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AI

AI Monthly: All those billions for AI - necessary investment or a waste of money?

Billions of dollars are once again set to be unleashed, not only in the US through initiatives like Project Stargate and Apple's recent investment plans, but also in the EU as promised at the AI Summit in Paris. But is all the money really needed given DeepSeek's success?



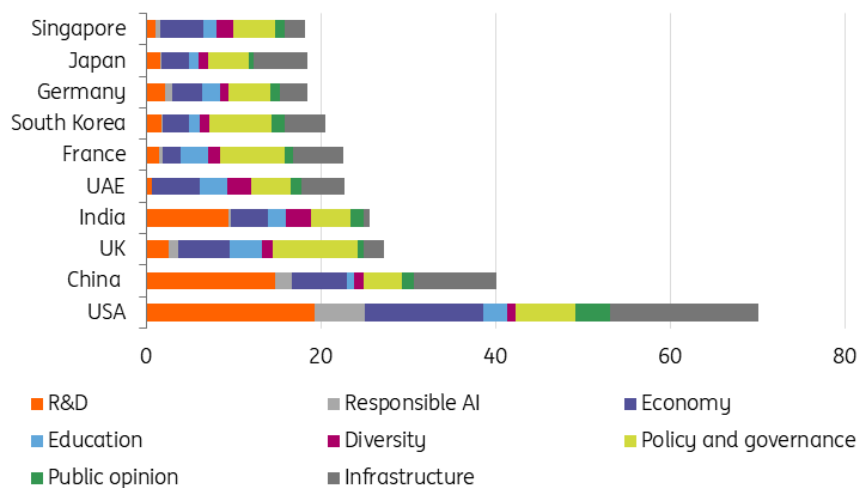
Amid all the clamour of tariff disputes and various domestic and foreign policy events, the tech world made waves of its own at the beginning of the year with a [market sell-off triggered by DeepSeek](#). DeepSeek, a Chinese AI start-up, hit the headlines for having trained its open source AI model for a fraction of the cost incurred by its competitors. This led to a reconsideration of the high valuations placed on tech companies, but also rippled through the supply chain, impacting electricity grid suppliers and chip makers. And it raised the question, do we ultimately need much less money, energy and high-end equipment?

DeepSeek's success: how strategic investments influence the AI race

DeepSeek managed to optimise its existing hardware and focus on training only the most relevant parts of its model, reducing the need for the latest high-end GPUs. Although the training costs ultimately turned out to be much higher than initially anticipated – \$1.3 billion instead of \$6 million when accounting for infrastructure and GPU expenses – the company still managed to reignite the AI race, raising doubts about whether the US is as unassailably ahead as the numbers imply.

Global AI Vibrancy Ranking

(2023, weighted index score)



Source: Global AI Vibrancy Tool, AI Index, HAI Stanford. Weighted: highest weight applied to R&D, economy, infrastructure

The US dominates the Global AI Vibrancy ranking and Trump's AI action plan aims to further cement this position

Still, when we look at the actual implementation of AI, the US dominates across almost all the measures tracked by the [Global AI Vibrancy ranking](#), including its R&D ecosystem, advanced computing and communications infrastructure, newly funded AI companies, and AI job postings. In 2023, the US produced 61 machine learning models and 109 foundation models, i.e. Large X Models (LxM), i.e. machine learning or deep learning models that are trained on huge data sets. China followed in second place with 15 and 20 models, respectively. Also, when it comes to investments, the US is leading by a large extent. While total AI private investments amounted to about \$8 billion in China, and some \$7 billion in the EU, the US saw \$68 billion in 2023.

President Trump's recent efforts aim to maintain this lead. The new AI Action Plan seeks to enhance the United States' leadership in AI technology, inviting the public to share policy ideas to "define priority policy actions to enhance America's position as an AI powerhouse and prevent unnecessarily burdensome requirements from hindering private sector innovation." The US administration also supports the private joint venture AI initiative from OpenAI, SoftBank, and Oracle, among others, worth \$500 billion, called Project Stargate. The US government is facilitating regulatory approvals for the project. Apple has also announced its largest-ever investment commitment, pledging to spend \$500 billion in the US over the next four years to support AI development, silicon engineering, and advanced manufacturing.

The EU's €200bn AI investment: a drop in the ocean?

Is the EU's 200 billion euro investment plan, including a new European fund totalling 20 billion euros for AI gigafactories, merely a drop in the ocean? At least compared to current investments - according to the EU Commission, the EU is currently only investing 4% of the funds that Washington provides for artificial intelligence - the project is a real investment boost. A look at the figures once again shows that the EU, or rather Europe, has a lot of catching up to do: France is in sixth place in the overall ranking, and Germany is in eighth place, while both are well behind the frontrunners US and China.

China: a serious competitor in the global AI race

At the very least, the events surrounding DeepSeek show that there is a risk of quickly losing the lead in the AI race - even without huge sums of money. And indeed, China already has considerable strengths in research and development as well as infrastructure (internet speed and supercomputers) and already ranks second behind the US. Furthermore, in 2023, China was the world leader in AI publications in journals and conferences as well as in citations from journals, registering 44,150 AI patents, three times as many as the US. In addition, China's share of open access start-up models, i.e. models whose source codes are freely accessible, is 90% and is only surpassed by the EU with 100%, compared to the US's 60.5%.

Investment is key to breakthrough AI results

Nevertheless, we would not say that the money spent on AI investments worldwide has not been well spent so far. The case of DeepSeek proves this when considering all the necessary investments to get those AI models running in the first place. The significant financial outlay on infrastructure, advanced GPUs and other key resources emphasises the importance of these investments in achieving breakthrough results. DeepSeek's ability to optimise existing hardware and focus on training the most important parts of its model shows that strategic spending can lead to significant advances and cost efficiencies - but the conditions must be right. To win the race for AI, we are therefore likely to hear a lot more about significant AI investment promises and endeavours from all corners of the globe in the near future.

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