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FAQ:

Investments in data centres in the context of AI trends like DeepSeek

Our key theses

1. **More efficient AI models do not reduce the demand for data centres – they increase it.**

   Greater efficiency leads to broader use, new applications and rising demand for high-performance infrastructure.

2. **The Jevons Paradox shows: When technology becomes more efficient, usage increases – and with it, the need for computing power.**

   Historically, every technological efficiency gain has led to more total consumption. There is no reason why AI should be an exception.

3. **Major technological advancements have never reduced total consumption – neither of coal nor of smartphones.**

   Efficiency gains lead to more usage and new applications – AI is no different.

4. **AI applications are growing exponentially – and so is the demand for high-performance data centres.**

   The cheaper and better AI becomes, the more it spreads in business and everyday life.

5. **Tech companies and CEOs agree: Efficient AI will not require fewer data centres but more.**

   Satya Nadella (CEO Microsoft): "As AI gets more efficient and accessible, we will see its use skyrocket."

6. **Blackstone continues to invest in data centres, with an USD 80 billion portfolio and a USD 100 billion pipeline – because the AI boom continues to drive demand.**

   Jon Gray (COO Blackstone): "The cost of compute is coming down pretty dramatically. But at the same time, that's going to lead to more usage to more adoption."

Our key messages

What happened with DeepSeek?

DeepSeek, a Chinese technology company, recently introduced a new AI model. This software has capabilities comparable to ChatGPT. Surprisingly, DeepSeek was reportedly developed with significantly lower costs and resources than similar AI models from Meta, OpenAI and others. This efficiency improvement has attracted global attention and sparked discussions about the future development of AI. Additionally, Alibaba has also released a new efficient model called Qwen 2.5, which is highly efficient.

Will open-source AI models like DeepSeek or Qwen reduce the demand for data centres?

We do not think that this is the case. While open-source models lower the cost of using AI, they simultaneously increase the adoption of AI applications, which in turn drives up the demand for data centre capacity. Additionally, specialised data centres remain essential to provide the necessary infrastructure for computationally intensive models.

How do low-cost AI models like DeepSeek or Qwen impact the demand for data centres?

We expect a positive effect: They increase the demand for data centres. Low-cost AI models can accelerate global AI adoption, unlock new application areas and attract more users. This significantly boosts the demand for data centres as more companies integrate AI applications.

- **Rising demand:** The more businesses and individuals use AI, the greater the need for specialised infrastructure to train and run AI models.
- **New application areas:** As AI becomes cheaper, more effective and efficient, new use cases emerge at an increasing pace. Every improvement in AI capabilities and costs expands its applications and accelerates its adoption.

Advancements like DeepSeek are not a sign of declining demand for data centres—on the contrary, they accelerate AI adoption and drive even stronger demand for high-performance infrastructure.

What is the Jevons Paradox and how does it impact the demand for AI and data centres?

The Jevons Paradox describes a phenomenon where more efficient technologies do not lead to lower consumption but instead increase it.

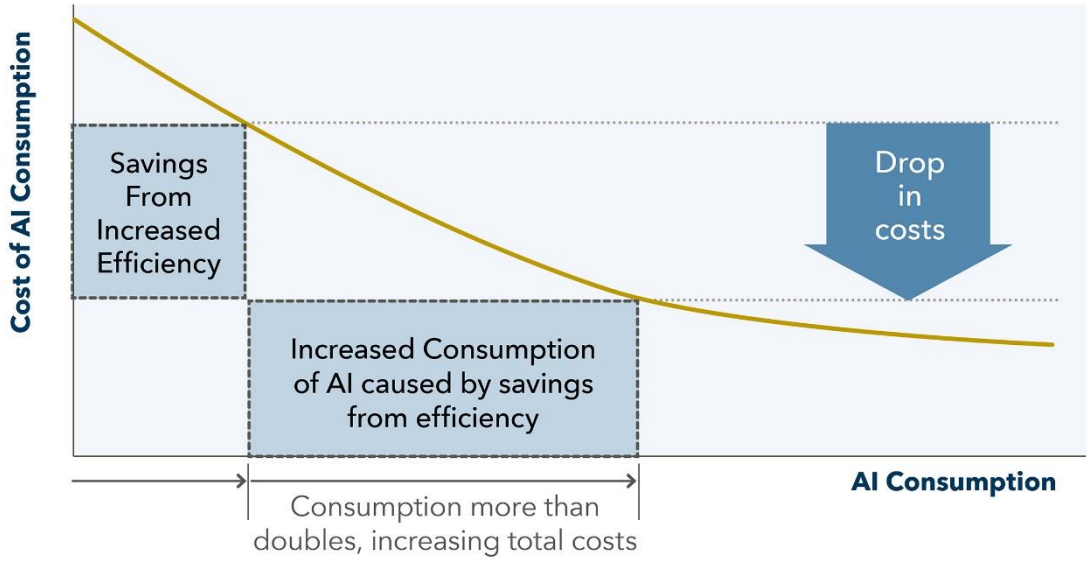
- **Example: Coal –** In the 19th century, the invention of more efficient steam engines made coal usage more economical. As a result, coal consumption increased because it became cheaper and more attractive for various applications.
- **Example: Smartphones –** Advances in chip technology have made processors more powerful and energy-efficient. However, instead of reducing total electricity consumption, these efficiency gains enabled new applications like social media, streaming and AI-powered apps. The number of smartphones and their daily usage increased significantly, leading to a substantial rise in overall energy consumption despite efficiency improvements.

How does the Jevons Paradox apply to AI?

The development of AI follows a clear pattern: the demand will continue to grow. New technologies lead to significant improvements in efficiency, performance and capabilities, as seen with DeepSeek. However, these advancements do not create pessimism in the industry—on the contrary, companies like Meta, Google, OpenAI and Microsoft expect continuous improvements that will ultimately increase energy consumption.

More efficient AI models do not lead to less AI but instead make it more powerful, affordable and accessible, which drives its adoption across an increasing number of applications.

This is where the Jevons Paradox comes into play: Although technologies become more efficient and consume less energy per unit, overall energy consumption increases because greater efficiency leads to broader usage. This paradox is particularly evident in AI, as models like DeepSeek not only optimise existing applications but also enable new use cases—ultimately driving up the total demand for computing power and energy.



What are the long-term impacts of DeepSeek on investments in data centres?

New cost-efficient technologies, such as those from DeepSeek, will continue to emerge and drive the AI market. The demand for infrastructure, such as data centres and power supply, will remain because the range of applications for AI continue to grow. For example, Meta plans to invest USD 65 billion in expanding its data centre capacity by 2025.

Are investments in data centres in Europe worthwhile, considering that China apparently has lower operational and development costs for AI applications?

- **Data sovereignty & regulation:** European data protection laws (e.g. GDPR) and national security requirements often mandate that data be processed within Europe. As a result, large companies and governments are increasingly relying on local data centres.
- **Growing local demand:** The increasing use of AI requires data centres in Europe, as low latency and high processing speed are crucial. Companies such as AI developers, cloud providers and financial service providers need to deliver their computing power close to end-users to minimise delays. Operating in distant data centres, such as those in China, would not be suitable for this purpose.

How have the CEOs of leading tech companies responded to the advancements of DeepSeek?

- Overall, leading tech companies have responded positively to the advancements of DeepSeek, acknowledging the innovative power of the model. At the same time, they emphasise that breakthroughs like this are not a sign of decreasing importance for data centres or infrastructure – on the contrary.

- They highlight the need for continuous investment in AI technologies to keep pace with rapid development. Advances like more efficient models do not lead to less AI usage; instead, they expand its range of applications.
- Additionally, the demand for powerful data centres remains, as even more efficient AI models require massive computing power – both for training and inference.
- Satya Nadella (CEO Microsoft): "As AI gets more efficient and accessible, we will see its use skyrocket, turning it into a commodity we just can't get enough of."

Why did the capital markets react so strongly to the advancements of DeepSeek?

The announcement of DeepSeek led to significant losses in technology stocks, especially Nvidia, whose market value dropped by over USD 500 billion. Many investors, lacking information, sold their AI-related stocks. However, stock prices have since recovered, with DeepSeek now being interpreted as evidence of significant innovation in the AI field.

What can we learn from the development of AI technology?

The development of AI requires continuous investment, as general artificial intelligence (AGI) has not yet been achieved. More efficient algorithms will continue to enhance performance and reduce costs, expanding the AI applications market and creating new investment opportunities.