GLOBAL INSIGHTS

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EconPol Update

Sovereign Software on the Rise?!

Tech Sovereignty Package promises more capacity and less dependency

Brussels Economic Monitor 2/2026

Source: European Commission, Lukasz Kobus

Executive Vice-President Henna Virkkunen: Reducing risky dependencies.

After the introduction of measures and strategies to enhance economic security and resilience in response to the increasing geo-economic pressure, the European Commission extends these efforts to the technological sphere by proposing a package designed to strengthen the Union's **technological sovereignty**. The package is primarily aimed at **developing significant capacities** and **reducing risky dependencies** in the fields of **semiconductors, artificial intelligence, cloud technologies,** and **open-source software**. The Commission identifies these four areas as essential for securing a digital and autonomous future for businesses, citizens, and public administrations alike. Particular emphasis is put on the technologically advanced and energy-efficient use of commercial and public AI applications.

The package brings together **two legislative proposals**, one overarching strategy, and one sectoral roadmap. The **Chips Act 2.0**, the first regulation, builds on previous efforts to reinforce Europe's semiconductor ecosystem and addresses persistent external dependencies in advanced chip design and manufacturing. This dependency is increasingly critical in light of rapidly growing demand for AI-related chips. Rather than focusing mainly on capacity expansion, the proposal adopts an **ecosystem-based approach**, aimed at strengthening Europe's position across the **semiconductor value chain** and improving alignment with demand from AI infrastructure, cloud services and high-performance computing. It further seeks to **reduce structural bottlenecks** through **accelerated permitting**, improved regional coordination and targeted investment in strategic projects.

The **Cloud and AI Development Act**, the second regulation, should establish the infrastructure layer for Europe's digital and AI policy framework. It recognizes that scalable AI deployment depends on adequate cloud capacity and computing resources. The proposal therefore pushes for a **substantial expansion of data centre and cloud infrastructure** in response to rising demand from compute-intensive AI applications, enabling the transition from experimentation to **large-scale deployment** in industry and public services. This expansion is accompanied by measures to ensure sustainability, including energy-efficient and climate-aligned infrastructure and streamlined permitting procedures. A harmonized framework for cloud and AI sovereignty aims to improve transparency on dependency risks, while coordination mechanisms and regional centres are supposed to **reduce fragmentation across Member States**.

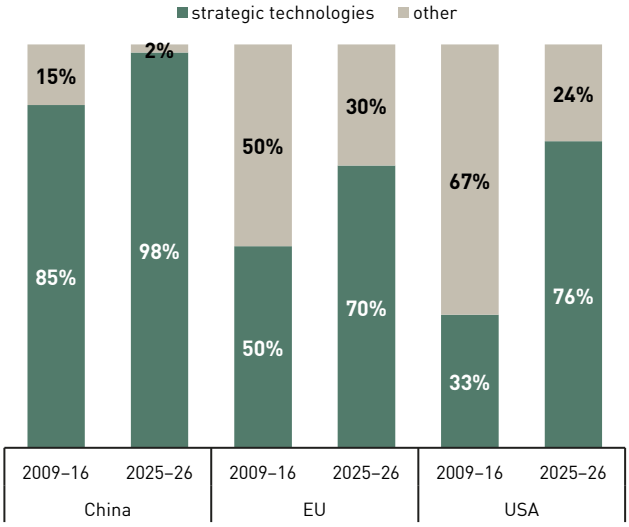
Building on these elements, the **Open-Source Strategy** addresses the software layer as a structural enabler of digital autonomy. It seeks to leverage Europe's open-source ecosystem to **reduce reliance on a limited number of dominant technology providers**. The strategy prioritizes the development and scaling of open-source solutions in strategic domains, including **cloud infrastructure, AI frameworks, cybersecurity and core internet technologies**. It is closely aligned with the systemic logic of the package: as cloud and AI infrastructure expands, open source allows operating across the stack without reinforcing vendor lock-in, thereby strengthening **interoperability** and strategic **flexibility**. Additional priorities include skills development, support for start-ups and increased uptake in public administration through procurement reform and interoperability standards.

Extending the Commission's approach beyond the digital domain, the **Strategic Roadmap for Digitalisation and AI in the Energy Sector** focuses on the increasing **interdependence between digital infrastructure and energy systems**. Rising demand from AI workloads and data centres puts additional pressure on energy systems, making energy availability and efficiency a binding constraint for digital scalability. The roadmap therefore promotes **coordinated planning of digital expansion and the energy transition**, including the integration of data centres into the energy system, secure access to clean energy and improved management of grid capacity. In parallel, it aims to support the deployment of digital technologies and AI to **modernize electricity networks**, improve system efficiency and accelerate the rollout of smart metering infrastructure.

Indicators to watch

Sectoral composition of industrial subsidies

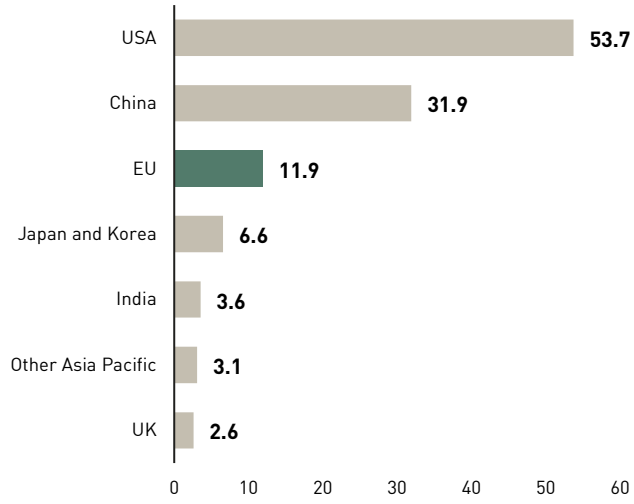
In % of subsidies



Source: NIPO, Strategic sectors = dual-use and high-tech products.

Installed data centre capacity by region

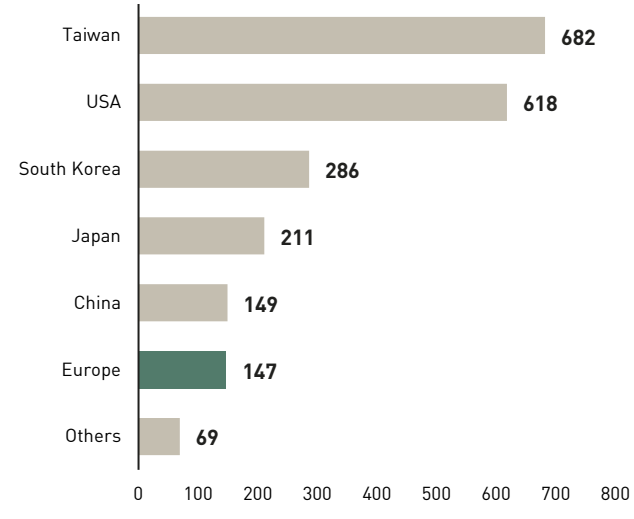
In GW, 2025



Source: IEA.

Forecast cumulative semiconductor investment by region

In billion euros, 2024-2032



Source: European Court of Auditors.

Europe is a latecomer to the race for strategic technologies

Today, governments around the world are trying to gain strategic leverage by attaining economic chokepoints while reducing their own dependences. No country has been more consistent in this endeavour than China, which, as early as the 2000s, directed a significant proportion of its industrial subsidies towards strategic sectors with high-tech or dual-use applications. Since then, the US and the EU have been catching up. While the US has made a particularly dramatic pivot, now allocating 76 % of its industrial subsidies to strategic sectors, the EU has also followed suit, allocating over two-thirds of subsidies to such industries. However, both the US and the EU are at a disadvantage as they are relatively new to this competition. China's decade-long consistent efforts have created strong network effects in terms of labour market skills, supplier networks and aligned demand that subsidies alone cannot recreate quickly.

The US has 4.5 times the data centre capacity of the EU

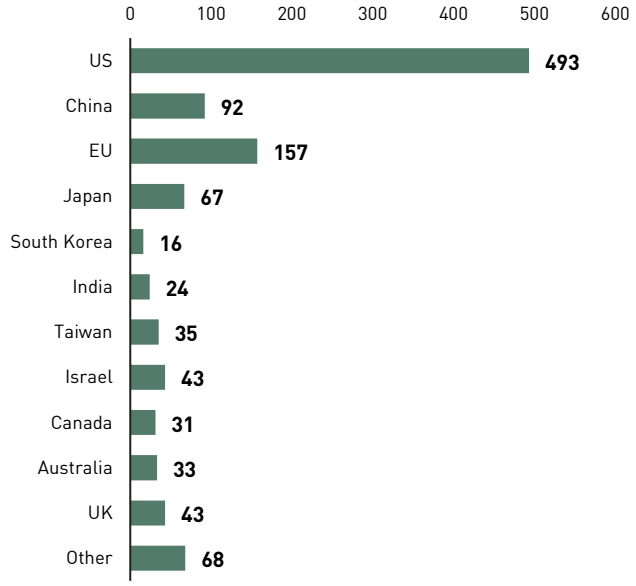
Data centres are the productive plant of the digital age. Their location determines where frontier models are trained and where critical data is processed. With just 11.9 GW of installed capacity, the EU operates at less than a quarter of the US (53.7 GW) and barely more than a third of China (31.9 GW). The gap is wider still if measured in planned additions rather than stock: the US is on track to spend roughly 5 times more than Europe on data centre build-out by 2030. This matters because, according to the OECD, about half of productivity growth over the next decade could come from AI and its diffusion in the economy. Europe's existing productivity shortfall versus the US is already largely attributable to two decades of weaker ICT investment. If Europe falls behind again on AI development and adoption, that shortfall could compound even further.

The Chips Act lacks the instruments to reach its targets

Europe is expected to account for just 8 % of global manufacturing capacity by 2030, down from around 10 % in 2013. SEMI estimates that EU-bound capital expenditure will total €147 billion between 2024 and 2032, out of a global €2,162 billion — leaving the EU behind Taiwan, the US, South Korea, Japan and China. While the Chips Act has mobilised around €86 billion in public and private investment, this pales in comparison to the €267 billion allocated by the US under its Chips and Science Act. Moreover, the Commission's own forecast projects only an 11.7 % global market share by 2030, which is well short of the 20 % target. And as Intel's abandoned mega-fabs in Germany showed, supply-side subsidies cannot create scale without demand. The revised Chips Act therefore shifts towards demand-side measures such as demand aggregation and procurement coordination.

The 1,102 largest tech firms in terms of market cap

Count, as of 29 May 2026



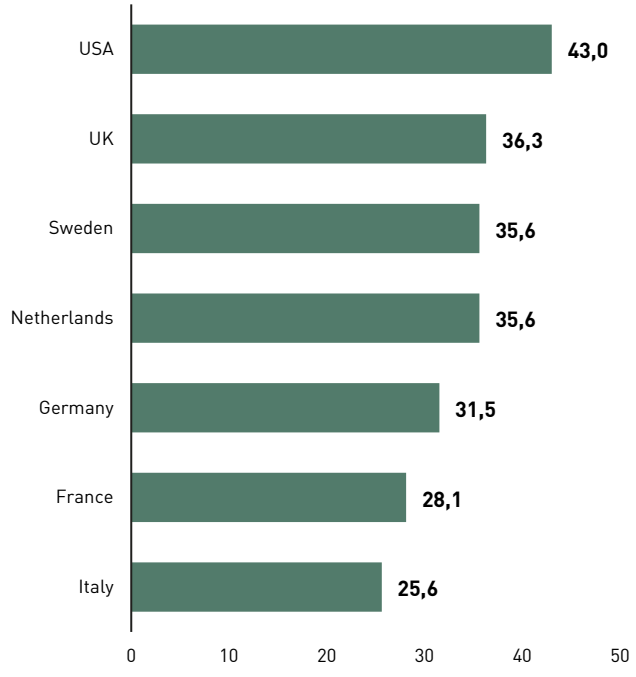
Source: companiesmarketcap.com, CER.

Only one out of seven of the world's top tech companies is based in the EU

It is a common criticism that Europe lacks a tech sector to rival the US 'Magnificent Seven'. Indeed, of the world's 1,102 most valuable tech companies, only 157 are based in the EU, against nearly 500 in the US. Yet closer inspection reveals pockets of strength. ASML, Europe's most valuable tech company (14th in this ranking), makes the extreme-ultraviolet lithography equipment that is indispensable for manufacturing the high-end chips powering the AI boom. Defence is another bright spot: start-ups such as Helsing and Destinus offer scalable, technologically advanced systems that matter ever more in an age of drone warfare and long-range strikes. For now, due to a fragmented single market and other structural barriers, Europe's successes remain too rare and too concentrated. However, if the EU can leverage its home market to achieve economies of scale and develop its capital markets further, a genuinely competitive tech sector could still be within reach.

Share of workers using generative AI

In %, 2026



Source: Blick et al. (2026).

The pace of AI adoption varies significantly across the EU

AI adoption in the EU is highly uneven. Sweden and the Netherlands are close to the frontier, whereas Germany, France and Italy fall short of the US benchmark. This partly reflects differences in sectoral structure and firm size, but research also suggests that the organisational features of companies play a role: firms adopt AI faster when they encourage experimentation, provide the necessary tools and adapt workflows. Unequal adoption threatens to widen the productivity gap not only between Europe and the US, but also within Europe itself. Policies should therefore incentivise tech investment and employee training to promote AI adoption throughout the EU. This includes targeted support for SMEs, regulatory clarity, and access to data and computing power. It should also incentivise firms to reorganise around AI in order to reap its full efficiency benefits. Europe can still become a leading user of AI, particularly in sectors in which it already has a strong presence, such as manufacturing. Ultimately, given the uncertain productivity effects of AI, it may be more beneficial to rebuild your workflows around AI than to produce the models themselves.

TAKE: Overall, Europe has **clear capability gaps in digital technologies** that are increasingly shaping economic life. The EU is now responding by helping firms to grow and **reducing the regulatory burden** (EU Inc. and the Digital Omnibus), while also seeking to **minimise critical dependencies**. While these approaches can reinforce one another, they can also pull in different directions if not properly calibrated. The key challenge will be to strike a balance, asserting **sovereignty where dependence is genuinely dangerous**, while allowing businesses enough freedom to experiment with and implement advanced AI tools in their workflows. From an **industrial policy perspective**, the focus should be on promoting AI adoption in sectors in which Europe already excels, such as machine building and certain fields of advanced manufacturing. However, one thing is clear: in an increasingly **hostile geopolitical environment**, Europe's tendency to default to caution - i.e. to regulate first and build later - is itself becoming a threat to sovereignty.

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