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Multisided Markets & Platform Dominance

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MULTISIDED MARKETS & PLATFORM DOMINANCE

ABSTRACT

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The internet giants – Facebook, Amazon, Netflix and Google, among others – have transformed society with both positive and negative effects. The negative effects have been stark. There have been huge disruptions caused by e-commerce. More recently, subtler, but even more serious negative effects are only now being recognized: threats to democracy, violations of privacy, and monopolistic behavior.

By traditional measures Facebook and Google are highly concentrated. Each has obtained *de facto* monopolistic or oligopolistic power with little concern on the part of government.

Facebook and Google and other internet giants are multisided markets (MSM); their economic rents are "hidden" from the public. On the user-side of the market, prices are zero – "free." On the other side of the market, Facebook's and Google's revenues are derived from advertising which appears when the users click on advertiser's web sites. Facebook and Google can extract exorbitant prices for ads, since they are virtually the only source that can target ads directly to potential customers. This is where the economic rents are not so obvious.

This paper addresses the monopolistic/monopsony aspect of the internet giants. In the single-sided market, monopoly pricing is well defined – as well as tests for predatory behavior; not so with multisided markets. Since the definition of markets is central to the legal enforcement of antitrust statutes, the paper examines non-transactional multisided markets for their potential for determining consumers' harm and welfare effects, as well as defining monopoly and predatory pricing in this context. Initial estimates of Google's and Facebook's social cost in terms of consumers' welfare loss are $54 and $33 billion, respectively and increasing cost to consumers at least $87 billion dollars. It demonstrates and quantifies that dominate internet platforms can create three major harms to consumers:

- Increasing prices to consumers *via* added costs to the products being advertised,
- Elimination (or non-emergence) of competition in markets to the products being advertised,
- Increasing prices to consumers beyond the cost of advertising *via t*he market power of the remaining firms in the market of the products being advertised

The paper outlines potential remedies to ameliorate the problems.

Keywords: Advertising, Antitrust, Consumers' Surplus, Internet, Platform Economics, Regulation, Two-Sided/Multisided Markets.

JEL Codes : D42, D43, K21, L12, L13, L22, L51, L96

MULTISIDED MARKETS & ANTITRUST[*,+]

OVERVIEW/INTRODUCTION

There can be no doubt that the FAANG companies[1] – Facebook, Amazon, Apple, Netflix and Google, as well as Twitter – have transformed society since their emergence; the changes wrought by their services have had ripple effects that are both positive and negative. On the positive side, soaring consumer access to information, news, social networks, and entertainment has been stimulated by the ever-more ubiquitous and falling prices of broadband fixed and mobile bandwidth. E-government has transformed the delivery of public services.

However, negative effects have likewise been stark. Certainly, there have been huge disruptions caused by e-commerce. Retail industries, industrial supply chains, banking and publishing are just a few obvious examples. Brick & mortal stores are closing. State tax collectors are fighting the loss of sales tax collections.

The internet giants give rise to three issues: privacy, threats to democracy, economic dominance. Privacy is not simply the collection of data for commercial use to target ads to users, but has been used in more malevolent ways: political manipulation, collecting data from children and government surveillance. The Cambridge Analytica was a wakeup call on the malevolent use of users' data. The use of social media on Facebook and Twitter, in particular, to spread misinformation and facilitate fraud has raised legitimate concerns about their responsibility for undermining democratic institutions, instigating cyber-bullying, enabling identity theft and distorting public opinion. On the other hand, social media has also facilitated the Arab Spring, the Orange Revolution, and March for Our Lives. Policy makers and regulators are caught between conflicting values of free speech and expression on the one hand and the desire to mitigate these and other injuries to social and government institutions on the other. As important as these issues are, we do not address them in this paper except to note that their significant market power (SMP) and dominance can magnify, aid and abet these malevolent actions. Here, we are concerned with the economics consequences of the SMP of the internet giants. What is the cost to the consumers and society of this market power? It is significant – . approximately $54 billion in the case of Alphabet (Google) and $33 billion in the case of Facebook in 2018.

Because Facebook and Google and other internet giants are two-sided markets their economic rents are "hidden" from the public. On the user-side of the market, prices are zero – "free." On the other side of the market, Facebook's and Google's revenues are derived from advertising which appears when the users go to various web sites. Facebook and Google can extract exorbitant prices for ads, since they are virtually the only source that can target ads directly to potential customers. This is where the economic rents are not so obvious. Since 1980, the antitrust authorities have focused, with few exceptions, on the users-side of the market, which

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[*] Portions of this paper have been adapted from Alleman & Taschdjian (2019).

[+] As we were finishing this paper, the Justice Department is reportedly preparing a possible US antitrust suit against Alphabet (Google) (Novet and Elisa 2019).

[1] Facebook, Amazon, Apple, Netflix, and Google are referred to by the acronym FAANGs (in Europe, Apple and Microsoft are added to the list and are referred to as GAFAMs). One might include Twitter in the list.

in the case of internet giants, is free. Where is the price gouging? On the other side of the market! The Supreme Court's decision in *American Express* addressed a two-sided transactional market, not the case of a "media" platform which is non-transactional such as Facebook and Google and many other internet platforms (Katz 2018).

The European Commission has alleged that "…Google treats and has treated more favorably, in its general search results pages, Google's own comparison-shopping service "Google Shopping" and its predecessor service "Google Product Search" compared to rival comparison-shopping services"(European Commission 2015). More recently it was fined $1.5 billion Euros for antitrust violations in the advertising practices. It third fine since 2017 (Satariano 2019) Its fine in 2018 was $5 billion (SEC Alphabet 2019).

The United States has not been as aggressive, in large part due to the deregulation trend in the eighties and Bork's *Antitrust Paradox* (1978) book which argued that unless consumer welfare and competition were adversely impacted, there was no need for antitrust intervention. This paper shows that both these conditions exist in the internet space, despite the hands-off approach of the US regulatory authorities and acceptance in many judicial decisions.[2]

The paper is divided into six sections beginning with this section. The next section briefly describes the internet platform markets: Why and how Facebook and Google are an economic threat and why economic incentives promote anticompetitive behavior. The third section develops the theory of the two-sided for the platforms. The fourth section estimates the economic cost of these monopoly platforms; the paper focus on Facebook and Google, but the methodology could be applied to other dominate platforms. The fifth section examines potential remedies and solutions. And why remedies require more than the internal controls that have been proposed by the firms. The last section summarizes and makes tentative conclusions.

THE ECONOMIC THREAT OF DOMINATE INTERNET PLATFORMS

Network Externalities

For Facebook, Google and other internet giants gain their position from the existence of positive externalities, i.e. network effects, such that the service becomes more valuable to users, the more users there are.[3] Adding users makes the service more valuable, which attracts more users, which makes it more valuable, etc. The expansion of network effects is underpinned by a business model that provides their services free to end-users and relies on advertising revenues for profits.[4]

[2] Bork's book has many critiques – among both economists and lawyers. See Khan (2017).

[3] That is not to say that these firms do not exhibit economies of scale and scope, but this is not their main competitive advantage.

[4] Other platforms have different business strategies, for example, Amazon (Khan 2017).

The Markets[5]

The percentage of the population that uses social media has grown dramatically over the last decade. In the United States, as of 2015, data indicate that over eighty percent (81%) of the adult population use social media as shown in Figure 1 (Statista 2018). When one examines what sites are visited, Facebook dominates, with twice as many visits as any other site (Figure 2).[6]

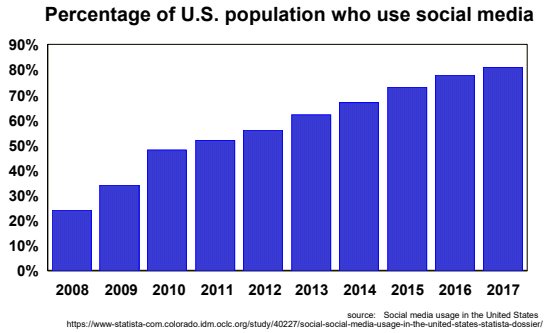

Figure 1. Population who use Social Media in the U.S.

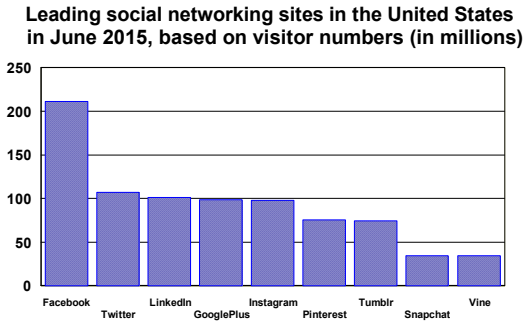

Figure 2. Visitors to Social Network Site in the US

Facebook also dominates the users of social media in the United States. Nearly eighty percent (79%) of users belong to Facebook while less than one-third of the users have accounts on the other social media sites. In these terms, Facebook dominates the field, and this is reflected in its revenue of nearly 40 billion dollars (Figure 3). Its latest results show a growth of revenue of 40 percent. Facebook is so dominated that Google+, Google's social media platform exited the market even though it ranked fourth in visits in 2015 (Welch 2019).

With respect to search, Google dominates with over three-quarters (75.8 %) of the search advertising revenue in the United States (see Figure 4). Some estimates suggest it is even higher, approximately ninety percent. On the other hand (being good economists), Khan

[5] For more details on the size, distribution and other characteristics of the internet platform giants, see Alleman & Taschdjian (2019).

[6] Recall, Facebook owns Instagram, which ranks fifth in visits.

(2018) reports that Amazon is Googles' biggest rival in terms of search. Forty percent of product search begins with Amazon (Khan 2017).

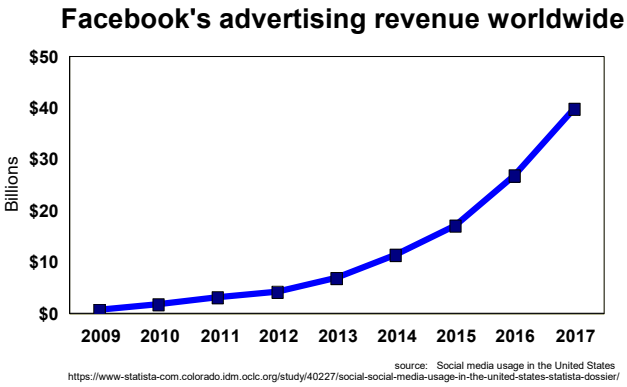

Figure 3. Facebook's Advertising Revenue

The percentage of digital advertising has been growing, primarily, at the expense of TV and newspapers. Digital advertising has doubled between 2010 and 2015 – growing to one-third of the US market as of 2015. At that growth rate it could reach 50 percent of the United States total advertising revenue (Statista 2018).

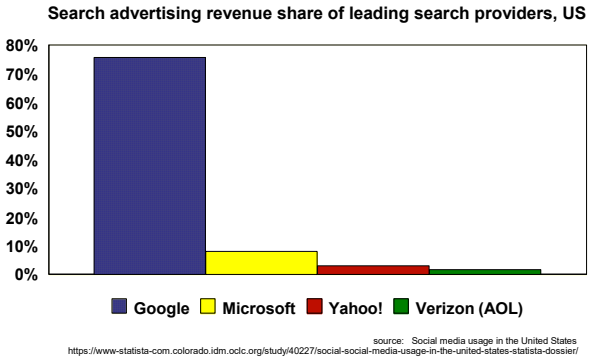

Figure 4. Search Market Revenue Share, US

TWO-SIDED/MULTISIDED MARKETS

Overview

Under the Chicago School doctrine as expressed by Bork (1978, 1993), the Department of Justice (DOJ) and Federal Trade Commission (FTC) do not see any consumer harm in the dominance of internet platforms, since the consumers' price is zero with Facebook and Google (Khan 2017, Bork 1993). They are not, apparently, aware of the research over the last decades on two-sided and multisided markets (Parker, *et al.* 2005).

A two-sided market is one in which the firm sells to the consumer on one-side and the advertiser, for example, on the other side.[7] Newspapers are among many examples. In some cities, newspapers are free to the consumer, but "paid for" by the advertisers. In other cases both sides of the market have a positive price. The former, free to the consumer, represents the Facebook-Google model: The latter represents major newspapers or the online *Wall Street Journal* model. What the DOJ and FTC policy have failed to consider is the second side of the market. The policy does not consider the harm done to the consumers by the high price of the advertising as shown below. These prices get reflected to consumers in the higher prices they must pay for the goods and services advertised.

With network effects, the rationalization for "free-to-the -user" is amplified. Since the user is, presumably, more price sensitive, lower or zero prices on this side of the market will increase the number of users, and the value to the advertiser, the second side of the market. Google and Facebook do not have to be concerned with advertisers switching to other platforms since they are virtually the only game in town.

Google and Facebook dominate worldwide digital advertising revenues. In the United States, Google/YouTube and Facebook/Instagram together garnered 63.1 percent of net digital ad revenues (eMarketer 2017).

The small-but-significant-and-non-transitory-increase-in-price (SSNIP) test, which is normally applied to test for market power as well as to define relevant markets, is not helpful in the case of retail services that have zero prices.[8] But it is applicable to advertising. If Facebook or Google were to permanently increase the price for advertising, would advertisers shift their purchases, either to competing venues or by reducing advertising overall? Since the platform's ads are targeted with laser-like focused, the advertisers are not likely to leave since they do not have a good substitute for the platform.

Analysis of Harm

Monopoly Prices

In a two-sided market, an internet platform like Google serves as a digital advertising intermediary between sellers and potential customers through its control over ad spending. Because of its unique focus on customers' demographics, Google is able to exercise monopoly power through an auction of prime ad space to sellers who want "front page" access to potential customers.[9] In so doing, the internet platform obtains billions of dollars at the expense of sellers and indirectly from the consumers of the products advertised.[10]

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[7] For simplicity, the analysis is developed as a two-sided market, but more correctly they are multisided markets (MSM). See Evans & Noel (2008), Evans & Schmalensee (2008), Katz (2018), Katz & Sallet (2018), OECD (2018).
[8] In contrast to Amazon's announced increase in the price on Amazon Prime by nearly twenty percent (Stewart, 2018).
[9] The "front page" is the first screen the viewers sees.
[10] To understand how the AdWords auction works see https://www.wordstream.com/articles/what-is-google-adwords or https://blog.tryadhawk.com/google-adwords/how-google-adwords-works/. From the source, see https://ads.google.com/home/.

To illustrate the economic harm that a two-sided monopoly can do, we simplify the model for advertising prominence on a digital platform like Google. On the consumer-side of the market, the access for search is "free," except for ads, pop up and other click-bait distractions. On the sellers' side of the market, there is access to millions of customers and laser-focused placement of advertising and top billing for the sellers from customers' searches. This comes at a direct cost to sellers and indirect cost to customers. In this advertising market, a firm like Google charges dynamic-monopoly prices.[11] Assume the marginal cost is constant, not an unrealistic assumption when the firm has tremendous economies of scale coupled with network effects (Shapiro and Varian 1997).[12] Using traditional microeconomics techniques, the maximum economic profit is determined, as shown in Figure 5 i.e. at the point that marginal cost (MC) equals marginal revenue (MR), profit is maximized by setting the price at P and selling Q. The area A represents the economic profit. In contrast, the social welfare maximizing price would be P' and the quantity sold would be Q'.[13]

Increase in Product Prices

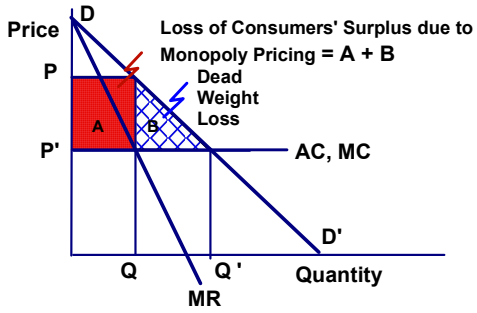


Figure 5. Platform Effect: Demand for Internet Advertising

In terms of welfare, the loss of consumers' surplus is the area under the demand curve above the marginal cost curve plus the over-charging by the internet platform in Figure 5 – the areas A plus B. Thus, the total economic loss of the monopoly pricing is the areas A plus B. Although indirect, this harms the consumers (as will be shown below), although this harm seems to go unrecognized by the antitrust authorities.

Okay, so you charge the advertisers a lot, what is the harm? Who pays for the adverting? In the long run, the consumers pay in the price of the products advertised. (Not rocket science), The price of these products is increased by the cost of the advertising. Simplify, once again, the additional cost is added to the price of the products which were advertised, as shown in Figure

[11] Google, for example, holds auctions continually, to set the price paid for advertising (Varian 2019). Thus, it can extract the greatest revenue out of this side of the market on an ongoing basis. It is practicing first-degree price discrimination on a continuous basis. The best of all possible worlds for a monopolist.

[12] Positive network effect shifts the derived demand for advertisers to the right, that is as more subscribers are added to the platform, the more valuable the platform is to the advertisers.

[13] In perfect competition (and other conditions), the pricing at marginal cost gives the best possible outcome for the society (if perfect competition ever existed except in the minds of the economists); hence the "welfare maximizing" price. The issue is more complicated when economics of scale and scope exit. See Alleman and Rappoport (2006).

6. (Note this is the seller's market, a different market from Figure 5.) The price has to be increased for P' to P to cover the cost of the advertising. The increased cost is a social loss of A plus the consumers' surplus loss of B''.

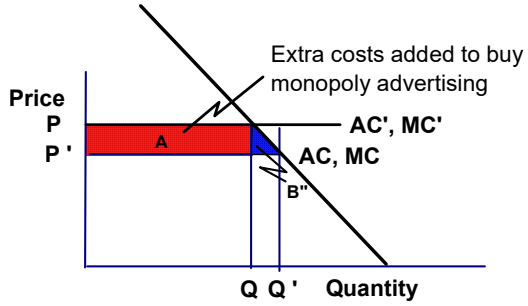


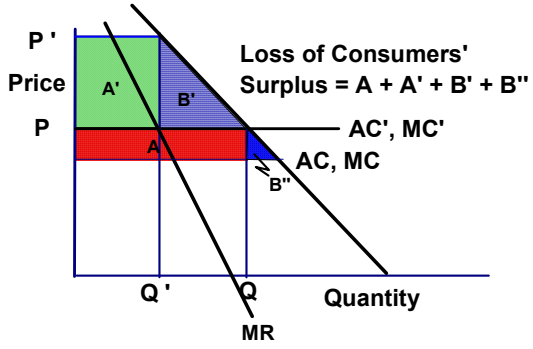
Figure 6. Product Effect: Extra Cost of Product due to Monopoly

Via this method the monopoly rents are borne by the consumers.

Elimination of Competition

But this is not the only harm done by this monopoly market structure. Potential entrants will have difficultly entering the product market , since they must pay the cost of advertising to the monopoly. While only a sample of one, over 30 percent of the total operating cost for one start-up is the price it pays for Google AdWords.[14] This is a significant amount for any company, but in the case of Google, a click does not necessarily mean a conversion to revenue for the start-up, only for Google. Every click costs the start-up, but does not mean the "clicker" uses the service or buys the product. Potential startups may not have sufficient funds to cover this additional cost and are driven out of business or find it too expensive to even enter the market.

Since competition is reduced through the elimination of less capitalized firms, the remaining product market firms gain significant market power (leveraged by the platform's monopoly prices) and, in the long run, may pass on these advertising costs to consumers through their own monopoly pricing. The resulting profits in the product seller's market are as illustrated in Figure 7 are A' (which reproduces Figure 6 and adding the marginal revenue curve to determine maximum profit for the seller). The total loss in consumer surplus is the area A' + B' + A + B" had the markets been competitive. Free is not free, it is an illusion.



[14] Discussion with John Korbel, a StoreMe director, 9 April 2019. StoreMe is an on-demand luggage storage start-up serving the major cites on the east coast. See https://getstoreme.com.

Figure 7. Extra Cost to Consumers due to the Elimination of Competition

To summarize, the social cost of the platform monopoly is:

- The economic rent (profit) extracted by the internet platform and the loss of consumers' surplus;
- The increased cost to consumers of the products advertised on the internet platform, and to the extent it thwarts competition;
- The increasing pricing power of the sellers due to the reduction of competition, which results in increased prices to consumers and an additional loss of consumer surplus.

Estimation of Welfare Loss

A first approximation of the welfare loss is the (economic) profit of the internet platform, since this is derived from its monopoly position. This is large, $35.8 and $22.1 billion for Google and Facebook, respectively (SEC Alphabet 2019, SEC Facebook 2019).[15] This is represented by the area A in Figure 5. But this is only part of the story; the total loss must consider the "dead-weight" loss, half of the profits under the assumption of a linear demand curve. The consumers' surplus is the profit plus the dead-weight loss, estimated below.

The loss of consumers' surplus was calculated based on SEC data for Google & Facebook. With the assumptions of a linear demand curve and a constant marginal cost (MC) is enough to make an estimate of consumers' surplus.

The revenues, costs and profits from Google and Facebook were obtained for 2018 from companies' Securities and Exchange Commission's 10-K filing (SEC Google 2019, SEC Facebook 2019). Profits come directly from the companies' 10-Ks. It is represented as area A in Figure 5 A constant marginal cost was assumed. This is a realistic assumption, given the strong economies of scale and network externalities. Since the marginal revenue (MR) exactly bisects the marginal cost (MC), the deal-weight loss is exactly half of the profits.

With the linear demand curve, the difference between the price (P) and marginal cost (MC) gives the height of the dead-weight loss calculation, and the linear demand curve means the width of the dead-weight loss will be equal to the quantity (Q). Then one has to simply calculate the area of a triangle to find the dead-weight loss, area B in Figure 5. Add this to the total profits to determine the total loss in consumers' surplus, areas A + B. The results were significant – approximately $53.7 billion in the case of Google and $33.2 billion in the case of Facebook in 2018.[16] Recall, this is an annual estimation, so the loss continues year after year. This is the loss to consumers' due to the monopoly of these two internet giants. To put this in

[15] Alphabet's net income was $30.7 billion, but it had an EU fine of $5.1 in 2018. This was added to the income, since, presumably, it was unanticipated.

[16] The authors recognize that this is a crude estimate, but a low estimate. Since profits are "hidden" by a variety of tax avoidance schemes, these are under-estimates of the loss. Google's dynamic pricing algorithm may also lead to an under-estimation of the calculation. On the other hand, because Google only makes 96 % of its revenue from advertisements this may overestimate the loss. Nor does this estimate account for a "normal" return on assets, which would lower the estimate. Nevertheless, it provides a rough order of magnitude of the problem and suggests further investigation.

perspective, it represents over 11 percent of online purchases for the US in the same year (Internet Retailer 2019).

REMEDIES AND SOLUTIONS

As noted in the introductions, the internet giants need some form of social control not only for the economic issues: monopoly profits, predatory pricing, elimination of competition, etc. but also for their threats to democratic and privacy (Alleman & Liebenau 2017, Wu 2016). The controls of the latter are important issues and can be handled, *inter alia*, by such tools as the "fairness doctrine," identifying sources of advertisements, or fake news, etc. While the issues on privacy and threat to democracy are important and should be addressed, this paper only suggests solutions to the the economics issues highlighted in this paper. By reducing the monopoly power of the internet giants, the solutions will buttress the tools to control these other areas.

Internal Tools: Promises not fulfilled

While Facebook and Google have called for regulation of internet platforms, this is self-serving in order to frame the regulation in their favor – it gets the "solutions" they want rather than what is best for the society. Facebook, Google and others could internally fix their problems, if they desired to, but there are no incentives for them to do so. Indeed, they "break things" and ask for forgiveness later. They always quick to apologize when they get caught doing something inappropriate, questionable, or illegal and promise to take corrective measures. However, the promises are not fulfilled in many cases. Indeed, Facebook, Google and others have not and do not conform with the current rules.[17] How can we expect them to correct their behavior without external measures? We cannot, so we turn to examine external remedies.

Antitrust

Antitrust action is an obvious method to reduce the power of the giant internet platforms by breaking them up. Unfortunately, based on the lack of action on the various acquisitions of FAANGs, this may not be a realistic strategy. Amazon's behavior illustrates how antitrust policy has been eroded. In May of 2018 raised the price of Amazon Prime by 20 percent, a clear sign of monopoly power (Rubin 2018). It also practices predatory pricing, thwarts competition, creates barriers to entry; but the current view of antitrust law, the neoclassical one, does not consider these practices deleterious (Khan, 2017). For Facebook and Google, the DOJ and FTC, apparently, only view one side of the market – the consumers' side – not the advertisers' side, who pay excessive prices because of the unique market position of the platforms. But if these regulatory units were to look more closely at the old tools of antitrust – structure, conduct and performance, as well as the advertising side of the market – they might have a different view (See Khan 2017).

Antitrust analysis as posited by the Chicago School is a poor tool. The precedent of imposing behavioral obligations on operators found to possess Significant Market Power (SMP) was established in the telecom industry for purposes of establishing interconnection between incumbents and new entrants. Such an approach should be examined for FANG companies.

[17] See Singer (2018) for the several violations of regulatory rules by Facebook and Google.

Facebook and Google have significant market power as measured by their Herfindahl-Hirschman indices (HHI) by several different definitions of markets. They range from 8,476 for Google in the market for search to 2,024 for Facebook in the market for social media – representing "highly concentrated" to "moderately concentrated" markets (Alleman & Taschdjian 2019). They have acquired many different firms with little or no antitrust scrutiny. Many of which have become major parts of their business. Alphabet (Google) has acquired over 200 companies (Wikipedia 2019a). Facebook has acquired Instagram, WhatsApp, Oculus VR, and some sixty other companies, many of which could be spun off (Wikipedia 2019b). The breakup of these companies would be complex but feasible. A smaller set of firms would ameliorate some of the issues.

Regulation: Treat as Utility

An obvious method of regulating internet giants is treating them as a public utility (Feld 2019; Abernathy, *et al.* 2019). They have become a vital infrastructure, critical to the economy, but under virtually no control. These internet platforms, particularly Facebook and Google, have suggested that they should be regulated, but they would set a self-serving agenda as noted above. Moreover, the firms have yet to control fake political posts from outside the country, "hate-speech," false news, and a variety of malevolent posts, has not been adequate. As important as these issues are, we will only address the economic controls in this paper. As a utility, the regulatory authority could use a variety of tools which are reviewed below:

Data Portability

Internet giants such as Facebook and Google have collected a variety of data from their users[18] and supplemented with third party data in order to pursue their business strategy of focused advertisements aimed at their users. It would be extremely difficult for any company to duplicate this data set. By making the data portable, it would loosen the power of network externalities to allow the internet giants to dominate the market. A requirement that this data be "portable" among internet platforms would go a long way to allowing competition into these market. If correctly structured, it would allow more transparency. Moreover, users could select what data they wish to keep private and what can be used publicly, or at least shared among the platforms. It would also allow the user-side of the market the ability to amend incorrect data, just as consumers can correct false financial information held by credit rating agencies. A secondary effect might be for the providers of the data to recognize the value of the asset they have given away.

Rate of Return Regulation/Profit constraints/Price-caps

In the utility industries: power, water, telecommunications, etc. have large capital requirements which gives the utility with economies of scale, and hence, monopoly control of the market. The regulatory solution to this market failure has been to control the rate-of-return (RoR) on assets in order to emulate the competitive outcome.[19] But in the case of

[18] User is used here to denote the suppliers of *their data* to the Facebooks of the world.

[19] A long and extensive literature exists on the problems with this and price-caps methods of regulation.

internet giants, it is the network externalities which gives the FAANGs their monopoly power, hence, the RoR does not offer a solution. Network externalities has to be confronted.

In response to the issues of associated with the RoR, many regulators adopted price-caps controls. That is the regulated firm could only increase its vector of prices by an index of inflation less a factor for efficiency. After its introduction in the United Kingdom, it has been extensively used in the telecommunications industry by countries around the world. Price has the valuable function of allocating valuable resources, thus in order for price-caps to be apply to the internet sector, prices would first have to be set at "costs" and then the price-caps could be implemented. Finding the correct "costs" would be an issue, but this could be overcome.

SUMMARY/TENTATIVE CONCLUSIONS

Traditional antitrust and regulatory tools rely heavily on static economic analysis to determine relevant markets and assess market power. Careless application of the tools to control monopoly power can lead to policy errors that undermine the dynamism of technological change and reduce consumer welfare. In a dynamic environment, antitrust and regulatory oversight is necessary.

Their pricing behavior has at least three consequences: It raises the prices for the goods advertised, since these costs must be covered by the selling party to stay in business. This is at least $35.8 and $30.2 billion for Google and Facebook, respectively. This harms consumers, obviously. An addition harm is the dead-weight loss generated by the monopoly pricing. The total welfare loss is at least $53.7 and $33.2 billion for Google and Facebook, respectively. Collectively, the two internet giants create a welfare loss of nearly 57 billion dollars!

Second, it thwarts potential competition on the consumers side of the market. Only those with deep financial pockets can afford the cost of advertising; the others will be excluded from entering the market. This harms consumers by eliminating competition in the market for the product being advertised, and, once again, a higher price for consumers. This higher price is in addition to the increase in price due to the cost of advertising. It amplifies the harm to consumers of the price increase due to advertising costs.

The irony is that the platform is eliminating competitors not from its market – it already has a monopoly – but for (from) its clients' market, the buyers of space/advertising on its platform. This has a secondary effect of increasing the market power of the seller of the products. To the extent that these firms have significant market power they can charge higher prices for the products they are advertising, causing additional consumers' harm.

Both platforms eliminating competition and harming consumers are grounds for some form of social control – the combined effect makes an even stronger case for treating internet platform giants as a utility and regulating them and/or vigorous antitrust actions for injurious conduct and performance. The "market" approach will not correct the problems. Proactive action is needed.

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