

(English version)

**Question for written answer E-000512/25
to the Commission
Alex Agius Saliba (S&D)
(5 February 2025)**

Subject: The lessons from DeepSeek AI's development strategy for the proposed methods in the 'AI Gigafactories' and 'Apply AI' initiatives

A shock wave went through the tech markets on 27 January 2025 with the release of Chinese-made DeepSeek AI, which seems to perform similarly to US tools such as ChatGPT.

DeepSeek's claim that it used significantly fewer resources and microchips led to a drop in share prices. Enormous investments in AI hardware might be less essential to AI development than had been assumed.

It was reported that DeepSeek used distillation to learn from the OpenAI model and that this could be a breach of intellectual property (IP) rights — an ironic claim by a company that used swathes of IP-protected material to train its own model.

These developments need to be followed closely to be used as lessons for the upcoming proposals for the 'AI Gigafactories' and 'Apply AI' initiatives.

1. Has the Commission analysed DeepSeek's claims that it operates an efficient AI system at lower cost and with fewer resources, including fewer advanced microchips, and does it deem these claims to be credible?
2. What are the lessons to drawn from DeepSeek's approach when developing an AI ecosystem in the EU with a fraction of the budget available to the US big tech firms and how will these lessons be incorporated in the upcoming 'AI Gigafactories' proposal?
3. What is the Commission's view on the method of distillation used to train AI models within the European IP framework?

Submitted: 5.2.2025

**Answer given by Executive Vice-President Virkkunen on behalf of the European Commission
(2 May 2025)**

DeepSeek's present efficiency improvements in training and deployment, and the details reported in DeepSeek's technical papers are not refuted by analysts ⁽¹⁾.

However, the true efficiency gains are obscured by suggestions that those models are offered at a lower end-user price with smaller gross margins than competitors.

Moreover, the reported cost-figures often disregard research and development, staff and server costs. One report estimates capital expenditure at USD 1.6 billion², but the exact chip inventory is unclear.

DeepSeek has made efficient use of its limited amount of artificial intelligence (AI) chips for model training, but analysts believe the same chip limitation poses further challenges for wide model deployment ⁽²⁾.

DeepSeek's capabilities rival existing frontier models ⁽³⁾. Small models may be very capable, but the next generation of frontier models still needs more computing power.

The AI Continent Action Plan ⁽⁴⁾ will strengthen EU's AI and supercomputing infrastructure with a network of AI factories and gigafactories, integrating vast computing resources to develop frontier models at unprecedented scale.

It includes measures on data access, cloud, talent and skills, regulatory simplification and AI adoption in strategic sectors. The Commission will also set up the InvestAI Facility with the EIB Group to mobilise EUR 20 billion for AI infrastructure.

The Commission understands distillation as a training method using the output of larger AI models to increase the performance of smaller models.

⁽¹⁾ The Commission has examined analyst reports, such as: 'The Rise of DeepSeek: What the Headlines Miss', RAND; 'What went into training DeepSeek-R1?', Epoch AI.

⁽²⁾ 'DeepSeek Debates: Chinese Leadership On Cost, True Training Cost, Closed Model Margin Impacts', SemiAnalysis.

⁽³⁾ 'Chatbot Arena (formerly LMSYS): Free AI Chat to Compare & Test Best AI Chatbots', LLM Leaderboard; 'Compare GPT-4o, Llama 3, Mistral, Gemini & other models', Artificial Analysis.

⁽⁴⁾ <https://digital-strategy.ec.europa.eu/en/library/ai-continent-action-plan>

From an intellectual property standpoint, however, it is still unclear if this technique raises copyright matters, since in principle the outputs generated by AI are not considered protectable subject matter under copyright. The Commission will closely follow developments in this regard.
