

Importance of geopolitics in AI development

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In what ways is geopolitics – rivalry between nation-states for hegemony – affecting the flow of resources necessary to develop and deploy artificial intelligence (AI)? Answer to this question matters greatly to those in countries with a stake in being at the top of the AI race.ⁱ But when we as experts are asked to draw implications of geopolitics for AI, we seem to be somewhat at a loss. This is in part because the necessary expertise to address this issue is distributed, crossing boundaries of technological knowhow – the domain of data scientists – and of policymaking – the domain of politicians and diplomats. It is also because geopolitics for AI has active stakeholders in the private sector, including tech firms that develop AI and investors that finance AI development.

For some, AI as general-purpose technology is about progress, just like steam power and electricity that lifted the human race out of drudgery to enjoy higher standards of living. For others, AI poses risks of job loss, hitting the young more than older workers, challenging a widely held assumption that education provides a solution to societal ills like inequality. For yet others, AI is the arena in which great powers like China and the United States play out their rivalry. AI hawks in the US worry that this emerging technology could undercut America’s national security and geopolitical hegemony. When we hear Nvidia’s CEO Jensen Huang say that “China is going to win the AI race”,ⁱⁱ how should we evaluate and react to such a statement?

In this column, we ask: what do we need to know about the current links between geopolitics and AI, and likely future scenarios? What is unique about AI that makes learning from past geopolitical tensions more challenging? Knowing the answers to these questions are as important to businesses and data scientists that work for them as for diplomats and national security advisors.

Geopolitics: shift over time

Geopolitics used to be about the study of how physical geography and related factors, such as natural resource endowment, affect a country’s politics and foreign policy. For instance, an island nation like the United Kingdom has vastly different opportunities to secure its borders than countries with land borders. Political power

connected to geography made some countries a sea power, giving them leverage in naval affairs. Fast forward into the last few decades, even Henry Kissinger, who served as national security advisor in consecutive US administrations, came to the view that geography trumped ideology in shaping a country's expansionist ambition. He therefore concluded when the Cold War ended that whoever governed Russia would continue to be a threat to the US.ⁱⁱⁱ Great powers can also launch a geographic project to enhance its geopolitical power. A good example here is China's Belt and Road Initiative, linking China by sea and land to Central Asia and Europe, to assert its hegemony in the region.

In recent years, there has been a notable shift from geopolitics to what some call geoeconomics. Geoeconomics is "the use of economic resources to promote and defend national interests and to produce beneficial geopolitical results".^{iv} The use of economic policy – tariffs, export controls, etc. -- as a tool of national security, however, has long historical roots, in the mercantilist tradition advocated by Alexander Hamilton. And in the twenty-first century, the underlying mechanism of geoeconomics is the "weaponization" of interdependence that has resulted from decades of globalization.^v In AI development and use, geoeconomics manifests itself in governments' control over strategic assets, or restricting access to such assets by adversaries, as in the case of US denying China access to the most advanced chips made by Nvidia.

Linking geopolitics to AI

AI is digital and therefore little to do directly with physical geography. But AI depends greatly on tangible resources, including semiconductors and raw materials used to manufacture them and electricity that powers data centers. Seen in this way, geopolitics (and its geoeconomic cousin) affect AI greatly, via shaping access to resources – including minerals, components, talent – that are deemed essential for its development and use.

Moreover, because of the use of AI to enhance the defence and security capabilities of nations, some observers draw parallels with nuclear arms race. However, this parallel has limited validity due to differences in technology and stakeholders. AI is a general-purpose technology whose development is driven by private tech giants, and whose use is in part determined by the general public, unlike nuclear weapons which are discrete state-controlled hardware for military supremacy. Stockpiling and mutually assured destruction for nuclear weapons result solely from actions by nation-states, thus more predictable and accountable. By contrast, the AI race involves commercial competition and societal transformation over and above state actions, resulting in a broad range of risks.

Rivalry between China and USA

Most recently, the AI rivalry between China and the United States was brought home by the release of DeepSeek's R1 reasoning model in January 2025, just a few months after OpenAI's launch of its pioneering o1 model. DeepSeek, a private entrepreneurial firm in China, struck the world with its design principles of cost-efficiency, rapid deployment, and targeted applications. The resulting competitive dynamics unravelling among pioneer and fast follower providers of AI foundation models are intricately linked to the rivalry between China and the US.

Benchmarking various dimensions of AI development shows that US is ahead, but China is quickly catching up. According to one study, the United States leads in four of the six categories of metrics examined (talent, research, development, and hardware), and China leads in two (adoption and data).^{vi} AI adoption in this study is proxied by the number of broadband subscriptions and mobile payments. But why is the US "ahead of the game" in hardware, and China in applications? The reason may lie in the fact that China and the US are playing a different game.

Some of the China-US differences stem from different political systems with China being state-led and the United States being market-led. China is pursuing industrial policies with state funding to promote energy, chips, state-backed AI labs, and data.^{vii} But this simplistic contrast between state-led and market-led does not capture the whole picture. Today, and at least since the 2010s, Chinese entrepreneurial companies have played a significant role in developing a competitive AI ecosystem that differs from Western systems.

China is committed to building a modular and resilient AI infrastructure, in which the emphasis is on customized infrastructure (e.g. Alibaba Cloud's storage solutions), cost efficiency in model development (e.g. AI models have significantly lower training and inference costs), and calibration for real-world applications.^{viii} And this US-China contrast is symptomatic of the different approaches taken by Silicon Valley (investing massive amounts of venture capital in cutting-edge technology) and China's ecosystem (brimming with fast-follower startups willing to do the grunt work to adapt their product applications to meet consumer demand).^{ix} The consequence of this business model in China is a wide diffusion of AI across all segments of the economy, including e-commerce, finance, healthcare, logistics, EVs, automated ports, and intelligent manufacturing.

China's policy to promote AI hinges on a combination of mobilizing public funds and private entrepreneurial firms which are expected to abide within the state system. A good example of this private-public consistency is the decision by DeepSeek and other providers (such as Baidu, Moonshot AI and Meituan) to offer open-source AI. Open-source has the advantage of low-cost adoption and rapid diffusion of applications.^x It is a business decision, as seen for instance by Meta's open-source approach through its Llama models. But open-source also enhances the state's supervisory and surveillance capacity, thus making the decision consistent with the Chinese state goals and stance.

Private sector players' influence in geopolitics

Geopolitics is primarily a domain of nation-states. Yet private sector actors play an important role with respect to AI and by extension geopolitics due to a number of factors governing business-government relations. Here, we highlight corporate spending on AI, business engagement in corporate diplomacy^{xi} as remaining neutral in geopolitics is often not an option, and the enhanced definition of sectors affecting national security.

First, private sector spending on AI dwarfs public sector spending. According to one estimate, global corporate AI investment reached \$252.3 billion in 2024 experiencing a dramatic thirteenfold growth over the past decade.^{xii} In the US, the 2024 private sector AI investment was over \$109 billion, compared to the federal non-defense AI R&D funding of approximately \$3.3 billion.^{xiii} Even in the European Union, 73% of the total 257 billion euros spent on AI investment by EU27 countries in 2023 was estimated to be in the private sector.^{xiv} The US is squarely focused on maintaining and strengthening the primacy of the US AI industry, but with funding from businesses. This necessitates positioning private capital investment as America's geopolitical manoeuvre. Witness in January 2025, the way President Trump championed the announcement of the Stargate Project, a joint venture among OpenAI, Oracle and Softbank to commit \$500 billion investment over four years to build an AI infrastructure such as data centers.^{xv}

Second, given this government stance, private sector firms are either taking sides, or carefully navigating and walking the tight geopolitical rope, to be consistent with their respective competitive position. A contrast between OpenAI and Nvidia illustrates the situation well. On the one hand, OpenAI is clearly taking sides, endorsing the US government's stance to divert potential investment capital flow away from China. OpenAI could not have been more explicit when they stated: "With an estimated \$175 billion sitting in global funds awaiting investment in AI projects, if the US doesn't attract those funds, they will flow to China-backed projects — strengthening the Chinese Communist Party's global influence."^{xvi} On the other hand, Nvidia got caught in the geopolitical firing line, when one day, its CEO Jensen Huang stated that "China is going to win the AI race", only to replace it the following day by "China is nanoseconds behind the US".^{xvii} Nvidia evidently did not wish to antagonize the US, and its hope of easing export controls of advanced AI chips was realized soon thereafter.

Third, while private actors play a greater role in geopolitics, governments are extending their definition of national security well beyond the traditional understanding of strategic sectors in defense to most sectors of the economy with digital connectivity (subject to cybersecurity risks). Specifically, the US identified 16 "critical infrastructure sectors", whose "incapacitation or destruction ...have a debilitating effect on security, national economic security, national public health or

safety, or any combination thereof.”^{xviii} Similarly, the UK specified 17 areas of the economy (AI being one of them) in which the government could scrutinize, and block, acquisitions for potential national security harm.^{xix} With such shift in the meaning of national security, governments’ geoeconomic toolkits – sanctions, tariffs, investment control, etc. – can be justifiably applied to many different sectors that deploy AI.

Future of geopolitical influence in AI

Amidst all the efforts made by universities and businesses to develop AI, this column urges businesses, investors, and data scientists who work for them to pay explicit attention to the impact of geopolitics on AI development.

The AI race is much more affected by what we do, compared to say the nuclear arms race, because AI development is driven by commercial firms, and its use is determined by us as citizens. In a world in which governments rely more on private sector actors, rules of the game are co-created by governments and these actors. This applies as much to co-creating the rules for geopolitical discourse as to co-developing domestic regulations that govern AI, as demonstrated by the above discussion of open-source AI in China and OpenAI’s alignment with government stance in the US.

Next time we hear a big tech executive make a geopolitical manoeuvre, via a public statement, we need to judge not only the extent of commercial benefits derived from it, but also the potential influence they wield in policymaking. Next time you see your government restricting exports, imports or investment in your sector, remember their newly extensive definition of national security to apply to most sectors with connectivity, rendering most workers to be in strategic sectors affected by geoeconomics. This lens also enables us to anticipate how the resources necessary for AI deployment are likely to flow, be they energy, data center infrastructure, or the movement of AI talent.

ⁱ State Council of the People’s Republic of China, *New Generation Artificial Intelligence Plan*, translated by Webster, G. et al., Stanford Cyber Policy Center, August 1, 2017. <https://digichina.stanford.edu/work/full-translation-chinas-new-generation-artificial-intelligence-development-plan-2017/>.

ⁱⁱ “Nvidia’s Jensen Huang says China ‘will win AI race with US “ *Financial Times*, November 5, 2025 <https://www.ft.com/content/53295276-ba8d-4ec2-b0de-081e73b3ba43>

ⁱⁱⁱ Kissinger, Henry (1994). *Diplomacy*, New York: Simon & Schuster.

^{iv} Blackwill, Robert D. and Harris, Jennifer M. (2017) *War by Other Means: Geoeconomics and Statecraft*. Harvard University Press.

^v Farrell, Henry and Newman, Abraham L. (2019) “*Weaponized interdependence*” *International Security*, 44(1): 42-79.

^{vi} Daniel Castro, Michael McLaughlin, and Eline Chivot (2019) *Who Is Winning the AI Race: China, the EU or the United States?* Center for Data Innovation, August. With an 2021 update.

^{vii} Chan, Kyle et al “China’s Evolving Industrial Policy for AI, June 26, 2025 <https://www.rand.org/pubs/perspectives/PEA4012-1.html>

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- x Kai-fu Lee “China’s open-source AI is a national advantage” *Financial Times*. December 5, 2015. <https://www.ft.com/content/b1f92b0e-d6ef-4c95-b51e-7bcf90c8a65f>
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- xiv Fonteneau, François et al. (2025) *Advancing the Measurement of Investments in Artificial Intelligence*, OECD Artificial Intelligence Papers, No.47, September.
- xv Smith, C. S. “Stargate: America’s \$500 billion bid to corner global AI capital” *Forbes*, January 24, 2025 <https://www.forbes.com/sites/craigsmith/2025/01/23/stargate-americas-500-billion-bid-to-corner-global-ai-capital/>
- xvi OpenAI (2025) *AI in America: OpenAI’s Economic Blueprint*.
- xvii “Nvidia’s Jensen Huang says China ‘will win AI race with US “ *Financial Times*, November 5, 2025 <https://www.ft.com/content/53295276-ba8d-4ec2-b0de-081e73b3ba43>
- xviii “Critical Infrastructure Sectors” defined by the US Cybersecurity & Infrastructure Security Agency. <https://www.cisa.gov/topics/critical-infrastructure-security-and-resilience/critical-infrastructure-sectors>
- xix “National Security and Investment Act: Details of the 17 types of notifiable acquisitions”, UK Cabinet Office, February 6, 2025 <https://www.gov.uk/government/publications/national-security-and-investment-act-guidance-on-notifiable-acquisitions/national-security-and-investment-act-guidance-on-notifiable-acquisitions>