NEW ECONOMICS FOUNDATION

DIGITAL POWER PLAYERS

POWER AND ACCOUNTABILITY IN THE DIGITAL ECONOMY

PART 4: THE PROBLEM AND THE POWER OF TECH MONOPOLIES

Written by: Duncan McCann

New Economics Foundation
www.neweconomics.org
info@neweconomics.org
+44 (0)20 7820 6300
@NEF

CONTENTS

PREFACE

A new economy is emerging. And this new economy is powered by a new type of fuel: data. As the data economy becomes increasingly prominent, there are troubling signs that it is worsening existing power imbalances, and creating new problems of domination and lack of accountability. But it would be wrong simply to draw dystopian visions from our current situation. Technological change does not determine social change, and there is a whole range of potential futures – both emancipatory and discriminatory – open to us. We must decide for ourselves which one we want.

This is the fourth of four papers exploring power and accountability in the data economy. These will set the stage for future interventions to ensure power becomes more evenly distributed. This paper explores the rise of the tech giants, and how they are using tactics both new and old to ensure that they maintain and amplify their power.

Our research so far has identified a range of overarching themes around how power and accountability is changing as a result of the rise of the digital economy. These can be summarised into four key points:

- Although the broader digital economy has both concentrated and dispersed power, data is very much a concentrating force.
- A mutually reinforcing government-corporation surveillance architecture – or data panopticon – is being built, that seeks to capture every data trail that we create.
- We are over-collecting and under-protecting data.
- The data economy is changing our approach to accountability from one based on direct causation to one based on correlation, with profound moral and political consequences.

This four-part series explores these areas by reviewing the existing literature and conducting interviews with respected experts from around the world.

The tech giants have become essential to our modern digital lives and many of us interact with them on a daily basis. Although many of these companies started in garages, with ambitions to disrupt existing businesses and power structures, they are now the dominant companies seeking to maintain their position. But now that algorithms wield such influence, we have a responsibility not to misuse them.

- **We need to redefine monopoly and monopsony to tackle the tech giants**.
- **Tech company founders are using novel share structures to allow them to raise money without ceding control of the company to investors.**
- **Tech companies are using old tactics of lobbying and acquisition to maintain their power**.
- **By winning the customer with cheap prices and free services they have embedded themselves in our consciousness as our 'friend'**.
- **Existing remedies to tackle their dominant positions are unlikely to work against global tech giants.**

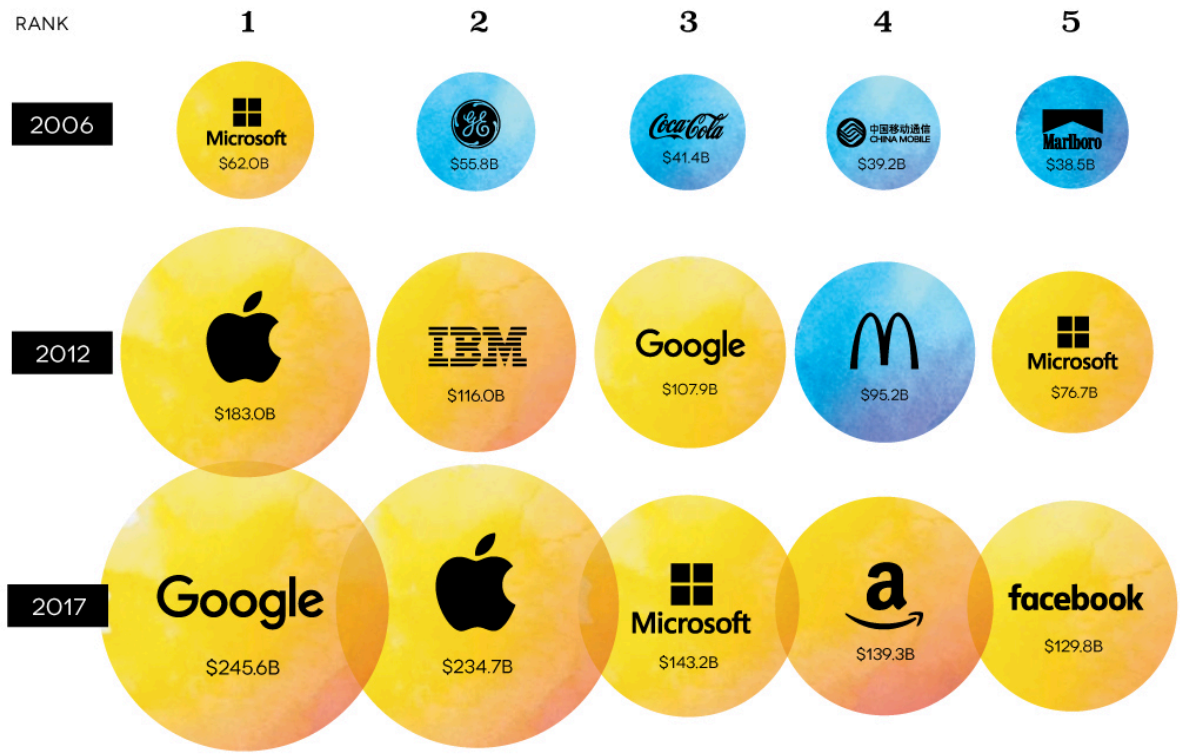
INTRODUCTION

The largest and most valuable companies have always been powerful in society and exerted significant control over the economic and political environment that they operate in. In this final edition of our overview of the data economy, we will look at these new mega corporations and their superstar founders to uncover the old and new ways in which they exert their power.

Just 20 years ago, only one of the top 10 most valuable companies in the world was a technology company. Today seven of the eight most valuable are tech companies, with five based in the US and two in China. They are: Apple (worth $927 billion), Amazon ($778 billion), Alphabet (the holding company for Google, worth $766 billion), Microsoft ($751 billion), Facebook ($542 billion), Alibaba (the 'Chinese Amazon', $499 billion) and Tencent (the 'Chinese Facebook', $491 billion), with a combined market capitalisation of $4.75 trillion.[1]

What is remarkable is the speed with which the technology sector has captured the top spot. Figure 1 below, showing the value of the top five brands (rather than whole companies) over time, illustrates the tech takeover that has been happening.

Figure 1. Value of the top five brands, 2006-2017[2]



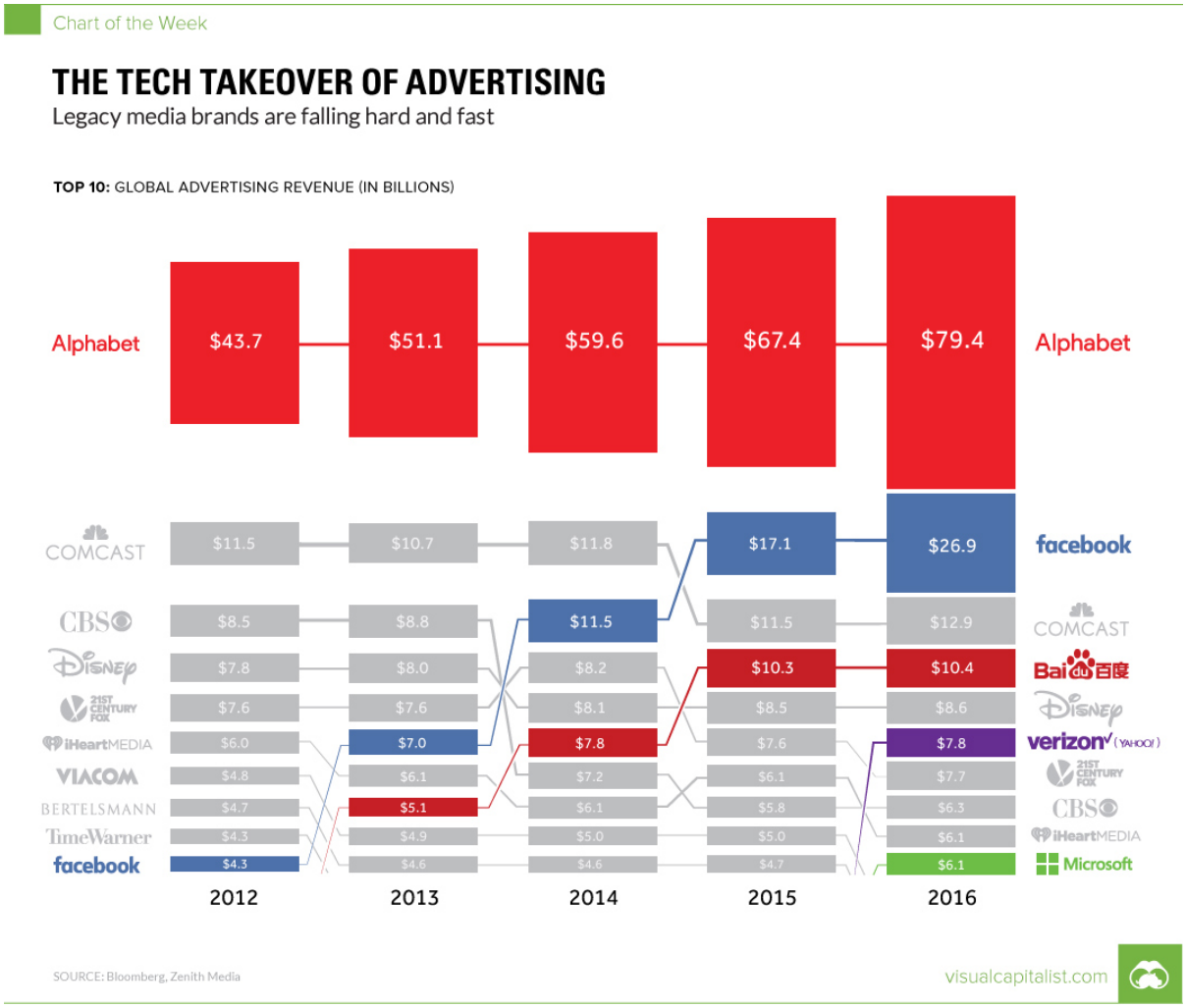
Many of the tech companies have seized entirely new markets, like Amazon with e-books or Google with search engines; or they share a market with a small group of competitors, like Google and Apple for smartphone operating systems. Other markets have been disrupted, with the tech companies generally coming out on top, like Google and Facebook in advertising, or Facebook and Tencent for messaging via Messenger, WhatsApp and Wechat, which they all own.

1. BACKGROUND

The story of how tech came to dominate advertising is illustrative of the power the new tech giants have. They are able to enter a mature market with large established players and a particular way of servicing the market, only to fundamentally alter the business model, enabling them to capture a significant portion of the market. This paper will focus on highlighting some of the ways in which tech companies establish and cement their power, but first will look at a description of the advertising market as an illustrative example.

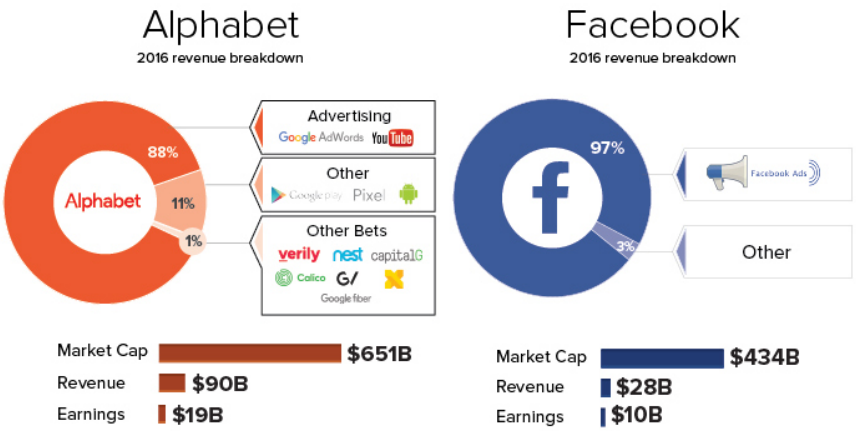
Figure 2 below shows how the tech companies have been able to consistently grow their ad revenue while previously dominant companies struggle to even maintain the revenue.

Figure 2. Top 10 companies by global advertising revenue (in billions)[3]



Out of a total $172.2 billion of advertising spend in the top 10 companies, over 60% goes to just Google and Facebook. Only taking online spend into account means that Google and Facebook have an 84% market share.[4] Both have grown their ad revenue sharply in the last decade, with Facebook growing by over 600% in the five years from 2012-16. Figure 3 below shows how reliant these companies are on ad revenue, with Facebook collecting 97% of their overall revenue from ad spending while at Google it accounts for 88%.

Figure 3. Alphabet and Facebook 2016 revenue breakdown[5]



Facebook and Google have different strategies to rule the marketing roost. Facebook's key advantage is the data that users share on the platform, giving them an almost unique insight into our personalities, which allows an aggressive strategy to push the potential of targeting messages at specific user segments. One example is how the company now embeds Facebook staff within election campaigns to help them make the best use of Facebook's platform to push their messages to potential voters.

Google on the other hand has opted for a different strategy. It also has rich and deep profiles on most of us through their ownership of Gmail, YouTube and of course, Google Search. Google's strategy has been to invest in the whole advertising industry, so that they not only get revenue when ads are placed on Google-owned sites, but by owning key parts of the advertising infrastructure, can make revenue even when ads are placed on other sites.

So many tech giants rely on advertising revenue. And advertising operates like a disease. Over time we develop immunity to certain advertising techniques. The first banner ads achieved click rates of over 70%; whereas today the average click rate for a search ad is 1.91%, and 0.35% for a display ad, despite both being much more contextually and personally relevant than the early banner ads.[6] In order to maintain their advertising revenue, platforms therefore need to be continually innovating their ad product to

ensure they remain effective. Evidence of this can be seen in Google recently launching the Google Marketing Platform,[7] or in the increasingly invasive nature of online ads. Coupled with this is the challenge of combatting fraud, with estimates that about 25% of ad spend goes towards showing ads to bots.[8] This has led the online ad sector to be a modern day battleground, where "surveillance giveth", to help platforms target us better, while "click fraud taketh away".[9]

What remains most interesting is that – despite Google controlling search, Amazon controlling online shopping and cloud services, Facebook being the dominant social network (although not necessarily for much longer) and Google and Apple sharing operating systems – none of them are currently seen by regulators and competition authorities as having contravened anti-trust law.

2. ISSUES

2.1 DEFINING MONOPOLY – EU V USA

One of the big challenges with the current tech giants is whether they should be legally defined as monopolies. In the US, the main rationale for state action against monopoly power historically has been to protect consumers who are being overcharged for a good or service. The tech model, which in many cases offers goods and services at very low costs or even for free, means that the likes of Amazon, Uber or Google cannot be defined as monopolies per this definition no matter what percentage of the market they control. Whereas the US has been using this particularly narrow definition and has failed to tackle the tech giants,[10] the EU has been applying a wider definition, leading to significant fines. Whereas, in the US, "[The Sherman Antitrust Act] doesn't allow one to just break you up because you're big and you're powerful",[11] the EU has targeted companies that abuse their powerful position in the market to prevent fair competition.

In July 2018, the EU Commission fined Google £3.8 billion for using its Android smartphone platform to secure dominance of its search engine. In May 2017 the EU fined Facebook $122 million for giving misleading information during a vetting of its deal to acquire messaging service WhatsApp in 2014.

Although the Facebook fine is welcome, it rests on a technicality, and although it seems a large amount it may well be seen as a cost of doing business. The fine to Google mirrors action taken against Microsoft when the EU applied a huge fine to prevent them using the dominance of the Windows system to promote Internet Explorer (IE). Although the action certainly had results, such as forcing Microsoft to offer users a choice of browser, it did not really address the monopoly position, and improvements in competitors' products, like Firefox or Chrome, are probably much more responsible for the demise of IE.

What we really need is a definition of monopoly that incorporates a couple of as-yet un-addressed additional concepts which the tech giants are well versed at exploiting. We need a broader definition that does not require consumers to be overcharged, but one that is based on the power that tech companies have over the market. The EU has, once again, taken some action in this area, fining Google £2.1 billion for demoting rival shopping sites from their search results. This should be extended to look at how tech companies use their financial power to acquire any company that is perceived as a market threat in order to maintain their dominant position. In addition there should be increased consideration given to how tech giants use their position as dominant

marketplaces to exploit the producer side of the market, known as 'monopsony' (which we explore below). Another area worth exploring is the way that tech monopolies are able to create the market and environment that they want through aggressive and smart lobbying.

2.2 MONOPSONY

Although looking at the tech giants through the prism of monopoly can be useful it does not provide a complete picture of how they use their size to create, and to support their needs. We can start to improve on the picture by thinking about whether they also have 'monopsony power', where a dominant buyer has the power to push prices down with suppliers. Whereas 'monopoly' was always more focused on the impact to the customer of a company's behaviour, as we saw earlier, when thinking about monopsony we consider the impact of the company's power as a buyer of goods and services. An example is Amazon and books, especially e-books and audiobooks. As they become more and more dominant in this sector we are not seeing the impact in increased consumer prices, which would strongly indicate abuse of monopoly power; in fact we are seeing the price of books go down. Where Amazon is using its commercial muscle is with publishers. In 2014 a dispute between Amazon and Hachette, a major publishing house, became public. Amazon had been demanding a larger cut of the price of Hachette books it sells. Hachette refused to agree so Amazon began disrupting the publisher's sales. Hachette books weren't banned outright from Amazon's site, but Amazon began delaying their delivery, raising their prices, and steering customers to other publishers.

Regulators need to make sure that they are aware of how the tech giants are using their power in ways that do not necessarily trigger conventional monopoly actions but should also consider how to ensure that companies do not abuse their buying power. This is because monopsony power also harms the wider economy by squeezing the producer side, in this example making it harder for book publishers and authors to survive financially, with the gains accruing to the company directly. In many ways it operates in a similar fashion to an additional tax on labour although the revenue does not go to help meet public spending obligations but to line the pockets of the companies. Therefore the actions of a company using its power to squeeze the supplier side has potential negative impacts beyond the industry in question, book publishing and distribution in this case, into the wider economy' "because the 'monopsony tax' drives workers out of the labour force, and simultaneously reduces tax revenue and increases social welfare payouts to the unemployed and destitute."[12]

2.3 FOUNDER POWER

Founders of successful tech startups are lionised in society today and have sought to extend their power over the companies they started by retaining outsized influence, even after a successful public offering, through the creation of shareholding structures that embed their power. This can be done by issuing different classes of shares offering different rights. This can range from arrangements where founders maintain certain voting rights irrespective of their shareholding, while others have issued shares without any voting rights. But lately a growing number of tech firms are setting limits on founder power, partly in response to serious investor and regulator backlash.

Google, Facebook, Snap and many others went public with multiple-class stock structures that cemented the founder's control over the company. In Facebook's case this meant that co-founder Mark Zuckerberg controls nearly 60% of shareholder votes, despite owning less than 16%. Snap, makers of Snapchat, took the practice to the logical extreme when it went public by only issuing non-voting shares, which alarmed investor groups although they still sold all of the stock. The subsequent fall of Snap's stock price has provided fuel for critics of 'supervoting' (issuing stock with disproportionately large voting rights).[13] Others, like Zynga, creators of the hugely popular game Farmville, announced a new share structure in May that voluntarily reduces the voting power of chairman and co-founder Mark Pincus.[14]

Founders defend these unconventional dual-class shareholding structures because they can allow them to focus on long-term planning over quarterly earnings. Investors say the structures deprive them of input over how the company operates. Last year the markets reacted against this trend with providers of stock indexes such as S&P, Dow Jones and FTSE saying that they would stop adding new companies with dual-class shares to their indexes, including the influential S&P 500 and Russell 3000.

This is a trend that extends outside publicly listed companies into private tech companies. Just three years ago, nine out of the 10 most highly valued private tech companies were dual-class. Today, this has dropped slightly with six out of the 10 most highly valued private tech firms issuing dual stock. Previously, "it was almost sort of an automatic that you would implement dual-class. The decision itself is much more carefully considered today."[15]

Although regulators have signalled support for limits on dual-class stock it is more likely that new initial public offerings (IPOs) will heed the voice of investors and voluntarily alter their behaviour. This can be seen with messaging service Slack, which is expected to go public next year, adopting rules that supervoting shares held by its co-founder and other insiders would expire seven years after its IPO. And the poster child of the

'unicorn' tech movement (made up of private tech companies worth over $1bn) Uber, plans to go public with only one class of stock.

Another change advocated by investor groups is to adopt restrictions that prevent executives at public companies from passing on supervoting stock to heirs or other family members, arguing that it reduces corporate accountability. Some private tech firms have begun to include such restrictions. For instance BuzzFeed has adopted a provision in which its dual-class stock will expire upon the death of founder Jonah Peretti. On the other hand WeWork's supervoting stock can explicitly also be transferred to family members.

2.4 ACQUIRING THE COMPETITION

One of the features of the corporate world, but especially prevalent in the new tech giant world, is the process of acquiring companies in order to cement a position in a market or extend the reach into a new market, rather than trying to develop everything in house. Acquiring companies becomes a particularly important task for companies that have monopoly positions in their main markets. The reason for this is that once you already have a dominant position, constant growth – which the market and investor expect– can be hard to find in your main market, because you already control most of it. Firms therefore tend to look outside to see what companies might complement or improve their product or service and allow them to grow their revenue.

What is interesting and different from previous eras is that the tech giants are not only able to improve their dominant position in their main market, search or social media – for instance, through acquisition – but they can also bring that advantage into other markets. This was not the case historically. Being big in market X does not generally give you an advantage in market Y. However today Amazon was able to use its position in books to branch out into all forms of retail – now taking $1 in every $2 (US dollars) spent online. Companies are looking to expand horizontally rather than vertically.

As well as acquiring companies strategically to help grow the businesses, the tech giants also acquire for other reasons. We will explore two briefly. First, they seek to acquire any company that looks like it might be an effective competitor (sometimes they also try to crush – see Uber – or make invisible – see Google). The tech giants all have teams looking at the markets that they are in and figuring out which rising stars are likely to compete. In fact many venture capitalists and entrepreneurs no longer want to create a company that is going to compete or disrupt the existing tech giants. Their overall goal is often to create something that the giants will want enough to buy out. This could be problematic as it may stifle innovation and hamper the positive disruption the new

technology can bring as the tech giants seek to maintain their dominant position. There are countless examples of large companies not being able to see the new model leading to their ultimate demise. The best is probably Kodak who, despite inventing the digital camera, failed to realise its potential and ultimately ceased to exist.

Second they may acquire companies primarily because of the data that they hold rather than the product, service or revenue that they might bring to the company. For example: Facebook's acquisition of Whatsapp, in which they paid almost $20 billion for a company losing over $400 million per year with almost no revenue. What it lacks in money Whatsapp makes up for in users (500 million at the time and adding 1 million per day), and importantly active users (over 70% use it every day) who use it to send loads of pictures and videos (over 500 million per day). All of these users and their data offer extremely valuable assets to a company like Facebook where user growth is the most important thing. Another interesting example is Google taking over the provision of free wifi services in Starbucks. Google paid serious money to Starbucks for the privilege of providing the service – but why pay to provide something free to some else's customers? The answer is data.

This trend in acquisition and consolidation means that without intervention we are moving towards an increasingly heavily centralised, almost feudal, internet.

2.5 WINNING OVER THE CUSTOMER

Another key strategy for the tech giants is to win over customers so that they become reliant on the company's goods and services. Many of these firms are heavily capitalised and are able to sustain big losses over a long time while they build markets and buy customer loyalty. Like Google they can use the money to provide services that are free and become essential to modern living. It is hard to imagine a world where we would no longer be able to use Gmail, Google Maps or Google Translate services. Amazon does not use its monopoly power to raise consumer prices, as in monopolies of the past, but instead focus on their role of being a champion of the consumer by keeping prices as low as possible. In other words, we're all enjoying the benefits of these corporations far too much to think hard about potentially distant dangers – this is a major factor in how they exercise their power.

Uber personifies this behaviour. In 2017 it lost a staggering $4.5 billion on revenues of $7.5 billion. Of the $17.3 billion raised it has burned through $10.7 billion.[16] Uber uses this money to try and expand into new markets, undercutting existing services while it tries to establish a dominant position. The low cost of the service, which is highly subsidised,[17] together with the excellent user experience has created an incredibly loyal

army of customers. This was extremely evident when Uber's license was not renewed in London. As well as the normal corporate PR backlash there was a huge outpouring of outrage from Londoners. Uber created an online petition on change.org which became one of the fastest growing petition ever on the site, and reached almost one million people, representing almost 33% of its customer base in London, within just a few days.[18] Uber tried to reframe the debate with its customers away from one about safety and regulation, which is why they had been denied renewal, into one about saving the work of its 40,000 drivers, and about small cabals, existing taxi and minicab drivers and firms, wanting to restrict customer choice and protect their high prices. This outpouring put the regulator on the back foot and was one of the factors that ultimately led to Uber winning the appeal and regaining its license in London.[19]

However, this may be a temporary strategy as the valuations placed on some of these tech companies only make sense in the context of being able to extract monopoly rents once they achieve market dominance. This should make us question whether there are any real long-term benefits for us as consumers.

2.6 THE LOBBYING POWER OF BIG TECH

In the early days of the rise of the tech giants they were disruptors who would often employ unconventional tactics to launch new products and get attention. However their time as young upstart disruptors is now well over. In 2018 Google spent more than any other company on lobbying the US government, with the other top spots taken by pharmaceutical, weapons and media companies.

Most of the tech giants funnelled some of this money toward saving net neutrality, reviving Deferred Action for Childhood Arrivals (popularly known as the Dreamer Act which gives children brought to the US residency rights under certain conditions) and weathering the backlash from Russian involvement in the 2016 election. Google also focused efforts on blocking new ad regulations and promoting self-driving cars. Meanwhile, Amazon sought to get legislation passed that would benefit a range of its efforts, including online sales taxes, cloud computing, and package-delivering drones. Facebook fought criticisms of 'fake news' and Apple pushed on issues like encryption.

3. TACKLING THE MODERN MONOPOLIES

There has been a lot of discussion about what potential action the state should take against the tech giants. These can be grouped into two broad categories: break them up or nationalise them. Neither of which, for reasons we will explain, will actually solve the problem.

In the past when monopolies got too big, we broke them up. This happened in many sectors in the late 19th and early 20th century (especially in the US). The companies were broken up and then told to compete with each other to create a more diverse and competitive market. It is tempting to apply that same logic to the tech giants of today. Perhaps the answer to Google is to create a series of mini googlets which would then all compete. However it is debateable whether this would deliver the outcome that we want, which is smaller, more privacy-respecting and socially responsible companies. It may not even achieve the much narrower goal of enabling more competition, which is the traditional rationale for breaking up monopolies. The reason is that just breaking them up does not require them to change their business model or become more socially responsible. In fact as the newly broken up companies compete for market share it may cause them to be more aggressive with their tactics and policies. Ultimately, as positive network effects kick in after a decade or so we may see the 10 googlets turn into one dominant and nine irrelevant companies again. In addition, the usefulness of Google and Facebook's core services are reduced as the user base is reduced. The reason people find Facebook so useful is that 2 billion people are on it – a platform with just 200 million users means orders of magnitude less potential connections.

The debate about breaking up the major tech companies has therefore evolved to talking about unbundling what have in effect become large business empires. All the large tech companies have aggressive acquisitions strategies that are supposed to both increase their revenue but also try to protect them against up and coming companies that may displace their dominant position. The unbundling strategy posits that because breaking up the core businesses does not makes sense, the best strategy is to break the empires back up into a number of independent companies. For Facebook this could mean separating out Whatsapp and Instagram, whereas for Google is could mean YouTube and Gmail becoming stand-alone companies. As with the previous strategy, this would create a more competitive digital economy because there would be more companies operating in the sector. It would also reduce the power to larger tech companies and disburse power slightly across the newly recreated companies. However since the business models would not change we would not in fact be fundamentally changing the

nature of the digital economy and in fact would now have a larger ecosystem of companies seeking to collect and monetise our data.

The other strategy being discussed is nationalisation. The logic is that these sectors are actually natural monopolies, rather than sectors we should attempt to foster competition in – and given the challenges of breaking them up or unbundling them the only suitable response is to nationalise them. Jeremy Corbyn has suggested this for Facebook. But the prospect of a 'Statebook', as it was termed in the New Socialist,[20] evokes a different but equally troubling future. The new state-owned tech company would have many of the same challenges as any competitor to the big tech companies and would therefore struggle to attract the number of users to see the positive networks effect grow the company. Wendy Liu rightly commented in the New Socialist article that "even if a new platform can overcome the challenge of migrating a significant number of users to the new platform - replacing one monopoly with another - this still leaves power concentrated in the hands of the few."[21] We need systemic changes that redesign the playing field to offer sustainable and long-term choice.

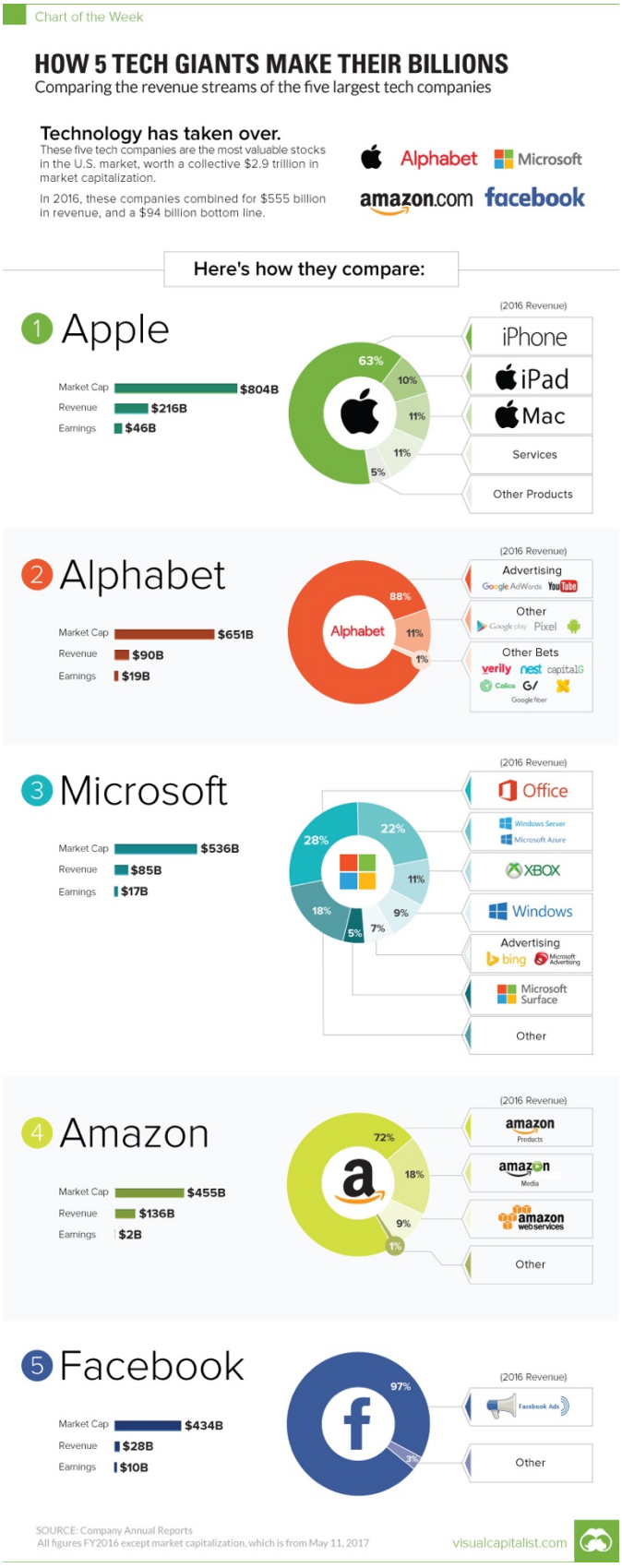
4. CONCLUSION

The world has always had powerful companies seeking monopoly positions in markets, and over time legislation and policy have been built up to try and ensure that their harms are mitigated. This new era of tech monopolies poses a serious challenge for how we understand the concept of monopoly itself, as well as traditional thinking about what solutions we should adopting to mitigate against the potential negative consequences. The tech giants, many of whom operate vast online marketplaces or platforms, have become adept at focusing their exploitative power on the producer side while ensuring cheap or free services to users. The strategy of buying off the users at the expense of the producers has been hugely successful. This makes the case for reform hard to argue since it is likely to impact millions, if not billions, of people through potentially increased prices.

Tackling the concentrations of power in these new tech powerhouses will require innovative legal and technical work to ensure that we retain access to the tools, goods and services that have become part of our everyday lives without sacrificing our own power and control over the companies that we interact with.

APPENDIX

Revenue of the top five tech companies[xxii]



ENDNOTES

[1] https://www.statista.com/statistics/263264/top-companies-in-the-world-by-market-value/
[2] http://www.visualcapitalist.com/chart-valuable-brands-world/
[3] http://www.visualcapitalist.com/the-tech-takeover-of-advertising-in-one-chart/
[4] https://www.ft.com/content/cf362186-d840-11e7-a039-c64b1c09b482
[5] http://www.visualcapitalist.com/the-tech-takeover-of-advertising-in-one-chart/
[6] https://blog.hubspot.com/agency/google-adwords-benchmark-data
[7] https://www.blog.google/products/marketingplatform/360/introducing-google-marketing-platform/
[8] https://www.invespcro.com/blog/online-ad-fraud-statistics/
[9] http://idlewords.com/talks/build_a_better_monster.htm?utm_campaign=FP%20Logue%20-%20Ghost%20of%20Electricity&utm_medium=email&utm_source=Revue%20newsletter
[10] This may be changing as Donald Trump comments in August 2018 that Amazon, Google and Facebook may be in a 'very antitrust situation' - https://thehill.com/business-a-lobbying/404472-trump-google-facebook-and-amazon-are-in-a-very-antitrust-situation
[11] https://www.theringer.com/tech/2018/6/7/17436870/apple-amazon-google-facebook-break-up-monopoly-trump
[12] https://www.vox.com/the-big-idea/2018/4/6/17204808/wages-employers-workers-monopsony-growth-stagnation-inequality
[13] From $27.09 on March 2017 to $7.18 in Oct 2018 - https://www.google.com/search?q=snap+share+price&ie=utf-8&oe=utf-8&client=firefox-b-ab
[14] https://www.cnbc.com/2018/05/02/zyngas-founder-cedes-control-in-a-rare-move-for-tech-companies.html
[15] https://www.theinformation.com/articles/tech-founders-cede-some-power-to-shareholders
[16] https://www.bloomberg.com/news/articles/2018-03-06/uber-spent-10-7-billion-in-nine-years-does-it-have-enough-to-show-for-it
[17] https://www.fastcompany.com/4026256/investors-are-paying-2-billion-per-year-to-subsidize-your-uber-ride
[18] https://www.theverge.com/2017/9/25/16360002/uber-change-london-petition-one-million-signatures
[19] http://uk.businessinsider.com/uber-wins-london-licence-2018-6
[20] https://newsocialist.org.uk/do-we-really-need-a-statebook/
[21]https://newsocialist.org.uk/do-we-really-need-a-statebook/
[xxii] http://www.visualcapitalist.com/chart-5-tech-giants-make-billions/