UNITED STATES OF AMERICA
Federal Trade Commission
WASHINGTON, D.C. 20580

Office of Commissioner
Melissa Holyoak

ANTITRUST AND AI: FOUNDATIONAL PRINCIPLES MEET FOUNDATION MODELS

MELISSA HOLYOAK*
COMMISSIONER, U.S. FEDERAL TRADE COMMISSION

JUNE 3, 2025

KEYNOTE ADDRESS AT THE US AI SUMMIT 2025
WASHINGTON, D.C.

* The views expressed in these remarks are my own and do not necessarily reflect the views of the Federal Trade Commission or any other Commissioner.

I. Intro:

Thank you so much for inviting me to be with you. This is an exciting time—in AI, in antitrust, in federalism, in foreign affairs, in everything.

Listening to the speakers at today's terrific conference has inspired two primary feelings in me. The first is sheer wonder. Every time I see a product demonstration from a frontier AI model, my jaw drops.

When I see a computer create a lifelike video from a text prompt or when I hear companies like Meta project that the majority of its code will be *written* by AI by 2026,[1] I think back to the first time I got a cellphone (a flip phone) and how amazed I was to send my first text message. My husband and I were young newlyweds at the time and could only afford one phone that we shared. It seems ridiculous now thinking back because he was the person I needed to text and call the most. That was *not that long ago*.

The second feeling is cautious optimism. I think that I am in good company in this room when I say that I am a believer in this technology. I believe that as this nascent technology matures, it can help humanity address some of its longest, most vexing problems: disease, hunger, energy, poverty.

That might strike some as unrealistically utopian, but I believe that this technology can be a force multiplier for human capital and unlock new possibilities in science.

While I consider myself a believer, I do not have blind faith in the idea that AI will fix all of our problems and cure everything that ails us. The technology can only reach its full, beneficial potential if we—and I really mean "we" as human civilization as a whole—create the conditions for success.

As an FTC Commissioner, I spend my day immersed in two distinct but overlapping fields: competition and consumer protection. So those are the two principal frames that I bring to thinking about AI. With respect to consumer protection, I think AI offers tremendous potential as a tool for fighting frauds and scams that plague Americans. But I will use my remarks today to shed some light on how I think about AI from a competition law enforcement perspective. Before I do, I want to set the stage with some historical and geographic context.

---

[1] Cecily Mauran, Mark Zuckerberg Wants AI to Do Half of Meta's Coding by 2026, *Mashable* (Apr. 30, 2025), https://mashable.com/article/llamacon-mark-zuckerberg-ai-writes-meta-code.

II. Historical Context: Differentiated Products, Global Markets

In 1882, an attorney for the Standard Oil Company created a trust among a group of 14 oil refinery corporations.[2] This trust formation allowed the group of refiners to escape state corporation regulations and directly negotiate the quantity of oil that the refiners produced and the prices they charged to customers.[3]

Firms in a handful of other commodity industries— sugar, cotton, linseed oil, lead, sugar refiners, and railroads—followed suit by forming their own trusts.[4] The Sherman Antitrust Act emerged as a populist response to these competition-killing horizontal arrangements.

In the intervening 140 years, much has changed, and much has stayed the same. Monopoly profits are as tantalizing as ever, and every couple of years a new cartel is uncovered.[5] And antitrust enforcers are still bringing enforcement actions in the same commodity markets at issue in the early days of antitrust. Just a couple of years ago, the DOJ sought to block a merger between sugar manufacturers.[6]

But today's antitrust cases more often focus on differentiated products than commodities. And as a result, the hardest questions in today's antitrust cases are typically "What is the relevant market? And who are the competitors in that market?"

Additionally, the world has become a much smaller place in the past 140 years. Communications networks at the turn of the 20th century were primitive and costly. A 15-word telegram in the early 1900s would cost more than $10, adjusted for inflation.[7] Even that flip phone I had twenty years ago limited the number of characters and texts I could send.

Today, we walk around with devices that immediately connect us to virtually every other person and business on earth—and virtually all information recorded throughout history.

As the world has gotten smaller, markets have become increasingly global. The total value of all exported goods in 1950 was about $63 billion; last year, it was about $24 *trillion*.[8]

These two pieces of historical context are critical for understanding AI from an antitrust perspective.

---

[2] *See* Naomi Lamoreaux, The Great Merger Movement in American Business, 1895–1904 (New York: Cambridge University Press, 1985).
[3] Wayne D. Collins, Trusts and the Origins of Antitrust Legislation, 81 Fordham L. Rev. 2279 (2013). *Available at*: https://ir.lawnet.fordham.edu/flr/vol81/iss5/7.
[4] *Id.* at 2317.
[5] *See, e.g. In re Auto. Parts Antitrust Litig.,* 29 F. Supp. 3d 982 (E.D. Mich. 2014); *Pacific Steel Group v. Commercial Metals Co*., No. 4:20-cv-07683-HSG (N.D. Cal. June 28, 2024); *In re: Cathode Ray Tube (Crt) Antitrust Litig.*, No. C-07-5944 JST, 2016 WL 183285, (N.D. Cal. Jan. 14, 2016).
[6] *United States v. United States Sugar Corp.*, No. CV 21-1644 (MN), 2022 WL 354228, at *1 (D. Del. Jan. 11, 2022).
[7] *See* Vintage Telegrams, *Telegram & Cable Co.*, https://www.telegramcableco.com/vintage-telegrams.html.
[8] *See* World Trade Organization, *Evolution of trade under the WTO: handy statistics*, https://www.wto.org/english/res_e/statis_e/trade_evolution_e/evolution_trade_wto_e.htm.

III. Antitrust and AI

From an antitrust perspective, AI presents tricky issues for enforcers. Right now, there is massive competition between firms to see who can build the best "foundation model." OpenAI, Google, Meta, Anthropic, xAI, Deepseek, Mistral, and others are all in a heated race to create the most intelligent, fastest, and cheapest foundation model.

And at a very basic level, the concepts behind this technology are relatively easy to understand: foundation models are software programs trained on vast amounts of information to predict patterns in data. Once trained, the model can be used for all kinds of applications: generating text in response to a prompt, generating an image or video, analyzing financial data or weather patterns, or predicting the structure of proteins based on their amino acid sequences.

And therein lies part of the antitrust challenge. Do these foundation models and the AI tools they enable compete with search engines like Google? Photo-editing and image generation tools like Adobe Photoshop? Data analytics software like Tableau or Power BI? Do AI tools compete with psychiatrists for providing talk therapy or primary care physicians for the purpose of diagnosing diseases? Teachers? Lawyers? Weapons systems designers?

In other words: What *are* the relevant markets that AI competes in? And who *are* (or *will be*) the competitors in that market?

Antitrust enforcers have plenty of experience analyzing horizontal restraints of trade, where two firms either merge or enter an agreement that reduces output. And we have experience analyzing vertical foreclosure, where one firm restricts other firms' access to a critical input or their access to customers.

But enforcers don't have much experience dealing with a technology that is projected to be both a critical *input to* and potentially a *competitor with* almost every firm in the economy.

If business history teaches us anything, it's that markets will not support a large number of large-scale brands competing to provide the same type of service. Foundation models are expensive and require massive amounts of energy, high-powered chips, and extremely talented human capital—three things that are in scarce supply in today's economy.

What's more, foundation models are similar to multi-sided platforms that may exhibit indirect network effects. As they improve through access to increasingly large datasets and continue to attract developer integration, they become more increasingly attractive to enterprise users, customers, and potentially advertisers.

In industrial organization economics, when a market is characterized by high fixed costs, barriers to entry, increasing economies of scale, and network effects, that market is likely to consolidate around a small number of competing firms.

Right now, investors are pouring money into these companies at an unprecedented rate, hoping that the model that they invest in will succeed and make them a lot of money. But foundation models are expensive and to my knowledge, *no* firms are making a profit today from foundation models alone.

Eventually investors will tire of dumping tens of billions of dollars per year into products that make no profit.[9] When that happens, there will be increased pressure on the market to consolidate.

Furthermore, it bears emphasizing that AI is a fundamentally *global* market. While markets at the dawn of antitrust were limited by language barriers and national barriers and the challenges associated with transporting goods long distances, AI knows no such barriers.

Foundation models are trained on vast sets of data from all over the world: novels written in Chinese, climate data from the Copernicus datasets in Europe, articles from newspapers around the globe, computer code uploaded to StackOverflow, financial data from the Nikkei, huge compendiums of information like Wikipedia.[10]

And amazingly, because the models are trained on multilingual datasets, they are capable of "learning" human languages. So a foundation model developed by French-speaking engineers in France, eating des macarons and drinking wine, can respond to an Arabic prompt entered by an Arabic-only speaker. *Encroyable!*

IV. Navigating Potential Risks

So what does all of this mean? Right now, everything is sunny in the world of AI competition. We have lots of firms raising and investing tons of money in AI to making innovative, groundbreaking products. It seems like every week a new model is released that is faster, cheaper, or smarter than the previous benchmark. More capabilities are being added to the models at breakneck speed – text, images, video generation, and even agentic AI executing your travel plans! The field right now is a competition enthusiast's paradise.

But if you look carefully, you may see rain clouds forming on the horizon. We have a technology that promises to be structurally critical—as an input, a direct competitor, or *both*—across nearly every sector of the economy. We also have strong indicators, based on both economic theory and the long history of industrial organization economics, that when there are significant increasing returns, the market may quickly consolidate around a small set of players.

And because the technology transcends national borders and language barriers, the *global* market could coalesce around a very small number firms. Exclusionary conduct in this field could dampen innovation or harm consumers on a worldwide scale.

---

[9] *See* Ingrid Lunden, AI Investments Surged 62% to $110 Billion in 2024, While Startup Funding Overall Declined 12%, *TechCrunch* (Feb. 11, 2025), https://techcrunch.com/2025/02/11/ai-investments-surged-62-to-110-billion-in-2024-while-startup-funding-overall-declined-12-says-dealroom/.

[10] *See, e.g.* Harry Guinness, Meta AI: What is Llama 4 and why does it matter?, *Zapier* (April 8, 2025), https://zapier.com/blog/llama-meta/ ("Llama 4 models were trained on trillions of tokens of text, as well as billions of images. Some of the data comes from publicly available sources like Common Crawl (an archive of billions of webpages), Wikipedia, and public domain books from Project Gutenberg, while some of it was also 'synthetic data' generated by earlier AI models.").

In my mind, these factors mean that antitrust enforcers need to be vigilant and carefully monitor these markets. One fact pattern I think we need to be particularly cognizant of is a business strategy that economists call "open early/ closed late."[11]

Here's how it works: In a networked industry—like AI—a firm might obtain a dominant position by adopting "open" policies. For example, the firm may attract developers to the platform by granting access to its model or its troves of data at low or no cost. These "open" policies could serve as an inducement for third parties to rely on the foundation model as the infrastructure for their apps or services. After achieving dominance, due in part to attracting developers with "open" policies, the foundation model operator is incentivized to "close" the policies, either by restricting access or increasing the fees associated with using the model.

Right now, we are very clearly in the "open" phase of the market development. Foundation model providers are offering generous access to the models, investing heavily in developing Software Developer Kits (SDK's) for easy integration, launching developer platforms for sharing fine-tuned models and plug-ins, creating intense tutorials and documentation to support developers, and offering cloud integration for developers.

All of these features come at a cost, and if the market consolidates around a small number of providers at the foundation model level, those firms may be less inclined to support these third parties.

V. Extra-Competitive Factors

Though competition between the firms and countries' approaches to antitrust enforcement will be critical to how AI develops, we shouldn't delude ourselves into thinking that these are the only factors that shape whether AI reaches its potential as a boon to humanity. In other words, exclusionary conduct by a potentially dominant firm is not the only potential raincloud in the sky.

Competition policy exists as one part of a broad tapestry of interactions between governments, firms, consumers, and third parties to shape outcomes for consumers. As I noted earlier, the development of AI will also affect consumer protection, both by giving enforcers a new set of tools to track law violators and by potentially enhancing fraudsters' ability to deceive consumers.

Because of the geopolitical significance of AI, we may also see increasing interaction between competition and national security concerns as the technology develops. It is well known that countries are currently investing billions of taxpayer dollars into developing AI infrastructure and subsidizing firms that provide AI. Imagine an AI firm that is subsidized by a foreign adversary that offers deeply below-cost pricing for a future AI product. From a competition perspective, that could be good—consumers benefit from low prices. But from a national security perspective, this could cause significant concerns. The foreign firm could use its low prices to attract American

[11] *See* Carl Shapiro, Professor, U.C. Berkeley, Testimony Before the Antitrust Modernization Commission: Exclusionary Conduct (Sept. 29, 2005), https://faculty.haas.berkeley.edu/shapiro/amcexclusion.pdf.

consumers and gain access to their personal data and other potentially sensitive or actionable information. Such an outcome would justify careful scrutiny across the federal government.

VI. A Path Forward

Grey clouds on the horizon do not guarantee a storm, but it does suggest that we should pack an umbrella.

As an antitrust enforcer in the United States, that means we have to remain vigilant about the accumulation and abuse of market power, even if the market is competitive today. Importantly, in the United States, the FTC and DOJ are antitrust *enforcers*, not *regulators*. We are loathe to create *ex ante* rules that dictate how firms compete in the marketplace or how markets are structured.

If one firm becomes a market leader through innovation, efficiency, or industry—in other words, if a firm out-competes its rivals—that's great! We *want* firms to be incentivized to win the market by providing the best products at the lowest costs.

If we try to impose our beliefs about how the AI market *should* look—about how many competitors there should be or how much they should charge for their products or what features the products should have—we are more likely to dampen innovation and allow a foreign firm to win the market than we are to dictate the desired outcome.

This is not a field where the government will be able to protect U.S. firms from the bright, unflattering light of international competition. We need to have faith in the core principle that it is *competition* that will generate the best products, the lowest costs, and the most innovation for consumers.

It is the role of the competition enforcers to make sure that competition is fierce and that no one firm is allowed to exclude competition and deprive consumers of its benefits.

Given the scale and the scope of this industry, I want to assure you that the FTC is vigilant and up to that task.