# The Challenge Regulating Big Tech Platforms

**Eric K. Clemons**[1]
*Professor of Operations and Information Management, The Wharton School, University of Pennsylvania*

## 1. Motivation

Across the Western World, while new legal decisions and regulations aim to address and mitigate the disruption and harm caused by the business models of large gig economy platforms, these platforms continue to grow exponentially, amassing more power by the day. The implications of their growth as well as the continued growth of other internet giants extend to the whole of society including civil society, consumers, workers, small businesses, entrepreneurs, venture capital investors, and others.

A small set of online platforms now control virtually all of consumers' online transactions. These firms often deploy novel online business models, with new sources of power and new forms of abuse of that power, which in turn may require new forms of regulation.

Regulation often seems like a rather abstract subject, but online abuse of power and the future regulation of Google, Apple, Facebook, and Amazon actually affects all of us.

Regulators, legislators, and the courts need to understand how today's giant companies are different from their predecessors. They need to understand when the forms of regulatory control that were designed for the industrial economy may no longer be effective today, even if they seemed fully adequate as recently as ten years ago.

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Executives need to understand their current and future vulnerability, even if they lead companies that may appear dominant in their industries today. Walmart, Lidl, and Carrefour will be dependent upon online platforms for access to their customers as smart homes and digital assistants like Google and Alexa begin to dominate automated online ordering. Google will route orders to companies that pay the highest prices for access to consumers, duly weighted by quality scores, as they do with search today. This will increase companies' costs of doing business. Alexa will route orders to Amazon and Whole Foods, reducing or in some cases eliminating competitors' access to Alexa's shoppers. Additionally, companies as diverse as BMW and GM, Walmart and Bosch will likewise be dependent upon these platforms for access to their consumers' smart appliances. Consumers already have Alexa, Google Android, and iOS devices. We do not need another life control interface from BMW, and another from Walmart, and another from Bosch.

Googleplex —
Google headquarters,
California

Entrepreneurs need to understand where it is currently impossible to compete with existing platform giants, and where regulatory change may open niches for them. Regulatory change may also create opportunities for new online entrants to replicate on a smaller scale the business models that these giants currently totally control.

Likewise, investors need to know when a new company is or is not going to be viable under current regulation, and when future regulation may dramatically reduce the value of their holdings in existing platform giants.

## 2. Introduction

In the Western World a small number of online platform giants have emerged as the most valuable companies in the world. Four of the ten most valuable companies in the world are the American online platform giants Amazon, Alphabet / Google, Apple, and Facebook, while Chinese online platform giants Tencent and Alibaba are included in the list as well.[2] Their wealth is truly astounding. Alphabet / Google's balance sheet as of 31 December 2018 showed just over $109 billion in cash[3], which is just over the combined market capitalization of American Airlines, Delta Airlines, United Airlines, and Southwest Airlines, or significantly more than the combined market capitalization of Ford and GM. They are also among the most powerful companies in the world, with the ability to control online commerce in all countries, in all industries. The firms create enormous economic value and enormous economic benefits for their users. Indeed, this should be self-evident; if they did not create value for users they would not have been so widely adopted. They also create significant economic disruption and demonstrable economic harm to entire industries and to large numbers of these same platforms' own most loyal customers.

Such creative destruction produces economic losers as well. We don't mourn the loss of TV Guide now that we have online cable and online cable schedules, any more than we mourn the passing of slide rule producers and the reduced importance of the handheld calculators that initially replaced them. But we should all be concerned when new technology and new business models lead to new sources of power, new forms of abuse of power, and new forms of harm to consumers.

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There have recently been calls to regulate the giant American platforms as monopolies, focusing on Google, Apple, Facebook, and Amazon.[4,5] However, despite their size and their power, and their abuse of their size and their power, it is not apparent that traditional antimonopoly law is the most appropriate way to regulate these companies. The most frequently discussed form of regulatory relief has been the threat to break these giants into smaller competing firms. As we have discussed previously, breaking up Google Search into smaller competing MP3PP companies would not reduce the cost of keywords; paradoxically, it could actually increase the cost of keywords to companies. Recent calls for regulation of Facebook after its complicity in fake news creation and dissemination involve threats to criminalize the action of its most senior executives[6]; interestingly, while holding Mark Zuckerberg personally liable for Facebook's actions might significantly alter the company's behavior, breaking up Facebook would not reduce the harm created by fake news.

Regulation of companies that provide essential infrastructure needs to be analyzed very carefully. Countries should consider regulation only in the presence of the following three conditions:

- Regulation is justified in the presence of demonstrable consumer harm;
- When markets will not provide solutions, or will not do so quickly;
- And when we know how to regulate without creating more harm than good.

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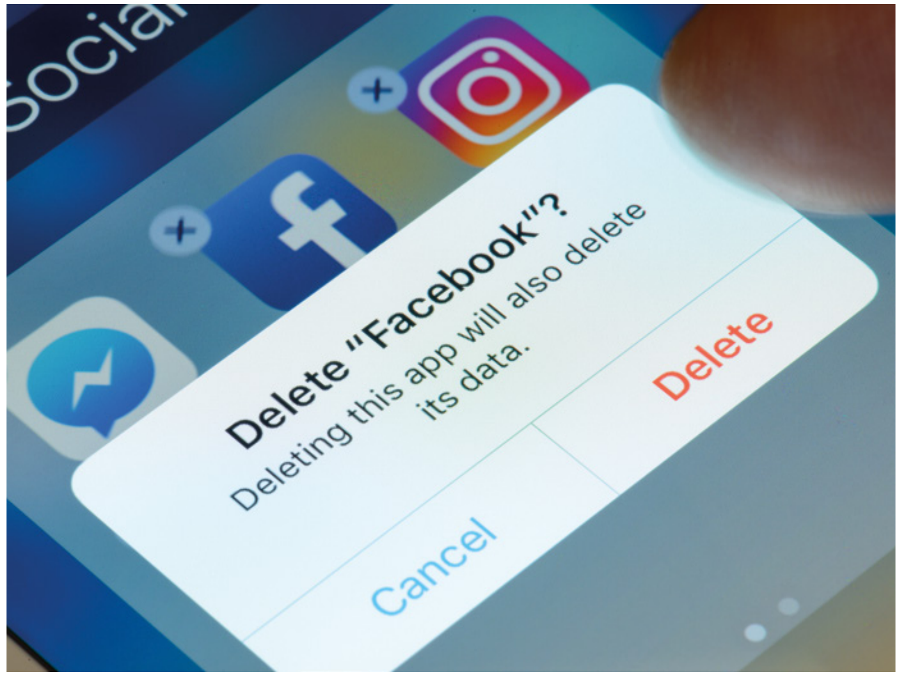


## 3.
## Context — The Need for a New Look at Regulation

The problems with today's online platform giants include monopoly power and the abuse of that power, but the problems go well beyond just antitrust and abuse of monopoly power. Indeed, the new business models embraced by today's platform giants create new sources of power and new abuses of power. Before we seek to regulate we need to be certain that there are problems with today's big tech companies, as of course there are.

- **Facebook** has undeniably been complicit in the effective creation and distribution of fake news[7,8], designed to manipulate both the Brexit Referendum and the 2016 US elections.[9] Indeed, Mark Zuckerberg has been called an "existential threat to democracy."[10]
- **Amazon** is accused of data mining online transactions and systematically destroying sellers in the Amazon marketplace.[11]
- **Google** may be the most expensive possible way to provide search, even though it appears to be free to consumers.[12]

Are these problems unprecedented? Are they different from the types of problems that regulators had to address before? That depends on what you mean by unprecedented.

- Facebook sells an ***addictive, harmful, defective product, enabled by lack of transparency***, just like tobacco companies have done for decades before mandatory product labeling. They sell harmful and unsafe products, just like the meat packing industry did in the 1890s, before the creation of the Food and Drug Administration in the US and its counterparts in developed western economies.
- Uber and Lyft and Airbnb produce ***negative externalities***. Uber and Lyft increase urban traffic and urban congestion. Airbnb changes the character of residential neighborhoods, as long-term tenants are replaced by transients. These externalities look different from the pollution created by leather tanning companies and chemical companies, but they are just as real.
- Google has a chokehold over application developers who want to produce apps for Android devices and Google uses that power. The Mobile Application Distribution Agreement (MADA) of Google specifies which apps must be preinstalled on all Android devices and which must be preinstalled on the home page, which apps *may* be preinstalled, and most importantly, which apps *may not* be preinstalled. This is a critical form of ***platform envelopment***, in which a company enjoys monopoly power over a core application, in this case Android. They allow and even encourage creation of additional apps, since each new app creates super-additive value; that is just a fancy way of saying that the value of Android plus YouTube plus Google Maps plus Search is greater than the sum of their values as standalone offerings. And the owner of the core app can deliberately limit interoperability, as Google did with the MADA, extending monopoly power over Android into new forms of monopoly power in new areas. The earliest example of platform envelopment may have been AT&T's launch of the first commercially successful radio station, WEAF, and its attempt to create the only viable broadcasting network, using its control over long distance land lines to link radio stations in cities throughout the United States. This was immediately blocked by the newly-created Federal Radio Commission, which held that broadcast radio networks were going to be too important to be controlled by a single company.[13] The EU's Competition Commission has not insisted that Google divest all of its apps, but it has dramatically reduced the use of the MADA by imposing record fines on Google.[14]

Of course there are differences between current problems and these historical precedents. Perhaps the most obvious difference is the breadth of industries that are affected when dominant platforms engage in platform envelopment strategies. The Federal Radio Commission intervened because AT&T had the ability to determine, unilaterally, who could and could not operate a radio network. Google used its platform envelopment strategy to destroy Foundem, a comparison shopping site in the UK; when Google launched a competing site it dropped Foundem from number one in its list of search results to a spot hidden five or more pages deep in its listings.[15] As we have discussed, home assistants, smart appliances, and smart vehicles will extend platform envelopments' effects even to companies that appear to have well-designed online strategies. It may not be possible for these companies to escape control by online platforms, or the charges these platforms will impose for allowing the firms to continue to access their customers. As smart homes and smart phones emerge as our new *life control interfaces*, the scope and power of platform envelopment will increase significantly.

> **Why would a regulator care? Why would a consumer care? Because these very high prices charged to party 3 sellers invariably result in higher prices to consumers**

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And of course there are new forms of problems created by giant online platforms that are without precedent in the industrial economy and that are not mitigated by current antimonopoly regulations. Perhaps the most perverse is the *reverse price war* in search, a special case of the reverse price war in Mandatory Participation Third Party Payer businesses (MP3PPs).[16] The basic form is simple to describe:

- Party 2 operates a platform that enables party 1 (buyers or consumers) to interact with party 3 (sellers or service providers).
- The platform is provided to party 1 without charge and buyers quickly and nearly universally adopt the platform. We *all* use Google when we are searching for a watch or a camera or a tour operator, or before we book travel.
- After the nearly universal adoption of the platform by consumers, party 3 sellers and service providers cannot remain in business without the support of the party 2 platform.
- Once that happens, party 2 raises the prices it charges party 3 and party 3 has no choice. Party 3 pays whatever the platform demands.
- The platform operator uses part of its revenue to provide additional services to consumers, who now view the platform as more free than free!
- The presence of competition — the presence of a second platform — does not cause the first platform to lower its prices to party 3. In fact, what commonly happens is that the platform *increases* the prices it charges party 3, and uses the additional revenue to provide even more services to consumers. That is, competition increases prices that party 3 sellers need to pay for access to their customers.
- As long as the platform's prices are not so high that they bankrupt party 3 sellers, this is stable. Party 3 has no choice; it needs to be found. Party 1 has no reason to object; it gets services freer than free.
- Key to all of this is *single homing*; how often do any of us run a search in Google and Bing? Most of us use only Google, and as a result party 3 sellers have no alternative. The presence of Bing does not reduce Google's power over sellers.

Why would a regulator care? Why would a consumer care? Because these very high prices charged to party 3 sellers invariably result in higher prices to consumers. The enormous profits of the party 2 platform operators are a form of tax that the platform imposes on both the sellers and the buyers, but the buyers are unaware of the true cost of relying upon the platform.

## 4. Will Markets Provide Solutions?

Before we recommend regulation, we need to ascertain if current problems are going to be solved by market forces. The answer is almost certainly not, and certainly not quickly!

***Markets don't solve problems caused by lack of transparency.*** Markets don't even know about these problems. Most people manipulated by fake news before the Brexit Referendum or before the 2016 US elections have no idea that they have been manipulated. Almost by definition, market participants are not aware of lack of transparency and harm that they may suffer. And even when consumers are aware that problems *may* exist in their markets, the cost of verification that problems are real and the lack of viable alternatives prevent a market response.

Economists have known for centuries that ***markets don't solve problems with externalities***. As long as I don't live down wind of a hog farm I am not directly affected by the smell, and I do benefit from buying ham. Markets do not fix problems caused by externalities because customers are not affected directly. The benefits the business creates go to its customers, and the harm goes to others. Even transparency and increasing customers' awareness of the problems their purchases cause to others is not effective. Altruism rarely solves problems created by harmful externalities.

***Markets don't solve problems with MP3PPs***. Party 3 sellers have no choice, so the high prices they pay don't matter. Party 1 buyers are rewarded, so they actually visibly benefit from the high prices paid by part 3 sellers, even if they suffer counterbalancing harm in terms of higher prices. The rewards are visible; the higher prices are not. The credit card industry is an MP3PP because of the terms of MasterCard and Visa's service agreements with their merchants; if a merchant accepts one MasterCard it has to accept all of them, and if seller accepts one Visa card it has to accept all of them. Sellers now hate the most expensive cash back rewards credit cards; the cash back programs are not funded by the banks that issue the cards, but by higher fees paid by merchants on every sale. But why would a customer abandon his or her cash back credit card? The merchant or airline isn't going to lower the price they charge the buyer, but the buyer is going to lose the 1%, 2%, or more that they receive as their reward for using the card.

***And markets don't solve problems with platform envelopment strategies.*** Consumers love the obvious superadditive value creation and would lose value if they switched platforms. However, successful platform envelopment strategies limit competition, limit consumers' choices, and increase consumers' prices. Still, when comparing the real superadditive value from the platforms they have, against the hypothetical advantages of increased choice and lower prices from competitors who do not yet exist, consumers will predictably and rationally remain with the platform providers and their platform envelopment strategies.

## 5. Will Monopoly Law Provide Solutions?

The problems we described above are not problems caused by monopolies. They almost certainly will not be solved by the application of traditional anti-monopoly law.

- The harm caused by the lack of transparency and the lack of awareness of the dangers of tobacco were not solved by monopoly law. The tobacco industry wasn't a monopoly and transparency isn't a monopoly problem.
- Polluters in chemical industries, agricultural industries, and in fossil fuel industries weren't monopolies. Pollution is a form of externality. Externalities aren't a monopoly problem, and externalities are not addressed by antimonopoly laws.
- MP3PPs aren't monopolies. Google does have monopoly market share in keyword auctions and search, but prior experience with MP3PPs indicates that competition among MP3PPs actually increases the cost of the services provided to party 3. Remember how competition among MasterCard issuers and Visa issuers actually increased merchants' costs of accepting the cards. Increasing party 3's cost of doing business invariably increases the prices that consumers pay for goods and services.

## 6. Other Sources of Relief

If current competition law is not going to provide relief from the present and future abuses of Google, Apple, Facebook, and Amazon, what form should regulation take? We offer a few simple suggestions.

- Google's Android, Apple's iTunes, and Amazon's Alexa are emerging as *essential facilities*. That is, they are essential to entire industries and they are too expensive to expect all retailers, or even all major manufacturers, to develop their own competing versions. Significantly, consumers don't need three or four. Rather, what consumers need, and what sellers and service providers need, is fair and fairly priced access to customers through these platforms. *The Essential Facilities Doctrine*[17] played a significant role in the regulation of Sabre and Apollo, airline reservations search engines that are the closest historical analogs for Google, and in the decision to compel AT&T to make its connections into consumers' homes available to competitors. At present *the Essential Facilities Doctrine* no longer plays a significant role in American enforcement of competition law and it has never played a significant role in EU enforcement of competition law. It may need to become a central element of our regulation of platforms going forward.
- Facebook is a harmful product, and consumer protection law needs to be adapted to limit the worst of Facebook's abuses. Facebook will continue to argue that it is not a media company and that it is inappropriate for private companies to censor what their users can say. I think we can all agree that some forms of private speech are not protected; child pornography, calls to ethnic violence, and other forms of hate speech come to mind immediately. Once we accept that some limitations are appropriate, it becomes acceptable to ask exactly *which* limitations should be enforced. As importantly, Facebook's targeting of extreme forms of fake news to the most sympathetic readers within their individual bubbles is essential for the continuation of fake news; if attempted manipulation were more widely visible the backlash against Facebook and against the architects of fake news campaigns would limit the harm. So a small regulatory change that would have enormous ➔

benefits is limiting Facebook's complicit cooperation with fake news campaigns.

Big Tech firms are among the most profitable in the world today, and they are among the largest spenders on public relations and on lobbying. It is not yet clear that any form of regulatory relief is feasible. Prior experience with the Stop Online Piracy Act / Protect Intellectual Property Act is instructive. The idea was to limit giant platforms' abuse of material under copyright. The largest abuser at the time was Google's YouTube, but Wikipedia felt threatened as well. The bills initially seemed certain to receive approval in the House and Senate. Google equated it with censorship, and Google's home page had the image of **CENSORED** stamped across it. Wikipedia asked us to imagine a world without free access to knowledge and then took itself offline for a day. Seven million people signed petitions against the bills. The bills didn't have a chance of passing after that, since the opposition involved millions of voters.

We expect that consumers could easily be rallied to sign petitions arguing that regulations would destroy the basis of the internet as free, that they would add considerably to users' costs, and that the current regulatory regime does not subject them to any harm. It is not clear that regulation of giant platforms is feasible until the nature of the harm they cause is much more clear both to regulators and to consumers.

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## 7. Regulation in the Context of Social Welfare Computing

Welfare Economics acknowledges that not all individuals are able to function in our industrial society at all times, and seeks to provide some form of economic social safety net.

This paper is part of an ongoing research program in Social Welfare Computing, which is being conducted with my colleagues at Copenhagen Business School's Departments of LAW and of Management, Politics and Philosophy and at the Technical University of Munich's Chair for Information Systems in the Department of Informatics. Social Welfare Computing specifically addresses developing societal mechanisms to mitigate the disruption and harm caused by digital transformation. It does not address using technology to address existing social problems. It does not address use of computing to improve rural access to health care or to higher education, or the improvement of government services, as important as these topics are. Social Welfare Computing addresses developing mechanisms to mitigate the harm caused by new forms of online power, or by abuse of private information, or by fake news and manipulation of elections. ■

1 This paper benefited from the insights of and from discussions with my colleagues at Copenhagen Business School, principally Jan Trzaskowski, and from work with my colleagues at the Technical University of Munich, principally Helmut Krcmar and Sebastian Hermes.

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## About the Author

**Eric K. Clemons** is Professor of Operations Information and Decisions at the Wharton School of the University of Pennsylvania. He has worked with the most senior executives in areas as diverse as international finance, global counter terrorism, craft brewing, credit card banking, and marketing of consumer packaged goods.

More recently, Clemons studies the public policy implications of online business models.

Clemons' most recent project integrates three decades of study into a single volume "*New Patterns of Power and Profit: A Strategist's Guide to Competitive Advantage in the Age of Digital Transformation*," which was published in 2018.

He has published over 100 scholarly articles and regularly publishes online in *Huffington Post*, *Business Insider*, and *Knowledge at Wharton*.