Case Study:
Big Tech’s monopoly power

Nearly half of the world’s richest men - and they are all men - made their money via technology companies. Once hailed as disruptors and garage inventors, Jeff Bezos, Mark Zuckerberg, Bill Gates, Sergei Brin, Steve Ballmer, and Larry Page accumulated their immense wealth by building digital monopolies.

For these billionaires and their companies, Davos has been an opportunity to rub shoulders with policy-makers, offering “private demonstrations[1]” of their products, hosting “cocktail receptions”[2], and arranging CEO meetings while pitching ways to become policy partners[3]. An opportunity to clean their public image and shore up their power.

At this year’s event, we expect tech billionaires and their corporate representatives will want to discuss the potential risks created by the development of (their) artificial intelligence (AI) products. They will pitch themselves as part of the solution.

They will also likely omit how they grew rich by monopolising the digital sphere, obsessed with domination with little to no care for who it hurts. Now, their power puts them in a prime position to dominate the next generation of technologies, including but not limited to AI.

The myth of the tech inventor working from their garage is well dead. In its stead, we have a small cohort of tech billionaires who set the rules for the digital economy and reap most of the rewards.

Along the way, they have harmed smaller businesses, peoples’ fundamental rights, the health of the digital public sphere, and democracy itself.

The rise of the Big Tech monopolies

The companies that we now refer to as Big Tech – Microsoft, Apple, Amazon, Alphabet, Meta– have grown in different waves of technological development, and their businesses vary greatly in their focus.

What unites Big Tech firms is the fact they have built empires by deploying monopolisation strategies

Big Tech firms deployed monopolisation strategies[4] [5] by:

- positioning themselves as intermediaries of an immense number of interactions happening online, allowing them to accumulate data like never before;
- prioritising fast expansion, with an obsession with growth and scale to exploit network effects to keep users locked-in;
- creating moats around their services to ensure no competitor can challenge them;
- whenever a competitive threat appeared, either buying or killing it (or both)[6].

By doing this, each company gained control over specific markets (see table 1), essentially becoming a gatekeeper [7] [8]that controls access to it and dictates the rules for a large swathe of businesses, public services and communities, trapped in their strong gravitational fields.

Table 1: Global market shares

	Alphabet (Google)	Alibaba	Amazon	Apple	ByteDance (TikTok & Doyin)	Meta	Microsoft	Big Tech share
Search engine[9]	91.55%							92%
Mobile Operating System[10]	70.46%			29%				99%
Cloud[11]	11%		32%				22%	65%
Digital advertising[12]	39%		7%			18%		64%
eCommerce[13]		24%	13%					37%
Social media[14]	14%				11%	44%		69%

It is not hard to find the source of Big Tech's monopoly power. We have only to look at rough markers of their control over the key functions of the Internet (Table 1).

Big Tech firms control the market for search engines, mobile operating systems, cloud, digital advertising and social media.

Google is a stand-out, present and dominant in so many layers of the digital economy, increasingly including the actual physical "stack" that keeps the Internet running : from the deep-sea cables (8.5% of the global cables are owned by Google[15]) to the data centres that host the cloud. Google also controls the most basic ways people access information online: mobile operating systems (Android) and search engines.

If you are online, whether you know it or not, chances are you are using a Google service.

Such global indicators of market share are mere indicators. They even disguise some alarming regional and local dynamics. For instance, one might look at Alibaba's 24% and Amazon's 13% slices of global ecommerce and think that it is far from being dominant. In fact, it is a standard monopolist's trick to define the market as widely as possible, then to say "look – we are only a small part of that.'

When it comes to ecommerce, due to restrictions on the logistics of retail, trade, and delivery, the relevant markets are more appropriately defined at the national level. Here, we see how Amazon and Alibaba dominate online commerce[16] both reporting incredible market shares in their home bases – Alibaba with 44% of the market in China[17] and Amazon with almost 50-55% in the US[18]. Yet, that is not all, Amazon also holds an incredible share of markets in Germany - where 1 in every 2 euros spent online is processed by Amazon[19] - France, Italy, and Spain where between 70 to 90% of all online shoppers use Amazon[20].

BOX 1 : Mark Zuckerberg, the tech nerd obsessed with domination

At a Davos panel discussion in 2009, after making the mandatory joke that Mark Zuckerberg (the founder and CEO of Facebook) was wearing a tie for the first time, TechCrunch's Michael Arrington put the following question to Zuckerberg:

> *"You must, in the back of your mind know that first it was Friendster who had their lunch eaten by MySpace, and you guys came along and have grown quite a bit bigger than MySpace worldwide now. Somebody is going to do that to you, and it is going to be in a year or two right?[21]" (…)*

Fourteen years later, we can see how wrong Arrington was. Nobody dislodged Facebook. Not only that: it has steadily grown to reach 3.96 billion users in October 2023[22].

How did the company evade the destiny of Friendster and MySpace? In large part the answer lies in the company's monopolisation strategy.

It is by now a well-trodden trope that Zuckerberg used to end his weekly meetings by shouting "**domination**"[23]. Zuckerberg's obsession with growth was apparently a key lesson he took from two of his role models[24]:

- Peter Thiel, founder of Paypal and surveillance firm Palantir, engraved in him an obsession with network effects, a dynamic whereby a service gains value the more people use it. For social media, network effects – and its exploitation by platform owners has meant users are locked-in to the biggest platform. Thiel is also one of Silicon Valley's most public defenders of monopolisation, famously saying that "competition is for losers[25];
- Microsoft, the original tech monopolist[26], who taught him the 'need' to build ecosystems offering several products and services to keep each user within a company's realm [27].

From the get-go, the one thing that mattered to Zuckerberg was to "connect everyone as quickly as possible because network effects were a massively important part of us" [28]. That meant getting as many users as possible on board to attract (and keep) their friends. The more users there were, the more advertisers were willing to pay more to Facebook[29] making it extremely difficult for competitors to challenge Facebook or potential competitors to enter the market.

It also meant a strategy of constant expansion. To keep its position and business model, Facebook had to dominate the social network market.

Facebook achieved this following a "copy, kill, acquire" strategy[30]. It bought market surveillance companies like Onavo that gave them privileged information into possible rising competitors. Internal emails from Facebook executives unearthed during US antitrust investigations showed the company would then act on that information. That is ultimately how the company ended up taking over WhatsApp[31].

Alternatively, the company would use its power to destroy potential competitors. Facebook, for instance, reportedly cut off access to its systems to Circle, a small but quickly growing social network. By doing this, the company basically stopped Circle's growth.[32]

The dark side of domination: Myanmar

Zuckerberg's quest for domination went far beyond the US and had a very real - and bloody - impact. Around 2013, as Facebook crossed the one billion users threshold, Zuckerberg reportedly became obsessed with the idea of the "Next One Billion", seeking to expand its business globally[33]. To do this, he set up agreements with telecommunications companies so that Facebook's Free Basics app would come pre-loaded on peoples' mobiles and users could access it without spending any mobile data[34].

While he was keen to connect everyone, everywhere, he seemed to pay no attention to how his company could best serve the people in those countries or, indeed, the impact it might have. In Myanmar, this led to brutal consequences.

Brought into the country via deals with telecoms companies, the app was pre-loaded and free to use for everyone[35]. Shopkeepers even helped users, who were accessing the internet for the first time, set up Facebook accounts[36]. This made Facebook the gateway to the Internet[37].

Myanmar, a country where over 100 languages are spoken, had only recently seen its military dictatorship liberalise and was seeing racial tensions being stoked up.

Yet, Facebook hired only one content moderator to work on the content for the whole country. Activists who flagged fears about Facebook being used to stoke up racial hatred, and the potential for genocidal violence, were not taken seriously[38]. Facebook's own algorithms, which promoted sensationalist content, have been accused of amplifying content that incited violence and hatred against the Muslim community, the Rohingya[39][40].

In 2017, the racial tension reached boiling point as the Myanmar military led a genocidal campaign against the Rohingya. **The UN's Fact-Finding Mission in Myanmar found that Facebook played a key role in the violence as it had "been a useful instrument for those seeking to spread hate"** and the company's response had been "slow and ineffective". Facebook's responsibility was even bigger as "for most users [in Myanmar], Facebook is the Internet."[41]

Due to its size and de facto power over information networks in Myanmar, Facebook set the rules for speech and shaped the digital public sphere. It did so according to its own profit maximising logic, with little care to what a responsible and safe engagement would have been. By acting as the Internet, Facebook's failures had systemic real-life consequences for peoples' safety and democracy.

Monopoly rents – data and fees

Big Tech's monopoly power over the services and technologies that people and businesses need to communicate, learn, access the news, and do business online, have enabled the companies to extract rents from their users.

Big Tech firms are known for providing a variety of services and products, many for free. This at times can obfuscate how they make their money. Looking at their annual accounts[42] can help.

Table 2: H*ow Big Tech companies make money- Information collated from the company's 2022 annual reports – information collated 14/09/2023*

<table>
<tr><th></th><th>Digital advertising</th><th>Fees (app store, subscriptions, 3rd party services)</th><th>Cloud</th><th>Devices & Software</th><th>Others</th><th>Ecommerce</th><th>Fintech</th></tr>
<tr><td>Google</td><td>79%</td><td>10%</td><td>9%</td><td></td><td>1%</td><td></td><td></td></tr>
<tr><td>Apple</td><td colspan="3">20%</td><td>80%</td><td></td><td></td><td></td></tr>
<tr><td>Meta</td><td>97%</td><td>1%</td><td></td><td>2%</td><td></td><td></td><td></td></tr>
<tr><td>Amazon</td><td>7%</td><td>30%</td><td>16%</td><td></td><td>5%</td><td>43%</td><td></td></tr>
<tr><td>Microsoft</td><td colspan="2">32%</td><td>38%</td><td>30%</td><td></td><td></td><td></td></tr>
<tr><td>Alibaba</td><td colspan="2">46%</td><td>9%</td><td></td><td>1%</td><td>44%</td><td></td></tr>
<tr><td>Tencent</td><td>15%</td><td>52%</td><td></td><td></td><td>1%</td><td></td><td>32%</td></tr>
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While there is variety in income sources, two streams of revenue stand out: advertising, and the fees companies charge for businesses and individuals to access their platforms.

Box 2: The old Big Tech firms keep up with peers

Even Apple and Microsoft, the older Big Tech firms for whom selling devices and software was the original strategy, have by now started the process of ‘platformisation’. They are now complementing the selling of devices and software with cloud and fees charged to application developers, to keep users inside their proprietary ‘walled gardens.’ Apple, for instance, famously used its control[43] of the iOS mobile operating system and the App Store to charge app developers as much as 30% for any app and in-app purchases[44]. This is ten times what other payment providers typically charge: in the words of the Coalition for App Fairness, which represents developers: “No other transaction fee —in any industry —comes close.”[45]

Apple first introduced the 30% fee on apps in 2011, which forced many apps to go entirely out of business. Yet, Apple co-founder Steve Jobs, in an internal email, showed little sympathy for the small developer. He told other Apple executives: “Bottom line —we didn’t have a policy, and now we do, and there will be some roadkill because of it. I don’t feel guilty. [46]

During the EU’s Digital Markets Act discussions to establish new rules for gatekeepers, Apple lobbied heavily to prevent any measures that would loosen its grip over the App Store. The company argued that allowing users to access apps outside the App Store or demanding interoperability of its services – in other words that its products can work and exchange information with non-Apple products -would be a security threat. Apple’s lobbying paid off – a security exception was added to the version of the text which the company will likely try to exploit[47].

Big Tech’s monopoly power allows them to extract rents from users – that is, unearned value that these companies take from one or more of its subsets of users without any fear of losing them, because they have by now become essential and face little to no competition.

Those rents came in two forms:

- Data – by using their power to impose intrusive collection of data at individual, business, and collective levels. This data is then used by the companies to further grow their power: either using it for their monopoly strategies (i.e. buying up potential up-and-coming competitors, copying products), developing new products that require the processing of immense data (i.e. generative artificial intelligence) and surveillance advertising;

- Fees – as the companies establish their dominance in specific markets and especially become the gateway for smaller businesses to access services and end-users, Big Tech firms are able to essentially charge a private tax on those firms[48].

In this context, Big Tech’s provision of products for free needs to be understood not as generosity towards users but rather under a cross-subsidisation strategy[49] whereby one service is run at a loss (think, for instance, of Gmail or even Google Maps) in order to attract as many users as possible onto their platforms so that the maximum amount of data can be collected. This data will then feed the real profit centres of the companies. In the case of Google, that is surveillance advertising.

Data rents – surveillance advertising

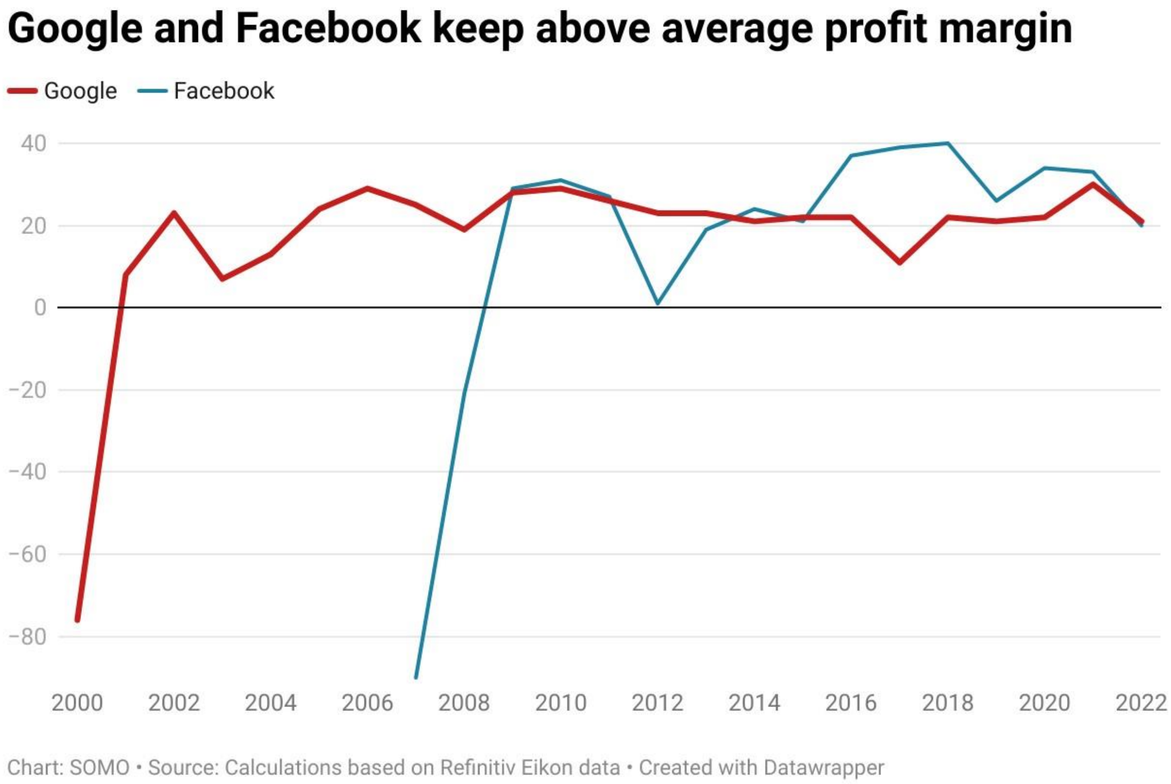
To a large extent, surveillance advertising is the business model of the Internet, ushering in the age of 'surveillance capitalism'[50]. Also known as micro-targeted or behavioural advertising, this practice relies on the extensive collection of users' data, across all their online lives, to build up detailed individual profiles. Each profile is then used to micro-target users with advertising online.

There is no end to the type of information that is collected or inferred to feed this type of advertising – anything from search history, location, political views, socio-economic status, religion, shopping history[51], sexual preferences, and ethnicity.[52]

It was Google that first developed this business model when it learned that when using its search engine, people were providing a valuable by-product – data. This was then commercialised for advertising. From Google, the model spread to Facebook when the latter hired Sheryl Sandberg, (who author Shoshana Zuboff called the "Typhoid Mary" of surveillance capitalism[53].)

By now, the model has spread widely. Yet Google and Facebook are still the leaders in this market, with a joint global market share of 57%. For a long time, these two companies were described as having a duopoly in digital advertising (especially as they largely operated in different segments: Facebook controls display advertising and Google search engine advertising[54].) The two compete at the edges of their markets but have also been accused of colluding to carve up advertising markets[55] [56].

For both companies, advertising makes up the majority of its revenue (79% for Google and 97% for Meta – see table 2). Advertising has also been a driver of the companies above average profit margin – at times as high as 40% (see figure 1). For comparison, the average publicly listed company declared a profit margin of around 10%[57].



Surveillance advertising has continued growing and is increasingly dominated by Big Tech in spite of:

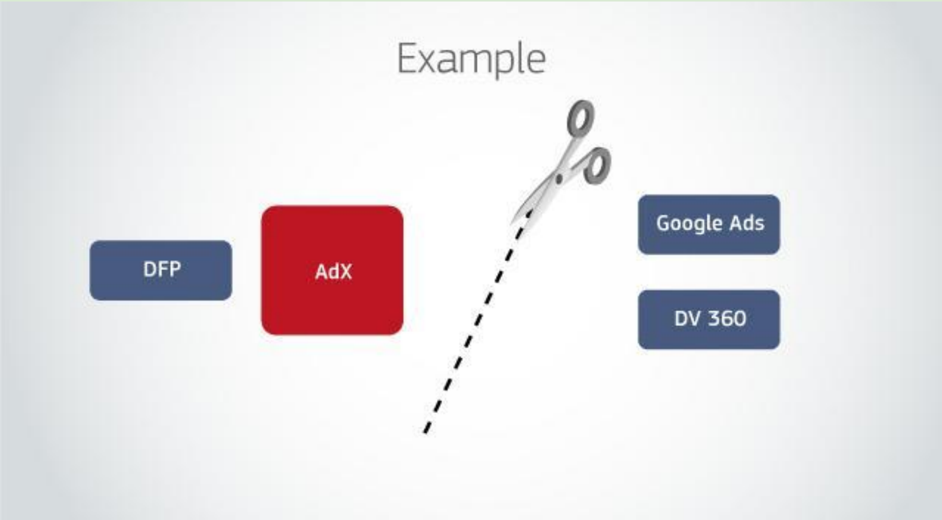
- Consumers overwhelmingly disliking the practice. Consumer surveys, time and again, have shown that the majority of people are concerned about the impact of this type of advertising on their privacy[58];
- Publishers, who provide the content and the space where ads are placed, the companies buying up the ad space, and regulators are basically unable to scrutinise Big Tech's advertising operations as the system relies on an opaque and complex automated system of real-time-bidding with hundreds of nameless intermediary companies[59];
- The opacity also conceals how big is the cut of Google and Facebook over the value of advertising. The UK's Competition and Markets Authority (CMA), for instance, has estimated that intermediaries captured at least 35% of the entire advertising value, diverting revenue away from publishers[60];
- Being accused of leading to the "biggest data breach ever recorded" as personal data is constantly shared between different supply chain actors during the real-time-bidding process for advertising[61];
- Being incredibly energy intensive and wasteful[62].

Box 3: Google adtech stack conflicts of interest and the need for break-ups

Google's monopoly power in digital advertising has been identified by several competition authorities across the world[63]. The UK's CMA went as far as identifying that its power allowed it to charge 30-40% more than its closest competitor,[64] without worrying that advertisers would just move to a competitor.
In June 2023, the EU's competition department said it had found that Google had distorted competition in the adtech sector by favouring its ad exchanges during auctions. According to the Commission's preliminary findings[65]:

"Google is active on both sides of the market with its publisher ad server and with its ad-buying tools and holds a dominant position on both ends. Furthermore, it operates the largest ad exchange. This leads to a situation of inherent conflicts of interest for Google."

The Commission's preliminary view is therefore that only the mandatory divestment – in other words, a break-up - by Google of part of the different strands of its ad tech services would address these competition concerns.



This is an unprecedented decision from the EU Commission who, in spite of investigating Google's anti-competitive behaviour for thirteen years and having issued the company to pay 8.25 billion euros in fines, has largely failed to limit the company's excessive power or its abuses .

Importantly, in those cases, the Commission did not follow up to ensure that the competition problems had been resolved or, indeed, that competition had been re-established[66].

Google has also challenged every single one of the decisions and it is yet to pay a cent to the EU[67].

Ultimately, the investigations and the threat of fines have not put limited Google's ability to exploit users and business customers.

Putting structural solutions on the table- break-ups-, as the European Commission did with its latest preliminary findings sets out a way to get past the lack of dissuasive power of fines, especially for the world's most valuable companies, and go from accepting Big Tech's promises not to abuse its monopoly power, into limiting their power altogether.

Surveillance advertising remains incredibly profitable for Big Tech firms and shows no signs of slowing down.

Why power and dominance matter

Big Tech's market power is, at least in part, the reason why the practice remains unchallenged:

- Google and Facebook became so dominant that advertisers and publishers feel locked into their advertising systems, especially if they wanted to access users' attention and the most valuable personal data[68]. This is especially problematic as publishers tend to use only one ad seller[69] and switching between services is difficult[70];
- Surveillance advertising firms left users without control over how their personal data is used due to the immense complexity of the system of intermediaries and the multiple ways their data is used[71];
- Big Tech firms force users to allow them to collect and process an increasing amount of their data to use their services,[72] in a 'take it or leave it' process, a Devil's bargain. As users are locked in they cannot avoid the platforms, in spite of the exploitative terms;
- Google and Facebook heavily lobbied against regulation of surveillance advertising, for instance, blocking the European Parliament's calls to ban the practice under the Digital Services Act[73].

Financial rents – the monetisation of the gatekeeper position

Big Tech's extractivism doesn't end with data. As the companies became gatekeepers to essential digital economy services, they were also able to extract financial rents from the businesses that depend on them.

Amazon is a clear example. In 1997, Bezos, a former hedge fund executive explained to potential investors that, in the short term, Bezos was to focus entirely on "growth" and "scale" to unlock shareholder value in the long term. [74] Nearly 30 years later, nobody can dispute that Amazon has achieved scale.

But Amazon isn't just an online retailer. One of the ways that Amazon was able to grow was by opening up its website to third-party sellers, independent businesses, selling their wares to Amazon customers. At this point Amazon became a marketplace, intermediating the relationship between sellers and shoppers.

It is through its marketplace that Amazon seems to have pursued on its "quest for profit"[75]. Currently, about 23% of its revenue is made up of the listing and logistics fees[76] it charges the independent businesses that use its marketplace.

Some of the services charged by Amazon are theoretically optional. Yet Amazon has used its power to make them nearly indispensable by tying them with achieving visibility and sales[77].

To this, though, it has added yet another fee: advertising made possible by its monopoly power. In the earlier years when Amazon was pursuing market share, user searches for products would yield organic results – ranked according to quality, relevance, and price. Now that its users are locked in, they increasingly face paid-for sponsored content.

This sees sellers bidding against each other to be placed in one of the top search results, the ones likely to be seen by shoppers[78]. According to the Institute for Local Self-Reliance (ILSR)[79], independent sellers on the platform account for more than half of Amazon's fast-growing advertising.

A British seller told SOMO: ""You're forced to keep buying ads, so that you keep the velocity up, so the algorithm keeps showing your product. Like a hamster on a wheel, you have to just keep going. As soon as you slow the pace, then they'll just go your competitor. But if you get it right, then good."[80]

Overall, Amazon has been steadily increasing how much it extracts from sellers. ILSR estimates that in 2023, Amazon kept 43% of sellers' total revenue. This rent, which ILSR equates with a toll for access, has been steadily increasing from just 19% in 2014[81].

Amazon didn't just rely on its immense market power to achieve this, it has deployed a set of obscure automated systems to make decisions that favoured itself and hurt competitors or punish sellers while avoiding almost all accountability. It has also built moats around itself to insulate itself from any competitive pressure and it prevented sellers from offering the same products at a lower price off Amazon. This has led, The Federal Trade Commission (FTC), for instance, to sue Amazon for illegally maintaining monopoly power[82].

Ultimately, Amazon's monopoly power has allowed the company to:

- Charge excessive fees on sellers which has put immense pressure on small and medium-sized businesses seeking to access online shoppers;
- Degrade the quality of the service provided as it replaced organic search results with less reliable sponsored ads;
- Perhaps most importantly, it likely raised prices across the market hurting consumers.

In the words of top US regulator Lina Khan, Amazon has become so powerful that it has been able actively to degrade its services in this and other ways, without fear of losing customers: "At various points there were folks at Amazon saying 'hey, we think these practices are actually bad for people, let's not do it,' and at each juncture, they were overturned by the executive." Firms like Amazon had become, as she put it, "too big to care".[83]

Conclusion

The past decades of the digital economy have been controlled and shaped by the profit logic of a handful of corporations. That has created a small cohort of billionaires, likely to be parading at Davos.

Yet, their wealth has been built by monopolisation. Their power has meant the Internet and digital technologies have failed to deliver on their promises to empower people and societies. Instead, they delivered a system that mines people's lives for advertising; amplifies sensationalist and hateful content; and destroys small businesses.

Big Tech's entrenched power is never clearer than when looking at the future. Artificial intelligence, for instance, has been hailed as a disruptive innovation that stands to alter the course of humanity. Corporate hype aside, it is crucial to note that such a disruptive technology is not being led by small startups, working from their garages. Instead, it is led by Big Tech firms such as Microsoft (via its investment in OpenAI), Amazon (with partnerships with Anthropic[84] and Hugging Face[85]), and Google[86].

Big Tech firms are the ones that have the wealth, the people and the data processing abilities to develop the technology. And, in doing so, they will only reinforce their monopoly power and continue the cycle of data and financial extraction, shaping the future to fit their needs.

This should be a wake-up call for the need for anti-monopoly action to break Big Tech's power.

Author

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