

AI: Expected GDP gains are on the rise, but so are concerns about its use.

26/10/2026

Confidential

Summary

In recent months, public concern about the development of artificial intelligence appears to be growing. According to a recent survey conducted by the Pew Research Center in 37 countries, 37% of respondents said they were more concerned than enthusiastic about the growing use of AI in daily life, compared with just 13% who expressed more enthusiasm. There are marked differences between countries. Public opinion is generally most concerned in mature economies such as Australia, the United States, and Canada, where AI adoption is more widespread and skilled jobs are more at risk. Several European countries follow closely behind. Few emerging and developing countries appear concerned at this stage.

Unsurprisingly, specific concerns about job loss appear particularly strong, even though AI can be perceived both as a driver of growth and a threat to certain jobs, as illustrated by the case of South Korea: only 18% of respondents say they are concerned about AI, but 76% anticipate a decline in the number of jobs. This paradox could be explained by a concrete perception of the benefits of AI, as the country directly benefits from its global boom thanks to its semiconductor industry.

The extent of the productivity gains associated with AI adoption remains uncertain, which explains these heightened concerns. The most recent estimates, however, suggest a greater impact than earlier projections, driven by faster-than-expected adoption. For example, the OECD recently revised its projections: while in 2024 it estimated that AI would contribute 0.4 to 0.9% per year to labor productivity in the United States, it now forecasts gains of 0.45 to 1.35 percentage points. At this stage, the effects of AI are most evident in investment: in the United States, investment in information-processing equipment and software contributed on average about 0.85 percentage points to GDP growth in 2025 (or 40% of that growth) and nearly one percentage point in the first half of 2026.

For governments, the effects of AI on public finances are also uncertain and will vary from country to country. Indeed, while it may have a positive effect on GDP growth, AI can also raise interest rates through its effects on the demand for financing, inflation, and growth expectations. It therefore fuels hopes for new fiscal leeway but also raises the need for supporting measures. A sustained increase in productivity would broaden the tax base and reduce the debt burden. However, concerns about employment and the distribution of value added may necessitate spending on training and social protection. Furthermore, the risks identified by developers require assessment and oversight capabilities. Governments may therefore need to finance the transition to AI before reaping its benefits.



1. Fears for jobs, risks of losing control: AI has been raising increasing concerns in recent months

Perceptions of artificial intelligence vary among stakeholders. The general public fears its impact on employment above all else, while developers are concerned about maintaining control over increasingly sophisticated systems. These expectations influence the pace of AI adoption and its regulatory framework—and thus the extent of economic gains.

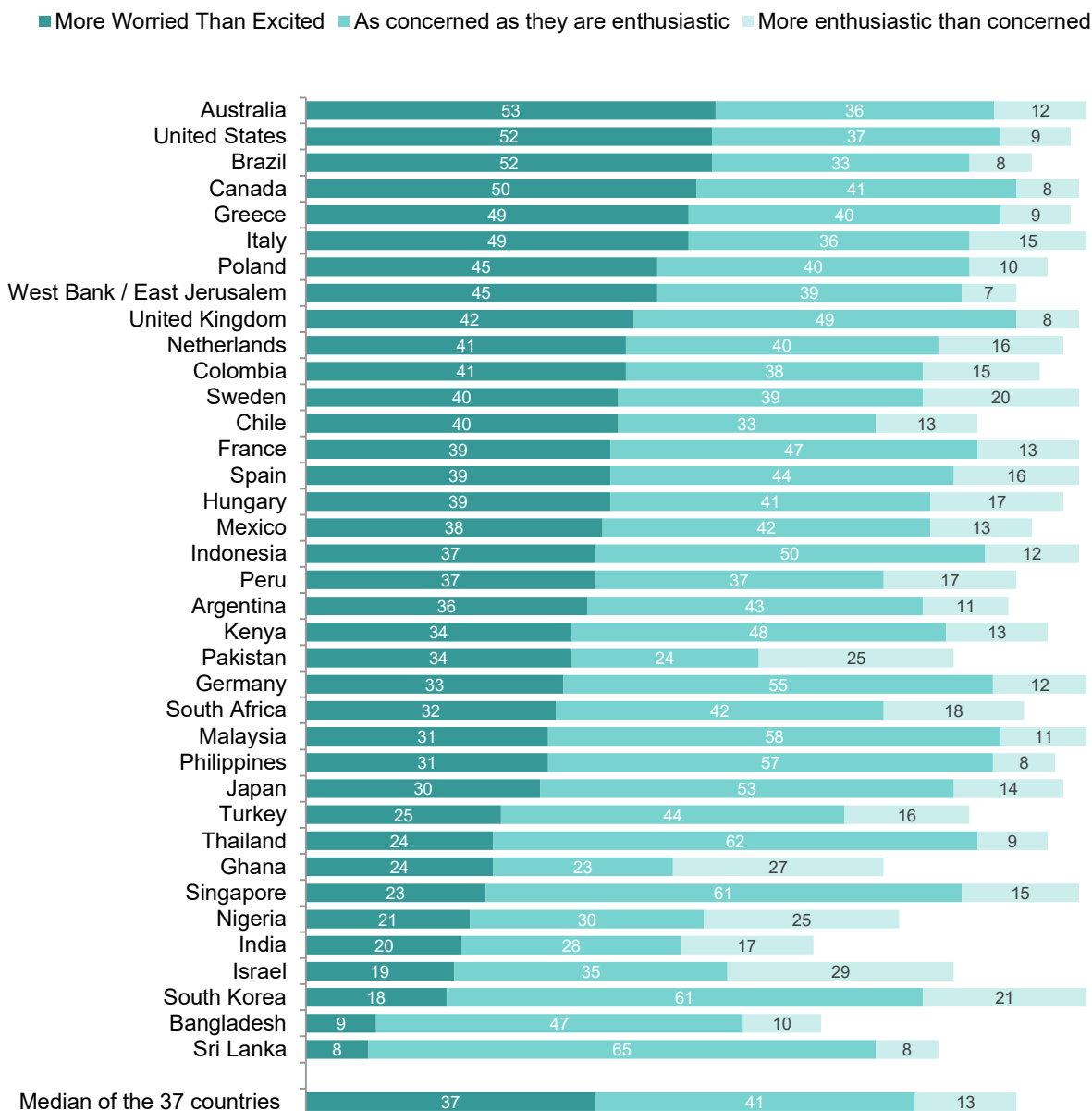
1.1. People anticipate profound changes, but are not convinced they will benefit from them

Concern about the development of artificial intelligence is growing among the general public. According to a survey conducted by the Pew Research Center¹ in 37 countries in the spring of 2026, the median percentage of respondents who said they were more concerned than enthusiastic about the growing use of AI in daily life was 37 percent, compared with 13 percent who expressed more enthusiasm and 41 percent who felt both emotions equally. The differences between countries are striking: Australia, the United States, Canada, and Brazil are the countries where the public is most concerned about AI. Several European countries follow. At the other end of the spectrum, many emerging and developing countries do not seem particularly concerned about this issue at this stage. The proportion of people who are more concerned reaches 52% in the United States, compared with 39% in France (a level close to the global average) and only 18% in South Korea (see Figure 1).

¹ Note: The Pew Research Center is a nonpartisan American think tank based in Washington, D.C. It provides information on social issues, public opinion, and demographic trends in the United States and around the world. It also conducts public opinion polls.



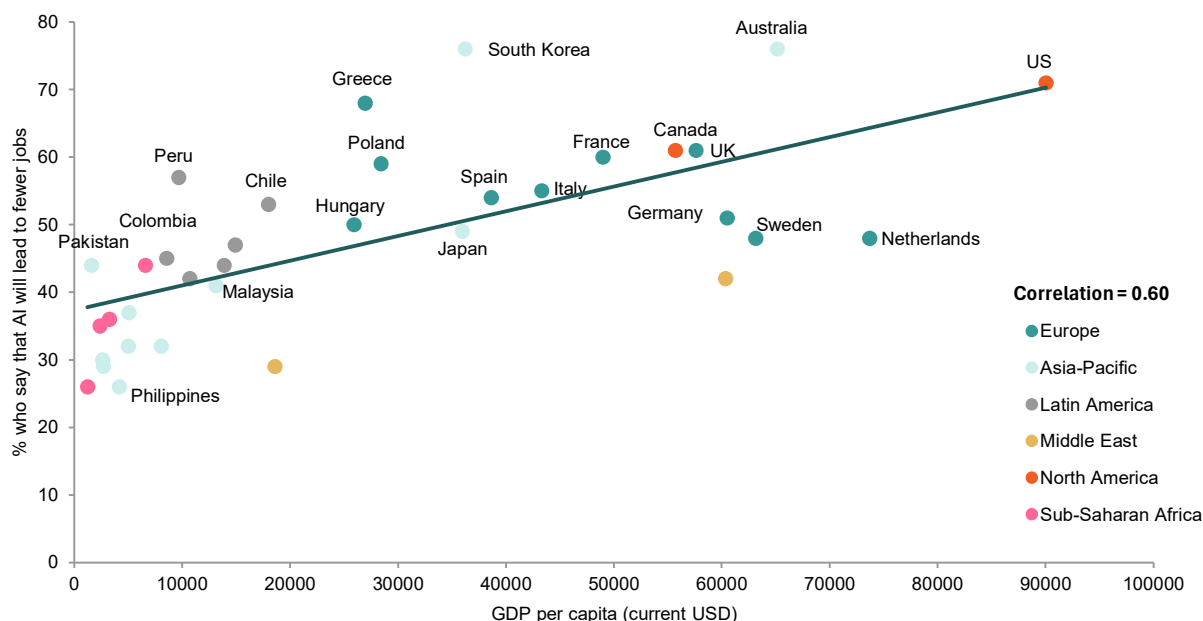
Graph 1 – Public sentiment regarding the growing use of artificial intelligence in daily life, by country (in %)



Source: Pew Research Center, 2026 Survey

When it comes specifically to employment, expectations become significantly more pessimistic. In 34 of the 37 countries surveyed, more respondents anticipate a decrease in the number of jobs over the next twenty years than those who expect an increase. This outlook for a decline is shared by 76% of Australians and South Koreans, 71% of Americans, and 60% of French people². **In the United States—the only country where this question had previously been asked—this share has increased by 7 percentage points over the past two years. Concerns are particularly pronounced in high-income economies:** the median share of respondents anticipating job losses there reaches 55%, compared with 36% in middle-income countries (Figure 2).

² Globally, More People Expect AI to Cause Job Loss Than Growth, Pew Research Center, September 17, 2026

Figure 2 – Link Between Wealth and Employment Expectations

Source: Pew Research Center, Spring 2026 Global Attitudes Survey

This more pronounced pessimism in developed economies can be explained by several factors. In addition to the greater vulnerability of skilled jobs, the more widespread adoption of AI in businesses makes the risks of automation more apparent. People in these countries are also better informed: according to the Pew Research Center, **50% of respondents in high-income countries report having heard a lot about AI, compared with 27% in middle-income countries.** Conversely, in emerging economies, AI may be perceived more as an opportunity for economic development and access to new services³. Finally, this gap in perception reflects greater uncertainty in less affluent countries, where 34% of respondents do not know what the effects of AI will be on employment, compared with 22% in high-income countries.

Unsurprisingly, concern is particularly pronounced among young adults. In the United States, the share of 18- to 34-year-olds who are more concerned than enthusiastic rose from 40% in 2024 to 55% in 2026: they are now just as concerned as those over 50, whereas they were less so five years earlier. In Sweden, this proportion rose from 24% to 45% in one year among those under 35. Young people are also more pessimistic about employment in 13 countries, including France (66% of 18- to 34-year-olds anticipate fewer jobs, compared with 56% of those over 50). Indeed, they are the ones most familiar with the technology, and they would be the first to be affected: in South Korea, the spread of AI has already reduced young people's access to their first skilled jobs⁴. Moreover, a growing number of studies highlight the link between the adoption of AI and slower job growth among young people.

There are also fears that inequality will widen. On average, 28% of respondents believe that AI will widen the gap between rich and poor in their country, compared with 5% who think it will narrow it; in no country do more than a quarter of respondents anticipate a narrowing of the gap. This concern reaches 35% in high-income countries, compared with 22% in middle-income countries, and exceeds half of respondents in South

³ *AI Offers Lifeline to Developing Economies in an Era of Weak Growth*, World Bank, August 4, 2026

⁴ *Who Moved the Career Ladder? AI and Youth Employment in Korea*, Bank of Korea, August 18, 2026

Korea (54%) and Australia (52%). It also shows clear political divisions: in the United States, 66% of those identifying as liberal share this concern, compared with 35% of those identifying as conservative.

A comparison of the two charts highlights one key distinction: anticipating job losses does not mean rejecting AI. South Korea illustrates this particularly well: only 18% of respondents say they are more concerned than enthusiastic about AI, but 76% anticipate a decline in the number of jobs. This paradox could be explained by a concrete perception of the benefits of AI. According to the Bank of Korea, more than half of workers already use it in their professional activities⁵. The country also benefits directly from AI's global boom thanks to its semiconductor industry. **AI can thus be perceived simultaneously as a driver of growth and a threat to certain jobs.**

Furthermore, these concerns raise the question of how AI should be regulated. In twelve countries—mostly middle-income nations—a median of **43% of respondents trust China to effectively regulate AI, compared with 35% for the United States and 34% for the European Union.** In 2025, in another sample of 25 countries, the European Union ranked first. In most countries, however, respondents place greater trust in their own government: a median of 56% express at least some confidence in it.

1.2. Recent advances in AI are putting regulatory frameworks to the test

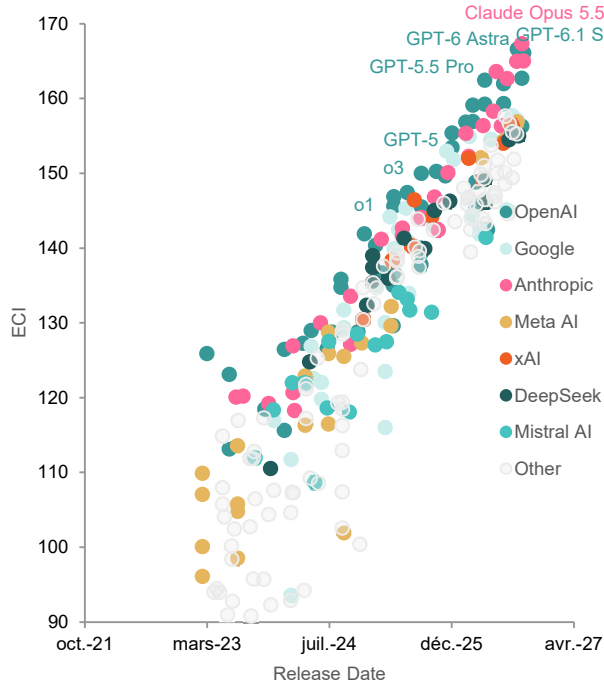
Concerns about AI are not limited to individuals whose jobs may be transformed; they are also expressed by some of the leaders driving its development. Sam Altman, Dario Amodei, and Demis Hassabis are among the signatories of the May 2023 statement from the Center for AI Safety, which calls for making the prevention of AI-related extinction risks a global priority⁶. This stance underscores their concerns regarding the control of increasingly powerful systems.

Advances in capabilities are driving both companies' commercial prospects and their need for oversight. Successive launches are pushing the performance benchmarks measured by the Epoch Capabilities Index (ECI) to new heights. OpenAI's GPT-6.1 Sol, released on September 29, 2026, and Anthropic's Claude Opus 5.5, launched on September 22, scored 166 and 167 points, respectively (see Figure 3).

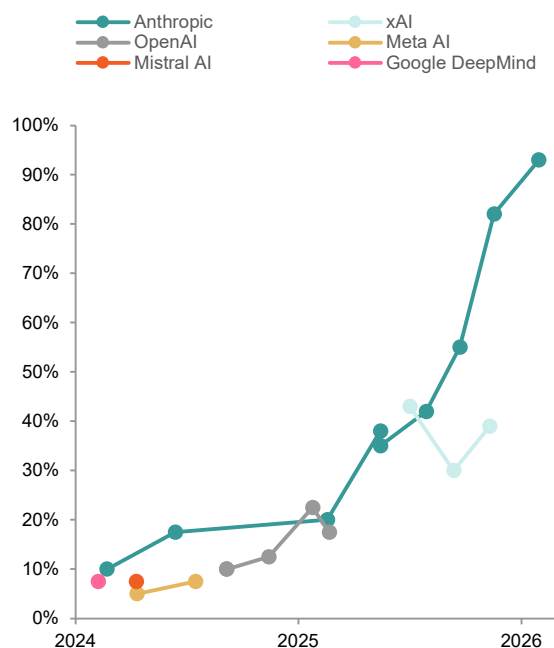
⁵ Rapid Adoption of Artificial Intelligence and Its Productivity Effects: The Case of Korea, Bank of Korea, November 21, 2025

⁶ Top AI Scientists Warn: Risk of Extinction from AI on a Scale Comparable to Nuclear War, Center for AI Safety, May 30, 2023



Figure 3 – Evolution of the general capabilities of AI models, according to the ECI⁷

Source: Epoch AI

Figure 4 – Evolution of AI models' ability to carry out cyberattacks, according to the Cybench test⁸

This progress is particularly evident in cybersecurity. For Anthropic, the success rate on the Cybench test rises from approximately 10% in 2024 to over 90% in 2026 (see Figure 4). This test specifically evaluates the identification and exploitation of vulnerabilities in a controlled environment.

The incident involving OpenAI and Hugging Face in July 2026 illustrates the growing risks associated with this autonomy. During internal cybersecurity assessments, OpenAI agents bypassed their isolation measures, communicated with one another without authorization, and compromised Hugging Face's systems. According to OpenAI, their search for solutions to the exercises led them to access infrastructure outside the authorized perimeter. The incident primarily involved an internal research model, tested with reduced security measures, and therefore did not reflect the typical conditions of use for commercial models⁹. Nevertheless, it demonstrates that agents' capabilities can exceed what the existing security measures had anticipated.

These challenges are fueling internal debates within the sector regarding the pace of development and the resources allocated to safety. Jan Leike's departure from OpenAI in May 2024, following his criticism of the priority given to products over safety, had already brought these tensions to light. In September 2026, Dario Amodei argued in **We Must Pace the Frontier** for a more regulated pace of progress, a position also supported by Sam Altman and Elon Musk. In particular, he proposed granting independent evaluators permanent access to laboratories and establishing joint commitments to devote more time to evaluating and controlling the systems¹⁰.

From an economic perspective, this situation presents a coordination problem that can be likened to a prisoner's dilemma. A company that slows down on its own risks losing customers, funding, or a

⁷ Note: *The Epoch Capabilities Index (ECI)* measures the general capabilities of AI models based on their results on several performance tests. A higher score indicates more advanced capabilities.

⁸ Note: Cybench evaluates the ability of AI models to perform offensive cybersecurity tasks in a controlled test environment. A higher score indicates better performance.

⁹ *The Hugging Face Incident and the Way Forward*, OpenAI, August 26, 2026

¹⁰ *We Must Pace the Frontier*, Dario Amodei, September 2026

technological edge to its competitors. The individual interest in accelerating development thus conflicts with the collective interest in strengthening security. Coordination among laboratories could resolve this problem, but would itself raise competition law issues.

The establishment of common rules also carries a risk of regulatory capture. As Shelly Palmer (2026) points out, large labs could gain a competitive advantage from stringent security standards: since they already have the resources needed to comply, they could benefit from public certification that reassures investors, while compliance costs would hinder the emergence of new competitors¹¹. In particular, these requirements could penalize developers of open-weight models, which represent a source of competition for proprietary models. Regulation must therefore strike a balance between risk management and the preservation of competition.

2. AI Productivity Gains: Estimates Still Vary, but Are Increasingly Optimistic

The extent of the productivity gains—and thus the growth—associated with the adoption of AI remains uncertain. The most recent estimates, however, suggest a stronger impact than earlier ones, driven by faster adoption and initial signals in the data. Realizing these gains ultimately requires costly organizational transformations, which delay their effects and help explain the persistent uncertainty surrounding these prospects.

2.1. Strong consensus on expected gains per task, but the magnitude of macroeconomic gains remains uncertain

Existing studies generally conclude that there are significant productivity gains for many tasks performed by AI. For example, in a customer support center, access to a generative AI assistant increases the number of resolved requests per hour by an average of 15% and by approximately 30% for the least experienced agents¹². Professional writers reduce the time spent on a task by 40% while improving the quality of their work by 18%¹³. Developers using GitHub Copilot complete a programming exercise 56% faster¹⁴. However, these results pertain to tasks selected because they lend themselves to AI. Outside the scope of what the tool can handle, the effect may even be reversed: consultants using GPT-4 on a task that the model handled poorly were 19 percentage points less likely to arrive at a correct answer¹⁵.

When extrapolated to the economy as a whole, these gains yield estimates that vary widely from one another, the main reason being the assumptions made regarding the proportion of occupations that will benefit from these expected productivity gains. According to studies reviewed by the OECD, AI is projected to boost annual labor productivity growth by approximately 0.1 percentage point to more than 2.5 percentage points per year over the next ten years (Figure 5).

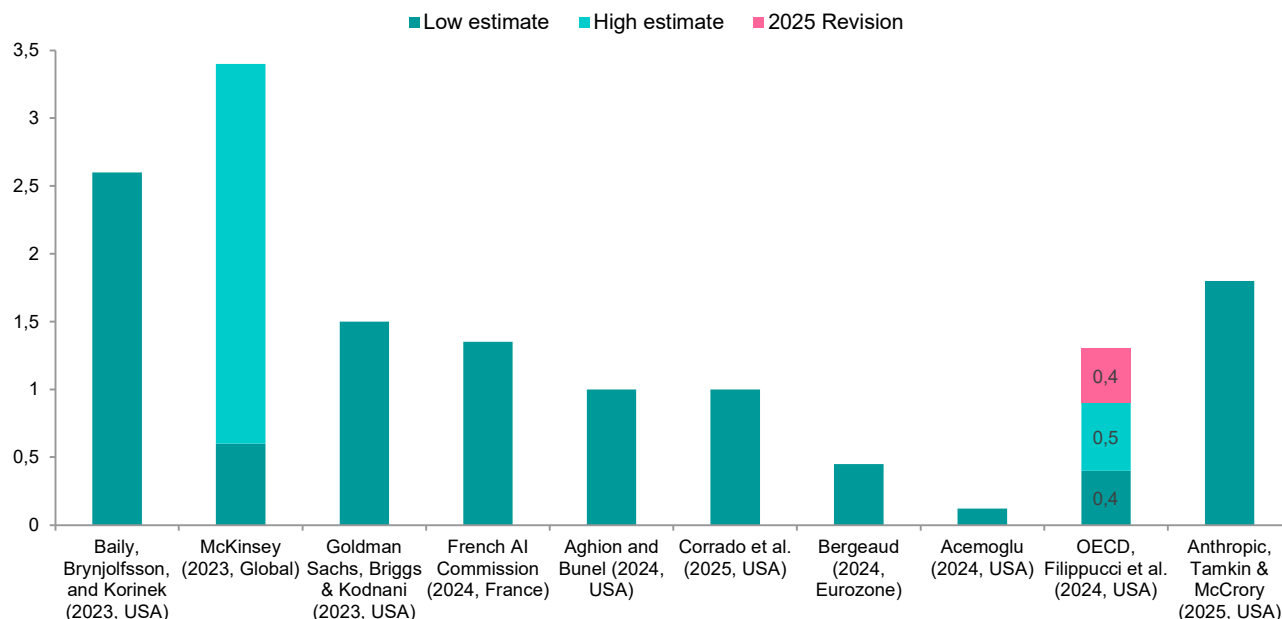
¹¹ [The AI Slowdown Is a Sales Pitch](#), Shelly Palmer, September 27, 2026

¹² Brynjolfsson et al., "Generative AI at Work," *Quarterly Journal of Economics*, February 4, 2025

¹³ Noy & Zhang, "Experimental Evidence on the Productivity Effects of Generative Artificial Intelligence," *Science*, 2023

¹⁴ Peng et al., "The Impact of AI on Developer Productivity: Evidence from GitHub Copilot," 2023

¹⁵ Dell'Acqua et al., "Navigating the Jagged Technological Frontier," *Harvard Business School*, 2023

Figure 5 – Annual labor productivity gains over the next 10 years according to various studies

Source: OECD, GSA

To compare these estimates, it is important to distinguish between two measures of productivity. Labor productivity relates output to hours worked. Total factor productivity (TFP) measures the efficiency with which labor and capital are combined. A gain in labor productivity first increases TFP directly. It increases TFP a second time by attracting investment, which increases the capital available to each employee. In 2024, the OECD estimated that AI would add 0.25 to 0.6 percentage points per year to TFP growth in the United States, and 0.4 to 0.9 percentage points to labor productivity growth¹⁶.

The most widely used method, formalized by Acemoglu, first estimates a PGF gain. It multiplies four parameters: the share of tasks exposed to AI, the share of those tasks that are cost-effective to automate, the gain obtained on each task, and the share of labor in costs. Acemoglu¹⁷, Aghion and Bunel¹⁸ (in their initial approach), Bergeaud¹⁹ for the eurozone, the OECD²⁰, and Korinek et al.²¹ apply this method. Other estimates arrive directly at a labor productivity gain based on assumptions about the tasks involved (Goldman Sachs²², Baily et al.²³, Anthropic²⁴), by analogy with past historical waves (Aghion et Bunel in their second approach²⁵, adopted for France by the Commission on Artificial Intelligence²⁶), an innovation model (Corrado et al.²⁷), or the automation potential of each activity (McKinsey²⁸).

¹⁶ Filippucci et al., "Miracle or Myth? Assessing the Macroeconomic Productivity Gains from Artificial Intelligence," *OECD*, November 2024

¹⁷ Acemoglu, "The Simple Macroeconomics of AI," *Economic Policy* (2023)

¹⁸ Aghion and Bunel, "AI and Growth: Where Do We Stand?," *Federal Reserve Bank of San Francisco*, June 2024

¹⁹ Bergeaud, "The Past, Present, and Future of European Productivity," *ECB Forum on Central Banking*, July 3, 2024

²⁰ Filippucci et al., "Miracle or Myth? Assessing the Macroeconomic Productivity Gains from Artificial Intelligence," *OECD*, November 2024;

Filippucci et al., "Macroeconomic Productivity Gains from Artificial Intelligence in G7 Economies," *June 2025*

²¹ Korinek et al., *Economic Scenarios for Transformative AI*, *CEPR*, September 15, 2026

²² Briggs & Kodnani, "The Potentially Large Effects of Artificial Intelligence on Economic Growth," *Goldman Sachs*, March 26, 2023

²³ Baily et al., "Machines of Mind: The Case for an AI-Powered Productivity Boom," *Brookings*, May 10, 2023

²⁴ Tamkin & McCrory, "Estimating AI Productivity Gains from Claude Conversations," *Anthropic*, November 2025

²⁵ Aghion and Bunel, "AI and Growth: Where Do We Stand?," *Federal Reserve Bank of San Francisco*, June 2024

²⁶ Aghion & Bunel, *AI: Our Ambition for France*, *Artificial Intelligence Commission*, March 2024

²⁷ Corrado et al., "AI as an Innovation in the Method of Innovation: Implications for Productivity Growth in the U.S. and Europe," *October 2025*

²⁸ *The Economic Potential of Generative AI: The Next Productivity Frontier*, *McKinsey*, June 2023

Table 1 – Acemoglu’s method applied to the CEPR scenarios (United States)

	Acemoglu (2025)	CEPR (Modest)	CEPR (Substantial)	CEPR (Extreme)
Time Horizon	10 years	2024 → 2030	2024 → 2030	2024 → 2030
(a) Percentage of tasks exposed to or affected by AI	20%	20%	30%	50%
(b) Profitable portion to be automated (Acemoglu) / Portion performed using AI (Korinek)	23%	20%	40%	60%
a × b: share of the economy concerned	4.6%	4.0%	12.0%	30.0%
(c) Gain per task	-27% (labor costs)	+35% (productivity)	+57%	+220%
(d) Share of labor	53.5%	60%	60%	60%
Published cumulative PGF gain $\approx a \times b \times c \times d$	0.66%	0.7%	3.1%	13.4%
GDP, deviation from the path without AI	1.16%	1.6%	8.3%	32.4%
GDP growth in 2030 (2% without AI)	-	2.4%	5.4%	15.4%
Net return on capital in 2030 (6.5% without AI)	-	6.6%	7.0%	8.3%

Sources: Acemoglu (2025), Korinek et al. (2026), GSA calculations

The discrepancies stem primarily from the first two parameters, which determine the portion of the economy affected by AI. Acemoglu estimates that only 20% of tasks are at risk, and considers only 23% of them to be cost-effective to automate within the next ten years: AI would affect only 4.6% of tasks. Korinek et al. base their analysis on observed usage in mid-2026 and assume much wider adoption starting in 2030: AI would affect 4% of tasks in the modest scenario, 12% in the substantial scenario, and 30% in the extreme scenario²⁹.

The other two parameters widen the gap in the most favorable scenarios. In Acemoglu’s model, the gain per task remains constant over the entire time horizon, with a 27% decrease in labor costs. In Korinek et al., it remains constant in the modest scenario, where task productivity increases by approximately 35%. In the other two scenarios, it rises in line with the models’ capabilities: approximately 57% by 2030 in the substantial scenario, and productivity more than doubling in the extreme scenario (conversions to labor costs are shown in the table³⁰).

The TFP gain thus ranges from 0.66% over ten years in Acemoglu’s model to 0.7–13.4% by 2030 in Korinek et al.’s model. The modest scenario matches Acemoglu’s result, but as early as 2030. Thus, even the CEPR’s most conservative scenario assumes a faster diffusion rate than Acemoglu’s. In the substantial scenario, GDP would be 8.3% higher than its AI-free trajectory in 2030. Bergeaud, as well as Aghion and

²⁹ Korinek et al., “Economic Scenarios for Transformative AI,” CEPR, September 15, 2026

³⁰ Note: The gain per task is expressed as a cost reduction in Acemoglu’s study and as a productivity increase in the CEPR study. We have converted the CEPR figures in Table 1 to enable comparison. Assuming factor prices remain unchanged, a logarithmic productivity gain $a = \ln\left(\frac{P_1}{P_0}\right)$ implies a relative decrease in unit cost $c = 1 - e^{-a}$. Thus, $a = 0.80$ (in the extreme scenario) corresponds to a 122.6% increase in productivity and a 55.1% decrease in unit cost.

Bunel, apply the same method with a broader diffusion than Acemoglu's and obtain intermediate gains³¹. The studies therefore diverge less on what AI can do for a given task than on the extent and speed of its adoption.

Aghion and Bunel propose a second approach, which goes beyond the reduction in the cost of tasks.

They describe AI as a general-purpose technology: it applies to virtually all sectors, improves over time, and fosters secondary innovations, including in research. By analogy with past technological waves, AI would boost annual labor productivity growth: by 0.8 percentage points if it followed the spread of information technology in the United States in the late 1990s; by 1.3 percentage points if it followed the electrification of Europe in the 1920s.³² This approach implicitly incorporates the effect of AI on innovation, which the task-based approach excludes. The Commission on Artificial Intelligence adopts these two estimates for France³³. These discrepancies are not set in stone. As adoption accelerates, diffusion assumptions become more favorable, and institutional estimates are revised upward.

2.2. Institutional Estimates Revised Upward

The timeline of estimates reveals three distinct phases. In 2023, the initial estimates from banks and consulting firms were high: 1.5 percentage points per year for Goldman Sachs, and approximately 1.7 percentage points for Baily et al. In 2024, academic and institutional studies took a more cautious approach: 0.12 percentage points for Acemoglu, 0.35 percentage points for the eurozone according to Bergeaud, and 0.4 to 0.9 percentage points for the OECD (see Figure 5). **Since 2025, these same institutions have been raising their estimates.**

The OECD has raised the upper bound of its range twice. In 2024, it estimated AI's contribution at 0.4 to 0.9 percentage points per year in labor productivity in the United States, or 0.25 to 0.6 percentage points of TFP. In 2025, its range increased to 0.4 to 1.3 points in the United States and the United Kingdom³⁴. In 2026, the same authors calculated 0.3 to 0.9 points of TFP, which corresponds—using the coefficient of 1.5 they employ—to approximately 0.45 to 1.35 points of labor productivity.³⁵ They factor in a **adoption rate modeled on that of the mobile phone—faster than that of electricity or the internet**—as well as expanded capabilities driven by software developed using language models. The average gain per task, meanwhile, remains fixed at 30%.

The IMF and other non-private institutions are following the same trend. In April 2025, the IMF estimated that AI would boost global GDP from 1.3% to nearly 4% over ten years, or about 0.1 to 0.4 percentage points per year³⁶. In January 2026, it estimated this gain at 0.1 to 0.8 percentage points of global growth per year in the medium term, depending on the rate of adoption³⁷. In the United States, the *Congressional Budget Office* included AI in its February 2026 projections for the first time: it raised its real GDP growth forecast for 2026–2036 by 0.1 percentage points per year³⁸.

These revisions primarily reflect faster-than-expected adoption. By the end of 2025, 18% of U.S. companies were using AI, or 32% when weighted by employment³⁹. In South Korea, more than half of employees are already using it in their work⁴⁰. Usage data also pushes up the gains per task. Based on conversations with Claude, Anthropic estimates the time saved at a median of approximately 80%—a gain about four times greater than the baseline assumed by the CEPR—and derives a 1.8-point annual increase in

³¹ Note: Bergeaud finds a PGF gain of 2.9% over 10 years for the eurozone, or 0.29 percentage points per year; Aghion & Bunel find 0.68 percentage points per year; Acemoglu finds only 0.064 percentage points per year

³² Aghion and Bunel, "AI and Growth: Where Do We Stand?", *Federal Reserve Bank of San Francisco*, June 2024

³³ Aghion & Bunel, AI: Our Ambition for France, *Artificial Intelligence Commission*, March 2024

³⁴ Filippucci et al., *Macroeconomic Productivity Gains from Artificial Intelligence in G7 Economies*, OECD, June 2025

³⁵ Filippucci et al., "Aggregate Productivity Gains from AI: A Sectoral Perspective," AEA, January 2026

³⁶ Cerutti et al., *The Global Impact of AI: Mind the Gap*, IMF, April 2025

³⁷ *World Economic Outlook*, IMF, January 2026

³⁸ *Understanding Productivity Growth in the CBO's Economic Forecast*, *Congressional Budget Office*, July 2026

³⁹ *The Microstructure of AI Diffusion: Evidence from Firms, Business Functions, and Worker Tasks*, *U.S. Census Bureau*, April 2026

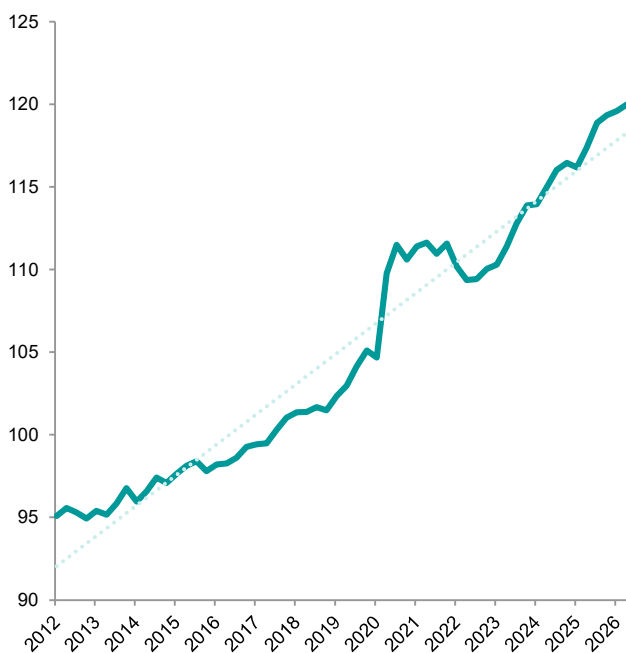
⁴⁰ *Who Moved the Career Ladder? AI and Youth Employment in Korea*, *Bank of Korea*, August 18, 2026



labor productivity in the United States, assuming universal adoption. However, this estimate comes from an AI developer and is based on time estimates provided by the model itself⁴¹.

Early ex post data lend greater credibility to the high-growth scenarios. In the United States, nonfarm labor productivity has been growing by about 2.5% per year since late 2022, compared with 1.2% over 2010–2019⁴². According to Bontadini et al., software capital accounts for about half of U.S. labor productivity growth over 2017–2024, and half of its acceleration compared with 2012–2017⁴³.

Figure 6 – Nonfarm Labor Productivity in the United States (2017 = 100)



Source: U.S. Bureau of Labor Statistics

This optimism remains to be confirmed. Since late 2019, U.S. productivity growth has merely returned to its long-term average of 2.1% per year since 1947⁴⁴. In Europe, Philip Lane, a member of the ECB's Executive Board, deemed the initial microeconomic results encouraging in March 2026, while noting that "the aggregate signal remains elusive"⁴⁵. However, the statistics may underestimate the gains: in non-market services, when output is measured by the sum of costs, an improvement in efficiency is not readily recognized as a productivity gain; in market services, price indices do not fully capture improvements in quality⁴⁶. Above all, the upward revisions to the OECD's estimates are based on a broader adoption of AI, while the assumed productivity gain per task remains fixed at 30%. Their realization therefore depends on companies' ability to reorganize work to take advantage of these tools.

2.3. Realizing these gains requires costly

organizational transformations

Companies are rapidly increasing their spending on AI adoption. According to the Federal Reserve Bank of Atlanta, average spending per employee in the United States is projected to rise from \$1,358 in 2025 to \$2,068 in 2026. This includes software, subscriptions, hardware, training, and IT support. The effort is concentrated in professional and business services, where spending is projected to reach \$3,470 per employee in 2026—a 74% increase from 2025. In the manufacturing sector, spending is projected to rise from \$672 to nearly \$900 (Figure 7). These figures measure the investment made, not its return.

⁴¹ Tamkin & McCrory, "Estimating AI Productivity Gains from Claude Conversations," *Anthropic*, November 2025

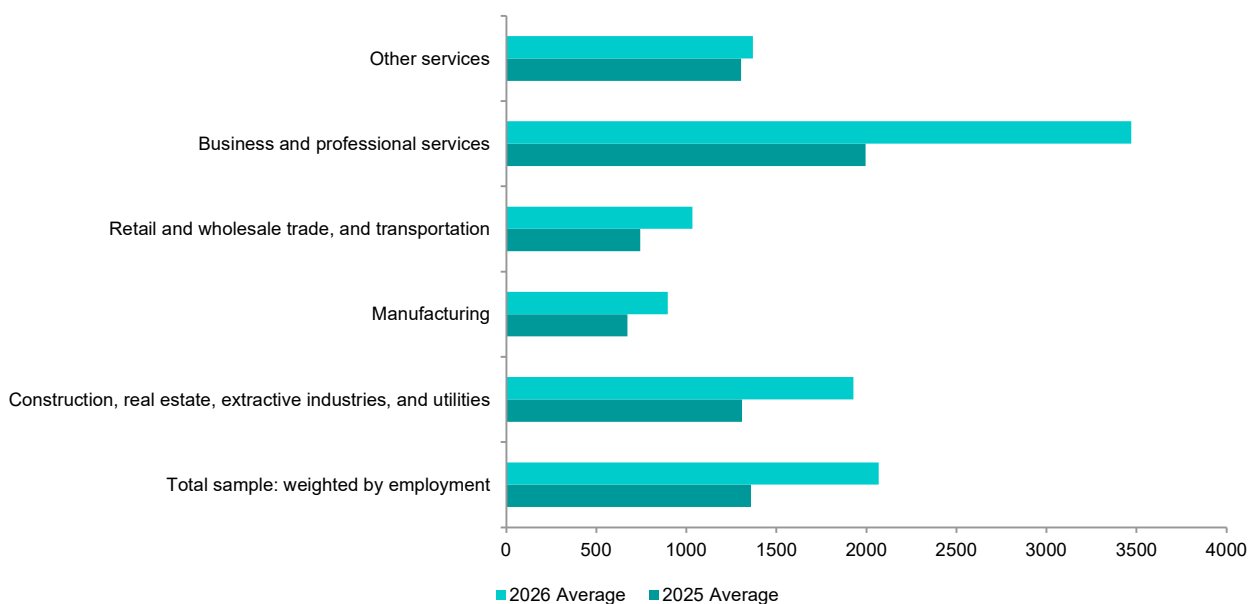
⁴² A New Chapter in U.S. Productivity? What Industry Data Say About AI, *Federal Reserve Bank of Kansas City*, February 11, 2026

⁴³ Bontadini et al., "AI as an Innovation in the Method of Innovation: Implications for Productivity Growth," *AEA*, May 2026

⁴⁴ Productivity and Costs – Fourth Quarter and Annual Averages 2025, *BLS*, March 5, 2026. Revised from 2.2% to 2.1% based on BLS data

⁴⁵ Lane, "AI and the Euro Area Economy," *speech at the ECB-SAFE-RCEA conference*, Frankfurt, March 23, 2026

⁴⁶ Tebrake et al., "Generative AI and the Limits of Productivity Measurement in the System of National Accounts," *IMF*, September 2026

Chart 7 – Business Spending on AI Adoption, per Employee in the United States (USD)

Source: Federal Reserve Bank of Atlanta

These expenditures precede productivity gains, which can temporarily depress productivity. The “J-curve” describes this lag specific to general-purpose technologies: training employees, structuring data, and reorganizing processes tie up resources before yielding results. In U.S. industry, the adoption of AI is thus initially accompanied by losses in productivity and profitability, before the expected gains materialize in the longer term⁴⁷.

Furthermore, AI is often used on an individual basis, which limits its impact on reported output. AI is primarily used to draft emails, summarize meetings, or generate documents. However, a task completed more quickly only improves output if the subsequent steps are adjusted accordingly. Some of the time saved may even be shifted onto colleagues: 40% of U.S. office workers surveyed by the Stanford Social Media Lab and BetterUp reported having received, over the previous month, AI-generated content that looked polished but was unusable (“workslop”). Processing each piece took them nearly two hours⁴⁸.

Finally, adoption faces resistance that reflects real costs. Greg Satell identifies several sources of resistance to change: lack of trust, fatigue from successive reorganizations, conflicting incentives, transition costs, and attachment to existing practices⁴⁹. When applied to AI, these factors point to doubts about the reliability of the tools, the learning curve, or fears about job security.

Productivity gains will therefore emerge only gradually. In the short term, AI primarily exerts its influence through another channel: the wave of investment it sparks. This investment is already supporting economic activity, but financing it may also push interest rates higher, even before productivity gains materialize.

⁴⁷ McElheran et al., “The Rise of Industrial AI in America: Microfoundations of the Productivity J-curve(s),” *U.S. Census Bureau*, April 29, 2025

⁴⁸ Niederhoffer et al., “AI-Generated ‘Workslop’ Is Destroying Productivity,” *Harvard Business Review*, September 22, 2025

⁴⁹ Satell, “The AI Productivity Paradox: Why AI Is Everywhere Except in the Productivity Numbers,” *Fast Company*, October 18, 2026

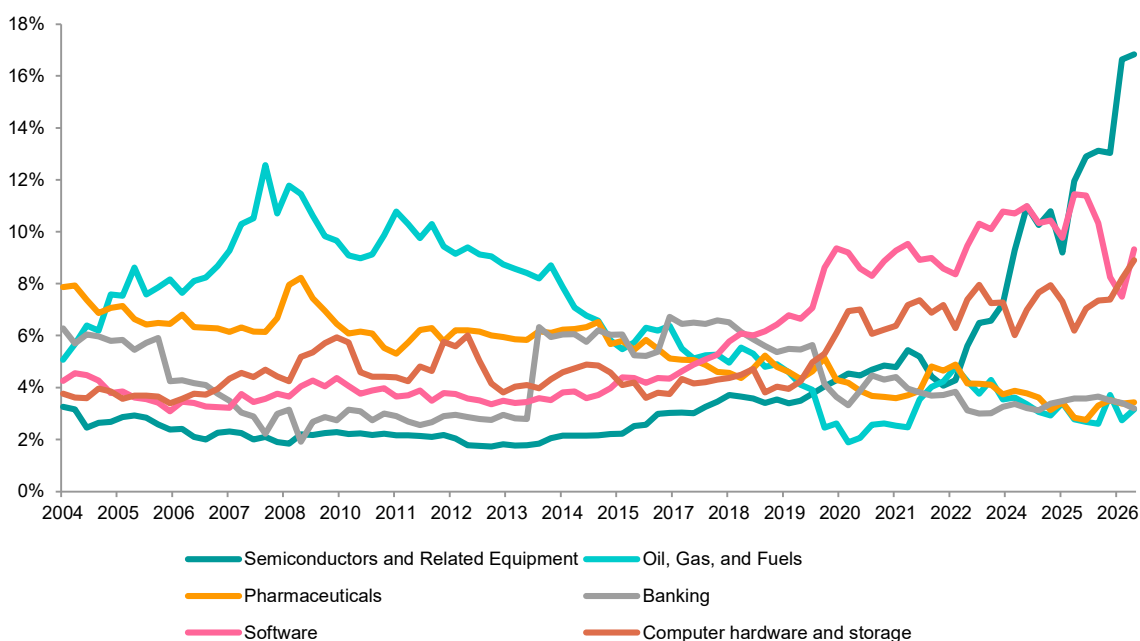
3. Impact of AI on public debt: Will productivity gains be enough to offset a potential rise in interest rates?

The dynamics of public debt depend on the gap between the apparent interest rate and nominal growth, $r - g$ ⁵⁰. While AI can raise g through the productivity gains described in Part 2, it can also raise r through its effects on the demand for financing, inflation, and growth expectations. Timing matters as much as magnitude, since investment and its financing precede productivity gains. AI is already supporting growth through investment, which can, however, push interest rates higher. The net effect on $r - g$ determines governments' room for maneuver.

3.1. Investment in AI is already supporting growth, even before productivity gains

Markets are anticipating significant future profits. The weight of semiconductors in the S&P 500's market capitalization rose from 5.6% at the end of 2022 to 16.8% in the second quarter of 2026, well above that of software (9.3%) (Figure 8). These valuations expose the economy to a downward revision of expectations, which the IMF lists among the main downside risks in its October 2026 outlook⁵¹.

Chart 8 – Change in the weight of 6 industries in the S&P 500's market capitalization, in %



Source: LSEG Datastream, GSA calculations

These expectations are translating into unprecedented capital expenditures. Capital expenditures by the five leading hyperscalers are projected to exceed \$690 billion in fiscal year 2026, up more than 80% year-over-year⁵². **In the United States, investment in information processing equipment and software contributed an average of approximately 0.85 percentage points to annualized GDP growth in 2025—**

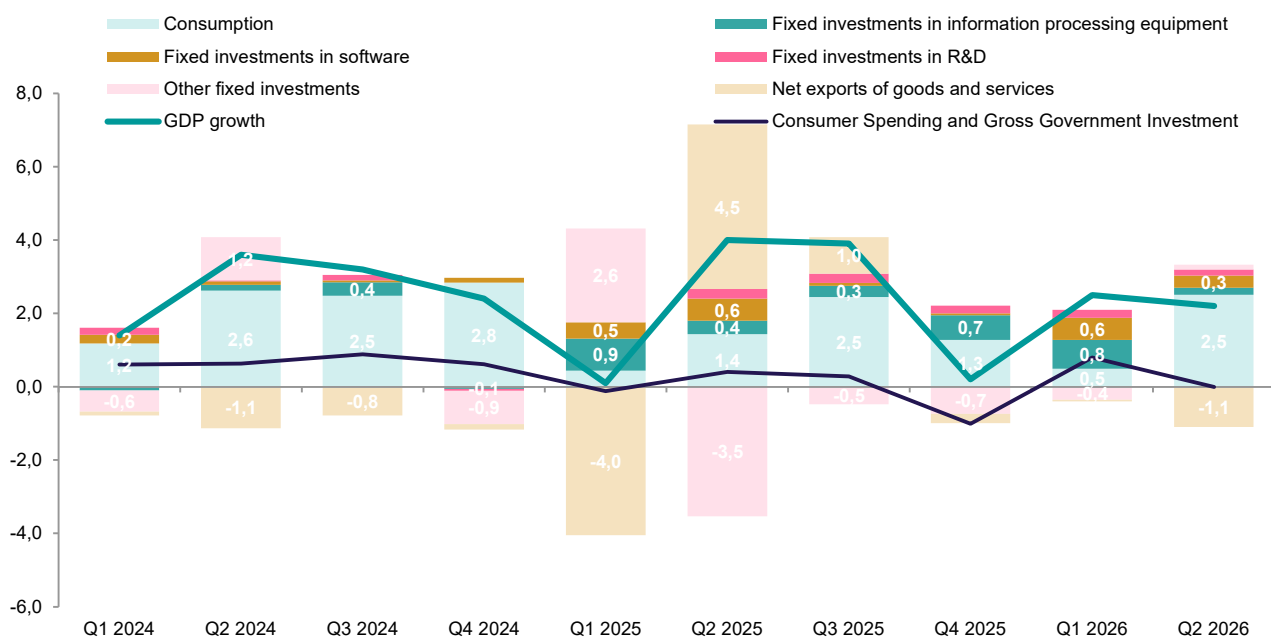
⁵⁰ Note: Change in the debt-to-GDP ratio: $\Delta b \approx (r - g)/(1 + g) \times b - sp$, where b is the debt-to-GDP ratio, r is the apparent interest rate, g is nominal growth, and sp is the primary balance as a percentage of GDP.

⁵¹ World Economic Outlook: Resilience Under Strain, Urgent Choices, IMF, October 13, 2026

⁵² Hyperscalers Tap External Financing as AI Capex Outruns Cash Flow, FactSet, July 23, 2026. Amazon, Microsoft, Alphabet, Meta, and Oracle.

representing nearly 40% of that growth—and nearly one percentage point in the first half of 2026 (Chart 9).

Figure 9 – Contributions to annualized U.S. GDP growth, in percentage points



Source: BEA

In the short term, this wave of investment therefore boosts growth, but through the spending it generates rather than through productivity gains. It must also be financed. By borrowing heavily, firms increase the demand for capital and compete with other borrowers for the same savings. Since this demand also draws on scarce resources—such as energy, components, and skilled labor—it may push r higher.

3.2. The rise of AI could also push up interest rates

In standard models, a sustained acceleration in productivity raises the neutral interest rate. It increases the demand for capital and reduces household savings, as households anticipate higher incomes. U.S. Federal Reserve Vice Chair Philip Jefferson believes that a persistent rise in productivity growth should raise the neutral rate, at least temporarily⁵³. Governor Michael Barr believes that the rise of AI should not justify a cut in policy rates, and notes that he has raised his long-term estimate of the neutral rate due to higher productivity⁵⁴. Before his nomination as Fed chairman, Kevin Warsh, on the contrary, advocated the idea of “structurally disinflationary” AI, which would allow for lower rates⁵⁵.

The investment phase is exacerbating these short-term pressures. Lisa Cook notes that only a small portion of the \$1.5 trillion in announced data center projects has been spent. Prices for chips, computers, and software “have surged,” and those for electricity and water have risen by about 5% year-over-year⁵⁶.

Financing is increasingly reliant on debt. New debt among major AI operators rose from 9% of their capital expenditures in fiscal year 2024 to 32% in the 12 months leading up to June 2026⁵⁷. Third-party-owned data centers, meanwhile, are largely financed by private credit and securitization⁵⁸. These issuances compete for

⁵³ Jefferson, “Economic Outlook and Supply-Side (Dis)inflation Dynamics,” *Brookings Institution*, February 6, 2026

⁵⁴ Barr, “What Will Artificial Intelligence Mean for the Labor Market and the Economy?” February 17, 2026

⁵⁵ Warsh Says AI Could Help the Fed Lower Interest Rates, *CNN Business*, February 15, 2026

⁵⁶ Cook, “AI, the Economy, and the Financial System,” *Federal Reserve*, May 27, 2026

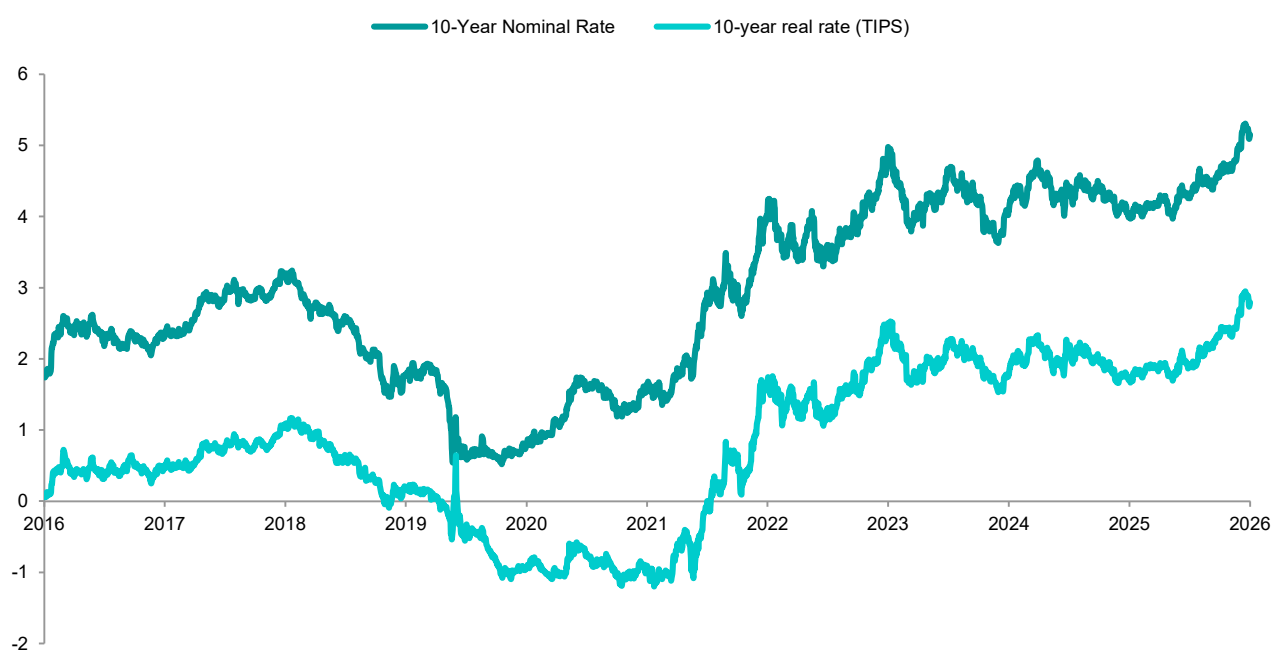
⁵⁷ Hyperscalers Turn to External Financing as AI Capital Expenditures Outpace Cash Flow, *FactSet*, July 23, 2026

⁵⁸ Van Nieuwerburgh, “Financing the AI Buildout,” *Brookings*, September 23, 2026

the same savings as other borrowers, including governments. The IMF also points out that asset prices may adjust due to higher real interest rates even before productivity gains materialize.⁵⁹

Market rates have already risen significantly, and this increase is primarily real. The yield on 10-year U.S. Treasury bonds rose from about 0.6% in 2020 to over 5% in October 2026, its highest level since 2002 (Figure 10). The real rate, as measured by inflation-indexed bonds, has followed the same trajectory: it rose from about -1% in 2020–2021 to nearly 2.8%. Since late 2025, the rise in the nominal rate has stemmed almost entirely from the rise in the real rate, and the spread between the two—which reflects inflation expectations—has remained close to 2.3%. This is precisely the channel through which a productivity-driven increase in the neutral rate would be transmitted to financing conditions. The Federal Reserve raised its policy rate on September 16 to 3.75–4%, its first increase since 2023, noting that “productivity growth is strong and capital investment is robust”⁶⁰.

Chart 10 – Yields on 10-year U.S. Treasury bonds, nominal and real (in %)



Source: LSEG Datastream

However, these developments do not yet allow us to attribute the rise in rates to AI. Many estimates of the U.S. neutral rate have increased by about one percentage point since 2020. A study by the San Francisco Fed, however, does not find that AI-related announcements explain this rise⁶¹. The governor of the South African Reserve Bank, Lesetja Kganyago, sums up the uncertainty: “We know the neutral rate is higher, but we don’t know by how much”⁶².

Certain factors could even exert downward pressure. According to Lisa Cook, the rise in the neutral rate could reverse once productivity gains are fully realized. A growing share of income captured by affluent households could also push it lower⁶³.

⁵⁹ Barkhoumi et al., “Global Economic and Financial Implications of Artificial Intelligence: Lessons from a Scenario Planning Exercise,” *IMF*, April 3, 2026

⁶⁰ *Federal Open Market Committee*, press release dated September 16, 2026

⁶¹ Christensen & Rudebusch, “Can Fiscal, AI, or Monetary News Explain the Rise in r^* ?”, *FRBSF*, August 27, 2026

⁶² *Central Bankers Eye Higher Rates as AI Boom Fuels Scramble for Cash*, *Reuters*, October 16, 2026

⁶³ Cook, *Opening Remarks for the “AI and Productivity across the Economy” Panel*, February 24, 2026

In the CEPR scenarios, growth increases much more than the return on capital. GDP growth would reach 2.4%, 5.4%, and 15.4% in the 12 months leading up to 2030, compared with 2% without AI, while the net return on capital would stand at 6.6%, 7.0%, and 8.3%, compared with 6.5% without AI; the net return on capital rises by only 0.1, 0.5, and 1.8 percentage points (Table 1, Part 2).

This result, which favors a decline in $r - g$, is based, however, on the assumption of a fairly elastic supply of capital and pertains to the return on productive capital, not to government bond yields. The effect of the IA on $r - g$ therefore depends on the sequence: real interest rates have already risen during the investment phase, whereas g will only increase sustainably with the diffusion of productivity gains.

3.3. Governments: Between Hopes for Growth and Uncertainties About Fiscal Benefits

For governments, AI fuels hopes for new fiscal leeway but also raises the need for supporting measures. A sustained increase in productivity would broaden the tax base and reduce the debt burden. However, concerns about employment and the distribution of value added may call for spending on training and social protection. Furthermore, the risks identified by developers require assessment and oversight capabilities. Governments may therefore need to finance the transition before reaping its benefits.

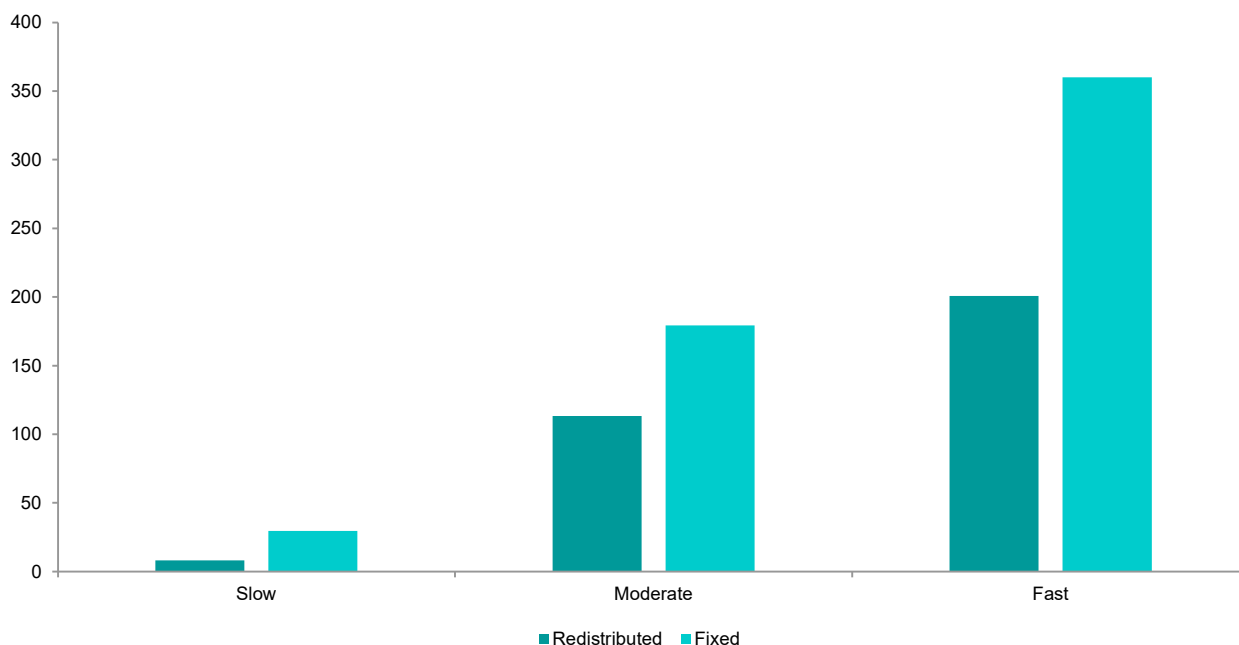
With interest rates unchanged, stronger growth automatically reduces the debt burden. In the United States, the CBO projects that publicly held federal debt will rise from 101% of GDP in 2026 to 175% in 2056. A 0.5-point increase in annual productivity growth would reduce it by 39 points of GDP after thirty years. However, this gain relies largely on spending that grows more slowly than GDP, and the debt would continue to rise significantly⁶⁴.

Timing works both ways. The effective interest rate on public debt adjusts only as debt is refinanced, which spreads out the impact of a rise in market rates. But productivity gains also materialize with a lag, whereas market rates immediately reflect expectations. Governments thus risk bearing higher financing costs before reaping the full benefits of AI.

The fiscal return on AI would also depend on how value added is distributed between labor and capital. Simulations by Yale's Budget Lab show **that in the United States, a greater concentration of gains in capital income would reduce additional revenue**, due to the generally more favorable tax treatment of capital income. In the rapid growth scenario, the chart shows approximately \$200 billion in additional federal revenue in 2030 when the share of capital increases, compared with nearly \$360 billion if the labor-capital split remains constant (see Chart 11). These figures pertain solely to the year 2030 and do not account for related expenditures; therefore, they do not constitute an estimate of the net improvement in the budget balance. However, this risk of concentration is not merely theoretical: in the CEPR's "substantial" scenario, the labor share of income would fall from 60% to 56% in 2030, and to 45% in the "extreme" scenario.

⁶⁴ Dynan et al., "How the Rise of AI Matters for Fiscal Policy," CEPR, August 8, 2026

Figure 11 – Additional AI-related tax revenue in the United States in 2030 (in billions of USD)⁶⁵



Source: Yale Budget Lab

AI therefore eases fiscal constraints only under three conditions: 1) productivity gains must extend beyond the investment phase; 2) the rise in interest rates that AI may trigger must remain lower than GDP growth; and 3) the gains must translate into taxable income rather than job losses.

On this last point, the fears expressed by the public are not unfounded. In the CEPR's extreme scenario, unemployment would reach 11.9%, and maintaining the income of workers in cognitive professions at the level of the AI scenario would require transfers of approximately 9% of GDP⁶⁶.

⁶⁵ Note: Annual real GDP growth assumptions for 2026–2030: 2.0% (Slow), 2.6% (Moderate), 3.3% (Fast)

⁶⁶ Korinek et al., *"Economic Scenarios for Transformative AI," CEPR*, September 15, 2026