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The US Approach to Antitrust Policy in Technology Markets

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AUGUST 2022

A M E R I C A N E N T E R P R I S E I N S T I T U T E

Executive Summary

This report illustrates the strengths and weaknesses of the US approach to antitrust policy by drawing lessons from three cases: *United States v. AT&T*, *United States v. Microsoft*, and *United States v. Google*. The cases against AT&T and Microsoft are historical cases, decided long ago; the Google case is pending.

The strength of the US approach to antitrust policy is its focus on innovation and, more specifically, how innovation improves with more pluralism of supply. Pluralism refers to a greater number and variety of options brought to market to compete with the dominant firm. Relatedly, the US approach to antitrust

does not rely on a one-size-fits-all approach to analyzing or remedying an impediment to competition.

However, the US approach has some weaknesses. Antitrust policy focuses on only issues that are targeted. Courts are inherently slow in resolving issues. Additionally, the US approach relies on competition to reform behavior at the dominant firm, but that puts the court's remedy at the mercy of the randomness of competitive events.

Overall, the US approach to antitrust policy has worked well because US technology markets are highly pluralistic, which has been true over many years and for many new technologies.

The US Approach to Antitrust Policy in Technology Markets

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For decades, the United States has led the world in technological innovation and entrepreneurship. Today, five US firms have reached a market value rarely seen in capitalist economies in the past century, but we inhabit a moment of confusion about our success.

There is clearly something unique about the American approach to technology policy, though few policymakers would be able to identify what is so special about it. It is the US approach to antitrust cases in high-tech markets that sets the American technology policy environment apart, and in the past half century, it has helped the US retain its status as the home of the most innovative firms in the world.

This is not the answer you would get from today's commentators, however. They have overlooked how the most prominent cases of the past few decades—the trials of AT&T and Microsoft—connect to today's events, including the pending trial against Google. Yet a brief study of the similarities and differences among these cases gives us an opportunity to find some order in the complex world of tech antitrust issues.

The US Approach

Broadly construed, three questions define the US approach. The first is a provocative question found in all antitrust cases: Did a dominant firm possess the ability and motive to build impediments to the competitive process? The next two questions focus specifically on technology markets: Could removing an impediment generate additional innovation

from other market suppliers? Could that additional innovation pressure the dominant firm to innovate more? Every court case sees some version of these questions.

What is so special about these questions? Together, they focus attention on innovation and, more specifically, how innovation improves with more pluralism of supply. Pluralism refers to a greater number and variety of options brought to market to compete with the dominant firm. The questions also broadly construe the meaning of innovation. Innovation can shape any new aspect of business—new products, new services for existing products, or new arrangements for providing them.

The US approach to technology antitrust policy emerged gradually over the past century, and it would take several books to sketch the evolution. Instead of focusing on its evolution, it is more useful to focus on the similarities and stark differences among a few prominent cases, such as *United States v. AT&T*,¹ *United States v. Microsoft*,² and *United States v. Google*,³ which can provide some illustrations of the strengths and weaknesses of the US approach.

The cases of AT&T and Microsoft are historical cases, decided long ago; the Google case is pending. AT&T refers to the historical AT&T, the large telephone company headquartered in New Jersey (not Texas, as it is today). A federal antitrust case led to its breakup, an action referred to as divestiture.

Microsoft is one of the Big Five today. Two decades ago, it fought a high-profile federal case over the governance of its personal computer (PC) operating system.

Before their respective trials, both AT&T and Microsoft were extraordinarily profitable. Their profitability was not on trial, however—only their behavior. The cases were prominent but endlessly complex, and they are not easy to explain, even with the benefit of hindsight; a short report will necessarily simplify many features. Yet, the differences between them illustrate the breadth and impact of the US approach to antitrust policy in technology markets.

The pending case against Alphabet, which owns and operates Google, the dominant search engine, also involves extraordinary profitability and prominence. The case seeks to end exclusive deals that Google makes with others, and, as such, it contains considerable continuity with prior cases. There are important differences, too, and the pending case explores new legal territory, prompted by Google's deals with Apple. These deals raise unprecedented questions and could mark a major pivot in the US approach to antitrust policy.

Divestiture and AT&T

At the time of its antitrust trial, AT&T was providing exceptionally good standardized telephone service at a large scale. So why did it face antitrust concerns?

Broadly stated, AT&T possessed a dominant place in equipment markets and local service markets. Its dominance in both created a mismatch in supply and demand. As the dominant firm, AT&T offered only one option that served its own business interests, particularly in equipment markets and local services that worked with the network. That contrasted with the potential to supply a variety of innovative products and services—and the demand for that variety.

That mismatch became a major source of tension after the electronics revolution began in the 1960s and '70s. New and inexpensive electronics enabled a variety of voices to shape designs for products and influence the supply of new commercial services. Experts could disagree in their forecasts about the commercial value of a specific product, but all could agree that a single decision maker should not determine and control the menu of options. Sampling from

many suppliers with a variety of viewpoints created many options for users, for both seemingly simple products, such as wireless house phones, and futuristic products like modems and mobile phones.

Many fights in local regulatory settings and at federal agencies made the tensions more visible and increased the value of restructuring supply so that one decision maker did not control it. The Department of Justice (DOJ) pursued these and other issues in the late 1970s, and it settled its case against AT&T in 1982 with a divestiture of the company.

The divestiture addressed AT&T's dominance with two distinct activities. First, it divided AT&T into eight different firms, reducing the ability of one firm to stifle new initiatives. Second, it helped separate the equipment supplier from the local telephone service provider. That severed the issues that arose from the same firm providing equipment to itself. This solution did not pose any downside for users. National scale was not essential to providing good local telephone service, nor to designing the next generation of communications equipment, nor to distributing it to many firms.

These efforts are often labeled as “deregulatory,” but that oversimplifies the history with a confusing label. In parallel to the DOJ's activities in the courtroom, the Federal Communications Commission and local regulators initiated regulatory limits on the influence of local telephone services. These initiatives enabled new products, equipment, and services that worked *with* local telephone providers instead of *for* them. These initiatives grew into standardized interconnections for equipment, which encouraged competitive markets in consumer products. Local and state regulators also had to monitor the behavior of local telephone operators and occasionally adjudicate disputes.

In other words, regulators sought to remove impediments to pluralism in supply by imposing routine limitations on the actions of monopoly local carriers. The new policies aimed to prevent a telephone company from slowing down an entrepreneur's ability to test its services on demand and refine those services in response to lessons learned from market experience. It is not a historical accident that the US was

the first market to see wireless handsets in all shapes and sizes, bulletin-board providers, and a plethora of business and consumer-data services. The American approach to antitrust enabled the US to be the first market where monopolies could not veto new entry.

This experience left an important intellectual legacy—namely, that dominant firms should not deter pluralism in innovative markets. It also proved that both court-ordered structural changes and monitoring could play a salutary role. Notice, too, that this approach contains an abiding faith in market competition and is not prejudiced against the products and services from any particular firm. The goal is to enable a variety of new entrants, both entrepreneurial firms and existing firms, and let users determine the outcome. Later cases, such as the Microsoft case or the pending case against Alphabet, share this outlook.

The Shadow of Microsoft

Judges and policymakers can be excused if they do not recognize what resemblance the Microsoft case bears to the AT&T case or the pending case against Alphabet. The drama surrounding the Microsoft trial obscured the lessons.

The first judge to examine the evidence largely sided with the prosecution's views, and he asked the firm and the DOJ to settle out of court. When those negotiations failed, the judge ruled that Microsoft should be divided between its operating and application divisions. Before that order could be put into action, however, the judge spoke copiously with reporters. The appeals courts took the case, scolded the judge, and threw out some of his conclusions. A new judge was assigned who jettisoned the breakup remedy and put in place some oversight of behavior over which she would preside.

Then-CEO of Microsoft Steve Ballmer authorized his staff to settle every potential private antitrust suit, regardless of cost. The monitoring made few headlines, and the market moved on as the topic dropped from the news. This antitrust soap opera served as fodder for the news and damaged Bill Gates's reputation, but it left the outcome and the lessons of the

case unclear. Today we have the benefit of time and distance, as well as a narrow goal. Just as with the AT&T case, the case against Microsoft left an intellectual legacy that is relevant to the pending case against Alphabet.

The American approach to antitrust enabled the US to be the first market where monopolies could not veto new entry.

In many ways, the general allegations in the Microsoft case echo those of AT&T's. Many firms had no choice but to work with the dominant company's operating systems, despite a broad array of encumbrances, which also limited the supply of complementary products. The dominant firm had considerable control over software and service, and it had maneuvered itself into a position to settle any dispute in self-serving ways. Numerous impediments erected by Microsoft deterred partners from growing into businesses that would threaten the dominant firm's many business interests.

There was one key difference, however; Microsoft made money from selling its operating system, and it made the operating system indispensable for PC applications. Microsoft willingly aided most of these applications as business partners, unlike AT&T, which usually refused to cooperate with such partners unless forced through regulatory oversight. In other words, Microsoft was more selective than AT&T about its uncooperative actions. Although Microsoft had invited many partnerships with software firms and other peripheral providers, eventually it discouraged others, sometimes without explanation.

Then, early on in the commercialization of the internet, Microsoft overreached and, just like AT&T before it, caused a potential mismatch between private

supply and society's demand. There was demand for pluralism in supply, this time for a variety of innovative products and services related to the commercial internet. Yet the dominant firm offered its own while deterring options that did not serve its own interests, especially by making distribution difficult for companies it deemed threatening.

Specifically, in 1995, Microsoft had some plans in place to support the commercial internet, but those plans anticipated back-office activity and did not foresee the potential for growing businesses by using a browser on a PC. As a result, many entrepreneurs initially turned elsewhere to develop applications. Once Gates saw partners going to others, he focused on the activities at Netscape and other supporting firms and arranged to have Microsoft build something similar. His firm announced those goals, but it was late and did not catch on.

In 1995 and 1996, Microsoft needed to catch up. The firm bought itself time by using its size and control to discriminate in favor of friends. It created a broad array of impediments on the distribution of products or services offered by companies that had to work with the Microsoft operating system. In scores of frustrating ways, it would sign deals that excluded those who might threaten Microsoft's leadership position; exclusive use of Microsoft's browser became part of those quid pro quos. Other actions, such as one with Sun Microsystems, the sponsor of Java, reeked of bad-faith negotiations, even though Java was popular with users.

The court heard a vigorous debate about these actions, the contours of which are likely to reappear in the pending case against Alphabet. The parallels with Google are striking.

Lessons for Google

Alphabet has signed many deals with others that require Google to be the default search engine. The prosecution alleges that these arrangements impede entry of potential rivals. Once again, the central question is whether exclusive provisions in contracts deter

pluralism in supply, while the dominant firm offers only one option.

As an illustration, consider the smartphone market. One firm, Google, gives away services (e.g., search) to attract users for auctions that sell ads. Google owns, guides, and licenses an operating system (i.e., Android), which it offers to other smartphone firms (e.g., Samsung). It requires that Google be the exclusive default search engine. Some of these phones are sold by carriers (e.g., AT&T, T-Mobile, and Verizon) to which Google makes payments for exclusivity. Apple sells devices (e.g., iPhones) and generates profit from its cut of applications and music sales. These compete with Google's online store, which also sells apps and music. Google licenses Apple to make the Google search engine the exclusive default on the iPhone.

At almost every point in the assembly and distribution of smartphones, a deal with Google restricts participants to exclusivity. That extends to carriers and handset makers, some of which are direct business partners with Android. These deals also extend to ostensible rivals, such as Apple. (More on this later.)

Why is there a single and exclusive option? Google could construe this arrangement as a favor for users, most of whom are likely to use Google. Many users never play with defaults and have no idea how they work. Most users rarely reset them more than once with a device. Google could argue that its arrangements simplify the user experience, which reduces hassles and frictions that many users would prefer to avoid.

The prosecution will ask two provocative questions: Could the same participants deliver the same set of services without exclusive clauses in the contracts? How many users and suppliers would alter the defaults if the exclusivity clauses disappeared tomorrow? The prosecution will argue that many suppliers and users would experiment with alternatives, and such a change would generate no loss in the quality of services rendered for users.

The prosecution only succeeds if it persuades a judge that its sketch is plausible. In this case, the sketch goes like this: Other entrepreneurs and existing firms that have tried to develop search engines might invest in trying to convince users to experiment with their

products. The exclusive deals narrow the foothold now, limiting the potential for experiments with new firms and alternatives. The last wave of venture capital-funded aspirations in search ended a while ago, and perhaps another would get going if any new firm shows how to gain a substantial market foothold.

Pluralism in supply could yield broad benefits by increasing opportunities to innovate. It is always possible for somebody somewhere to have a new idea. Absent the exclusive deals, Google would have to play whack-a-mole with every new idea from any random firm. Google would have to improve its product more frequently, invest in marketing and education at a high rate, and find creative ways to satisfy the users who could have, or would have, played around with those defaults.

It is always possible for somebody somewhere to have a new idea.

There is a not a tremendous amount of overlap between the AT&T case and Alphabet's. The case against AT&T sought to encourage alternatives that worked *with* telephones, encouraging pluralism in complementary products and services. The allegations against Google focus more on encouraging entry of direct competitors to Google that presently cannot compete with Google on devices. The difference matters. Even if one agrees with all the charges against Google, the most extreme (and logical) solution is to remove those exclusive requirements from contracts. A breakup, as with AT&T, makes no sense as a remedy.

Clashing Views

There is, however, useful overlap between the cases against Microsoft and Alphabet. Four similar debates take place in both cases.

The first debate focuses on whether the dominant firm is, in fact, dominant. Do not laugh at this question: If the defense wins on this question, it is the legal equivalent of the get-out-of-jail-free card. Competitive markets prevent a dominant firm from taking advantage of their own dominance.

The debate turns on two issues. First, what does a free service indicate? Second, does the dominant firm have many other firms over a barrel during negotiations? In the Microsoft trial, the defense stressed how much Microsoft gave away for free, while the prosecution stressed how much Microsoft gained during negotiations. In my reading, the prosecution won this debate because the latter turned out to be overwhelming.

A similar debate should unfold here. Google will stress how much it gives to users and developers, while the prosecution will stress that Google presently splits the lion's share of online advertising market with Facebook, and it can dictate terms to most ad-based websites.

The second open debate focuses on impediments and whether the whole exceeds the sum of its parts. Expect Alphabet to imitate Microsoft's defense, examining each of its actions in isolation. Viewed this way, each impediment did not do much harm, and many did none. The prosecutor countered in Microsoft's trial with reminders about the fallacy of composition—that is, navigating around an individual tree does not generalize to navigating through the forest. If all actions form a coordinated strategy, said the prosecution, then the impediments can be even worse. In my reading, the first judge agreed wholeheartedly with this point, while the appeals court did not display much sympathy for it.

A similar debate should show up in Alphabet's case. Many of the deals for exclusivity create comparatively minor harms when viewed in isolation of others. The potential harms to competitive processes are highest when all the exclusivity is viewed as a collection.

A third open debate focuses on how the dominant firm earned its status. Like any good defense, Microsoft's attorneys emphasized how an organization achieved rare commercial success and argued it

earned the right to be left alone to do what it does well. Like any good prosecution, the prosecutors stressed the misuse and abuse of strength. The presence of strength is a necessary precondition, said the prosecutors, but the strength per se is not on trial.

The same contrast should arise in Alphabet's trial and is one of its strongest potential arguments, in my view. Offering and growing its services require Google to meet some audacious technical benchmarks. Support in distribution channels helps achieve maximum user experience, the defense will say. The prosecution must argue that—impressive as these technical feats are—Google's goals could be achieved without exclusivity.

The prosecution in Microsoft's trial introduced a fourth debate, arguing that the firm's management lost its ethical bearings, becoming self-serving and selfish whenever it had discretion. The prosecution made this point by quoting from an abundance of confrontational and coarse arguments in Microsoft's records. The defense did its best to make its executives more sympathetic by stressing how much came from the heat of the moment.

The fourth debate also should arise in Alphabet's trial. The prosecution will play to both the court and public opinion. For example, any prosecutor with a flair for sarcasm will highlight how far Google's actions strayed from the firm's earliest mottos, such as "don't be evil." Every prosecutor knows how to use the old and familiar tropes about management slowly surrendering to the temptations of empire and riches.

In my reading of Microsoft's trial, the defense lost this debate in a wipeout, and the scrutiny did considerable damage to Microsoft's brand. That legacy will encourage prosecutors in Alphabet's trial to provoke similar debate. This trial could create a public-relations disaster for Alphabet. It easily could become an internet and media sideshow, just as it was in Microsoft's case.

Lessons from the Remedy

The outcome of the Microsoft trial reaffirms the strengths and weaknesses of the US approach to tech

antitrust policy. As any longtime observer of that firm will attest, the trial resulted in noticeable changes at Microsoft. Those changes have been underappreciated, however, and because that legacy will encourage the prosecution in its trial with Alphabet, it is worthwhile to elaborate.

It is easy to forget, but Microsoft quietly changed its practices after the trial. The changes showed up in various ways, either in anecdotes and stories or in the absence of tell-all books. More to the point, many commentators noticed that management tapered broad and aggressive competitive responses in some places where the firm previously would have taken blunt action. We have to presume some of these changes came from internal debates, and those debates altered style, strategy, and nuance.

As an illustration, in its early years, Google built a search bar for the Internet Explorer browser and did not receive any retaliation, as the old Microsoft would have done for such a direct confrontation to its control. (Did that help Google grow? Sure it did, though we also should not exaggerate; Google would have survived without it.)

The embarrassments and damage to Microsoft's reputation also extracted a toll. To be fair, it was easy to miss. As an example, consider the backlash over browsers, which took a while to play out. There turned out to be room for more than just one browser, especially with the potential for heavy-handed retaliation removed. With additional efforts to publicly standardize the key functions, Mozilla's entry with Firefox initially led this movement. More followed in a few years. Browsers came from Google, Apple, and others.

Although it took a while, Microsoft responded with multiple redesigns over the years, and it has a great browser today. That is what pluralism in supply can do: It can motivate an innovative response from a dominant firm.

Consider one more example. After the turn of the millennium, Microsoft began investing in an operating system for mobile devices, a product with the label "Windows CE." Despite an early and huge investment, it faced skepticism from potential partners investing in applications, who had watched the

trial and learned not to trust what they heard out of Redmond. Even though Ballmer appointed the nicest and most competent executive at Microsoft to guide the mobile division, many potential partners did not trust Gates, who was still present in daily decision-making. This distrust motivated many potential partners to look elsewhere for options, and that led to numerous alternative initiatives. That gave daylight to one alternative in the short run, the Blackberry, and many alternatives in the long run. Two of the latter—from Android and Apple—eventually succeeded.

Did the judge's oversight induce a change in behavior at Microsoft, or did it happen due to its own efforts to repair its reputation with partners? Only a few executives at Microsoft really know, and they aren't talking.

What lessons does the Microsoft trial hold? Federal antitrust trials in innovative markets mete out two types of remedies, and both build on an abiding faith in market competition. The first comes from the court. The second comes from the variety of suppliers who react in the marketplace. The costs from the second one become larger when new innovative opportunities emerge.

Google and Apple

Despite similarities between the Microsoft and Alphabet cases, there are important differences, especially where Apple is involved. Alphabet had made deals with Apple, and there is no precedent for them in either the AT&T or Microsoft cases. These deals could lead to a major pivot in the US approach to antitrust policy in technology markets.

Apple receives something like \$12 billion a year to use Google as the exclusive default on the iPhone and in other Apple products and services. This transaction takes the US approach in innovative markets in a new direction. To see why, and for the sake of illustration, focus on smartphones, for which the payments amount to approximately \$8 billion.

With smartphones, Apple competes directly with the partnership of Samsung and Google, as well as other partnerships. Apple makes a device and an operating system, and it works with an online site, also operated by Apple, where users can acquire applications. That device directly competes with Samsung's devices and devices from others. Those devices use the Android operating system, which also works with an online site, operated by Google, where users acquire many applications. In other words, Alphabet and its partners compete with Apple.

The suppliers' identity matters. Alphabet pays Apple, which is a direct competitor, to not use any search engine other than Alphabet's. Hence, the deal between Alphabet and Apple confronts one of the oldest principles of US antitrust policy, which *rarely* allows two direct competitors to cooperate and *never* for money. This principle has been central to US antitrust policy ever since the passage of the Sherman Antitrust Act. More to the point, in a technology market, a deal between direct competitors diminishes pluralism in supply and innovation.

For the sake of illustration, consider this: Apple influences more than 30 percent of search activity in the US and sells to the fastest-growing segment of users. That number builds on the prosecution's claim that iPhone takes 60 percent of smartphone sales in the US.⁴ It also builds on what most commentators believe today—that smartphones account for more than half of time spent online and far more than half among the youngest users.⁵ In short, Apple is the most formidable competitor in the smartphone market.

Consider what Apple could have done with its strong position and its history of user-friendly activity, had it not been constrained by its deal with Google. Apple might have informed users more transparently about their options for defaults. Apple might have designed a process that made it easier to change defaults on search engines or enabled experimentation from other services. Apple might have put effort into its contracts with carriers so that carriers inform users about the options for defaults when a purchase is made. Apple might have sent

periodic reminders to users to try alternatives, just as it does with many other applications. Apple could have done any of these user-friendly actions, but it has eight billion reasons *not* to try any of them.

Not trivially, Apple might be considered a potential search engine provider. It employs some of the best programmers in the world, and as one of the wealthiest firms in the world, it possesses the internal financing to undertake big projects. It already operates search engines on its own websites for limited purposes, so it possesses some experience with the technical challenges. The deal with Google gives Apple financial reasons *not* to have preliminary conversations about trying.

The partners to Google breathe easier because Google pays Apple *not* to take user-friendly actions or find a better search engine. For example, Samsung could not be happier. After all, the deal deters Apple from doing something that could improve the appeal of Samsung's most formidable competitor.

What if the court learns that Apple considered making a search engine and chose not to? That demonstrates one of two uncomfortable conclusions. For one, it could confirm that Google's monopoly is nearly unassailable by any potential entrant, even its competent and wealthy neighbor. Second, it could demonstrate that it is feasible for Apple to be a search engine provider, in which case Google has discouraged that outcome with an \$8 billion payment. Neither conclusion helps Google.

Antitrust lawyers and economists summarize this type of arrangement by giving it the euphemistic label "cozy." Two CEOs became "cozier" after sitting down to a dinner and making a deal, moving the situation away from competitive confrontation. This is *not* how an innovative and competitive marketplace generates new services for users.

Those who despise these types of deals use more blunt terms and call them sleazy and collusive. This collusive deal foreclosed any potential entrant that could have threatened its dominance, and the money provided incentives to discourage a competitive innovator. Society is worse off for not experiencing what would have occurred without the deal.

Google's Best Defense

Nothing in either Microsoft's or AT&T's trial raised serious questions about coziness and collusion, but a fifth open debate should determine how to assess such coziness. I am not a lawyer, but it appears to me that three open issues will shape the topic.

The first issue centers on whether there is any need to have an exception to the rules against coziness. Modern exceptions to the Sherman Act typically involve activities with massive anticipated consumer benefits, such as activities that create standardized plugs and sockets for all firms. That is not even close to the situation here, so this defense should fail.

The second issue leans on pricing and could sway a judge. The deal transfers to Apple money that might motivate Apple to decrease the price of an iPhone. Additional cash from Google could reduce prices for users.

The prosecution will counter with skepticism. If Apple acts like every other large firm on the planet, it keeps most of the money for its stockholders and employees. In settings where firms have pricing power, as Apple does, many studies show that the lion's share of the benefit tends not to go users. According to this generality, it would be remarkable if prices declined enough for users to see a modest discount, at best, on a product for which prices exceed \$500 a phone.

As an aside, the prosecutor's skepticism requires detailed information about how Apple sets its prices for the iPhone, something Apple typically closely guards. Expect Apple to be unhappy to see that topic scrutinized in court.

I expect the prosecution to win this second debate. Some judges might overlook the cozy arrangement to avoid interfering with price reductions, but most will not. Most will treat as sacrosanct the prohibition against buying an exclusive arrangement from a major direct competitor.

The third issue will lean heavily on a recent (and criticized) Supreme Court ruling that assesses a platform's actions by examining all sides of its business. Legal experts get excited by this possibility because it is uncharted legal territory.

A competent defense attorney for Google will use the Supreme Court's decision as permission to lean into the complexity of the smartphone market. Amazon recently has begun to develop advertising on its platform. Apple also has been taking steps to become more active in advertising (largely at Facebook's expense, so far). A competent defense attorney will try to argue that the dynamism in one place offsets any costs from Google's restrictions elsewhere.

A competent defense attorney also will seek to put doubts in the mind of a judge about the wisdom of requiring bold legal remedies, lest it interfere with fast-moving competitive trends. Not trivially, no judge wants to run into a skeptical appellate court, as happened to the first judge in Microsoft's trial, and any competent defense attorney will find a way to remind the judge.

How will this debate settle? For one, any argument about coziness gains momentum from the view that management has sacrificed its ethical compass at the altar of profit. As a result, prosecutors will have strong reasons to double down on evidence to support that point.

Second, while I do not see why the economics of the situation entitles Alphabet and Apple to a special exception to collusive behavior, nobody should underestimate a good defense lawyer's ability to use the Supreme Court's words. Like everyone else, I will watch and learn.

Public Relations

One more observation is required. History teaches a bitter lesson about exposing dominant firms to scrutiny. Both Microsoft and AT&T suffered significant and long-lasting damage to their reputations from the scrutiny they endured in court, and it hurt their ability to engage in business after the trial. That risk exists in the pending case as well. Even if Alphabet prevails in court, it faces significant risks to its reputation.

Apple shares some of the reputational risks with Alphabet, even though it is not on trial. Not only will Apple's pricing come under scrutiny, but so too will its willingness to cooperate in a cozy deal.

To appreciate the risks, imagine the editorial cartoons. A cartoonist could portray Google and Apple as two tycoons scratching each other's backs. Another could show wealthy executives exchanging money, while keeping others out of their rich playground. A third will show John Sherman's ghost expressing outrage. Somebody will make a meme on the internet, and eventually a clever picture will go viral on Twitter. It will just get worse from there.

Ever since Steve Jobs revived it, Apple has protected its public image. It would be unsurprising if current Apple CEO Tim Cook preferred fewer risks for Apple's brand. How could he reduce those in this case? He could participate in some version of a publicly acceptable mea culpa and tell Google to void their deal. He also could ask Alphabet to settle with the federal government before trial.

Would Google CEO Sundar Pichai and founders Larry Page and Sergey Brin be willing to settle this lawsuit to avoid embarrassment? It is just speculation, but this much can be said: Unless all of them have become steeped in antitrust history, they probably do not fully appreciate the downsides of going to trial.

The Strengths of US Antitrust Policy

Let's summarize the US approach to antitrust policy in technology markets. Prosecutors aspire to remove impediments erected by dominant firms and increase the plurality of suppliers. Removing those impediment gives other firms the freedom to innovate, which, in turn, increases pressures on the dominant firm to compete by innovating.

No single silver bullet remedies every situation. Sometimes those impediments are structural, in which case dividing organizations removes the impediment. Sometimes those impediments are contractual, in which case forbidding a type of contract removes a restriction on competition. Sometimes those impediments are behavioral, and some monitoring brings about a change. In many cases, the act of exposing activity to scrutiny in court brings information to the public conversation, and that,

too, can generate change. Overall, the US approach to antitrust also does not rely on a one-size-fits-all approach to analyzing or remedying a problem.

The three cases discussed here also illustrate some weaknesses in this approach. For one, antitrust policy is a tool of limited scope in technology markets. It can at best reduce impediments to competition, but only those that are targeted.

A second weakness is speed, or a lack thereof. Courts are inherently slow in resolving issues. Even when courts come to a decision, implementing it takes time, and it takes a long time for new competitive realities to reshape the environment.

Additionally, this process relies on competition to reform behavior at the dominant firm, but those competitive pressures are out of the court's hands. Commercial opportunities come and go. That puts the court's remedy at the mercy of the randomness of invention.

I would stress one other weakness: the rarity of prominent trials. Do not misinterpret me. There are enough private antitrust suits to keep experts busy, and these suits effectively make every prominent firm a target of some dispute on a regular basis. But CEOs rarely have the patience to sit and learn from senior legal staff about the wisdom or mistakes of their predecessors. To say it another way, this system depends crucially on deterrence and reasoned self-governance by prominent firms, but it contains no inherent reason for a CEO to pay attention until circumstances force a trial.

When does the US approach work well? It works well when pluralism in supply is possible and remains likely over many years and for many new concepts. These circumstances do arise in the US. For decades, its technology markets were the most attractive place for innovative products and services. Talented engineers wanted to work at US firms and sell to US businesses and consumers, and this talent and aspiration drove change in technology markets. Arguably, that is still so today.

That said, please forgive a world-weary conclusion. I fear the US political outlook today has *not* absorbed

any lessons about the historical strengths and weaknesses of the US approach to antitrust policy. Instead, all open questions have either been pigeonholed into impatient philosophical and ideological fights about forms of different legal standards or digressed into superficial Twitter debates about the minutia of proposed legislative reforms. Some claim antitrust could help with issues outside of competitive impediments and innovative incentives. But that substitutes hope for depth. I see little historical support for any such claim and regard it as a distraction from honest analysis.

At best, impatience and sloganeering mischaracterize the US experience. The US approach to antitrust policy cannot address nuanced issues related to trade policy with China, for example, or resolve any content moderation issues in social media. For that matter, it also cannot address many of the modern concerns about privacy. When it works well, the US approach to antitrust policy can address competitive issues in innovative markets and over the long run. Nothing else.

About the Author

Shane Greenstein is the Martin Marshall Professor of Business Administration at Harvard Business School and co-chair of the Harvard Business School Digital Initiative. Encompassing a wide array of questions about microelectronics, computing, communication, and internet markets, Dr. Greenstein's research extends from economic measurement and analysis to broader issues. His most recent book, *How the Internet Became Commercial: Innovation, Privatization, and the Birth of a New Network* (Princeton University Press, 2015), won the 2016 Schumpeter Prize for best book. Dr. Greenstein previously taught at the Northwestern University Kellogg School of Management and the University of Illinois Urbana-Champaign. He received a PhD from Stanford University and a BA from the University of California, Berkeley, both in economics.

Notes

1. The case was argued and settled in front of Judge Harold Greene, which resulted in divestiture and gave rise to what became known as the Modified Final Judgment (MFJ). The MFJ was a modification of the final judgment reached in the 1956 consent decree between the US government and AT&T. *United States v. AT&T*, 552 F. Supp. 131 (D.D.C. 1983).
2. *United States v. Microsoft*, 253 F.3d 34 (DC Cir. 2001).
3. *United States v. Google*, October 20, 2020, <https://www.justice.gov/atr/case-document/file/1329131/download>.
4. “Apple devices account for roughly 60 percent of mobile device usage in the United States.” *United States v. Google*, October 20, 2020, 27, <https://www.justice.gov/atr/case-document/file/1329131/download>.
5. Statistics vary by precise test question, population, and time period. See, for example, Broadband Search, “Mobile vs. Desktop Internet Usage (Latest 2022 Data),” <https://www.broadbandsearch.net/blog/mobile-desktop-internet-usage-statistics>; Christo Petrov, “51 Mobile vs. Desktop Usage Statistics for 2022,” TechJury, June 2, 2022, <https://techjury.net/blog/mobile-vs-desktop-usage/#gref>; and Imed Bouchrika, “Mobile vs Desktop Usage Statistics for 2021/2022,” Research.com, February 24, 2021, <https://research.com/software/mobile-vs-desktop-usage>.

The project is generously supported by the John S. and James L. Knight Foundation.

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