



Big tech rivalry could be the key to competition in AI

by Zach Meyers, 30 May 2024

Competition authorities might need to accept that today's large technology firms will play a key role in artificial intelligence. They need to focus on ensuring they compete fiercely – rather than peacefully co-exist.

While policy-makers fret about its risks, competition authorities ought to be excited about artificial intelligence (AI). AI has the potential to boost competition by helping firms in many sectors create new content, innovate, research, advertise and optimise their operations. AI could therefore enable many new entrepreneurs to launch businesses, help existing firms expand into new areas, and shift labour and capital away from incumbents and towards more innovative firms. This could finally help address one of the key reasons for slow economic growth in developed countries: the [struggle](#) to raise productivity.

But to maximise the benefits of AI, developers of foundation models (FMs) – AI models which can be used for many different tasks – will need competitive pressure to make their models as widely available and as accessible as possible. And new AI firms will need the freedom and incentives to pursue disruptive innovation, not just innovation which boosts incumbents' business models. Competition authorities in the UK, US, EU and the Union's [member-states](#) are therefore all turning their attention to FMs. They are determined not to "[repeat the mistakes of the past](#)" – meaning they do not want AI to be intractably dominated by one or two firms. AI has already catapulted chip-maker NVIDIA into a new 'big tech' firm, and there is potential for many more of today's AI start-ups to become powerful players. However, large tech firms might nevertheless continue to play an important role in the sector. Authorities should ensure these large tech firms compete aggressively to win customers - rather than fixating on their size.

Is the AI market competitive today?

Competition to build and improve FMs is currently fierce, mirroring the 1990s and 2000s when firms battled for internet supremacy. The UK's Competition and Markets Authority (CMA) recently [identified](#) 330 FMs which have been released in the public domain, many of them in just the last few months. Many of the potential barriers to small firms building their own FMs have proven surmountable. For example, large incumbent tech firms have huge private datasets which could be used to train FMs – but in practice

many FMs are being trained on [depositories of public data](#) which are available to anyone. And while incumbent tech firms are buying up AI talent, many skilled developers still choose to work in smaller and more agile start-ups. Policy-makers, including the architects of the EU's AI Act, have also avoided excessive regulation which would make life disproportionately difficult for small AI firms. Many of these start-ups have an edge on the largest firms, at least by some metrics: when start-up Anthropic launched its Claude 3 FM in March, for example, it [could beat](#) Google's Gemini FM on both undergraduate-level expert knowledge and graduate-level expert reasoning. All this means that businesses today have wide choice and easy access to AI services – often at no, or very little, cost.

Investments in AI by large tech firms are rapidly increasing too, indicating that they will likely play an important role – but also that they are in fierce competition with each other. The largest tech firms spent about [26 per cent](#) of their sales revenue on research and development in 2022, largely driven by the need to invest in AI. These firms collectively provided two thirds of the [\\$27 billion](#) in capital that small AI firms raised in 2023.

Given the number of promising start-ups and the competition between large tech firms, competition authorities have little reason to force radical changes to the market now. Rather, their job must be to ensure this investment is sustainable. That requires a careful balancing act. Moving too early or too aggressively may harm investment: temporary dominance can be a justified reward for a firm which spearheads innovation. Investors in start-ups, even more so than investors in large tech firms which have existing profit-making businesses, [need](#) a fair chance to earn big profits to justify high-risk, high-potential investments into AI.

The real problem authorities must address is the risk of [entrenchment](#). Many of today's digital markets were once characterised by fierce competition, including periods when now long-forgotten firms like Yahoo were temporarily market leaders. They have now been dominated for years by one or two large companies whose positions look unassailable. Dominance can become entrenched because a successful firm may have more user feedback to learn from, enabling it to get so much better than alternatives that rivals effectively 'give up'. Or several firms' ecosystems of services might become so 'sticky' that consumers rarely switch between them and these firms' market shares become ossified – as with the iPhone and Android mobile operating systems. Once this happens, platforms can focus on raising profits, rather than investing and innovating to attract new users: a process famously referred to by journalist Cory Doctorow as "[enshittification](#)". Other firms may then decide it is easier to peacefully co-exist or co-operate instead of launching challenges. This dynamic is evident in several large deals between tech firms, like Google's [payments](#) to Apple to be the default search engine on iPhones, which have probably dampened Apple's [incentives](#) to make its own search engine.

AI brings the potential for new disruption. For example, AI has inspired firms like Microsoft to invest in areas like online search where Google has not seen a serious challenge for many years, and today's start-ups might innovate in more disruptive ways if they do not need to worry about protecting existing business lines. The trick is to maintain AI's disruptive potential, rather than see industry focus instead on slow and incremental improvements, as in some digital markets today. It is not yet clear the extent to which economies of scale matter in AI – some AI models will perform better at particular jobs if they use smaller and more relevant datasets. But even if size does matter, this should not necessarily cause competition authorities to give up on competition. They should worry not about firms' size, but about if and when market advantages might become self-sustaining and insurmountable, to prevent another slide into peaceful co-existence.

Three risks of entrenched dominance

Despite today's thriving market, there are several possible factors that could slow down the current rates of innovation and investment in the sector, or lead to AI being less widely available. Currently, competition authorities have focused on three sets of worries – all of which target the actions of today's incumbent technology firms.

First, competition authorities in the EU, UK and US all fret that today's large technology firms could withhold critical inputs which competitors need to develop their own FMs. As noted above, smaller firms do not seem to be hampered by lack of talent or access to data. However, large tech firms – in particular Amazon, Microsoft and Google which collectively have about two-thirds of the global cloud computing market – do have access to significant computing power, thanks to their cloud computing businesses. Although there are numerous smaller cloud firms, most AI start-ups work with at least one of these three companies. Alongside NVIDIA, which produces AI chips, they are perhaps the only businesses actually [making money](#) from FMs, since the smaller AI firms devote [much of their cashflow](#) to paying for this computing power. There appear to be [some examples](#) of deals between large cloud computing firms and AI start-ups that require the start-up to use the cloud computing provider as their "primary" or "preferred" provider, although precisely what this means (and how free it leaves these start-ups to switch cloud providers) is not publicly known.

Despite this uncertainty, AI start-ups appear to continue to have choices of funding, cloud computing providers, and pathways to reach consumers, all of which should limit large tech firms' influence. Competition authorities therefore do not need to be immediately worried. Amazon, Google and Microsoft all offer cloud computing platforms which host multiple FMs – not merely their own or those they have invested in. Conversely, most FMs are available on multiple cloud computing platforms. Furthermore, several big tech players – such as Apple, Meta and NVIDIA – do not have large-scale cloud computing platforms and therefore have strong incentives to stop the three big cloud computing giants controlling the AI sector or depriving AI start-ups of choices. They are each trying different strategies to achieve this:

- ★ AI chip-maker NVIDIA sells access to its own AI service platform directly to users. By contracting directly with many different business users who need AI services, these users can avoid dealing with Amazon, Microsoft and Google directly. By promising to deliver a large group of users, NVIDIA can then negotiate tough deals with these cloud computing giants or give business to smaller cloud firms like Coreweave – helping to avoid the three big giants accumulating too much power.
- ★ Meta (along with many other firms) is developing FMs which are designed to be more open than many alternatives, and able to operate across many different cloud platforms. This enables AI start-ups to focus on ['fine-tuning'](#) existing models to perform better, rather than having to create their own, making start-up entry even easier.
- ★ Firms like Apple are reportedly designing AI systems which can run on a [user's own device](#), limiting the need for users to rely on cloud computing services at all.

Of course, this current openness and choice could quickly change. But competition authorities – including in the [UK](#), [France](#) and the [Netherlands](#) – are already investigating the cloud sector, and some might develop new rules to protect competition. Regulation should focus on ensuring that customers can easily switch between different AI services; allowing businesses to switch between cloud computing

services and FMs to run their AI applications; and preventing cloud computing firms from cutting off AI start-ups if they become too disruptive.

A second problem is that large tech firms might exploit their existing positions in other markets to influence how FMs are deployed – and ensuring only innovations which protect or bolster their existing business lines succeed. For example, Google and Apple operate the dominant app stores which consumers use to find new software on their smartphones, and might limit access to AI services in that way. Firms could also bolster a must-have product with a particular FM: Microsoft, for example, is integrating its FM into parts of Windows and Microsoft Office and has been using its control over Windows to persuade users to try its AI-powered search engine Bing (although without much success so far).

Competition authorities are already scrutinising, and in some cases regulating these bottlenecks. The EU's Digital Markets Act, for example, requires that Apple and Google give access to their app stores to developers on a "fair, reasonable, and non-discriminatory" basis. The UK has just passed the Digital Markets, Competition and Consumers Act, which will allow a Digital Markets, Competition and Consumer Bill which will allow the CMA to impose similar rules. But authorities should not simply assume that linking two services together is negative for consumers. Integrating two services, for example, can be a useful way to introduce users to a new technology and build up a user base, which a big tech firm can then use to compete against another dominant service, boosting competition. This appears to be Microsoft's strategy for challenging Google in online search: it is unlikely any serious challenger to Google will emerge without being able to take advantage of a large firm like Microsoft's resources and user base. Competition authorities, however, have so far struggled to give guidance about when integration is anti-competitive and when it might promote competition by helping one big tech firm disrupt another one's business. Overzealous limitations may persuade large technology firms that quiet co-existence is a safer path.

A third issue for [EU](#), UK and [US](#) authorities is the growing number of deals between big tech firms and smaller AI start-ups. Regulators worldwide have been concerned for years that big tech firms can buy up small, promising tech firms – killing off their ideas so they cannot challenge the acquirer's business. Authorities have started to block [some acquisitions](#), often for good reason, which has encouraged large technology firms to develop 'partnerships' with AI start-ups instead of simply buying them.

Anti-monopoly advocates argue that competition authorities still worry too little about how these deals might influence the direction of innovation. Large firms complain that partnerships are necessary to give start-ups the resources they need to succeed. Most observers agree, however, that competition authorities' merger review decisions in the tech sector have become less predictable, making it harder for start-ups to understand their options for raising capital quickly.

Unfortunately, this problem persists in AI. The European Commission is reportedly assessing whether Microsoft's partnership with OpenAI breaches competition law, despite not being prohibited under merger review. The CMA has launched a public consultation on several partnerships, without explaining why it hand-picked those partnerships for scrutiny. The deals in question vary dramatically. Microsoft's \$13 billion deal for 49 per cent of OpenAI requires OpenAI to use Microsoft's cloud computing platforms exclusively and has undoubtedly helped Microsoft assert influence over OpenAI's management – although even in this case, the partnership seems to have had pro-competitive benefits, by launching a wave of innovation in AI large language models. The CMA also looked at Microsoft's investment in the French AI start-up Mistral, which is worth only €15 million (although it has since abandoned its scrutiny of that deal), and Amazon's partnership with AI firm Anthropic, which caps Amazon's ownership at only 12

per cent. Google has also invested in Anthropic, suggesting that the firm is hedging its bets. It is unclear why the CMA has chosen only to investigate Amazon's investment in Anthropic, and not Google's.

The CMA has raised more general concerns about the "interconnected web" of partnerships between large tech firms and smaller FM developers. This might indicate that big tech firms are focused on co-operation rather than competition, replicating some of the problems in more mature tech markets, or that AI start-ups will be too afraid to challenge any of their investors. But competition authorities should be alert to the possibility that this may be a positive sign – illustrating that these partnerships are not always exclusive tie-ups and that AI firms are keeping their options open. AI start-up, Cohere, which has raised [more money](#) than almost any other AI firm, takes pride in operating independently of large tech firms and ensuring customers are not locked into one cloud computing provider. The CMA's desire to understand these partnerships in detail is sound – but its focus should be on ensuring start-ups can still innovate fearlessly. It will urgently need to provide clearer guidance so as not to inadvertently discourage pro-competitive partnerships that preserve this incentive.

Conclusion

AI has the potential to both boost Europe's flagging productivity across many sectors of the economy, and to give European firms an opportunity to secure an important role in the next wave of innovation.

Competition authorities have reasons to be wary about the direction of the AI sector. However, they must remain focused on maximising competition – which will in turn make AI more widely available – instead of minimising the role of big tech firms. Large tech firms' uncertainty about which business models will succeed seems to be a key driver of players' attempts to win customers and innovate freely. Competition authorities need to focus on preserving that uncertainty, rather than trying to exclude 'big tech': an objective that risks being counterproductive and unrealistic, at least absent a more interventionist government policy to actively shape a different market structure. Without that, the emergence or persistence of large firms can hardly be unexpected: these are markets where scale matters. In a market of big players, competition authorities must ensure they compete fiercely rather than falling into a peaceful oligopoly.

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