



Consumer Federation of America

**BIG DATA PLATFORMS:
A NEW CHOKEPOINT IN THE DIGITAL
COMMUNICATIONS SECTOR**

Meeting New Challenges with Successful Progressive Principles

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1. THE ECONOMIC VALUE TO BE PRESERVED

OUTLINE AND PURPOSE

The digital information system is the heart of the digital economy, but it has become a source of great concern to economists and policymakers. This paper analyzes a great challenge facing the digital communications sector at a turning point in the Digital—or 3rd Industrial—Revolution, examining the benefits and threats that Big Data Platforms create for competition and consumers. These platforms have become a key chokepoint in the emerging information age. Continuing to enjoy the immense benefits that the flow information creates while preventing the abuse of information as it flows through these chokepoints is a critically important juncture for the digital economy.

Earlier working papers have laid the groundwork for this analysis by establishing the framework of pragmatic, progressive capitalism that successfully negotiated similar challenges at the same point in the 2nd Industrial Revolution (WP#1). We have described how those principles were applied to the communications infrastructure (network neutrality, WP#2 and Business Data Services, WP#3) in the past and explained why the resulting successful policies provide powerful lessons for the policies that should be adopted establish the guardrails and guidance for the information system.

The remainder of **Chapter 1** frames the current dilemma faced by policymakers. It explains the severe challenges faced by both antitrust and regulatory authorities, made particularly severe at this critical juncture, both because the traditional authorities they possess have not been effectively utilized and because new approaches are needed to deal with new economic relationships.

Chapter 2 describes the key factors that underly the immense power and success of digital technologies. The benefits of economic transformation represent the first horn of the dilemma that confronts policymakers. Preserving these benefits are necessary if the dynamic of economic progress is to be maintained. The chapter also briefly identifies the second horn of the dilemma: the harms of anticompetitive structures and abusive conduct. It argues that a “tight oligopoly on steroids” has come to dominate the key aspects of the digital information sector. The remainder of the paper is devoted to understanding and proposing effective responses to mitigate the harms and preserve the benefits of digital technology. Passing through the horns of the dilemma is difficult, but a similar challenge was successfully met early in the 2nd Industrial Revolution.

Chapter 3 describes the challenges that Big Data Platforms pose to traditional antitrust and regulation from several points of view. It starts with a structure-conduct-performance evaluation of the obstacles the technology poses, then outlines the many market failures that must be addressed by policy.

To overcome these obstacles, the policy response must understand why the free market fundamentalist view should be rejected. This is the subject of **Chapter 4**, which includes a discussion of why existing antitrust institutions are inadequate to regulate the day-to-day market power that Big Data Platforms inherently create.

Chapter 5 lays out the principles for a response to the dilemma. It argues for reinvigorated (to overcome decades of misguided laxity in enforcement of existing authority) and recalibrated (new definitions and authorities to adapt to the new technology) antitrust. Regulation of daily activities must also be reinvigorated and recalibrated, but with the added problem that no single agency has a portfolio that is broad enough to deal with the reach and variety of activities in which the Big Data Platforms engage. We believe it is necessary to create a new digital data agency.

Chapter 6 provides advice on specific approaches policy makers should (“Dos”) and should not (“Don’ts”) implement with the goal of creating flexible oversight that negotiates between the horns of the dilemma.

The section argues

- for dual strategies (antitrust and regulation), which have been applied for over century in telecommunications.
- against overreliance on antitrust, particularly Section 5 regulatory authority of the FTC, which was never very effective because of its structure and has been a disaster in the digital age.
- for flexible, expert agency oversight with clearer goals and strengthened tools articulated by legislation where necessary
- against utility-like regulation that will stifle innovation in a sector that is far more dynamic than traditional utilities
- against simplistic, extreme antitrust approaches that break up everything to create a “horse and buggy” where units are too small to capture the powerful economies of scale, scope and integration that typify digital platforms.

The approach offered does not rule out bans or structural solutions, but it argues that these should be implemented by expert agencies where careful analysis shows that preventing abuse cannot be achieved by less intrusive interventions. The chapter concludes by showing that other analyses support the approach taken in the working paper.

The Appendix offers a brief overview of the comments recently filed in the EU proceeding to develop a competition tool and then shows the similarity with an analysis of antitrust as consumer protection done two decades earlier in the Microsoft case. The link between the first great antitrust case of the digital age and the ongoing efforts to develop effective oversight over Bid Data Platforms, the new chokepoints in the digital communications sector, is clear and reminds policymakers that oversight can and should be impose.

THE URGENT AND COMPLEX NEED FOR POLICY

Many governmental bodies, research institutions, and expert practitioners agree that digital technologies have proven their value, but also acknowledge the significant harms and abuses of this technology that diminish its current value and threaten its future.

Recently, these harms have garnered increasing concern and calls for policy change. In fact, a House Antitrust Subcommittee hearing on July 29th about online platforms has been

called “a rout in favor of the anti-monopoly movement” and reflects ongoing efforts to “get Republicans on board with sweeping updates to U.S. antitrust laws.”

On the subject of this landmark hearing, the *Washington Post* Editorial Board weighed in about the value of careful consideration when it comes to such legislative updates:

getting involved... to consider whether antitrust doctrine needs an update in the digital age, when big data skews what regulators thought they knew about pricing, and when unforeseen and often immeasurable harms may arise from the concentration of too much control in too few hands... is a worthy task.¹

While the *Washington Post* applauded Congressional hearings, it cautioned that:

the line-drawing between good business and bad behavior may not be as easy as legislators make it seem... They must take care that... remedies address clear and concrete injuries – and that they don’t cause new ones.²

- The complexity of the situation is quite clear in the finger pointing about how we got into this mess.³ Blame has been assigned to the antitrust laws themselves, to
- lax enforcement, and to the
- courts, who have been accused of applying a discredited theory that gives all benefit of the doubt to efficiency claims.

The uncertainty over causes interacts with the uncertainty over remedies. Two major solutions have emerged:

- a radical antitrust approach that breaks-up all the dominant digital firms with little regard for efficiencies of integration, or
- a more nuanced approach that seeks to regulate platforms to prevent abuse while capturing some of their large efficiencies.

The goal of this working paper is not to regurgitate those analyses. Rather, it is to locate them in the framework developed throughout the Working Paper series and demonstrate that past approaches embedded in pragmatic, progressive capitalism should provide the launchpad for future policy. The lessons of history are extremely important at this moment.

- The institutional structure needs both antitrust and regulation to ensure a stable basis for the new digital political economy.
- The pragmatic, progressive approach ensures both political stability and economic expansion.
- While the principles on which they rest are the same, historical practice must be adapted to the new techno-economic relationships in the economy.
- Antitrust and regulation need to be rebooted, after a long period of inactivity,
- Antitrust and regulation also need to be recalibrated to fit the new economy.
- Antitrust practice must be redefined to be better equipped for the challenges of the new economy,

- Regulatory practice that was designed and is well-suited for communications networks (big broadband networks), needs to be redefined for the challenges of digital information (big data platforms).
- A new regulatory agency is necessary because the existing sector-specific expert agencies do not have portfolios and approaches (authority and power) to meet the task of overseeing the digital information sector.
- A new agency designed for the digital sector is important not only to provide oversight, but also to ensure flexibility and adaptability and promote competition.
- Guardrails and guidance of pragmatic, progressive capitalism are designed to negotiate the classic dilemma. On the one hand, insufficient regulation will allow abuses to continue and grow, ultimately undermining innovation and growth.
- On the other, excessive regulation will compromise innovation and growth.
- The studies on which we rely in this working paper are, like pragmatic, progressive capitalism, very much in the middle between these two extremes.⁴ They reject both overly prescriptive regulatory mandates set in the stone of legislation (e.g. utility-style regulation), as well as
- ineffective reliance on unregulated markets (irrational exuberance for deregulation or “horse-and-buggy” competition).

About 6 months before the July 29th House Judiciary Committee hearing at which the CEOs of the largest digital platforms testified, a dozen antitrust practitioners and scholars filed a lengthy, footnote-laden letter as part of the hearing record. Although they were narrowly focused on antitrust, that letter is a useful starting point to identify and address the challenges facing public policy at the quarter-life crisis of the 3rd Industrial Revolution.

Antitrust

In their letter, the experts show clearly that antitrust faces two major obstacles in responding to the challenges of the digital economy.

First, antitrust labored under a long period of increasing inactivity.⁵ The dominant antitrust theory gave neglected real competition and consumer harm resulting from the absence of such competition, instead giving all the benefit of the doubt to large, and especially vertically integrated entities.⁶ This theory claimed that powerful market forces prevented the abuse of market power and that there were substantial efficiencies to offset any harms.⁷ This theory had been thoroughly discredited, but it was deeply entrenched in the courts, which are often slow to adapt when it comes to economic transformation.

The blame laid at the door of the courts reflects the long-standing criticism of free market fundamentalism, which can be summarized by the following beliefs:

- Markets self-correct.
- Large, monopoly units promote innovation.
- Vertical integration creates efficiency.

- Harms of market power are small (the single monopoly rent theory).
- Harms of market power are fleeting (undermined by ease of entry and the contestability of markets).
- Potential competition (the mere possibility of entry, contestability) is enough to discourage the abuse of market power. (Though, actual potential competitors who are harmed by exclusionary tactics or face real and artificial barriers to entry are given little weight).
- Evidence of anticompetitive intent is ignored.

These failures of free market fundamentalism are a clear theme of the first working paper in the series, which details The Brandeis-Stiglitz framework for progressive capitalism.⁸ The practical impact of this pragmatic approach can be seen in Brandeis' vigorous support for the Sherman Act and in his belief that it needed to be updated and strengthened legislatively.⁹ He was also concerned about democracy and participation, which have been the subject of considerable controversy in the antitrust community and have tested the limits of antitrust practice.

Beyond the recent history of lax enforcement, the second obstacle facing antitrust stems from a new set of economic characteristics in the digital economy. This would have been a severe challenge for traditional antitrust, even if it had been functioning at its full potential.

Platforms are often insulated from platform competition to a substantial extent by substantial scale economies in supply and demand (network effects) combined with customer switching costs.¹⁴ The financial markets appear to value many large platforms at levels reflecting an expectation that they will earn substantial rents from the exercise of market power for an extended period of time....

Large online platforms often exist in winner-take-all and winner-take-most markets. In those markets, there are likely to be long periods where a firm has a monopoly or dominant position, which makes anticompetitive conduct more dangerous. Exclusionary conduct and mergers involving online platforms, particularly dominant ones, can harm competition among platforms and harm competition among users on platforms.

Antitrust law and enforcement have failed to respond to growing market power in substantial part because many key antitrust precedents—particularly those precedents governing exclusionary conduct—rely on unsound economic theories or unsupported empirical claims about the competitive effects of certain practices.¹⁰

This was a second major theme of the Brandeis-Stiglitz discussion in support of significant regulation.¹¹ The aspects of daily life undergoing transformation during the 2nd Industrial Revolution demanded agency oversight that delved into the details of the operation of the new economic units. Brandeis devoted a great deal of attention to labor relations, financial institutions, social protection, and health and safety, to name a few of the most important major categories identified in the 100 elements of the Brandeis Protocol. He supported the creation of

new regulatory bodies in response to the challenges of the 2nd Industrial Revolution, which Stiglitz celebrated in his model for progressive capitalism.

This is not to suggest that traditional antitrust is unaware of the challenges. The digital platforms have attributes that are magnifications of those that have been challenging for the antitrust law and practice. The solution for Brandeis and the 2nd Industrial Revolution was pragmatism, flexibility and above all, dual jurisdiction. Both antitrust and regulation were necessary to provide the guardrails and guidance that capitalism needed. Brandeis and Stiglitz also believed that broader policies were necessary, as well, including taxation, (voting) rights, personal freedom (privacy and speech). The importance and limitations of antitrust that Brandeis and Stiglitz identified are particularly trenchant at the critical junctures in industrial revolutions.

The experts' defense of antitrust in their letter to the House Judiciary Committee launches from the observation that the growth of market concentration and the accumulation of market power that flows from it constitute a failure of competition. This undermines the benefits associated with competitive markets, including entrepreneurialism, productivity growth, innovation and fair treatment of labor. Market power leads to bad behavior. Consumers suffer from higher prices, lower quality and fewer choices. The supply-side is distorted by mergers and exclusionary tactics.

Regulation

The challenge that regulatory institutions face is even greater, in a sense a “triple” whammy, although the first two that afflict regulation are similar to antitrust.

Regulation has suffered under a long period of lax enforcement driven by the same, discredited theory that abuse is short-lived and policy action is not necessary.

Regulatory institutions also suffer from the challenges of a new economic landscape because they were defined according to specific technologies and functions – e.g. telecommunications, commerce. Their jurisdiction to deal with dominant big data platforms is questionable and inadequate at best. Any action they take is likely to be challenged by dominant platforms.

Regulatory authority does not exist to deal with the challenges posed by big data platforms. While it might be possible to shoehorn new authority into an existing agency through legislation (expansion without legislation is doomed), it would be preferable to create a new agency. The experience under the Telecommunication Act of 1996, described in the second Working Paper, argues very strongly for the creation of a new agency by legislation.¹²

CAPTURING THE BENEFITS OF TECHNOLOGICAL CHANGE, WHILE PREVENTING THE ABUSE OF MARKET POWER

In this Working Paper we examine how the issues and concerns that pragmatic, progressive capitalism successfully handled during the quarter-life crisis of the 2nd Industrial Revolution play out in the contemporary debate around a similar challenge confronting the 3rd Industrial Revolution. The introduction to a major paper from the Stigler Center that involved over 30 leading analysts and practitioners in antitrust, privacy, journalism, and democratic practice

framed the issue confronting oversight over big digital platforms in exactly the way the Brandeis-Stiglitz framework does, as described in an earlier working paper.

On the one hand, there are immense benefits flowing from a technological revolution – efficiencies and potential growth that parallel the starting point of the Brandeis-Stiglitz framework.

One of the key defining factors of the past decade is the rise of Digital Platforms (DPs), such as Google, Facebook, Amazon, Apple. As more and more of our economy and society moved online, these companies ascended from non-existent or nearly bankrupt in the early 2000s to join Microsoft as global behemoths, exceeding (as of August 2019) more than 4 trillion dollars in market capitalization.

This meteoric rise is not surprising. These companies invented new products and services that revolutionized the way we work, study, travel, communicate, shop, and even date. In the process, they created trillions of dollars in consumer surplus.¹³

On the other hand, new technology and the benefits it delivers do not excuse anticompetitive practices or abuse of market power that causes harm to the public, Brandeis and Stiglitz’s central concern.

Nonetheless, recognizing the enormous gains brought about by these companies to date does not equate to saying that: (i) these gains will endure, especially if markets are no longer competitive; and (ii) there is no room for welfare gains by reducing some of the downsides brought about by them.¹⁴

However, it is critically important to recognize that there are clear differences in the existence and abuse of market power across companies and markets that require nuanced responses to preserve the benefits.

The term “Digital Platform” lacks a consistent definition—different companies may be characterized as a platform in different environments. For example, Google, Facebook, Amazon, Apple, and Microsoft raise different concerns regarding how their “bottleneck power” impacts the markets in which they operate. Considerations on market power involve all five companies mentioned above.¹⁵

The challenges of the 3rd Industrial Revolution are somewhat different from those in the 2nd because the nature of the technology is different, but the principles of an effective policy response to promote competition and ensure consumer protection are not, as shown in WP#1. Institutions that worked well to achieve their economic, social and political goals need to be updated, but not abandoned. The Stigler paper advocated, responses that were “least intrusive.”

This *Policy Brief*, aimed at a non-specialized audience, summarizes the main concerns identified by these studies and provides a viable path forward to address the identified concerns. It tries to do so in the least intrusive way possible.¹⁶

From the point of view of this analysis and the ongoing debate over how to shape the political economy, the phrase “least intrusive” is acceptable, as long as it is subject to key conditions. It is certainly consistent with the notion of preserving decentralized competition and markets. However, the policy response must not sacrifice effectiveness in service of the objective of “least.” This applies to both horns of the dilemma. It needs to be intrusive enough to get the job done, but not so intrusive as to undermine the dynamic growth of the economy. Therein lies the rub, the need to balance guardrails and guidance that set the goals and orient the market, while letting the market operate to the greatest extent possible in pursuit of those goals, a process we call “command-but-not-control” regulation when applied to specific examples.¹⁷ With these caveats, this part will rely heavily on the Stigler paper.

2. THE ADVANTAGES OF THE DIGITAL POLITICAL ECONOMY

Throughout the working papers we have emphasized two different kinds of benefits and harms.

One set is grounded in the “traditional” view of competition and the benefits that flow from decentralized, capitalist markets. The harms of market concentration and abuses of market power are traditional, having long been recognized by antitrust theory. The need for regulation where circumstances dictate that market power is likely to be strong and long-lived (small numbers, inelastic demand, barriers to entry, etc.). Business Data Services¹⁸ were the quintessential example, although even the most advanced firms that control the networks over which digital data flows rely on “traditional” anticompetitive practices to abuse, defend, and extend their market power. In fact, this paper shows that advanced technology are not a guarantee against the “traditional” abuse of market power; they may even facilitate and expand it.

The second view of competition is not traditional, but flows from the unique characteristics of digital technology and the digital revolution. Here we have identified new processes that rely on public policy and experimental entrepreneurialism in competitive markets to yield much higher and faster levels of economic development and change. The essence of a technological revolution is to transform the productive process across a wide swath of society, which we have demonstrated in the discussion of the 2nd Industrial Revolution (WP#1 on progressive, inclusive societies and capitalist technological revolutions) and the 3rd Industrial Revolution (WP#2 on network neutrality), primarily by dramatically lowering costs (WP#3 in the cost of communications technologies).

However, we stress that the transformation is not a certainty or without dangers. Dominant incumbents, both Big Broadband Networks and newly dominant big data platforms can gain market power and abuse it using “traditional” tools and new tools, while making arguments that digital technologies are so special they should not be subject to antitrust or regulatory oversight. We have shown through the historical analysis that those arguments were wrong at the critical juncture of the 2nd Industrial Revolution, as they are wrong at the critical juncture of the 3rd. We have argued that the lessons of pragmatic progressive capitalism, that worked so well in the response to the 2nd Industrial Revolution, can, and should, be applied to the critical juncture of the 3rd Industrial Revolution.

This paper, which deals with the big data platforms as the new chokepoint in the digital communication sector, delves into the details of these observation. WP#2 focused on the central dynamic process of the digital revolution in communication – innovation at the edges without permission. Here we begin with the broader, “non-traditional” benefits of digital technology in the communications sector and more broadly in the economy. By expanding the view of economic transformation, we are able to catalogue the threat posed by big data platforms, as shown in Table 2.1

TABLE 2.1: UNIQUE ADVANTAGES OF OPEN DIGITAL PRODUCTION THAT ARE THREATENED BY THE RISE OF THE TIGHT OLIGOPOLY OF BIG DATA PLATFORMS

Benefits of the “open” End-to-End Internet				Harms of Abusive Big Data Platforms
Activity	Shared Resource	Process	Benefits	
<u>Supply Side Economies of Scale and Scope = Transformation Resource Savings</u>				
Internet	Network	Open Protocol/Open Access	Innovation at the edge	Closed access, restricted innovation
Mesh Network	Spectrum	Embedded Coordination Algorithms	Dynamic occupation of spectrum	Centralized management slows progress, creates barriers to entry
Open Source Software	Code	Embodied Knowledge in software	Exploiting rich information in real time	Proprietary information limits value
Peer-to-Peer	Storage, Bandwidth content	Torrenting, Viral communications	Reduction in cost and expansion of throughput, broad exchange	Segmented market/functionalities
<u>Transaction Cost Reduction</u>				
All	Info search & deliver	“order fulfillment”	Immense time/resource savings	Biased results favor subset
All	Local Knowledge	Consumer as producer	Fit Between consumer needs and output improved	Restricted access to knowledge
<u>Demand-Side Economies of Scale and Scope, i.e. Network Effects = Value Creation</u>				
All	Direct	New Products	New values created and old value fulfilled more efficiently	Managed products tied to bundles
All	Direct	Self-organizing	Increased option value, supply-Side support for open source property due to specialization	Option value restricted by proprietary interest
All	Indirect	Increased value of niches	Value from diversity of Apps & content expands due to ease of aggregating demand	Competition through niche-based entry curtailed

Source: End-to-end benefits adapted from Mark Cooper, 2006, “From WiFi to Wikis and Open Source,” *Journal on Telecommunications and High Technology Law*, 3:1, pp. 133, 138 and applied to the characteristics of the emerging system as described in Mark Cooper, 2017b. *The Political Economy of Electricity: Progressive Capitalism and the Struggle to Build a Sustainable Power Sector* (Santa Barbara, Praeger), Chapters 8, 10, 11. Other, non-digital examples are provided in Mark Cooper, 2011. “Structured Viral Communications: The Political Economy and Social Organization of Digital Disintermediation,” *Journal on Telecommunications and High Technology Law*, 9:1

ECONOMIC ADVANTAGES OF DIGITAL

As described in Table 2.1, we identify numerous advantages created by digitization of the economy. Three distinct economic forces are at work: supply-side reductions in production cost (what North refers to as transformation costs), lowering transaction costs (a central concern of North), and increases in demand side value. A brief discussion of the benefits is necessary to lay the groundwork for the remainder of the paper, that focuses on the threats.

The advantage of the economic transformation process rests on three factors.

First, each set of activities accomplishes greater coordination by applying a combination of technological and human coordination. For instance, mesh wireless communications rely more on embedding cooperation in the technology: the algorithms and protocols of communications devices. Open source, in contrast, relies more on human cooperation, greatly enhanced by digital communications. Peer-to-peer networks made up of non-technologists stand between the two. Technology does much of the work, but the functioning of the network requires the cooperation of the people using it. Most importantly, these networks survive with varying levels of human cooperation and skill.

In each case, networks share critical resources: spectrum, code, storage, and bandwidth. Sharing requires a process, a principle of cooperation that organizes the critical factors of production. The sharing of resources creates significant efficiencies for the networked activities and confers benefits to the collaborating parties. The capacity of the network expands. When the benefits are larger, the cost is lower. When it is easy to communicate, collaboration is more likely. A similar process has been shown to affect the electricity system.¹⁹ The ease of communications is driven in significant part by the rapidly declining cost of equipment, as shown in the previous paper. Recent analyses of technological innovation have provided strong evidence that the digital communications platforms transformed the very fabric of the innovation process.²⁰

Second, the economic transformation process dramatically lowers transaction costs. The technologies at the core of this revolution reinforce the dynamic of this change because they are platforms within networks. They are important because there are strong complementarities between the layers and each layer sustains broad economic activity in the layer above it.²¹ Communications and computer industries have always exhibited network effects and strong economies of scale.²² Digitization reinforces these economic characteristics because economies of scope reinforce economies of scale. The technological revolution altered the information environment to make distributed solutions more feasible by fostering the uniquely user-focused character of the communications-intensive Internet solution.

“A platform is a common arrangement of components and activities, usually unified by a set of technical standards and procedural norms around which users organize their activities. Platforms have a known interface with respect to particular technologies and are usually ‘open’ in some sense.”²³

The Internet thrived and has become the focal core communications resource system of the digital economy because it possessed characteristics that are ideally suited to a cooperative,

non-governmental solution to a social dilemma. The policies simultaneously opened the communications space to widespread market entry and innovation under a radical, new approach to electronic communications, while ensuring that the telecommunications network (the focal core communications resource system of the 2nd Industrial Revolution) on which the Internet was dependent would be available on terms that held the incumbent network operators in check.

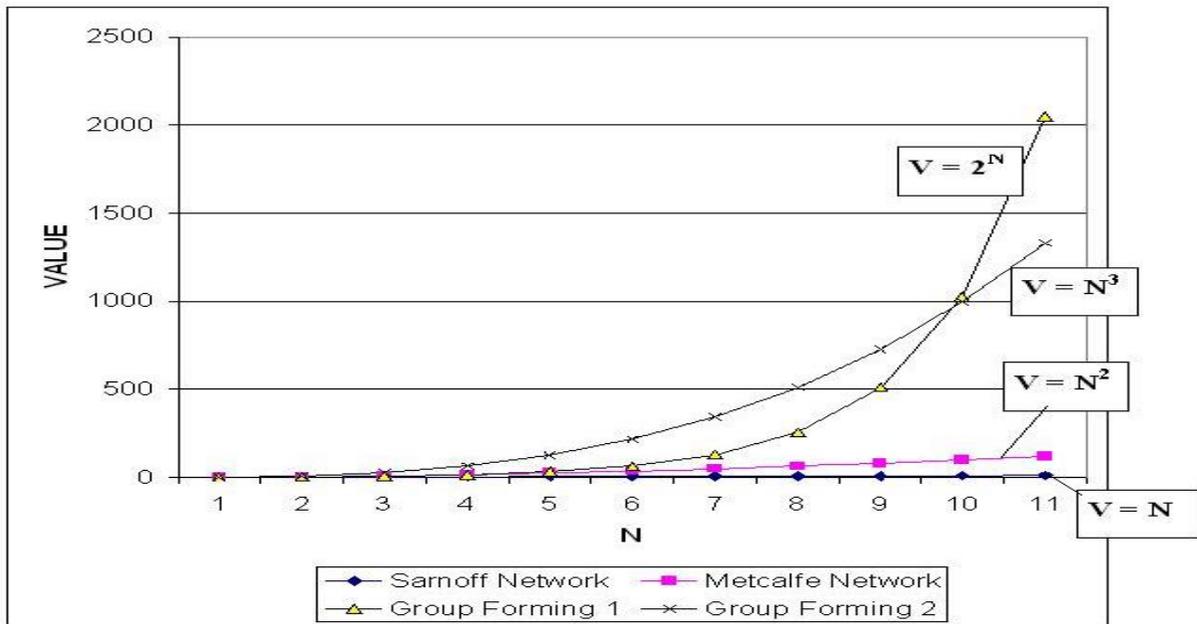
Co-invention and a transformation of production that included a much more collaborative approach within and between firms has become a large part of the broad response to the technological revolution. “Collaborative production” is an apt phrase for distinguishing and describing this economic transformation. Collaborative production produces an economic advantage because it lowers transact costs by streamlining the search, acquisition and delivery of products. Products that can be delivered digitally (music text, video) are most greatly affected, but the impact is felt for physical products, too.

Third, the technological advance is also making user-based design an attractive option.²⁴ It allows individuals to participate in task portioning and decision-making.²⁵ The technology transforms consumers into producers.²⁶ This introduces an important transformation on the demand side. Here there are two impacts. One obvious benefit is the introduction of entirely new products. A more subtle, but equally important, impact is the improvement in matching supply and demand. Reducing or removing the distinction between user and producer results in substantial transaction cost savings. The distance shortens between what producers produce and what consumers consume because the consumer-turned-producer knows what he wants more than a producer who is not a consumer. The consumer’s and producer’s interests are identical as they are the same person.

Users know what they need and want. Transferring that knowledge to producers creates inefficiency. Producers who are also users and volunteer for tasks that interest them inherently understand the production problem more clearly and can produce for their needs more easily instead of for the masses. They have the locally specific knowledge necessary to solve problems.²⁷ There is also an agency problem when consumers are not producers.²⁸ When producers are separate from consumers, the producer may not be able to meet the needs of individual consumers precisely. However, when the developer is also the consumer, he will act in his own best interest when producing.²⁹

Demand-side economies of scale and, especially, of scope (network effects) are extremely important. Demand-side economies of scale are known as network effects, so this should not be surprising. This includes both direct and indirect network effects. Direct network effects come from the ability to reach more people. Indirect network effects occur where consumers benefit, not because of their ability to directly connect to others and the value they place on those connections, but because the existence of potential demand expands the options that they have. The ability to create and expand markets, particularly niche markets, because of the reduced production costs and transaction costs benefits all consumers. These effects can be understood as the benefit of Group-Forming Networks created by the new technology.

FIGURE 2.1: THE VALUE OF TRADITIONAL AND GROUP-FORMING NETWORKS



Source: David Reed, “The Sneaky Exponential – Beyond Metcalfe’s Law in the Power of Community Building, 1999.

The value of being part of the network scales as the number of members increases (as shown in Figure 2.1), with the Reed community 2^N , having the highest value by far. The key difference in the Group-Forming Network is multi-way communications. Group-Forming Networks use group tools and technologies, such as chat rooms and buddy-lists, that “allow small or large groups of network users to coalesce and to organize their communications around a common interest, issue, or goal.”³⁰ The exponentiation increases value very quickly and may cause the number of connections or communications to exceed individuals’ ability to maintain them. Thus, 2^N is a theoretical upper limit. On the other hand, as Reed points out, the formation of even a small subset of the theoretically possible groups— N^3 —would dramatically increase the value of the network. Even if not all groups form, the potential value in the option to form groups increases. The critical point is that, in order to capture the value of Group-Forming Networks, the members of the network must have the freedom to self-organize groups. With that freedom, they create the groups of greatest value to the users.

Table 2.1 identifies the numerous ways that dominant big data platforms undermine this process by using their market power to lock consumers in, making it harder to move about and freezing out competitors. Raising barriers to entry and increasing switching costs are not only anticompetitive, they are the antithesis of the dynamic process of innovation at the edges without permission that is central to the dynamic innovation in the digital space.

COMMUNICATIONS TECHNOLOGY AND COLLECTIVE ACTION

The transformation of a third sector – political mobilization – is equally important. Group-Forming Networks use group tools and technologies such as chat rooms and buddy-lists that “allow small or large groups of network users to coalesce and to organize their communications around a common interest, issue, or goal.”³¹

Conventional collective action arguments say that a large group is less likely to generate collective goods because each member would receive such a small fraction of the benefit that they would lose their desire to produce collectively.³² However, with the emerging collaborative production, the opposite is true, as seen in open-source software: the larger the group connected by the Internet, the more likely it is to have the motivation and resources to create code.³³ User-driven innovation causes individuals to volunteer, particularly among the core group of lead users.³⁴

The existence of heterogeneous resources available in the network definitely improves the efficiency of collaborative responses, but this may not be a necessary condition. The critical condition is ease of communication. The Internet, for instance, spawned innovation, as participants of group projects were able to work together over long distances and share their specific skills in a “seamless process.”³⁵

New communication technologies reduce the cost of sending information long distances, increase “noticeability, and make ineffective communicative networks effective.”³⁶ Communications technology allows large numbers of people with common interests to interact and share information “in a way that undermines many widely held beliefs about the logic of collective action.”³⁷

It may well be that the literature on collective action was always too pessimistic.³⁸ For example, the literature that stresses the tragedy of the commons assumes “individuals do not know one another, cannot communicate effectively, and thus cannot develop agreements, norms, and sanctions.” These assumptions were never correct in physical space and certainly are not correct in cyberspace.³⁹ The ability to communicate changes everything – especially when a collective payoff flows from cooperation.

In addition, the recognition of shared interest plays a key role in establishing the necessary cooperation. When a monitored and sanctioned system is agreed upon, it “enhances the likelihood that agreements will be sustained, they are capable of setting up and operating their own enforcement mechanism.”⁴⁰ Due to the benefits received from cooperation, the effect of breaking agreements may deter those inclined to break the agreements, as such a breach will affect not only the individual, but also the group as a whole.⁴¹ Thus, even prior to the advent of digital communications platforms, the ability to communicate and exchange information was central to the ability to organize around shared interests and take collective action. However, the recent technological revolution has fundamentally enhanced the capacity to do so.

As with all new technologies, the dramatic increase in the ability to communicate is a double-edged sword. Communications facilitated innovation and collusion, as shown in WP#3. All speech is facilitated, both good and bad (however they are defined). The ability to gather and process unprecedented quantities of data has pluses and minuses. The goal of policy is to promote the “pluses” and reduce the “minuses.”

TRANSFORMING THE BROADER ECONOMY

The economic advantages of digital technology translate into a powerful force for change in the entire economy. The dramatic shift of activity online reflects the value that consumers derive from the new services that digital technologies deliver, as discussed in WP#3).

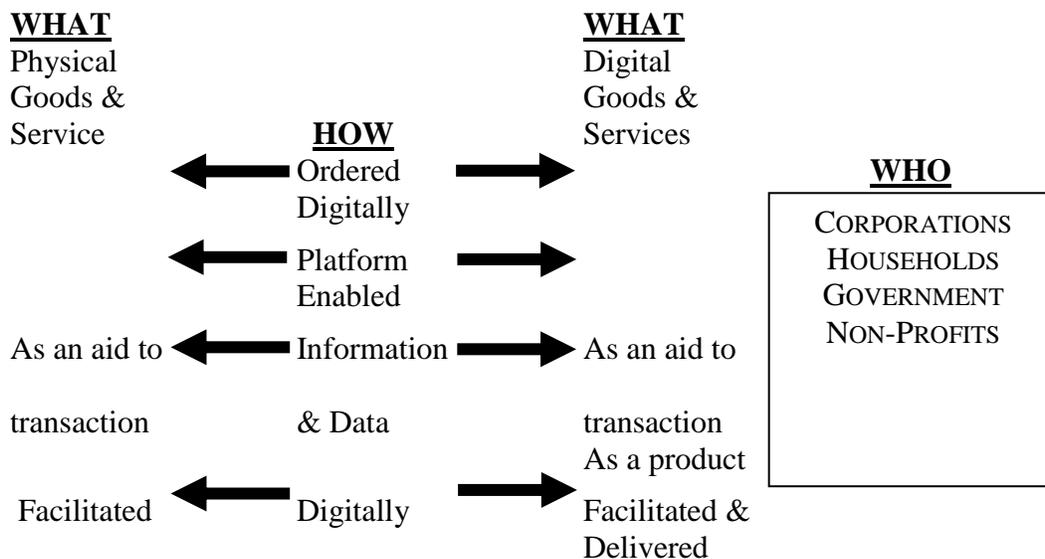
The effect of technology is magnified when it includes technology that supports communication, enhances productivity, and improves the wellbeing of the society. In this regard, development in technology is expected to lower the cost of production, streamline supply chain processes, provide access to information in decision making, and support consumers in acquiring quality products at competitive prices.

We present this graph to underscore the fact that the policies must be carefully thought out and implemented. Because the benefits are so large, overly simplistic policies that essentially ban activities can impose large costs (losses) on society. However, as we have seen, technological change is not a guarantee against the accumulation and abuse of market power.

Another, simpler, view of this process is provided in upper part of Table 2.2 with a discussion from an IMF document that seeks to explain the challenge of measuring the transformation at a practical level. The OECD analysis focuses on how existing approaches to measure gross domestic product and price changes have not been adjusted to deal with the change.⁴³ This is also a frequent topic of analysis in the U.S. economic literature.⁴⁴

TABLE 2.2: ECONOMIC PROCESSES UNDERLYING THE DIGITAL REVOLUTION

Four Digital Dimensions of Both Digital and Physical Transactions



Source: IMF Staff, 2018, Measuring the Digital Economy, February.

The original framework focuses on digital goods and services only, since that is the greatest challenge for changing indices. However, the impact of the digital revolution also affects physical goods and services, which presumably are already reasonably well incorporated into the measures of economic activity. We have added to the framework in three important ways. First, we have included the physical side. Second, because the framework is focused on the fully digital economy, it treats Information and data as a product, or a *what*. We believe information and data should also be treated as a *how*: a transaction cost reduction, particularly for physical goods and services. In theory, this effect is captured in existing indices (i.e. final values and prices). Third, while the original framework focused on the delivery of fully digital products, we

believe it is crucial to also identify digital technology as a means to facilitate the delivery of physical goods and services.

Table 2.3 is from a study by Avi Goldfarb that expands on the framework from the OECD paper and takes the analysis to a much deeper level. He identifies three specific, common economic tasks that digital technology improves: storage, computation and transmission. We divide transmission into three components, interconnection, flow and control, which are suggested by Goldfarb's analysis and will be important in the policy discussion. We identify specific technologies that support the transformation of these functions, distinguishing between hardware and software. Finally, we extract from his discussion each of these changes' positive impacts on the economy.

TABLE 2.3: THE FUNCTIONS, TECHNOLOGIES AND IMPACTS OF THE DIGITAL REVOLUTION

<u>Core Functions</u>	<u>Supporting Technologies</u>	<u>Impacts</u>	
		<u>Positive</u>	<u>Negative</u>
	Hardware		
Storage	Massive medium	1. Cost Declines	
Computation	CPU	2. Search	
Transmission	Networks/ Broadband	3. Replication	
Interconnection	Code	4. Transportation	
Flow	Internet	5. Tracking	
Control	Policy-based-routing	6. Verification	
	APPS (software)	7. Communications	Information
		Decentralizes	Centralizes
	Browser	8. Coordination	Integration
	Search Engine	9. Open Access	Open Access
	Social Networks	10. Complements	Incentives to Produce
	Mobile Communications	11. Matching	Negative Externalities
	Security	12. Access to Inputs	Breach/Privacy Cost
	Customer Relations Mgmt	13. Discovery	Spam
	Data Collection & Use		Crime
			Hate
		14. Marketing	Marketing
		15. Matching demand	Shaping Market tools
		16. Variety	
		17. Quality diversity	
		18. Inventory Efficiency	

Sources: Avi, Goldfarb and Catherine Tucker, 2017, Digital Economics, NBER, Working Paper, 23684, August.

We also introduce the negative impacts, which are the launchpad for much of the policy discussion. Thus, Goldfarb's analysis reflects one of the central themes of this paper – the need to recognize both the benefits and harms of the technological revolution.

TIGHT OLIGOPOLIES ON STEROIDS AND GATEKEEPER THREATS

More detailed discussion of both benefits and harms for big data platforms are discussed in this paper, as are the policies best suited to control the harms without undermining dynamic innovation in the sector. Two earlier working papers examined the challenge and threat Big Broadband Networks (WP#2 and #3) pose to the future of the digital economy. Here we introduce two common, interrelated themes in the overall analysis that ties this working paper to

the previous two – the growth of a “tight oligopoly on steroids” and the gatekeeper role that threatens to undermine dynamic innovation in the digital communications sector (see Table 2.3).

**TABLE 2.3: THE TIGHT OLIGOPOLY ON STEROIDS:
BIG BROADBAND NETWORKS AND BIG DATA PLATFORMS**

Tight Oligopoly on Steroids Characteristic	Big Broadband Networks	Big Data Platforms		
High Concentration	Franchise, economies of scale	Economies of scale & scope, zero marginal cost, winner-take-most		
Multi-market contact	Telco BDS, Wireless Cable MVPD, BIAS	Google Search	Facebook, connectivity	Amazon, distribution
Technological Specialization	Point-to-point (landline) Cell Networks Star video	Google Algorithms & network value	Facebook Network Value	Amazon Distribution efficiency
Product Segmentation	Voice, wireless Video, BIAS	Search	Social Media	Distribution
Unique Product Traits	Geographic Separation Local network Franchise origin	All: Must Have Content protected by lock-in supply-side foreclosure and demand-side bundling and behavioral manipulation		

Source: The “tight oligopoly on steroids” was introduced in Mark Cooper, 2016, *Overcharged and Underserved*, The Roosevelt Institute. February 7.

The high degree of concentration among Big Broadband Networks in the communications sector and the high degree of concentration among big data platforms in the information space are reinforced by four other factors that create a “tight oligopoly on steroids,”

High concentration is reinforced by multi-market contact, technological specialization, product segmentation, and geographic separation (for Big Broadband Networks) or must have bundles (for big data platforms). Our working papers show that the tight oligopoly on steroids afflicts both the communications networks (Big Broadband Networks) and the information system (big data platforms). The tight oligopoly on steroids results in the classic harms of lack of competition: denial of consumer choice, insufficient innovation, higher prices, and lower quality.

The members of the “tight oligopoly on steroids” have gatekeeper control of chokepoints, reinforced by steroids that give the small number of firms that dominate the digital communications sector immense market power. They have demonstrated time and again that they have the willingness and ability to abuse that market power. Specific areas where policy can move forward in spite of the complexity include:

- Concentration: Public policy must not only deal with the high level of concentration, it must also address the steroids to restore competition for big data platforms.

- Horizontal or vertical concentration: Increases in concentration should be prevented, while past mistakes that allowed excessive concentration should be reviewed and remedies proposed.
- Anticompetitive bundling: Take action to avoid anticompetitive bundling, banning unfair rates terms and conditions, requiring open access to APIs.
- Tacit Collusion: While explicit collusion is clearly illegal, tacit collusion and parallel exclusion should also be prevented.
- Exclusionary practices: Numerous practices should be banned, including predation (with a new standard for anticompetitive pricing), foreclosure, denial of access to customers, and self-dealing.
- Transparency: Fair information practices should be enforced.
- Privacy: Effective consumer choice is crucial. One of the great challenges is access to data. However, the solution cannot be just force the data to be shared, unless there is a much stronger regime of consumer sovereignty over data.

3. THE NEW CHALLENGES OF THE ABUSE OF DIGITAL TECHNOLOGY

THE STRUCTURE AND CHALLENGES OF THE DIGITAL REVOLUTION IN COMMUNICATIONS

The Stigler antitrust subgroup recognized the benefits of the digital revolution but are not lulled into thinking there are no harms, highlighting why competition is not enough to guide the economy. The core logic of the new dominant form of industrial organization must be respected, but the inclination of capitalists across all periods to exploit and abuse their market power in anti-competitive, anti-consumer, anti-social ways must be recognized and countered.

Table 3.1 identifies over a dozen characteristics of workably competitive markets offered in one of the most frequently used texts in the field of industrial organization, which relies on the structure-conduct-performance paradigm. The authors recognize that competition is never perfect, so “doubts concerning the competitive model’s utility as a policy guide prompted a search for more operational measures of workable competition.” They summarized a large literature on “the criteria of workability...divided into structural, conduct, and performance categories.” Since structure and conduct criteria are often associated with performance outcomes, we allocate performance measures to structure or conduct criteria, where the overlap is very clear. The result is ten criteria. In the right-hand column, we summarize the characteristics of big data platforms that suggest these markets are not likely to be workably competitive. The Stigler antitrust group’s framing of these issues will be discussed below.

However, it is important to reiterate at the outset that the fact that antitrust and regulation have failed to prevent the harms in recent years is not a justification to abandon the benefits. The historically successful response to this challenge has been to do the opposite – to control harms without undermining the benefits. The moment has historically required a shift toward progressive policies, not a step backwards. Regulation by a strong entrepreneurial state is backed up by antitrust that seeks to protect competition where it is the more efficient policy tool. The triumph of market guidance in progressive capitalism explains why Marx was wrong and Brandeis would be very unlikely to make the same mistake.⁴⁵

The Stigler antitrust group a pragmatic approach highlighted throughout this paper. “Ideally, the goal is to steer technological advances to ensure widespread benefit without widespread harms—to protect and preserve innovation and advancement while minimizing the harms so that all of society reaps net benefits.”⁴⁶ The underpinning of the Stigler Group analysis means that their report “is offered in the spirit of ensuring a future of continued technological and economic progress and social well-being as we move forward in the digital age.”⁴⁷

Thus, they start from the recognition that “[e]very technological revolution comes with the potential to create unprecedented value,” but also a need to address specific problems arising from the digital platforms’ reach, scale, scope, and use of data.⁴⁸ Policy is necessary because “[b]enefits from innovative firms could be even greater and more equitably spread, ensuring that the public is not sort-changed in firms’ pursuit of profit.”⁴⁹ The Stigler group’s analysis also accepts the central proposition of this analysis, in that “[i]nsufficient competition and entry result in harms to investment and innovation.”⁵⁰ In the digital age, innovation plays a much larger part compared to price than it played in the policy space of the 2nd Industrial Revolution.

TABLE 3.1: BIG-DATA DIGITAL PLATFORM CHALLENGES TO WORKABLE COMPETITION

Scherer & Ross Workable Competition			Stigler Antitrust Group
Structure	Conduct	Performance	Big-Data Digital Platform Competition Challenges
The number of traders should be at least as large as scale economics permit.			Minum Efficient Scale may be too lared to support vigorous competition
		Profits should be at levels just sufficient to reward investment, efficiency, and innovation.	Profits are excessive
There should be no artificial inhibitions on mobility and entry.			Pervasive natural barriers to entry result in tipping markets
	There should be no unfair, exclusionary, predatory, or coercive tactics.		Pervasive and much of it is beyond the reach of antitrust in a timely manner; a regulatory agency is necessary
	Inefficient suppliers and customers should not be shielded permanently.	Success should accrue to sellers who best serve consumer wants.	Potential entrant are excluded, extending the reach and lifespan of dominant firms
There should be moderate price-sensitive quality differential in products offered.		Firms' production and distribution operations should be efficient and not wasteful of resources.	Perverse incentive to increae quality undermines ability to cmpe for low quality/prices customers, reduces choice and raises barrers to entry
	Some uncertainty should exist in the minds of rivals as to whether price initiatives will be followed.	Opportunities for introducing technologically superior new products and processes should be exploited.	Reduction in rivalry and elimination of potential entrants has reduced constraints on pricing and pressures to innovate.
		Prices should encourage rational choice, guide markets toward equilibrium, and not intensify cyclical instability.	Pricing refelects manipultation and exploitation under conditions of reduced rivalry
	Output levels and product quality (i.e., variety, durability, safety, reliability, etc.) should be responsive to consumer demands.		Bundling prcing and advertising structure demand an erstrict choice
	Sales promotions should be informative, or at least not be misleading.	Promotional expenses should not be excessive.	Advertising si excessive, manipulative and exploitative
	Firms should strive to attain their goals independently, without collusion.		Productsegmentation reduces rivalry

Source: Workable Competition and the SCP paradigm are discussed in F.M. Scherer and David Ross, Industrial Market Structure and Economic Performance (Houghton Mifflin, 3rd ed., 1990).

The harm from lack of competition in digital markets will manifest itself in quality and innovation, as well as from higher prices to advertisers.... the impact on consumer welfare of a decline in innovation due to lack of competition is likely to be large, especially in the case of fast-moving technologies that affect many consumers and related businesses.⁵¹

The Stigler antitrust group report recognizes that measuring the impact of reduced competition on innovation is difficult. However, effects of anticompetitive conduct or market structure that reduces entry are so important that the antitrust approach needs to “recalibrate” to give much greater weight to potential competition. Although “recalibration” may sound like a timid approach, as discussed below, the changes recommended are quite extensive, while remaining within the U.S. antitrust tradition.

The Stigler report also recognizes that antitrust addresses one issue area, “market structure and competition,” while a different framework is needed to address other issues like “politics, media, and the nature of privacy.”⁵²

DIGITAL PLATFORMS

Digital platforms pose a unique challenge for competition and antitrust for a variety of reasons. Table 3.2 is constructed to highlight the tension in the Stigler group’s analysis, which mirrors the tension in the digital political economy. Here we have a litany of supply-side structural characteristics that explain concentration and market power, and an equally long litany of demand-side characteristics that explain the immense ability of the seller to exploit their market power. The irony is that many of the characteristics of digital markets that pose challenges to competition and antitrust are also the source of the efficiency of the new form of industrial organization.

First, as shown in the upper left (Section A), the new form of organization that generates a great deal of surplus also tends toward high levels of concentration and barriers to entry.

These markets often have extremely strong economies of scale and scope due to low marginal costs and the returns to data. Moreover, they often are two-sided, have strong network externalities and are therefore prone to tipping. If so, the competitive process shifts from competition *in* the market to competition *for* the market. This combination of features means many digital markets feature large barriers to entry. The winner in these settings often has a large cost advantage from its scale of operations and a large benefit advantage from the scale of its data. An entrant cannot generally overcome these without either a similar installed base (network effects) or a similar scale (scale economies), both of which are difficult to obtain quickly and cost-effectively.⁵³

Second, behavioral imperfections (Section B) are highlighted in Tables 3.2. They have been recognized for several decades and make these markets very vulnerable to the accumulation and abuse of market power by dominant firms.

TABLE 3.2: CHALLENGES (MARKET IMPERFECTIONS) TO COMPETITION AND ANTITRUST FROM DOMINANT, BIG DATA DIGITAL PLATFORMS

<p>A. Market characteristics increase surplus but weaken competition</p> <ul style="list-style-type: none"> (1) Average cost is too low (2) Quality costs are too high (3) Transaction costs are too low (4) Advertising costs are too low (5) Advertising value too effective for some (6) Increased output v. allocation of output (7) Direct network effects are too large (8) Indirect network effects are too large (9) Data is non-rivalrous and increasing in marginal values (10) Expansion costs (local and global) are too low <p>B. Consumer behaviors that contribute to entry barriers abuse by dominant firms</p> <ul style="list-style-type: none"> (11) Inherent behavioral biases (12) Data is open to manipulation and exploitation (13) Machine learning is uniquely powerful (14) Lack of availability of Information to consumers (15) Failure to research and compare (16) Complex, opaque transactions (17) Consumer preference v. welfare (manipulation) 	<p>C. Traditional conduct that reinforces market power</p> <p>On the supply-side</p> <ul style="list-style-type: none"> (18) Limit openness and interoperability (19) Lack of transparency (20) Exclusion or degradation of services (21) Resist data portability (22) Behavioral economics used to exploit consumers <p>On the demand-side</p> <ul style="list-style-type: none"> (23) Pricing (loyalty and to zero) (24) Contracts (25) Bundling (26) Lack of transparency (27) Increasing switching costs (28) Sunk costs/asymmetric information increase <p>D. Policy that facilitates or fails to address market power</p> <p>Lax antitrust enforcement</p> <ul style="list-style-type: none"> (29) Structure (mergers) (30) Conduct (fraud and abuse) <p>Lack of regulatory authority</p> <ul style="list-style-type: none"> (31) Ineffective (privacy) (32) Absent (big data exploitation) (33) Severe challenge of assessing welfare
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Source: Stigler Center, Stigler Committee on Digital Platforms, 2019, Final Report, George Stigler Center for the Study of the Economic and the State, The University of Chicago Booth School of 2020.

Additional barriers to entry are, ironically, generated by the very consumers who are harmed by them... In general, the findings from the behavioral economics literature demonstrate an under-recognized market power held by incumbent digital platforms.

The role of data in digital sectors is critical. Personal data of all types allows for targeted advertising to consumers, a common revenue model for platforms. The report shows that the returns to more dimensions and types of data may be increasing, which again advantages incumbents. Consumer data in the United States is not regulated in any way that gives useful control or privacy to consumers, and additionally, most consumers have little idea what is being collected about them and re-sold. One way in which digital platforms often exploit their market power – and increase their profits – is by requiring consumers to agree to terms and conditions that are unclear, difficult to understand, and constantly changing, but which give the platform freedom to monetize consumers’ personal data.⁵⁴

Behavioral economics presents a different, and in some ways greater, challenge to traditional antitrust.

Behavioral economics magnifies the anticompetitive potential and harm of platforms. Consumer biases are vulnerable to big data and competition is not the solution, since the marketplace – demands exploitation for competitive survival because “staying profitable in a competitive environment may force firms to exploit behavioral biases to achieve maximal profitability. Firms abstaining from doing so may be driven out of the market... rais[ing] broader consumer protection concerns that cannot be solved through greater competition.”⁵⁵

Behavioral economics challenges fundamental assumptions about consumer behavior and calls into question the antitrust enterprise, which seeks to clear away the supply-side market imperfections that are believed to frustrate the actions of welfare-maximizing, well-informed, effective, demand-side decision makers. If the motivations, capabilities, and tools used by consumers do not operate as the market paradigm assumed, the outcome will not be as expected, even if supply-side imperfections have been reduced or eliminated. The neoclassical view and antitrust were criticized for this failure long before big data platforms made matters much worse.

A major criticism is that dominant firms will “convince” consumers to stay put and prevent competitors from being able to convince them to move.

Moreover, unlike traditional markets, where several quality layers may coexist at different price levels (provided that some consumers favor lower quality at low prices) markets where goods are free will be dominated by the best quality firms and others may compete only in so far as they can differentiate their offers and target different consumers. This strengthens the firm’s incentive to increase quality through increasing fixed costs in order to attract customers (the Sutton sunk cost effect) and further pushes the market toward a concentrated market structure.⁵⁶

Under alternative assumptions about consumers—who cannot be assumed to be perfectly rational, welfare-maximizing, knowledgeable, information-using actors—, producers have the ability to manipulate consumers by studying and exploiting inherent biases in consumer action. Big data magnifies this potential exploitation and abuse by enabling those selling goods and services to gather data and analyze consumer weaknesses at an unprecedented level and depth. They do not just meet consumer needs; they create and exploit them. Consumer defenses, already weakened, are overwhelmed.

Thus, the Stigler antitrust group identifies a number of practices that can lock in consumers, raising barriers to entry and reducing competition.

One way in which digital platforms often exploit their market power – and increase their profit – is by requiring consumers to agree to terms and conditions that are unclear, difficult to understand, and constantly changing, but which give the platform freedom to monetize consumers’ personal data.

Maintain complete control over the user relationship... can be used to reduce the

possibility of successful entry by direct competitor. Exclusive contracts, bundling, technical incompatibilities.⁵⁷

After explaining how these factors create challenges for antitrust, the document devotes its attention to seeking solutions. It begins with antitrust but ends by acknowledging a sector-specific regulator will be necessary.

However, because technology platforms present the enforcement challenges detailed above, even effective enforcement may not be enough to generate competitive digital markets in a timely fashion. Therefore, the report suggests that Congress create a specialist regulator, the Digital Authority. The regulator would be tasked with creating general conditions conducive to competition.⁵⁸

If we conduct the intellectual exercise of assuming all problems in the right column of Table 9.3 are solved, then ask ourselves the following basic antitrust question, we come up with a surprising answer. Having eliminated the producer conducts that reinforce or exploit market power, could we leave the sector alone and let the big platforms do their thing? The answer is no, just as it was for the big communications corporations a century ago. The inherent tendency of capitalists in the sector – who are pursuing its efficiencies – is to concentrate and integrate. This creates huge barriers to entry and a dramatic reduction in competition. Without competition, innovation slows, and the dominant firms collect rents from consumers.

There is no tooth fairy; advertising supported services are not free. There are costs. Consumers pay with a reduction in their privacy and in the price of the goods that are advertised and the weakening if not elimination of competition, which reduces innovation and lowers quality. (33)

The right side of Table 3.2 identifies upwards of a dozen more “traditional” antitrust concerns that the Stigler antitrust groups find operating in big data digital platforms. This is not to say that traditional antitrust was incapable of easily dealing with these types of action. However, under the influence of free market fundamentalism, lax antitrust enforcement did not try very hard to prevent these abuses. In fact, the broad critique of free market fundamentalist antitrust identified and demonstrated many mistakes that have been made. Antitrust practice had already *Overshot the Mark*.⁵⁹ I argue that, in fact, they had totally missed the mark long before the new form of industrial organization had moved market reality even farther from the underlying assumptions – not only of free market fundamentalism, but also of a more reasonable view of market operation and performance. With well over a dozen severe challenges to traditional antitrust identified, the existence and importance of the more traditional substance of antitrust is magnified

Table 3.3. uses the issues identified in Table 3.2 to locate the analysis of Tim Wu’s book on *The Curse of Bigness*, As shown in Working Paper #1, the original book is an important aspect of the Brandeis Protocol but is only one aspect. Table 3.3 underscore the fact that, a careful reading of Brandeis must recognize the complexity of the overall analysis. Wu is sensitive to this need in three important ways.

TABLE 3.3: CHALLENGES OF NEW TECHNOLOGY

STIGLER GROUP ON ANTITRUST AND REGULATION
#)

TIM WU (*CURSE OF BIGNESS*, Pg.

Market Characteristics that increase surplus but weaken competition

- (1) Average cost is too low
- (2) Quality costs are too high
- (3) Transaction costs are too low
- (4) Advertising costs are too low
- (5) Advertising value (targeting) with large databases is too effective (for some/many)
- (6) Consumer preference v. consumer welfare
- (7) Increased output v. allocation of output
- (8) Direct network effect value for communications consumers is too
- (9) Indirect network effect value to producers of complements are too large
- (10) Local/global expansion costs are too low

Antitrust Reform	Economic Issues
128	15, 119,
129	120,123
134	124, 125

Traditional conduct that reinforces market power

- On the supply-side
- (11) Limit openness and interoperability
- (12) Lack of transparency
- (13) Exclusion or degradation of services
- (14) Resist data portability
- (15) Consumer exploited by behavioral economics
- (16) Complex, opaque transactions
- On the demand-side
- (17) Pricing (loyalty and to zero)
- (18) Contracts
- (19) bundling
- (20) Lack of transparency
- (21) Increasing switching costs
- (22) Magnifying switching cost through sunk costs and asymmetric information

Antitrust Reform	Economic Issues
	119

Consumer behaviors that contributes to entry barriers abuse by dominant firms

- (23) Inherent behavioral biases
- (24) Data is open to manipulation & exploitation
- (25) Manipulation of Consumer preference v. welfare
- (26) Machine learning is uniquely powerful
- (27) Lack of availability of Information
- (28) Failure to research and compare

Antitrust Reform	Economic Issues
128, 135	112,120
137	123,125

Policy that facilitates or fails to address market power

- Lax antitrust enforcement
- (29) Structure (mergers)
- (30) Conduct (fraud and abuse) Lack of regulatory authority
- (31) Ineffective (privacy)
- (32) Absent (big data exploitation)
- (23) Severe challenge of assessing consumer welfare
- (34) Political impact of weak antitrust & absence of regulation

Antitrust Reform	Economic Issues
16,17,18,	123, 132
32, 40,41,	133, 139
42, 72	
123, 125	
128, 130,	

Source: Stigler Center, Stigler Committee on Digital Platforms, 2019, Final Report, George Stigler Center for the Study of the Economic and the State, The University of Chicago Booth School of 2020; Tim Wu, 2018, *The Curse*

of Bigness: Antitrust in the New Gilded Age, (Columbia, Global Reposts).

First, he begins from an appreciation of the “big cases” under the Sherman Act. This is certainly the view of Brandeis, too. Second, he underscores the shortcomings of the act both in how it was vulnerable to abuse by market fundamentalists and how it must be powered up to deal with digital technology. Again, Brandeis understood the limitations of the Sherman Act and worked hard to improve it. Third, Wu recognizes that there is a great deal of other policy necessary. While he declares those beyond the scope of the short treatise in *The Curse of Bigness*, we find about three-dozen references to policies or issues that merit further attention. These fit within the Brandeis-Stiglitz framework for progressive capitalism that I have outlined above.

Simply put, while *The Curse of Bigness* is an important part – perhaps even the start – of the conversation among progressives, but it is certainly not the end. Regulation and other policies (e.g., taxation, social protection, innovation, etc.) are just as important in building a pragmatic, progressive political economy that, according to Stiglitz and Brandeis, must be based on decentralized competition and markets.

One aspect of the Brandeis-Stiglitz framework worth repeating and expanding here is the identification of market failures. As Stiglitz argue in the mid-1990s, there were three views (schools of thought) on market imperfections that led to market failure. The old view includes market failures generally recognized by economists, although it must be said that extreme market fundamentalists may not accept the widely recognized failures of the market or may not accept the proposition that there is much government can do about them. The second, newer view identifies a broader set of market failures that stems from the important role institutions and transaction costs play in determining the nature and performance of the political economy. The third “new, new” view contemplates the 50 years of economic theory that Stiglitz claims have fundamentally altered thinking about markets and their performance.

Here we add a fourth view, the newest of all— the behavioral view (see Table 3.4). Stiglitz noted this view in his most recent book, and it deserves special attention because it poses such a new challenge in the hands of big data platforms. The biases are well known, but the ability to gather and analyze data on a real time basis to influence consumers is new. This power goes well beyond traditional influence to cross into the realm of manipulation and exploitation. There is a growing recognition that behavioral economics must affect regulatory and antitrust policy.⁶⁰ Table 3.4 includes a couple of examples from both the general economic and the antitrust literatures.

TABLE 3.4: MARKET FAILURES AND CHALLENGES FOR POLITICAL ECONOMIES

MARKET IMPERFECTIONS	CHALLENGES FOR ALL POLITICAL ECONOMIES
<u>OLD (Expanded)</u>	
Public Goods	Public Goods Expanded
Externalities	Broad concept of externalities
Inequality	Inequality
	Redistribution
	Education
Weak (insufficient) Competition	Imperfect Competition expanded
	Information
	Barriers to entry
	Rent seeking
	Policy
 <u>NEW</u>	
INSTITUTIONS	Institutions
	Banks
	Stock market
	Organizational structure
	Transaction costs
	Monitoring & control
 <u>TRANSACTION COSTS</u>	
 <u>NEW, NEW</u>	
Information	Innovation
Incomplete	R&D
Asymmetric	Technology
Costly	Resource Allocation
Incomplete Risk and Futures	Capital Allocation
Market,	Perverse Incentives,
	Moral hazard,
	Principle agent
	Non-economic
	Price- Cost
	Management independence
	Property uncertainty
	Coordination
 <u>NEWEST</u>	
BEHAVIORAL	Manipulation and Exploitation of Biases
	to abuse market power
	Motivation: Non-economic
	Manipulability of preference
	Perception: Bounded & Social
	False confidence
	Calculation: Discount Rate
	Bad Math
	Execution: Limited Attention
	Limited Learning,

Source: Old, New and New, New from Joseph Stiglitz, *Wither Socialism*, (MIT, 1994); Behavioral that identify specific biases as leading to market failure and abuse of market power from: Jon D. Hansen and Douglas A. Kysar, 1999, "Taking Behavioralism Seriously, The Problem of Market Manipulation," *NYU Law Review*, 74,2000, "Taking Behavioralism Seriously, A Response to Market Manipulation, *Roger Williams University Law Review*,6 ; Avishalom Tor and William J. Rinner, "Behavioral Antitrust: A New Approach to the Rule of Reason After Leegin, Avishalom Tor, *The Fable of Entry, Bounded Rationality , Market Discipline and Legal Policy*. These four sources are the tip of a very large ice berg and they identify two-dozen biases, about one-fifth of the total. .

4. THE NEVER-ENDING BATTLE WITH FREE MARKET FUNDAMENTALISTS

Not surprisingly, the long running debate between progressive capitalists and free market fundamentalists persists into the present critical juncture. While the Stigler antitrust group calls for “recalibration” to strengthen antitrust and recomposition of regulatory institutions, the antitrust and regulatory authorities in the Trump administration and market fundamentalists recommend the opposite. They argue that current oversight antitrust, narrowly interpreted, is adequate to deal with any problems that might exist, while increased regulation would do more harm than good. Here we briefly discuss three examples that fit squarely in the analytic framework used throughout the working paper series. In the second and third working papers we showed that the FCC has essentially abandoned its regulatory role, executing what amounts to an administration repeal of the Communications Act of 1934. Here we focus on the antitrust agencies.

Less than a month apart, in June 2019, two Trump appointees to the federal antitrust agencies, both of whom had served in the Bush administration a decade earlier, laid out the case that antitrust, as it stood, was more than adequate to deal with the problems that were increasingly obvious in the digital communications sector. Enforcement that was lax before 2016 was non-existent in the Trump administration. In Working Papers #2 and #3 we noted that communication oversight had been all but eliminated following the adoption of a “Title 0” approach to non-discrimination and a zero-competition standard for Business Data Services. Below we show a similar attitude of antitrust authorities.

THE DEPARTMENT OF JUSTICE

Makhan Delrahim, head of the antitrust division of the Department of Justice, pointed back to Orrin Hatch, who Chaired the Senate Judiciary Committee at the start and height of the neoliberal period (1981-1987) for his inspiration. He stated that that “Vigilant and effective antitrust enforcement today is preferable to the *heavy hand* of regulation of the Internet Tomorrow.”

In a piece entitled “Sorry, Mr. Delrahim: Big Tech’s Worst Abuses Can’t Be Cured Without Stiffer Regulation,” Hal Singer, a prominent Washington economist with a long list of corporate and trade association clients, flatly rejected the claim (see Table 4.1).

He noted that “Delrahim’s condemnation of regulation stands in contrast to a growing number of influential voices, including prominent antitrust practitioners, who not only want to steer antitrust in a very different direction but also want a supplementary or reinforcing role for regulation.” He proceeded to identify a long list of behaviors that challenged the simple, antitrust-can-do-everything view. Singer’s analysis, which parallels the Stigler group paper is summarized in Table 4.1.

THE FEDERAL TRADE COMMISSION

FTC Commissioner Wilson’s analysis reaches even farther back for its inspiration to Edmund Burke: “[p]eople will not look forward to posterity, who never look back to their ancestors” and George Santayana, “[t]hose who cannot remember the past are condemned to repeat it.” Wilson then presents a myopically distorted view of history.

TABLE 4.1: HAL SINGERS CRITIQUE OF THE DOJ CLAIM OF “JUSTICE FOR ALL: ANTITRUST ENFORCEMENT AND DIGITAL GATEKEEPERS

- Bogus technological integration:** “a technological tie-in that bolts a web browser with an operating system”
- Inability to prevent abuse of bundling:** “The Microsoft court was unwilling to unwind... bundling... on the flimsiest of efficiency defenses
- Discrimination:** “a platform’s search algorithm that affords extra weight for affiliated properties of merchandise... which “under the antitrust laws... would be ‘very difficult’”
- Building barriers to entry:** “appropriating content at the edge of their platforms and then using their platform power to steer users to the affiliated clones.”
- “Facebook has forced other sites to copy Facebook’s privacy terms, but that just presents another entry barrier.
- Treatment of exclusionary conduct:** “the Supreme Court has... dramatically narrowed the reach of the Sherman Act
- Difficulty of measuring harms:** “Because the primary form of anticompetitive injury in *Microsoft* and any potential case against a modern tech platform would take the form of hard-to-measure innovation harms, securing a structural remedy via antitrust under current law would be challenging. It is not clear how to estimate a future loss in consumer choice due to exit by independents with any “measure of confidence.”
- Competition does not protect privacy:** “[T]he very essence of Facebook’s business model is the exploitation (and monetization) of user data. Adding a horizontal rival won’t change how money is made in social media.”
- Perverse incentives:** “It may not be in the second Facebook’s interest to hold itself out as the privacy savior... Why would an entrant want to lure away Facebook’s most privacy-sensitive customers, who are by selection the least attractive to advertisers?”
- Inability to affect dominant firm behavior:** “And even if the social media entrant did hold itself out as a privacy savior, it is not clear why Facebook would change is exploitative ways.”
- “[I]n the presence of switching costs and imperfect information, discrimination against similarly-situated edge rivals likely would still be profit maximizing, even in the face of modest platform competition.”

Source: “Sorry, Mr. Delrahim: Big Tech’s Worst Abuses Can’t Be Cured Without Stiffer Regulation,” Hal Singer.

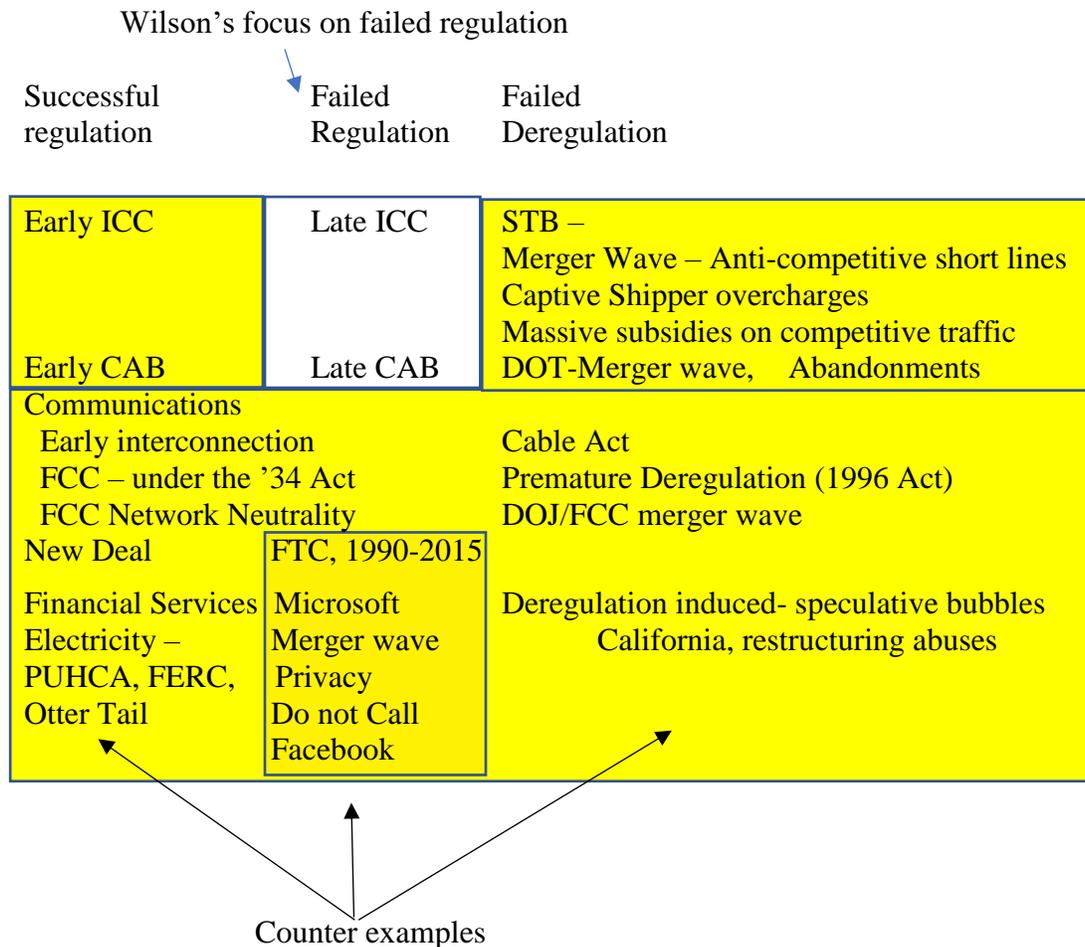
Wilson’s simplistic cautionary tales of regulation are a highly selective and misleading subset of experiences with regulation and deregulation. As shown in Figure 4.1 Complex reality includes many successful regulatory regimes, many unsuccessful deregulations, and the abysmal failure of the FTC to oversee digital services. Wilson ignores the long-standing and strong consensus in the U.S. and Europe that vertical integration and leverage require much closer scrutiny, particularly in communications network and platforms, than they have been given.

Wilson notes that “Starting in the 1970s, scholars increasingly recognized that the regulations distorted competition in the marketplace, reduced economic efficiency, and harmed the very consumers they ostensibly protected.” She cites half a dozen studies of transportation, written before 2000, but ignores analyses of problems in the deregulated industries. She also ignores the vast literature on the other side. In the one area where she cites more recent literature, she repeats the highly contested claim that “vertical integration typically enhances economic efficiency, making force vertical deintegration economically inefficient and reducing consumer surplus in the long run.”

Similarly, Maureen Oldhausen, the First Chair of the FTC under President Trump, claimed in a speech that the abandonment of the Title II classification was tantamount to “Putting the FTC Cop Back on the Beat.” Oldhausen attacked the concept of network neutrality as implemented by the FCC, citing a decade-old FTC report that claimed there was no problem that needed a regulatory solution. The speech made no reference to the history of the Internet

and the regulatory decisions (Carterphone, the Computer Inquiries, Unlicensed Spectrum) that made it possible.

FIGURE 4.1: THE FTC’S TUNNEL VISION DISTORTS ITS EVALUATION OF REGULATION



AN ACADEMIC EXAMPLE

The selective and distorted vision of market fundamentalism is evident in a recent paper by Nicolas Petit. Petit tries to resurrect pure market fundamentalism through the introduction of “non-equilibrium markets” and/or “network effects markets in growth phase,” which excuses all manner of anticompetitive conduct on the basis of uncertainty.⁶¹

At the highest level, the paper uses the Microsoft defense. If a firm says in its SEC filing that it faces competition, antitrust authorities are told to believe them and generally overlook actions they take to create, extend, or defend market power. As one Microsoft witness put it, the only thing that unequivocally constitutes anticompetitive behavior is if I burn down my rival’s business.⁶² Petit’s affinity for the Microsoft case is made clear toward the end of the paper where he says

History is of little help. More than 20 years after the Microsoft antitrust saga, we

still entertain doubts about whether Microsoft's anticompetitive strategies towards rivals were not a self-inflicted wound. After all, a credible argument can be built that Microsoft "take-no-prisoner" approach to complement software applications led the Redmond firm to underestimate the commercial potential of nascent technologies, and incentivized the computer industry to move elsewhere leading to the emergence of Google, Facebook and myriad other firms."⁶³

The author sets up a strawman that he uses to reject the very narrow traditional model of monopolist behavior, asserting incorrectly that the conclusions apply to oligopoly situations. A true and total monopolist would extract every penny of excess profits. The same Microsoft witness who said that only burning down the competition's facilities would count as anticompetitive argued that if Microsoft did not charge \$600 dollars for its operating system (the maximum it could), it was not behaving like a monopolist, even though the price it charged (\$150) was far above cost.

The examples given – identical to Microsoft's defense – would excuse all of the behaviors that raise deep concerns for the Stigler antitrust group

Non-equilibrium strategies are difficult to categorize as pro or anticompetitive. Think about cross platform integration of complements through M&A (e.g. Facebook's acquisition of Instagram), preferential treatment (e.g., Google's integration of maps on its search engine and mobile OS Android), bundling (e.g., Netflix's bundle of DVD and streaming subscriptions), imitation (e.g., Amazon's cloning of merchants' products) or exclusive dealing (e.g., app stores' bans on third party distribution). In a non-equilibrium environment, cross platform integration is a well-accepted strategy to grow network effects. At the same time, cross platform integration reduces reversibility, increases switching costs and exacerbates lock-in. This may deprive competing firms in non-equilibrium equilibrium markets from profit maximizing network externalities ... or strengthen their incentives to invest into disruptive innovation and inter platform competition. (p. 32)

Strategic and long-term behavior is ignored, as is the abuse of market power at the oligopoly level. Price discrimination (abusing market power at different rates in different categories of customers) is never mentioned, nor are multisided markets. Petit shows the dominant platforms are not perfect monopolists and ignores monopolization of complementary product markets and strategic behaviors that enhance market power. In the strawman setting, Petit dismisses the possibility of market power abuse in a dynamic market with increasing output. Increasing output is taken as an indicator that there is little likelihood that market power is being exercised. Instead, antitrust authorities are told to only look at markets that have "tipped," but to be very cautious in concluding that the market has tipped. "Give low priority to anticompetitive conduct in non-equilibrium markets." The result is to extend the under-enforcement bias – the error the Stigler group's recommendation for recalibration is intended to correct.

The economic issue is the well-known type I error cost that arises when a firm in a competitive market type is deemed in a dominant position, and instantly subject

to a specific set of legal constraints under the doctrinal concept of “special responsibility”. The legal problem is that the conventional definition of dominance makes no sense in a non-equilibrium market with uncertainty.

The firms that the author analyzes bear little, if any resemblance, to the hypothetical market he describes.

Nonequilibrium market power is absent – above cost pricing or other extractive practices are a moot problem in a non-equilibrium market (an overpriced service will instantly collapse to the 0 equilibrium), they are a possible source of deadweight loss in an equilibrium market...

a firm confronted with a network effects markets in growth phase is to some extent dependent on marginal users’ adoption choices (by contrast, the firm’s existence is not at stake when the demand curve slopes downward). If we believe that unilateral anticompetitive conduct is possible in non-equilibrium markets, the definition does not help and creates a type II error. (34-35)

At the end, Petit assures the reader that the abuses that have attracted so much attention are theoretically possible. However, reaffirming the long-standing error of market fundamentalist antitrust, he argues that these are to be given “lower priority.” The empirical history we have reviewed, and the analysis of the Stigler antitrust group strongly supports the opposite view. As the following table shows, each of the Stigler group’s antitrust responses is either rejected or ignored by the market fundamentalist view.

TABLE 4.2: ANTITRUST CHALLENGES UNADDRESSED BY MARKET FUNDAMENTALIST THEORY

Stigler Group Challenges	Free Market Fundamentalist sidesteps
Understand innovation process better	Ignored (differential investment strategies)
Recalibrate perception of risk,	Rejected
Speed oversight by shifting burden, presumptions	Rejected
Clearer thresholds	Rejected
Attention to small firms, Protect competition	Ignored (merger example)
Reconsider duty to deal (P)	Rejected (exclusives example)
Data barrier to entry (i.e. portability)	Ignored (merger example)
Separation of data	Ignored (merger example)
Study implications of multi-sided,	Absent
Understand barter better (P)	Absent
Understand behavioral biases & their exploitation	Absent
Understand conflicts of interest in multisided	Ignored
Understand consumer welfare in multisided (P)	Ignored
In light of competitive, reexamine pricing	Rejected (assume absent if rising product and/or margin)
In light of competitive, reexamine product)	Rejected (integration example)
Eliminate safe harbor for exclusive dealing	Rejected (exclusives example)
Prohibit terms raising switching costs	Rejected
Unbundling, maximize consumer choice	Rejected (bundling example)
Multiple agency oversight of mergers (L)	Ignored

The problems he identifies are very real, while the assumptions used to excuse them are unrealistic. His recommendations, in the context of the deep concern about Big Data Platforms

expressed in the U.S. and EU are exactly backwards. Oversight of these chokepoints need urgent and prominent attention, not a “lower priority.”

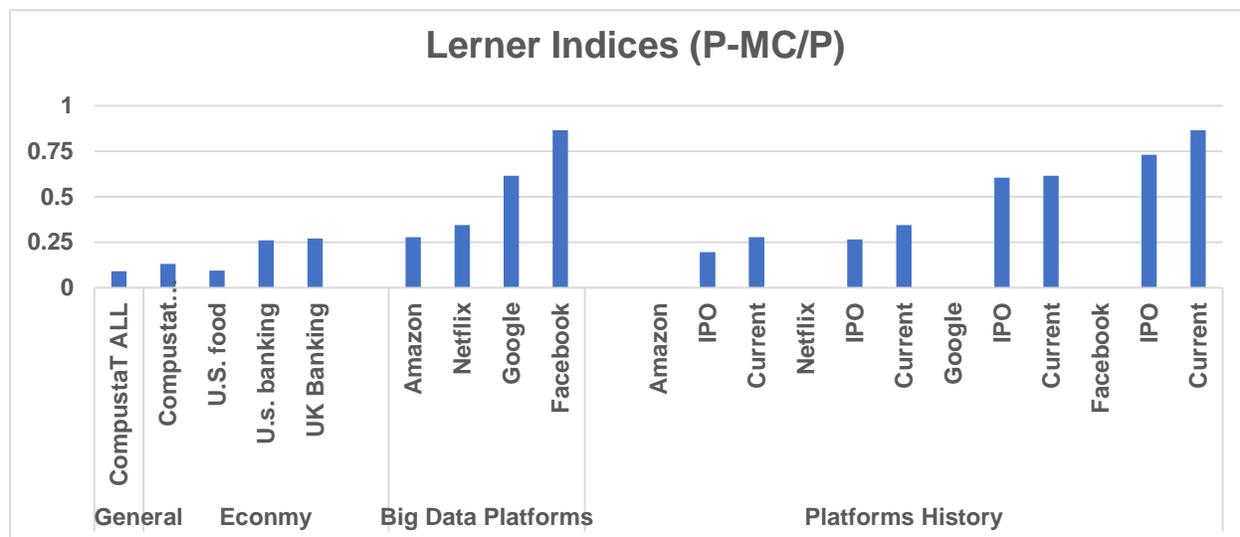
Make no mistake. Our suggestion is not to introduce a rule of per se legality for nonequilibrium markets with uncertainty. In non-equilibrium markets, firms may have ability and incentives to reduce uncertainty in ways that are anticompetitive. Moreover, firms that operate at a higher point of the upward sloping demand curve may try to protect relative competitive advantages by recourse to anticompetitive means. Put simply, we do not exclude that anticompetitive conduct can occur on the road to equilibrium. There should remain regulatory ability to enforce applicable competition law in such markets, though this should be subject to lower priority attention for enforcers.⁶⁴

Petit claims to have shown that FANG (Facebook, Amazon, Netflix, and Google) “would outperform textbook monopolies by observable metrics of price, output, labor, or innovation.” That is not the issue. The question is: Do these firms perform like a workably competitive market? The answer is no. Several observations are in order.

First, a quick glance at the paper shows the author adheres to the view that, as long as output is expanding, there cannot be abuse of market power and policy need not respond. The Stigler antitrust group disagrees.

Having liberated the data from the market fundamentalist ideology, the data used in the Petit paper to test the ill-fitting monopoly theory are useful to ascertain whether there are excess profits – the traditional measure of antitrust harm. Figure 4.2 presents a standard calculation of the Lerner index (used in the Working Paper #3). This is a standard measure of the markup of price over cost. The figure compares Lerner indices for general economic goods.

FIGURE 4.2: LERNER INDICES: GOODS AND SERVICES COMPARED TO BIG DATA PLATFORMS



Source: Genera Economy based on Compustate; Platforms base on Nicolas Petit, 2019, “Are ‘FANGs’ Monopolies? A Theory of Competition under Uncertainty,” SSRN, October 21.

Second, note the dramatic difference in the Lerner indices between Amazon and Netflix as compare to Google and Facebook. One can argue that Amazon and Netflix were entering into markets that were occupied (product distribution and video). Their pricing power was much more constrained, although Amazon has obtained much greater horizontal size and is adding complements. On the other hand, Google and Facebook entered primarily new spaces (search and social media) where we might expect these firms to earn innovator (Schumpeterian) rents when introduced. However, we would also expect those rents to be dissipated as competition is attracted to the sector. Yet, Facebook's margin increased 10% when it acquired WhatsApp and has continued to rise.

Third, the behaviors that the author cites as "complicating" the competition analysis are very different between firms. Netflix is said to have engaged in a very weak form of bundling (i.e., the bundle is mixed, with each of the parts readily available in the market). Amazon is engaged in online products. Facebook's merger with Instagram is mentioned, but WhatsApp is not. Google is said to have integrated maps and Android. Digital distributors, including Google and Facebook, exclude third-party apps.

EXPANDING THE SCOPE OF ANTITRUST AND REGULATION TO INCLUDE INSIGHTS FROM THE FULL RANGE OF SOCIAL SCIENCES

Caution in the antitrust approach raises the question of what changes are necessary to bring the overall landscape of policy into a position to deal with the digital revolution. In fact, four decades ago, Lawrence Sullivan pointed the way forward for antitrust.⁶⁵ Antitrust practice did not take up the challenge for three decades, Sullivan's early observations provide solid advice for the regulatory institutions that are necessary today.

A 1977 article by Lawrence Sullivan, who appears to have originally identified the Harvard Law School side of Chicago/Harvard debate, started with a prescient discussion of the key differences between these schools of thought. The Chicago School viewed monopoly as rare, cartels as unstable, barriers to entry as low, and pricing strategies (like vertical restraints and tying) as overwhelmingly efficiency based. Market participants were assumed to be highly functioning economic actors. Efficiency was the only goal to be pursued by antitrust. Under these circumstances, overcharging consumers was, at best, very short term, since entry and economics would dissipate rents quickly. The Harvard School raised doubts about each of these assumptions.

This tradition, here called the "Harvard school"... is less likely than is the Chicago analysis to attribute oligopolistic industry structure to scale efficiencies. Harvard theorists recognize other barriers to entry, such as control of scarce resources, high capital requirements, and product differentiation.... Harvard theory envisages the additional possibility of non-collusive but interdependent pricing in oligopolistic markets. Also, Harvard theorists sometimes use dynamic models suggesting ways in which foreclosing restraints like tying, requirements contracts, or vertical mergers may injure competition. Thus, they perceive the possibility that vertical relationships may inhibit entry. They also regard certain characteristic aspects of competitive style, such as high advertising expenditures, as capable of dampening competition either by increasing capital requirements for

entry, or by increasing product differentiation and, thereby, tending to disaggregate markets. The Harvard school is more likely than Chicago to view resale restrictions as pernicious.⁶⁶

The focus of the 1977 article was not so much on the fact that the Chicago assumptions were wrong, which Sullivan believed the Harvard School had demonstrated convincingly, but on the best way to study the implications of the much improved understanding of the more complex market reality that emerged from the debate. This understanding called for a broader social science of industrial organization in which antitrust and regulation played important roles.

Sullivan criticized the Harvard School for not building a robust framework to describe the outcome of markets, offering observations on a broader view of antitrust issues. His criticism of the neoclassical Chicago School was that it is focused on a narrow set of economic issues – namely economic efficiency. He argued that the Harvard School was much broader, but still too focused on economics and failed to bring other disciplines into the analysis. History and philosophy were mentioned – the former to add a qualitative grounding, the latter to provide values and goals – but the analytic disciplines he advocated were sociology and political science.

His critique of the doubly narrow Chicago view was, essentially, that institutions and behavior had a much greater influence on the working of the economy than the neoclassical economists admitted. The Harvard School was better, but it did not go far enough because it put structure in the driver's seat. He argued that conduct was at least an equal copilot, if not the captain. While many had argued that Bork's effort to narrowly focus antitrust on efficiency was simply an incorrect interpretation of the Sherman Act, Sullivan grounded that conclusion in a political economy analysis of the economic system into which the Sherman Act was introduced.

The scale of industrial activity expanded rapidly and dramatically and as it did so, the scale and scope of political and community life expanded in reaction. All of this yielded the tensions and ambivalences that are inevitably associated with profound changes in the conditions of life. The Sherman Act took form in that atmosphere. It was, indeed, one of the few significant American governmental responses to the transformation of American life resulting from economic development during the last decades of the nineteenth century. No one who knows anything about life or politics could expect to find theoretical rigor or doctrinal purity in such a statutory instrument... The Sherman Act is seen most fully as one product of that dialectic. The Act was invoked by the same kinds of social and political pressures as those to which Populism and the Progressive Movement responded, each in its unique way.⁶⁷

This description is consistent with the view of the development and evolution of antitrust offered in WP#1. Sullivan's critique of the Harvard School is that it failed to live up to the tradition of the Sherman Act. As a result – and as the Stigler antitrust group shows – antitrust has a lot of catching up to do. Sullivan's observations were prescient in linking the Harvard School's failure to the contemporary need for "recalibration," beginning with the flaws in the Chicago School approach.

Having offered a grounded historical political economy of antitrust and explained the importance of this type of historical analysis, Sullivan focused on sociology as the discipline that might make the greatest contribution to the understanding of market performance and the role of antitrust.

My thesis is that antitrust scholarship could usefully explore the styles of analysis and some of the material from the humanistic disciplines of history and philosophy, and that it might be useful to draw upon social sciences other than economics, particularly on sociology and political science. (1214)

He questions the “cultural validity of basic presumptions, such as that firms maximize profits and individuals maximize utility,”⁶⁸ noting that the assumptions neuter analysis of conduct and result in an obsession with market structure and a failure to examine conduct.⁶⁹ The blind spots of traditional antitrust are of great importance, most notably in the “[t]reatment of monopoly pricing [which] reveals the faults of a rigorous economic approach that values generalized analysis of structure above inquiry into human conduct and the disorder of the market”⁷⁰ and the failure of Chicago School analysis to examine long-term and strategic action.⁷¹

The implications of Sullivan’s analysis are profound along a number of dimensions. One dimension is a broader view of the role of antitrust, which extends beyond the narrow, efficiency-orientated approach of the Chicago School – a point that was hammered home intensely in the debate over the goals of antitrust. Just as the recognition of the historical context of the Sherman Act went a long way toward defining the goals of antitrust, shifts in contemporary society influence the direction that antitrust should take today.

Americans today live out their lives in a vastly different world than that of their fathers and grandfathers. The social, political and economic institutions through which they express themselves are almost all on a larger scale now than they were at the end of the last century. Many of the forces that now affect them are less personal, more remote, than they used to be. A people may care about these changes as well as about changes in efficiency and market power. They may expect policy about industrial structure to deal with their concerns, and it would be incongruous to suppose that antitrust would not reflect such solicitude....

The changing perceptions of and attitudes about antitrust that ultimately affect its content... are interrelated with changes in social and political attitudes that have affected other American institutions as well.⁷²

Sullivan returns the political to a central role in political economy.

The political consensus that supports antitrust comes from other sources. Americans continue to value institutions the scale and the workings of which they can comprehend. Many continue to value the decentralization of decision-making power and responsibility. Many favor structures in which power in one locus may be checked by power in another. Antitrust, broadly perceived and sensitively administered, may contribute to the realization of these values. So, doing, it may reduce various of the pressures for fuller governmental regulation of commercial and industrial activity.⁷³

One of the greatest shifts Sullivan notes is the interplay between antitrust and regulation. Sullivan's political economy view of antitrust focuses on the limitations of antitrust and the need for regulatory institutions.

One can no longer assert that antitrust is the major governmental intervention aimed at dealing with industrial transformation and its social effects. For the last fifty years or so the nation has implemented various regulatory programs, has socialized many activities and has used the taxing and spending power to affect economic conduct and performance.⁷⁴

Given the date of Sullivan's article, the fifty-year period he points to in the development of regulation reaches back to the enactment of the Radio Act of 1927 – the precursor to the Communications Act of 1934 – as well as the other regulatory policies of the New Deal.

Of the social sciences, Sullivan devoted the most attention to sociology, underscoring its significant role in bolstering and improving antitrust analysis and policy. "If, as suggested above, the contemporary importance of antitrust lies primarily in its relation to the social and political dynamic through which power is allocated, sociology may contribute to an understanding of relevant relationships."⁷⁵ Broadly, Sullivan suggested that individual behavior was located within institutions that drove conduct.

The antinomies of conflict and consensus, stability and change, bureaucracy and democracy have been among the classic concerns of sociology. Contemporary sociological research deals with many issues relevant to antitrust. Organization theory, the social aspects of economic development, social differentiation within business organizations, and the ways in which differentiation relates to organization size and related variables, the politics of bureaucracy, and theory about the way norms and values are legitimized and transformed all have potential significance.⁷⁶

At the time, new institutional and behavioral economics were in their early stages of systematic development. He argued that these disciplines held great promise, but they needed to develop, as they did.

Sociology may, in time, be able to make direct contributions to antitrust, much as does economics today. This literature focuses upon relationships between organizations and their environments and seeks to analyze the ways in which organizations modify and are modified by their environments.

Biological, evolutionary organizations cannot generate internally all the resources needed to survive and that the ultimate goal that explains both changes in organizational structure and changes in the environment initiated by the organization is the need to attract resources from the external environment.⁷⁷

That is not to say that antitrust has no role to play. Nor does it suggest consensus around the expanded list of goals that antitrust should pursue or considerations it should take into account. On the contrary, these questions have been a source of continuous debate, as Sullivan recognizes.

The contemporary significance of antitrust, like its past significance, lies primarily in the role it continues to play in the working out of those political and social issues. To argue, as do the Chicago economists, that antitrust ought to be used solely to inhibit expressions of market power in a technical economic sense, is not only to miss much in the history and development of the law, but to ignore much of its potential.⁷⁸

5. ANTITRUST AND REGULATION FOR THE DIGITAL AGE

JUSTIFICATION FOR OVERSIGHT

Turning to policy, it is important to understand the numerous factors that justify intervention in the digital communications sector to control the abuse of market power and to promote competition and protect consumers. Making the case for economic regulation, Alfred Kahn pointed to the fact that because communications networks exhibit economies of scale, the market will support only a small number of large firms compared to other sectors of the economy.⁷⁹ In addition, because of the essential inputs these large firms provide, they influence the growth of other sectors and the economy.⁸⁰ They are infrastructure.

Kahn's rationale for regulating infrastructure encompasses three major economic principles. He starts with what is essentially a positive externality – a public goods argument. The broad economic impact of digital communications means that private individuals might not see the benefits or might be unable to appropriate or capture that value in the form of profits. As result, private individuals will invest less in the provision of service than is socially justified. In addition to this macroeconomic impact, those who are unserved or priced out of the market are disadvantaged at the individual level. Capitalists won't serve them because they are not typically profitable.

Extending this argument for the communications network involves achieving ubiquitous, seamless interconnection and interoperability, which is not a likely outcome of market forces alone.⁸¹ Ubiquitous, seamless interconnection and interoperability are highly desirable characteristics of infrastructure networks that achieve important network effects, another positive externality.⁸² Competitive communications and transportation networks do not inherently produce this outcome because of the perverse incentives of dominant providers of bottleneck facilities,⁸³ and because the high cost of negotiating interconnection creates obstacles to seamless interconnection. Government policy has repeatedly been forced to step in to achieve the desired outcome.

Kahn added two other characteristics as potential justifications for regulation: “natural monopoly” and “for one or another of many possible reasons, competition does not work well.”⁸⁴ Although Kahn was skeptical of the monopoly rationale for regulation, he later argued that the nature and extent of competition is an empirical question:

The question is not simply one of *how much* competition to allow—how much freedom of entry or independence of decision making with respect to price, investment, output, service, promotional effort, financial, and the like. It is a question also of what, in the circumstances of each regulated industry, is the proper *definition*, what are the *prerequisites*, of effective competition.⁸⁵

Establishing the preconditions for competition is a policy action that greatly affects the outcome, but the ultimate outcome, the actual growth of competition that prevents the abuse of market power is what matters most. Two decades after the passage of the Telecommunication Act of 1996, which aspired to supplant regulation with competition, the critical question is not,

“Is there more competition?” Rather, the question is, “Is there enough competition to prevent abuse?” This analysis shows that the answer must be a resounding no.

Kahn’s second rationale for intervention is a market structure problem. Very large economies of scale mean that building multiple networks raises costs. The market will not support competition. In the extreme, we run into the problem of a natural monopoly. Firms that become too large behind high barriers to entry, transaction costs on the supply-side, high switching costs or other behavioral flaws on the demand side obtain market power. Monopolists, natural or otherwise, have market power and a strong incentive to abuse it. With the incentive and ability to exercise their market power, monopolists engage in behaviors that harm competition (by creating additional obstacles to entry or extending their market power to complementary markets) and consumers (raising prices and restricting choices). Regulation controls market power. However, monopoly is not the only reason to implement public policy. It has never been a necessary condition to impose common carriage in the communications and transportation sectors.

Infrastructure industries exhibit several market structural problems. They deliver service with relatively low elasticities. In fact, they can be considered “necessities” since they have a combination of low-price elasticity and moderate-income elasticity.⁸⁶ The low-price elasticity means it is difficult to go without communications or find good substitutes. The moderate-income elasticity means the good commands a significant part of the household budget all the way up and down the income distribution, but the percentage declines as income rises. The important role of communications in the broader economy and for households magnifies the ability to exercise, as well as the impact of, the abuse of market power.⁸⁷

Deploying facilities to compete with an incumbent communications network is costly and difficult. Network effects – the ability to reach large numbers of customers to make the network more valuable to each individual customer – are important. Therefore, the communications sector provides a fertile ground for the abuse of market power. Its size, great importance to the functioning of the economy, and underlying economic characteristics suggest that the existence and persistence of market power is a problem. It has made this sector the target of a great deal of public policy.⁸⁸ Elasticities of demand and supply are low compared to other sectors. The key services supplied to consumers in the digital communications sector (broadband and wireless) exhibit the elasticities of necessities.

Social Values

We turn next to Kahn’s third reason for regulation – “other.” Although it is less specific, it can be given several referents in the communications space. Competitive markets do not deliver universal service because there are significant parts of society where the rate of profit does not support extending the infrastructure or making it affordable. Rural or high-cost areas and low-income populations may not be very attractive from an investment point of view, but they are important from a public policy and social values point of view.

Freedom and diversity of opinion and voices are extremely important socio-political values that may not be accomplished by a competitive market. They may or may not be profitable, but society simply cannot leave them to the vagaries of the market. Speech and

diversity are perhaps the most important examples of these values.⁸⁹ Communications is well-recognized as a key to democracy, and many consider it a human right.⁹⁰ The challenge is not simply to ensure that all have the opportunity to speak, but also to address gross imbalances in those opportunities. Many citizens deserve more speech than the market affords them.

COMPLEXITY, CHALLENGES AND CORE PRINCIPLES

This paper describes focuses on the big, digital platforms that have become bottleneck firms, dominating a new choke point in the digital communications sector. WP#2 and #3 analyzed the challenge of the big broadband networks, which posed an obstacle to the development of digital communications in the birth and initial deployment of the Internet.

The policy principles that we have shown had success in that earlier period are the same as the principles needed today. Of course, the details of the policy change with the technology, but its principles are the same.

The Stigler group provides crucial analysis with its very comprehensive examination of issues. The Stigler group's approach is pure Brandeis, as described in Working Paper #1.

- It launches from a detailed economic analysis as it affects antitrust.
- It endeavors to make competition and markets work better.
- It examines the single largest social issue and economic issue arising in the digital age— privacy and the use of data.
- It discusses one of the most important mainstays of the democratic political economy (journalism), as well as the broader impact of digital technology on democracy.
- It seeks policies that set clear goals, identify the most important issues, and remove barriers to effective implementation, but it relies on the practice of experts to identify how to implement specific policies to achieve those goals.

The Brandeis-Stiglitz model of pragmatic, progressive capitalism meets the challenge, by doing the following:

- It seeks to construct guardrails and guidance to promote competition and innovation in decentralized markets.
- It orients capitalism in a direction that promotes and furthers the fundamental economic, social and political values of society.
- It ensures consumer benefits and provides consumer protection.
- It encourages pragmatic and flexible processes to accommodate the dynamic economy, based on analysis of the real-world functioning and impact of each sector.
- It should be implemented by experts who have not only the skill, but the authority and resources to implement policy to pursue the goals.
- It encourages democratic and participatory political development, endeavoring to have political development support evolving economic structure.

Given the focus of this paper on the intersection of the political and economic elements of the model, Table 5.1.1 uses the issues identified by the Stigler group (shown in the left-hand column), to organize the discussion of policy responses shown in the two right hand columns. This underscores the need for a complex approach to the oversight of the digital revolution. The left column identifies the changes in antitrust that the group deemed necessary. The right column identifies the authorities and issues that constitute the portfolio of the new regulatory agency. Here, legislation is necessary. There will be a debate over where the legislation should draw bright lines and where agency practice should be developed.

The Stigler group’s recommendations for antitrust reform conclude that “It is time for antitrust law to recalibrate the balance it strikes between the risks of false positives and false negatives.” “Recalibration” may sound like a timid response, but there are a number of ways in which it is profound. In addition to the major changes identified above, the Stigler antitrust group will also let a new regulatory agency handle many issues that would frustrate antitrust. This is the pattern we have pointed out in the New Deal as the launchpad for the Golden Age of Capitalism. Antitrust law was not substantially amended, but enforcement was ramped up dramatically while over a dozen other policies were adopted and new regulatory agencies created.

At the same time, the Stigler group’s recommendations reflect a belief in the overall success of the Sherman Act approach and its flexibility to deal with economic changes. They tie this to the link to common law, an issue that I noted earlier. The Stigler antitrust group notes that the preference for legislation over practical evolution is a close call. The significance of the proposed recalibration can be appreciated from another perspective. As the Stigler antitrust group points out,

With few exceptions, antitrust law has in the past evolved in a common-law-like process by which it has reflected new learning and judicial and market experience. This process is continuing, at least to some extent, as antitrust law and enforcement have recognized, for example, previously unnoticed competition problems in labor markets and doctrine has evolved to incorporate new learning about competitive problems that can be created by most favored nation (MFN) and other vertical agreements. The challenges posed by the big technology platforms and the current populist political climate have, however, put the issue of antitrust reform before Congress in various legislative proposals. There are advantages and disadvantages to both common law evolution and new legislation. Evolution by a common law-like process takes time.⁹¹

ANTITRUST STRUGGLES WITH COMPLEX, BEHAVIORAL REGULATION

It is important to consider the recent experience of the antitrust agencies. In general, antitrust authorities take action after a harm has occurred and seek to stop the abuse and/or restore competitive conditions. One way to appreciate why antitrust alone is not enough to promote the conditions necessary for innovation is to consider the only circumstance where antitrust is called on to take preventative action – merger review. In merger review, the agencies

project the likely impact of a merger and can take action to block or modify the merger and prevent the harm from occurring.

TABLE 5.1: OVERSIGHT OF BIG DATA DIGITAL PLATFORMS, ANTITRUST REFORM AND A NEW REGULATORY AGENCY

CHALLENGES OF NEW TECHNOLOGY	STIGLER GROUP ON ANTITRUST AND REGULATION	
	ANTITRUST REFORM	A NEW REGULATOR
Market Characteristics that increase surplus but weaken competition		
<ul style="list-style-type: none"> (1) Average cost is too low (2) Quality costs are too high (3) Transaction costs are too low (4) Advertising costs are too low (5) Advertising value (targeting) with large databases is too effective (for some many) (6) Consumer preference v. consumer welfare (7) Increased output v. allocation of output (8) Direct network effect value for communications consumers is too (9) Indirect network effect value to producers of complements are too large (10) Local/global expansion costs are too low 	<ul style="list-style-type: none"> Understand innovation process better (P) Recalibrate perception of risk false positive v. false negative (P) Speed oversight by shifting burden, evidentiary presumptions, decision frameworks in merger review (L) Clearer thresholds (P) Attention to small firms (L) & Reconsider duty to deal (P) Data barrier to entry (i.e. portability) Separation of data 	<ul style="list-style-type: none"> Ex ante, forward looking rules preempt harmful effects Complementary role Speedy deadlines, lower burdens, joint responsibility especially for behavioral remedies Clearer boundaries of unacceptable conduct potential leapfrog competition (P) Data portability (with consideration for data protection)8. Separation of data Study implications of multi-sided
Traditional conduct that reinforces market power		
<ul style="list-style-type: none"> On the supply-side (11) Limit openness and interoperability (12) Lack of transparency (13) Exclusion or degradation of services (14) Resist data portability (15) Consumer exploited by behavioral economics (16) Complex, opaque transactions On the demand-side (17) Pricing (loyalty and to zero) (18) Contracts (19) bundling (20) Lack of transparency (21) Increasing switching costs (22) Magnifying switching cost through sunk costs and asymmetric information 	<ul style="list-style-type: none"> Supply-side In light of competitive, reexamine: pricing (e.g. zero and loyalty discounts) product design in light of competitive effects (P) 	<ul style="list-style-type: none"> Demand side Prohibit terms raising switching costs (take it or leave it contracts) Unbundling, maximize consumer choice
Consumer behaviors that contributes to entry barriers abuse by dominant firms		
<ul style="list-style-type: none"> (31) Inherent behavioral biases (24) Data is open to manipulation & exploitation (25) Manipulation of Consumer preference v. welfare (26) Machine learning is uniquely powerful (27) Lack of availability of Information (28) Failure to research and compare 	<ul style="list-style-type: none"> Understand better (P) Understand behavioral biases & their exploitation (P) Understand conflicts of interest in multisided (P) 	<ul style="list-style-type: none"> Data Protection Agency Fair information practices Effective choice Algorithmic transparency Define & enforce effective consumer choice
Policy that facilitates or fails to address market power		
<ul style="list-style-type: none"> Lax antitrust enforcement (29) Structure (mergers) (30) Conduct (fraud and abuse) Lack of regulatory authority (31) Ineffective (privacy) (32) Absent (big data exploitation) (23) Severe challenge of assessing consumer welfare (34) Political impact of weak antitrust & absence of regulation 	<ul style="list-style-type: none"> Multiple agency oversight of mergers (L) Protect competition (L) Need to become more aggressive in enforcement (P) 	<ul style="list-style-type: none"> Multiple agency oversight of mergers Promote competition, monitoring and enforcement of behavioral remedies and firewalls Open standards and interoperability Experience with active, ex ante preventions of discrimination, limits on market power, define and break bottleneck power and foreclosure. Non-competition digital goals: experience with universal service, local and diverse ownership, customer proprietary network information New roles in data use restrictions, consumer protection, Pro competitive rules for consumer control of personal data Algorithmic oversight
<p>Sources: Stigler Committee on Digital Platforms, April 2020</p>		

John Kwoka’s analysis of antitrust oversight of mergers provides a useful starting point for the discussion in this chapter.⁹² While Kwoka’s analysis can be criticized on a number of grounds, some of the clearest conclusions are informative for the purpose of this analysis. The notion that behavioral remedies are not as effective in response to mergers is long-standing and not very controversial. Kwoka’s advice on when and how to use conduct remedies points directly to the complementarity of antitrust and regulation.

Antitrust agencies must resort to conduct remedies when divestitures will not work, efficiencies are large, and/or vertical integration is the question. This situation typifies the network platform industries in general, and digital platform communications networks in particular. Given the overwhelming role of such platforms, antitrust is ill-suited to deal with the underlying market power. Historically, as we have pointed out, U.S. policy explicitly subjected key communications infrastructure industries to the dual jurisdiction of antitrust and regulation for precisely this reason.

Kwoka’s advice for how such remedies should be structured – transparency, simplicity, and third-party oversight – points to regulation, especially in dynamic industries. The key is that the “intended beneficiaries of access provisions [must not] find it difficult to fully or quickly obtain the necessary access.”⁹³ In our view, bans on specific actions are likely to be the most effective because “important characteristics of effective remedies would seem to be simplicity and transparency.” Third-party (e.g., regulatory commission) oversight is important in creating “[f]irewalls to constrain the exchange of competitively sensitive information... Recording explicit communications may help enforce the necessary discipline.” Third-party oversight is also necessary because “[w]ithout an outside monitor, target firms may be reluctant to complain since they will continue to have to deal with offending firm.”

Doubts about antitrust’s ability to effectively implement such an approach continue to rage. The view taken in this paper is that we do not have to push antitrust to or beyond its limits. We can rely on the well-defined, century-old complementarity between antitrust and regulation in the communications space, adapting it to the dynamic digital environment.

One further observation is in order. Kwoka’s critique of behavioral remedies adopted by antitrust authorities not only suggests that reliance on the FTC will be ineffective, but it also suggests that the FTC itself will be particularly ineffective. Kwoka’s analysis shows that the FTC is the maven of behavioral remedies in the antitrust space – over eight times less likely to oppose mergers and over twice as likely to rely on remedies. To the extent that Kwoka’s findings are sound, they apply above all to the FTC.

Table 5.2 identifies a long list of reasons why the existing process will not work (most from Economides). Since the market cannot provide a self-regulatory solution to the problem, the regulatory regime must provide effective oversight to prevent abuse. The key is before the fact (*ex ante*) nondiscrimination on which entrepreneurs can rely. Without this strong assurance of nondiscrimination, new entrants will be strangled and innovation at the edges without permission will be stifled.

The particular circumstances of the Internet and the unique value of innovation at the edges without permission magnifies the weakness of antitrust. While one might hope that

antitrust practice would evolve away from the recent misguided view of markets, antitrust moves very slowly and the courts have established thresholds and burdens that favor inaction. The result is more support for legislation than one frequently sees from antitrust practitioners, as the only way to correct flaws that have been baked into the judicial process.

TABLE 5.2: REASONS WHY RELIANCE ON SIMPLE ANTITRUST AND TRANSPARENCY WILL NOT PROTECT CONSUMERS, COMPETITION OR INNOVATION

- A. The self-interest in good behavior is weak where there is a lack of competition.
 1. Firms profit from pricing/marketing abuse and controlling the flow of technology.
 2. Survey evidence shows these have been the least popular companies in America for decades and it has not changed their behavior. If caught, they move on to another abusive practice.
 3. Dominant platforms and communications giants have a long history of saying one thing for political ends and doing another for economic ends.
- B. Antitrust agencies struggle to address this type of abuse.
 4. Structural remedies work much better for horizontal mergers than behavioral.
 5. Vertical market power is particularly challenging.
 6. Monitoring behavioral remedies is challenging for antitrust authorities, so transparency and simplicity for third-party oversight is necessary.
 7. *Ex post* antitrust is ineffective to create the environment needed for innovation without permission at the edges.
 8. Litigation is slow and case-specific. The communications network companies have been targets of legal challenges for decades and that has not changed their behavior.
 9. Network effects are large and vulnerable.
 10. Discrimination, with its threat of holdup and need for permission, can chill innovation at the edges without abuse.
- C. Transparency won't work for complex bundles of products.
 11. Behavioral economics demonstrates the ability to manipulate and exploit the consumer.
 12. Lack of competition and choice renders complaint useless.
 13. Consumer monitoring costs and barriers are very high and responsibility is uncertain in a coproduced service.
 14. The communications network companies have been among the worst for consumer satisfaction and that has not changed their behavior.
- D. The FTC has repeatedly demonstrated its inability to deal with complex behavioral issues in the digital age.
 15. The Microsoft case took half a decade and failed to produce a meaningful consent decree.
 16. It took the FTC a decade to enjoin Facebook's behavior and the solution may not be effective.
 17. The FTC's record on privacy and Do Not Call is abysmal.

In their response to the House Judiciary Committee on the state of antitrust law and implications for protecting competition in digital markets, antitrust experts suggested a number of potential avenues for bolstering antitrust laws and enforcement.

On similar occasions in the past, most notably in 1914 and 1950, Congress acted to correct the direction that the courts had taken by strengthening the antitrust laws. It is once again time for Congress to step in. In broad overview, Congress should update the antitrust laws to:

- Correct flawed judicial rules that reflect unsound economic theories or unsupported empirical claims
- Clarify that the antitrust laws protect against competitive harms from the loss of potential and nascent competition, especially harms to innovation
- Incorporate presumptions that better reflect the likelihood that certain practices

harm competition

- Recognize that under some circumstances conduct that creates a risk of substantial harm should be unlawful even if the harm cannot be shown to be more likely than not
- Alter substantive legal standards and the allocation of pleading, production, and proof burdens to reduce barriers to demonstrating meritorious cases

Congress also should improve the effectiveness of antitrust enforcement by increasing the resources available to the federal antitrust enforcement agencies and increasing penalties. Even in these recommendations for legislation, the antitrust practitioners are cautious, preferring to rebalanced the process of litigation to promote more vigorous enforcement, but eschewing explicit prohibitions.⁹⁴

REGULATION: ENDURING PRINCIPLES FOR A NEW BIG DATA PLATFORM OVERSIGHT AGENCY

The big data platforms are the new chokepoint in the digital communications sector, and they have immense power because they are the portal through which an immense amount of daily activity flows. Their ability to gather, analyze, use and abuse that data to undermine competition and override consumer choice is immense. The Stigler antitrust group has identified the specific economic challenges confronting both antitrust and regulation. The antitrust analysis offered a telling observation. “Data sharing, full protocol interoperability, non-discrimination requirements, unbundling. These are sources of rents that society may determine through appropriate regulation should not be part of the winner’s reward.”⁹⁵ There is no need to repeat that analysis here. However, the Shorenstein analysis adds broad principles to guide the regulatory response.

Nondiscriminatory Access as a Common Law Duty to Deal

The concept of a common law that allows practice to evolve guided by core social principles has been one of the keys to success in coping with the dynamic transformation of the economy. While some lament the flexibility that common law affords, that flexibility ensures that legal structure will not undermine economic development. The leading role of common law nations in the 2nd (Britain) and 3rd (America) Industrial Revolutions cannot be denied, although many factors may have been in play. Common law is explicitly the basis for the Sherman Act and has become, through quasi-judicial actions of regulatory agencies, the basis for much regulatory activity. Deference to expert agencies, where statutes are “ambiguous,” is essentially a common law approach.

Scholars at the Harvard Shorenstein Center argue that the new digital regulatory agency should be based on two specific aspects of the common law: duty of care and the duty to deal. I have argued that the latter, in the form of an obligation to provide nondiscriminatory access to the means of communications and commerce, is part of the DNA of capitalism.⁹⁶ This obligation was evident half a millennium ago in British law.⁹⁷ Moreover, early during the 2nd Industrial Revolution in the U.S. (e.g. 1886),⁹⁸ it played a key role in the development of the Internet,⁹⁹ so there should be little surprise that it has such importance at this turning point in the 3rd Industrial

Revolution. Nondiscriminatory access to consumers through the chokepoint is the key to competition and consumer choice.

A good source of insight into the issue can be obtained by examining what the most important independent service providers, who needed access to the communications network to compete for customers, said was necessary (see Table 5.3). We explored this issue in a document that reviewed the official filing of an independent long-distance carrier and an independent Internet service provider at the key moment of debate after the passage of the 1996 Telecommunications Act. AT&T Long Distance and America Online had not yet been acquired by dominant communications network owners, so they outlined the specific conditions they needed in order to compete.

Nondiscriminatory access to consumers is important for all three different types of competition.

- Head-to-head competition between platforms would have the greatest effect on the market, but it is the least likely. The large market share in a core service as the basis for ever expanding bundles is a major obstacle to competition.
- Unbundling becomes a key for freeing customers to switch suppliers. Access enables competition for complementary services.
- The hope is that a seller of complements will add enough customers to consider entering the access business. Competition in complements is a benefit, competition in access would be the big enchilada.

However, access is a complex concept. To support competition both the supply-side (reducing barriers to entry) and the demands-side (reducing switching costs) must be dramatically changed. Interconnection and interoperability are needed for a technical link. Unbundling and elimination of anticompetitive contracts are necessary to free customers; rigorous nondiscrimination including pricing and technical quality is necessary to make it possible for competitors to make an attractive offer.

PARTICIPATORY GOVERNANCE

The Shorenstein Center proposal also envisions a process of regulatory negotiation to improve outcomes. We called it participatory governance in an earlier piece.¹⁰⁰ This concept is quite consistent with Brandeis' support for industrial democracy in the early phase of the 2nd Industrial Revolution (WP#1). Whatever one thinks about how well the effort to implement industrial democracy worked or how far it advanced, the search for a new form of democratic participation is an important aspect of the technological revolution. The 3rd Industrial Revolution is no different.

TABLE 5.3: NECESSARY COMPETITIVE CONDITIONS & NONDISCRIMINATION REMEDIES

Competition

- 1) local competition issues are resolved and the terms and conditions for local entry have been successfully implemented such that practical alternatives to the supply of local services exist in the local market;
- 2) a demonstration that vigorous and effective competition has evolved in a substantial portion of the market for broadband access services and in the market for BDS services;
- 3) the broadband tracking requirements have been implemented and reports from the telephone companies satisfy the Commission that treatment of broadband investment and expenses are appropriate;
- 4) price cap regulation has been implemented in such a manner as to preclude telephone companies from recouping broadband investment costs from utility services, the implementation of an effective price cap mechanism for basic and extended basic services in order to prevent instances of cross-subsidization;
- 5) safeguards are established to ensure that broadband access services continue to remain available from the telephone companies on a non-discriminatory and unbundled basis.

Interconnection

- (1) Comparably Efficient Interconnection: the principle of providing competitors with access to the broadband network on terms that are technically and economically equivalent to those provided by the broadcast carrier to itself.
- (2) A prohibition on preferred agency or exclusive arrangements between vertically-integrated broadband access providers and integrated or affiliated information service providers which contain discriminatory access provision, either in terms of price or quality of access.
- (3) Access: the ability to make a physical connection to cable company facilities, at any place where a cable company exchanges consumer data with any Internet service provider, or at any other technically feasible point selected by the requesting Internet service provider, so as to enable consumers to exchange data over such facilities with their chosen Internet service provider .

Pricing

- safeguards in order to prevent instances of anti-competitive behavior... implementation of a cost-based price floor to protect against below-cost pricing of broadband access services;
- implementation of a cost-based price ceiling with a limited mark-up to prevent excessive pricing of access services in uncontested markets;
- implementation of a third-party access tariff, allowing for non-discriminatory and unbundled access to broadband bottleneck facilities, as well as comparably efficient interconnection and associated non-price safeguards;
- implementation of price caps, accounting separations and other safeguards against anti-competitive cross-subsidization;
- imputation of appropriate third-party access tariffs to value added information services providers by broadcast carriers.

Non-price safeguards

- competitors able to gain comparable access to network bottlenecks;
- competitors protected against abuse of confidential information which is provided to the bottleneck access provider;
- competitors not otherwise disadvantaged in the market by the bottleneck access provider through, for example, the negotiation of exclusive or preferential agreements with other service providers.

Bundling

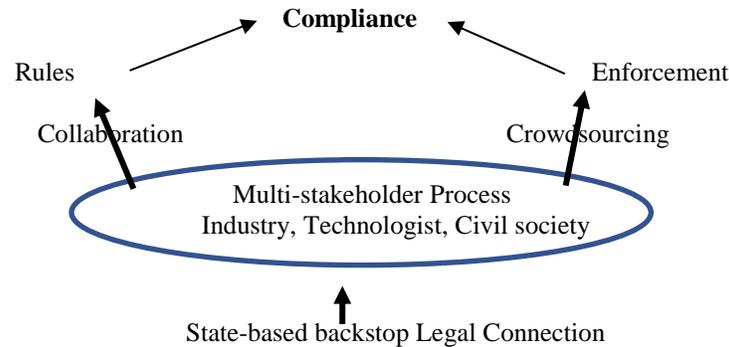
- the bundled service must cover its cost, where the cost for the bundled service includes
- the bottleneck component(s) "costed" at the tariffed rate(s) (including, as applicable, start-up cost recovery and contribution charges);
- competitors are able to offer their own bundled service through the use of stand-alone tariffed bottleneck components in combination with their own competitive elements;
- resale of the bundled service permitted...

Sources: AT&T Canada Long Distance Services, "Comments of AT&T Canada Long Distance Services Company," before the Canadian Radio-television and Telecommunications Commission, Telecom Public Notice CRTC 96-36: Regulation of Certain Telecommunications Service Offered by Broadcast Carriers, February 4, 1997. At the federal level, AOL's most explicit analysis of the need for open access can be found in "Comments of America Online, Inc.," In the Matter of Transfer of Control of FCC Licenses of MediaOne Group, Inc. to AT&T Corporation, Federal Communications Commission, CS Docket No. 99-251, August 23, 1999 (hereafter, AOL, FCC). America Online Inc., "Open Access Comments of America Online, Inc.," before the Department of Telecommunications and Information Services, San Francisco, October 27, 1999.

As described in Figure 5.2 consistent with the Shorenstein proposal, participatory governance is envisioned as a multi-stakeholder process that involves industry, civil society and

technologists in both the writing and enforcement of rules. The ultimate goal is to foster compliance, rather than enforcement.

FIGURE 5.2: THE STRUCTURE OF PARTICIPATORY GOVERNANCE



ATTRIBUTES OF AN EFFECTIVE ALTERNATIVE REGULATION STRUCTURE

<p><u>Transparency/Openness</u> <u>Clarity of Purpose</u> Dialogue Consensus Informing policy process Influencing decisions Planning Implementation Monitoring and evaluation Data gathering and analysis <u>Clarity of Process/Rules</u> Governance Convening Decision rules Voting Unanimity (Veto) Super Majority Majority Non-Voting Rough Consensus Right of Appeal, Dissent <u>Scope of "Authority"</u> Rules only Review of operations & goals</p>	<p><u>Participation</u> <u>Public Awareness</u> Rights - Redress Public consultation <u>Inclusiveness</u> Access Representativeness Organization of groups Resources Expertise Role of independents <u>Adequacy of Resources</u> Overall For NGOs <u>Industry Coverage</u> Achieve Critical Mass Avoid "Capture" & Ballot packing</p>	<p><u>Desired Results</u> <u>External</u> Credibility Legitimacy Effectiveness Efficiency Adaptability Flexibility <u>Internal</u> Building Trust Shared Knowledge & Expertise Culture of Cooperation & Leadership</p>
<p><u>Enforcement – Compliance</u> Accountability Fairness Speed Appropriateness Complaint and Audit Adequacy of Resources</p>	<p><u>Legal Clarity</u> Relationship to gov't. Formal Sponsored Recognized Status of Decisions Safe Harbor Reg.-Neg. Sponsored Recognized Preferred Advisory Informal Bully Pulpit- Nudge Procurement R&D International</p>	<p>Sources: Mark Cooper, "The Quarter-life Crisis Based on: Hans Bredow Institute, Final Report: Study on Co-Regulation Measures in the Media Sector, University of Hamburg, June 2006 http://ec.europa.eu/avpolicy/docs/library/studies/coregul/final_rep_en.pdf, at 118-123, Bert-Japp Koops, et al., Starting Point for ICT Regulation, B-J Koops, et. al (Eds.), Starting Points for ICT Regulation, ITER, The Hague, 2006 http://rechten.uvt.nl/prints/upload/200662790842312037944.pdf, at 133-140. Bart Cammaerts, "Civil Society participation in multistakeholder processes: in between realism and utopia, <i>LSE Research Online</i>, 2009</p>

The participants are the three sets of non-governmental interests. The activities are rule-writing and enforcement. Participatory governance is supported by the state in the delegation

decision. Although it is an attractive approach to increasing participation and achieving wider support for regulation and good behavior, there are many factors that determine how successful participatory governance will be. The key factors are shown in the table below the graph in Figure 5.2. Multi-stakeholder processes have worked in key areas of the Internet, but there were unique conditions that made this success possible.¹⁰¹

Moreover, since guardrails and guidance must be imposed by regulation, the state must be closely involved in establishing and monitoring the process. Ultimately, if the participatory process produces a consensus rule, that rule can be given great weight in a regulatory process that adopts it as policy. But there must be a regulatory process to ensure that the rule is binding (i.e. participatory governance is not voluntary self-regulation). With strict timelines, adoption and enforcement from the sponsoring agency, this could become the main approach to rulemaking.

6. “DOS AND DON’TS:” BUILDING GUARDRAILS AND GUIDANCE FOR DIGITAL COMMUNICATIONS

“DO” RECOGNIZE THE IMPORTANCE OF DUAL JURISDICTION

Policy’s commitment to competition and consumer protection created a strong commitment to dual jurisdiction. Economic regulation and antitrust were focal points of pragmatic, progressive capitalist policy activity in the late 19th century as large corporate entities, above all the railroads, became more important and ultimately dominant in the economy. Regulators applied dual jurisdiction very early in the development of telecommunications, as shown in Table 6.1. The telecommunications sector is a useful example here because it is a critical part of the communications sector and a strong complement for big data platforms.

TABLE 6.1: THE LONG HISTORY OF DUAL OVERSIGHT IN THE COMMUNICATIONS SECTOR

Year	Regulation	Antitrust
1887	Interstate Commerce Act	
1890		Sherman Act
1910	Mann-Elkins Act	
1913		ATT/DOJ Consent Decree
1914		FTC Act
1927	Radio Act	
1934	FCC Act	
1945		Associated Press
1949		Final Judgment
1956		Modification of Final Judgment
1968	Carter Phone and Computer Inquiries	
1969	Red Lion	
1984	Spread spectrum decision leading to Cable deregulation	Break-up of ATT
1987		Triennial reviews begin in the Antitrust court
1992	Cable Reregulation (Consumer Protection Act)	
1996	Telecom Act of 1996	
2003	Cable Modem Order	
2005	Madison River	
2005	Wireline Broadband Order	
2010	Open Internet Neutrality Order Comcast/NBC Merger Conditions	Ticket Master Comcast-NBC Consent Decree
2011	ATT/T-Mobile merger blocked	
2013	Data Roaming Order	e-Book Price Fixing
2014	Open Internet Order remanded Universal Service Reform Upheld	
2015	Title II jurisdiction over Broadband Under the Communications Act of 1934	
2017	Administrative Repeal of the '34 Act	

In a sense, the communications networks were the chokepoints that policy successfully opened to create the environment that allowed the Internet to flourish. The big data platforms have become the new chokepoints in the digital communications sector.

These jurisdictions frequently interact. Antitrust-driven developments are later incorporated into economic regulation. Regulation's failure to prevent abuse can give rise to antitrust action. Congress can give greater authority to either antitrust or regulatory development through legislation, which tends to occur after practice has stabilized. In merger review, the FCC has a broader charge than antitrust. The very concept of the public interest was despised by free market fundamentalists, like Michael Powell, the first chairman of the FCC under George W. Bush,¹⁰² but the flexibility of the concept has proven durable. It is not an exaggeration to say that the success of the modern communications sector rested on this dual oversight of the industry, which strove to keep it as competitive as possible and pressed it toward progressive goals, given the available technologies. This important role of balanced, dual oversight continued into the digital era, until the FCC sought to administratively repeal the Communications Act and the antitrust authorities continued lax oversight.

“DON'T” RELY ON THE FEDERAL TRADE COMMISSION

In WP#2 we explained why the Federal Trade Commission is the wrong agency to rely on for oversight over the immense market power of big broadband networks. In this paper we have shown that the same conclusion applies to big data platforms. The FTC's failure in privacy is particularly telling in this regard, since the use and abuse of data is central to the market power of the big data platforms. Table 6.2 repeats the market failures in the privacy space and the FTC's failure to address the problem. Despite looking at the issue for over a decade, the FTC has not seen fit to regulate any of these privacy problems.

Behavioral targeting may be particularly harmful to vulnerable populations, including youth and the elderly. Although the survey data showed that few consumers of any age comprehend the trade-offs involved with behavioral targeting, youth and the elderly are at special risk of not understanding the consequences of being tracked online. The FTC's Self-Regulatory Principles for Online Behavioral Advertising and voluntary industry self-regulatory programs have proven inadequate to ensure that consumers have effective control if they do not want their online behavior to be tracked for purposes beyond fulfilling the transactions they make.

The Stigler antitrust group claims a single focal point on competition and repeatedly notes that there are other groups working on “non-economic” issues like privacy. However, it is clear that a major component of the effort to restore competition among big data platforms involves addressing the collection, use, and abuse of data on individuals and groups. A simple observation reconciles the two different aspects of the analysis. Without a vigorous and effective set of institutions to protect privacy, the performance of the big tech platforms will continue to disappoint. Privacy advocates would go farther in limiting data flows.

Data portability, which is a classic antitrust policy solution to restore the potential for competition, embodies the tension between privacy concerns and competition. Data should be portable, but without an effective set of institutions to constrain producer collection and use of data, not to mention consumer control or sovereignty over that data, there is no reason to believe data portability will improve the competitive situation. Without those institutions in place, data portability will make the negative impact on privacy worse.

TABLE 6.2: MARKET IMPERFECTIONS LEADING TO THE FAILURE OF PRIVACY PROTECTION IN CYBERSPACE

Societal: Situations where important values are not well reflected in market transactions

Externalities: Trust is undermined¹

Non-economic Values: Concern,² Fear of Being Monitored,³ and Exposed,⁴ Reputational Harm,⁵ Unwanted Intrusion,⁶ Physical Security,⁷

Structural: Conditions that result in inefficient outcomes

Insufficient Competition: Incomprehensible Privacy Policies,⁸ Inadequate Choice⁹

Economic Harm: Bad Purchase Decisions,¹⁰ Security Breaches,¹¹ Identity theft¹²

Endemic: Tendencies of economic relations that undermine key market functions

Perverse Incentives: Incomprehensible Privacy Policies,¹³ Slow to React¹⁴

Asymmetric Information: Speed of Technological Change¹⁵ v. Slowness to React,¹⁶ Difficulty of Detecting Harm,¹⁷ Invisibility of Transactions and 3rd Party Relations¹⁸

Transaction costs: Frictions that impose costs and constrain exchange

Search and Information Costs: Lack of Simple and Clear Information,¹⁹ Cost of Interrupting Transactions to Find, Evaluate and Act to Protect Privacy,²⁰ Invisibility of Transactions and 3rd party Relations to Consumers²¹

Bargaining Costs: Lack of Alternatives,²² Inability to Define²³

Policing and Enforcement Costs: Difficulty of Detecting Harm,²⁴ Complexity, Level and Amount of Information Gathered,²⁵ Rapid Pace of Technological Change,²⁶ Third Party Relationships²⁷

Behavioral: Psychological and other human traits that bound “maximizing” actions

Motivation: Concerns,²⁸ Fear of Being Monitored²⁹

Perception: Reputational Harm³⁰

Calculation: Failure to Understand,³¹ Failure to Appreciate Risk,³² Lack of Awareness³³

Execution: Struggle to Keep Pace,³⁴ Do Not Read³⁵

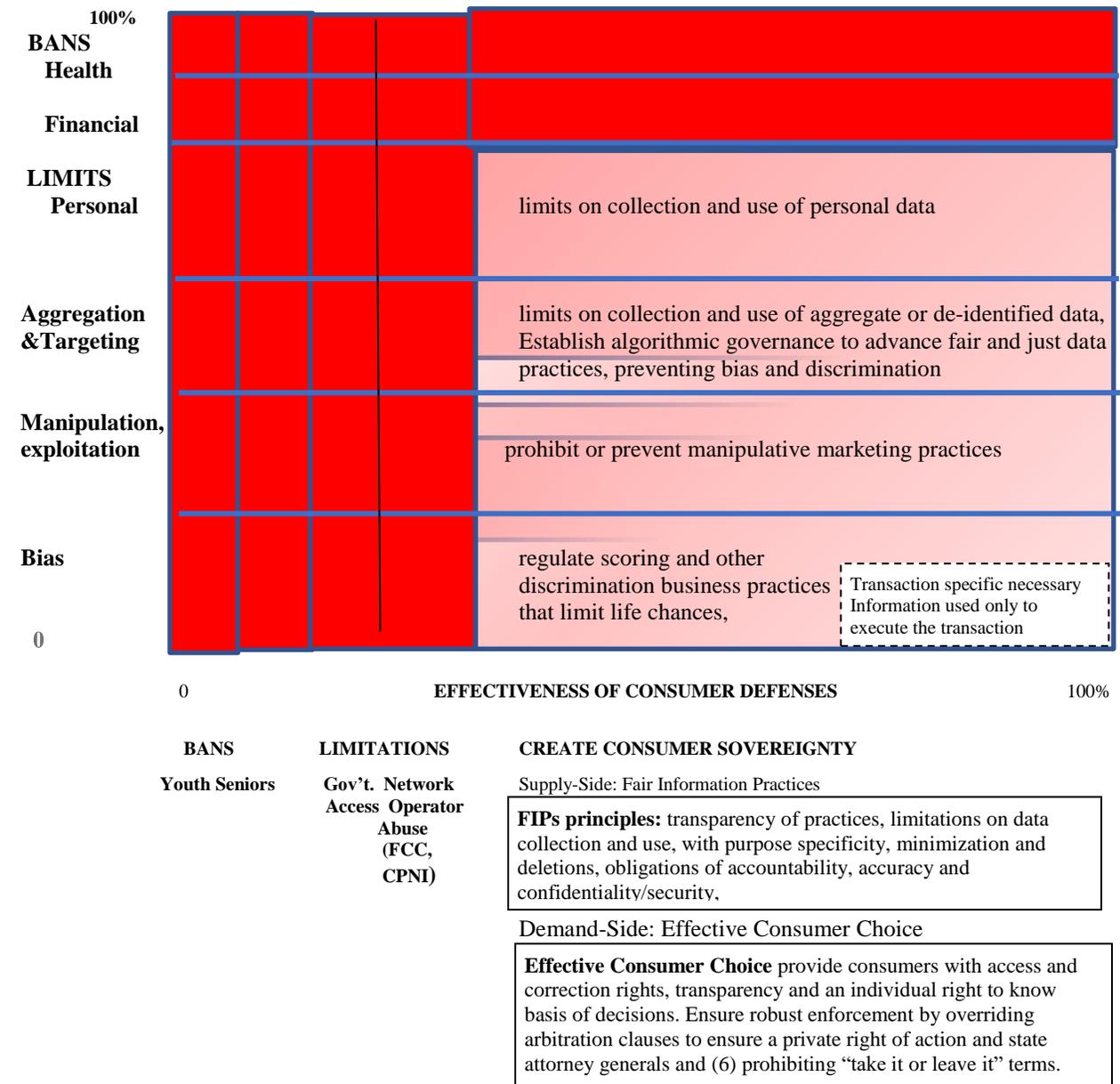
Sources and Notes: U.S. Department of Commerce, *Commercial Data and Innovation in the Internet Economy: A Dynamic Policy Framework*, December 2010; Federal Trade Commission, *Protecting Consumer Privacy in an Era of Rapid Change: A Proposed Framework for Businesses and Policymakers*, December 2010.

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|---|---|---------------------|
| 1. DOC, pp. vi, 1, 13, 15. | 17. FTC, p. 33. | 32. FTC, p. ii. |
| 2. FTC, pp. iii, 28-30,
DOC, pp. 3, 16-17. | 18. FTC, pp. I, iii, 26. | 33. FTC, p. ii. |
| 3. FTC, p. iii. | 19. DOC, p. vii | 4. FTC, pp. ii, 26. |
| 4. FTC, p. 20. | 20. FTC, p. 27 | 35. FTC, p. iii. |
| 5. FTC, p. iii. | 21. FTC, pp. iii, 26. | |
| 6. FTC, p. iii. | 22. FTC, p. iii. | |
| 7. FTC, p. iii. | 23. FTC, p. iv, 35, | |
| 8. FTC, pp. iii, 26. | 24. FTC, p. 33. | |
| 9. FTC, p. 19. | 25. FTC, pp. ii, DOC, p. 18-19. | |
| 10. DOC, p.1. | 26. FTC, pp. ii, iii. | |
| 11. DOC, p. iii. | 27. FTC, pp. ii, DOC, p. 16. | |
| 12. DOC, p. 1, | 28. FTC, pp. iii, 28-30, DOC,
pp. 3, 16- | |
| 13. FTC, pp. iii, 26. | 29. FTC, p. iii. | |
| 14. FTC, p. iii, DOC, p. 1. | 30. FTC, p. iii. | |
| 15. FTC, p. 36. | 31. FTC, p. ii, 26, DOC p. 4. | |
| 16. FTC, p. iii. | | |

“DO” BUILD SYSTEMS THAT AFFORD EXPERTS THE FLEXIBILITY TO RECOGNIZE AND BALANCE THE COMPLEXITY OF BENEFITS AND COSTS

Figure 6.1 defines the issues in the privacy space, which has been under review for two decades. On the x-axis is the ability of consumers to defend themselves from the abusive collection and use of data. On the y-axis is the sensitivity of information.

FIGURE 6.1: CONSUMER/PRIVACY ADVOCATE ISSUES FOR A DATA PROTECTION AGENCY
SENSITIVITY OF INFORMATION



Beginning on the x-axis, certain groups were historically seen as unable to defend themselves, like children, youth, and the elderly. Recent events suggest that average citizens

have been unable to defend themselves from government surveillance. We show these are red areas where prohibitions have been—or need to be—strong.

On the y-axis are types of information that have traditionally been deemed so sensitive as to require special rules – healthcare and financial information, for example. These rules may have to be updated. Again, we show these are red areas where protections or prohibitions must be strong.

The much larger task is to develop rules to deal with other types of information. People should be allowed to choose how information is collected and used, but the mechanisms for choice must be highly developed and effective. For the vast majority of consumers that is not true of the current institutions. It remains to be seen whether it is possible to develop these institutions. The graph identifies real transparency on the supply-side – with the shorthand of Fair Information Practice Principles (FIPPS) are not enough. The demand side requires mechanisms for effective consumer action. Both FIPPS and effective choice mechanism must be ongoing, with consumers empowered to decide before information is gathered and to easily change their choice as they see fit.

The graph shows a tentative safe harbor for information that is transaction specific (used only to complete a transaction and for no other purpose). It would be convenient if this space was easy to define, as it was in the physical age, but in the digital age it is not. It is a space that is needed but will be contested.

The two principles embodied in this approach are general. First, we have the principle of setting strict bans in some dimensions, recognizing the impossibility of effectively policing the harmful behaviors that are highly likely to develop under the market’s perverse incentives. Second, we have the establishment of rules to define practices that may be beneficial, as long as they are not abused in an anticompetitive or anti-consumer manner.

Figure 6.2 outlines the general the privacy approach to the broader goals of promoting competition and protecting consumers. We use two axes drawn from the Structure-Conduct-Performance paradigm. On the x-axis is conduct by consumers and producers that facilitates the abuse of market power. On the y-axis are basic conditions and market structures that are conducive to the abuse of market power. The goal is to establish policies that limit the tendency toward abuse. There are red zones, where simple bans may be needed and then a large area where rules requiring specific behaviors should be adopted. We have not filled these in because the goals, where to draw the lines and what the content of the specific rules should be will vary from sector to sector.

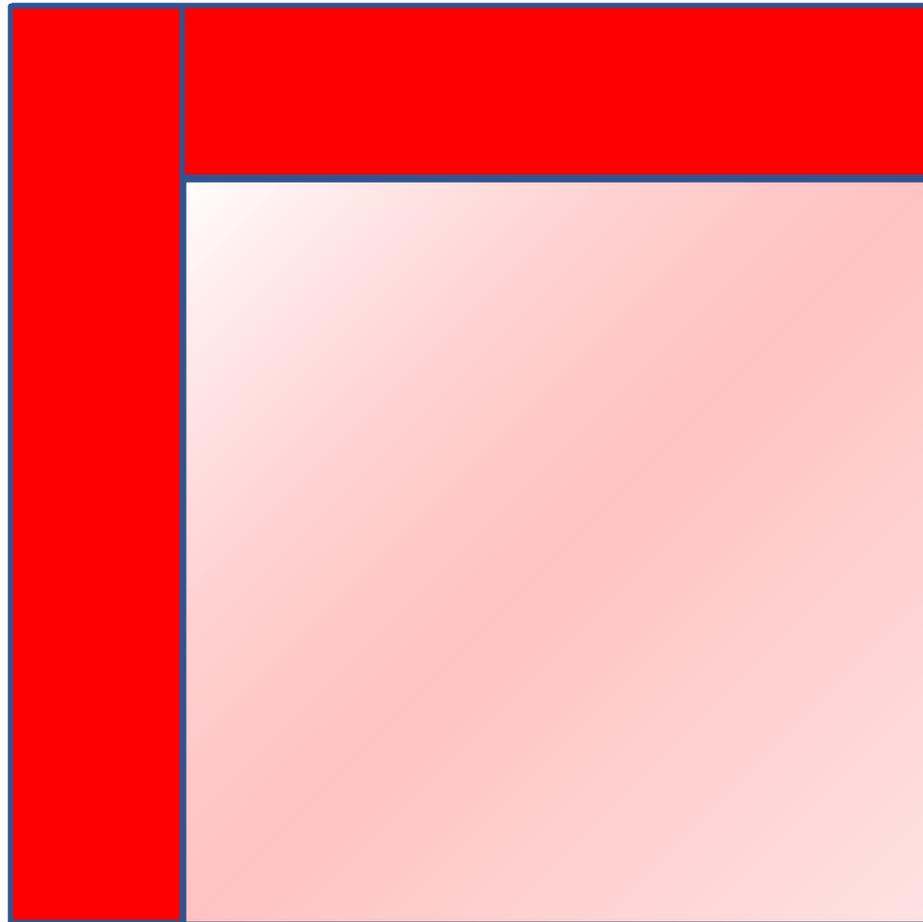
The working papers provide three examples in the communications sector, although the broader discussion of pragmatic progressive capitalism (WP#1) demonstrates that this flexible approach was applied to important economic sectors, such as finance and labor, and social issues, such as education and the environment.

In addition to the privacy and data example discussed above, WP#2 dealt with the case of network neutrality, which argued for a light-handed Title II approach to nondiscriminatory access, as an evolution of common carrier obligations, which were themselves a pragmatic

response to the challenge that the 2nd Industrial Revolution posed to a long-standing commitment to nondiscrimination.

FIGURE 6.2: A BROAD APPROACH TO CHOOSING BANS VERSUS REGULATION FOR GUARDRAILS AND GUIDANCE TO DIRECT MARKET BEHAVIOR

Market Structure/
Basic Conditions
Including
New digital &
Lax traditionnel



Conduct that facilitates abuse of market power in the digital communications sector
Including consumer and producer behaviors

The approach taken to control the abuse of market power at the Business Data Services chokepoint in the digital communications sector is more akin to traditional common carrier, with specific anticompetitive practices banned and an ongoing effort to establish a formula for just and reasonable rates.¹⁰³

We view these as examples of a pragmatic approach that is not “outdated,” as they are frequently dysphemized, but “updated” applications of enduring principles. Congress has, correctly, been hesitant to draw the hard lines and, certainly in the case of the communications regulator, it has allowed a great deal of flexibility. As a result, practice has evolved along a common-law-like path that reflects the technologies being used. Size limitations, structural separations, banning specific practices, and the extent of regulation, are all important policy questions that have gained currency and can be addressed in legislation by giving them weight

and prominence as rulemaking considerations, without drawing lines and making them mandatory.

For example, traffic blocking, slowing and paid prioritization are seen as anticompetitive practices that are widely criticized. Free market fundamentalists believe these practices can be controlled by statements of principles backed up by self-regulation, transparency and weak oversight by the FTC. History suggests this will not be effective and it will not achieve the same effect as an explicit rule that bans such practices. Similarly, antitrust had specific thresholds for concern about market power abuse in highly concentrated markets, (30% for the abuse of buyer market power or monopsony, 65% for seller market power, the equivalent of 4 to 6 firms in all markets, with concerns about vertical integration). The problem was not in the thresholds or identification of issues, it was in the failure of antitrust authorities to enforce these thresholds and the failure of the courts to embrace them.

The solution is for Congress to make clearer statements of goals. In the past most agency portfolios did not include promoting competition and innovation, which should be added to the more common goals for consumer protection and universal service. Specific findings about what contributes to or frustrates the achievement of these goals in legislation could constrain agency discretion. Bans on specific practices and hard thresholds may be necessary, but ultimately agency expertise, based on analysis of real-world performance, should be allowed to operate and arrive at these conclusions.

“DON’T” THINK SIMPLISTIC EXTREMES ARE THE SOLUTION; UTILITY-LIKE REGULATION AND ATOMISTIC COMPETITION SHOULD BE OPTIONS FOR EXPERTS, NOT MANDATES

A stiff dose of reinvigorated competition is certainly needed, as is regulatory oversight that reflects fundamental economic, social, and political values. The following brief discussion focuses on economics as derived from the Brandeis-Stiglitz analysis developed herein. However, as analysts and advocates have rushed to take progressive positions within the contemporary policy debate with very broad recommendations, it is important to show why a complex, balanced position seems superior at a general level. The question is: how should stricter antitrust and new regulation be imposed?

In the position of central planners, we find a call for utility-like regulation of all big digital firms. This view has an overly optimistic evaluation of utility regulation and little regard for efficiency given the nature of the technology to be regulated. We can make this case with observations from both history and contemporary policy. Brandeis, Stiglitz, and the New Deal had several distinct regulatory models for different sectors depending on the nature of the function performed by the sector. Here, I offer six observations that connect with the debate over utility-like regulation of big data platforms.

First, in addition to the utility model, which was actually quite limited, there was a model for the financial sector and other sectors that was less regulatory than utility-like regulation. In addition to finance, this was applied to public safety, labor, and other sectors.

Second, interestingly, when the Obama administration decided that it needed the authority under the Communications Act of 1934 to ensure basic values in the age of digital

transmission over communications networks, the administration invoked Title II, where utility-like regulation resides. However, it eschewed more than four-fifths of the sections of that title, including the most classical utility regulation – rate setting, tariffing, and pre-approval of offerings. In other words, given the battle over network neutrality, it sought to make the smallest claim to authority possible. Better statements of goals and the weighting of factors to be considered might help to ensure a better outcome and limit the agency’s discretion to achieve outcomes that are inconsistent with the law, contemporary economic understanding of the market, and the facts before the agency.

Third, over the course of eight years, the FCC, sustained by the courts, developed and implemented a hybrid model that was very much oriented toward competition and market flexibility (such as wireless interconnect, i.e., roaming, universal service). The goal was to establish a strong principle of nondiscrimination while preserving the flexibility to innovate (i.e., without pre-approval or tariffing of service). This complex approach is more challenging, but the benefits of preserving flexibility and innovation are worth the trouble.

Fourth, historically, the biggest failures of regulation have involved rigidities of utility-like regulation that should have been avoided. Although these are rare, they are real, and they are the mistakes to which market fundamentalists point in their attacks on regulation. The call for utility-like regulation invites this market fundamentalist subterfuge unless one explains how these big mistakes will be avoided.

Fifth, utility-like regulation in communications (Title II standards) are imprecise even after three-quarters of a century of regulatory practice and case law. Congress pragmatically used loose language to deal with challenges in the regulation of a dynamic sector like telecommunications. The underlying technology has always been more dynamic than the law, and this has become overwhelmingly apparent in the digital era. Drawing bright lines before the fact will provide greater certainty once the rulemaking and litigation are done, but therein lies the rub. Bright lines can easily undermine innovation, and the Stiglitz critique of even well-intentioned market socialist administrators deserves careful consideration.

Finally, the general approach to utility-common carrier regulation is challenging from the point of view of the Internet innovation system. The Brandeis-Stiglitz emphasis on oversight to make markets work better has special force in the digital space. Utility regulation is about homogeneity and stability. It thrives in static environments and, inevitably, reinforces the stasis of the environment because it operates best by creating silos with categories of producers and consumers, definitions of acceptable behavior, and permissions required to act. These service categories and “dos & don’ts” are hashed out in administrative proceedings and court cases that can stretch out for years or even decades. The cost of delay can be ignored because the sector is so static.

Digital communications networks are the antithesis of common carrier telecommunications networks. They thrive on diversity and prosper with dynamic change. The essence of utility regulation is incompatible with the experimentation, innovation, and entrepreneurship that have been the hallmark of the digital economy. In a dynamic environment, the costs of delay and the value of lost services – innovation that is never brought to market – are high. Greenstein’s description of how experimentation works makes this point clear, “because

nothing precluded this unanticipated use from growing, grow it did.” In the utility-common carrier approach, everything is precluded until it is permitted, and problems immediately end up at the Commission for adjudication. Brutally simple bright lines that opened the way to entrepreneurial behavior worked in the past, unlike detailed regulation of behavior.

At the other extreme are those who argue that atomistic competition enforced by reconceived and aggressive antitrust is needed. This would break up everything with little regard for efficiency, under the presumption that efficiency is the culprit for many recent abuses. Historically, market fundamentalists argued the opposite of the neo-Brandeisian atomistic antitrusters (i.e., that the presumption should be in favor of size, not against it).

The analysis of antitrust in the New Deal raises several important points.

First, while Brandeis might have been more comfortable with atomistic antitrusters’ position, he was unwilling to abandon efficiency.

Second, Thurman Arnold argued lax enforcement should not be used as an excuse for abandoning the fundamental approach to antitrust. The general consensus is that he accomplished his goal. The pragmatic compromise he advocated proved to be effective until it was explicitly abandoned.

Third, FDR’s claim that the Supreme Court had shackled him with a “horse and buggy” economy was too extreme. Here, too, the pragmatic compromise proved to be effective until it was explicitly abandoned. The later New Deal that Brandeis supported provides several examples in specific sectors.

Fourth, bans should be restricted to things that simply cannot be regulated well. In finance the New Deal relied on regulation, but also chose to ban the commingling of banking and investment (Glass-Steagall) because the resulting conflicts of interest and perverse incentives were too strong to regulate. The Public Utility Holding Act banned interstate utilities unless the utility could prove efficiency gains from direct interstate connection through the grid. For over half a century these laws did their job remarkably well, and every time a hole was poked in them, negative consequences followed, to say the least (e.g., the financial meltdown, PURPA).

Fifth, with a great deal of ambiguity in the New Deal and flexibility in its implementation, the FCC seems to have done a good job of promoting progress and universal service. It was only after the breakup of AT&T, the effort to make subsidies explicit, and, ultimately, the ill-considered decision to deregulate prematurely that neoliberal ideology was able to undermine the public interest.

THE STIGLER RECOMMENDATIONS

With one important exception, the introduction to the Stigler report is similar to the analysis in this paper.

It begins with a summary of key findings on the structure and conduct of big data platforms, emphasizing that consumers pay for the pieces of the bundle that may appear to have a zero price. They pay indirectly in cash and in kind. More importantly, they lose a great deal

from the reduced competition that bundling, data exploitation and increased switching costs cause. All of the negative effects of market power (resulting from higher concentration and more vertical integration) are identified in the Stigler introduction: higher (though indirect) costs, lower quality, less innovation. There is no chance that the market will self-correct due to the structural conditions in the sector and the powerful incentives that platforms have to defend, increase and exploit their market power. The economic problem becomes a much larger social problem because of externalities, like loss of privacy, reduced production of news and distortion of political discourse. “This concentration of economic, media, data, and political power is potentially dangerous for our democracies.”¹⁰⁴

The Stigler report’s recommendations include interoperability, aggressive antitrust, transparency, and an independent regulator, designed to avoid capture. There is a sensitivity to the unique conditions that may “normally” be benign market behaviors but become anticompetitive and anti-consumer in the hand of dominant, big data platforms.

Exclusive dealings and loyalty discounts, which are common in most markets, deserve much closer antitrust scrutiny in DP [digital platform] markets because these markets have a natural tendency to monopolization: Many practices that are benign in other markets could easily become the straw that breaks the camel’s back in DP markets.¹⁰⁵

We are not convinced that exclusive dealing, whether or not it is common, is very benign. It has been given an undeserved free pass by free market fundamentalism. We do agree that they are a particular concern in the presence of big data platforms.

On the other hand, the proposal aims to encourage experimentation and maintain states’ ability to try other approaches. These are two characteristics that were central to the Brandeis Protocol. Careful, timely analysis of real-world data is the cornerstone of the effort to prevent abuse.

The proposed remedy also includes a novel approach to making the rules more responsive to consumer needs. This process begins to look a lot like the participatory governance described above. The intense study the Stigler report advocates should certainly be part of the participatory governance process.

The adoption of “consumertarian default rules”; that is, default rules on data protection that follow the preferences of a majority of US consumers. Such defaults should be based on “the results of well-designed, scientifically rigorous studies that elicit consumer preferences, opt-out costs, and knowledge of the rules and alternatives, as well as ignorance and biases of such rules’ potential costs and benefits.” These default rules should also be revisited periodically to account for updates in consumers’ preferences due to technological changes or better education.¹⁰⁶

The proposal involves a great deal of differentiation. There are different levels of protection for different types of data, different approaches to writing rules, and different paths for firms to come in compliance with rules.

An interesting alternative may be for some authorities to establish a safe harbor for companies that pre-commit in advance to the result of product-specific studies, which must be periodically rerun. If a company fails to qualify for the safe harbor, it is exposed to additional legal liability in litigation if a plaintiff can prove that the default fails the “consumertarian” standard. Finally, federal regulation should be a floor—states should be free to establish different, more protective requirements as they deem appropriate.¹⁰⁷

Finally, if all else fails the authors argue that society should consider “the imposition of an additional fiduciary duty on the boards of monopolies: a fiduciary duty towards society.” This is essentially the common law duty of care.¹⁰⁸

All of these measures are pragmatic and progressive, intended to make competition, markets and capitalism work better. The one area where we disagree strongly is the suggestion that the FTC can take on much of this regulatory oversight. The institutional nature and past behavior of the FTC discussed above indicates strongly that it is not up to the job. We need a new regulatory agency designed to deal with big data platforms.

OTHER VIEWS OF THE CHALLENGES AND RESPONSES TO BIG DATA PLATFORMS SEEN THROUGH THE BRANDEIS PROTOCOL FOR PRAGMATIC PROGRESSIVE CAPITALISM

The discussion above relies heavily on an analysis prepared by a broad range of American analysts examining the challenge of the transformation brought on by digital technology. In each of the working papers we have made reference to broader (particularly European) points of view. Table 6.3 summarizes three such studies by locating these research efforts in the broader Brandeis Protocol. In Table 6.3 I include only those elements of the Brandeis Protocol that are mentioned by one of the three sources evaluated. With about two-third of the element of the Brandeis Protocol for pragmatic progressive capitalism discussed in Working Paper #1, Table 6.3 shows that the analysis could have launched from any one of a number of similar studies.

Figure 6.3 makes the point that these observations are shared widely. It offers a view of the lengthy analysis by The Competition and Market Authority (CMA) in the UK. It has provided a convincing analysis concluding that, while antitrust is part of the solution, it is far from sufficient. The CMA analysis presents, what I believe is a detailed, micro-level structure-conduct-performance (SCP) framework. The left-hand column of the figure reflects the four main elements of the SCP framework – basic conditions, structure, conduct and performance.

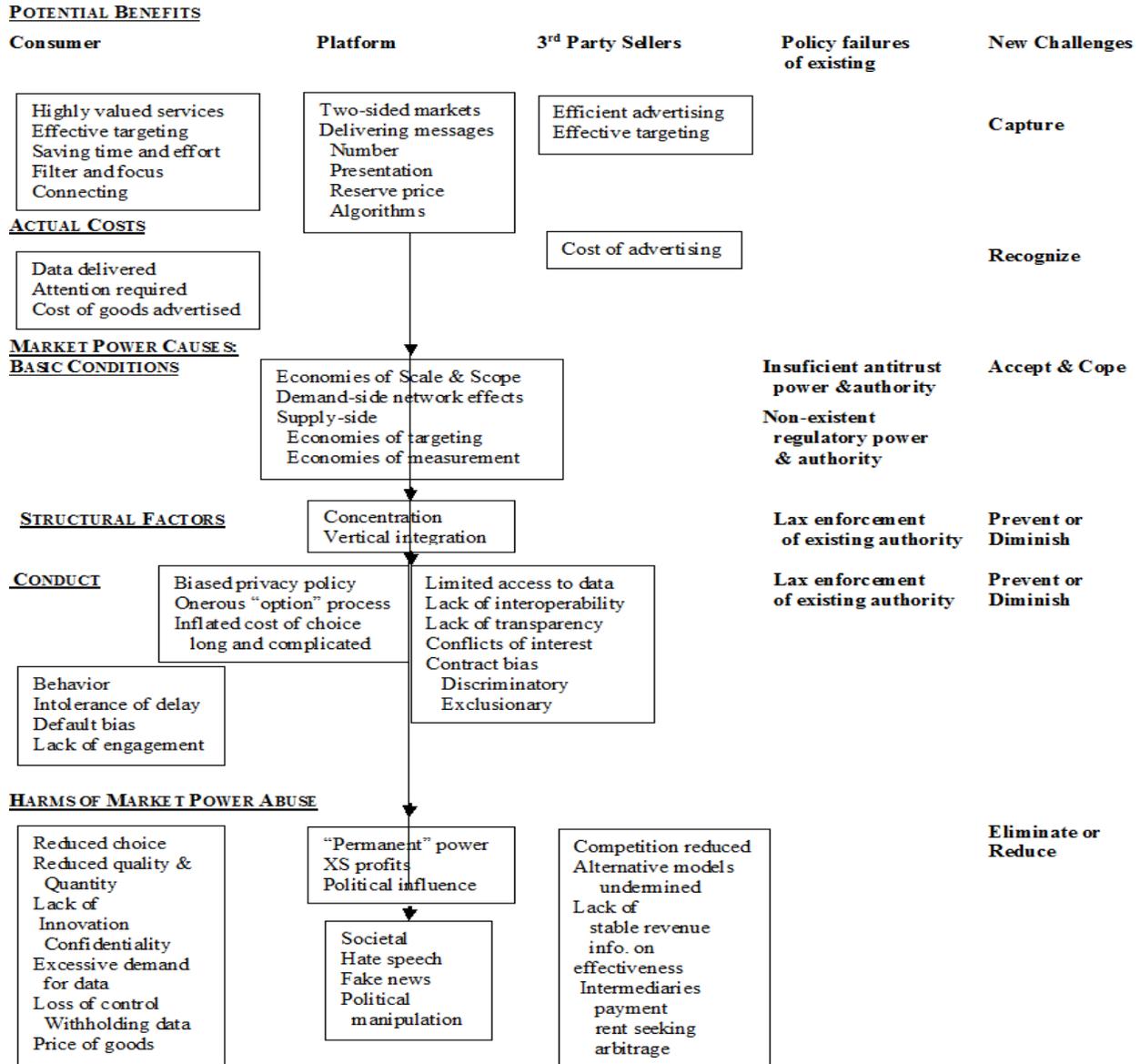
The next four columns bring the analysis down to the factors that operate in the digital communications sector. The characteristics of platforms and their impact on third-party sellers are identified. Then the failures of current oversight are noted, followed by the goals of new policy. The key point is that there are benefits, costs, and basic conditions that operate in the digital communications sector, which must be accepted and recognized if policy is to ensure that the benefits are captured. The basic conditions in this sector pose a severe challenge to competition and markets. There are, however, a host of structure and conduct factors that have made things much worse and led to extensive abuse. These factors can be prevented or diminished to reduce or eliminate the associated abuses.

TABLE 6.3: BIG TECH POLICY PROPOSAL VIEWED THROUGH THE BRANDEIS PROTOCOL

Economic Fundamentals					Political Fundamentals						
	A	B	C		A	B	C		A	B	C
1	*	*	*	49	*	*	*	Democracy & competition	*	*	*
2	*	*	*	50	*	*		Civil Rights (Gender)	*	*	
3	*	*	*	51	*	*		Education	*	*	
4	*	*	*	52	*	*	*	Participation	*	*	*
5	*	*	*	53	*	*	*	Responsibility of Citizens	*	*	*
6		*	*	54	*	*	*	Unaccountable power	*	*	*
7	*	*	*	55	*	*	*	Speech	*	*	*
8		*	*	56	*	*	*	Privacy	*	*	*
9	*	*	*	57	*	*	*	Law	*	*	*
10	*	*	*	58	*	*	*	the public interest, pub. Private Law	*	*	*
11	*	*	*	59	*	*	*	Lagging Law (common)	*	*	*
12				60	*	*	*	due process	*	*	*
13	*	*	*	61				Lawyers (Professionals)			
14	*	*		62	*	*		Obligations of a Professions	*	*	
15		*		64	*	*		Failure in Capture	*	*	
16		*	*	66	*	*	*	Social Science	*	*	*
17		*	*	68	*	*	*	Lagging Law	*	*	*
18		*	*	69	*	*	*	Pragmatic Process	*	*	*
19	*	*	*	70	*	*	*	Law & Reality	*	*	*
20	*			71				Facts (Brandeis Brief)		*	
21	*	*	*	72				Flexibility (evolutionary)		*	
				73	*	*	*	Experimentation/Federalism	*	*	*
28				74				Restraint & Responsibility		*	*
31		*						Regulated Competition			
32				77	*	*	*	Institution building	*	*	*
40		*		78	*	*	*	Antitrust	*	*	*
45	x	x	x	79				Sherman Act		*	
46	x	x	x	80	*	*	*	new agencies (FTC)	*	*	*
47	x			81	*	*	*	Regulation	*	*	*
48	x	x		82	*	*	*	Authority, power & tools	*	*	*
				83				Uniqueness of war		*	
				84				Police power		*	
				87				Interstate Commerce		*	
				88	*	*	*	Economic	*	*	*
				89	*	*	*	New & Expanding (Fed. Reserve, ICC)	*	*	*
				95	*	*	*	Health, safety	*	*	*
				96				Investor Protection		*	*
				97	*	*	*	Public Provision	*	*	*

Sources A: *Stigler Committee on Digital Platforms*, September 2019., B: Wheeler, Thomas, Phil Verveer, and Gene Kimmelman, 2020, *New Digital Realities, New Oversight Solutions*, Shorenstein Center, August 20, Harvard Shorenstein Center, C: UK Competition Authority, *Online Platforms and Digital Advertising Interim Report*, 2019.

**FIGURE 6.3: UK COMPETITION AND MARKETS ADMINISTRATION
VIEWED THROUGH THE STRUCTURE, CONDUCT AND PERFORMANCE PARADIGM**



Source: United Kingdom, Competition and Markets Authority: *Online Platforms and Digital Advertising: Interim Report*, 2019.

APPENDIX: EFFORTS TO CONTROL ABUSE OF DIGITAL CHOKEPOINT MARKET POWER, THE EU COMPETITION TOOL AND THE MICROSOFT CASE

OVERVIEW OF APPROACH TO ANTITRUST AND REGULATORY OVERSIGHT

This section elaborates on the analysis of the challenges and responses to Big Data Platforms by offering details on two real world attempts to deal with the complex problem. First, we provide our answers to the consultation undertaken by the European Commission in its effort to develop a Competitive Tool for the national competition authorities. The Commission, having done the empirical analysis necessary to demonstrate that there was a serious problem, is investigating practical approaches. Second, we present an analysis from twenty years earlier in which we described the outcome of the Microsoft case. Both the EU and the U.S. found Microsoft guilty of violating the antitrust laws. At the trial level, both found it guilty of illegal tying, although the U.S. reversed that decision on appeal. In the Big Data Platform context, one of the important steps for the U.S. is to identify how tying has created market power and its abuse.

Once we recognize that economies of scale and scope on the supply and demand sides of the market create efficiencies, we must accept the proposition that there will be small numbers of firms supplying the functionalities that consumers want because their costs and prices will be lower. This is an infrastructure problem that has existed since the birth of capitalism. The answer has always been to design a structure that provides the shared infrastructure and makes it available to all users on fair, reasonable, and nondiscriminatory (FRAND) terms. There have been a variety of solutions, from regulated, private, franchise provision (common carriers, turnpike trusts) to state ownership. Unregulated private provision has been a disaster for well over a century because the economic interests of the private actors conflict with the public good. The question is not whether to regulate the behavior, but how.

Regulated competition is the answer, where the goal is to promote competition in decentralized capitalist markets along two dimensions—the core infrastructure market and markets that rely on such infrastructure—both of which require constraints on market power, which is inefficient. Inefficiency can be measured by prices and profits above costs, diseconomies of scale and scope, or artificial barriers to entry. Thus, along the first dimension, because we do not know the precise limits of the economies of scale and scope, we hold out the hope that there can be competition for the core infrastructure services. Along the second dimension, we are much more confident that there can be competition for the complements that ride on the infrastructure. Anticompetitive behavior that limits potential competition along either dimension must be regulated and eliminated or diminished.

Sometimes, we break the infrastructure into pieces, either horizontally (considering economies of scale) or vertically (considering economies of scope). However, that is not always the best answer. Sometimes it is better to ensure FRAND access to the infrastructure, which, above all, addresses the problem for the competition from complements, but which can also lower the barriers to entry for head-to-head competition for the provision of infrastructure (i.e.,

competitors combine FRAND access to parts of the infrastructure with other parts that they self-supply).

The answer is complicated but so too is the digital economy. Anticompetitive conduct is generally easy to define but may be difficult to prove. Clearly identifiable complements that should not have been integrated with the infrastructure may be easy to see but identifying whether the right solution is divestiture or structural separation is more challenging. Encouraging the entry of competitive supply of complements is always the right thing to do, but response to the removal of entry barriers may be too slow without action against vertical integration.

The high degree of concentration among big data platforms is reinforced by three other factors that create a “tight oligopoly on steroids,” which the Commission highlights in its discussion of tacit collusion. High concentration is reinforced by multi-market contact, technological specialization, product segmentation, and geographic separation (for Big Broadband Networks) or must-have bundles (for Big Data Platforms). As shown in the following table, our working papers demonstrate that the tight oligopoly on steroids afflicts both the communications networks (Big Broadband Networks) and the information system (Big Data Platforms). The tight oligopoly on steroids results in the classic harms of lack of competition: denial of consumer choice, insufficient innovation, higher prices, and lower quality.

**TABLE 7.1: THE TIGHT OLIGOPOLY ON STEROIDS:
BIG BROADBAND NETWORKS AND BIG DATA PLATFORMS**

Tight Oligopoly on Steroids Characteristic	Big Broadband Networks	Big Data Platforms
High concentration & multi-market contact	Franchise, economies of scale Telco Basic Data Service (BDS), Wireless Cable Multichannel Video Programming Distributor (MVPD) , Broadband Internet Access Service (BIAS)	Economies of scale & scope, zero marginal cost, winner-take-most Google Search, Facebook connectivity, Amazon distribution
Technological Specialization	Point-to-point (landline) Cell Networks Star Video	Google algorithms and network value, Facebook network value, Amazon distribution efficiency
Product Segmentation	Voice, wireless Video, BIAS	Search, Social media, distribution
Unique Product Traits	Geographic Separation Local network Franchise origin	All: “must have” content protected by lock-in supply-side foreclosure and demand-side bundling and behavioral manipulation

Gatekeeper control of chokepoints, reinforced by steroids, gives the small number of firms that dominate the digital communications sector immense market power. They have demonstrated time and again that they have the willingness and ability to abuse that market power. Specific areas where policy can move forward in spite of the complexity include:

- Concentration: Public policy must not only deal with the high level of concentration; it must also address the steroids to restore competition for Big Data Platforms.
- Excessive horizontal or vertical concentration should be prevented.
- Anticompetitive bundling: Action should be taken to avoid anticompetitive bundling, banning unfair rates terms and conditions, requiring open access to APIs.
- While collusion is clearly illegal, tacit collusion and parallel exclusion should also be prevented.
- Exclusionary practices should be banned, including predation (with a new standard for anticompetitive pricing), foreclosure, denial of access to customers, and self-dealing.
- Transparency: Fair information practices should be instituted.
- Privacy: Effective consumer choice is key. One of the great challenges is access to data and the solution cannot be to just force data to be shared. There must be a stronger regime for consumer sovereignty over data.

While some of these policies should apply to all firms in the market and may be addressed by general policies – e.g., a structure of supply-side transparency and demand-side consumer choice (sovereignty) – others should focus on dominant firms. A traditional measure of dominance should be used. A tight oligopoly exists where the top four firms have a 60% (or more) market share, and all firms that could constitute this market share should be well regulated. While action against anticompetitive structures and conduct should be taken against firms who constitute the tight oligopoly, scrutiny should not stop there. The empirical evidence we have reviewed shows that “four are few, six may be enough, and ten are many.” Scrutiny of higher numbers of firms (4–10) should be subject to complaint and might shift the burden to complaining firms.

While dual jurisdiction (antitrust and regulation) has been essential to oversight over the communications sector, and should remain so, it is important to have clear regulatory responsibility vested in specific agencies. We prefer a new digital regulatory agency. Because of the large benefits of the digital sector, the approach should seek to achieve the desired pro-competitive, pro-consumer outcomes with the least amount of intervention necessary.

Subject to agency expertise and practice, no remedies should be taken off the table, and the threat of extreme action is a useful prod to corrective action. However, no remedies should be mandated before careful consideration has been given to the costs and benefits of more extreme actions. In order to accomplish its goals with the least intervention necessary, the regulatory agency must have full investigative authority, power and resources and it must be subject to deadlines to avoid foot dragging by firms under investigation.

QUESTIONNAIRE FOR THE PUBLIC CONSULTATION ON A NEW COMPETITION TOOL

Objectives of the public consultation

The proposal for a New Competition Tool is one of the measures aimed at making sure that competition policy and rules are fit for the modern economy. It is meant to address gaps in the current EU competition rules, which have been identified based on the Commission's enforcement experience in digital and other markets, as well as the worldwide reflection process about the need for changes to the current competition law framework to allow for enforcement action preserving the competitiveness of markets.

EU competition law can address (i) anti-competitive agreements and concerted practices between companies pursuant to Article 101 of the Treaty on the Functioning of the European Union ("the EU Treaty") and (ii) the abuse by a company of its dominant position pursuant to Article 102 of the EU Treaty. The enforcement experience of the Commission and national competition authorities, as well as the worldwide reflection process on the fitness of the existing competition rules to tackle today's challenges have helped to identify certain structural competition problems that these rules cannot tackle (e.g. monopolisation strategies by non-dominant companies with market power) or cannot address in the most effective manner (e.g. strategies by companies with market power to extend their market position into multiple related markets).

The objective of this consultation is to collect stakeholder views on two aspects. First, stakeholders are asked to provide their views on whether there is a need for a new competition tool to ensure fair and competitive markets with a view to delivering lower prices and higher quality, as well as more choice and innovation to European consumers. Second, stakeholders are asked to provide their views on the characteristics that such a new competition tool should have in order to address structural competition problems in a timely and effective manner.

In parallel, the Commission is also engaged in a process of exploring, in the context of the Digital Services Act package, ex ante rules to ensure that markets characterised by large platforms with significant network effects acting as gatekeepers, remain fair and contestable for innovators, businesses, and new market entrants. As part of that process, the Commission has launched a consultation to seek views on the framing, on the scope, the specific perceived problems, and the implications, definition and parameters for addressing possible issues deriving from the economic power of large, digital gatekeeper platforms. As such, the work on a proposed New Competition Tool and on the ex ante rules complement each other. The work on the two impact assessments will be conducted in parallel in order to ensure a coherent outcome. In this context, the Commission will take into consideration the feedback received from both consultations. We would therefore invite you, in preparing your responses to the questions below, to also consider your response to the parallel consultation on ex ante rules for large, digital gatekeeper platforms, which can be found at Digital Services Act survey.

STRUCTURAL COMPETITION PROBLEMS

6. Please indicate to what extent each of the following market features/elements can be a source or part of the reasons for a structural competition problem in a given market in your view. Please, give examples of sectors/markets or scenarios you are aware of in the follow-up question.

Market concentration (A) is among the most important indicators of a competition problem: a concentrated market belies the small number of alternatives for consumers and, by extension, the power of the large players in the market that reduces incentives to innovate and to respect consumer interests. Many of the other features on this list are important in that they encourage or enable market concentration. Network effects—both direct (K) and indirect (L)—and extreme economies of scale and scope (J) make the largest players much more attractive and efficient than smaller competitors, thereby making the big bigger and the small smaller (or non-existent). These effects clearly exist for the dominant digital platforms, where the cost of adding an extra user on top of the existing infrastructure is low and where platforms become more valuable the more people they provide access to. When combined with single-homing (M), which pushes customers to stay put where they are, dominance becomes entrenched and competition becomes difficult to encourage. Other barriers to entry, like high start-up costs (C), lack of access to an essential input (I), or the platform owner competing with business users (N) and potentially exercising their power as a platform to preclude competition, also create structural competition problems that encourage market concentration.

TABLE A.2: SURVEY RESPONSES

	No knowledge/No experience	No importance/No relevance	Somewhat important	Important	Very important
A - One or few large players on the market (i.e. concentrated market)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
B - High degree of vertical integration ('Vertical integration' relates to scenarios where the same company owns activities at upstream and downstream levels of the supply chain)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
C - High start-up costs (i.e. non-recurring costs associated with setting up a business)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
D - High fixed operating costs (i.e. costs that do not change with an increase or decrease in the amount of goods or services produced or sold)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
E - Regulatory barriers ('Regulatory barriers' refer to regulatory rules that make market entry or expansion more cumbersome or extensively expensive)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
F - Importance of patents or copyrights that may prevent entry	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
G - Information asymmetry on the customer side ('Information asymmetry' occurs when customers (consumers or businesses) in an economic transaction possess substantially less knowledge than the other party so that they cannot make informed decisions)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
H - High customer switching costs ('Switching costs' are one-time expenses a consumer or business incurs or the inconvenience it experiences in order to switch over from one product to another or from one service provider to another)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

I - Lack of access to a given input/asset which is necessary to compete on the market (e.g. access to data)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
J - Extreme economies of scale and scope ('Extreme economies of scale' occur when the cost of producing a product or service decreases as the volume of output (i.e. the scale of production) increases. For instance serving an additional consumer on a platform comes at practically zero cost. 'Economies of scope' occur when the production of one good or the provision of a service reduces the cost of producing another related good or service)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
K - Strong direct network effects (Where network effects are present, the value of a service increases according to the number of others using it. For instance in case of a social network, a greater number of users increases the value of the network for each user. The more persons are on a given social network, the more persons will join it. The same applies e.g. to phone networks)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
L - Strong indirect network effects (Indirect network effects, also known as cross-side effects, typically occur in case of platforms which link at least two user groups and where the value of a good or service for a user of one group increases according to the number of users of the other group. For instance, the more sellers offer goods on an electronic marketplace, the more customers will the marketplace attract and vice versa)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
M - Customers typically use one platform (i.e. they predominantly single-home) and cannot easily switch	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

N - The platform owner is competing with the business users on the platform (so-called dual role situations, for instance the owner of the e-commerce platform that itself sells on the platform)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
O - Significant financial strength	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
P - Zero-pricing markets ('Zero-price markets' refer to markets in which companies offer their goods/services such as content, software, search functions, social media platforms, mobile applications, travel booking, navigation and mapping systems to consumers at a zero price and monetise via other means, typically via advertising (i.e. consumers pay with their time and attention))	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q - Data dependency ('Data dependency' refers to scenarios where the operation of companies are largely based on big datasets)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
R - Use of pricing algorithms ('Pricing algorithms' are automated tools that allow very frequent changes to prices and other terms, taking into account all or most competing offers on the market.)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

EXPLANATIONS

7. Please indicate what market scenarios may in your view qualify as structural competition problems and rate them according to their importance.

7.1. Please explain your answers above and give examples if possible.

The ability to extend market power from a core market into other markets (for example, Google using its power in the ad market to divert money from other industries through higher prices charged to advertisers) and enact anti-competitive monopolisation (for example, Amazon's willingness to price below cost, potentially in order to acquire market shares in its product markets) allow companies to achieve market power and eliminate competition. Gatekeeper power and tipping entrench this power and make it nearly impossible to reverse course and return to a competitive playing field in the absence of regulation or other government intervention.

7.2. Can you think of any other market scenarios that qualify as structural competition problems?

- Yes
- No

8. Structural competition problems may arise in markets where a (not necessarily dominant) company with market power in a core market may apply repeated strategies to extend its market position to related markets, for instance, by relying on large amounts of data.

8.1. Do you have knowledge or did you come across such market situation?

- Yes
- No
- Not applicable /no relevant experience or knowledge

	No knowledge/No experience	No importance/No relevance	Somewhat important	Important	Very important
*A (not necessarily dominant) company with market power in a core market extends that market power to related markets.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
*Anti-competitive monopolisation, where one market player may rapidly acquire market shares due to its capacity to put competitors at a disadvantage in the market unfairly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
*Highly concentrated markets where only one or few players are present, which allows to align their market behaviour.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
*The widespread use of algorithmic pricing that allows easily to align prices.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
*Gatekeeper scenarios: situations where customers typically predominantly use one service provider/platform (single-home) and therefore the market dynamics are only determined by the gatekeeper.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
*Tipping (or 'winner takes most') markets ('Tipping markets' refer e.g. to markets where the number of customers is a key element for business success: if a firm reaches a critical threshold of customers, it gets a disproportionate advantage in capturing remaining customers. Therefore, due to certain characteristics of that market, only one or very few companies will remain on those markets in the long term.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

8.2. In which sectors/markets did you experience repeated strategies to extend market power to related markets?

Operating systems, search, digital advertising (search and display)

8.3. Please list and explain instances where a company with market power has used its position to try to enter adjacent/neighbouring markets to expand its market power.

- Microsoft using PC OS dominance to expand its power in media player application market by tying Windows Media Player to Windows OS and in web browser market by tying Internet Explorer to Windows OS

- Apple using iOS market power to extend market power in app stores, using market power in app store to extend market power in particular app markets (for example, screen time monitoring apps, e-reader apps, etc...)

- Google using dominance in general search to expand market power in vertical search and other services (for example, Google Flight Search, Google Scholar, Google Maps, Google shopping...)

8.4. Do you consider that strategies to extend market power to related markets are common in digital sectors/markets?

- Not applicable / no relevant experience or knowledge
- No
- Yes, to some extent
- Yes, common
- **Yes, very common**

8.5. Please explain your answer and identify the sectors/markets concerned.

Digital platforms broadly, particularly where platforms occupy strategic market status as a gatekeeper, control access to the digital economy. This enables them to use their platform position to gain market power within various aspects of the digital economy as sellers (like Apple becoming involved in the app market in addition to running an app store, or Amazon becoming involved in product creation and fulfillment in addition to being an online marketplace). Markets concerned include digital marketplaces (e-commerce, app stores), search engines, ads, and social media.

8.6. In your experience, does a repeated strategy by a company with market power to extend its market power to related markets raise competition concerns?

- **Yes**
- No
- Not applicable /no relevant experience or knowledge

8.7. Please explain your answer, and indicate the competition concerns that may arise in case of leveraging strategies.

Using market power in a core market to extend into related markets can reduce or foreclose competition in the related market with consequences for consumer choice, consumer welfare, and innovation. To extend into new markets, companies often employ strategies like bundling and tying in which they force consumers to buy a potentially unwanted product in the related market to acquire the product in their core market.

9. Do you think that there is a need for the Commission to be able to intervene in situations where structural competition problems may arise due to repeated strategies by companies with market power to extend their market position into related markets?

- Yes
- No
- Not applicable /no relevant experience or knowledge

9.1. Please explain your answer. If you replied yes, please also indicate the type of intervention that would be needed.

It is important for the Commission to intervene to preserve competition across sectors and prevent the largest companies from cannibalizing power across the economy. Some interventions might include strong merger review for non-horizontal mergers, prohibitions on tying and bundling

10. Anti-competitive monopolisation refers to scenarios where one market player may rapidly acquire market shares due to its capacity to put competitors at a disadvantage in the market unfairly, for instance, by imposing unfair business practices or by limiting access to key inputs, such as data.

10.1. Do you have knowledge or did you come across such market situation?

- Yes
- No
- Not applicable /no relevant experience or knowledge

10.2. In which sectors/markets did you experience anti-competitive monopolisation strategies?

E-commerce, app stores, & social media

10.3. Please provide examples and explain them

Amazon employing below-cost pricing, in the process undercutting competitor diapers.com and then acquiring its parent company, Quidsi

Apple removing screen-time-monitoring apps from its app store after releasing its own competitor app

Facebook restricting access to its APIs

10.4. Do you consider that anti-competitive monopolisation is common in digital sectors/markets?

- Not applicable / no relevant experience or knowledge
- No
- Yes, to some extent
- Yes, common
- **Yes, very common**

10.5. Please explain your answer and identify the sectors/markets concerned.

Dominant digital platforms have substantial abilities and incentives to use anti-competitive monopolisation strategies to earn market power. They can use their position and technology to restrict their competitors' access to key inputs (data, customer access through the platform) and to surveil their competitors. These digital platforms span e-commerce, app stores, search, web services, and social media.

10.6. In your experience, does anti-competitive monopolisation raise competition concerns?

- **Yes**
- No
- Not applicable /no relevant experience or knowledge

10.7. Please explain your answer and indicate the competition concerns that may arise in case of anticompetitive monopolisation.

Anti-competitive monopolisation allows companies to eliminate competition and acquire market power that they can later abuse. This market power is not earned through superior products or innovation, but through strategies that unfairly disadvantage competitors that may have otherwise provided competitive pressure or desirable alternatives for consumers.

11. Do you think that there is a need for the Commission to be able to intervene in situations where structural competition problems may arise due to anti-competitive monopolisation?

- **Yes**
- No
- Not applicable /no relevant experience or knowledge

11.1. Please explain your answer. If you replied yes, please also indicate the type of intervention that would be needed.

Preventing anti-competitive monopolisation before market power becomes entrenched is crucial for preserving a fair, competitive, and consumer-friendly market place. Some solutions might include guardrails around self-preferencing for companies who occupy a gatekeeper role, strong nondiscrimination rules, regulation of data (for example, make platform data and APIs

available under fair, reasonable, and non-discriminatory terms), banning certain uses of proprietary third-party data, and new restrictions around anti-competitive pricing.

12. An oligopoly is a highly concentrated market structure, where a few sizeable firms operate. Oligopolists may be able to behave in a parallel manner and derive benefits from their collective market power without necessarily entering into an agreement or concerted practice of the kind generally prohibited by competition law. In those situations rivals often ‘move together’ to e.g. raise prices or limit production at the same time and to the same extent, without having an explicit agreement. Such so-called coordinated behaviour can have the same outcome as a cartel for customers, e.g. price increases are aligned.

12.1. Do you have knowledge or did you come across such market situations?

- **Yes**
- **No**
- **Not applicable /no relevant experience or knowledge**

12.2. Please identify the markets concerned and explain those market situations.

Wireless, broadband, business data services, food delivery, ridesharing, and operating systems all have a few dominant players. These players often don’t compete head-to-head, instead choosing to dominate their respective customer-bases (by geography, product differentiation, etc.)

12.3. In your experience, what are the main features of an oligopolistic market with a high/substantial risk of tacit collusion?

Please explain your answer and your rating above.

High concentration levels and the ability to monitor behavior make coordination between firms easier. Segmentation of the market between competitors (often geographic separation or product segmentation) and repeated contact in several markets also increase oligopolists’ incentives and ability to collude.

12.4. Can you think of any other features of an oligopolistic market with a high/substantial risk of tacit collusion?

- **Yes**
- **No**

13. Do you consider that there is a need for the Commission to be able to intervene in oligopolistic markets prone to tacit collusion in order to preserve/improve competition?

- **Yes**
- **No**
- **Not applicable /no relevant experience or knowledge**

13.1. Please explain your answer.

Tacit and parallel collusion should be prevented. Because it is often difficult to identify tacit collusion, special attention should be given to markets with conditions that facilitate such behavior: tight oligopolies, particularly where they are reinforced by multi-market contact, technological specialization, product segmentation, and geographic separation. A tight oligopoly exists where the top four firms have a 60% (or more) market share, and all firms that could constitute this market share should be well regulated. One remedy would be to move to ex-ante regulation for these firms, placing the burden on them to show that rate or term changes are fair, reasonable, and non-discriminatory (FRAND) and that mergers will not harm competition.

	No knowledge/No experience	No importance/No relevance	Somewhat important	Important	Very important
*High concentration levels	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
*Competitors can monitor each other's behaviour	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
*Oligopolists competing against each other in several markets	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
*Homogeneity of products	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
*High barriers to enter (e.g., access to intellectual property rights, high marketing costs, global distribution footprint, strong incumbency advantages, network effects...)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
*Strong incumbency advantages due to customers' switching costs and/or inertia	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
*Lack of transparency for customers on best offers available in the markets	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
*Vertical integration into key assets of the vertical supply chain	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
*Existence of a clear price leader, resulting in leader-follower behaviour	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

However, four or more firms does not necessarily ensure competition and the commission should take care to extend scrutiny beyond firms who constitute a tight oligopoly. Scrutiny of higher numbers of firms (4-10) should be subject to complaint and might shift the burden to complaining firms.

14. Relying on digital tools, companies may easily align their behaviour, in particular retail prices via pricing algorithms. (Pricing algorithms are automated tools that allow very frequent changes to prices and other terms taking into account all or most competing offers on the market.)

14.1. Do you have knowledge or did you come across such market situations?

- *Yes

- **No**
- Not applicable /no relevant experience or knowledge

15. Do you consider that there is a need for the Commission to be able to intervene in markets where pricing algorithms are prevalent in order to preserve/improve competition?

- **Yes**
- **No**
- Not applicable /no relevant experience or knowledge

15.1. Please explain your answer.

Pricing algorithms are not fundamentally different to other forms of collusion and do not require special regulations.

16. So-called tipping (or ‘winner takes most’) markets are markets where the number of users is a key element for business success: if a firm reaches a critical threshold of customers, it gets a disproportionate advantage in capturing remaining customers. Therefore, due to certain characteristics of that market, only one or very few companies will remain on those markets in the long term.

16.1. Do you have knowledge or did you come across such market situations?

- **Yes**
- **No**
- Not applicable /no relevant experience or knowledge

16.2. Please list and explain those situations and in which markets you encountered them.

Digital platforms in general are prone to tipping. Some examples include e-commerce platforms and app stores (where sellers feel pressured to sell on the dominant platform in order to access the online marketplace), social media (where users are most likely to single-home where their friends are), food delivery apps, ridesharing apps, etc.

16.3. Please indicate what are in your view, the main market features of a tipping market. Please rate each of the listed competition concerns according to its importance. .

16.4. Please explain your answer, indicating why you consider the above features relevant for a tipping market and describe any other feature that you consider important.

Economies of scale alone are not enough to tip a market. However, network effects, both direct and indirect, as well as extreme economies of scale give dominant companies large advantages which encourages competition for the market rather than in the market early on, but results in huge advantages for incumbents once the market has tipped. Single-homing further entrenches these advantages by making customers less likely to leave incumbents for new entrants.

16.5. In your view, is tipping common in digital sectors/markets?

- Not applicable / no relevant experience or knowledge

- No
- Yes, to some extent
- Yes, common
- **Yes, very common**

	No knowledge/No experience	No importance/No relevance	Somewhat important	Important	Very important
*Efficient or innovative market players will disappear	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
*There will not be sufficient competition on the market in the long run	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
*Customers will not have enough choice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
*Customers may face insufficient innovation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
*Customers may face higher prices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

16.6. Please explain your answer and identify the sectors/markets concerned.

Most digital platforms, from social media to ad exchanges to e-commerce services, are prone to tipping. Because fixed costs play such an important role in digital markets, digital markets feature especially large returns to scale. Additionally, digital platforms are driven by network effects that strengthen large incumbents and weaken new entrants.

16.7. In your experience, what are the main competition concerns that arise in tipping markets? Please rate each of the listed competition concerns according to its importance.

16.8. Please explain your answers above. Please also use this space to mention any other competition concerns that arise in tipping markets and rate their importance.

The key concern with tipping markets is that it precludes competition in the long run. In order to compete new entrants can only overcome incumbency advantages through significant innovation or through existing scale or installed base. This leads to the typical concerns for markets that lack competition: abuse of market power, lack of consumer choice, insufficient innovation, higher prices, and lower quality. These harms arise when there is a lack of competitive pressure on dominant players and consumers lose the ability to “vote with their feet”.

17. Do you consider that there is a need for the Commission to be able to intervene early in tipping markets to preserve/improve competition?

- **Yes**
- No

- Not applicable /no relevant experience or knowledge

	No knowledge/No experience	No importance/No relevance	Somewhat important	Important	Very important
*Direct network effects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
*Indirect network effects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
*Economies of scale	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
*Users predominantly single-home (i.e. they use typically one platform only)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

17.1. Please explain your answer.

The Commission must be able to intervene early to preserve competition. Once markets have tipped it is very difficult to restore the market’s initial competitive conditions because of incumbency advantages in tipping markets.

18. So-called ‘gatekeepers’ control access to a number of customers (and/or to a given input/service such as data) that – at least in the medium term – cannot be reached otherwise. Typically, customers of gatekeepers cannot switch easily (‘single-homing’). A gatekeeper may not necessarily be ‘dominant’ within the meaning of Article 102 of the EU Treaty.

18.1. Have you encountered or are you aware of markets characterised by ‘gatekeepers’?

- **Yes**
- No
- Not applicable /no relevant experience or knowledge

18.2. Please list which companies you consider to be ‘gatekeepers’ and in which markets.

Google (search, advertising, mobile apps)
 Facebook (publishing, display advertising)
 Apple (mobile apps)
 Amazon (e-commerce)

18.3. Do you consider that gatekeeper scenarios are common in digital sectors/markets

- Not applicable / no relevant experience or knowledge
- No
- Yes, to some extent
- **Yes, common**
- Yes, very common

18.4. Please explain your answer and identify the sectors/markets concerned.

Gatekeeper scenarios are common in digital platform markets because these platforms often act as an intermediary between consumers and other businesses online, thus controlling access to the digital marketplace for these businesses. This arises in advertising, e-commerce, app distribution, and publishing.

	No knowledge/No experience	No importance/No relevance	Somewhat important	Important	Very important
*Gatekeepers determine the dynamics of competition on the aftermarket/platform	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
*As customers/users cannot easily switch, they have to accept the competitive environment on the aftermarket/platform	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
*Business operators can only reach the customers that use the specific platform/aftermarket by adapting their business model and accepting their terms and conditions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

18.5. Do you consider that gatekeeper scenarios also occur in non-digital sectors/markets?

- Yes
- No
- **Not applicable /no relevant experience or knowledge**

18.7. Please indicate what are, in your view, the features that qualify a company as a ‘gatekeeper’. Please rate each of the listed features according to its importance.

18.8. Please explain your answer, indicating why you consider the indicated features relevant for qualifying a company as a gatekeeper. Please also add any other relevant features that qualify a company as a gatekeeper and rate their importance.

The most important thing for gatekeepers is that other business operators must go through them to access customers or key infrastructure. Typically this need is driven by gatekeepers controlling access to a large number of customers and by a lack of alternatives for businesses, which is exacerbated by a lack of multi-homing on the customer end (for example, app developers must go through Apple’s app store to reach iPhone users because iPhone users can’t multi-home on multiple app stores).

18.9. In your experience, what are the main competition concerns that arise in markets featuring a gatekeeper? Please rate each of the listed competition concerns according to its relevance.

18.10. Please explain your answers above. Please also use this space to mention any other competition concerns that arise in markets featuring a gatekeeper and rate them in importance.

If gatekeepers determine the dynamics of competition on the platform, which all competitors must go through to achieve scale, they have the ability (and incentive) to foreclose competition. This entrenches their gatekeeper power and can lead to abuse of such power in the long run, resulting in consumer harms and giving consumers little recourse.

19. Do you consider that there is a need for the Commission to be able to intervene in gatekeeper scenarios to prevent/address structural competition problems?

- Yes
- No
- Not applicable /no relevant experience or knowledge

19.1. Please explain your answer.

Gatekeeper scenarios deserve special attention from competition authorities because of the particular power gatekeepers hold over their rivals and the potential for anti-competitive conduct. In the absence of regulation and oversight, gatekeepers have every incentive to abuse their status in order to harm competitors. The Commission, and not a handful of gatekeepers, should maintain ultimate control over the competitive conditions in the marketplace. One step toward this would involve requiring fair, reasonable, and non-discriminatory access to crucial infrastructure, including data and APIs.

	No knowledge/No experience	No importance/No relevance	Somewhat important	Important	Very important
*High number of customers/users	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
*Customers cannot easily switch (lack of multi-homing)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
*Business operators need to accept the conditions of competition of the platform - including its business environment - to reach the customers that use the specific platform	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

20. In which sectors/markets do you consider that structural competition problems may occur?

- Structural competition problems may occur in all sectors/markets
- **Structural competition problems may occur in some specific sectors/markets (including but not only digital sectors/markets).**
- Structural competition problems only occur in digital sectors/markets
- Structural competition problems mainly occur in digital sectors/markets
- Not applicable / no relevant experience or knowledge

20.1. Please explain your answer and identify the sectors/markets your reply refers to.

Structural competition problems are not unique to digital sectors, but are common in digital markets because of significant economies of scale and scope, large fixed costs, and prevalent network effects in these markets. These problems span across digital communication, digital advertising, social media, and e-commerce. The competition problems in these digital markets may resemble those in telecommunications and other infrastructure industries, which contain many of the same characteristics and structural competition problems.

22. Article 101 of the EU Treaty prohibits agreements between companies which prevent, restrict or distort competition in the EU and which may affect trade between Member States (anti-competitive agreements). These include, for example, price-fixing or market-sharing

cartels. Is Article 101 of the EU Treaty, in your view, a suitable and sufficiently effective instrument to address structural competition problems?

- Yes
- No
- Not applicable /no relevant experience or knowledge

22.1. Please explain your answer. If you replied ‘no’, please indicate the types of conduct and situations that in your view, Article 101 of the EU Treaty does not sufficiently or effectively address, and why.

This only appears to address explicit collusion. In highly concentrated markets, tacit collusion can occur and even non-cooperative behavior can still result in non-competitive outcomes.

22.2. Please explain in which markets the market situations and problematic conducts you have identified manifest themselves.

In the communications sector, tacit collusion has been a major problem, with companies often refusing to compete head-to-head thus maintaining dominance in their smaller markets. Similar patterns have emerged in food delivery apps where different apps dominate in different geographies. Even if there is no explicit agreement between companies, it is easy to coordinate these types of market power-preserving behaviors and the risk of abuse of this market power is an important concern.

23.1. Please explain your answer. If you replied ‘no’, please indicate the type of conduct and situations that in your view, Article 102 of the EU Treaty does not sufficiently or effectively address, and why.

In markets prone to tipping, market power can be achieved even in the absence of traditionally anti-competitive conduct. Other intervention is needed to protect competition in such markets so that market power cannot be abused once the market has “tipped” and restoring competitive conditions is all but impossible. Especially where early intervention is needed, it is not enough to address anti-competitive harms after the fact.

This also fails to address dominant players in one market expanding into new markets, or non-dominant players who still exercise market power.

23.2. Please explain in which markets the market situations and problematic conducts you have identified manifest themselves.

Many digital markets are prone to tipping (see question 16.2). Expansion into new markets is also common (see 8.3 and 8.5). Non-dominant players can still exercise market power particularly where single-homing is an issue (for example in Apple’s App Store, ridesharing apps, food delivery apps). All of these issues can hurt competition and reduce consumer choice, leading to harms like limited privacy options, higher fees, excessive ad targeting, and poor content moderation on digital platforms.

ASSESSMENT OF POLICY OPTIONS

The questions in this section seek to gather feedback on the policy options outlined in the Inception Impact Assessment (<https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12416-New-competition-tool>).

24. In light of your responses to the questions of Section C, do you think that there is a need for a new competition tool to deal with structural competition problems that Articles 101 and 102 of the EU Treaty (on which current competition law enforcement is based) cannot tackle conceptually or cannot address in the most effective manner? (Article 101 of the EU Treaty prohibits agreements between companies which prevent, restrict or distort competition in the EU and which may affect trade between Member States (anti-competitive agreements). These include, for example, price-fixing or marketsharing cartels. Article 102 of the Treaty prohibits any abuse by one or more undertakings of a dominant position within the internal market or in a substantial part of it.)

- **Yes**
- No
- Not applicable /no relevant experience or knowledge

24.1. Please explain your answer. Please indicate which structural competition problems the new tool should tackle or address. [3000 character(s) maximum]

The new competition tool can be a key element in addressing structural competition problems in digital markets. The tool can address all the structural competition problems previously elucidated in Part C of the survey.

25. Do you think that such a new competition tool (that would not establish an infringement by a company and would not result in fines) should also be able to prevent structural competition problems from arising and thus allow for early intervention in the markets concerned?

- **Yes**
- No
- Not applicable /no relevant experience or knowledge

25.1. Please explain your answer. Please indicate which structural competition problems the new tool should prevent. [3000 character(s) maximum]

The new competition should be allowed to be proactive in protecting competition. In markets with only a few competitors, market exit can be a deathblow for competition in the entire market. The tool should pay particular attention to acquisitions by already dominant platforms as tools to further entrench market power or disrupt competition in adjacent markets.

26. What are in your view the most important structural competition problems that should be tackled with such a new competition tool? [3000 character(s) maximum]

The new competition tool should address the unique problems posed by dominant digital platforms. The first is network effects. The users of many digital platforms benefit from other users using the same platform. For example, a social network becomes more useful for an individual user as more of her friends join the same network. A seller posting their goods for sale prefers a marketplace with more potential buyers on it. Next, is the nature of data in economies of scope and scale. Data is a non-rivalrous good whose utility to a platform exponentially increases as the platform both collects data on more users and more data on an individual user. This gives platforms with a wide user base and maximum data exploitative policies a large advantage over newer rivals. Finally, digital platforms take advantage of consumer behavior “stickiness.” Many consumers are unlikely to change the default offerings and have a tendency to “single home” with one provider—not constantly checking whether a superior option has entered the market. The new competition tool must take account of and counteract these structural competition problems if it is to be as effective as possible.

27. In your view, what should be the basis for intervention for the new competition tool?

- **The tool should be dominance-based (i.e. it shall only be applicable to dominant companies within the meaning of Article 102 of the EU Treaty)**
- The tool should focus on structural competition problems and thus be potentially applicable to all undertakings in a market (i.e. including dominant but also non-dominant companies)
- Other
- Not applicable /no relevant experience or knowledge

27.1. Please explain your answer. Please indicate what type of situations would be covered by the scope of application you suggested. [3000 character(s) maximum]

The tool should focus on dominant digital platforms. Proper regulation should focus on the main bad actors who endanger competition as a whole.

28. In your view, what shall be the scope of the new competition tool?

- 1) It shall be applicable to all markets (i.e. it should be horizontal in nature)
- 2) **It shall be limited in scope to sectors/markets where structural competition problems are the most prevalent and/or most likely to arise**
- 3) Other

28.1. Please explain your answer. If you indicated ‘limited in scope’, please indicate what sectors/markets should be covered by the new competition tool, and why. [3000 character(s) maximum]

The tool should be limited to digital platform markets. This should ensure smooth interaction with existing regulation and a focus on these competition problems.

28.2. Do you consider that the new competition tool should apply only to markets/sectors affected by digitisation?

- Yes
- No
- Not applicable / no relevant experience or knowledge

28.3. Please explain your answer, indicating what markets/sectors you would consider as affected by digitisation. [3000 character(s) maximum]

As digital platforms expand out into other markets, the tool should follow their actions there. We would consider markets where the use of the Internet is a key component in the business model as those markets affected by digitisation.

29. If a new competition tool were to be introduced, how should a smooth interaction with existing sector specific legislation (e.g. telecom services, financial services) be ensured? [3000 character(s) maximum]

Clear and thoughtful guidance from the beginning is essential to a smooth interaction with existing sector-specific legislation. The tool’s mandate should clearly state from Day 1 exactly what kind of companies fall under its purview and which are still regulated under other pieces of legislation. Agency “turf wars” ultimately end up hurting consumers and should be avoided at all costs. The new tool should also not be afraid to adapt legislative or regulatory solutions that have worked in other industries to tackle digital market problems. For example, Public Knowledge has advocated for adapting the “Customer Proprietary Network Information” (CPNI) standard from US telecom regulation to solve the problem of third-party seller data stealing by large digital marketplaces such as Amazon. The new tool should strike the right balance between taking account of the unique nature of digital markets and applying lessons learned from other legislative and regulatory areas.

30. Do you consider that under the new competition tool the Commission should be able to:

- Make non-binding recommendations to companies (e.g. proposing codes of conducts and best practices)
 - Yes
 - No
 - Not applicable /no relevant experience or knowledge
- Inform and make recommendations/proposals to sectorial regulators
 - Yes
 - No
 - Not applicable /no relevant experience or knowledge
- Inform and make legislative recommendations
 - Yes

- No
- Not applicable /no relevant experience or knowledge
- Impose remedies on companies to deal with identified and demonstrated structural competition problems
 - **Yes**
 - No
 - Not applicable /no relevant experience or knowledge

30.1. Please explain your answers indicating why you consider that the new competition tool should include or not include the options above. [3000 character(s) maximum]

The new competition tool should include a wide array of tools to combat structural competition problems. The companies under the domain of the tool have immense political and financial power and have thus far mostly resisted regulatory efforts. The tool should couple recommendations with some degree of legal force, otherwise they risk being ignored by the dominant platforms. The ability to recommend to sectorial regulators will ensure the best fit with the incumbent regulators and allow the various regulators to specialize in what they know best. The tool will have a first-hand view of digital platforms and will thus be best poised to give legislative recommendations. If the tool cannot impose remedies on demonstrated structural competition problems, one wonders if there should be a tool at all.

31. Do you consider that in order to address the aforementioned structural competition problems, the Commission should be able to impose appropriate and proportionate remedies on companies? If yes, which?

- Non-structural remedies (such as obligation to abstain from certain commercial behaviour)
 - **Yes**
 - No
 - Not applicable /no relevant experience or knowledge
- Structural remedies (for instance, divestitures or granting access to key infrastructure or inputs)
 - **Yes**
 - No
 - Not applicable /no relevant experience or knowledge
- Hybrid remedies (containing different types of obligations and bans)
 - **Yes**
 - No
 - Not applicable /no relevant experience or knowledge

* 31.1. Please explain your answer and why you indicated or not indicated the remedies listed above. [3000 character(s) maximum]

As above, a wide array of potential tools is essential if the Commission is to be effective in regulating dominant digital platforms. In many cases, non-structural regulatory remedies will be sufficient to solve many of the problems in these markets. However, the threat of structural remedies can force compliance and could be the best option in some other cases. Finally, hybrid remedies would give the Commission needed flexibility in regulating digital platforms. If the new competition tool is handicapped from the outset, there will be immediate questions about its efficacy. The Commission can avoid that with an endowment of a wide range of powerful potential remedies.

32. Do you consider that certain structural competition problems can only be dealt with by structural remedies, such as the divestment of a business?

- Yes
- No
- Not applicable /no relevant experience or knowledge
- **Other: *In some markets, structural remedies can be the only answer. However, in the digital markets in question, strong regulatory remedies may very well be sufficient.***

INSTITUTIONAL SET-UP OF A NEW COMPETITION TOOL

The questions in this section seek feedback on what features and set-up the new competition tool should have.

33. Do you consider that enforcement of the new competition tool by the Commission would require adequate and appropriate investigative powers in order to be effective?

- Yes
- No
- Not applicable /no relevant experience or knowledge

33.1. Please explain your answer. [3000 character(s) maximum]

Without investigatory powers it would be difficult for the new competition tool to be effective. The first step in solving competition problems is studying the market to learn about the problem and investigatory powers are the key component in that.

33.2. Please indicate what type of investigative powers would be adequate and appropriate to ensure the effectiveness of the new competition tool. Please rate each of the listed investigative powers according to its importance.

- Addressing requests for information to companies, including an obligation to reply

- No knowledge/No experience
 - No importance/No relevance
 - Somewhat important
 - **Important**
 - Very important
- Imposing penalties for not replying to requests for information
 - No knowledge/No experience
 - No importance/No relevance
 - Somewhat important
 - Important
 - **Very important**
- Imposing penalties for providing incomplete or misleading information in reply to requests for information
 - No knowledge/No experience
 - No importance/No relevance
 - Somewhat important
 - **Important**
 - Very important
- The power to interview company management and personnel
 - No knowledge/No experience
 - No importance/No relevance
 - Somewhat important
 - Important
 - **Very important**
- Imposing penalties for not submitting to interviews
 - No knowledge/No experience
 - No importance/No relevance
 - Somewhat important
 - Important
 - **Very important**
- The power to obtain expert opinions
 - No knowledge/No experience

- No importance/No relevance
- Somewhat important
- **Important**
- Very important
- The power to carry out inspections at companies
 - No knowledge/No experience
 - No importance/No relevance
 - Somewhat important
 - **Important**
 - Very important
- Imposing penalties for not submitting to inspections at companies
 - No knowledge/No experience
 - No importance/No relevance
 - Somewhat important
 - **Important**
 - Very important

33.3. Please explain your answer. Please also list here any other investigative powers that you would consider appropriate to ensure the effectiveness of the new competition tool. [3000 character(s) maximum]

All of the above investigatory powers would be appropriate for the new competition tool. It is important that there are penalties for companies refusing to comply with the tool's investigations as otherwise the tool risks being ignored and ineffective.

34. Do you consider that the new competition tool should be subject to binding legal deadlines?

- **Yes**
- No
- Not applicable /no relevant experience or knowledge

34.1. Please explain your answer, including the resulting benefits and drawbacks. If you replied yes, please specify the type of deadlines. [3000 character(s) maximum]

Companies under regulation can draw out investigations to tire out regulators, all the while collecting rents from their outsize market power. Binding legal deadlines ensure that the investigation will proceed apace and consumers will see real relief in an efficient manner.

Companies should be given deadlines to respond to the tool's investigations and the tool should also have deadlines in deciding whether to bring enforcement actions and what remedies to use.

35. Do you consider that the new competition tool should include the possibility to impose interim measures in order to pre-empt irreparable harm?

- **Yes**
- No
- Not applicable /no relevant experience or knowledge

35.1. Please explain your answer. [3000 character(s) maximum]

Digital platform markets can be incredibly complex and thus investigations can take several years. Once competitors impacted by anti-competitive behavior leave the market, it can be difficult to get them back. Competition should be protected while investigations are ongoing, thus the need for interim measures.

36. Do you consider that the new competition tool should include the possibility to accept voluntary commitments by the companies operating in the markets concerned to address identified and demonstrated structural competition problems?

- Yes
- **No**
- Not applicable /no relevant experience or knowledge

36.1. Please explain your answer. [3000 character(s) maximum]

While voluntary commitments can be a tool in the toolbox, it should not be the default. Companies have a duty to shareholders to maximize profits, not to safeguard competition in their markets. The tool needs to make it in a company's best interest to comply with the remedies proposed, and thus some degree of legal force is needed to ensure compliance.

37. Do you consider that during the proceedings the companies operating in the markets concerned, or suppliers and customers of those companies should have the possibility to comment on the findings of the existence of a structural competition problem before the final decision?

- **Yes**
- No
- Not applicable /no relevant experience or knowledge

37.1. Please explain your answer. [3000 character(s) maximum]

An opportunity to comment before final decision can certainly be helpful to reaching the most informed decision. However, the tool should be wary of taking everything in a regulated company's comment at face value and instead rigorously investigate the claims made. Other participants in the market would be an excellent source of information about potential anti-competitive conduct on the part of major platforms.

38. Do you consider that during the proceedings the companies operating in the markets concerned, or suppliers and customers of those companies should have the possibility to comment on the appropriateness and proportionality of the envisaged remedies?

- **Yes**
- No
- Not applicable /no relevant experience or knowledge

38.1. Please explain your answer. [3000 character(s) maximum]

As above, the opportunity for comment here would be a good thing so long as a company's complaints about the heavy-handedness of a remedy is not given outsized importance.

39. Do you consider that the new competition tool should be subject to adequate procedural safeguards, including judicial review?

- **Yes**
- No
- Not applicable /no relevant experience or knowledge

39.1. Please explain your answer. [3000 character(s) maximum]

The Commission must strike the right balance when it comes to procedural safeguards. Dominant digital platforms pose novel competition problems and existing law can sometimes fail to capture the full gravity of their harms to competition. Updates to the law should work in tandem, not in conflict, with the new competition tool.

39.2. Please indicate which further procedural safeguards you would consider necessary. [3000 character(s) maximum]

Judicial review would certainly be an important procedural safeguard. We have no further proposed safeguards.

CONCLUDING QUESTIONS AND DOCUMENT UPLOAD

40. Taking into consideration the parallel consultation on a proposal in the context of the Digital Services Act package (https://ec.europa.eu/eusurvey/runner/Digital_Services_Act) for ex ante rules to ensure that markets characterised by large platforms with significant network effects

acting as gatekeepers remain fair and contestable for innovators, businesses, and new market entrants, please rate the suitability of each option below to address market issues raised by online platform ecosystems.

1. Current competition rules are enough to address issues raised in digital markets

- Not applicable/No relevant experience or knowledge
- Not effective
- Somewhat effective**
- Sufficiently effective
- Very effective
- Most effective

2. There is a need for an additional regulatory framework imposing obligations and prohibitions that are generally applicable to all online platforms with gatekeeper power

- Not applicable/No relevant experience or knowledge
- Not effective
- Somewhat effective
- Sufficiently effective
- Very effective**
- Most effective

3. There is a need for an additional regulatory framework allowing for the possibility to impose tailored remedies on individual large online platforms with gatekeeper power on a case-by-case basis.

- Not applicable/No relevant experience or knowledge
- Not effective
- Somewhat effective
- Sufficiently effective
- Very effective**
- Most effective

4. There is a need for a New Competition Tool allowing to address structural risks and lack of competition in (digital) markets on a case-by-case basis

- Not applicable/No relevant experience or knowledge
- Not effective
- Somewhat effective
- Sufficiently effective

- **Very effective**
 - Most effective
5. There is a need for combination of two or more of the options 2 to 4.

- Not applicable/No relevant experience or knowledge
- Not effective
- Somewhat effective
- Sufficiently effective
- Very effective
- **Most effective**

40.1. Please explain which of the options, or combination of these, in your view would be suitable and sufficient to address the contestability issues arising in the online platforms ecosystems. [3000 character(s) maximum]

Case-by-case enforcement is not enough to combat structural obstacles to competition.

When markets are prone to tipping (as in the case of digital markets), the status quo of remedying individual violations may be insufficient to protect competitive markets. We recommend a New Competition Tool that can conduct market-wide investigations and impose industry-wide structural remedies where necessary. Additionally, special attention should be paid to gatekeepers, who occupy an important strategic position and can exert power over the competitive landscape in the absence of regulation and oversight. Some of these remedies may apply to all gatekeepers, while others may be market-specific.

THE LESSONS OF THE MICROSOFT CASE

The Competition Tool is a clear reaction to an anticompetitive problem that has grown in the digital communications sector. Two decades ago, antitrust officials were confronted with the first great challenge of the digital age, Microsoft’s abuse of its market power. Microsoft made all of the claims we hear today from dominant digital firms about why they should not (perhaps cannot) be regulated under the antitrust laws. Courts in the U.S. and EU rejected this claim. That cases began the process of reigning in the abuse of market power in this emerging sector. We drew important lessons for competition and consumer protection from it. It was the beginning of the process of which the Competition Tool is an important part.

- As the only public interest group to publicly support the Department of Justice antitrust case against Microsoft for four years before it was decided, we are painfully aware of how difficult and important it is to prevail in these cases.¹⁰⁹
- Having recently released an extensive analysis of Big Data Platforms,¹¹⁰ and filed the above comments in the European Union on the development of a new competition tool for regulators to assess the status of competition and consumer protection in

digital data markets,¹¹¹ we are keenly aware of the urgent need to need improve (actually begin) oversight over data platforms.

These two experiences lead us to comment on the regulation of Big Data Platforms. The filing of the case raises many issues from the perspective of our past involvement.

First, policymakers should not be deterred from rebooting, updating and recalibrating the antitrust laws. Part of the reason these cases have been so difficult is that antitrust practice has been and continues to be distorted and undermined by an erroneous economic theory that has long since been discredited and rejected in the antitrust and economic literature.

Second, important pro-competitive and consumer protective principles that are at the core of this case should not be compromised in a settlement or the implementation of a finding that the law has been broken. The importance of this case cannot be overemphasized in setting the terrain for structure and conduct in the digital economy. We argued as much in a law review article we authored after the Microsoft case, entitled “Antitrust as Consumer Protection in the New Economy: Lessons from the Microsoft Case.”¹¹²

The lessons we drew from the Microsoft case are remarkably similar to the issues we expressed concern about in two recent working papers. The fact that we express similar concerns about Big Data Platforms, is not an indictment of that case. It is a reminder of the deep-seated challenges that digital technologies pose to a capitalist market economy and the importance of addressing each of the chokepoints that develop as the digital revolution advances.

Microsoft’s market power was a threat to competition and consumers in which Microsoft used its operating system dominance to prevent competition. We can debate various aspects of the remedy, including the failure to address tying, but the remedy changed the market significantly. The Big Data Platforms have abused the market power of the chokepoints they dominate. The inherent nature of the technology creates similar challenges across the digital sector.

Table 7.3 summarizes our analysis of the case against Microsoft.

TABLE 7.3: THE CASE AGAINST THE MICROSOFT MONOPOLY

		FACT (Paragraph No..)	LAW (Page No.)
MARKET STRUCTURE	MONOPOLY POSITION	18-21,33-35	4,5
	BARRIERS TO ENTRY		
	Hardware	19,20,22-27,54-55	4,6
	Software	30,36-43,141,166	4,5,6
CONDUCT	UNDER THE TABLE		
	Abrogation of Contracts	390,394	18
	Intimidation	106,129,236,355	6,10
	Market Division	88,105	10,22
	Patent Infringement	390,394	
	EXCLUSION		
	Exclusive Deals	143,147,230-234, 247,259-260,287-290,293-297,305-306, 317-321,326-326,332, 337,339 -340,350-352	10,15,37,38
	Preferred Desktop Location	139,272,301	17, 20
	Secret Price	64,118,236-238,324	6,10,11
	Indirect Sales	10,19,103	4,6,10
	Desupporting	90,122,128-129, 192,405 -406	10,18
	BUNDLING		
	OS Tying	159, 170,198	4,11,12,31
Imitation	133-134,166,	10,18,19,22	
DEGRADATION OF QUALITY			
Impair MS Functionality	173, 174	11	
Reducing the Availability	407	18,19	
Impair the Nonms Functionality	92,128 -129, 160,171-172, 330,339,340	6,10,11,17,32	
Quality Impairment	90-92,128-129,160, 330,339 -340	6,11	
Resource Denial	240,357,379,396-406	31	
Incompatibility/Integration	129,387-396,404 -406	18,19	
Disabling	160,170-172	11,31,32	
MONOPOLISTIC PRICING			
Reverse Bounty	1,392,602,951	6,20	
Predation Cross- Subsidy	107,137-139,147,261-262	6,10,10,21,22	
Hidden Price/Indirect Sales	10,18-19,58,103	4,6,10	
Overcharges	62-63,66	6	
PERFORMANCE	RETARDING INNOVATION		
	Chilling Effect on Investment, Developer Time and Money	379, 397,412	
	Delay or Prevent Development	411, 132,395-396	10,18,19
	Netscape's Navigator	81-88,408-410	22
	IBM's OS2/Smartsuite	116-118,125-130	10
	Sun's JAVA	397-403	18
	Real Networks	111-114	10
	Apple's Quicktime	104-110	10
	Intel's Native Signaling Processing	94-103	6
	Undermining Compatibility	390-396, 407	6,18,19
	DENIAL OF CONSUMER CHOICE		
	Deny Products Consumer Needs	247, 410	
	Delaying Release of Products	167-168	11
	Deny Consumers User-Friendly	210-216	11
	Force New Versions in New PC	57, 66	6
	Deny or Delay Non-Microsoft	90-91,93	10,11
	Thwart Responses to Demand	225-229	11,14
	Forcing Consumers to Buy	133,143,203-20611	
	In Inconvenient Ways	239-240,247,309 -311, 357,359-361	10,15
	INCREASE IN CONSUMER COST		
	Direct: Short Term Revenue	57,62-63	6
	Price Discrimination/Secret Price	64,118,236-238,324	4,6,10,11
	Indirect: Raising Consumer	203-206,239-240,247	11
Raising Hardware Transaction Costs			
Upgrade Policy	57,66	6	
Excess Functionality	173-174,210-126	6,11,32	
EXCESS PROFITS	66,379	6	

Source: Adapted from, Mark Cooper, 2001, "Antitrust as Consumer Protection in the New Economy: Lessons from the Microsoft Case," *The Hastings law journal* · April,

That analysis fits squarely within the framework we have adopted in this Working Paper Series. WP#1 adopts and explains the Structure-Conduct-Performance paradigm. WP#3 undertakes important task of identifying specific market failures and abuses as the basis for policy action. Similarly, WP#2 and the earlier discussion in WP#4 reinforced the need to identify specific market failures and abuses, but also cautioned against overly simplistic, rigid reactions that would undermine the dynamic flexibility and innovation of the sector. We emphasize the need for a new agency and a recalibration of both antitrust and regulation, not unlike the need for a new Competition Tool, although it goes much farther.

The most important point is that the concerns go far beyond an antitrust case and underscore why Congress needs to create an effective regulatory agency. Our analysis outlined the challenges faced by both a structural remedy that would separate the chokepoint from other products and services and a conduct remedy that controls the exercise of market power at the chokepoint. Above all, the remedy must be decided by the relevant expert agencies based on the facts of the case. Moreover, it seems clear that given the pervasiveness of market power and the importance of innovation around the chokepoint, a conduct remedy – regulatory oversight – is necessary in all cases. That said, the remainder of this section is a direct excerpt from our analysis of the Microsoft case.

EXCERPT FROM “ANTITRUST AS CONSUMER PROTECTION IN THE NEW ECONOMY: LESSONS FROM THE MICROSOFT CASE.”

V. Antitrust Lessons for the Internet Century

A. Competition in the New Economy and the Microsoft Remedy

Breaking up Microsoft would unleash powerful competitive market forces in the industry and send a strong message that illegal business practices will not be tolerated. The functional breakup would not fragment the operating system. The transitional conduct remedies are intended to give the new incentives a chance to take root by re-igniting the competitive process in the industry. After a short transition, there would be no regulation of either of the new companies.

The remedy attacks the key element of market power that Microsoft executives repeatedly identified and used in their business plans and strategies to undermine competition. A functional divestiture would restore the natural competitive process in the software industry. Competition builds out from a strong customer base in a complementary product. That is the competitive dynamic that existed in the mid-1990s before Microsoft “cut off its air supply.”

In a sense, the court's acceptance of the remedy tailors the principles of antitrust to the new economy. It restores the competitive process of the industry that has been assaulted by anticompetitive conduct, which is consistent with fundamental antitrust principles...

Identifying a set of conduct remedies that could be used to address the antitrust violation is a daunting task because so many anti-competitive aspects of Microsoft's behavior were demonstrated at trial, especially in light of Microsoft's past and ongoing behavior inside and outside of the courtroom. Having failed to convince the court that it did not do the crime

Microsoft set about trying to convince public opinion that it should not do the time. Outside of the courtroom it commissioned studies to suggest that a strong remedy would hurt the public... These assumptions were discredited inside the courtroom during the trial and they are no less wrong outside the courtroom after the trial.

A conduct remedy would have to be extensive, since Microsoft has engaged in such a broad range of anti-competitive practices. The policing of the remedy would have to be aggressive, since Microsoft has shown itself to be recalcitrant both in its failure to comply with the earlier consent decree and in its steadfast denial of wrongdoing in this case. Even if Microsoft obeyed the decree, competition would be slow to take root because Microsoft has dominated the operating systems market for so long....

A comprehensive behavioral remedy would need specific provisions to address each of the anti-competitive practices that contributed to the violations of law and enforcement mechanisms that have a reasonable chance of eliciting compliance or discovering and rectifying non-compliance.

- (1) Under the Table...*
- (2) Applications Barrier to Entry*
- (3) Contracting*
- (4) Quality Impairment*
- (5) Bundling*
- (6) Price*

B. Antitrust Lessons Beyond the Case

While the economic literature recognizes that a large installed base may be necessary to promote economies of scale and positive network externalities, it also recognizes that large market shares sustained over long periods may be harmful. The “benefits” of having a firm that dominates an industry of this size and to this extent are doubtful. The “winner-take-most” outcome is far less of an ironclad law than defenders of monopolies claim. The claim that Schumpeterian monopoly is necessary for innovation has been challenged. The empirical facts of the case also make it clear that there are other outcomes that are far more competitive and consumer-friendly.

(1) Structure

Economic theory recognizes the uncertainty of outcomes. A variety of stable market structures is possible. Technological “lock-in” may short-circuit the innovation process. With the reinforcement of network effects, small advantages gained early in the process turn into substantial leads in the marketplace. The feedback process can lock in the wrong technology. Once an inferior technology is locked in, superior technologies may be locked out. High fixed costs and low variable costs may slow innovation.

The potential for inefficiency and market failure may exist, even where positive network externalities exist. Consumer risk aversion may bias them toward known technologies. A herd mentality makes it difficult for new technologies to enter the market. This mentality tends to become a self-fulfilling prophecy. On the supply side, sponsors and agents may play an “innocent” role in locking in the wrong technology by giving an advantage to a solution to one

problem that unintentionally and inappropriately is applied to a different problem. Because the inferior solution is given a head start, it takes hold.

One of the most important observations about the origins of a positive feedback process is its openness in the early stages of development. In order to stimulate the complementary assets and supporting services, and to attract the necessary critical mass of customers, the technology must be open to adoption and development by both consumers and suppliers. This openness captures the critical fact that demand and consumers are interrelated. If the activities of firms begin to promote closed technologies, this is a clear sign that motivation may have shifted.

While it is clear in the literature that the installed base is important, it is not clear that an installed base must be so large that a single firm can dominate the market. As long as platforms are open, the installed base can be fragmented and still be large. In other words, a large market share is not synonymous with a large market, a standard is not synonymous with a proprietary standard. Open platforms and compatible products are identified as providing a basis for network effects that is at least as dynamic as closed, proprietary platforms and much less prone to anti-competitive conduct.

The installed base of computers is so large that it could support multiple and competing operating systems, software packages, and browsers that would be optimized to meet specific needs. Nor is there any reason to believe that the installed base will be fragmented in the sense that cross-platform applications and translations would not be available to those who value them. Microsoft's number one enemy was always compatibility that it could not control. No one ever threatened to fragment the base, what they threatened to do was migrate it to a platform that was broader and more inclusive than Microsoft's. The only threat over the installed base.

The market outcome that most vigorously challenges the proprietary “winner-take-most” model is a model that centers on open standards. Microsoft itself recognizes that the most important developments in computing in post mainframe environment are open standards, first the PC then the Internet. The Internet is the most important single development to come along since the IBM PC was introduced in 1981....

The Internet's unique position arises from a number of elements. The TCP/IP protocols that define its transport level support distributed computing and scale incredibly well. The Internet Engineering Task Force (IETF) has defined an evolutionary path that will avoid it running into future problems even as virtually everyone on the planet connects up. The HTTP protocols that define HTML Web browsers are extremely simple and have allowed servers to handle incredible traffic reasonably well.

Once the economic inevitability and superiority of a “winner-take-most” model is questioned, we confront the motivation to monopolize. In spite of theoretical claims that monopolists have little motivation to engage in such activities, there is ample evidence that these anti-competitive behaviors may be attractive to a new economy monopolist for a variety of reasons.

- * Market power in the core product can be preserved by conquering neighboring markets, raising cross-platform incompatibilities, raising rivals' costs, or preventing rivals from achieving economies of scale.
- * Profits may be increased in the core product by enhanced abilities to price discriminate.
- * By driving competitors out of neighboring markets, new monopolies may be created or the ability to preserve market power across generations may be enhanced by diminishing the pool of potential competitors.

In the end, economic theory does not resolve the issue, empirical facts do. We look to the empirical facts, especially corporate motivation and conduct, organized in the traditional antitrust framework. In this case they are overwhelmingly on the side of traditional market structure analysis and the antitrust laws. Despite Microsoft's claims of a new competitive dynamic in these network, new economy industries, the traditional rules of antitrust remain a solid guide to pro-innovation, procompetitive, proconsumer public policy. The warning signs remain the same.

- * At the level of structure, we include the traditional warning signs of large and persistent market shares, especially across generations of intraplatform technological change and domination of multiple products within layers of a platform.
- * In the high tech realm, domination of different layers of a platform and steering of consumers to specific products across layers of a platform should be a special concern. The installed base of customers at one layer provides the base to compete across layers.

(2) Conduct

Conduct and its intent should remain a central concern of antitrust authorities, notwithstanding the claim that “winner-take-most” competition justifies all tactics to eliminate the competition. Economic theory notes that it is especially critical to recognize that the entrepreneur is not passive in the positive or negative aspects of the lock-in process. Sponsors have a variety of tools to create economic and entry barriers that are counterproductive. What was once the establishment of an installed base now becomes defense of market dominance that reduces competition and reinforces the lock-out of competing technologies. Having gained a controlling position, firms may seek to implement isolating mechanisms.

Diffusion agents or technology sponsors can use a wide range of actions to advance their technology. Precisely because certain characteristics of the process lend themselves to intervention by “sponsors,” there is ample room for self-interested action that furthers the private sponsor's interest at the expense of the public interest. The public good aspect of efforts to achieve critical mass-to organize the switch to a new technology-cannot be assumed to outweigh the private motivation in such actions. Thus, a critical step is to look at actual firm behavior.

A dominant firm may create barriers to entry through exclusive deals, retaliation against those who deal with competitors, manipulation of standards and support for competing products, strategies that freeze customers, and the exercise of property rights through restrictive licensing, patents and copyrights. These business strategies create inertia and prevent competitors from

gaining market share. Companies can leverage their access to customers to reinforce their market dominance. This access allows them to bundle-complementary assets.

It is well recognized that dominant firms tend to blur distinctions between markets with bundling and integration of functions, so it is particularly important to consider the points of interface or interconnection between markets since this is where market power can be leveraged. Additional control points that may emerge in the gateway to e-commerce make the market power analysis particularly important. Given the threat of lock-in and the advantages of being much subtler forms of discrimination. This second generation of discrimination is difficult to detect and root out.

Bundling, which may play a key role in creating the critical mass for positive externalities during the early period of adoption of a technology that provides the benefit of convenience for consumers throughout the product life cycle, can also play a role in exploiting customers. When combined with market power, bundling results in overpricing of products in the aggregate. The conclusion is strongest with monopoly bundling, as is the case with Microsoft's browser, but extends to other situations as well.

- * Traditional marketing practices that tie products and predatory pricing remain a concern.
- * Classic practices, such as refusal to deal with complements or competitors, retaliation for dealing with competitors, price discrimination and rebating, and foreclosure of distribution for competitors are still a cause for concern.
- * In the high tech environment, manipulation of standards to disadvantage competitors or withdrawal of support for complements or competitors and lock-in contracts for core products or complements, including long terms, minimum commitments, and “preannouncement” of features to freeze customers become new concerns.
- * Conduct that closes standards or frustrates cross platform compatibility and competition are the most egregious offenses, since these destroy the most dynamic economies available.

(3) Performance

Performance of the industry must be considered in terms of price, innovation (quality) and competitive process. 246 The reward for successful anti-competitive activity is the ability to impose pricing patterns on the public that exploit market power and allow the dominant firm to control the direction and pace of innovation to protect its interest.

The economic literature recognizes that the introduction of, and the reliance upon, price discrimination after the initial round of positive growth is a crucial factor. Price discrimination undermines the value of existing products **by** creating incompatibilities. This extracts consumer surplus. Price discrimination allows firms to manage the cannibalization process. That is, introducing later versions of a product does not eliminate the ability to extract consumer surplus, as long as price discrimination occurs. Advertising and distribution will shift in nature from an open and expansive focus to a proprietary emphasis, while control over the product cycle can impose immense costs through forced upgrades. Indirect costs through greater

and accelerated demands on hardware may actually be several times larger than the direct costs of hardware and software.

- * As we have shown, traditional concerns about high and rising prices remain pertinent. Monopoly rents provide the resources to execute anti-competitive strategies and these can be measured in terms of excess profits.
- * In high tech industries, compulsory and coercive upgrading policies are a concern, as they exploit switching costs to extract consumer surplus.
- * Measuring impacts on quality and innovation is the most difficult aspect of market performance to assess. Slowing of innovation through the delay or prevention of products is one area of concern. Sloppy design and reduced or unstable performance are additional concerns.
- * Creation of and/or indifference to consumer inconvenience also emerge as a concern.

It would be reasonable for antitrust officials confronted with questions about anti-competitive practices in high technology industries to act only when they observe warning signs at *each* of the levels of analysis. The Microsoft case presents mountains of evidence of many violations at *every* level. In the end, this case is not about new, high technology industries. It is about old anti-competitive business practices that have been illegal for over a century.

Perhaps the most important lesson that can be learned from the court's careful consideration of the multiple forms of harm is that consumers need not fear real competition in the software industry or the new economy. Can we expect a competitive market to be as efficient and “consumer friendly” as the Microsoft monopoly?

Given the fact that Microsoft has undermined successful products from profitable companies, there is every reason to believe that consumers would receive products that are better at lower prices if the anti-competitive practices were eliminated. The ability of developers to create products that are compatible, which Microsoft then drives out of the market with anti-competitive tactics, suggests that if Microsoft were prevented from abusing its market power, a competitive market would produce compatible products. Fears that competition will cause computing to become more difficult, requiring support of multiple, incompatible applications and operating systems, are unfounded. If the installed base of more than 300 million computers were divided between competitors, interoperability would be seen as a premium quality. OEMs could purchase and choose from a number of bundles and companies could profitably write programs to any of them. Portability will be highly valued in the market.

In fact, Microsoft has fought against software compatibility in market after market. Over time, as Microsoft's market share has grown, it has built more and more barriers to interoperability between Windows and other operating systems or application software. Microsoft is not actually concerned about incompatibility when it controls that incompatibility and it suits its business interests. The threat to the public has grown with each subsequent conquest of a market.

The ultimate irony is that Microsoft's pricing and marketing patterns imposes the greatest burden on the very consumers that it claims to be helping most with its preinstallation and bundling of software. The least sophisticated consumers are the most likely to take the packages and

upgrades and least likely to find the alternatives that Microsoft has driven into niches in the market. These consumers cannot find bundles that suit their limited needs, so they are forced to buy up both in the initial purchase and with upgrades.

At its heart, the arguments against a break-up are essentially a defense of monopoly in the industry. The trial undermines the claim that the monopoly persists because of the unique natural forces of the software market. The causes of its durability are to be found in the plain old anti-competitive business practices of Microsoft. Real competition, even in this new economy industry, is not likely to impose the costs that its critics claim; it is likely to deliver the benefits consumers have come to expect from truly competitive markets. Thus, the lesson for consumers and antitrust policy makers to be drawn from the successful prosecution of the Microsoft case is clear antitrust properly focused on competition should be a powerful form of consumer protection in the new economy, as it was in the old.

Just over a century ago, the antitrust laws were adopted and applied when America was taking leadership of the world's industrial economy. Break-ups of the major industrial corporations at that time were intended to prevent abuse and restore competition to the most important industries of the industrial age. Claims that preventing the concentration of economic resources would hurt the economy were raised at that time and they proved to be wrong, for exactly the same reasons they are wrong today. Competition is the wellspring of economic progress and technological innovation in our capitalist economy, and antitrust law still has a critical role to play in promoting and protecting competition.

The purpose of antitrust is not to pick or punish winners, it is to ensure that the contest is fair, because only a fair contest elicits effort that gets maximum progress. By any reasonable evaluation of Microsoft's behavior, it broke the rules. The Microsoft case represents much more than good courtroom drama. It is the first antitrust test of the new economy and it will go a long way toward determining the role of antitrust in the Internet century. Importantly, the Microsoft case teaches that classic antitrust law and trial evidence still matter.

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ENDNOTES

¹ *Washington Post*, Editorial, July 30.

² *Id.*

³ Antitrust Experts, 2020.

⁴ The primary study on which we rely is a major undertaking by the Stigler Center, 2020. Additional studies include, The Shorenstein Center, (Wheeler, Verveer, and Kimmelman, 2020); and the UK Competition Markets Authority, 2019.

⁵ Antitrust Experts, 2002, We are concerned that market power is on the rise in the U.S. economy generally, including in the digital markets that are the Committee's focus. Growing market power harms consumers and workers, slows innovation, and limits productivity growth. Courts have contributed to increased monopoly power through decisions that have weakened the prohibitions against anticompetitive exclusionary conduct and anticompetitive mergers. The circumscribed state of the law and insufficient resources have resulted in insufficiently aggressive government enforcement. And when enforcers do bring meritorious cases, their success has been hampered by serious deficiencies in the contemporary judicial interpretation of the antitrust statutes.

⁶ *Id.*, Antitrust law and enforcement have failed to respond to growing market power in substantial part because many key antitrust precedents—particularly those precedents governing exclusionary conduct—rely on unsound economic theories or unsupported empirical claims about the competitive effects of certain practices. In part for this reason, the antitrust rules constructed by the courts reflect a systematically skewed error cost balance: they are too concerned to avoid both chilling procompetitive conduct and the high costs of litigation, and too dismissive of the costs of failing to deter harmful conduct. Excessively permissive precedents and unsound or unsupported economic claims have, in turn, encouraged overly cautious enforcement policies and overly demanding proof requirements and have discouraged government enforcers and private plaintiffs from bringing meritorious exclusionary conduct cases.¹⁸ These developments have likely contributed to an increased incidence and exercise of market power across the U.S. economy.

⁷ *Id.*, Overly lenient antitrust rules have been defended with reference to mistaken and unjustified assumptions—including erroneous claims that markets self-correct quickly, monopolies best promote innovation, firms with monopoly power can obtain only a single monopoly profit, vertical restraints and mergers almost invariably benefit competition even in oligopoly markets, courts and enforcers are manipulated by complaining competitors, and courts cannot tell whether exclusionary conduct harms competition or benefits it. Each of those mistaken assumptions leads courts to underestimate the likelihood antitrust violations and the resulting harm.

⁸ *From Brandeis to Stiglitz: Into and Beyond The 2020 Election: Brandeis Protocol and the Stiglitz Model of Pragmatic Progressive Capitalism*, hereafter WP#1.

⁹ This happened twice during his life, with the Clayton Act (1914) and the Robinson Patman Act (1936).

¹⁰ Stigler Center, 2020.

¹¹ WP#1.

¹² *Pragmatic, Progressive Capitalism at Its Best: Network Neutrality: How an Entrepreneurial State Used Public Policy to Foster Experimental Entrepreneurialism and Create the Internet* (hereafter WP#2).

¹³ Stigler Center, 2020, p. 2

¹⁴ *Id.*

¹⁵ *Id.*, p. 3.

¹⁶ *Id.*, p. 3.

¹⁷ Cooper, 2014a, 2017b.

¹⁸ *Business data services: Irrational Exuberance for Deregulation: The Failure of Free Market Fundamentalism to Promote Competition or Prevent Abuse of Market Power* (hereafter WP#3). A more comprehensive treatment can be found in Cooper, 2017a.

¹⁹ Cooper, 2016b, 2017b.

²⁰ Aurora, et. al. 2001, p. 112.

²¹ See Shapiro & Varian, 1999, 9-15.

²² *Id.* at 22-23.

²³ Greenstein, 2000, p. 155.

²⁴ von Hippel, 1998.

²⁵ Arora et al., 2001.

²⁶ *Id.*

²⁷ Von Hippel, 2005.

²⁸ *Id.* p. 277.

²⁹ *I.*, pp. 276-77.

³⁰ *Id.*

³¹ *Id.*

³² Weber, 2004, p. 155.

³³ *Id.*

³⁴ von Hippel, 2005, p. 57.

³⁵ Weber, 2004, pp. 83-84.

³⁶ Lupia and Sin, 2003, p. 329; see also Coleman and Goetz, 2002, and Cooper, 2009.

³⁷ Lupia and Din, 2003..

³⁸ See generally Ostrom et al., 1999, p. 319

³⁹ *Id.*

⁴⁰ *Id.* at 220.

⁴¹ *Id.* at 296.

⁴² Solow, 1987.

⁴³ IMF, 2018.

⁴⁴ While the U.S. has witnessed similar high level analyses of GDP growth, as discussed in WP#3, and interesting set of micro level studies examines the impact on consumer welfare changes and specific Internet services. See for example: Nakamura, Samuel and Soloveichik, 2018; Brynjolfsson, Erik, et. al. 2019; Chen, Young and Kim, 2010; Brynjolfsson, Erik Avانش Collins and Felix Eggars, 2019.

⁴⁵ Sallet's critique of the simplistic neo-Brandeisian arguments is certainly valid, but I want to take it a step farther. Brandeis is being more severely misused and abused by the neo-Brandeisians in the following sense. Brandeis was one of the great American progressives. He

started in economics, but ended up leading in areas which were not really economic, as I will define them – privacy and democracy. More importantly, he died before he had a chance to witness what progressive policy (1939), expressed most fully in the late New Deal that he played a key role in creating, could do. Whether or not he would have acknowledged the accomplishments of the post-war New Deal era and adjusted his economic thinking, we will never know, but short-sightedness is not something he suffered from and it is extremely important to avoid. To appreciate the importance of this possibility, we can turn back to interestingly, Piketty, 2014, p. 10, had observed that Marx underestimated the resilience of capitalism because of when his ideas were formed and offers a similar explanation. “[Marx.] [l]ike his predecessors, totally neglected the possibility of durable technological progress and steadily increasing productivity, which is a force that can to some extent serve as a counterweight to the process of accumulation and concentration of private capital. He no doubt lacked the statistical data needed to refine his predictions. He probably suffered as well from having decided on this conclusion in 1848.” The turn toward progressive policies at past critical junctures is the focal point of this analysis because we are at a critical juncture in the digital industrial revolution. Acemoglu and Robinson, 2015, p. 3, date the first progressive turn of the capitalist political economy to the 1820s and 1830s, long before Marx’s conclusion that capitalism was doomed to extinction. They argue that Marx’s laws fail “Mostly because they ignored both the endogenous evolution of technology . . . and the role of institutions and politics that shape markets, prices and the path of technology. . . . The distribution of the gains from new technologies was also shaped by an evolving equilibrium. The Industrial Revolution went hand-in-hand with major political changes.” Stiglitz’s critique of Thomas Piketty’s *Capital*, which holds an important place in the debate, captures the need for this understanding and the need for a balance of progressive policies and markets. Taken together, these proposals would make real inroads into reducing inequality, returning us to an economy more like that of the post-war years. Those were the years when America was becoming the middle-class society it had long professed to be, with decades of rapid growth and widely shared prosperity, when those at the bottom saw their incomes grow faster than those at the top. They are also the years that Thomas Piketty views as an anomaly in the history of capitalism. But getting back to that time doesn’t require eliminating capitalism; it requires eliminating the market distortions of the ersatz capitalism practiced in this country today. This is less about economics than it is about politics. We don’t have to choose between capitalism and fairness. We must choose both (Stiglitz, 2014.)

⁴⁶ Stigler Antitrust group, 2019, Id., p. 124.

⁴⁷ Id., p. 27,

⁴⁸ Id., p. 26.

⁴⁹ Id., p. 27.

⁵⁰ Id., p. 29.

⁵¹ Id., p. 88.

⁵² Id., p. 27.

⁵³ Id.

⁵⁴ Id., p.88.

⁵⁵ Id., pp. 52-53.

⁵⁶ Id. P. 29.

⁵⁷ Id., pp. 6-7.

⁵⁸ Id., p. 30.

⁵⁹ As the introductory essay showed, Pitofsky, 2008.

⁶⁰ By the start of the 21st century three Nobel Prizes heralded the arrival of behavioral economics. Its impact was visible in economics and law broadly, (see e.g. Dawney and Shah, 2005, Jolls, 2007, Diamond and Vartiainen, 2007, DelaVigna, 2009, Wikipedia, N.D.) as well as antitrust (see e.g. Hansen, and. Kysar, 1999, 2000, Tor, 2002, 2003, 2013, “ Stucke, 2007, Reeves, and Stucke, 2011, Huffman, and Heiddtke, 2012. Martin, Stephen, 2017, Huffman, Max, 2019). Traditional, neoliberal economics resisted (see Ginsberg and Moore, 2010, and Huffman, 2019, for a response).

⁶¹ Petit, 2019, pp. 18 . . .35..

⁶² Cooper, 2000, puts this claim in context and shows that it excuses a remarkable abuse of market power. See also Gavil and First, 2014, for a demonstration that the outcome of the Microsoft case was “correct” and, if anything, should have been stronger.

⁶³ Id., p. 33, Cooper, 2000, and in Appendix A, rejects this claim, as a general proposition. The charge of anti-competitive bundling, upheld at trial in the U.S. and EU, but overturned on appeal in the U.S. remains a key and important issue in the regulation of Big Data Platform.

⁶⁴ Petit, 2019, p. 34.

⁶⁵ Sullivan, 1977. I devote considerable attention to Sullivan because his critique of the Harvard School, who he rightly concludes had won the debate incorporates both of the “whammies” antitrust had suffered. It clearly supports the call for the reinvigoration of “traditional” antitrust, but also calls for the “recalibration of antitrust in exactly the direction that is needed today, incorporation of behavioral and new institutional economics. These were two of the schools of thought that grew dramatically (as shown by the Nobel Prizes in economics discussed in WP#1) that came to prominence in the past two decades (i.e. four decades after Sullivan laid down the challenge).

⁶⁶ Id., pp. 1216-1217.

⁶⁷ Id., p. 1219.

⁶⁸ Id., p. 1223.

⁶⁹ Id., p. 1224, Industrial organization theorists, who insist upon the existence of a functional relationship between market structure and market conduct, have tended to regard the structure of the industry rather than the conduct of the firm as the variable that antitrust policy should be used to influence. It may well be that this emphasis should be reversed.

⁷⁰ Id.

⁷¹ Id., p. 1225, Chicago analysts are likely to assume a monopolist will produce to the point where marginal cost and marginal revenue intersect and will price to clear the market.⁴⁸ This yields the highest short run monopoly profit, but also does the most to attract entry. Harvard theorists are more likely to assume a limit pricing strategy, which will be calculated to yield a supra-competitive, though lower, return over a longer period. Harvard school analysts are more likely to utilize longer run or dynamic models, and thus to increase the realism, if also the complexity, of the analysis.

⁷² Id., pp. 1220-1221)

⁷³ Id., p. 1223

⁷⁴ Id., p. 1222.

⁷⁵ Id., p. 1232.

⁷⁶ Id., pp. 1232-1233.

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- ⁷⁷ Id., pp. 1233...1234.
- ⁷⁸ Id., p.1233.
- ⁷⁹ Kahn, 1988, p. 11.
- ⁸⁰ Id.
- ⁸¹ Cooper, 2014b.
- ⁸² This remains true, even in the case of a recent example in the digital age – peering between interconnected networks. For a significant period, the national transmission networks engaged in unbilled interconnection and carriage. That approach worked well, only as long as it did not matter. As soon as the networks became differentiated by size or market, voluntary unbilled peering broke down. Big charged little and transmission dominant networks (those who simply transported the bits) charged eyeball heavy networks (those who were selling the content to their customers). Commercial negotiations became contentious and disputes and disruptions occurred.
- ⁸³ Cooper, 2014b.
- ⁸⁴ Id.
- ⁸⁵ Id. at 114.
- ⁸⁶ Taylor, 1994, p. 262, “Taylor identifies three characteristics of necessities – inability to replace the good, large relative size of the expenditure, and importance of the good in a broad sense. ‘The point of departure will be to remind ourselves of a point this is probably too often forgotten: that price elasticity consists of two components, an income effect and a substitution effect. The substitution effect is a measure of the extent to which goods and services can substitute for one another when there is a price change without making the consumer any worse off in terms of consumer welfare. The income effect, on the other hand is a measure of the extent to which the consumer’s real income is changed when there is a change in price. Ordinarily, the importance of the income effect is represented by the importance of the good whose prices has changed in the consumer’s budget. Goods whose expenditure account for a small proportion of the consumer’s total expenditures will have a small (or even tiny) income effect, while a good whose expenditures account for a large portion of total expenditure will have a possibly large income effect. Goods that in ordinary discourse are seen as necessities (such as heating fuels and telephone service) will also have relatively larger income effects the lower the level of income.”
- ⁸⁷ Id., p. 262, “In assessing income effects, however, a point that is usually overlooked is the effect on the consumer’s welfare of not consuming a good because of a price increase. In the case of making or not making a phone call because it has become more expensive, the question that needs to be asked is what are the consequences (not necessarily in monetary terms) of not making the call. For residential consumers, this cost is usually cast in term of the utility (or satisfaction) that is given up by the call not being made. For many calls, however, this is not the correct measure of cost, for the call may be important to the *earning* of income. In this case, the actual income effect of not making a telephone call may be large, although the decrease in real income, (as customarily measured), occasioned by the price increase may be extremely small.
- ⁸⁸ Kahn, 1998, p. 11.
- ⁸⁹ Associated Press, 1945.
- ⁹⁰ Cooper, 2013, 2016.
- ⁹¹ Antitrust Experts, 2020.
- ⁹² Kwoka, 2015.
- ⁹³ Id., p. P. 14
- ⁹⁴ Antitrust Experts, 2020.
- ⁹⁵ Id., p. 12.
- ⁹⁶ Cooper, 2003.
- ⁹⁷ Blackstone, in Speta, 2002,
- ⁹⁸ Hocket, in Speta, 2002.
- ⁹⁹ Cooper 2003
- ¹⁰⁰ Cooper, 2013.
- ¹⁰¹ Cooper, 2013.
- ¹⁰² Michal Powell belittled the concept of the public interest in his first speech upon becoming a member of the Commission, Powell, 1998.
- ¹⁰³ A compromise approach, like the framework for interconnection in wireless roaming based on negotiations between parties with the agency asserting clear authority of situations where an agreement could not be reached, may be an attractive “lite-handed” approach, if it does not undermine the *ex ante* nature of access that is central to innovation at the edges without permission.
- ¹⁰⁴ Stigler Center, 2019, p. 14.
- ¹⁰⁵ Id., p. 16.
- ¹⁰⁶ Id., p. 19.
- ¹⁰⁷ Id., p. 19.
- ¹⁰⁸ Id., p. 21.
- ¹⁰⁹ *The Consumer Case Against Microsoft* (Consumer Federation of America, October 1998)
- ¹¹⁰ *Big Data Platforms, A New Chokepoint in the Digital Communications Sector, Meeting New Challenges with Successful Progressive Principles*, Consumer Federation of America, Working Paper No. 4 on Pragmatic, Progressive Capitalism, September 2020.
- ¹¹¹ Response of Public Knowledge and Consumer Federation of America to European Union Questionnaire for the public consultation on a New Competition Tool, Sept 8, 2020.
- ¹¹² *Hastings Law Journal*, 52: 4, April 2001, first presented at *Conference On Antitrust Law In The 21st Century Hasting Law School*, February 10, 2000