Estimates of Potential Harm to U.S. Small and Medium-Sized Businesses from Proposed Abuse-of-Dominance Antitrust Legislation Aimed at Large Digital Platforms

John T. Scott, Dartmouth College

Technical Report

January 2024

DATA CATALYST INSTITUTE

Overview

For over a century, U.S. competition law has focused on protecting consumers from specific harms that result from a lack of marketplace competition: higher prices, fewer choices, declining service, and less innovation. Recently, some U.S. policymakers have tried to adopt a more "European-style" approach to competition that focuses less on consumer harm and more on the competition between businesses. This report uses a bespoke economic model to estimate that if European-style competition concepts, also called "abuse of dominance" (AOD), become law in the U.S., it could cost small and medium-sized businesses (SMBs) more than $600 billion in lost sales revenue annually.

State policymakers are considering AOD bills in response to the success of America's leading digital platforms, including Amazon's online marketplace, Google's search and advertising platforms and app store business, Meta's Facebook, and Apple's app stores. These bills would, among other things, make it illegal for these platforms, or any platform that meets an arbitrary definition of "dominant," to engage in any practices that harm competitors, including practices that benefit consumers, such as lowering prices or improving security.

The model estimated the harm to SMBs from the disruption of digital online marketplaces, digital advertising, and other digital tools that SMBs use to run and grow their businesses. First, we modeled a "heavy" scenario where AOD becomes the de facto standard for U.S. competition law nationwide, following several states passing such a law, and companies implement the standards nationwide (similar to automobile emissions standards) or if the federal government passes a similar law. Under this scenario, for the SMBs selling physical goods, nationwide SMB revenue losses are estimated to total $670 billion annually, translating into an average sales loss of $14,000 per month per U.S. SMB in the manufacturing, wholesale trade, and retail trade sectors.

We also modeled more limited scenarios in which, for example, AOD becomes law in only New York (which has recently considered such legislation) and found that the harm to SMB revenue both in-state and in other states is still significant. For example, AOD laws would reduce NY-based SMB sales by $41 billion annually and SMB sales in other states (because of interstate commerce) by another $19.9 billion annually, for a total harm of $60.9 billion per year, or an average of $1,270 per month per U.S. SMB.

Lawmakers at all levels of government should strongly consider the wide-ranging economic implications of a potential European-style revision of longstanding U.S. antitrust law.

Executive Summary

Several U.S. states are currently considering antitrust legislation that abandons the long-held, objective, and empirical "consumer welfare standard" for assessing alleged monopolization and adopts a vague "abuse of dominance" standard. While the details of various states' bills differ somewhat, at the core, under such legislation, it would become illegal for a company to (a) obtain a "dominant position" in a market, which would be presumed to exist when a company reaches an arbitrary and below-majority market share, and (b) "abuse" such a dominant position, where "abuse" is defined very broadly, often in vague and speculative ways.

State legislators promoting such bills understandably wish to help the business community by preventing dominant companies from reducing competition. But as written, these proposed laws will likely have a disproportionately negative impact on small and medium-sized businesses (SMBs) by creating arbitrary, vague, and confusing state business environments that will surely cause companies—that could under AOD law be perceived as dominant and abusing their dominance—to avoid providing services to SMBs in the states with AOD laws. Even SMBs could be perceived as dominant in local or regional niche markets. Moreover, in states with AOD laws, both SMBs as well as the companies they rely on for business services may choose to incur the costs of relocating to states without AOD laws. This report uses a bespoke economic model to estimate the harm to SMB sales revenue due to "abuse of dominance" (AOD) bills becoming law in one or more states, presumably disrupting popular digital tools, platforms, and marketplaces that SMBs rely on to communicate, advertise, sell, and fulfill orders.

State-level AOD legislation considered during 2023

State	Bill	Intro Date	Bill Information
NJ	S3778	May 2023	Amends "New Jersey Antitrust Act" to make monopsony illegal and regulate entity in dominant position in market
NY	S6748	May 2023	Relates to actions or practices that establish or maintain a monopoly, monopsony or restraint of trade, and authorizes a class action lawsuit in the state anti-trust law
ME	No. 1815	April 2023	An Act to Protect Maine's Consumers by Establishing an Abuse of Dominance Right of Action and Requiring Notification of Mergers
MN	HF 1563	Feb 2023	A bill for an act relating to trade regulations; prohibiting abuse of dominance

There are several reasons that AOD laws would cause harm for SMBs. The AOD laws (1) would disrupt digital platform services that SMBs rely on for digital online marketplaces, digital advertising, and other online business tools, (2) would disrupt markets for technology acquisition on which SMBs rely to ensure a return on R&D investment, (3) would create uncertainty for SMBs about anticipated returns from investments in sales, product development, and marketing, and (4) would cause SMBs to face significant costs of dealing with the disruptions and uncertainty. Those costs for SMBs are especially significant in states that pass AOD laws, but because of interstate commerce, SMBs in other states would also incur costs.

For each state where an AOD law is modeled, there are "direct" effects on SMBs based within that state and "indirect effects" on SMBs based outside the state but doing business in it (i.e., interstate commerce). Thus, an AOD law passed in, say, New York, harms New York-based SMBs directly, and can also harm businesses in Connecticut or Massachusetts indirectly. To some degree, but not entirely, this is a function of geography, as states close to each other tend to transact more commerce with each other).

This report describes conservative estimates of harm to U.S. SMB sales in dollars. We modeled three scenarios: (1) AOD laws take effect in a single state ("lite" scenario) - for which we individually modeled the states of New Jersey, New York, Maine, and Minnesota, which have considered AOD legislation in the last year; (2) a "domino effect" scenario in which AOD becomes law in one of the above states and quickly spreads to the other states currently considering the legislation ("medium"); and (3) AOD de facto becomes the national standard either because it becomes widespread enough that national and international companies are forced to use it as the standard, and/or it eventually is enforced at a federal level ("heavy").

Nationwide harm to U.S. SMBs from an AOD competition standard

In a "heavy" scenario, where the U.S. effectively shifts to a national AOD standard, for the U.S. manufacturing, wholesale trade, and retail trade sectors, the total harm to U.S. SMBs as measured by lost sales per year is estimated to be $670 billion, or roughly $14,000 per SMB monthly, on average.

That said, under any scenario of AOD laws being passed, the estimated harm to SMBs is substantial. For example, in the "lite" scenario of only New York state becoming an AOD jurisdiction (third column, below), the estimated total annual harm to U.S. SMBs is $60.9 billion, or an average of $1,270 in monthly sales revenue harm. Moreover, this is the average across all U.S. SMBs, and as seen just below in the analysis of state-by-state harm to SMBs, the average harm to the SMBs in New York state would $13,000 per New York SMB per month—an order of magnitude greater than the U.S. average. Local SMBs are disproportionately affected when their own state has an AOD law. For the SMBs within a state with an AOD law, the damage caused is

local, not simply a matter of costs of dealing in interstate commerce with other states with AOD laws, but instead the costs are imposed by their own state's law.

Under the "medium" scenario of these four states all passing AOD legislation in a "domino effect," the total harm to U.S. SMBs is estimated to be $113.4 billion annually or an average of $2,400 per SMB per month.

Estimated annual harm in dollars to nationwide U.S. SMB sales under AOD scenarios.

	Lite – NJ	Lite - NY	Lite – ME	Lite – MN	Medium	Heavy
Total annual harm	$34.2 B	$60.9 B	$5.1 B	$21.5 B	$113.4 B	$670 B
Direct harm	$21.1 B	$41.0 B	$3.45 B	$15.3 B	$80.8 B	$670 B
Indirect harm	$13.1 B	$19.9 B	$1.65 B	$6.2 B	$32.6 B	N/A
Avg. annual harm per SMB	$8,550	$15,230	$1,280	$5,380	$28,350	$167,500
Avg. monthly harm per SMB	$710	$1,270	$110	$450	$2,400	$14,000

Direct harm is harm to SMBs within the state(s) where AOD becomes law. Indirect harm is harm to SMBs in states outside AOD jurisdictions. The effects of different "lite" scenarios vary depending on the economics of the state that passes AOD into law. The "medium" scenario is one in which all four state bills become law.

State-by-state harm to SMBs from an AOD competition standard

We can also measure harm to SMBs under AOD scenarios on a state-by-state basis. Harm is greater for non-AOD jurisdiction states if there are substantial sales from those states to AOD jurisdiction states, as those sales become subject to the AOD standard. Thus, the harm per SMB varies largely across the states, with the greatest harm being to SMBs in states where AOD legislation would be enacted, but also with substantial harm for SMBs in other states that have substantial sales to states with AOD legislation.

We present two examples below. First, we consider the case of New York, which is considering its own AOD law (direct harm) and can also be affected by other states passing AOD laws to the extent that New York-based SMBs do business in those other states (indirect harm).[1] The model estimates that if New York passed an AOD bill, the direct harm to New York-based SMBs would

be $41 billion in annual lost sales, or $13,000 per New York SMB per month on average. Under a different scenario in which New York did not pass such legislation but its neighbor New Jersey did, New York-based SMBs would still experience $3.5 billion in annual reduced sales, or an average of $1,110 per NY SMB per month, due to interstate commerce. The effects on New York-based SMBs from Maine and Minnesota AOD legislation are estimated to be smaller because of relatively less trade between New York and those states.

Estimated annual harm in dollars to New York SMB sales under AOD scenarios.

	Lite – NJ	Lite - NY	Lite - ME	Lite - MN	Medium	Heavy
Total annual harm	$3.5 B	$41.0 B	$0.15 B	$0.20 B	$41.0 B	$41.0 B
Direct harm	N/A	$41.0 B	N/A	N/A	$41.0 B	$41.0 B
Indirect harm	$3.5 B	N/A	$0.15 B	$0.20 B	N/A	N/A
Avg. annual harm per SMB	$13,340	$155,600	$570	$760	$155,600	$155,600
Avg. monthly harm per SMB	$1,110	$13,000	$50	$60	$13,000	$13,000

Direct harm is harm to SMBs within the state(s) where AOD becomes law. Indirect harm is harm to SMBs in states outside AOD jurisdictions. The effects of different "lite" scenarios vary depending on the economics of the state that passes AOD into law. The "medium" scenario is one in which all four state bills become law.

As a second example, we consider Connecticut, which is not currently considering AOD laws but whose SMBs would be harmed indirectly through other states' AOD laws. Here, the model estimates that a New York AOD law would indirectly harm Connecticut-based SMBs to the tune of $1.7 billion a year, or an average of $3,500 per Connecticut SMB per month. The effects from other states (New Jersey, Maine, Minnesota) are smaller but would still be noticeable to a typical SMB owner. The harm to Connecticut-based SMBs in a "heavy" scenario (national AOD standard) is estimated to be $8.6 billion, or an average of $17,500 per Connecticut SMB per month. As can be seen in the table, all of the sales harm to CT-based SMBs is indirect (i.e., caused by other states' AOD laws), except in the "heavy" scenario in which every state has AOD laws, including CT.

Complete estimates of SMB harm in the form of lost sales revenue state-by-state (50 states plus DC) across all AOD scenarios can be found in the Technical Appendix to this report.

Estimated annual harm in dollars to Connecticut SMB sales under AOD scenarios.

	Lite – NJ	Lite - NY	Lite - ME	Lite - MN	Medium	Heavy
Total annual harm	$0.4 B	$1.7 B	$0.07 B	$0.05 B	$2.2 B	$8.6 B
Direct harm	N/A	N/A	N/A	N/A	N/A	$8.6 B
Indirect harm	$0.4 B	$1.7 B	$0.07 B	$0.05 B	$2.2 B	N/A
Avg. annual harm per SMB	$9,300	$41,700	$1,800	$1,150	$54,000	$210,000
Avg. monthly harm per SMB	$780	$3,500	$150	$100	$4,500	$17,500

Direct harm is harm to SMBs within the state(s) where AOD becomes law. Indirect harm is harm to SMBs in states outside AOD jurisdictions. The effects of different "lite" scenarios vary depending on the economics of the state that passes AOD into law. The "medium" scenario is one in which all four state bills become law.

Conclusion

Considered against the backdrop of decades of precedent of well-developed law about monopolization as proscribed by the Sherman Act and elsewhere, AOD legislation leaves the definition of "dominance" up to state law enforcement and defines behaviors as "abuse" where other reasonable minds might define them as promoting efficiency and creating value for users of a popular business' services. In sum, AOD legislation, should it become law in one or more U.S. states, could actually harm successful, efficient, and innovative small firms that use digital platforms and tools to sell physical goods. Based on this report's findings, lawmakers at every level of government should abandon consideration of European-style legislation that would have such serious negative economic consequences for small businesses across America.

Introduction

Several U.S. state legislatures have recently considered European-influenced "abuse of dominance" (AOD) antitrust legislation. This legislation parallels proposed Congressional antitrust legislation aimed at large digital platforms and also parallels new directions in national-level antitrust enforcement actions. Just during 2023, state legislatures in New York, Minnesota, Maine, and New Jersey have proposed AOD legislation[2], and such legislation is likely to be proposed in other states, for example, in California.[3]

Various experts have had concerns about the negative effects of European-influenced antitrust law on the SMBs that comprise much of the U.S. private sector economy. For example, Miller (2023) specifically analyzed New York's proposed AOD legislation - which has been the closest to becoming law - and provided a detailed list of how and why the legislation would harm businesses of various sizes. In a separate publication, the Data Catalyst Institute (DCI) (June 2023) outlined the major problems that SMBs would face following the enactment of AOD legislation in U.S. states. DCI (June 2023) concludes that the AOD legislation would harm SMBs because the bills would create uncertainty and "…will have a range of economic consequences, including hindering the ability to raise capital, attract and hire talent, and reduce entrepreneurship, job creation, and economic growth. Ultimately, the effect would be to harm AOD state economies in the global marketplace."

In August 2023, DCI published a read-out from its assembling a "Working Group" of experts in antitrust law and economics who discussed state-level AOD legislation and its implications for SMBs.[4] An important reason for the emergence of the proposed AOD legislation at the state level is the belief by the supporters of the proposals that, because of the way the federal courts have interpreted the statutes, federal antitrust law has not produced sufficiently aggressive action against monopoly and monopsony power of dominant firms. Federal antitrust policy evolves from the combination of three key things: the statute (for governing the behavior of dominant firms, primarily Section 2 of the Sherman Act), the enforcement actions (that could be filed by private parties, by the states' attorneys general, or by the U.S. Department of Justice and the Federal Trade Commission), and finally, the interpretation of the U.S. courts, with the controlling interpretation coming from the U.S. Supreme Court.

Philosophically, federal case law aims to avoid "false positives" (finding an antitrust violation when none exists and thereby inhibiting efficient behavior by a dominant firm). In contrast, newly emerging state-level AOD legislation implicitly places more weight on avoiding "false negatives" (finding there is no antitrust violation when, in fact, the behavior is anticompetitive). To this point, consider the following statement in New York's proposed AOD legislation: "The [New York state] legislature further finds and declares that effective enforcement against unilateral anti-competitive conduct has been impeded by courts, for example, applying narrow definitions of

monopolies and monopolization, limiting the scope of unilateral conduct covered by the federal anti-trust laws, and unreasonably heightening the legal standards that plaintiffs and government enforcers must overcome to establish violations of those laws."[5]

Across states, the proposed AOD legislation embodies an approach to antitrust law akin to European Union (EU) competition policies. As Fox (2014) explains, U.S. antitrust case law sets a very high bar for a plaintiff alleging that a firm's behavior is an abuse of dominance, while EU law makes it much more likely that the behavior of a firm will be found to be an abuse of dominance.

However, the proposed AOD laws at the state level, while akin to the EU approach, do not incorporate the controls—including an effects-based analysis—provided by the well-developed, established institutional framework grounded in the needs and perspectives of the European Union's history. The state-level AOD legislation, with vague, uncertainty-creating pronouncements about abuse of dominance, may share with EU law concerns about a level playing field for all firms and fairness and efficiency. However, the U.S. states proposing AOD legislation do not have the institutional history of case law that has been developed before the European Court of Justice.[6]

Moreover, the decisions by states' attorneys general about the meaning of abuse of dominance in their states' AOD legislation would not have the shared decision-making quality of the EU framework with the interplay among the Directorate General for Competition of the European Commission, supervised by its commissioner and responsible for the EU competition cases, the European Parliament, and the European Commission and its president, and the European Court of Justice.[7]

The state-level AOD legislation, as currently proposed, clearly does not agree with current U.S. law, differing from the federal statute law and the interpretation of that law in the U.S. courts. As discussed in the DCI Working Group on this topic, New York and other states proposing AOD antitrust legislation are drawing on EU law, but the proposed state AOD laws go beyond the EU approach, which—although emphasizing fairness, lower barriers to entry, and level playing fields in addition to efficiency and innovation—entails an effect-based analysis, essentially similar in that regard to rule of reason analysis in federal case law.

The state-level AOD proposals roll antitrust back to the U.S. courts' interpretations of antitrust statutes during what Fox (2023) refers to as "the pro-little-guy, anti-concentration model of the Warren Court in the 1960s" before the dramatic shift in the courts' interpretations that have emphasized the economic efficiency possibilities for the behavior that the proposed AOD legislation sees as abuse of dominance. So, these new AOD laws go further than Article 102 of the EU Treaty because they take away the discipline of effect-based analysis.

Summarizing, the state AOD proposals will not perform as well as EU AOD law: The state AOD proposals lack the institutional context—including case law—of the EU, and thus are expected to have much worse economic outcomes than EU AOD law. The proposed state AOD laws do not allow for the effects-based analysis that is used in EU case law, and instead simply (overly so) declare abuse for circumstances defined broadly, often in vague and speculative ways. It is important to understand that state AOD proposals will not perform as well as EU AOD law. Without that understanding, some people might erroneously think, "Well it couldn't be too much of a disaster if it would be the same results as in the EU."

There is an additional institutional detail distinguishing EU competition policy and proposed state AOD laws that is expected to make the proposed state AOD laws costly for businesses and ultimately their customers to whom higher costs are passed. The EU policy does not entail class actions in the same way that the state-level proposed AOD laws make AOD a cause for actions.[8] While there aren't EU-wide collective actions, they do occur in member states, most notably the Netherlands (and in former EU member UK), and can be brought based on abuse of dominance. However, they generally are brought only where a government enforcer already has established the fact of an abuse, so the plaintiffs' lawyer only has to show the level of damages. Under state AOD laws, the class action lawsuits would not be so restricted. Notably, as observed in DCI's Working Group, the proposed New York statute introduces the element of class action lawyers who will inevitably bring frivolous claims emanating from a statute that is vague and from which the attorney general can define cases of AOD and promulgate rules in which decisions become binding after just 60 days of legislative review, public comment, and time to deny the rules.[9]

Under these conditions, to paraphrase one DCI Working Group expert, "I'd move somewhere else if I were a business in New York starting up…in this environment, big or small, I'd expect businesses to decide to take their business elsewhere." The tech sector is clearly a target of the new AOD legislation, which is especially important because of the application of the AOD legislation to acquisitions. More than 90% of the startups that succeed exit via acquisition. So, startups will simply move outside AOD states to have a chance at being acquired.

The DCI Working Group also discussed several other issues relevant to understanding the emergence of state-level AOD legislation and its impacts. Those additional issues included (a) the connections between efficiency (especially non-dominant firms' roles in innovation and dynamic efficiency) and the concerns about fairness, level playing fields, and access of nondominant firms to markets, and (b) the elastic or multiple-definitions aspect of the "consumer welfare standard" (on this, see Fox (2023)) for evaluating antitrust issues, and its inclusion, at least in some of its incarnations, of innovation and dynamic efficiency as well as static efficiency; (c) in addition to the economic concerns about Big Tech such as efficiency implications of self-preferencing by digital-platform firms, the noneconomic concerns (such as addiction, privacy, and "social poisoning") that require legislation other than new antitrust legislation. These noneconomic issues have played a role in the support for proposed AOD legislation that clearly targets the dominant firms providing digital platform services.

The wide-ranging DCI Working Group discussion identified two key problems with state-level AOD legislation that imply the need for estimates of harm developed in this technical report:

> (1) A lack of any development of understanding of the effects of behavior that the legislation would proscribe as abuses of dominance;[10] and
>
> (2) A patchwork of state AOD antitrust laws, with the lack of uniformity across states disrupting commerce. Some states would have such laws while others would not, and the various AOD laws would be applied differently in general and with respect to targeting particular sectors. The situation would not promote a level playing field or easy entry and operation of businesses across the states.[11]

The potential harm to SMBs posed by the proposed AOD legislation comes because the legislation enumerates direct and indirect evidence of dominance and enumerates behavior that could imply abuse of dominance that could very well describe the most innovative, entrepreneurial SMBs that have surged ahead of the competition because of innovating — whether with a better product, or lower costs, or better management. Moreover, what the legislation enumerates as evidence of dominance and as behavior indicating abuse of dominance could also describe the behavior of large firms that provide helpful, supportive services that enable the success of SMBs. The upshot is that when confronted by these proposed state AOD laws, efficient firms, small and large, would be expected to change their behavior—including deciding not to do business in the states with such laws—to avoid being caught in the snare of the laws.

Key Results

Overview of Conservative Estimates of Harm to SMBs

This technical report provides conservative dollar estimates of the potential harm for U.S. SMB sellers/retailers (technically, for the purposes of this analysis, those ~4 million SMBs classified in the manufacturing, wholesale trade, and retail trade sectors) if a patchwork of state-level AOD legislation becomes law. Three scenarios were modeled; the first scenario having four variations: (1) AOD laws take effect in a single state ("lite" scenario); (2) a "domino effect" in which AOD becomes law in one state and quickly spreads to other states considering the legislation ("medium"); (3) AOD de facto becomes the national standard either because it becomes widespread enough that national and international companies are forced to use it as the standard, and/or it eventually is enforced at a national level ("heavy").

The report provides estimates of the harm to SMB sales stemming from AOD bills becoming law in one or more states, which we predict to disrupt popular digital tools, platforms, and marketplaces that SMBs rely on. It is important to note that for each state where AOD law is modeled, there are "direct" effects on SMBs based within that state and "indirect effects" on SMBs based outside the state but doing business in it; thus, an AOD law passed in, say, New York, can also harm businesses in Connecticut or Massachusetts.

Nationwide harm to U.S. SMBs from an AOD competition standard

First, for the SMBs in the U.S. manufacturing, wholesale trade, and retail trade sectors, we investigated the harm to all U.S. SMBs across several scenarios. For the conservative assumptions used, in a "heavy" scenario in which the U.S. shifts to a national AOD standard, the total harm to U.S. SMBs, as measured by lost sales per year, is estimated to be $670 billion or an average of $14,000 per SMB per month.

Under the "medium" scenario in which the four states where the AOD legislation has been prominently proposed (New York, Minnesota, Maine, and New Jersey) all pass it into law (which, for example, could happen because of a "domino effect" in which one state passes it and that creates momentum for the others to do so, too), the harm to U.S. SMBs sales revenue is estimated to have a lower bound of $113.4 billion per year, with $80.8 billion from "direct" effects on the four states themselves, and an additional $32.6 billion in "indirect effects" from SMBs based in other states but conducting commerce within the boundaries of the four states. This harm is an average of $2,400 per month per SMB nationwide.

Estimated annual harm in dollars to nationwide U.S. SMB sales under AOD scenarios.

	Lite – NJ	Lite - NY	Lite – ME	Lite – MN	Medium	Heavy
Total annual harm	$34.2 B	$60.9 B	$5.1 B	$21.5 B	$113.4 B	$670 B
Direct harm	$21.1 B	$41.0 B	$3.45 B	$15.3 B	$80.8 B	$670 B
Indirect harm	$13.1 B	$19.9 B	$1.65 B	$6.2 B	$32.6 B	N/A
Avg. annual harm per SMB	$8,550	$15,230	$1,280	$5,380	$28,350	$167,500
Avg. monthly harm per SMB	$710	$1,270	$110	$450	$2,400	$14,000

Direct harm is harm to SMBs within the state(s) where AOD becomes law. Indirect harm is harm to SMBs in states outside AOD jurisdictions. The effects of different "lite" scenarios vary depending on the economics of the state that passes AOD into law. The "medium" scenario is one in which all four state bills become law.

Under any scenario of AOD laws being passed, the estimated harm to SMB sales revenue is substantial. Take the "lite" scenario of just New York state becoming an AOD jurisdiction - the estimated total harm to U.S. SMBs is $60.9 billion annually. This amounts to $15,230 in potential annual harm per SMB or $1,270 monthly.

State-by-state harm to U.S. SMBs from an AOD competition standard

We also investigated sales harm to SMBs for several AOD scenarios on a state-by-state basis. Consider the case of New York, which is considering its own AOD law and can also be affected by other states passing AOD laws. For a state, such as New York in this example, that passes its own AOD law, all of the state's SMB sales, whether sold to customers in other states or not, are exposed to the harm of AOD law, and so the state's total annual harm, direct harm, and hence harm per SMB will be the same for the Heavy and Medium (when it is among the AOD states) scenarios and for the Lite scenario when it is the state with AOD law.

Estimated annual harm in dollars to New York SMB sales under AOD scenarios.

	Lite – NJ	Lite - NY	Lite - ME	Lite - MN	Medium	Heavy
Total annual harm	$3.5 B	$41.0 B	$0.15 B	$0.20 B	$41.0 B	$41.0 B
Direct harm	N/A	$41.0 B	N/A	N/A	$41.0 B	$41.0 B
Indirect harm	$3.5 B	N/A	$0.15 B	$0.20 B	N/A	N/A
Avg. annual harm per SMB	$13,340	$155,600	$570	$760	$155,600	$155,600
Avg. monthly harm per SMB	$1,110	$13,000	$50	$60	$13,000	$13,000

Direct harm is harm to SMBs within the state(s) where AOD becomes law. Indirect harm is harm to SMBs in states outside AOD jurisdictions. The effects of different "lite" scenarios vary depending on the economics of the state that passes AOD into law. The "medium" scenario is one in which all four state bills become law.

However, even in states without AOD legislation, when the states' businesses have substantial sales in the states with AOD legislation, the states' business sales would be exposed to substantial harm by AOD legislation. Consider Connecticut, a state like Alabama without pending AOD legislation, and a state that the report shows would face similar potential harm if the U.S. Congress enacted national-level AOD legislation. The noteworthy difference between Connecticut and Alabama is that Connecticut has a substantial amount of business sales to customers in New York, and so those sales would be exposed to harm from New York's AOD legislation if it were enacted. As a result, as shown in the report, for the scenario in which just New York, Minnesota, Maine, and New Jersey enact AOD antitrust laws (the NY-MN-ME-NJ scenario), the estimated potential annual harm per SMB in manufacturing, wholesale trade, or retail trade in Connecticut is about $54,000 annually or $4,500 monthly.

There is a large variance across the states in the harm per SMB, with the greatest harm coming for states where AOD legislation would be enacted, but also with substantial harm for states, like Connecticut in the foregoing discussion, that have substantial sales to states with AOD legislation. With the patchwork of state-level AOD legislation, in the estimation of harm, most states have neither AOD legislation nor substantial sales to the states that do. Consequently, on average, for the roughly 4 million SMBs in the U.S. manufacturing, wholesale trade, and retail trade sectors, the estimated average annual harm per SMB is relatively (in comparison with the harm per SMB in the AOD-legislation states) low—$28,350 in 2021 dollars ($113.4 billion/4 million SMBs = $28,350 per SMB).

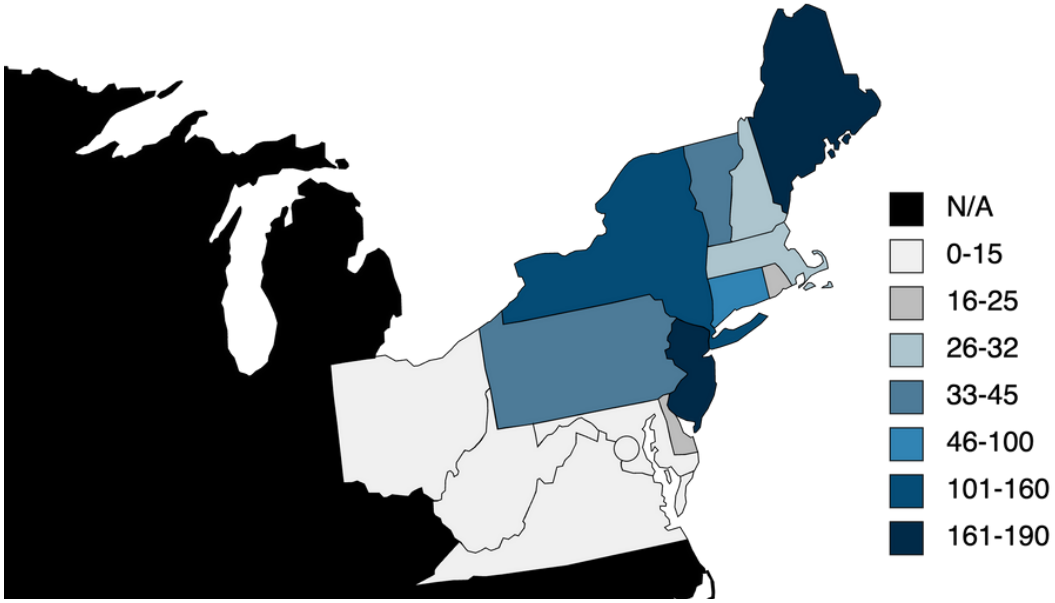
Estimated annual harm in dollars to Connecticut SMB sales under AOD scenarios.

	Lite – NJ	Lite - NY	Lite - ME	Lite - MN	Medium	Heavy
Total annual harm	$0.4 B	$1.7 B	$0.07 B	$0.05 B	$2.2 B	$8.6 B
Direct harm	N/A	N/A	N/A	N/A	N/A	$8.6 B
Indirect harm	$0.4 B	$1.7 B	$0.07 B	$0.05 B	$2.2 B	N/A
Avg. annual harm per SMB	$9,300	$41,700	$1,800	$1,150	$54,000	$210,000
Avg. monthly harm per SMB	$780	$3,500	$150	$100	$4,500	$17,500

Direct harm is harm to SMBs within the state(s) where AOD becomes law. Indirect harm is harm to SMBs in states outside AOD jurisdictions. The effects of different "lite" scenarios vary depending on the economics of the state that passes AOD into law. The "medium" scenario is one in which all four state bills become law.

For the NY-MN-ME-NJ "medium" scenario, Figure 1 visually illustrates how the harm would be greater for states, like New York, Maine, and New Jersey, that enact AOD legislation. The figure also shows the harm is greater for non-AOD-legislation states if, like Connecticut, there are substantial sales to AOD-legislation states. Figure 1 shows the collection of states, including New York, Maine, and New Jersey, along with surrounding states, with the intensity of the color increasing as the annual harm per SMB increases. The harm is greatest in the AOD-legislation states, New York, Maine, and New Jersey, but is also substantial for Connecticut and the other states bordering those states and having substantial sales to customers in the AOD-legislation states.

Figure 1. Annual Harm per SMB in Manufacturing, Wholesale Trade, and Retail Trade in New York, Maine, New Jersey, and Surrounding States



Legend: Thousands of 2021 dollars; Source: Author's construction.

Nationwide harm to U.S. SMBs from an AOD competition standard in California, New York, Minnesota, Maine, and New Jersey ("medium plus" scenario)

To provide an understanding of how the estimates of potential harm would change if there were additional states that enacted AOD legislation, the report also develops the estimates if California's Law Revision Commission concludes that the state should revise its law to include AOD antitrust proscriptions and that California, as well as New York, Minnesota, Maine, and New Jersey, enacts AOD legislation ("medium-plus"). If California proposes and passes AOD legislation, joining the other four, the estimated U.S. total annual harm is $212 billion. This is almost double the "medium" scenario because California has such a large state economy and because other states have such a large volume of sales in California.

Extended analysis and results detailing SMB harm from AOD laws

Results showing harm in lost sales revenue for SMBs based in each of the 50 U.S. states plus the District of Columbia, under all four "lite" scenarios, the "medium" and "medium plus" scenarios, and the "heavy" scenario, are available in the Technical Appendix to this report.

Methodology

Outlining a 14-step Approach to Estimate Harm to SMBs

This technical report uses a 14-step approach to create the foregoing estimates and comparable estimates for all 50 U.S. states and the District of Columbia. The report explains why the estimates are a very conservative lower bound for the harm to SMBs that state legislatures' AOD legislation would cause. For this introduction, a brief statement describing each of the 14 steps follows. Then, in the sections of the report following the introduction, each of the 14 steps is presented in detail.

Step 1. Digital Marketplaces and Digital Advertising Contributions to U.S. Physical Goods Creation and Sales. Over the first two decades of the new millennium, Step 1 estimates a model of U.S. physical goods creation and sales (the sum of the sales for all of the industries in the U.S. manufacturing, wholesale trade, and retail trade sectors) that identifies the contributions to sales of (a) the buildout of the Internet during the ICT revolution, (b) digital advertising, and (c) R&D investment.

Step 2. Annual Digital-Marketplace-Enabled Sales at Risk Estimate if the U.S. Congress Enacted National AOD Legislation. Step 2 uses the model in Step 1 to estimate the annual digital-marketplace-enabled sales at risk if the U.S. Congress enacted national AOD legislation—i.e., legislation from the U.S. Congress that would affect the business sales in each of the 50 states and the District of Columbia.

Step 3. The Lost Proportion of Digital-Marketplace-Enabled Sales at Risk. For Step 2 at-risk sales enabled by digital marketplaces and related services (other than digital advertising services addressed separately in subsequent steps) provided by digital platforms, Step 3 uses the stock-market reaction to key legislative events in the U.S. Congress to estimate the proportion of the sales at risk that would be lost because of national-level AOD legislation.

Step 4. The Annual Harm to U.S. Physical Goods Creation and Sales from Disruption of Digital Marketplace Services and Other Digital Tools. Step 4 estimates the total annual harm to U.S. business sales because national AOD legislation disrupts digital marketplaces and related services. That estimate is the proportion in Step 3 multiplied by the sales at risk estimated in Step 2.

Step 5. The Annual Harm to U.S. SMBs' Physical Goods Creation and Sales from Disruption of Digital Marketplace Services and Other Digital Tools. Step 5 estimates the total annual harm to

business sales of U.S. SMBs because of AOD legislation disrupting digital marketplaces and related services. That estimate is the Step-4 total digital-marketplace-related harm to U.S. business sales multiplied by the SMB share of U.S. physical goods creation and sales.

Step 6. Estimate of Annual Digital-Advertising-Induced Sales at Risk if the U.S. Congress Enacted National AOD Legislation. Step 6 uses the model in Step 1 to estimate the digital-advertising-induced sales at risk from U.S. national AOD legislation—i.e., legislation from the U.S. Congress that would affect business sales in each of the 50 states and the District of Columbia.

Step 7. The Lost Proportion of Digital-Advertising-Induced Sales at Risk. For the at-risk business sales enabled by digital advertising, step 7 uses the stock market reaction to a key antitrust enforcement action by the U.S. DOJ to estimate the proportion of the sales at risk that would be lost because of national-level AOD legislation.

Step 8. The Annual Harm to U.S. Physical Goods Creation and Sales from Disruption of Digital Advertising Services. Step 8 estimates the total annual harm to U.S. business sales because national-level AOD legislation disrupts digital advertising services. That estimate is the proportion in Step 7 multiplied by the sales at risk estimated in Step 6.

Step 9. The Annual Harm to U.S. SMBs' Physical Goods Creation and Sales from Disruption of Digital Advertising Services. Step 9 estimates the total annual harm to the physical goods creation and sales of U.S. SMBs because of AOD legislation disrupting digital advertising services. That estimate is the Step-8 total advertising-related harm to U.S. business sales multiplied by the SMB share of U.S. business sales.

Step 10. The Total Annual Potential Harm to U.S. SMBs from National-Level AOD Legislation. Step 10 estimates the total annual potential harm to physical goods creation and sales of U.S. SMBs from national-level AOD legislation as the sum of the Step 5 harm (because of disruption of digital marketplaces) and the Step 9 harm (because of disruption of digital advertising).

Step 11. Estimated Harm to SMBs by State, Caused by National-Level AOD Legislation. Step 11 divides the total Step-10 U.S. harm to SMBs among the 50 states and the District of Columbia by using each state's share of U.S. SMB activity in the manufacturing, wholesale trade, and retail trade sectors (the sales for these three sectors is what is called "U.S. physical goods creation and sales") to have for each state and D.C. the annual harm to SMBs in the counterfactual scenario that there is national AOD legislation and the businesses of every one of the 50 U.S. states and D.C. are harmed by the legislation. I.e., this estimate is the harm to each state assuming that all of its SMB business sales are exposed to harm from AOD legislation. The estimated annual loss of SMB sales in Step 11 is a conservative estimate for three key reasons:

- The estimate is for the last year before the pandemic, and since the onset of the pandemic, SMB reliance on digital technologies has increased. Data Catalyst Institute (2021, 2023) describes and details the importance of digital marketplaces and digital advertising for the success of U.S. SMBs.

- The model used to estimate the harm to SMBs is specifically designed for the manufacturing, wholesale trade, and retail trade sectors, and the estimated harm is for the SMBs in just those three sectors of the U.S. economy. The estimate of harm is conservative because the loss of SMB sales would obviously be much greater if the other sectors of the U.S. economy were included.[12]

- The estimate is also conservative because the analysis in the report supports the expectation that AOD legislation would cause a loss of sales induced by a fall in R&D. However, the impact on sales of any loss of R&D spending that may be caused by AOD legislation is not estimated.

Step 12. Estimated Harm to SMBs in AOD-legislation States: by State, Caused by a Patchwork of State-level AOD Legislation. Step 12 estimates the harm to SMBs if there is no national-level AOD legislation, but instead a patchwork of state-level AOD laws with only some states that enact AOD legislation. First, for New York, Minnesota, Maine, and New Jersey where such legislation has been introduced, we use the harm to SMBs in those states as a lower bound on the harm to those states' businesses as estimated in Step 11. To avoid sanctions and litigation because of state-level AOD law, Big Tech providers of digital platform services on which SMBs rely will not want to deal with the SMBs in the states with AOD legislation. As explained in the report's explication of Step 12, the digital platforms would have the legal right to decide not to sell services to businesses in states with AOD legislation. Thus, it should be expected that state legislatures passing AOD legislation would disrupt the provision of digital platform services to their states' businesses.

Clearly, we have a lower bound because (1) Step 11 produces a lower bound estimate of the harm for the three reasons observed in Step 11 and because (2) from Miller (2023) and from DCI (June 2023), we know that there will be for these states' SMBs many other costs beyond the lost sales because of disrupting the provision of digital tools by the leading digital platforms—an important cost of AOD legislation to be sure (one target of AOD legislation would surely be the Big Tech firms that provide digital platform services on which SMBs rely), but not the only cost. For example, a business in a state with AOD legislation might decide to leave the state and locate in a state without AOD legislation. For another example, even a small SMB itself could face uncertainty about whether a state court would, pursuant to a competitor's complaint, find it to be dominant and to have abused its dominance in a particular line of business within a state with

AOD legislation. The SMB would face litigation costs and might deviate from consumer-welfare-enhancing strategies to avoid uncertain and arbitrary rulings that its behavior violated AOD law.

Step 13. Estimated Harm to SMBs in non-AOD Legislation States: by State, Caused by a Patchwork of State-level AOD Legislation. For all of the remaining states where AOD legislation has not been proposed, step 13 uses Census data to compute the proportion of each state's business sales that are sold in the states where AOD legislation has been introduced or proposed. Those sales would be exposed to the disruption of the digital marketplaces and digital tools caused by the AOD legislation in states that pass such legislation. Being exposed to the disruptions would lead to a loss of sales, even apart from SMB decisions to restrict sales to states with AOD legislation.[13] For example, platforms providing digital marketplaces might restrict third parties' sales to AOD-legislation states.

For each non-AOD-legislation state, the proportion of its business sales that are sold in the states where AOD legislation has been proposed multiplied times the harm to the non-AOD-legislation state as estimated in Step 11 is the harm for the SMBs of that state because of the state-level AOD legislation to which a portion of their sales are exposed when sales are made to customers in states with AOD legislation.

Step 14. Estimated Annual and Monthly Harm per SMB by State, Caused by a Patchwork of State-level AOD Legislation. The state harms developed in Step 12 and Step 13 are divided by each state's number of SMBs in manufacturing, wholesale trade, and retail trade, providing estimates for each state of the harm per SMB.

About the Author

Professor John T. Scott is a Professor of Economics, Emeritus at Dartmouth College. He earned his Ph.D. from Harvard University. The views expressed in this paper do not necessarily reflect the views of Dartmouth College.

End Notes

1. For a state that passes its own AOD law, all of the state's SMB sales, whether sold to customers in other states or not, are exposed to the harm of AOD law, and so the state's total annual harm, direct harm, and hence harm per SMB will be the same for the Heavy and Medium (when it is among the AOD states) scenarios and for the Lite scenario when it is the state with AOD law.

2. New York's bill is Senate Bill S933C, "Twenty-First Century Anti-Trust Act," https://www.nysenate.gov/legislation/bills/2021/S933. Minnesota's bill is HF 1563, 93rd Legislature (2023-2024), "A bill for an act relating to trade regulations; prohibiting abuse of dominance," https://www.revisor.mn.gov/bills/text.php?number=HF1563&type=bill&version=0&session=ls93&session_year=2023&session_number=0. Maine's proposed AOD legislation is Legislative Document No. 1815, H.P. 1161, House of Representatives, April 27, 2023, "An Act to Protect Maine's Consumers by Establishing an Abuse of Dominance Right of Action and Requiring Notification of Mergers," https://legislature.maine.gov/bills/getPDF.asp?paper=HP1161&item=1&snum=131. New Jersey's proposed AOD legislation to amend the "New Jersey Antitrust Act" is Bill S3778, Session 2022-2023, introduced May 8, 2023, https://www.njleg.state.nj.us/bill-search/2022/S3778. All links in this note were accessed June 7, 2023.

3. In 2022, the California's legislature authorized the California Law Revision Commission to study "[w]hether the law should be revised to outlaw monopolies by single companies as outlawed by Section 2 of the Sherman Act, as proposed in New York State's "Twenty-First Century Anti-Trust Act" and in the "Competition and Antitrust Law Enforcement Reform Act of 2021" introduced in the United States Senate, or as outlawed in other jurisdictions." Antitrust Law - Study B-750 at http://www.clrc.ca.gov/B750.html, accessed June 7, 2023. Staff Memoranda at the site for Study B-750 show in status reports that the Commission has been active throughout 2023 to date in its consideration of whether AOD legislation should be introduced. Pennsylvania is also considering revision of its state antitrust laws, although its case is somewhat different because it does not have same AOD language and substance as the AOD legislation introduced in New York, Minnesota, Maine, and New Jersey. HB2677, ("Pennsylvania Open Markets Act," p. 2, "Providing for cause of action for antitrust conduct, for indirect purchaser recovery under State antitrust laws and for premerger notice of health care mergers and transactions; and imposing criminal penalties," p. 1) was introduced in the Pennsylvania General Assembly and referred to the Committee on Consumer Affairs, June 24, 2022, https://www.legis.state.pa.us/cfdocs/billinfo/billinfo.cfm?syear=2021&sind=0&body=H&type=B&bn=2677, accessed June 7, 2023.

4. DCI Working Group on State-Level "Abuse of Dominance" Antitrust Legislation and its Relevance to SMBs (June 2023) brought together experts in law and economics to discuss the AOD legislation and to consider and debate its likely implications for SMBs. The discussions by the group of professors of law, economics, and management generated ideas that are used, with reference to the Working Group, in this report. DCI (August 2023) provides a policy analysis based on the discussions of the Working Group.

5. New York's Senate Bill S933C, "Twenty-First Century Anti-Trust Act," https://www.nysenate.gov/legislation/bills/2021/S933, p.2.

6. For example, the Court of Justice recently confirmed that enforcers alleging a company has abused its dominance through exclusive dealing must have "tangible evidence…beyond mere hypothesis" that that the conduct can have anticompetitive effects. Case C-680/20, Unilever Italia Mkt. Operations, EU:C:2023:33. The proposed AOD bills lack such an evidentiary burden on the plaintiff to show anticompetitive effects from the alleged abuse.

7. For careful, analytical description of the special institutional history and framework of EU competition policy, see Fox (2014, pp. 132-135). Discussing Article 102 of the Treaty on the Functioning of the European Union, a successor treaty to the Treaty Establishing the European Economic Community, Fox observes (2014, p. 132): "In many ways, the Treaty tries to establish a level playing field, meaning that firms should be able to compete on their merits and not be fenced out by power, privilege, or favoritism. The competition provisions embody this principle." Fox (2014, p. 133) explains the reasons in the EU setting for the language that "in its prohibition of abuse of dominance includes language of fairness and appears to express both equity and efficiency motivations." Further, the EU competition law (Fox, 2014, p. 134) "… strikes a different balance and creates a different relationship between antitrust, regulation, public policy, and the state in the EU than in the United States. … In Europe, the competition authority is the Directorate General for Competition of the European Commission, which is supervised by the commissioner who is entrusted with the competition portfolio. The directorate typically undertakes market studies as well as enforcement of antitrust (abuse of dominance and agreements), state aids, and merger law. It confers with the European Parliament, and it responds to and incorporates the initiatives of the European Commission as articulated by its president." Further, (Fox, 2014, p. 135): "The European Court of Justice has developed a large body of case law on abuse of dominance. The law establishes that dominant firms have a special responsibility not to erect or maintain barriers that frustrate the access of nondominant firms to markets. Some recent judgements reveal a concern for competitiveness, efficiency, and consumer welfare, but all within the framework of general EU policy. Even the usage of the words "consumer welfare" and the phrase "to protect consumers" do not correspond with the usage of the words in the U.S. cases."

8. For example, the New York law specifies: “The legislature further finds and declares that anti-competitive practices harm great numbers of citizens and therefore must ensure that class actions may be raised in anti-trust suits.” New York’s Senate Bill S933C, “Twenty-First Century Anti-Trust Act,” https://www.nysenate.gov/legislation/bills/2021/S933, p.2.

9. New York’s Senate Bill S933C, “Twenty-First Century Anti-Trust Act,” https://www.nysenate.gov/legislation/bills/2021/S933, p.3.

10. See Hovenkamp (2022, pp. 12-15) for an exposition of how the rule of reason in U.S. antitrust law ideally works to provide understanding of the effects of alleged anticompetitive behavior. The process entails a disciplined shifting of the burden of proof during allegations by plaintiffs followed by responses by defendants. The process is designed to develop understanding of whether the practice promotes efficiency or instead simply restricts competition. Describing the “presumptions-based approach to the rule of reason”, Hovenkamp (2022, p. 12) says: “Under that approach a plaintiff must prove a prima facie case, identifying with some particularity a particular practice, and why it represents an anticompetitive exercise of market power. At that point the burden of proof shifts to the defendant to offer a procompetitive justification for its restraint. If it fails to do so the plaintiff wins.” If instead the defendant shows a justification for the behavior, the burden shifts back to the plaintiff to show that the benefits of the practice could have been achieved in a less restrictive way.

11. The need for uniformity suggests that if U.S. antitrust policy were to go in the direction of the proposed AOD legislation, national-level legislation would be more appropriate than a patchwork of state-level AOD antitrust laws. However, Fox (2023) observes, “There is, however, a basic problem in changing the trajectory of antitrust law by legislation, for legislation (except of the most general kind, which we already have in antitrust) is commonly black letter law, more like civil law, while antitrust law is evolutionary through the case-by-case process; heavily fact-dependent; an intermixture of fact and law, in the course of determining whether specific acts or transactions are anticompetitive.” The problem that lies behind the emergence of proposals for AOD antitrust legislation, Fox observes, is not with the existing statutory language that proscribes anticompetitive behavior, but instead with the interpretation of those laws.

12. In 2019, the share of total U.S. SMB employment taken by the SMB employment in manufacturing, wholesale trade, and retail trade is 0.225 or 22.5%. Thus, economy-wide, lost revenues for SMBs may be upwards of four times the estimate for the manufacturing, wholesale trade, and retail trade sectors. There are about 33.2 million SMBs in the U.S. with about 61.7 million SMB employees (46.4% of U.S. employees), (https://advocacy.sba.gov/2022/08/31/2022-small-business-profiles-for-the-states-territories-and-nation/). In 2019, the share of total U.S. SMB employment taken by the SMB employment in manufacturing, wholesale trade, and retail trade is 0.225 or 22.5% (the share is (5093618 + 3362014 + 5439291)/(61693908) = 0.225), from "The Number of Firms and Establishments, Employment, and Annual Payroll by State, Industry, and Enterprise Employment Size: 2019," https://www.census.gov/data/tables/2019/econ/susb/2019-susb-annual.html. Many SMBs do not have employees even while having substantial sales, and taken together the sectors for manufacturing, wholesale trade, and retail trade have relatively fewer of the no employee SMBs. There are 4,003,990 SMBs in the U.S. sectors for manufacturing, wholesale trade, and retail trade (593,849 + 675,837 + 2,734,304 = 4,003,990), from the webpage for the United States as a whole, at https://advocacy.sba.gov/2022/08/31/2022-small-business-profiles-for-the-states-territories-and-nation/, using "Nonemployer Statistics" and "Statistics of U.S. Businesses" data from the 2019 Census.

13. As observed in Miller (2023) and DCI (May 24, 2023), firms in states without AOD legislation might restrict their dealings with firms in the states with AOD legislation in order to reduce the likelihood of being caught up in the snare of AOD litigation.

References

Benzell, Seth G., and Chang, Felix B., "Facebook, Welfare, and Natural Monopoly: A Quantitative Analysis of Antitrust Remedies," March 7, 2022, available at SSRN: https://ssrn.com/abstract=4052023 or http://dx.doi.org/10.2139/ssrn.4052023.

Danziger, Robert S., and Scott, John T., Government Royalties on Sales of Pharmaceutical and Other Biomedical Products Developed with Substantial Public Funding: Illustrated with the Technology Transfer of the Drug-Eluting Coronary Stent, Annals of Science and Technology Policy: Vol. 6: No. 1, print/paper version, 2022, pp. 1-104 (Online version, September 8, 2021, pp. 1-99, http://dx.doi.org/10.1561/110.00000020).

Data Catalyst Institute (DCI), Super Selling: How Contemporary Small Businesses Reach Customers and Sell Products, U.S. Research Report, Fall 2021, available at https://datacatalyst.org/wp-content/uploads/2021/12/Super-Sellers-Fall-2021-FINAL2.pdf.

Data Catalyst Institute (DCI), Maximum Impact: How Digital Ads Level the Playing Field for U.S. Small Businesses, March 2023, RXN Group and Connected Commerce Council, available at https://datacatalyst.org/reports/maximum-impact-how-digital-ads-level-the-playing-field-for-u-s-small-businesses/.

Data Catalyst Institute (DCI), "Analysis of State-Level "Abuse of Dominance" Antitrust Legislation and its Relevance to Small and Midsize Businesses," June 2023, at https://datacatalyst.org/reports/analysis-of-state-level-abuse-of-dominance-antitrust-legislation-and-its-relevance-to-small-and-midsize-businesses/.

Data Catalyst Institute (DCI), "Race to Regulation: Assessing the Impact of Proposed U.S. State Competition Bills on Small and Medium-sized Businesses," Policy Analysis Informed by the DCI State Antitrust Law and Small Business Working Group," August 2023, at https://datacatalyst.org/reports/race-to-regulation-assessing-the-impact-of-proposed-u-s-state-competition-bills-on-small-medium-sized-businesses/.

Fox, Eleanor M. "Monopolization and Abuse of Dominance: Why Europe Is Different," The Antitrust Bulletin, Volume 59, No. 1 (Spring 2014), pp. 129-152.

Fox, Eleanor M., "Consumer Welfare" and the Real Battle for the Soul of Antitrust, April 19, 2023, Promarket, Stigler Center for the Study of the Economy and the State, Booth School of Business, University of Chicago, at https://www.promarket.org/2023/04/19/consumer-welfare-and-the-real-battle-for-the-soul-of-antitrust/.

Grant, Nico, “Google Devising Radical Search Changes to Beat Back A.I. Rivals,” April 16, 2023, The New York Times, https://www.nytimes.com/2023/04/16/technology/google-search-engine-ai.html, accessed April 17, 2023.

Grant, Nico, and Weise, Karen, “In AI Race, Microsoft and Google Choose Speed Over Caution,” The New York Times, April 7, 2023, https://www.nytimes.com/2023/04/07/technology/ai-chatbots-google-microsoft.html, accessed April 7, 2023.

Guilford, Gwynn, “Inflation Report Shows Price Pressures Eased in March: Elevated Inflation has Weighed on Household Spending Decisions,” The Wall Street Journal, April 12, 2023, https://www.wsj.com/articles/us-inflation-march-2023-consumer-price-index-fa6eba99?mod=hp_user_preferences_pos3#cxrecs_s, accessed April 12, 2023.

Haggin, Patience, “Google and Meta’s Advertising Dominance Fades as TikTok, Streamers Emerge,” Updated January 4, 2023, The Wall Street Journal, https://www.wsj.com/articles/google-and-metas-advertising-dominance-fades-as-tiktok-netflix-emerge-11672711107, accessed April 1, 2023.

Haggin, Patience, and Hagey, K., “Breakup of Google’s Ad Business Would Reshape $500 Billion Sector”, The Wall Street Journal, January 29, 2023, https://www.wsj.com/articles/breakup-of-googles-ad-business-would-reshape-500-billion-sector-11674967791?mod=hp_lead_pos4, accessed January 29, 2023.

Hobbs, Kelsi G., Albert N. Link, and John T. Scott, “The Growth of U.S. Science and Technology Parks: Does Proximity to a University Matter?,” The Annals of Regional Science, Vol. 59, Issue 2 (September 2017), pp. 495-511.

Hovenkamp, Herbert, “Antitrust Presumptions for Digital Platforms,” University of Pennsylvania Institute for Law and Economics Research Paper No. 22-42, 27 September 2022, last revised 30 March 2023, available at SSRN: https://ssrn.com/abstract=4224554 or http://dx.doi.org/10.2139/ssrn.4224554.

Kruppa, Miles, “Google CEO Sundar Pichai Says Search to Feature Chat AI,” The Wall Street Journal, Updated April 6, 2023, https://www.wsj.com/articles/google-ceo-sundar-pichai-says-search-to-feature-chat-ai-2fa0f54c?mod=hp_lead_pos2, accessed April 6, 2023.

Kruppa, Miles, Schechner, Sam, and Michaels, Dave, “DOJ Sues Google, Seeking to Break Up Online Advertising Business: Suit Could Have Major Implications for Digital-Ad Industry,” The Wall Street Journal, January 24, 2023, https://www.wsj.com/articles/u-s-sues-google-for-alleged-antitrust-violations-in-its-ad-tech-business-11674582792?mod=hp_lead_pos1, accessed January 25, 2023.

Link, Albert N., and Scott, John T., Employment Growth from Public Support of Innovation in Small Firms (Kalamazoo, Michigan: W. E. Upjohn Institute for Employment Research, 2012a), http://dx.doi.org/10.17848/9780880993944 .

Link, Albert N., and Scott, John T., "The Exploitation of Publicly Funded Technology," Journal of Technology Transfer, Volume 37, Number 3 (June 2012b), pp. 375-383.

Martin, Stephen, "The Goals of Antitrust and Competition Policy," in W. D. Collins (Ed.), Issues in Competition Law and Policy, Vol. I, pp. 19-84, (Chicago: American Bar Association Section of Antitrust Law, 2008).

McCabe, David, and Grant, Nico, "U.S. Accuses Google of Abusing Monopoly in Ad Technology," The New York Times, January 24, 2023, https://www-nytimes-com.dartmouth.idm.oclc.org/2023/01/24/technology/google-ads-lawsuit.html, accessed January 25, 2023.

Metz, Cade, and Weise, Karen, "A Tech Race Begins as Microsoft Adds A.I. to Its Search Engine," The New York Times, Feb. 7, 2023, https://www.nytimes.com/2023/02/07/technology/microsoft-ai-chatgpt-bing.html, accessed April 7, 2023.

Miller, Cameron D., "Busted: How the Twenty-First Century Anti-Trust Act Will Harm New York's Economy, Disincentivize Innovation, and Open the Floodgates of Litigation," New York Civil Justice Institute, Spring 2023, at https://www.nycji.org/research.

Miller, Cameron D., and Richard D. Wang, A New Economic Lens for Exploring the Negative Effects of Digital Platform Antitrust Legislation on American Small Businesses, Data Catalyst Institute (DCI), White Paper, May 2022, available at https://datacatalyst.org/reports/a-new-economic-lens-for-exploring-the-negative-effects-of-digital-platform-antitrust-legislation-on-american-small-businesses/.

Mills, Mark, "Of Tabulators and Tractors," a presentation on February 25, 2023, at a meeting of the Global Interdependence Center in La Jolla, California, published as "Conference Roundup: Mark Mills on the Cloud, the Robot Revolution, and Machines that Think", April 2023, edited by Laurence B. Siegel, Special to AJO Vista, available at https://manhattan.institute/article/of-tabulators-and-tractors-2, accessed April 24, 2023.

Romanoff, Tom, "Comparison of Competition Law and Policy in the US, EU, UK, China, and Canada," December 16, 2021, Bipartisan Policy Center, https://bipartisanpolicy.org/blog/comparison-of-competition-law-and-policy-in-the-us-eu-uk-china-and-canada/, accessed March 30, 2023.

Scherer, F. M., Industrial market structure and economic performance (Chicago: Rand McNally, 1970).

Scott, John T., Estimates of Potential Harm to U.S. Small and Medium Sized Businesses from Proposed Antitrust Legislation Aimed at Large Digital Platforms, Technical Report, Data Catalyst Institute, August 2022. https://datacatalyst.org/wp-content/uploads/2022/08/Estimates-of-Potential-Harm-to-U.S.-Small-and-Medium-Sized-Businesses-from-Proposed-Antitrust-Legislation-Aimed-at-Large-Digital-Platforms.pdf, https://datacatalyst.org/wp-content/uploads/2022/08/Appendix-Estimates-of-Potential-Harm-to-U.S.-Small-and-Medium-Sized-Businesses-from-Proposed-Antitrust-Legislation-Aimed-at-Large-Digital-Platforms.pdf.

Tilley, Aaron, "When Apple Comes Calling, 'It's the Kiss of Death': Aspiring partners accuse tech giant of copying their ideas; Apple says it plays by the rules", April 20, 2023, The Wall Street Journal, https://www.wsj.com/articles/apple-watch-patents-5b52cda0?mod=hp_lead_pos1, accessed April 20, 2023.

Tracy, Ryan, "Senate Panel Approves Antitrust Bill Restricting Big Tech Platforms," The Wall Street Journal, January 20, 2022, https://www.wsj.com/articles/senate-panel-approves-antitrust-bill-restricting-big-tech-platforms-11642701487, accessed January 22, 2022.

U.S. House of Representatives, House Committee on the Judiciary, "Chairman Nadler Applauds Committee Passage of Bipartisan Tech Antitrust Legislation," Press Releases, June 24, 2021, https://judiciary.house.gov/news/documentsingle.aspx?DocumentID=4622, accessed April 10, 2022.

U.S. Department of Justice, Complaint, filed October 20, 2020, in the United States District Court for the District of Columbia, United States of America, U.S. Department of Justice, State of Arkansas, State of Florida, State of Georgia, State of Indiana, Commonwealth of Kentucky, State of Louisiana, State of Mississippi, State of Missouri, State of Montana, State of South Carolina, and State of Texas, Plaintiffs, v. Google LLC, Defendant, https://www.justice.gov/atr/case-document/file/1329131/download.

U.S. Department of Justice, Complaint, filed January 24, 2023, in the United States District Court for the Eastern District of Virginia, Alexandria Division, United States of America, U.S. Department of Justice, Commonwealth of Virginia, State of California, State of Colorado, State of Connecticut, State of New Jersey, State of New York, State of Rhode Island, and State of Tennessee, Plaintiffs, v. Google LLC, Defendant, https://www.justice.gov/atr/case-document/file/1566706/download.

Technical Appendix

For additional details about the data and methodology underlying the results presented here, please refer to the accompanying Technical Report Appendix.