasingly depend on these services. Policymakers in the U.S. and around the world are also interested in redressing market imbalances in search and social media platforms³⁸ and investigating monopoly practices in Ad Tech³⁹ and app stores.⁴⁰

Australia and Canada passed pioneering legislation to require platforms like Google and Meta to negotiate payments to news publishers and allowed publishers to collectively bargain with these tech behemoths. These types of news media bargaining codes, which are also under consideration throughout the U.S., South Africa, India, and elsewhere,⁴¹ have followed inquiries by competition regulators into news market dynamics that have largely focused on the revenue side of the sustainability equation. But they have not focused sufficiently on the cloud as an expenditure that is set to increase due to monopoly pricing, constrained choice sets, and exploitation by providers.

Competition inquiries should also include investigations into the role that cloud services play in journalism and the power asymmetries that impose unsustainable costs on data and investigative journalism in particular. Policymakers and publishers should consider how to leverage collective bargaining frameworks and mandatory bargaining forums to include cloud service providers.

As data storage and processing needs expand, managing data across hybrid and multi-cloud environments will make interoperability and data portability even more important. Imposing interoperability standards and capping egress fees could also help ensure that new competitors are able to enter the market and compete by making it easier for users to switch between cloud providers or use different services for various needs.

More ambitiously, treating cloud providers as public utilities or common carriers would help ensure that costs remain at market rates, that companies not retaliate (for example, against journalists that report critically on the human and environmental impacts of their AI systems), and that providers maintain interoperability and portability to encourage competition.

The threat unchecked concentration of power among a handful of cloud technology firms poses to the contemporary economy as we transition to the cloud-centric AI era requires that we understand how the political economy of AI, particularly cloud, replicates many of the same harms and risks as the current system, including further platformization of journalism. We must not reinforce many of most troubling trends toward dependency and monopoly and must immediately take steps to mitigate them before they become further entrenched. ■

38 UCLA INFORMATION POLICY LAB, *Sustaining Journalism, Sustaining Democracy: A Policy Guide on Platforms and the Press*, (2023), https://itlp.law.ucla.edu/wp-content/uploads/2023/04/UCLA_ITLP_PlatformsPress_Final.pdf.

39 Karina Montoya, *How Google Manipulated Digital Ad Prices and Hurt Publishers, Per DOJ*, TECH POLICY PRESS, Feb. 2, 2023, <https://www.techpolicy.press/how-google-manipulated-digital-ad-prices-and-hurt-publishers-per-doj/>.

40 Karina Montoya, *Two Lawsuits Targeting Google Play Store May Remake the Mobile App Market*, CENTER FOR JOURNALISM & LIBERTY (Oct. 12, 2023), <https://www.journalismliberty.org/publications/two-lawsuits-google-play-store-remake-mobile-apps-market>.

41 See Center for Journalism & Liberty, *supra* note 37.

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