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#AI / #US / #China

Who's winning the AI race?

Artificial intelligence (AI) has the potential to rewire economic growth and reshape geopolitics. For these reasons, it has been compared to the nuclear, space and arms races, which defined the 20th century. And, while the US may be in the lead at the moment, this is a marathon not a sprint.

Key Takeaways

- AI models developed by US companies are at the frontier and are likely to remain so, helped by export controls on the most advanced chips. That said, China's open models are close behind and may see wider adoption worldwide, even if the US uses geopolitical levers to embed its technology stack (and displace China's) across key allies.
- US firms continue to spend heavily on AI infrastructure, but the Chinese state also has deep pockets and is better placed to provide cheap electricity. China is on track to become the world's first "electro-state" while US domestic politics could stymie energy production needed for data centres.
- A key difference is that while US tech firms are shooting for the moon in the hopes of achieving artificial general intelligence (AGI), China's 'AI+' strategy is focused on using current AI tools to augment its vast manufacturing ecosystem.
- China's regulatory efforts to harness data could also give it an edge in developing new models, specifically 'world models', which use large reams of data to allow AI to understand the physical world, such as for autonomous driving and robotics.
- It will be difficult to judge who is leading the AI race real time; ultimately whoever develops the largest ecosystem may take the top spot.

At the starting blocks...

One year ago, China's DeepSeek R1 model, which rivalled US large language models (LLMs) at a fraction of the cost, shocked markets, knocking $1 trillion off stocks and opening up a new chapter in US-China strategic competition.

Since then, China has made significant inroads into the top 10 LLMs, while leading in open models (see Figure 1).

So, where do the US and China stand on key elements of the 'AI race'? And what do differing government strategies imply for both nations?

Figure 1: The US and China dominate LLMs, judged from reasoning, knowledge, math and coding tests

Nationality	Company	LLM	Type
US	OpenAI	GPT-5	Closed
US	OpenAI	o3-high	Closed
China	ByteDance	Doubao-Seed-1.6	Closed
US	xAI	Grok-4	Closed
China	Alibaba	Qwen3-23B	Open
China	DeepSeek	DeepSeek-R1	Open
US	OpenAI	o4-mini-high	Closed
US	Google	Gemini-2.5-Pro	Closed
China	Zhipu AI	GLM-4.5	Open
China	Tencent	Hunyuan-TI	Closed

Source: Aberdeen, DW, OpenCompass LLM Leaderboard, March 2026

The stakes could be huge. In the most extreme scenario, achieving artificial general intelligence (AGI) could lock-in enduring economic and military advantages.

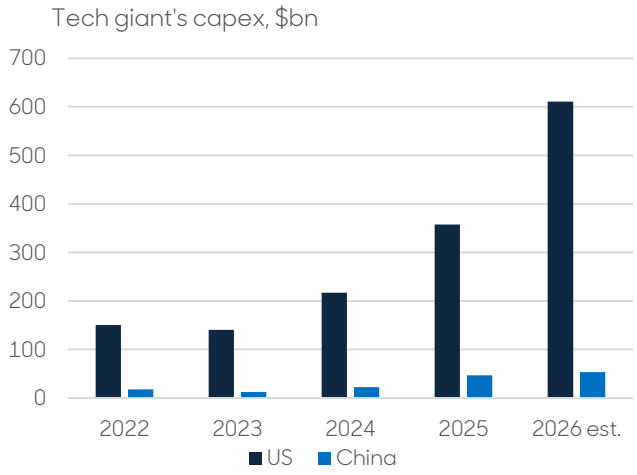
The US private sector has led the way

Unlike prior 'races', which have necessitated government intervention, the commercial pay-off has been clear this time round.

The US' deep capital markets and cash-rich technology firms have leaned-in hard to closed models, with the hope of ultimately developing the "machine god" of AGI.

US tech companies have spent more than $865 billion since 2022 on capex already, and plan to spend more than $610 billion in 2026 alone. In contrast, Chinese tech firms have 'only' spent around $67 billion (see Figure 2).

Figure 2: US tech firm spending dwarfs that of Chinese firms



Note: US tech giants = Alphabet, Meta, Microsoft, and Amazon. Chinese tech giants = Tencent, Alibaba, and ByteDance (ByteDance numbers unavailable for 2022/2023)

Source: Aberdeen, FactSet, Financial Times, Silicon UK, March 2026

These figures however may understate China's spend. The buildout of datacentre infrastructure is very clearly driven by 'hyperscalers' in the US. In China's case, the capital-intensive investment sits with a more diffuse array of firms, including state-backed telecom companies, rather than just its high-profile tech behemoths.

Will US protectionism and realpolitik keep it in the lead?

The Trump administration's "AI action plan" talks a good game, highlighting the need to cut regulatory hurdles, build out energy and computing infrastructure, export American AI globally, and integrate it across defence and federal agencies while accelerating private sector innovation.

Interestingly, it also encourages tech companies to focus on open-source models due to their greater ease of adoption for other firms, which is at odds with the current focus of US firms on closed-source models.

Export controls on the most advanced Nvidia chips and semiconductor manufacturing technology remain the key active government levers, given regulation was already light touch.

Export controls are likely to continue to give US firms a strong advantage in training frontier AI models that will be hard for China to catch up with. It is estimated that US firms currently control almost 70% of global AI 'compute', whereas Chinese companies may only account for 10%.

One new tactic by the US administration is to use AI as a geopolitical lever, helping to embed the US tech stack across more countries.

In particular, compute is becoming a key pillar of the US relationship with the Gulf: countries in the region have had to dump Chinese technology in order to get access to frontier AI capabilities.

Large Sovereign Wealth Funds (SWFs) and abundant energy suggest that Gulf states could expand their AI capabilities rapidly, giving wide swathes of MENA access to US technology.

That said, US government policy is not all moving in a complementary direction.

The US administration continues to wage a culture war on top tier universities, such as Harvard. H-1B visas now carry a $100k price tag, while the focus on cost-of-living ahead of the US mid-term elections is pushing up the electricity prices for data centres, risking energy becoming a constraint on US AI expansion. Indeed, NVIDIA CEO Jensen Huang has highlighted that power, not GPUs, could become the main bottleneck to AI.

Power-hungry data centres need feeding

The data centres at the heart of the AI race require vast amounts of electricity. The International Energy Association (IEA) has estimated that they consumed 183 terawatt-hours (TWh) of electricity in the US in 2024, more than 4% of the total consumption. McKinsey projects that this could rise to over 600 TWh by 2030.

Electricity costs, which are up 6.3% year on year in January, have become highly political, and more than half of survey respondents consider data centres as responsible for the increasing price of power according to a Morning Consult poll.

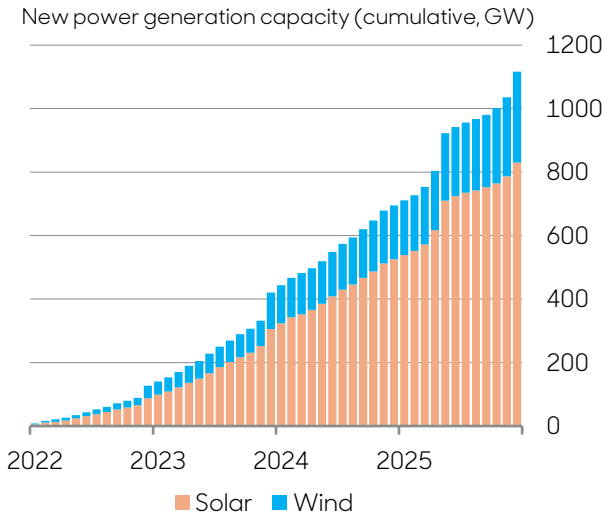
Local legislation and proposals to regulate or cancel data centres projects have risen, while President Donald Trump has taken to Truth Social to say that: "I never want Americans to pay higher Electricity bills because of Data Centers ... big Technology Companies who build them must pay their own way".

For now, hyperscalers are seemingly happy to oblige. Microsoft has committed to compensate for higher power prices and contribute to local communities. While others are turning to behind-the-meter generation to avoid the grid altogether.

That said, questions remain about whether power and costs will become a headwind for US firms, and whether China can capitalise on its advantages.

After two decades of minimal growth in power consumption and a slow and steady expansion of grid capacity in the US, power may be hitting an inflection point. The IEA expects power consumption growth to almost double to 2% by 2030, largely due to data centres. Our own work on global infrastructure gaps suggests that the expansion of US grid capacity needs to double, even before accounting for data centre needs.

Figure 3: China has rapidly increased its grid capacity

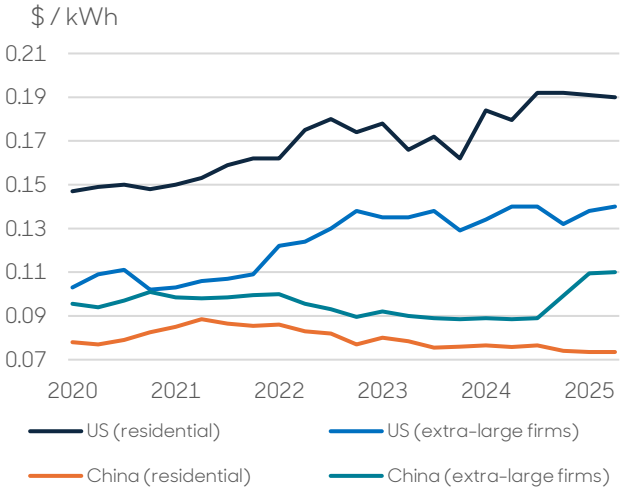


Source: Aberdeen, Haver, March 2026

In contrast, China continues to rapidly expand its grid capacity, exceeding our estimates of the near-term underlying demand, partly reflecting the need to counter the drag from real estate.

Since 2022 China has added a staggering 1100 GW of new capacity (with 420 GW added in 2025 alone), almost as much as the entire US grid (see Figure 3). This suggests that there is little danger of capacity becoming a constraint for China, which should cement its cost advantage (see Figure 4).

Figure 4: Chinese firms have a substantial energy cost advantage over their US counterparts



Note: extra-large firms are defined as those who consume >7.5GWh/yr

Source: Aberdeen, Gavekal Technologies, March 2026

Is China running a different race?

China has the lead when it comes to energy, but it is unlikely to be able to manufacture the advanced semiconductors necessary for developing frontier AI models any time soon. Indeed, the broad consensus is that China's chip industry remains five-to-seven years behind, having struggled to close the gap to date, despite substantial subsidies and encouragement.

The US administration's decision to allow Nvidia to sell its H200 chip will only help at the margin, given it is now two generations behind its top-of-the-range Rubin architecture. However, such export restrictions have proven to be of limited effectiveness, with Deepseek reportedly training their latest model using the most advanced Nvidia chips, according to a US official.

Moreover, the Chinese Communist Party (CCP) has tried to discourage Chinese firms from buying the Nvidia H200, partly to support the development of its domestic industry, but also having seemingly been insulted by Commerce Secretary Howard Lutnik's comments that "We don't sell them our best stuff, not our second-best stuff, not even our third best".

Huawei has developed some workarounds that have helped to mitigate the technological disadvantage: joining millions of lower-capacity chips together, which some have dubbed "swarms beat the titan", is one such method.

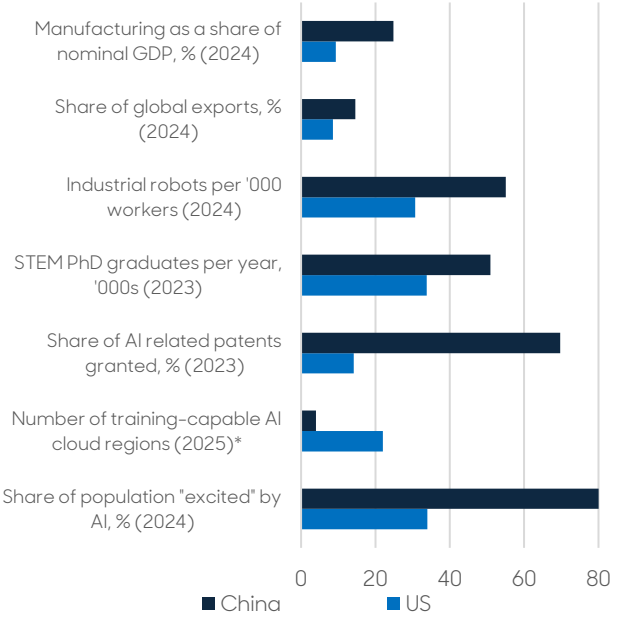
Access to Nvidia compute in other countries remains open, for now at least.

Arguably more importantly than its attempts to catch up on advanced semiconductors and close the gap on the performance of AI models, is China's 'AI+' strategy, which is heavily focused on what it can do with existing AI tools.

'Future industries' – such as robotics, biomanufacturing and quantum computing, which feature heavily in the 15th five-year plan – could all gain a helping hand from AI tools available now.

And regardless of the payout to nascent technologies, the authorities see an opportunity in rolling out practical applications, giving China's much larger manufacturing sector a productivity boost. Overall, China fares well across a range of manufacturing categories, while it also has the human know-how that makes further 'Deepseek moments' hard to rule out (see Figure 5).

Figure 5: While the US leads on frontier AI, applicability and openness to implementation favour China



*Note: Cloud regions are clusters of large datacentres with the most powerful classes of GPUs suitable for training frontier-level models

Source: Aberdeen, Haver, International Federation of Robotics, FDI Intelligence, Stanford AI Index 2025 Annual Report, Hawkins, Lehdonvirta, and Wu (2025), March 2026

China's strategy is likely to be more interventionist, in both financing and regulation

On top of direct investments, grants, and subsidies from central and local government, the People's Bank of China (PBOC) has a relending program dedicated to boosting the flow of credit towards sectors deemed of strategic importance. Consequently, Chinese firms are likely to receive far larger financial subsidies than those in the US.

Chinese regulations and institutional structures have also been evolving in a way that should support AI development and rollout. At one stage model developers had to test against thousands of questions to check answers were (politically) "safe", but this process has reportedly been streamlined, with trusted firms no longer having to do this as part of the training process.

More generally, China has been at the forefront of efforts to harness the power of data, with regulations pivoting as part of the 2021 reform agenda, effectively acknowledging that data is another factor of production for a modern economy.

The introduction of the 2021 Data Security Law (DSL) – which governs how data are stored and transferred, and has similarities to the EU's GDPR – reinforced the trend of opening data, making large firms standardise it and share it with competitors and the government.

And while China's 2021 Personal Information Protection Law (PIPL) requires consent for users' data to be shared, China is arguably still less encumbered by data privacy concerns than the US. Indeed, recent efforts have included creating public data sets and marketplaces for firms to trade data with government bodies.

All of this could help train models, tailor them to tasks and speed up the adoption of 'world models', which use large reams of data to allow AI to understand the physical world, such as for autonomous driving and robotics.

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