
NISKANEN C E N T E R

Regulatory Comment

Comments submitted to the Federal Trade Commission in the Matter of:

HEARINGS ON COMPETITION AND CONSUMER PROTECTION IN THE 21ST CENTURY

The Identification and Measurement of Market Power and Entry Barriers, and the Evaluation of Collusive, Exclusionary, or Predatory Conduct That Violates the Consumer Protection Statutes Enforced by the FTC, in Markets Featuring “Platform” Businesses

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EXECUTIVE SUMMARY

Platforms are unique businesses — their purpose is more often to bring customers together to complete an exchange with *each other* than it is to sell something directly to the customers. The service being provided is that of a matchmaker, finding two people who could profitably trade but haven’t done so yet for lack of information or because transaction costs were too high without a trusted intermediary.

The platform business model also leverages one of the more powerful forces in the economy — network effects — to scale quickly and maintain momentum behind the entire ecosystem. Network effects mean the product or service increases in value with the total number of customers. This fact alone has traditionally been cause for concern, posing the danger that platforms will grow without bound and first movers in a market may win with an inferior product.

But recent research has shown that the dynamics of the digital economy are different in the 21st century than they were in the 20th century. Last century, all the action revolved around the desktop computer. This

century, the multiplicity of devices and ease of direct communication means middlemen can quickly find themselves cut out or replaced. We also now have better evidence on negative network effects — caused by congestion, competition, advertising, and spam — that are making us rethink our assumptions about how self-reinforcing these platforms actually are. It's a complex landscape and policymakers would be wise to wade slowly as they enter the sector currently creating the most value in the economy.¹

INTRODUCTION

The internal combustion engine turns chemical energy — typically from combusting gasoline — into mechanical energy by moving pistons inside the cylinder where combustion occurs. This turns the crankshaft, which turns the flywheel, which turns the wheel. The pistons fire intermittently, but the wheel needs continuous power for a smooth ride. That’s where the flywheel comes in. The flywheel continues spinning even after the initial stimulus stops, which means it collects energy over time, extending the output of the energy source. It uses its own inertia to smooth out the torque from the pistons. In other words, it’s the tool engineers use to leverage momentum.

Jim Collins applied this concept to business, observing that the best companies are constantly trying to find new flywheels that create positive feedback loops and allow success to feed on itself.² Jeff Bezos, the founder and CEO of Amazon, is famous for using this framework to evaluate decisions at his company:³

Bezos and his lieutenants sketched their own virtuous cycle, which they believed powered their business. It went something like this: lower prices led to more customer visits. More customers increased the volume of sales and attracted more commission-paying third-party sellers to the site. That allowed Amazon to get more out of fixed costs like the fulfillment centers and the servers needed to run the website. This greater efficiency then enabled it to lower prices further. Feed any part of this flywheel, they reasoned, and it should accelerate the loop.

The flywheel described above has multiple input points a management team can add power to and make the whole wheel turn faster. There are supply-side economies of scale, or the lower unit costs caused by spreading large fixed costs (e.g., fulfillment centers) over a higher quantity of sales. And then there are demand-side economies of scale, also known as network effects. When the value of a product or service increases with the number of total customers, that’s a network effect.

The classic example is the telephone: The more people who have one, the more useful each telephone is. In Amazon’s case, as the volume of sales increased, more third-party merchants joined Amazon’s marketplace and made it a more valuable service for shoppers. In the following sections, we will discuss whether platforms have unique implications for antitrust policy and how network effects might inform an analysis of competition in these markets.

PART I: ARE PLATFORM BUSINESSES SPECIAL?

A. Whether the platform business model has unique implications for antitrust and consumer-protection law enforcement and policy.

B. Whether and how the presence of “network effects” should affect the Commission’s analysis of competition and consumer protection issues in these markets.

Platform businesses bring together a large number of people to interact, communicate, and exchange with each other. Modern technology platforms are “two-sided markets,” meaning they have two distinct user groups who can potentially benefit one another. These platforms can grow quickly by leveraging indirect network effects, meaning that when one user group grows, it becomes more valuable to the other user group. Operating systems are a case in point: Developers’ demand for adopting a particular operating system depends on the number of users, and users’ demand depends on the number of developers creating applications. If an operating system can reach critical mass — the point at which the value of the platform exceeds its cost for a large number of customers — it can engage the powerful flywheel effect where more

users create more value for developers and vice versa. Research has shown that the social benefit from someone buying a new computer can exceed the private benefit due to these indirect network effects.⁴

A successful platform can decrease search costs and reduce deadweight loss by brokering exchanges that never would have happened without it. Since the Internet became widely available in 1994, about 70 percent of the value creation in the technology sector has come from companies with network effects at the core of their business models.⁵ But before a platform reaches that point, it must overcome a chicken-and-egg problem caused by the interdependence of demand between the customer groups. Who wants to join a two-sided market with no one on the other side? One way to solve this problem is for the platform operator to subsidize one side (usually the one with higher elasticity of demand or the one that creates more value for the platform) by raising prices on what’s known as the “money side.”

The red herring for policymakers when evaluating multisided platforms is that if they are defined as one-sided markets, then it might seem like the “money side” is being exploited by these higher prices. That is an erroneous conclusion because the high price charged to the money side is being used to get the subsidy side onto the platform. (In some cases, the price charged to the subsidy side — which is often zero — can even fall below the platform’s marginal cost). For these markets, you do need to “net out” the effects of price changes across customer groups and consider effects on output to determine consumer welfare effects.

The Supreme Court’s recent decision in *Ohio v. American Express Co.* was narrow and will only apply to transaction-based multisided platforms — i.e., platforms that facilitate a direct exchange between a buyer and a seller — with significant network effects.⁶ FTC Chairman Joe Simons concurred with this view, calling the ruling “extremely narrow” and predicting that “it’s going to apply to very few situations.”⁷ However, the Supreme Court did commit one error with potentially wide implications when it reasoned that simultaneous transactions were the defining feature of two-sided markets. Interdependence of demand is the actual *sine qua non*. And as Will Rinehart, the director of technology and innovation policy for the American Action Forum, pointed out, “if the lower courts come to rely on [simultaneous transactions] to define platforms, then some assessments of competitive effects are likely to be wrong.”⁸

Companies should not be treated as monoliths: They often have one division or subsidiary that operates a two-sided market while the rest of their products and services are sold in traditional one-sided markets. They also have varying levels and types of network effects that will be affected differently by this ruling and therefore should be treated on a case-by-case basis. This is also the approach advocated by Makan Delrahim, the top antitrust official at the Department of Justice: “The ruling doesn’t treat all two-sided marketplaces alike” and “other companies, like Amazon, might find some parts of their business protected and others not.”⁹

PART II: FANTASTIC NETWORK EFFECTS AND WHERE TO FIND THEM

Taxonomy of Network Effects

Communication networks have the strongest direct network effects — in which each user benefits when a similar user joins — of any platforms. Their *raison d’être* is to enable people to interact with others. WhatsApp, Facebook Messenger, Slack, iMessage, and Snapchat all serve this purpose, and collectively they have billions of users. In the pre-Internet age, the phone and fax machines were communication networks that also grew in value with their size.

Marketplaces facilitate transactions between two or more distinct groups and help minimize transaction costs, which results in more exchanges and an increase in social welfare. From the analog era, we have shopping malls that match retailers and shoppers; flea markets that match buyers and sellers; and night clubs that match singles (n.b.: ladies' night means that women are the subsidy side of the market and men are the money side). In the digital economy, there are eBay, Craigslist, and Amazon Marketplace for matching merchants and customers; Uber and Lyft for matching drivers and riders; Postmates and Grubhub for restaurants and eaters; and Airbnb for hosts and guests.

Social media like Facebook, Instagram, Twitter, Pinterest, Reddit, YouTube, and LinkedIn combine the direct network effects of communication networks (the “social” part of the name) with the matchmaking of marketplaces. Social media websites aggregate attention and then sell pieces of it to advertisers for targeted campaigns. Newspapers, magazines, television, and radio used to be the primary platforms for this latter function in the predigital era.

Platforms, such as operating systems and video game consoles, are ecosystems of users and developers and demonstrate both strong direct network effects (many apps that involve communication and collaboration become more useful with more users) and indirect network effects (app developers want more users and users want more apps), with the result that these markets tend toward oligopoly. Today, there are only three big personal computing platforms: Windows, which leads the desktop OS market with more than 88 percent market share, and Android and iOS, which together have almost 97 percent of the mobile and tablet OS market.¹⁰¹ The video game console market is almost entirely divided among three companies: Sony, Microsoft, and Nintendo.¹²

Data networks are a new type of network that did not exist before the Internet made collecting, analyzing, and applying large datasets economical. Waze uses a driver's speed and location to improve routing and navigation for other users of the app. Yelp and Netflix collect data and ratings to improve recommendations for users. AncestryDNA and 23andMe create databases of their customers' genetic data, which are then used to improve genetic analysis for those same customers. All of these data networks have direct network effects, i.e., after *each* user's data is added to the network, the value of the service provided by the network increases to *every* user.

Standards, formats, and protocols are difficult for companies to monetize and tend to be open rather than closed by nature. These characteristics, combined with very strong direct network effects, often lead to a single format or protocol being universally adopted. Two recent and notable examples are the Blu-ray high-definition optical disc format and the Internet protocol suite (also known as TCP/IP). Languages also have powerful direct network effects that are highly localized.

Network Effects Aren't What They Used To Be

I. Proliferation of physical devices and digital platforms lowers switching costs

Network effects may not be as effective at increasing market power in the 21st century — the age of digital platforms and multiple devices per consumer — as they were in the 20th century, when there was one dominant platform (i.e., Windows) tied to one piece of hardware (i.e., the desktop computer). Users often engage in what's known as “multi-homing,” where they use multiple products or services in the same market (e.g., many consumers carry multiple credit cards in their wallet). This behavior naturally leads to an increase in competition as alternatives are always one click away, either figuratively or literally.

2. Network effects have become highly localized

The generally accepted model of network effects depicts them as increasing with the total number of users at a more or less constant rate. Catherine Tucker, a professor at MIT Sloan, has a body of research showing that this is the wrong way to think about how network effects operate in the real world.¹³ Most network effects are local, not global. She has found that “network externalities are often very local in a way that renders the general size of the platform unimportant ... in a world of scarce attention, users tend to focus only on connections and interactions that matter personally to them” and “the evolution of platforms has led them to be more personalized and individualized in the services they offer.”¹⁴ There is also separate research on the video game console industry showing diminishing network effects, i.e., the marginal impact on demand of a unit increase in network size was larger for smaller networks than for bigger networks.¹⁵ An analysis of the ride-hailing market also finds diminishing effects for Uber and Lyft.¹⁶

3. Network effects can be negative, too

In the general discussion of network effects, *positive* network effects predominate. This is understandable given how strong they can be at creating momentum for a platform. But network effects can be negative as well. Merchants or suppliers often experience a negative same-side network effect — more sellers just mean more competition and lower margins. Platforms can also play an important role curating content for their users. As the network grows, that can get harder to do well and users may feel inundated with irrelevant or low-quality content. Many platforms monetize via advertising, which similarly creates a negative cross-side network effect for users who just want the free services. Lastly, rapid growth can lead to a decrease in user quality. Early adopters may flee a platform if late adopters send unwanted messages or don’t conform to community norms.

4. Users can go off-platform

Users also always have the option to cut out the platform and complete a transaction in another venue. The incentive to do so is higher in markets that involve repeat business or high-value transactions. Recently, the popular free-to-play game Fortnite cut out the Google Play Store and invited users to directly download it from the publisher’s website, thus avoiding paying the fee to Google for in-game purchases.¹⁷ Digital platforms and networks also still typically compete against physical platforms and networks, such as brick-and-mortar retailers, and consumers often view them as substitutes.

Interventions and Novel Frameworks Can Be Risky

One of the most infamous interventions to prevent anticompetitive behavior in a platform market was the interoperability mandate imposed on AOL’s instant messaging service as part of the consent decree for its merger with Time Warner.¹⁸ Complying with this requirement cost AOL significant time and effort that could have been better spent preparing for the transition from desktop to mobile.¹⁹ A white paper prepared for the European Parliament said that “these obligations on AOL are widely viewed as having been a dismal failure.”²⁰

The German government is laying the groundwork for a platform intervention predicated on a half-baked framework for analyzing consumer harm.²¹ The argument is that the most dominant platforms are “data price gouging” their users by requiring them to share their data in exchange for free services. This novel theory has a few fundamental problems, as the Niskanen Center detailed in a research brief this year.²² For starters, before one can determine if there is price gouging, one must determine the price for data. But it’s not clear that’s even possible, and the empirical evidence in this area is severely lacking. From first principles, data is

neither homogeneous nor inherently valuable; it is worth different amounts of money to different people in different contexts.²³

PART III: SUMMARY OF RECOMMENDATIONS

1. Distinguish between supply-side economies of scale and demand-side economies of scale (i.e., network effects) when analyzing platforms for consumer protection and antitrust enforcement.
2. When analyzing a two-sided market for anticompetitive behavior and consumer harm, it is appropriate to net out harms and benefits between the two sides only if two conditions are met: two distinct customer groups are identified and there is a significant interdependence of demand between the two groups (i.e., indirect network effect).
3. Identify the negative and positive network effects for each platform individually and assess whether the effects are diminishing, increasing, or constant before determining market power.

CONCLUSION

Platform business models may be exceptional in their ability to produce surplus for themselves and for their customer groups, but any potentially anticompetitive behavior these innovative firms engage in should be tested against the consumer welfare standard. The clearest definition of what that test entails can be found in the Department of Justice's horizontal-merger guidelines, released in 2010:²⁴

The unifying theme of these Guidelines is that mergers should not be permitted to create, enhance, or entrench market power or to facilitate its exercise. For simplicity of exposition, these Guidelines generally refer to all of these effects as enhancing market power. A merger enhances market power if it is likely to encourage one or more firms to raise price, reduce output, diminish innovation, or otherwise harm customers as a result of diminished competitive constraints or incentives. In evaluating how a merger will likely change a firm's behavior, the Agencies focus primarily on how the merger affects conduct that would be most profitable for the firm.

This test is comprehensible and actionable, with a reasonable focus on real rather than perceived harms to consumers. Its logic applies equally well to enforcement decisions beyond mergers.

We hope that our comments have helped in mapping out the platform landscape and clarified how network effects work in both digital and analog markets. We would like to thank the FTC for the opportunity to comment on this issue and we look forward to continuing to engage on this and other topics as the hearings progress.

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