ANALYSIS



AI: catalyst for competitiveness or vector of dependence?

November 2026

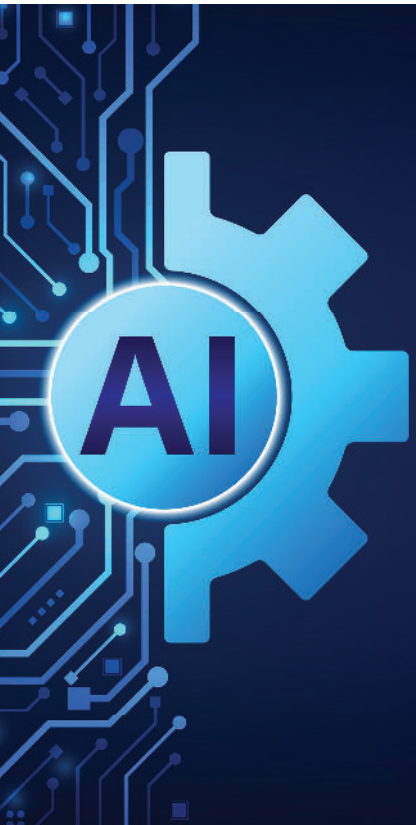
Introduction

Artificial intelligence is often presented as a software revolution and an essential lever of competitiveness, promising productivity gains and a transformation of cognitive processes. The scale of investment reflects the enthusiasm surrounding this transformation. In January 2025, OpenAI, SoftBank and Oracle announced **Stargate**, an AI infrastructure programme in the United States that could reach $500 billion. At the same time, the **European Commission** announced a €200 billion plan to accelerate Europe's AI capabilities, while France specifically claimed €109 billion in private investment linked to artificial intelligence at the **AI Action Summit in Paris**. In March 2026, China announced that artificial intelligence, semiconductors and computing infrastructure would sit at the heart of its **new five-year plan**, with an explicit objective of strengthening national technological autonomy in response to US restrictions. Beyond the headline figures, China is developing an integrated national capability model: more than 250 AI data-centre projects are reported to have been announced or built across the country since 2024, as part of a strategy to coordinate computing infrastructure, energy and cloud capacity at national scale.

AI today remains **more an industrial wager than a settled economic model**. The amounts being invested point to a widely shared conviction about its transformational potential. Yet the **mechanisms through which value will be created remain more uncertain**: neither the future distribution of that value between users, model developers and infrastructure providers, nor the economic sustainability of the race for computing power has yet been clearly established.

The potential productivity gains from AI are extensively documented. Much less attention, however, is paid to the economic structure of the **compute chain** on which these uses depend. **Where will the value of AI genuinely be captured, and under what economic and strategic conditions?**

AI has two inseparable faces. It can be a formidable driver of competitiveness, while also acting as a silent mechanism for transferring value and decision-making capacity towards the dominant actors in the compute chain.



I. AI is already reshaping value creation by shifting it from labour to capital

The integration of artificial intelligence into business is still largely viewed through the lens of productivity. Task automation, enhanced analytical capabilities and improved decision-making are generating a growing range of use cases, all pointing to a clear promise of **operational gains**. Viewed in this light, AI appears to extend the transformations already set in motion by cloud computing and software.

Yet this interpretation overlooks a deeper shift: **AI is also changing the cost structure** that underpins this activity.

Historically, productivity gains made it possible to produce more with the same resources, or to reduce labour requirements, without fundamentally altering the distribution of costs. AI introduces a different dynamic. As companies embed AI components into their processes, a growing share of activities previously performed in-house (analysis, drafting, data processing and decision support) is **consumed in the form of technology services**. What once belonged to labour is gradually becoming expenditure on computing power and models. **Part of the wage bill is therefore being converted into recurring technology capital expenditure**. Some players in the ecosystem are already beginning

to see the first effects: during his hearing before the French National Assembly in May 2026, Arthur Mensch, founder of Mistral, indicated that token-related expenditure already represented an amount equivalent to around 10% of the company's wage bill. Without assuming that such a ratio will become generalised, this order of magnitude illustrates the economic weight that compute costs could gradually acquire in certain organisations.

For now, this shift remains relatively inconspicuous, as AI use cases are still at the experimental stage in many organisations. The early signals nevertheless point to a change in kind. Several companies have recently indicated that AI-related expenditure has become **a cost category in its own right, already reaching substantial amounts**. Uber is reported to have consumed its entire 2026 AI budget by April, while Microsoft ended Claude licences for its developers only a few months after granting them. Other organisations are beginning to introduce dedicated mechanisms to monitor token consumption. [1]

This phenomenon is not confined to technology companies. Several large organisations are beginning to question the economic sustainability of scaling certain use cases. Aldrick Zappellini, Group Data & AI Director and Chief Data Officer at Crédit Agricole, has noted that, despite a 75% fall in unit inference costs over 18 months, projections based on sixty billion interactions could lead to "unsustainable annual costs, even for banks such as Crédit Agricole".

This development calls for two structural observations:

- First, this transfer is not geographically neutral. The computing infrastructure, models and platforms that make AI deployment possible are today overwhelmingly controlled by non-European players. The rise of these recurring costs for a given company therefore reflects not only an internal transformation of the company itself, but potentially a **shift of value beyond its own perimeter** and, at an aggregate level, beyond its economy.
- Second, this transfer is gradual and difficult to perceive in day-to-day decisions. Each tool deployment, each integration of an AI feature and each local optimisation may appear rational and value-creating in the short term, yet taken together, they progressively reshape the company's economic structure.

The question therefore extends beyond competitiveness, becoming a question of the **distribution of the value created**. Productivity gains can coexist with a growing shift of revenue towards providers of computing power, models and platforms.

To understand this dynamic, we need to **take a step back and examine the infrastructure that makes individual use cases possible: the compute chain**.

Source

[1] https://techcrunch.com/2026/06/05/the-token-bill-comes-due-inside-the-industry-scramble-to-manage-ais-runaway-costs, June 5, 2026

II. The compute chain: architecture that organises dependence

AI sits at the top of a **compute chain**, built through the successive layering of cloud infrastructure, middleware, software, standards and legal frameworks. As a result, the digital economy operates within an **economy of dependence**: a company may develop its own applications, enrich its data or create high-value services, yet it remains dependent on the infrastructure and standards that make those activities possible. In this sense, **cloud and digital platforms have become the new critical infrastructure** of the contemporary economy.



Actors closest to the end user benefit from proximity to use, but they do not necessarily control the critical resources on which that use depends. As one moves down into the lower layers (compute, cloud, components, operating systems and platforms), **the ability to set the terms of access tends to increase**.

The actors positioned upstream in the compute chain should not be seen as simple service providers, but as those that **define the environment in which other actors operate**. Prices, technical standards, migration arrangements and interoperability options depend largely on them.

This logic clarifies the **two faces of artificial intelligence**. The first, productivity and competitiveness gains, is widely promoted; the second is less visible. As noted above, it takes the form of a gradual transfer of value from labour to technological capital. Yet **that capital is now concentrated in the hands of actors that control the foundations of the compute chain**: infrastructure, language models and platforms. As use expands, **these actors capture a growing share of the value created**, while strengthening their ability to shape access conditions, standards and technological pathways across the whole ecosystem.

The digital economy has therefore entered a logic comparable to that of major network infrastructure: once an actor becomes indispensable, the entire ecosystem begins to organise itself around that actor.

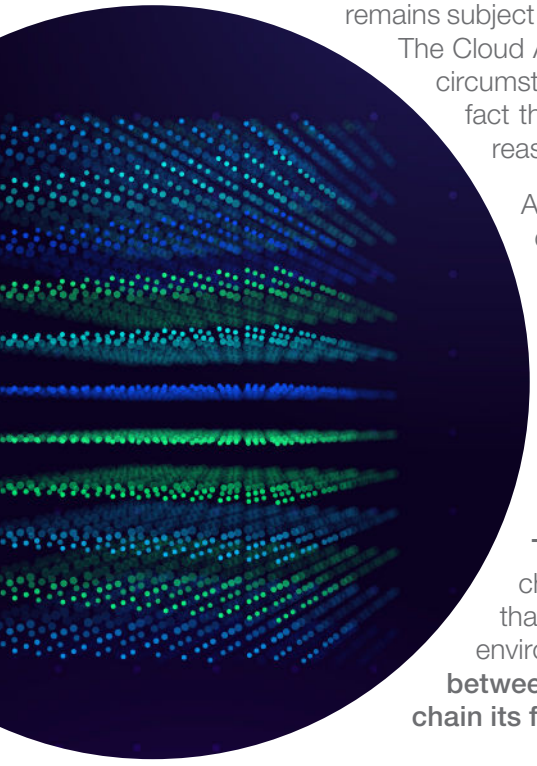
Dependence rarely appears as an explicit choice. It results from a **sequence of locally rational decisions**: adopting a new solution, outsourcing a service, integrating an additional feature, seeking better performance or aiming for faster implementation. Each decision may be justified when considered in isolation, but together, they gradually trace a technological path whose implications become visible only once dependence has taken hold.

III. The ratchet effect: when rational choices become difficult to reverse

When an organisation adopts a cloud provider, a collaborative tool or an AI model, the essential question generally concerns speed of deployment, cost or performance. Future governance is seldom front of mind.

Cloud provides a clear example. Its initial advantages are well known: shared infrastructure, lower investment requirements and rapid scalability. Yet the more critical applications, data and business processes become embedded in a given environment, the higher the cost of migration becomes. Dependence is then measured in terms of the **complexity of any future change of provider**.

The consequences become visible when the contractual balance shifts. Following Broadcom's acquisition of VMware, many companies whose infrastructure relied heavily on VMware technologies faced steep price increases for systems that had become critical to their day-to-day operations. Users had not deliberately chosen this exposure; over the years, they had simply incorporated a component that became indispensable to their architecture and were then confronted with the absence of any immediate alternative.



The same dynamic also appears in the legal sphere. Data hosted in a cloud operated by a US provider remains subject to certain extraterritorial US legislation, even when it is physically stored in Europe. The Cloud Act and certain provisions of FISA allow US authorities to access data in specific circumstances. Here again, the issue lies less in the existence of these laws than in the fact that they have often been discovered after the event by organisations that initially reasoned in terms of performance, cost or service availability.

Artificial intelligence could amplify this dynamic because, unlike other technological discontinuities, it is often integrated into existing digital environments through successive additions: a copilot embedded in a collaborative suite, a document assistant or an automated generation feature. Each change appears limited when taken on its own. As use cases accumulate, however, data shifts, workflows adapt and working habits begin to change.

In this sense, we can speak of a **ratchet effect**. Each decision appears reversible at the moment it is made, but the cost of going back rises gradually, until reversal becomes difficult to justify.

The fundamental issue is this loss of reversibility. An organisation able to change provider, technology or architecture retains negotiating power. A company that no longer has that option may continue to gain efficiency, but within an environment where it has diminishing control over the essential parameters. The **gap between immediate productivity and future freedom of action gives the compute chain its full economic significance**.

IV. The technological trajectory becomes an object of governance

For a long time, matters relating to cybersecurity, data governance, cloud and IT architecture were treated separately, each with its own indicators and decision-making processes. The arrival of artificial intelligence is blurring these boundaries. An AI project brings together data, infrastructure, cloud providers, regulatory requirements, cybersecurity considerations and economic trade-offs. A decision taken to improve a model's performance may alter the company's legal exposure. An infrastructure choice may change its economic dependence on certain suppliers. A solution designed to strengthen operational resilience may, at the same time, increase technological dependence.

The resulting trade-offs no longer sit within a single function. Should the operational simplicity of a single provider take precedence, or should risk be spread across several actors? Should an organisation choose the highest-performing solution on the market if doing so increases exposure to a dominant supplier? Should it optimise short-term costs at the risk of narrowing options tomorrow?

Such questions touch simultaneously on technology, risk, procurement, law and strategy. They therefore extend well beyond the remit of the IT function.

This observation has led directly to the development of new approaches such as the Digital Resilience Index. The index was initiated by David Djaïz, a lecturer at Sciences Po and head of the consultancy Ascend Partners, and by Yann Lechelle, former chief executive of Scaleway and co-founder of Probabl, a company spun out of Inria that specialises in the open-source ecosystem for artificial intelligence and data science.

The initiative was developed with several organisations that deal on a daily basis with technological dependence and digital resilience, including CIGREF, France's leading network of large companies and public administrations using digital technologies, and RTE, the operator of France's public electricity transmission network and an operator of critical infrastructure.

The Digital Resilience Index is intended to provide a consolidated view of an organisation's digital exposure by aggregating risks that are often analysed separately: data, infrastructure, cloud, cybersecurity, supplier dependencies and artificial intelligence. Its emergence reflects the rise of a new object of governance: the company's technological trajectory.

The value of this type of initiative lies in **making visible the dependencies that are often dispersed across different corporate functions and providing a common framework for assessing them**. Its purpose is to enable an organisation to make more explicit trade-offs between technological, economic, legal, operational and geopolitical risks that are usually considered in isolation.



Conclusion

No organisation will be able to remove itself entirely from the compute chain. By their very nature, digital infrastructures rest on relationships of interdependence. It therefore becomes essential to distinguish the dependencies that remain reversible from those that progressively reduce room for manoeuvre.

Seen in this light, retaining decision-making power must mean preserving alternatives, maintaining negotiating power and keeping open the possibility of choosing between several technological trajectories.

This awareness is already reflected in the emergence of initiatives designed to safeguard certain critical computing capabilities and maintain technological alternatives. Whether through public computing infrastructure, open models or open-source ecosystems, their value lies less in the pursuit of complete autonomy than in conserving the capacity to choose. In an environment shaped by technological lock-in, the ability to change provider, architecture or model becomes a strategic resource in its own right.

Artificial intelligence therefore has two faces. It is a powerful lever of competitiveness, while also accelerating the concentration of value around the infrastructure, platforms and architectures that make such performance possible. The challenge for companies lies in how value is distributed across the compute chain, and in the conditions under which organisations retain control over their technological trajectory.

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