

FIRST SUPPLEMENT TO MEMORANDUM 2024-32
Antitrust Law: Status Update (Public Comment)

The staff has received a number of public comments relating to the Antitrust Study.¹ This memorandum provides information about the commentors. The comments are attached as Exhibits to this memorandum. If the staff receives additional public comment, that comment will be provided in another supplemental memorandum.

In addition, the staff received written versions of the remarks made at the May 2, 2024, Commission meeting by Prof. Mitchell Steinbaum and Sheheryar Kaoosji on behalf of California Alliance for a Fair Economy,² which are also attached as an exhibit.

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Economic Security California and Six Other Organizations

The contents of this submission are identical to the comment submitted previously and provided as an Exhibit to the [Seventh Supplement to Memorandum 2024-24](#) at page 7. This submission adds three additional organizations (the [Institute for Local Self Reliance](#), [Rise Economy](#), and the [Greenlining Institute](#)) as signatories and to the letterhead.

Information Technology & Innovation Foundation

This submission is from Joseph V. Coniglio on behalf of the [Information Technology & Innovation Foundation](#) (ITIF). The submission is responsive to the expert reports on Mergers and Acquisitions and Technology Platforms.

¹ Any California Law Revision Commission document referred to in this memorandum can be obtained from the Commission. Recent materials can be downloaded from the Commission’s website (www.clrc.ca.gov). Other materials can be obtained by contacting the Commission’s staff, through the website or otherwise.

The Commission welcomes written comments at any time during its study process. Any comments received will be a part of the public record and may be considered at a public meeting. However, comments that are received less than five business days prior to a Commission meeting may be presented without staff analysis.

² For more information see [Memorandum 2024-13](#) at page 1.

According to its website,

[ITIF] is an independent 501(c)(3) nonprofit, nonpartisan research and educational institute that has been recognized repeatedly as the world’s leading think tank for science and technology policy. Its supporters include corporations, charitable foundations, and individual contributors....

ITIF’s mission is to formulate, evaluate, and promote policy solutions that accelerate innovation and boost productivity to spur growth, opportunity, and progress. ITIF’s goal is to provide policymakers around the world with high-quality information, analysis, and actionable recommendations they can trust. To that end, ITIF adheres to a high standard of research integrity with an internal code of ethics grounded in analytical rigor, original thinking, policy pragmatism, and editorial independence.³

Ramsay Eyre on Behalf of Listed Law Professors

This submission is from Ramsay Eyre on behalf of a group of law professors, who submitted it in their individual capacities. The submission is responsive to the expert reports on Technology Platforms and Single Firm Conduct. The submission was signed by the following individuals:

Ganesh Sitaraman, New York Alumni Chancellor’s Chair in Law, Vanderbilt Law School; Director, Vanderbilt Policy Accelerator for Political Economy and Regulation

Morgan Ricks, Herman O. Lowenstein Chair in Law, Vanderbilt Law School; Faculty Co-Director, Project on Networks, Platforms, & Utilities, Vanderbilt Policy Accelerator

Shelley Welton, Presidential Distinguished Professor of Law and Energy Policy, University of Pennsylvania, Carey School of Law

Lev Menand, Associate Professor of Law, Columbia Law School

Tejas N. Narechania, Professor of Law, University of California, Berkeley School of Law; Faculty Co-Director, Berkeley Center for Law & Technology

Danielle D’Onfro, Professor of Law, Washington University in St. Louis School of Law

The submission provides copies of law review articles as recommended reading. The Exhibit provides the text of the cover letter but does not reproduce the full text of the attached articles. The articles are available online and copies are on file with Commission staff.⁴

³ See <https://itif.org/about/>.

⁴ Copies of the following articles were included in the submission:

- Ganesh Sitaraman & Morgan Ricks, [Tech Platforms and the Common Law of Carriers](#), 73 Duke L.J. 1037 (2024).

The submission also recommends a book on Antitrust authored by several of the law professors who signed the letter.⁵

This book studies the law of networks, platforms, and utilities (NPU). For many years, this field was known as “regulated industries.” Before that, it was called “the law of public utilities,” “the law of public service corporations,” and “the law of common carriers.” For generations, its centrality in American life was widely recognized – from union halls to board rooms to state houses and universities. According to Felix Frankfurter, who taught public utilities at Harvard Law School for nineteen years and served on the Supreme Court for twenty-three, “no task more profoundly tests the capacity of our government... than... securing for society those essential services [including ‘light, heat, power, water, transportation, and communication’] which are furnished by public utilities.”⁶

Chamber of Progress

This comment was submitted by Kaitlin Harger on behalf of the [Chamber of Progress](#). The comment relates to Technology Platforms. According to its website, the Chamber of Progress:

is a new tech industry coalition devoted to a progressive society, economy, workforce, and consumer climate. [The Chamber of Progress] back[s] public policies that will build a fairer, more inclusive country in which all people benefit from technological leaps.⁷

The chamber’s website also indicates:

Our work is supported by our corporate partners, but the Chamber of Progress remains true to our stated principles even when our partners disagree. No partner companies sit on our board of directors or have a vote on our work.⁸

International Center for Law & Economics

This submission is from Kristian Stout on behalf of the [International Center for Law & Economics](#) (ICLE). The submission is responsive to the public comment submitted by the Writers Guild of America West, which is attached to the [Fourth Supplement to](#)

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- Lina Khan, [The Separation of Platforms and Commerce](#), 119 Colum. L. Rev. 973 (2019).
 - Lina Khan, [Amazon’s Antitrust Paradox](#), 126 Yale L.J. 564 (2017).
 - Tejas N. Narechania & Ganesh Sitaraman, An Antimonopoly Approach to Governing Artificial Intelligence, Yale L. & Pol’y Rev. (forthcoming 2025); a version of this article is available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4597080.
 - Tejas N. Narechania, [Machine Learning as Natural Monopoly](#), 107 Iowa L. Rev. 1543 (2022).

⁵ Morgan Ricks, Ganesh Sitaraman, Shelley Welton & Lev Menand, *Networks, Platforms, and Utilities: Law and Policy* (2022).

⁶ <https://scholarship.law.columbia.edu/books/349/>.

⁷ <https://progresschamber.org/>.

⁸ <https://progresschamber.org/partners/>.

[Memorandum 2024-24](#) at page 4.

According to ICLE’s website, its “mission is to promote the use of law & economics methodologies to inform public policy decisions.”⁹

California Alliance for a Fair Economy: Remarks from May 2, 2024, Commission Meeting

As indicated above, this submission is a written version of the comments made by Professor Mitchell Steinbaum and Sheheryar Kaoosji on behalf of the California Alliance for a Fair Economy at the May 2, 2024, Commission meeting.

Respectfully submitted,

Sharon Reilly
Executive Director

Sarah Huchel
Staff Counsel

⁹ <https://laweconcenter.org/about/>.



June 19th, 2024

Amb. Chair David Huebner
Vice Chair Xochitl Carrion
California Law Review Commission (CLRC)
c/o Legislative Counsel Bureau
925 L Street, Suite 275
Sacramento, CA 95814

Dear Ambassador Huebner, Vice Chair Carrion, and Commissioners:

On behalf of the undersigned organizations, we respectfully submit for your consideration the following letter in response to the Working Group Report on Technology Platforms.

Of all the issues the Commission is tasked to examine pursuant to ACR 95, none would be more surprising to the original drafters of the Cartwright Act than digital technology. The scale and scope with which these digital platforms construct closed systems that privilege and reinforce their dominant market positions is unprecedented. Perhaps it is expected, then, that the Cartwright Act is not up to the task of addressing the full breadth and scope of challenges and harms of corporate concentration in this industry.

While people can – and do – argue about the tradeoffs between the benefits and the harms of the digital age, no one seriously disputes that technology will continue to advance and likely further expand into our lives. It is also evident that the power to dictate these choices about technological development, usage, and policy is increasingly concentrated in a few hands. As the U.S. House of Representatives Subcommittee on Antitrust, Commercial and Administrative Law of the Committee of the Judiciary put it in its sweeping report in 2020, “Investigation of Competition in Digital Markets:”

To put it simply, companies that once were scrappy, underdog startups that challenged the status quo have become the kinds of monopolies we last saw in the era of oil barons and railroad tycoons. Although these firms have delivered clear benefits to society, the

dominance of Amazon, Apple, Facebook, and Google has come at a price. These firms typically run the marketplace while also competing in it—a position that enables them to write one set of rules for others, while they play by another, or to engage in a form of their own private quasi regulation that is unaccountable to anyone but themselves.¹

A handful of tech corporations have amassed so much power – in the market, in society, in our individual lives – that they rival that of our democratically elected government (and others around the world). Big Tech often has the upper hand, as demonstrated recently when Google temporarily shut down access to all news to all Californians on its platform because it opposed a legislative proposal (AB 886 - Wicks) that would have required it to share proceeds with local news outlets.^{2 3} Facebook/Meta made a similar flex in Australia, too, and elected to remove the “news” tab from Facebook after Meta refused to renew negotiated agreements that required payments to local news outlets for content Meta featured on its platform.⁴

The public is in a bind. The dominant digital tech is so intricately woven in the fabric of daily life that avoiding it is frankly impossible. The rise of Artificial Intelligence will only supercharge this reality. The public is increasingly concerned about the concentration of power in the tech industry and supports government intervention to address it. Polling from October 2023 shows that 76% of Americans, including 73% of Republicans, 80% of Democrats, and 75% of Independents, support regulating Big Tech companies as public utilities. As well, 76% believe Big Tech companies should not have so much power and should be prevented from controlling all aspects of AI. And 68% would support a proposal to break up the big AI companies to prevent them from controlling the entire sector.⁵ In other words, strong majorities want the government to step in and counter the unchecked power of Big Tech, especially as the specter of AI looms.

With this context in mind, we urge you to consider the following as you develop your recommendations:

- 1. Include in your analysis the impact of corporate concentration of the digital platforms on evolving, nascent trends, especially artificial intelligence (AI).**

We urge you to consider reforms that would address corporate concentration in the tech industry more broadly, in particular AI.

AI builds on the existing infrastructure dominated by the incumbent digital platforms. Their very nature as multi-sided platforms, giving them the ability to leverage data across multiple markets, network effects, and scale across vertical and horizontal integration, has meant that these are the same players with a built-in market advantage that will remain critical to address through

¹ https://democrats-judiciary.house.gov/uploadedfiles/competition_in_digital_markets.pdf, page 6.

² <https://www.politico.com/news/2024/04/12/google-california-news-journalism-00151873>

³ https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202320240AB886

⁴ <https://www.theguardian.com/media/2024/apr/02/facebook-shuts-news-tab-after-meta-vows-to-stop-paying-australian-publishers-for-content>

⁵ <https://cdn.vanderbilt.edu/vu-URL/wp-content/uploads/sites/412/2023/10/09151420/VPA-AI-Polling-Report-10.9.23.pdf>

policy and antitrust enforcement if we're serious about building a level playing field for smaller players, start-ups, and entrepreneurs.

Surprisingly, the Working Group Report on Technology Platforms does not consider or address the most significant aspect of the technology sector today: AI. We believe this is an omission that needs remedying. In many ways, the anticompetitive dynamics arising in AI are not new and instead only replicate the existing trends toward concentration at scale. While many of the single firm conduct business practices outlined by the Working Group Report on Technology Platforms that lead to monopolization by the tech platforms apply to AI as well, there are also important distinctions that the Commission should bear in mind as it carefully considers the need for updated antitrust laws for California's economy. For example, the tech platforms are not cementing their dominance and control over AI through conventional mergers and acquisitions, but instead by entering financial partnerships and investment arrangements that give them control over nascent, new AI players like OpenAI.⁶ This dynamic must be studied and remedied to fully understand the scope and scale of Big Tech in our modern economy.

2. Examine the impact of ownership across multiple lines of business (including vertical and horizontal integration) as a key driver of Big Tech corporate concentration that threatens innovation and entrepreneurship necessary for a dynamic tech sector and consider structural separation to address it.

To leverage economies of scale and gain efficiencies, digital platforms have pursued aggressive vertical and horizontal integration strategies, including through mergers and acquisitions to buy up and snuff out nascent and potential competitors. Today's enforcers have brought antitrust suits challenging Meta's practice of buying out the competition to maintain its dominant position.⁷ Operating across multiple lines of business also creates incentives for dominant platforms to engage in anticompetitive practices that preference their own products and services, including price discrimination, tying goods and services so that customers have to purchase other products, and more. Structural separation can eliminate these incentives.

We have a long history of embracing structural separation as a tool to confront and prevent concentrated power in other industries. In the era when Cartwright was passed, railroads, banking, and telecom were all subject to strong structural separation regimes to ensure free and open markets.

A similar approach should be used in the tech sector. The Commission could consider legislation such as the *Ending Platform Monopolies Act* ([H.R.3825](#) – Jayapal) that would limit ownership or control of an online platform and certain other businesses that utilize the covered platform for the sale or provision of products or services, offers a product or service that the covered platform requires a business user to purchase or utilize, or gives rise to a conflict of interest. A "conflict of interest" would be a situation where a platform operator owns or controls a line of business, and the platform's ownership or control of that line of business creates the

⁶<https://www.project-syndicate.org/commentary/ai-will-strengthen-big-tech-oligopoly-market-concentration-and-corporate-political-power-by-eric-posner-2024-01>

⁷<https://www.ftc.gov/legal-library/browse/cases-proceedings/221-0040-meta-platforms-inc/mark-zuckerberg-within-unlimited-ftc-v>

incentive and ability for the platform to advantage its own products, services, or lines of business over those of a competing business or exclude or disadvantage the products, services, or lines of business on the platform of a competing business. For example, through its e-commerce platform, Amazon is both the marketplace *and* a competitor to many of the vendors selling goods on its platform.⁸ This dual role in the marketplace has meant that Amazon occupies a unique advantage where it can leverage the data it gains about popular products to distort competition. A strong structural separation bill would also require individuals who serve as officers, directors, employees, or other institution-affiliated parties of a platform to terminate such service if it violates the conflict of interest provisions.

3. Strengthen nondiscrimination requirements and require platform interoperability

As a complement to structural separation and conflict-of-interest prohibitions, the Commission should propose that tech companies be required to treat other downstream businesses neutrally, prohibit them from engaging in self-preferencing, and prohibit them from inhibiting the free movement of downstream entities with lock-up provisions—even, and especially if—a single firm owns or controls vertically linked lines of business. For example, Apple and Google both own mobile app stores, which gives them the ability to control the marketplace by manipulating search results.

Nondiscrimination requirements would require the firm to treat downstream businesses neutrally, including its own vertically-integrated business lines. This would prevent dominant upstream tech providers (think cloud computing or hosting, digital platforms, etc.) from favoring their own products or services over those of competitors.

Interoperability rules require that upstream tech businesses must ensure that the systems they build are compatible with other systems.⁹ Some digital platforms have at one point built interoperability into their systems; for example, Meta most recently introduced interoperability across its Messenger, Instagram, and WhatsApp messaging apps. With reduced switching costs, users can move between providers, which promotes competition and allows for new entrants in the market.

Thank you for your consideration of our perspective. We look forward to working with the Commission to develop a robust proposal for addressing market concentration in the technology sector.

Sincerely,

American Economic Liberties Project
California Independent Booksellers Alliance
California Nurses Association
Economic Security California
Ending Poverty In California
Institute for Local Self Reliance
Rise Economy
Small Business Majority
TechEquity
The Greenlining Institute

⁸<https://columbialawreview.org/content/the-separation-of-platforms-and-commerce/>

⁹<https://www.newamerica.org/oti/reports/promoting-platform-interoperability/online-platform-competition-is-hard-to-address>

MERGERS AND INNOVATION: KEEPING CALIFORNIA THE WORLD'S DIGITAL LEADER

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INTRODUCTION

On March 26, 2024, the Technology Platforms Working Group of the California Law Revision Commission (“the Commission”) Study of Antitrust Law issued a report (“Technology Platforms Report”) discussing potential changes to California’s antitrust laws aimed specifically at technology platforms.¹ On the same day, the Mergers and Acquisitions Working Group issued its own report (“Mergers and Acquisitions Report”) analyzing antitrust merger policy.² The reports come amidst an ongoing process commissioned by the California legislature in 2022 to review the state’s antitrust laws.³

The Information Technology and Innovation Foundation (ITIF) appreciates the opportunity to comment on the reports of the Technology Platforms and Mergers and Acquisitions Working Groups, and in particular to ensure that California and the United States more generally maintain their roles as the leading innovation hubs of the world. This comment follows ITIF’s previous comment⁴ to the Commission on its Single Firm Conduct⁵ and Concentration⁶ Reports. While ITIF applauds the Commission for its efforts to evaluate the adequacy of California’s competition laws and consider possible changes, this comment highlights concerns with both the Technology Platform and Mergers and Acquisitions Reports, specifically regarding their respective legal and economic findings from the standpoint of promoting innovation.

This comment proceeds in four parts. The first analyzes the findings of the Technology Platforms Report and specifically whether the status quo, new general legislation, or some form of specific legislation for technology platforms is the best approach for California going forward. The second part considers the Mergers and Acquisitions Report and, in particular, the need to ensure that merger policy is consistent with Schumpeterian competition and benefits from scale, which can be chilled by structural presumptions of harm. Next, the comment provides the Commission with several recommendations to consider as it continues to reflect upon new legislation. A brief conclusion follows.

¹ A. Garcia et al., Tech Platforms Working Group's Report (Mar. 26, 2024) [hereinafter Technology Platforms Report].

² R. Gilbert et al., California Antitrust Law and Mergers (Mar. 26, 2024) [hereinafter Mergers and Acquisitions Report].

³ See California Law Review Commission, Antitrust Law – Study B-750, *Antitrust Law -- B-750* (ca.gov).

⁴ Joseph V. Coniglio and Trelysa Long, *Comments for the California Law Review Commission Study of Antitrust Law Regarding Single-Firm Conduct and Concentration*, ITIF (May 2024) [hereinafter ITIF California Comment].

⁵ A. Edlin et al., Single-Firm Conduct Working Group, California Law Review Commission of Antitrust (Jan. 25, 2024).

⁶ C. Johnson et al., Concentration and Competition in California: (Mar. 26, 2024).

CALIFORNIA'S ANTITRUST *STATUS QUO* IS WORKING

The Technology Platforms Report reflects concerns that the antitrust *status quo* may not be working as it regards the growth of large technology platforms or “Big Tech.” But as the report admits, not only is it “universally acknowledged that California’s technology sector is world class,”⁷ but of the world’s 10 most valuable firms by market capitalization, eight are American and four are headquartered in California: Alphabet, Apple, Meta and Nvidia.⁸ Indeed, as the report also recognizes, the revenues from the technology industry account for about a sixth of the Californian economy and over 1.5 million employees.⁹ As such, large technology companies have not only made California the world’s leading innovation hub, but brought opportunities to its economy as a whole. Moreover, rather than stagnate, California’s digital markets are again leading the world in the next technological revolution associated with artificial intelligence,¹⁰ driven in part by billions of dollars in investments by “Big Tech.” These are digital markets that are thriving, not failing.

The benefits of this antitrust *status quo* in the U.S. and California are clear relative to Europe. Unlike the U.S., Europe lacks any large digital giants of its own and has seen its share of global wealth fall precipitously over the past 40 years. One simple reason for this divergence has to do with competition policy. Whereas the U.S. moved away from a structure focused antitrust regime that effectively equated conduct that increased concentration with harm to competition in favor of one that required proof of harm to consumers and reduced market performance, the Europeans continued much more along the former lines—competitive order meant some degree effective competition order in a way that was inherently opposed to monopoly.¹¹ Additionally, European competition law even proscribed exploitative offenses like excessive pricing, which can reduce the ability for firms to recoup the costs of innovation.¹²

In so doing, whereas the U.S. approach was open to the Schumpeterian scale driven competition that characterized so much of Silicon Valley’s success, Europe’s competition regime was inapposite to it. Specifically, as ITIF explained in its prior comment, “the success of Silicon Valley and the high-tech economy in America is a testament to Schumpeterian competition at work: for example, IBM’s leadership in personal computing was displaced by Microsoft’s paradigm shifting operating system, which was in turn leapfrogged both by Apple with its mobile platform as well as by Google (who surpassed Yahoo!) in general search, who in turn saw its position in advertising challenged by Facebook (overcoming MySpace) in social media.”¹³ Indeed, in the early 2000s, when the results of this transatlantic antitrust experiment were becoming clear, Europe began to adopt a “more economic approach” to antitrust enforcement.¹⁴ But unfortunately for Europe, it was already too late: by the end of 2004, Google had gone public, Apple was drawing up the iPhone, and Meta had already been founded.

⁷ See Technology Platforms Report at 1.

⁸ *Largest Companies by Market Cap*, COMPANIES MARKET CAP, <https://companiesmarketcap.com/> (last visited Jun. 18, 2024).

⁹ Technology Platforms Report at 1.

¹⁰ Executive Department, State of California, Executive Order N-12-23, [GSS_9534-1E-20230905164825](https://www.ca.gov/gss_9534-1E-20230905164825) (ca.gov).

¹¹ See, e.g., Joseph V. Coniglio, *Rejecting the Ordoliberal Standard of Consumer Choice and Making Consumer Welfare the Hallmark of an Antitrust Atlanticism*, CPI ANTITRUST CHRON. (Summer 2017).

¹² See, e.g., David S. Evans, & A. Jorge Padilla, *Excessive Prices: Using Economics to Define Administrable Legal Rules*, 1 J. COMP. L. & ECON. 97 (2005).

¹³ ITIF California Comment at 4.

¹⁴ See, e.g., Mario Monti, European Comm’r for Competition, Comments to the Speech of Hew Pate: Antitrust in a Transatlantic Context, Brussels, Belg. (June 7, 2004) (“[W]e have a great debt to the United States in helping us to forge our developments, including very recent ones, in antitrust policy and enforcement.”).

The neo-Brandeisian concerns cited by the Technology Platforms Report do not suffice to cast doubt on a system that is working well. First, despite claims that current antitrust laws are insufficient to police “Big Tech,” not only were both Microsoft and Intel to consent decrees by the Department of Justice (DOJ)¹⁵ and Federal Trade Commission (FTC)¹⁶ respectively, but antitrust lawsuits are currently ongoing against Google, Apple—both signed on by California—Amazon, and Meta. Accordingly, the idea that antitrust law “inordinately” focused on higher prices neglects that the consumer welfare standard and antitrust law more generally have long and consistently been viewed to encompass innovation.¹⁷ Moreover, as concerns harm to potential competition from mergers and acquisitions, the perception of inadequate enforcement is explainable by cases like *Meta/Within*, which makes clear that, even for transactions that the agencies are aware of, actions alleging harm to potential competition appropriately face substantial burdens of proof to ensure that the antitrust laws are not used to chill procompetitive transactions based on speculative theories.¹⁸

Nor are any general changes to California’s antitrust law necessary to address concerns with digital markets. First, such changes would be almost by definition overbroad, and thus not proportional to issues in digital markets, with the result being increased costs and false positives burdening the Californian economy. Indeed, as ITIF has noted previously, general changes in unilateral conduct enforcement being considered would, among other things, harm—not help—competition in California.¹⁹ Moreover, the Technology Platforms Report itself identifies the House Antitrust Subcommittee’s recommendation to override the Supreme Court’s decision in *Spectrum Sports* but fails to mention that creating anticompetitive liability for leveraging that falls short of creating monopoly or market power would condemn behavior that does not necessarily result in any harm to consumers, but on the contrary very often benefits them, like self-preferencing. Similarly, eliminating the recoupment requirement for *Brooke Group*²⁰ and *Weyerhaeuser*²¹ would condemn behavior that merely harms competitors without any ultimate harm to consumers and competition and thus also generate false positives.²²

The alternative of adopting specific legislation to address tech platforms, of which the EU’s Digital Markets Act (DMA) is given as an example, would be even more detrimental to Californian consumers and competition. Indeed, similar legislation in the United States, including the Open App Markets Act and the American Innovation and Choice Online Act (AICOA) have so far stalled in Congress, and for good reason. For example, as concerns the AICOA, Professor Hovenkamp has explained that the “AICOA was a bill that

¹⁵ See *United States v. Microsoft Corp.*, 231 F. Supp. 2d 144, 149–150 (D.D.C. 2002), *aff’d*, 373 F.3d 1199, 1250 (D.C. Cir. 2004). The DOJ also entered into a settlement with Microsoft to resolve antitrust issues in 1994.

¹⁶ Decision and Order, *In re Intel Corp.*, FTC File No. 061-0247, FTC Docket No. 9341 (Nov. 2, 2010).

¹⁷ See, e.g., *Lorain J. Co. v. United States*, 342 U.S. 143 (1951); *Int’l Salt Co. v. United States*, 332 U.S. 392 (1947); *IBM Corp. v. United States*, 298 U.S. 131 (1936); *Standard Oil Co. (Indiana) v. United States*, 283 U.S. 163 (1931). Indeed, as one data point, between 2004 and 2014, the FTC alleged harm to innovation in approximately 54 of the transactions it challenged—approximately a third overall. See Richard J. Gilbert & Hillary Greene, *Merging Innovation into Antitrust Agency Enforcement of the Clayton Act*, 83 GEO. WASH. L. REV. 1919, 1931–32 (2015).

¹⁸ *Fed. Trade Comm’n v. Meta Platforms, Inc.*, No. 5:22-cv-04325-EJD, 2022 WL 16637996 (N.D. Cal. Nov. 2, 2022).

¹⁹ See ITIF California Comment.

²⁰ *Brooke Group v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209 (1993).

²¹ *Weyerhaeuser Co. v. Ross-Simmons Hardwood Lumber Co.*, 549 U.S. 312 (2007).

²² See generally Timothy J. Muris & Joseph V. Coniglio, *What Group Hath Joined Let None Put Asunder: The Need for the Price-Cost Recoupment Prongs in Analyzing Digital Predation*, THE GLOBAL ANTITRUST INSTITUTE REPORT ON THE DIGITAL ECONOMY 1334 (2020) (“These conditions capture the essence of the recoupment requirement that is central to the modern rule—namely, that a predator be able not only to exclude competitors, but also recover its losses and harm consumers in the process.”).

deserved to die” as “[m]any of its consequences are uncertain, but others are just plain bad.”²³ Specifically, not only does the AICOA unfairly target innovative markets and firms based on size rather than market power, but its substantive rules would “condemn competitively harmless conduct by firms defined as gatekeepers.”²⁴

More generally, not only is digital regulation justifiable solely in the case of market failure—of which there is scant evidence—but the regulation must also improve the status quo relative to non-regulation. And yet, as the U.S. experience with regulation confirms,²⁵ ex-ante competition regimes raise a host of problems associated with chilling innovation and regulatory capture or the picking of winners and losers. For example, as with the DMA, applying broad *per se* rules to myriad forms of very often procompetitive behavior like self-preferencing or certain refusals to deal will inevitably chill procompetitive behavior. Indeed, even in the short time it has been enforceable, the DMA has already resulted in both harm to consumers as well as small businesses while effectively picking winners and losers by sending traffic to large intermediaries.²⁶ To be sure, while the proposal in the report suggests a regime where platforms could offer procompetitive defenses for their behavior, as ITIF previously explained, making a rule of reason balancing test the general standard for evaluating unilateral conduct will not only be unadministrable but also chill procompetitive behavior.²⁷

MERGERS AND INNOVATION

In its review of antitrust merger enforcement, the Mergers and Acquisitions Report contains several notable oversights that risk clouding its analysis of potential changes. First, as the Supreme Court made clear in *Brown Shoe*—a case which is not cited in the report—for the Clayton Act, “the legislative history illuminates congressional concern with the protection of *competition*, not *competitors*, and its desire to restrain mergers only to the extent that such combinations may tend to lessen competition.”²⁸ Nowhere in its extensive discussion of the purposes behind the Clayton Act did the Supreme Court in *Brown Shoe* expressly invoke the panoply of specific non-competition goals—“protecting democracy, opportunity, and societal values”—mentioned in the report. To be sure, the Court did link a “rising tide of economic concentration” with a “lessening of competition,” but as early as *Philadelphia Nat’l Bank* the Court made clear that structural evidence must be tied to some harm to market performance,²⁹ and *General Dynamics* confirmed that increases in market concentration do not necessarily suffice to meet the plaintiff’s burden and create a presumption of harm.³⁰

²³ Herbert Hovenkamp, *Gatekeeper Competition Policy*, MICH. TECH. L. REV. (2023), [Gatekeeper Competition Policy by Herbert Hovenkamp :: SSRN](#).

²⁴ *Id.*

²⁵ For a survey, see Douglas H. Ginsburg, *The Future of Regulation: What We Can Learn From the Past*, in FINDING NEW IDEAS IN OLD ONES 89 (2014).

²⁶ See Hadi Houalla, *The EU’s DMA Investigations Place Innovation Under Microscope*, ITIF (May 28, 2024), [The EU’s DMA Investigations Place Innovation Under Microscope | ITIF](#) (discussing how in addition to creating a worse user interface, the DMA’s restrictions on Google have resulted in a shift in traffic away from small businesses like hotels and restaurants and toward Google’s rivals like TripAdvisor and Expedia—effectively picking winners and losers).

²⁷ See ITIF California Comment at 10–11. By contrast, to the extent that the proposal should be interpreted to apply a no-economic sense test whereby a procompetitive justification was sufficient for legality, it would likely result both in false negatives for conduct like tying where procompetitive benefits may be outweighed by anticompetitive harms, as well as false positives relative to a sham innovation test applied for predatory innovation. See *Allied Orthopedic Appliances Inc. v. Tyco Health Care Group LP*, 592 F.3d 991 (9th Cir. 2010).

²⁸ *Brown Shoe Co. v. United States*, 370 U.S. 294, 320 (1962).

²⁹ *United States v. Philadelphia National Bank*, 374 U.S. 321, 370 (1963).

³⁰ *United States v. General Dynamics Corp.*, 415 U.S. 486, 501 (1974).

Second, from an economic standpoint, the report’s trifurcation of antitrust merger policy into a Chicagoan model, a centrist camp presumably associated with the “post-Chicago” school mentioned elsewhere in the report, and the neo-Brandeisian movement overlooks several other key models for antitrust policy. In addition to the Harvard School, which was critical to the formation of the prior antitrust consensus,³¹ one of these alternative models is a dynamic view of antitrust rooted in the work of Austrian economists like Joseph Schumpeter.³² As ITIF has previously explained, Schumpeterian competition and creative destruction, whereby firms compete for the market by creating new products, captures the essence of the American technology success story:

IBM’s leadership in personal computing was displaced by Microsoft’s paradigm-shifting operating system, which was in turn leapfrogged by the Internet tidal wave beginning with Google (who surpassed Yahoo!) in general search, who saw its position in advertising challenged by Facebook (overcoming MySpace) in social media. This cycle, which continues today, led to the rise of the American technology titans that are the economic envy of the world—each not only driving innovation, but competing with one another as they do it. And that technological leadership led to increased global market share, driving U.S. jobs and competitiveness.³³

Unfortunately, in its discussion of innovation, the Mergers and Acquisitions Report attempts to cabin Schumpeterian innovation incentives in cases of “imperfect intellectual property rights” and other unspecified conditions, which minimizes the robust body of empirical evidence consistent with Schumpeter’s theory.³⁴ As ITIF explained in its prior comments:

Schumpeter’s insights have more than withstood the test of time. While the general relationship between market structure and innovation has long been a matter of great debate, numerous studies across many economies around the world continue to confirm that the relationship often takes the form of an inverted-U, where markets characterized by many firms are less innovative than markets with a few firms, and markets with a few firms exhibit more innovation than those characterized by monopoly. In fact, for some U.S. studies the relationship is negative, and thus strongly supportive of the Schumpeterian thesis that firms in less concentrated markets lack robust incentives to engage in the risk-taking and R&D that drives innovation.³⁵

³¹ See William E. Kovacic, *The Intellectual DNA of Modern U.S. Competition Law for Dominant Firm Conduct: The Chicago/Harvard Double Helix*, COLUM. BUS. L. REV. 1 (2007).

³² See, e.g., J. Gregory Sidak & David J. Teece, *Dynamic Competition in Antitrust Law*, 5(4) J. COMP. L. & ECON. 581 (2009); see also Joseph V. Coniglio, *Twilight of the Lodestars: Brandeis, Chicago, Schumpeter, and the Future of Competition Policy*, CPI NA COLUMN (July 2021).

³³ Joseph V. Coniglio, *Protecting Innovation: Why the Draft Merger Guidelines Fall Short*, ITIF (Sept. 2023), <https://itif.org/publications/2023/09/27/comments-regarding-premerger-notification-reporting-and-waiting-period-requirements/>.

³⁴ See Philippe Aghion et al., *Competition and Innovation: An Inverted-U Relationship*, 120 Q. J. ECON. 701 (2005); Michael R. Peneder & Martin Woerter, *Competition, R&D and Innovation: Testing the Inverted-U in a Simultaneous System*, 24 J. of EVOLUTIONARY ECON. 653 (2014) (Switzerland); Michiyuki Yagi & Shunsuke Managi, *Competition and Innovation: An Inverted-U Relationship Using Japanese Industry Data*, Discussion Papers 13062, Research Institute of Economy, Trade and Industry (RIETI) (2013) (Japan); Michael Polder & Erik Veldhuizen, *Innovation and Competition in the Netherlands: Testing the Inverted-U for Industries and Firms*, 12 J. INDUS. COMPETITION AND TRADE 67 (2012) (Netherlands); Chiara Peroni & Ivete Gomes Ferreira, *Market Competition and Innovation in Luxembourg*, 12 J. INDUS. COMPETITION AND TRADE 93 (2012) (Luxembourg).

³⁵ ITIF California Comment at 3.

Moreover, the Mergers and Acquisitions Report fails to note that while the new Merger Guidelines “make frequent reference to the potential for mergers to harm competition by suppressing innovation,”³⁶ as ITIF noted in comments, any serious consideration of the incentives underlying Schumpeterian competition is omitted in favor of a thoroughly Arrowian view:

Conspicuously absent from this discussion is any recognition of how mergers can facilitate innovation, including by enhancing the ability for appropriation, increasing scope and scale, and supporting investment in R&D—that is, basic themes of Schumpeterian competition. Although the Draft Merger Guidelines acknowledge that “[d]evelopment of new features depends on having the appropriate expertise and resources,” the only inference they draw is that a merger between two such firms “with specialized employees, development facilities, intellectual property, or research projects in a particular area” can harm competition by reducing innovation—and not that a merger can increase innovation by creating “the appropriate expertise and resources” to foster dynamic competition.³⁷

One proposal identified by the Mergers and Acquisitions Report is to amend California's antitrust law to address mergers and acquisitions. And yet, as the report itself notes, “the state Attorney General’s office has exercised enforcement powers under the Clayton Act both on national mergers as well as on mergers of state and local importance.”³⁸ Furthermore, the report acknowledges that “California cannot, as a practical matter, enact a merger statute that is more lenient than the federal standard.”³⁹ But it is not all clear how a stricter standard would be worthwhile. For example, the report notes the “appreciable risk” standard under the proposed Consolidation Prevention and Competition Promotion Act (CPCA), which is defined as “more than a *de minimis* amount.”⁴⁰ Deviating from *Brown Shoe’s* warning that merger policy not focus on “ephemeral possibilities” but transactions that have a “probable anticompetitive effect”⁴¹ would open a Pandora’s Box that would have absurd results in a dynamic economy full of possibility—thousands of ultimately procompetitive mergers may be thought to have some “appreciable risk” of harm ex-ante.

Another proposal identified in the report is the Platform Competition and Opportunity Act, which is targeted specifically at acquisitions by digital platforms. It places the burden on the platform to show that its deal is not anticompetitive using clear and convincing evidence, in large part to address concerns with so called “killer acquisitions.”⁴² However, as ITIF has explained, “fears about underenforcement in the form of failing to protect potential competition in technology markets from ‘killer acquisitions’ appear to be overstated. In particular, concerns about killer acquisitions may be more well-founded in pharmaceutical markets characterized by drastic innovations, and where innovation milestones are easy to observe, rather than in technology markets.”⁴³

³⁶ Mergers and Acquisitions Report at 14.

³⁷ Joseph V. Coniglio, *Protecting Innovation: Why the Draft Merger Guidelines Fall Short*, ITIF (Sept. 2023), <https://itif.org/publications/2023/09/27/comments-regarding-premerger-notification-reporting-and-waiting-period-requirements/>.

³⁸ Mergers and Acquisitions Report at 1.

³⁹ *Id.* at 18.

⁴⁰ *Id.*

⁴¹ *Brown Shoe Co. v. United States*, 370 U.S. 294, 323 (1962).

⁴² Mergers and Acquisitions Report at 19.

⁴³ Joseph V. Coniglio, *Comments to the FTC and DOJ Regarding Premerger Notification Reporting and Waiting Period Requirements*, ITIF (Sept. 2023), <https://itif.org/publications/2023/09/27/comments-regarding-premerger-notification-reporting-and-waiting-period-requirements/>.

RECOMMENDATIONS

For these reasons, ITIF has concerns with several of the proposals identified in the reports and offers the following recommendations:

- **Reassess the need for antitrust changes:** California has been the global hub of innovation for the past several decades. Its economy is driven by dynamic Schumpeterian competition in the tech sector, which is experiencing yet another gale of creative destruction with artificial intelligence. Rather than impede this innovation, California should look to conserve the legal ecosystem that made it the innovation leader of the world.
- **The status quo is working:** Unlike Europe, the U.S. and California have a booming tech sector because they were open to the Schumpeterian competition that continues to characterize so much of Silicon Valley's dynamism. Market concentration is a feature, not a bug, of this type of competition, and proposals to expand antitrust liability either generally or for digital markets specifically are likely to have the overwhelming effect of chilling procompetitive behavior that benefits consumers.
- **Mergers can drive dynamic efficiencies:** Mergers are often a crucial way to create the scale necessary for the flourishing of Schumpeterian competition, which has been established by a robust body of literature showing that innovation is often maximized when there are only a few firms in a market. California already enjoys sufficient tools to police anticompetitive mergers, and should avoid taking cues from neo-Brandeisian inspired merger guidelines or legislative proposals that seek to take merger enforcement well beyond its proper scope.

CONCLUSION

As intimated in our prior comment, California's digital markets are, without exaggeration, perhaps one of the greatest economic success stories in modern history. In just a few decades, California has become home to four of the most valuable companies in the world, which continue to drive innovation and technological progress forward into the new frontiers of artificial intelligence, robotics, and much more. California's digital markets thus exhibit the very opposite of the sort of market failure that could justify substantial changes to California's antitrust regime modeled after federal proposals, which are ironically perhaps far less likely to succeed than responsive Congressional action aimed at curbing antitrust expansionism at the state level. At bottom, amidst continued gales of creative destruction, the antitrust policies that enabled the Schumpeterian and scale-driven competition that made California the economic success story that it is remain just as necessary going forward.

Thank you for your consideration.

Joseph Van Coniglio (CA Bar No. 315045)
 Director, Schumpeter Project on Competition Policy
 Information Technology and Innovation Foundation

July 1, 2024

Dear Commissioners:

We write regarding your consideration of revisions to the Cartwright Act, California's antitrust statute. We are legal scholars and professors with expertise in the regulation of network, platform, and utility (NPU) industries, including technology platforms.¹ In particular, we write in relation to the second question the Commission is tasked with examining:

Whether the law should be revised in the context of technology companies so that analysis of antitrust injury in that setting reflects competitive benefits such as innovation and permitting the personal freedom of individuals to start their own businesses and not solely whether such monopolies act to raise prices.

Addressing the problems posed by great concentrations of economic power is a task of the utmost importance, one which policymakers have confronted for centuries. As the Commission does its work, we recommend that it, and the California State Legislature by extension, consider the full range of tools at its disposal to promote competition and innovation in the technology sector—not only those conventionally associated with *ex post* antitrust enforcement.

In particular, as you consider sector-specific policies in the context of technology companies, we urge you not to limit your work to conventional antitrust laws or to adopt policies that operate as carve-outs to antitrust laws without significant market regulations. Concentration in the tech sector has been shown to harm innovation, including through platforms engaging in serial acquisitions and copying of smaller rivals, discouraging investment in innovative technologies.² It has also harmed both existing and prospective small business owners: Control over critical online infrastructure that small businesses rely on, including marketplaces and cloud computing, enables platforms to engage in discriminatory treatment of businesses who compete against their own proprietary products and services.³

¹ See MORGAN RICKS, GANESH SITARAMAN, SHELLEY WELTON, & LEV MENAND, NETWORKS, PLATFORMS, & UTILITIES: LAW AND POLICY (2022).

² See e.g. Mark A. Lemley and Matthew Wansley, *Coopting Disruption* (2024), <https://ssrn.com/abstract=4713845>; INVESTIGATION OF COMPETITION IN DIGITAL MARKETS: H. COMM. ON THE JUDICIARY, 117TH CONGRESS, 35-39 (2020) <https://www.govinfo.gov/content/pkg/CPRT-117HPRT47832/pdf/CPRT117HPRT47832.pdf> (on the risks of concentration in the technology sector to innovation and entrepreneurship); Sai Krishna Kamepalli, Raghuram Rajan & Luigi Zingales, *Kill Zone*, NBER Working Paper (2021), <https://www.nber.org/papers/w27146>; Betsy Morris and Deepa Seetharaman, *The New Copycats: How Facebook Squashes Competition from Startups*, WALL ST. J. (Aug. 9, 2017), <https://www.wsj.com/articles/the-new-copycats-how-facebook-squashes-competition-from-startups-1502293444>.

³ See INVESTIGATION OF COMPETITION IN DIGITAL MARKETS, *supra* note 1, at 35-39. For one example, see Jordan Novet, *Amazon's Cloud Business is Competing with its Customers*, CNBC (Nov. 30, 2018), <https://www.cnn.com/2018/11/30/aws-is-competing-with-its-customers.html>.

Rather, we suggest that you consider the full range of regulatory options, whether or not you adopt a sector-specific policy for technology companies. While antitrust is a powerful tool that should be strengthened, other tools may also be applied to promote fair competition and innovation in the technology sector, some of which may be even more effective than traditional *ex post* antitrust enforcement. These include *structural separations* between distinct lines of business, to prevent conflicts of interest that may harm competition, and *neutrality mandates* or *nondiscrimination rules* to prevent self-preferencing or discriminatory treatment of downstream businesses. These tools, which often originate in legislation rather than in antitrust remedies, have the benefit of *preventing* harmful conduct before it occurs, rather than *remedying* it after it occurs. They also have the benefit—for both consumers and businesses—of being fairly simple structural rules that leave very little ambiguity about their meaning or import. Should the Commission find a sector-specific antitrust policy for technology companies to be desirable, these are tools it should consider recommending the Legislature use.

Additionally, we enclose several reports, articles, and books we believe are worthy of your time and attention as you navigate how to protect competition and innovation in the technology sector. Each of these materials are enclosed except for the book, which is available at booksellers:

- MORGAN RICKS, GANESH SITARAMAN, SHELLEY WELTON, & LEV MENAND, *NETWORKS, PLATFORMS, AND UTILITIES: LAW AND POLICY* (2022).
- Ganesh Sitaraman & Morgan Ricks, *Tech Platforms and the Common Law of Carriers*, 73 DUKE L.J. 1037 (2024).
- Lina Khan, *The Separation of Platforms and Commerce*, 119 COLUM. L. REV. 973 (2019).
- Lina Khan, *Amazon's Antitrust Paradox*, 126 YALE L.J. 564 (2017).
- Tejas N. Narechania & Ganesh Sitaraman, *An Antimonopoly Approach to Governing Artificial Intelligence*, YALE L. & POL'Y REV. (forthcoming 2025).
- Tejas N. Narechania, *Machine Learning as Natural Monopoly*, 107 IOWA L. REV. 1543 (2022).

Please let us know if you have any questions about this or other matters, and we would be glad to engage further.

Sincerely,

Ganesh Sitaraman

New York Alumni Chancellor's Chair in Law, Vanderbilt Law School

Director, Vanderbilt Policy Accelerator for Political Economy and Regulation

Morgan Ricks

Herman O. Lowenstein Chair in Law, Vanderbilt Law School

Faculty Co-Director, Project on Networks, Platforms, & Utilities, Vanderbilt Policy Accelerator

Shelley Welton

Presidential Distinguished Professor of Law and Energy Policy, University of Pennsylvania

Carey School of Law

Lev Menand

Associate Professor of Law, Columbia Law School

Tejas N. Narechania

Professor of Law, University of California, Berkeley School of Law

Faculty Co-Director, Berkeley Center for Law & Technology

Danielle D'Onfro

Professor of Law, Washington University in St. Louis School of Law



July 12, 2024

Amb. David Huebner, Chairperson
Sharon Reilly, Executive Director
California Law Revision Commission
c/o Legislative Counsel Bureau
925 L Street, Suite 275
Sacramento, CA 95814

Re: California's Social Safety Net Depends on a Healthy Tech Industry

Dear Chairperson Huebner, Executive Director Reilly, and Members of the Commission,

I am writing on behalf of the Chamber of Progress to provide the California Law Revision Commission with a copy of our recent report, "California's Social Safety Net Depends on a Healthy Tech Industry." This report presents an analysis of the significant financial contributions of California's technology sector to the state's social safety net, including health and human services, K-12, and higher education.

Our findings highlight the substantial funding that could be directed to essential public services if the additional annual revenue from tech were spent on the social safety net. Here are the main findings of this report:

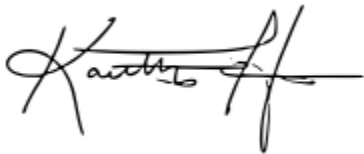
- Assuming a five-year average growth rate, the tech industry adds, on average, a minimum of \$2.6 billion to California's annual state government revenue and over \$14.3 billion in revenue across a five-year period.
- Based on current spending patterns, from that \$2.6 billion in annual tax revenue growth from the tech industry, K-12 education in California receives \$916 million annually, health services receives \$614 million, higher education receives \$266 million, and human services receives \$270 million.
- Overall, the \$2.6 billion in additional annual tax revenue from the **tech industry supports 20,577 additional jobs in California each year.**
- The additional spending in K-12 education could directly support 7,341 jobs in California annually or 41,865 jobs over a five-year period.
- The additional spending in healthcare could directly support 2,591 jobs in California on an annual basis and 14,773 across a five-year period.
- The additional higher education spending could support 2,132 jobs annually and a total of 12,160 jobs over a five-year period in California.

- Additional spending in human services could support 1,308 jobs annually and 7,457 jobs over a five-year period in California.

We believe this research provides valuable insights for the Commission's ongoing examination of the role of technology companies in California. The findings emphasize the need to consider the broader financial and social implications when reviewing and potentially revising antitrust regulations.

Thank you for considering our report as part of your important work. We hope the information will be helpful in your discussions.

Respectfully,

A handwritten signature in black ink, appearing to read "Kaitlyn Harger". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Kaitlyn Harger, PhD
Senior Economist
Chamber of Progress



California's Social Safety Net Depends on a Healthy Tech Industry

*How Income Taxes on
California Tech Employees
and Companies Help Fund
Social Programs*

By Kaitlyn Harger

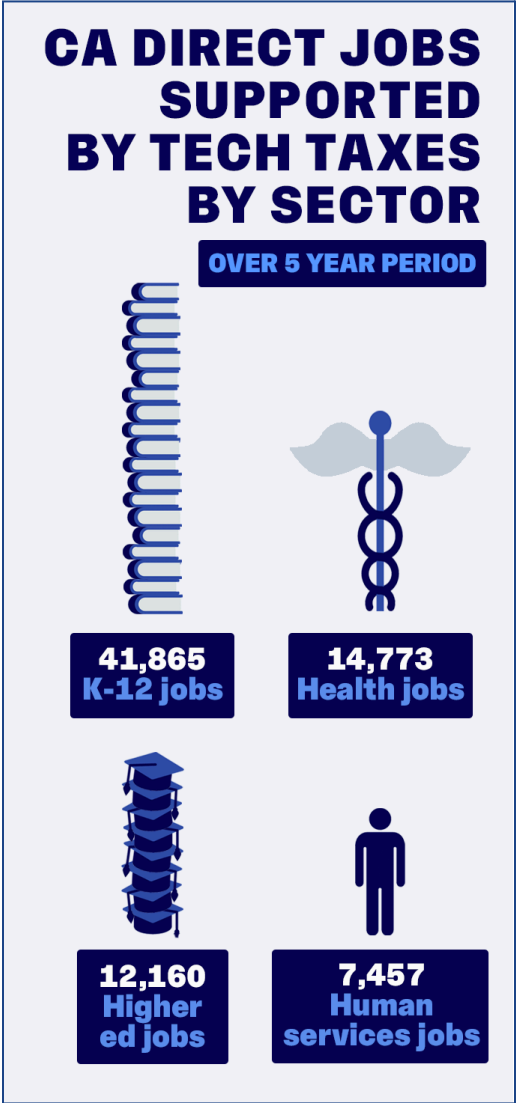
EX 18



**CHAMBER
OF PROGRESS**

EXECUTIVE SUMMARY

- At a time when California is facing a significant budget deficit and preparing to cut spending, few Californians understand how a thriving state tech economy helps support the state’s social safety net.
- Assuming a five-year average growth rate, the tech industry adds, on average, a minimum of \$2.6 billion to California’s annual state government revenue and over \$14.3 billion in revenue across a five-year period.
- Based on current spending patterns, from that \$2.6 billion in annual tax revenue growth from the tech industry, K-12 education in California receives \$916 million annually, health services receives \$614 million, higher education receives \$266 million, and human services receives \$270 million.
- Overall, the \$2.6 billion in additional annual tax revenue from the tech industry supports 20,577 additional jobs in California each year.
- The \$2.6 billion in additional annual funding could help avoid planned delays and cuts in 2024-25 to behavioral health services, support for foster children, and support for families needing stabilization due to mental illness, addiction, domestic violence, homelessness, and more.
- The additional spending in K-12 education could directly support 7,341 jobs in California annually or 41,865 jobs over a five-year period.
- The additional spending in healthcare could directly support 2,591 jobs in California on an annual basis and 14,773 across a five-year period.
- The additional higher education spending could support 2,132 jobs annually and a total of 12,160 jobs over a five- year period in California.
- Additional spending in human services could support 1,308 jobs annually and 7,457 jobs over a five-year period in California.



INTRODUCTION

California is facing a significant budget deficit, estimated to be \$73 billion by the Legislative Analyst's Office (LAO).¹ While the office's estimates of the size of the deficit differ, both Governor Gavin Newsom and LAO estimate the state will face a sizable deficit in the 2024-25 fiscal year.²

The budget deficit does not seem to be a one-time problem for the State. LAO's report analyzing the Governor's budget noted that the state's spending levels are likely unsustainable in future years as the Governor plans to manage the current deficit by delaying spending until later years, while new revenue is not expected to offset the spending.³

Additionally, the budget deficit could be upwards of \$80 billion by the 2027-28 fiscal year, as noted by Dan Walters in Cal Matters' Gut Check:

"The fine print in Newsom's own budget says the state's finances could be \$81 billion out of balance by 2027-28 as revenues stagnate, spending automatically increases on K-12 schools and community colleges due to a section of the state constitution, and the state's reserves are exhausted".⁴

Given the budget shortfall, California will be forced to make spending cuts or pull from emergency funds in order to balance the budget. The Governor's budget proposal already outlines areas where Californians can expect to see spending cuts, especially to social safety net programs like human services, as well as to education and health services.^{5 6} The proposed cuts include delays and/or cuts to healthcare worker wages, housing

¹ "The 2024-25 Budget Deficit Update", Budget and Policy Post, February 20, 2024.

<https://www.lao.ca.gov/Publications/Report/4850>

² Gov. Newsom unveiled his budget proposal for California on January 10th, 2024, estimating a \$38 billion budget deficit for the 2024-25 fiscal year. On January 13, 2024 California's Legislative Analyst's Office (LAO) produced a report that estimated the deficit to be \$58 billion. LAO has since updated their estimate to \$73 billion.

³ Legislative Analyst's Office, *The 2024-25 Budget: Overview of the Governor's Budget*, Gabriel Petek, January 2024, <https://www.lao.ca.gov/reports/2024/4825/2024-25-Overview-Governors-Budget-011324.pdf>

⁴ Dan Walters, "Gut check: Newsom's state budget proposal is already showing its shortcomings", *CalMatters*, February 6, 2024,

<https://calmatters.org/commentary/2024/02/newsom-state-budget-showing-shortcomings/>

⁵ Gavin Newsom, "Governor's Budget Summary 2024-25", January 10, 2024,

<https://ebudget.ca.gov/FullBudgetSummary.pdf>

⁶ Mikhail Zinshteyn and Sameea Kamal, "Digging out: Newsom outlines plan to covers tate budget deficit", *CalMatters*, January 10, 2024,

<https://calmatters.org/politics/2024/01/newsom-budget-california/>

programs, higher education, scholarship programs, crisis response programs for foster children, and homelessness support for children and disabled populations.^{7 8}

At a time when California is facing a sizable deficit, supporting industries that pay large amounts of tax dollars to the state could be advantageous—since tax revenue increases when these industries flourish.

One such industry is the technology sector.

Tech is sometimes criticized for increasing inequality in California, but less attention is paid to how California’s social safety net relies on the tech economy.⁹

The tech sector’s stock equity tax withholding plays an important role in California’s revenue system. According to an analysis by LAO, tech equity compensation is large enough to determine whether withholding receipts are above or below last year’s numbers. As LAO wrote:

*“Income tax withholding receipts for 2022-23 were about 3 percent lower than a year before. Without the boost in equity compensation withholding in the final quarter of 2022-23, **receipts would have been 4 percent lower**. For the current fiscal year, withholding receipts through September are running 1 percent higher than the same period last year. Without the boost in equity compensation in the first quarter of 2023-24, withholding receipts would instead be running about 1 percent lower.”¹⁰*

As tech stock prices increase, equity withholding also increases. So, **as California tech companies become more successful, California’s state tax revenue increases.**

⁷Ana B. Ibarra, “Newsom OK’d a minimum wage increase for health care workers. Now he wants to delay it”, *CalMatters*, January 11, 2024,

<https://calmatters.org/health/2024/01/california-health-minimum-wage-delay/>

⁸Taryn Luna, “How Newsom plans to fix California’s projected \$37.9-billion budget deficit”, *Los Angeles Times*, January 10, 2024,

<https://www.latimes.com/california/story/2024-01-10/california-gavin-newsom-budget-2024-deficit>

⁹Richard Florida, “Tech Made Cities Too Expensive. Here’s How to Fix It”, *Wired*, April 26, 2017,

<https://www.wired.com/2017/04/how-to-save-the-middle-class/>

¹⁰Chas Alamo, “How Does Tech Company Equity Pay Affect Income Tax Withholding?”, *California Economy and Taxes*, Legislative Analyst’s Office, November 16, 2023,

<https://lao.ca.gov/LAOEconTax/Article/Detail/789>

According to estimates from LAO, California is expected to run budget deficits through at least 2028.¹¹ Given the expected future deficits and likely cuts to spending, **policymakers should consider the impact of policy on the tech industry's performance.** The regulatory framework under which the California tech industry operates will likely be an important determinant of tech's stock performance and thus tax withholding revenues in California.

The remainder of this paper will:

- Examine where California currently spends most of its revenue;
- Outline the process by which tech stock value impacts California's revenue collections;
- Show the potential annual revenue contribution of tech workers across typical one-year and five-year periods;
- Describe the direct impacts of additional state spending due to tech sector tax revenue, including jobs supported by additional government spending; and
- Detail the secondary and tertiary spillover effects that this government spending has on California's economy.

EDUCATION, HEALTH AND SOCIAL SAFETY NET

California funds several social safety net programs including food assistance programs like CalFresh, immediate cash assistance programs like CalWORKS, and the State Supplementary Payment (SSP) program, which provides supplemental income to those receiving Supplemental Security Income (SSI).

In addition to traditional social safety net programs like those described above, California also spends billions on its health and education systems. Medi-Cal, the state's Medicaid program, is expected to cover almost 14 million Californians in 2024, more than one in three people in the state.¹²

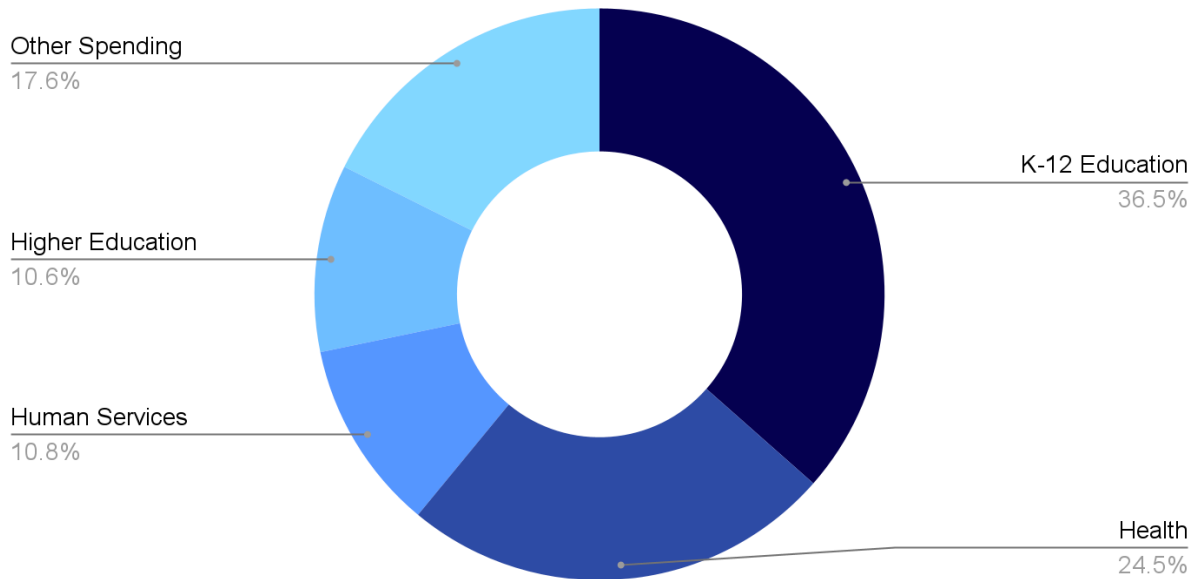
California's universal pre-K and K-12 school systems serve over 6 million students. While health and educational services are not considered traditional social safety net programs, they are integral to developing the skills needed to enter the workforce and thus are considered in this report.

¹¹ Legislative Analyst's Office, *The 2024-25 Budget: Overview of the Governor's Budget*, Gabriel Petek, January 2024, <https://www.lao.ca.gov/reports/2024/4825/2024>

¹² Gavin Newsom, "Governor's Budget Summary 2024-25", January 10, 2024, <https://ebudget.ca.gov/FullBudgetSummary.pdf>

Currently, California spends the majority of its General Fund revenue on education, health, and human services. The Governor’s Budget Summary describes expected spending by state agencies in the 2024-25 fiscal year.¹³ Figure 1 presents total spending on California's education, health, and human services sectors.¹⁴

Figure 1: General Fund Spending 2024-25



Taken together, education, health, and human services comprise over 82% of California’s general fund spending.¹⁵

¹³ Gavin Newsom, “Governor’s Budget Summary 2024-25”, January 10, 2024, <https://ebudget.ca.gov/FullBudgetSummary.pdf>

¹⁴ The other spending category is made up of the following expenditures by agency: legislative, judicial, executive, business, consumer services and housing, transportation, natural resources, environmental protection, corrections, labor and workforce development, government operations, non-agency departments, tax relief/local government, and statewide expenditures.

¹⁵ Gavin Newsom, “Governor’s Budget Summary 2024-25”, January 10, 2024, <https://ebudget.ca.gov/FullBudgetSummary.pdf>

IMPACT OF TECH WITHHOLDING ON CALIFORNIA REVENUE

The tech sector plays a unique role in funding California's revenue system since California is home to several major tech companies like Apple, Google, Nvidia, and Meta. As LAO notes:

"Including California's other large technology firms, the state's tech companies make up more than one-third of the total value of the Nasdaq 100 index, a list of the 100 most valuable companies listed on the Nasdaq stock exchange."¹⁶

The strength of California's revenue system is directly tied to the tech industry via corporate and personal income taxes. Businesses in California pay into the corporate income tax system, which generates over \$38 billion in revenue for California on an annual basis.¹⁷ Individuals in California pay personal income taxes on their wages and salaries as well as on income from some stock options.

Tech workers are usually compensated with both salaries and stock options. The tech industry's propensity to allocate stock options as part of their compensation packages means that tech companies' stock prices impact California's personal income tax revenue levels.

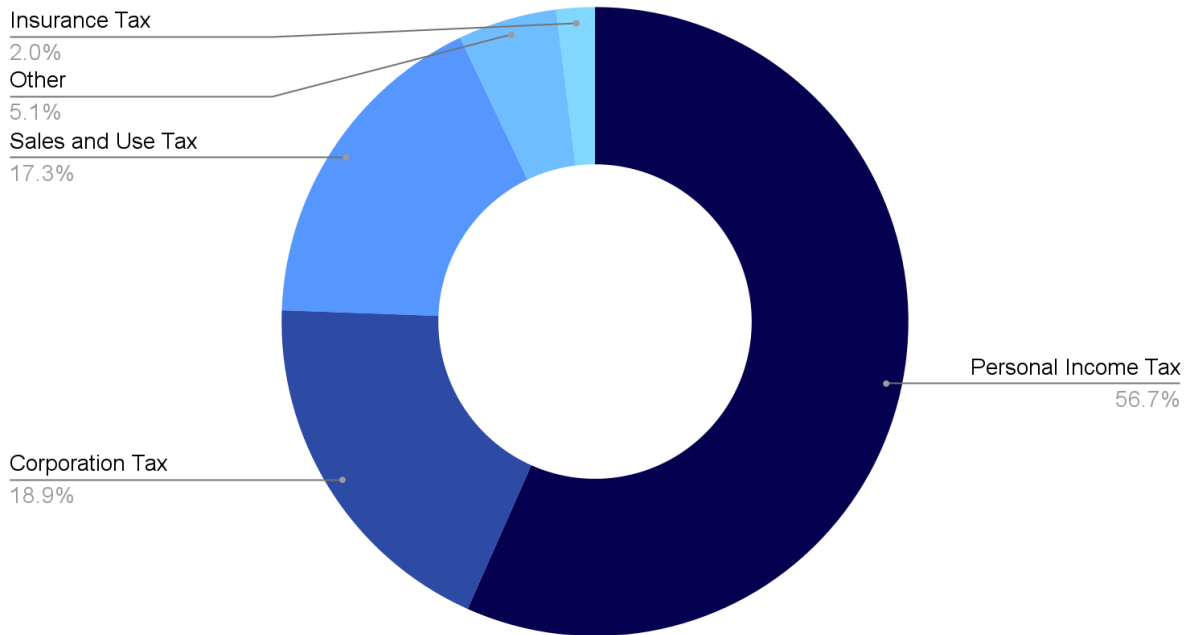
Taken together, corporate income taxes (19%) and personal income taxes (PIT) (57%) make up 76% of the state's General Fund revenue.¹⁸

¹⁶ Chas Alamo, "How Does Tech Company Equity Pay Affect Income Tax Withholding?", *California Economy and Taxes*, Legislative Analyst's Office, November 16, 2023, <https://lao.ca.gov/LAOEconTax/Article/Detail/789>

¹⁷ Gavin Newsom, "Governor's Budget Summary 2024-25", January 10, 2024, <https://ebudget.ca.gov/FullBudgetSummary.pdf>

¹⁸ Gavin Newsom, "Governor's Budget Summary 2024-25", January 10, 2024, <https://ebudget.ca.gov/FullBudgetSummary.pdf>

Figure 2: General Fund Revenues: 2024-25



Many tech companies pay employees with salaries as well as stock options, referred to as equity pay. In California, some equity pay is treated as income, so employers must withhold a portion of the value to pay state income taxes.^{19 20} The amount of equity pay withheld is directly related to the value of a company's stock. Typically, employers sell a portion of the employees' stock and use the proceeds to pay the tax.²¹

Figure 3 presents a simplified version of the process by which equity pay can increase revenue for California.

¹⁹ Chas Alamo, "How Does Tech Company Equity Pay Affect Income Tax Withholding?", *California Economy and Taxes*, Legislative Analyst's Office, November 16, 2023,

<https://lao.ca.gov/LAOEconTax/Article/Detail/789>

²⁰ According to LAO, one common type of equity pay is restricted stock units (RSUs). Companies make quarterly payments to employees when their RSUs vest.

²¹ Chas Alamo, "How Does Tech Company Equity Pay Affect Income Tax Withholding?", *California Economy and Taxes*, Legislative Analyst's Office, November 16, 2023,

<https://lao.ca.gov/LAOEconTax/Article/Detail/789>

Figure 3: Equity Pay Taxation Process



First, employees are awarded equity pay as part of their compensation package, with the equity pay vesting at a later date. After the stock vests, the employer withholds a portion of the equity pay to pay the withholding tax on behalf of the employee. The amount withheld is collected by California as part of PIT revenue collections. The employee then receives the equity pay as part of their income.

The total amount of equity pay withholding a company must implement varies depending on its size and growth. As companies become larger, the amount withheld increases as the companies hire more employees with compensation packages, including equity. The amount of withholding also increases when the company's stock performs well, since equity pay withholding is tied to stock value. As a result, as California's tech companies have grown over time, so too has equity pay withholding.

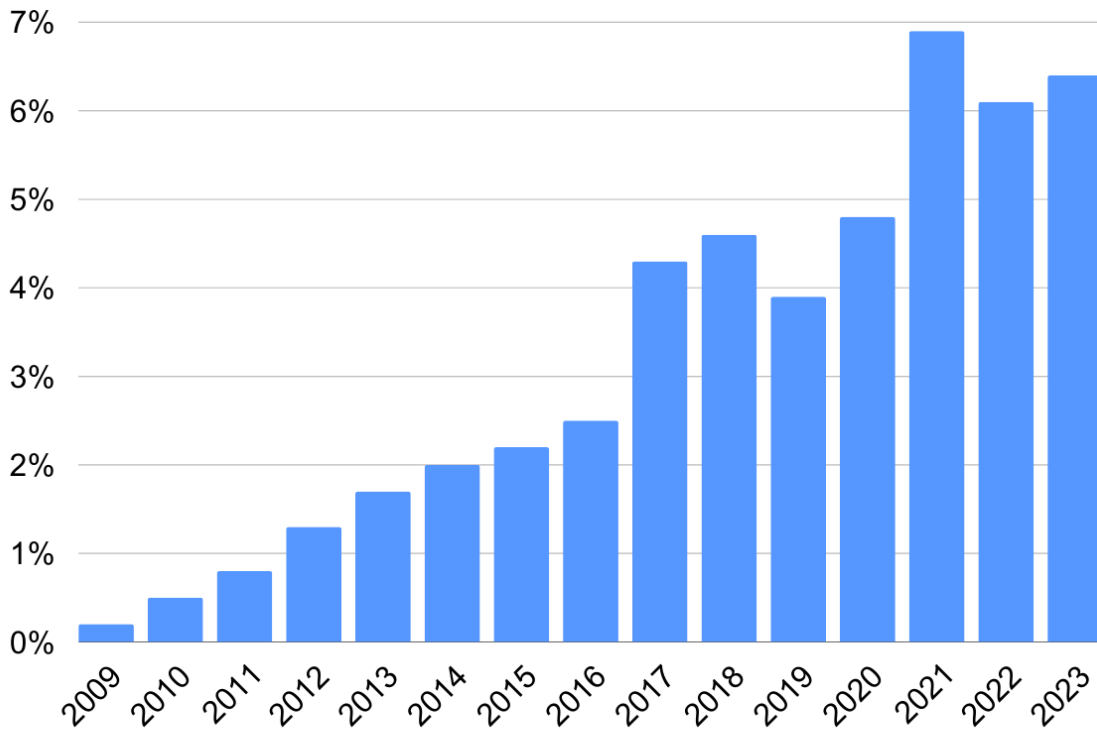
A report from LAO recently estimated the size of equity pay withholding for four major tech companies in California: Apple, Nvidia, Google, and Meta. The analysis used companies' SEC filings, which include information on the amount of equity pay each company withheld.

Figure 4 shows LAO's estimates of equity pay withholding as a share of total income tax withholding for four of the state's largest tech companies.²²

²² Sources for this chart include <https://lao.ca.gov/LAOEconTax/Article/Detail/789> and <https://calmatters.org/economy/2024/01/ca-tech-tax-withholding/>

Figure 4: Estimated Equity Pay Withholding as a Share of Total Income Tax Withholding

Includes: Apple, Nvidia, Google, and Meta



Sources: Legislative Analyst's Office, CalMatters

As shown in the chart, equity pay withholding has become an increasingly large portion of total income tax withholding over time. The chart includes data from only four of California's major tech companies—Apple, Nvidia, Google, and Meta—and thus underestimates the total impact of tech's equity pay on income tax withholding. The chart also does not account for additional corporate taxes or personal income tax withholding from tech companies and employees.

EQUITY PAY REVENUE AND CALIFORNIA GOVERNMENT SPENDING

This analysis aims to estimate the annual revenue generated by tech companies and workers contributing to the corporate and personal income tax systems. The goal is to understand how this additional revenue translates into services provided to Californians in the education, health, and human services sectors.

In order to examine these research questions, I estimated how much annual revenue California receives from tech companies and workers via corporate and personal income taxes.

Equity Pay

First, I determined the amount of revenue California receives from tech equity pay withholding. The estimated equity pay share of total income tax withholding was roughly 6.1% in 2022, according to an analysis by LAO.²³ Another LAO article shows total income tax withholding in 2022 to be roughly \$90B.²⁴

Based on those estimates, equity pay withholding in 2022 was roughly \$5.5 billion. This estimate is based on LAO's analysis of only four major tech firms: Apple, Nvidia, Google, and Meta.²⁵ **Thus, the tech sector's equity pay withholding in 2022 was at least \$5.5 billion, but likely higher with the inclusion of other tech companies.**

Next, I expanded upon LAO's analysis of these four major tech firms to more comprehensively estimate the total amount of equity pay withholding in California. Their analysis mentions, but does not analyze, withholding at other major tech firms in California, including Cisco, Intel, Adobe, Netflix, AMD, Intuit, Qualcomm, Airbnb, Paypal, and Zoom. Based on 10-K filings from most of these companies, I estimate that California receives a *combined total* of \$6.7 billion in withholding from all of these major tech firms.²⁶

However, withholding and tax liability totals often differ as individuals may choose to under or over-withhold. Based on an LAO analysis, PIT withholding in 2021 was roughly \$75 billion. According to California's Franchise Tax Board's (FTB) annual report on PIT, the total PIT liability in 2021 was \$139 billion.²⁷ Taken together, this suggests that Californians tend to under-withhold, withholding roughly 55% of total tax liability. Thus, if

²³ Chas Alamo, "How Does Tech Company Equity Pay Affect Income Tax Withholding?", *California Economy and Taxes*, Legislative Analyst's Office, November 16, 2023, <https://lao.ca.gov/LAOEconTax/Article/Detail/789>

²⁴ Chas Alamo, "Income Tax Withholding Tracker", *California Economy and Taxes*, Legislative Analyst's Office, May 2, 2024, <https://lao.ca.gov/LAOEconTax/Article/Detail/756>

²⁵ Chas Alamo, "How Does Tech Company Equity Pay Affect Income Tax Withholding?", *California Economy and Taxes*, Legislative Analyst's Office, November 16, 2023, <https://lao.ca.gov/LAOEconTax/Article/Detail/789>

²⁶ Comparing LAO's analysis with the 10-K filings for Apple, Nvidia, Google, and Meta I assume that 25% of the withholding from each company goes to California.

²⁷ State of California Franchise Tax Board, "Personal Income Tax Data", <https://data.ftb.ca.gov/stories/s/2it8-edzu>

tech equity withholding was at least \$6.7 billion then **the estimated tax liability from tech equity was roughly \$12.4 billion in 2021.**

Personal Income Taxes Net Equity Pay

To estimate the remaining portion of PIT revenue that comes from tech workers, I used information on tech industry concentration as well as information on tax liability by county in California.

A report by CBRE identified three tech hubs in California with varying levels of concentration.²⁸ The San Francisco Bay Area had the highest concentration, with an estimated 11.6% of workers in the Bay Area working in tech. San Diego's metro area also constituted a tech hub with a concentration of 5.3%. The Sacramento metro area was also designated as a tech hub, with 4.1% of workers working in tech. Finally, the Los Angeles metro area was also identified as a tech hub with a concentration level of 3.9% of workers working in the tech industry.

In order to estimate the remaining PIT revenue from tech workers, I take the revenue totals for each county in the tech hub metro areas and adjust the total to only reflect the percentage of the workforce working in tech.²⁹ I also adjust the PIT total to exclude the equity estimate described above in order to avoid double counting tax due as a result of equity payments. **Overall, this yields a total of roughly \$5.6 billion in estimated annual tax due from tech employees living in these areas.**

Corporate Income Taxes

Corporate income taxes are paid by tech companies operating in California. California's FTB produces annual reports that describe taxes paid by corporations, including information by industry. **In 2021, the total tax liability for corporations in the tech industry, defined as the professional, scientific, tech services industry classification, was \$2.3 billion.** I use this as my estimate for tech's corporate tax contribution to California's revenue system.

²⁸ "Which are the top-ranked tech talent markets?", CBRE report, <https://www.cbre.com/insights/books/scoring-tech-talent-2023/which-are-the-top-ranked-tech-talent-markets>

²⁹ The report uses definitions of metro areas provided by the Bureau of Labor Statistics. For more information on the geographic definitions please see <https://www.bls.gov/bls/omb-bulletin-18-03-revised-delineations-of-metropolitan-statistical-areas.pdf>.

Taken together, these estimates suggest that tech employees and companies could pay at least \$20.4 billion in taxes to California annually.

Next, I determined how much each source of revenue is likely to increase year to year. Beginning with PIT revenue, I calculated the average growth rate of tax liability over the five most recent years of data published by the FTB, 2017-2021. The average annual growth rate during that period was 12.81%. Both equity and wage/salary tax liability are assumed to grow at this rate since equity tax liability falls under the PIT umbrella. Corporate income tax liability is assumed to grow at roughly 11.21%.³⁰

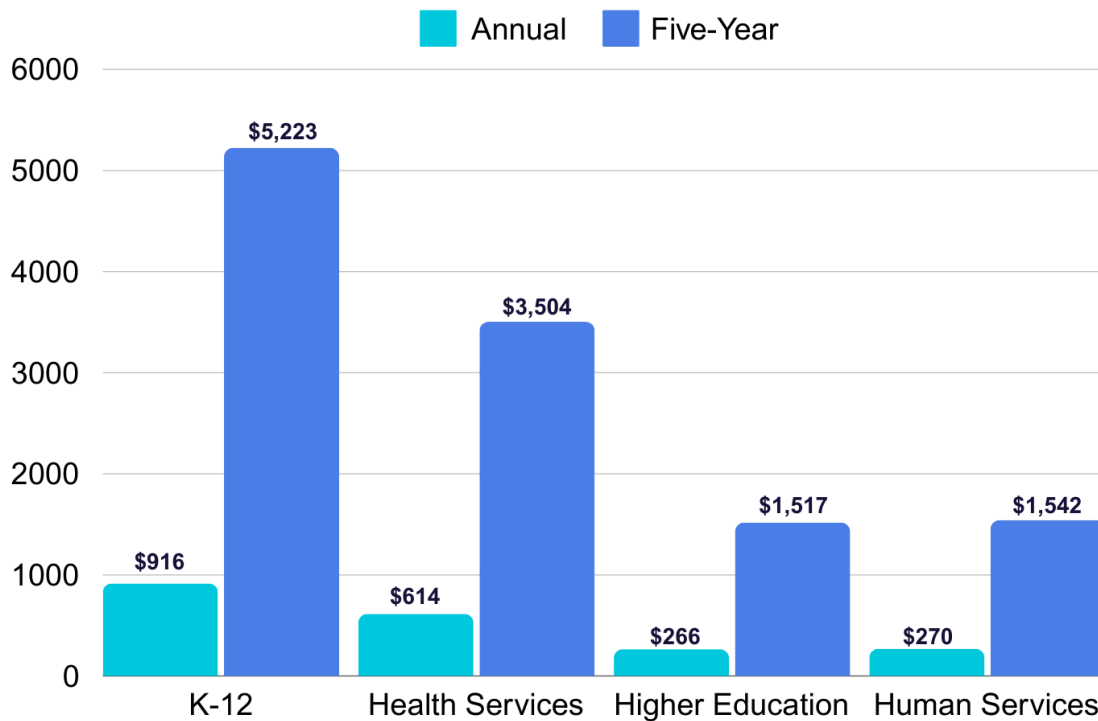
Based on those annual growth rates, **I modeled a single-year scenario where the tech sector's annual tax liability, \$20.4 billion, increases by \$2.6 billion annually.** I also estimated the total amount of tech tax liability would grow over a five-year period. Beginning with the 2022 estimated withholding of \$5.5 billion, **I applied the growth rates mentioned above, which resulted in a total of \$14.3 billion in additional revenue over the five-year period.**

To understand how additional revenue from tech equity pay could impact services available to Californians, I analyzed how government spending from the equity pay revenue spreads throughout the economy. Additional equity pay withholding will likely be spent by the state in patterns similar to how the state currently plans to spend revenue. Figure 1 shows that California spends most of its revenue on K-12 education (36.5%), health services (24.5%), human services (10.8%), and higher education (10.6%).

Next, I combined the information from Figure 1 with the estimated annual and five-year equity pay revenue increases in order to estimate the distribution of additional government spending as a result of the equity pay. Figure 5 presents the estimated additional annual spending per-category from tech equity pay.

³⁰ Between tax years 2020 and 2021 corporate tax liability increased by almost 83%. That level of annual growth was much larger than previous years and as such I exclude 2021 from the growth rate calculation. Instead, I focus on the years 2016-2020 to avoid potentially overestimating by including 2021.

Figure 5: Estimated Additional Annual and Five-Year Spending (\$M) from Tech Equity Pay



In total, my analysis suggests that **education would receive an additional \$1.2 billion annually**, across K-12 (\$916 million) and higher education (\$266 million). **Over five years, the additional spending on education would total over \$6.7 billion**, with \$5.2 billion in funding going to K-12 and \$1.5 billion to higher education.

Each year, the \$916 million spent on education could be used to support the hiring of teachers for the state. California has suffered an ongoing teacher shortage with roughly 10% of public school classrooms taught by teachers who were not properly credentialed in 2022.³¹ The \$916 million in extra spending could be used to support annual hiring of teachers.

The California Department of Education publishes information on the percentage of state spending allocated to teacher salaries as well as teacher salaries by school district type. Using the largest teacher salary for each school district type, I calculated the number of teachers that could be supported by the additional annual state spending on K-12 education. Table 1 shows the calculation of the number of annual teacher salaries supported.

³¹ Mackenzie Mays, “How to find out if your child’s classes have teachers with proper credentials. Many don’t”, *Los Angeles Times*, July 1, 2022, <https://www.latimes.com/california/story/2022-07-01/amid-staffing-shortage-46-700-teachers-in-california-classrooms-lack-proper-credentials>

Table 1: Estimated Additional Annual Teacher Salaries Supported

School District Type	Highest Annual Teacher Salary	Percentage of Spending Allocated to Salaries	Allocated Spending on Salaries (\$M)	Teachers Supported
Elementary	\$111,440	33.16%	\$304	2,725
High	\$122,669	31.17%	\$285	2,327
Unified	\$109,418	30.35%	\$278	2,541
Total Teachers Supported Annually				7,593

My calculations suggest that the annual K-12 spending modeled above could support 7,593 teaching jobs. For context, there are currently 166 teaching jobs open within the Los Angeles Unified School District alone.³² This funding for teacher salaries could help solve California’s ongoing teacher shortages.

Health services would receive an additional \$614 million on an annual basis and \$3.5 billion over five years under this model. Currently, health services funding provides public health services to Californians via the Medi-cal, California’s Medicaid program. The Governor’s budget plans to address the current budget shortfall in part by delaying spending on behavioral health infrastructure (\$140.4 million) and behavioral health bridge housing (\$235 million) for one year.³³ **The extra spending from this additional tech revenue could have eliminated the infrastructure and the bridge housing delays entirely.**

Human services would receive \$270 million on an annual basis and a total of \$1.5 billion over a five-year period under this scenario. This additional funding could help avoid reductions and delays required in future years of budget shortfalls. The Governor’s 2024-25 budget suggests reductions to several programs intended to stabilize families and foster children.

The budget proposes a \$71 million reduction in the family stabilization program, which offers intensive case management to families in crisis due to mental health issues,

³² “Teacher and Counselor Positions Eligible for Backfilling”, Human Resources Division of Los Angeles Unified School District, <https://www.lausd.org/Page/12010>

³³ Gavin Newsom, “Governor’s Budget Summary 2024-25”, January 10, 2024, <https://ebudget.ca.gov/FullBudgetSummary.pdf>

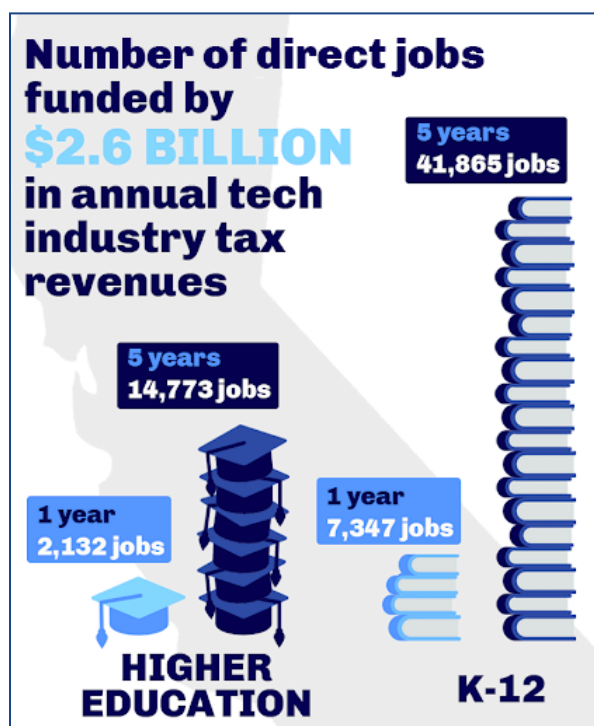
homelessness, domestic violence, substance abuse, and more. **These reductions could be avoided if these additional funds were applied.**

The budget also proposes a \$30 million reduction in funding for the family urgent response system, which provides trauma-informed support for foster children and families³⁴, in addition to a reduction of \$195,000 in funding to help foster children find housing. **Those two reductions combined could have been completely avoided with the use of these extra funds.**

IMPACTS OF CALIFORNIA'S TECH ECONOMY

Next, I examined how the total additional spending on education, health, and human services affects California's economy. Modeling the impact on California's economy from the total additional spending illustrates how this revenue translates into employment opportunities throughout the state. For example, this data allows me to examine how many additional teachers, nurses, and social workers are supported by this spending.

In order to study how additional revenue from tech equity withholding could impact California's economy, I utilized IMPLAN, a standard modeling tool used in regional economics.³⁵ IMPLAN is a regional economic analysis software that is designed to estimate the impact of a given economic activity—in this case, government spending—within a specific geographic area like California. IMPLAN uses an economic modeling technique that tracks the interdependence among industries and household spending.



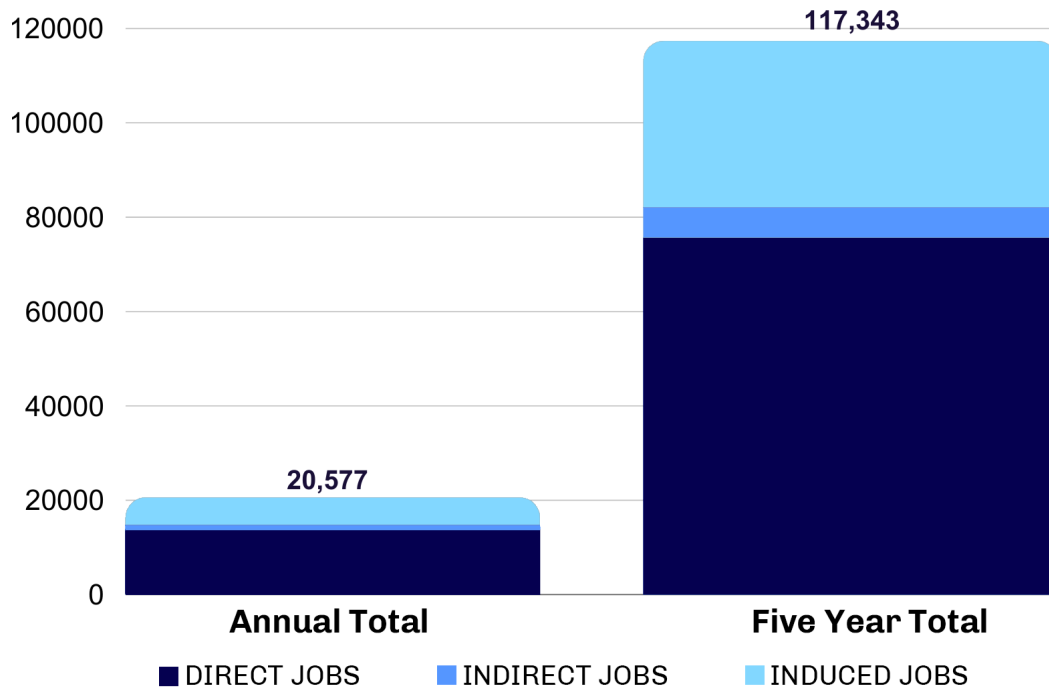
The total additional spending estimates from Figure 5 are used as inputs to the IMPLAN model. The IMPLAN analysis yielded estimated increases in direct, indirect, and induced

³⁴ California Department of Social Services, Family Urgent Response System Flyer, <https://www.cdss.ca.gov/Portals/9/Child-Welfare-Programs/Foster-Care/FURS/FURS-Hotline-Flyer-Adult.pdf>

³⁵ For more information on the IMPLAN modeling process, visit www.IMPLAN.com

employment as a result of the additional spending.³⁶ IMPLAN’s employment measure includes full-time, part-time, and seasonal employment by industry. Figure 6 presents the results for total estimated employment generated by the additional spending for one-year and five-year scenarios.

Figure 6: Estimated Total Employment from Additional Spending



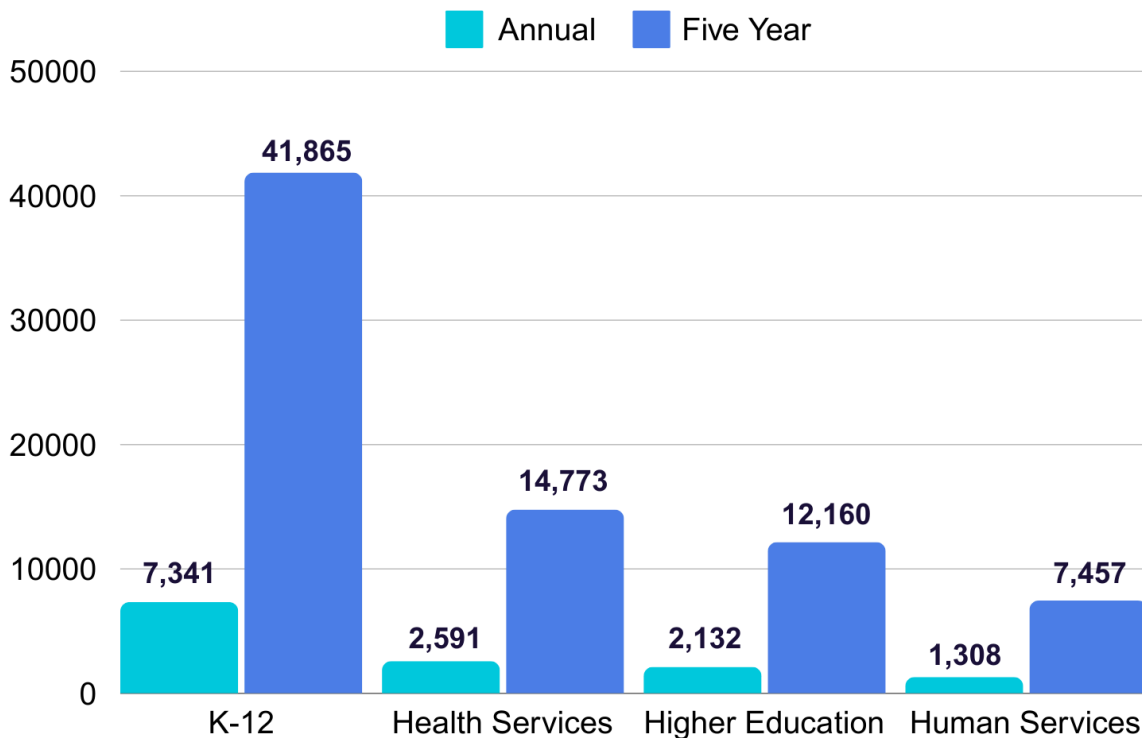
Overall, the additional \$2.6 billion in annual spending is expected to support over 20,000 direct, indirect and induced jobs. Over five years the \$14.3 billion in total spending would support over 117,000 jobs. What types of jobs this funding supports depends on the sector in which the spending takes place: K-12, health services, higher education, or human services. Next, I examine employment results by spending categories.

Direct Impacts to California’s Economy

Figure 7 shows the direct employment effects by spending category. Direct effects are the initial effects to an industry due to the policy being analyzed. For example, a direct employment effect of K-12 spending would be the hiring of additional teachers.

³⁶ The Governor’s Budget Summary provides information on the types of projects each for the category of spending, which I used for modeling within IMPLAN.

Figure 7: Estimated Direct Employment Impact by Spending Category



K-12

K-12 received the most additional spending (\$916 million) under this scenario given that it receives the largest portion of California’s current government spending. **Based on IMPLAN modeling, I estimate that 7,341 jobs could be supported as a direct result of the additional spending in K-12.** Note that this result is very similar to the estimated 7,593 teaching jobs supported by the total additional K-12 investment shown in Table 1. Both results make sense because California would need to hire new teachers and education professionals in order to administer the programs supported by this additional K-12 spending. Since public schools are funded by the state, the direct state spending on K-12 schools will directly impact the number of teachers hired.

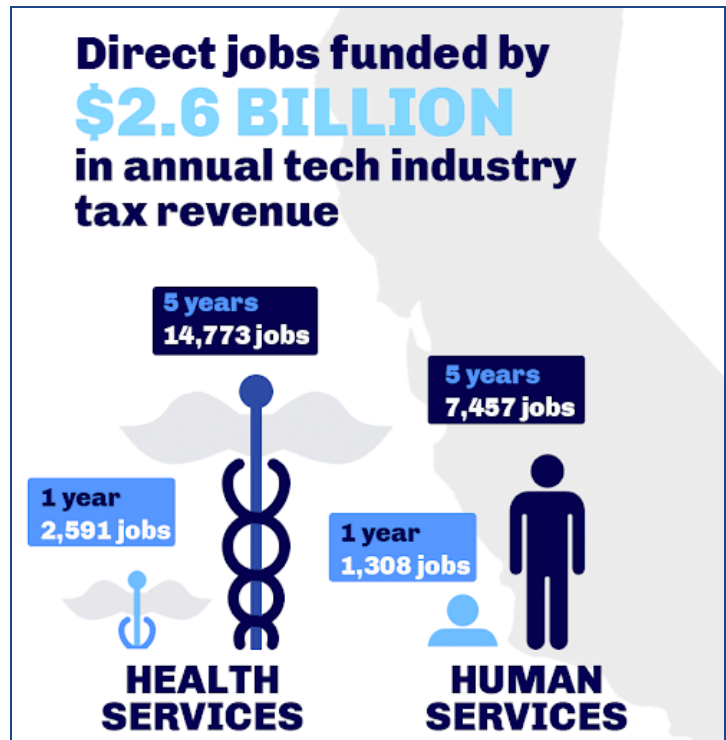
Of the predicted 7,341 jobs supported annually by the additional funding for K-12 schools, **95% of the jobs are in local or state educational facilities or related to transportation needed for students to get to school.**

IMPLAN’s model suggests a **total of 41,865 jobs supported by this spending over a five-year period.** This could be sustained funding of teacher salaries or a combination of teacher salary spending and one-time spending.

Health Services

Health services is the second largest recipient of additional spending with \$614 million allocated annually to this sector under this additional spending scenario. **Overall, 2,591 jobs are directly supported by the additional spending on an annual basis and 14,773 jobs are supported across a five-year period.**

Most of these jobs resulting from the additional spending are located in local or state hospitals or medical facilities. Many of the other jobs resulting directly from spending in this area are spread across services needed to support healthcare facilities, for example, dry-cleaning and laundry services, offices of other health practitioners, and residential health facilities.



Higher Education

Higher education received \$266 million under the scenario I considered. IMPLAN's model predicts **2,132 jobs supported annually as a direct result of spending in higher education. Over a five-year period, I estimate a total of 12,160 jobs supported in California's economy.** Similar to K-12 schools, the vast majority of state funding for higher education (93%) goes towards the payroll of educational professionals at higher education institutions.

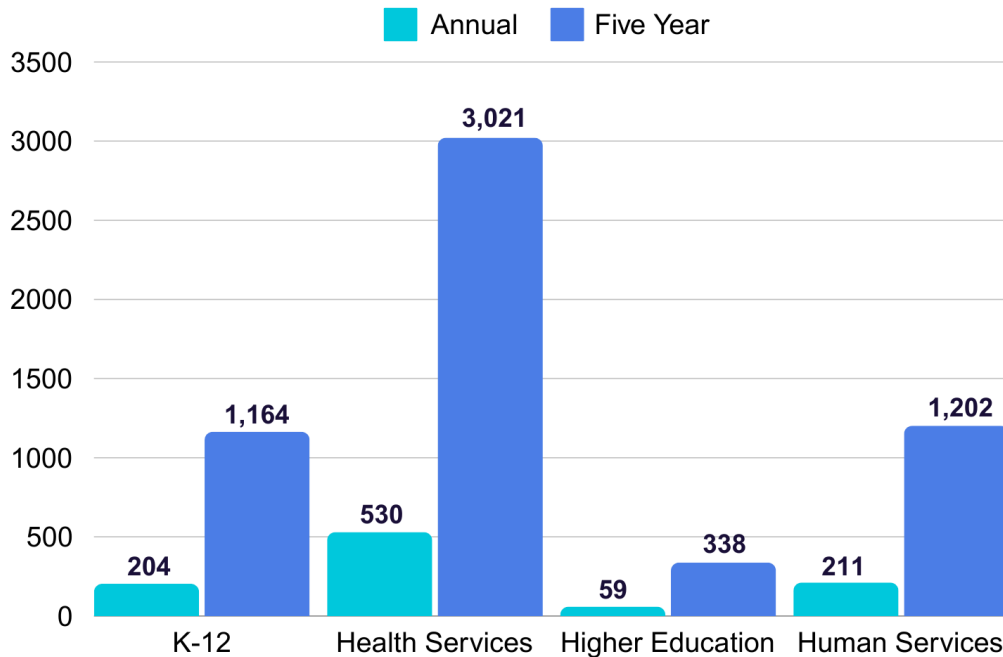
Human Services

Human services received \$270 million under the additional revenue scenario. This spending yielded a total of **1,308 jobs annually as a direct result of the additional spending. Over a five-year period, the spending in human services is expected to support 7,457 jobs in California.** Roughly 66% of the jobs were in human services offered by the government via social safety net programs.

Indirect Impacts to California's Economy

Indirect effects stem from business-to-business transactions in the region as a result of the change in spending. In the K-12 example this could mean purchases of educational software. Figure 8 presents annual and five-year scenario results for indirect effects.

Figure 8: Estimated Indirect Employment Impact by Spending Category



K-12

The indirect effect on employment due to K-12 is small, estimated to be 204 jobs supported annually or 1,164 jobs over a five-year period. Recall that indirect effects result from business-to-business transactions and most of the services required to run schools do not involve outside sales. Instead, teachers and school funding provide most of the required materials. Most of the jobs due to the indirect effect are contract labor and product rentals used to supplement the main offerings of public schools.

Health Services

The additional spending on health services is estimated to generate support for 530 jobs on an annual basis, or 3,021 jobs over a five-year period. Services needed for office administration, including staffing services, rental of office spaces, services to buildings, accounting services, and storage services, make up many of the indirect jobs created by the spending in this category.

Higher Education

There are an estimated 59 jobs supported indirectly on an annual basis by the spending on higher education. These indirect jobs were mostly found in employment services which include staffing agencies and contract labor.

Human Services

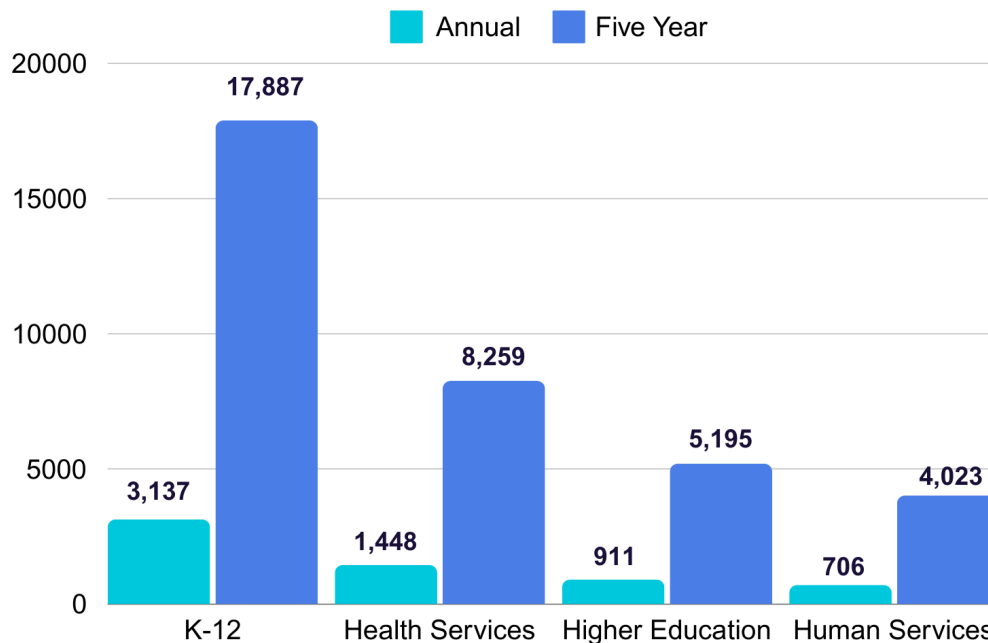
I estimate support for 211 jobs on an annual basis and 1,202 jobs over a five-year period due to the additional spending in the human services sector. The indirect jobs were in industries that complement the government services sector like employment services, couriers and messengers, and services to buildings.

Induced Impacts to California's Economy

Next, I examine the economic impacts induced by changes in household spending stemming from the additional government spending. One example of an induced effect would be the spending by newly hired teachers on household items like clothing.

Figure 9 presents the induced employment effects for each spending category.

Figure 9: Estimated Induced Employment Impact by Spending Category



Since household spending patterns are similar regardless of employment industry, the induced employment results are distributed across similar industries for all spending

areas considered. While the distribution across industries is constant across education, health, and human services spending, the level of employment is not. Instead, the level of employment is correlated with the amount of additional spending that went to each sector. As a result, the highest level of induced employment is seen through K-12, where the most spending took place.

In total, an estimated 6,201 jobs are supported as a result of induced effects from the additional spending. Over a five-year period, induced employment totals 35,364 jobs.

CONCLUSION

Tech employees and companies are valuable sources of revenue for California. Data from major tech companies located in California and California's FTB suggest that tech companies and employees pay at least \$20.4 billion per year in taxes to the state.

Using tax liability growth rates over a five-year period, I estimated that the tech sector's tax liability increases by \$2.6 billion on average per year. This additional income could meaningfully reduce California's budget deficit.

If an additional \$2.6 billion were spent in the same method outlined in the current budget, it could support over 20,000 jobs in California on an annual basis. Additionally, the funding could help avoid planned delays and cuts in 2024-25 to behavioral health services, support for foster children, and support for families needing stabilization due to mental illness, addiction, domestic violence, homelessness, and more.

**EMAIL FROM KRISTIAN STOUT, INTERNATIONAL CENTER
FOR LAW & ECONOMICS
(7/11/24)**

Dear Ms. Reilly,

I hope this message finds you well. I am writing to share with you a recent blog post that Geoffrey Manne and I authored, which I believe provides valuable insights relevant to the California Law Revision Commission's Study of Antitrust Law. The blog post is titled "The WGA's Misguided Fears: Unpacking the Myths of Media Consolidation in the Streaming Era" and is available at the following link: [The WGA's Misguided Fears](#).

In this post, we address several key points:

- **Debunking Myths of Media Consolidation:** We analyze common misconceptions surrounding media consolidation, particularly in the context of the streaming era, and provide data-driven arguments to refute these claims.
- **Economic Implications:** We explore the economic impacts of media consolidation, emphasizing how it can lead to innovation and consumer benefits.
- **WGAW's Concerns:** We specifically respond to the Writers Guild of America West's (WGAW) recent submission, highlighting where we believe their concerns are misplaced and offering an alternative perspective grounded in economic analysis.

Given the recent submission by WGAW to the CLRC, available here: [WGAW Submission](#), we thought it pertinent to share our views to provide a balanced perspective. Additionally, we would like to note that our organization has previously participated in this proceeding. You can view our earlier submission, "Against the Europeanization of California's Antitrust Law," [here](#).

I hope you find our blog post informative and consider it as part of your ongoing study. We are eager to contribute to the Commission's important work and would be happy to discuss any of the points further if needed.

Thank you for your time and consideration.

Best regards,

Kristian Stout
Director of Innovation Policy | International Center for Law & Economics

Marshall Steinbaum

Hello, my name is Marshall Steinbaum. I'm an assistant professor of economics at the University of Utah, and my research concerns the exercise of market power in online and offline labor markets, including by powerful platform intermediaries and dominant franchisors who control their workers and other disempowered subordinates, coordinating economic production to their own benefit while disclaiming responsibility and offloading costs to economic agents less able to carry them. These business models, for which David Weil coined the phrase "fissured workplace," heavily rely on vertical restraints, i.e. control exercised across legal firm boundaries that would once have been the subject of antitrust liability. But since the 1970s, antitrust has retreated from its suspicion of vertical control, reinterpreting domination by powerful actors as economically efficient and therefore immune from law and policy. The idea that the autonomy of independent economic agents was something the law should protect was deemed 'uneconomic' and backward-looking, inviting the economy's most powerful actors to accumulate even more profit and power to themselves.

The single-firm conduct report was therefore in some important ways extremely refreshing: it recognizes the competitive threat of vertical control and seeks to beef up California's antitrust and fair competition laws accordingly. However, I remain concerned that the proposed changes in the report do not go far enough, because they continue to focus solely on the potential for excluding rivals at the same level of the supply chain as the putative violator, while not recognizing the disempowered counterparties themselves as agents whose autonomy the law should protect. That autonomy is indeed necessary to preserve horizontal competition at the same level as the dominant firm, but that is not the sole justification for targeting single-firm conduct. Moreover, inviting rebuttals to findings of anti-competitive effects from single-firm conduct threatens to sneak the old pro-vertical-control consensus back in through the back door, since such rebuttals would likely consist of "our business depends on this conduct," and courts have historically proven credulous to that logic.

Perhaps it would be helpful to give an example: I have studied competition in the rideshare industry extensively, particularly in California where the dominant platforms succeeded in classifying rideshare drivers as independent contractors through Prop 22 (pending the current review by the Supreme Court). The implication of rideshare driver independence is that they ought to be able to contract freely with alternative platforms and use retail price-setting to steer customers to platforms offering better terms. But the rideshare companies do not permit this: they control retail prices directly, and they use de facto exclusivity provisions, as well as algorithmic wage discrimination, to tie drivers to a single platform (at least in the course of any one shift), which permits the platform to charge high take rates, suppresses driver pay, and raises prices for consumers. In a world where drivers are independent contractors, all of this is the proper subject of potential antitrust and unfair competition liability. But I fear the parameters of the single-firm conduct report are too narrow in bringing such liability to bear, because the desideratum would be exclusion of rival platforms, rather than harm to drivers. For example, the platforms practice resale price maintenance, not Most-Favored Nations clauses (to my knowledge). The former has the same economic effect as the latter, i.e. artificially raising the price of putatively third-party transactions, but resale price maintenance in rideshare formally does not pertain to retail prices set by rival rideshare platforms, hence would likely be immunized under the changes proposed in the single-firm conduct report. And the rideshare companies can offer plenty of justification for conduct that harms drivers that a

court might believe, preserving a business model that exploits ambiguity at the boundary of labor and competition law because it exploits ambiguity about the boundary of the firm. The result would be, again pending legal review of Prop 22, that rideshare drivers are deprived of the protections of both labor and antitrust law.

Another example from my work is franchising: dominant national chains bind local franchisee retailers and service providers with a range of vertical restraints that have the effect of focusing their effort on suppressing and exploiting workers, because every other aspect of their business is not actually subject to independent business judgment. For example, franchisees are obligated to source their inventory through expensive exclusive supply contracts that may or may not offer kickbacks to the franchisor, but in any case squeeze the franchisee to the point that they are prone to commit wage theft and other wage-and-hours violations. The single-firm conduct report frames the harm from such arrangements narrowly: the potential to exclude rival franchisors, if franchisees are prohibited from transacting freely with entrants. In fact, my research finds that nearly 100% of franchising chains bind their franchisees with noncompete clauses, meaning that once the franchisees make a fateful choice about which chain to affiliate with, they're locked in for life, and the franchisor can change the terms of the arrangement at will. This isn't only bad for competition with other would-be franchisors, but also for workers, who are often forced to swallow the harm from thin franchisee profit margins.

In conclusion, I urge the commission to consider a wider array of constituents than the single-firm conduct report imagines: workers, small businesses, independent contractors, and a range of other economic actors seeking to earn a living free of the control and domination of the most powerful firms in the economy.

Sheheryar Kaoosji

My name is Sheheryar Kaoosji and I'm the Executive Director of the Warehouse Worker Resource Center, a nonprofit organization based in Ontario, San Bernardino County. We work across Southern California focusing on raising standards among the 250,000 plus workers in the warehouse sector of the region.

You just heard a case of single firm conduct in the case of ride share operators. This conduct is common in the technology field and an area where there are key examples that may not be as far developed but represent a threat of monopolization, in process, that we should be aware of and designing policy to counter.

In particular, the case of Amazon as a dominant market actor in several fronts represents a key site of concern for us. In the past decade Amazon has become the largest private employer in the state and in the warehousing sector of the nation. Over 80,000 people work in Amazon warehouses in the Inland Empire region of California. This creates a labor market dynamic that affects the entire region through several forces, which have grown rapidly, most dramatically in the period 2020-22 when Amazon doubled in size in the region and across the country.

In specific, the same use of misclassification, in particular in the establishment of subcontracted Delivery Service Providers, or DSPs, that provide the bulk of delivery services for Amazon in the gray vans in California, creates a dynamic where DSPs are forced to contract exclusively with Amazon for a slice of work at a local delivery station, at rates and scales of production and delivery that are set by the company with no space for negotiation. In particular these rates make it difficult for DSPs to employ workers at decent wages, and often leads to drivers having to work off the clock loading or waiting in order for the DSP to fulfill their orders at or under cost.

This phenomenon exists in the warehouses themselves as well. Because Amazon does not have to make money on warehousing- in fact it intends not to. Amazon is able to subsidize the development of automation and technology in warehouses through vast amounts of of venture capital as well as profit from its huge Amazon Web Services division, which operates as a web server for approximately a third of the internet, including contracts with private companies like Netflix and Zoom, and public contracts with government agencies from the NLRB to the Department of Defense to the Israeli Defence Force.

This market force allows Amazon to keep its facilities moving fast and with significant technological support, which is good for the company's bottom line but that is not good for human beings who live in the Inland Empire. In particular Amazon's warehouses have a 180% turnover rate every year, with thousands of people flowing through these facilities. Why is the turnover rate so high? Amazon pushes workers to move fast- so fast that they have to keep up with quotas or face potential termination. So fast that the injury rate in Amazon warehouses is double that of non-Amazon sites- up to 18 serious injuries per 100 workers per year at a site in Riverside County, burning through thousands of our neighbors every year, leading to long-term and permanent injuries.

The warehousing and goods movement sector is famously cutthroat and low profit, dependent on contracts set by major retailers with massive market power and the ability to push supplier and service costs down through market power, as illustrated in books like the Wal-Mart effect. The bulk of Amazon product is moved by the company itself, and its warehouses act in direct competition with other warehouse companies. Warehousing and distribution companies bid to move goods for Amazon itself, but Amazon has in the past year also begun an effort to take on freight for other retailers, essentially becoming a third party logistics company itself. This expansion allows Amazon to affect the rest of the goods movement sector through its force as a retail market actor and now through its entry into the third party logistics sector.

The way this plays out in our region is that the other 2/3 of the sector are incentivized to lower their working standards- adopt high rates of work, high turnover employment models and other structures in the Amazon model in order to try to compete with Amazon- usually without the advantage of the high technology and other physical capital that Amazon has because of its access to venture capital and revenues from other business lines. This horizontal integration has moved Amazon to having 0 employees in California in 2011 to being our largest private

employer now- one that has a massive effect on the working class of the state and shows no sign of slowing down its growth.