



What Might AI Adoption Mean for the Fiscal and Economic Outlook?

Published: May 6, 2026 Updated: May 19, 2026

[Download the Data](#) 

Key Takeaways

1

Surveys of experts highlight the possibility of large productivity increases and labor force participation declines

2

Large, persistent productivity growth improvement would make the fiscal path more sustainable

3

But labor supply reduction would partially offset this, as would outlays to support workers who leave the labor market

4

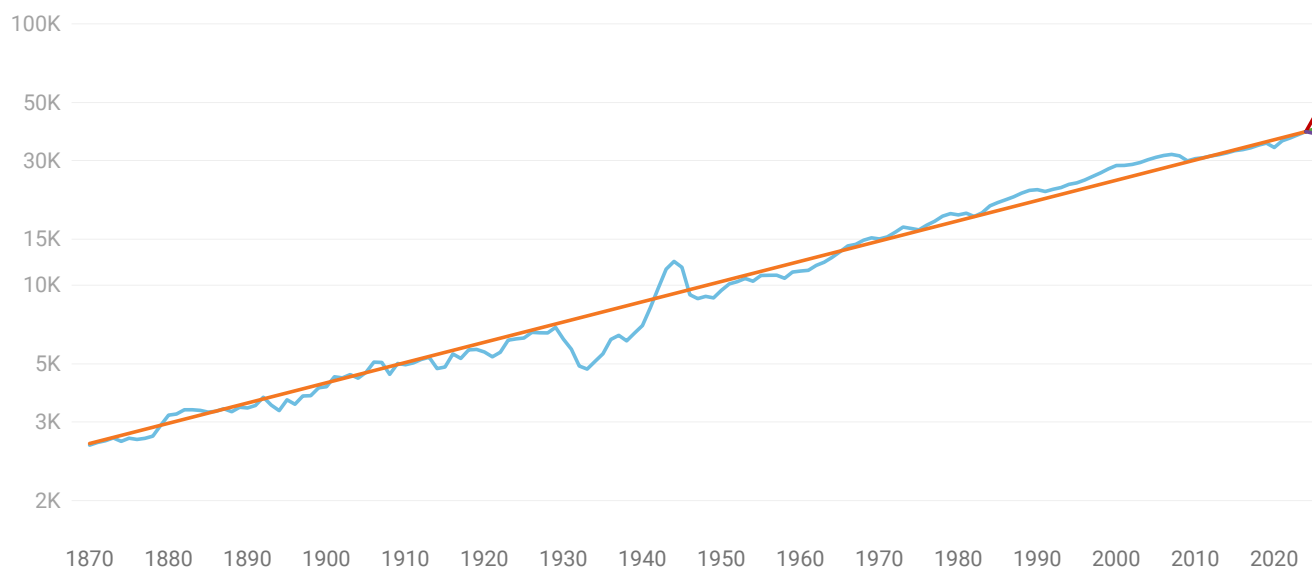
This analysis is not meant as a Budget Lab prediction of how AI will affect the fiscal outlook. Rather, it takes an outside survey of economist expectations and runs it through our model to show possible scenarios.

The emergence of increasingly capable large-language models (LLMs), and the widespread enthusiasm about their economic potential, has spurred much thinking about the macroeconomic implications of AI. Understandably, the range of envisioned outcomes is quite wide, given all of the uncertainty about the pace of both technical progress and adoption by businesses. A Dallas Fed [article](#), the key figure from which is excerpted below, illustrates this uncertainty and the correspondingly wide range of possible futures.

Figure 1. The wide range of potential AI futures

1990 dollars, log scale

— Singularity: Benign scenario — Real GDP per capita — AI GDP-boosted trend, 2.1% for 10 years — Trend GDP per capita, 1.9% per year — Singularity: Extinction



The blue line is real gross domestic product (GDP) per capita in 1990 dollars. The orange line is a trend line fitted to the data for 1870–2024 with a trend growth rate of 1.9 percent per year. The red, green and purple lines are hypothetical paths for per capita GDP based on different scenarios.

Chart: Federal Reserve Bank of Dallas • Created with [Datawrapper](#)

Narrowing this range will be important, especially for policymakers. A [recent paper](#) by Ezra Karger and coauthors has very helpfully gathered and distilled the expectations of different groups of experts: economists, AI experts, and so-called superforecasters.¹ They provided medium- and long-term forecasts of variables like labor productivity growth, labor force participation and unemployment, and other macroeconomic outcomes.

What we now provide is a complement to this research: an internally consistent, model-based exploration of how macroeconomic and fiscal variables would evolve under the scenarios envisioned in Karger et al. (2026).

What might it look like if AI is widely adopted?

The most-consequential variable, for understanding fiscal and macroeconomic impacts of AI, is the path of productivity growth. Over the long run, productivity growth is the dominant determinant of living standards and a key contributor to fiscal outcomes. In the context of AI-related discussions, it is important to have a realistic range of forecasts grounded in sound macroeconomic thinking as well as knowledge of LLM capabilities.

In the Karger et al. (2026) survey's "Moderate Adoption" scenario, the median economist expected annual labor productivity growth of 2.5% from 2025-30.² This is a large number by recent standards: average labor productivity growth from 2015 to 2025 was only 1.8%. Figure 2 shows that this 2.5% assumption is historically large but not unprecedented: the ten-year average of labor productivity growth has exceeded it twice in the postwar record, first in the 1960s and again in the late 1990s and early 2000s. However, this scenario entails lower growth than in the most [aggressive forecasts](#) by some AI experts, and lower growth than in the Rapid Adoption scenario in Karger et al. (2026), shown as the top horizontal line in Figure 2. In the Appendix, we show results for that scenario as well as the Slow Adoption scenario.

Figure 2. How AI scenario productivity assumptions compare with historical productivity growth

Labor productivity growth (10-year moving average)

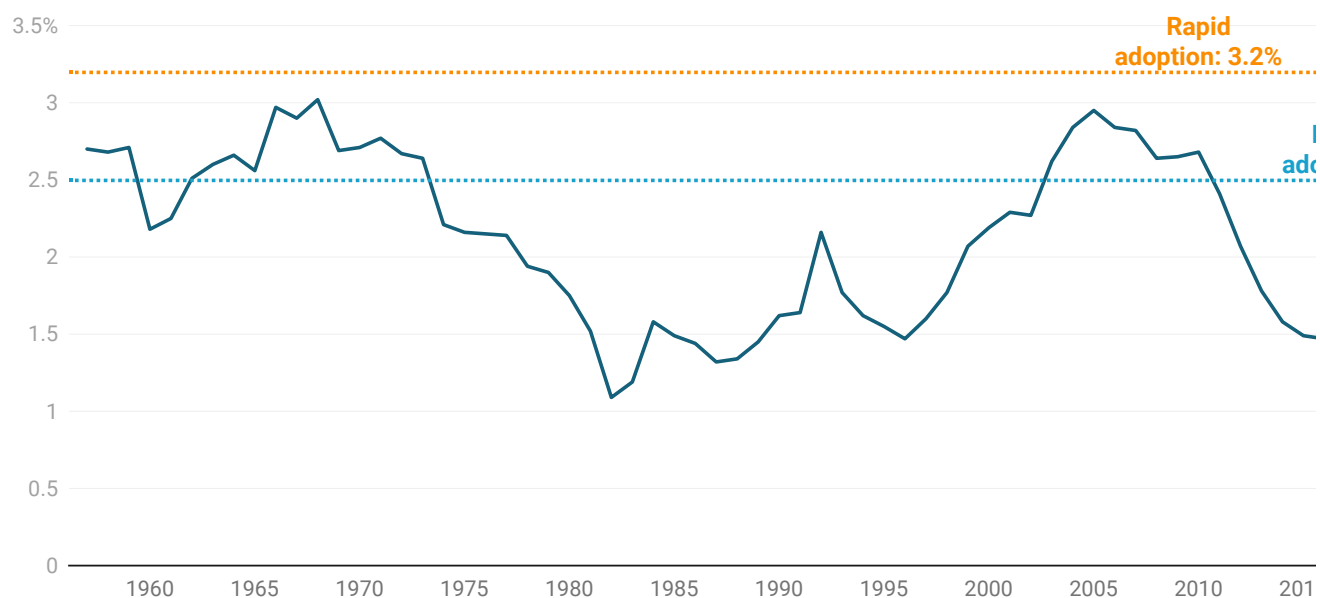


Chart: The Budget Lab • Source: BLS, The Budget Lab analysis • Created with [Datawrapper](#)

Next to productivity, the other macroeconomic effect that likely matters most is labor force participation. We therefore consider what would happen if economists' expectations for labor force participation were to be realized in the moderate adoption scenario. Economists, like the AI experts surveyed, tended to anticipate lower participation in that scenario: 60.7% in 2030 as opposed to CBO's assumed rate of 62.1% in the same year.³

The third and final factor we consider is the possible implication of employment loss for federal spending. This is not something asked of survey respondents in Karger et al. (2026), but it is a fiscal variable worth considering given the large participation rate reductions that survey respondents find plausible. There is considerable uncertainty as to how robust the fiscal response will be to any job loss, so we consider two assumptions that

could bracket the range of possibilities. The less-generous assumption is that the federal government spends (with no offsetting receipts) as much on workers exiting the labor force as it does on the unemployed. This amounts to about \$5,500 per lost labor force participant. (Here we scale by the number of unemployed rather than the number of unemployment insurance recipients.)⁴ The more-generous assumption is that it spends as much as it does on retirees, amounting to about \$42,400 per lost participant.⁵ Using the participation rate reduction expected by survey respondents, as described above, we then separately apply these two assumptions.

Putting all of these factors together, we now show a variety of macroeconomic and fiscal outcomes over the budget window. The dashed black line indicates the Budget Lab's baseline path for each outcome. Solid lines show a "stacked" outcome that progressively incorporates deviations from that baseline: first, incorporating the higher labor productivity increase (blue line); second, incorporating the labor force participation reduction, in addition to the productivity change (orange line); third, incorporating the previous changes as well as a less-generous outlay increase to support those no longer in the labor force (green line); and fourth, the same as the previous but with a more-generous outlay increase (pink line).

Figure 3. Deficits shrink unless worker support is especially large

Budget deficit as % of GDP

-- Baseline S1: Productivity S2: Productivity + Labor Force S3: Productivity + Labor Force + Less-generous Spending S4: Productivity + Labor Force + More-generous Spending

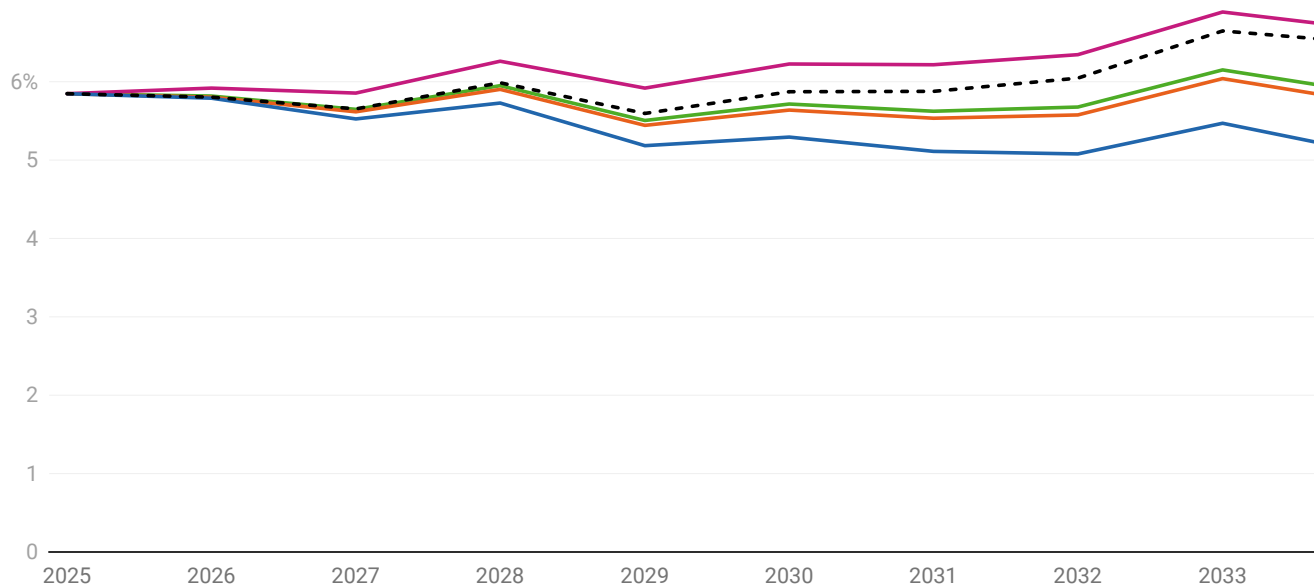


Chart: The Budget Lab • Source: BLSMM v1.0, The Budget Lab Analysis • Created with [Datawrapper](#)

Figure 4. Debt rises more slowly unless worker support is especially large

Debt as % of GDP

-- Baseline S1: Productivity S2: Productivity + Labor Force S3: Productivity + Labor Force + Less-generous Spending S4: Productivity + Labor Force + More-generous Spending

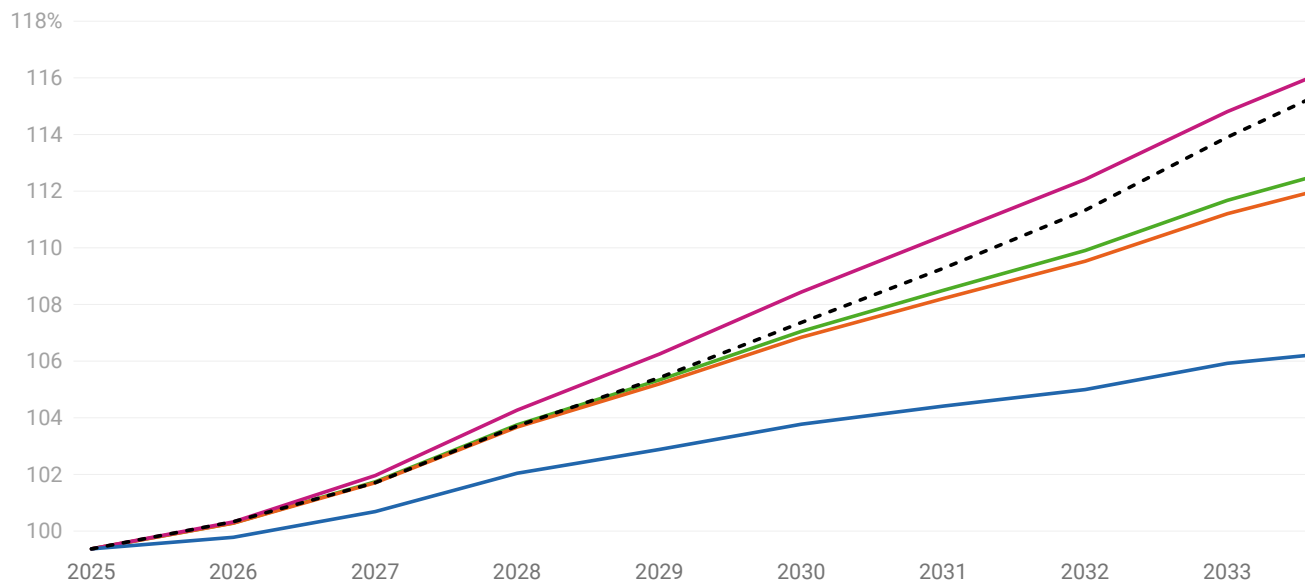


Chart: The Budget Lab • Source: BLSMM v1.0, The Budget Lab Analysis • Created with [Datawrapper](#)

Figure 5. GDP eventually rises even with a decline in labor force participation

Real GDP Growth

-- Baseline S1: Productivity S2: Productivity + Labor Force S3: Productivity + Labor Force + Less-generous Spending S4: Productivity + Labor Force + More-generous Spending

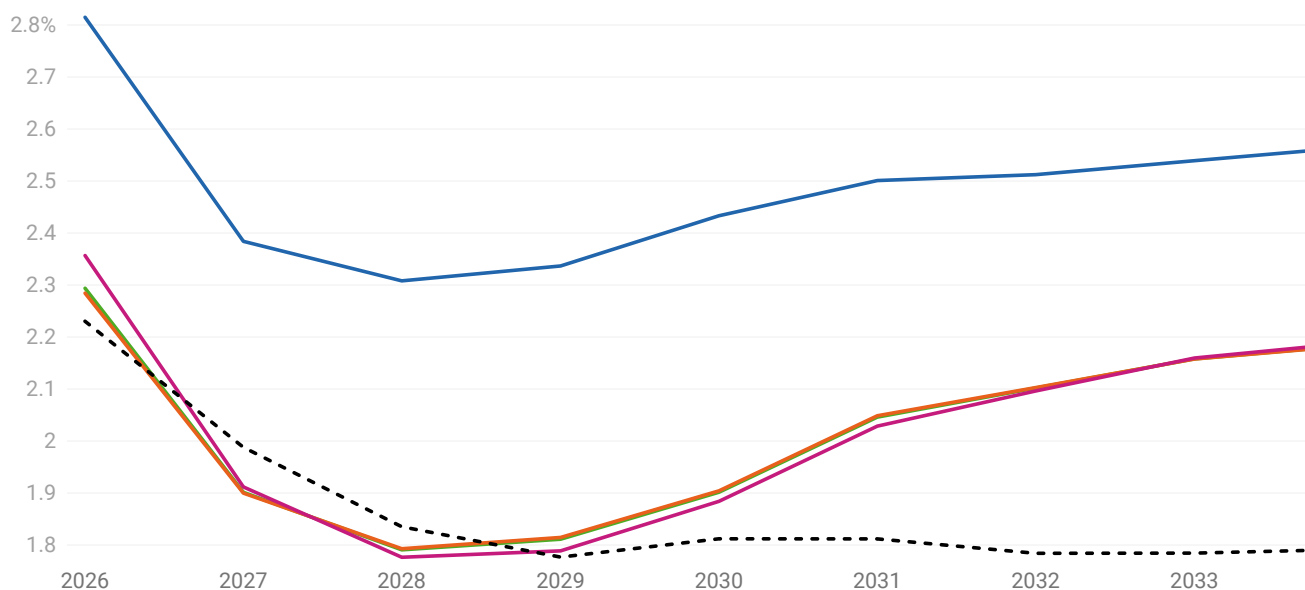


Chart: The Budget Lab • Source: The Budget Lab Analysis • Created with [Datawrapper](#)

A few takeaways are immediately apparent. First, the budget balance and debt trajectory are generally more sustainable in this scenario than in the baseline. Even with diminished labor force participation, and with the higher interest rates that occur in equilibrium with faster productivity growth, a productivity boom of this magnitude leads to more rapid GDP growth and a more-manageable deficit and debt burden. Only the large outlay increase assumed in the “generous” scenario variant offsets the fiscal benefits from higher productivity. But this is neither a forecast nor a comprehensive assessment of how a large AI shock would transform the economy; rather, it is an illustration of how specific assumptions affect key outcomes in The Budget Lab Small Macro Model (BLSMM), which we describe in the next section.

In the future, the Budget Lab intends to follow this work with a more detailed investigation of how AI could affect fiscal outcomes. In particular, an AI-induced productivity shock (as opposed to other kinds of productivity shocks) could interact with the existing tax system in a way that reduces revenues (e.g., because capital is more lightly taxed than labor).

How we calculate scenario forecasts

The modeled trajectories in Figures 3-5 are all outcomes of the brand-new Budget Lab Small Macro Model (BLSMM). It is freely available [here](#) as an interactive tool. Documentation on how it works is available [here](#). This is a preliminary version, which Budget Lab expects to modify in response to feedback. As such, figures like those above should be regarded as illustrative demonstrations of stylized scenarios, rather than authoritative forecasts.

Intuitively, what BLSMM does is take fiscal and monetary policy as inputs, along with other user-specified values like the paths of productivity growth and labor force participation, and delivers model-consistent paths for a variety of key outcomes. Those outcomes include real GDP; unemployment; inflation; 10-year Treasury rates; outlays, receipts, and debt; the primary and total budget deficits; the debt-to-GDP ratio; the average interest rate on federal debt; and the federal funds rate.

In so doing, it generates an internally consistent economic and fiscal narrative that embodies key macroeconomic relationships. For example, BLSMM includes an expectations-augmented Phillips Curve and an Okun’s Law relationship between unemployment and GDP. This framework means that inflation is anchored to the Fed’s target but evolves in the short run as shocks hit the economy and unemployment fluctuates. In turn, unemployment is closely connected to the output gap; above-potential GDP is associated with low unemployment, and vice versa. Monetary policy is implemented with a Taylor-type policy rule: the Fed tightens when inflation is high (or unemployment is low) and loosens when inflation is low (or unemployment is high). Some of the details of this rule can be modified by users.

Where possible, the BLSMM implementation follows CBO and standard practice, as in the case of the relationship between federal debt and the real neutral interest rate (often referred to as r^*), where we assume that a one percentage point increase in the debt (as a share of potential GDP) causes r^* to [rise by 2 basis points](#). Some of BLSMM’s other relationships are implemented with so-called [rules of thumb](#) from CBO. Those rules of thumb imply that higher productivity and labor force growth lead to substantial reductions in outlays as a share of output; by contrast, receipts as a share of output are minimally affected.⁶ For all of these assumptions, alternative choices could also be reasonable.

BLSMM was designed to be parsimonious, especially relative to the large macro models commonly used by Budget Lab and others. This has important virtues, chiefly simplicity and transparency. It is much easier to understand what is driving a given equilibrium response in BLSMM than in a larger model that functions to some

extent as a black box. However, it also comes with downsides: some important macroeconomic dynamics are not captured by the current version of the model. For example, the financial sector in BLSMM is very limited, and does not feature asset values that could be used to generate wealth effects of macro or fiscal shocks. The model has no international dimension, and so does not include trade or capital flows. In some cases, these limitations may mean that BLSMM generates outcomes that conflict with users' macroeconomic intuition. The Budget Lab expects to reevaluate these limitations in the future, balancing them against the overall complexity of the model.

The Budget Lab is grateful to Basil Halperin for insightful feedback on an earlier draft.

On 2026-05-19 The Budget Lab switched from using the as-published Karger et al. (2026) productivity forecasts to using modified versions of those forecasts that better align the Karger et al. (2026) nonfarm business output per hour concept to the BLSMM total economy output per employee concept. This refinement reduced the magnitude of productivity shocks assumed in the BLSMM forecasts.

Appendix

Projections of how AI will affect the economy are, at best, educated guesses at this stage. The “moderate AI adoption” scenario used in our analysis above is one such guess, but it is not the only reasonable one. The Karger et al. (2026) research we rely on for these projections also furnished two other scenarios, one with a more-limited AI impact and one with a larger impact. Below we reproduce BLSMM’s output for those two scenarios.

Rapid AI adoption scenario

Figure A1. Budget Deficit Following Rapid Adoption

Budget deficit as % of GDP

-- Baseline S1: Productivity S2: Productivity + Labor Force S3: Productivity + Labor Force + Less-generous Spending S4: Productivity + Labor Force + More-generous Spending

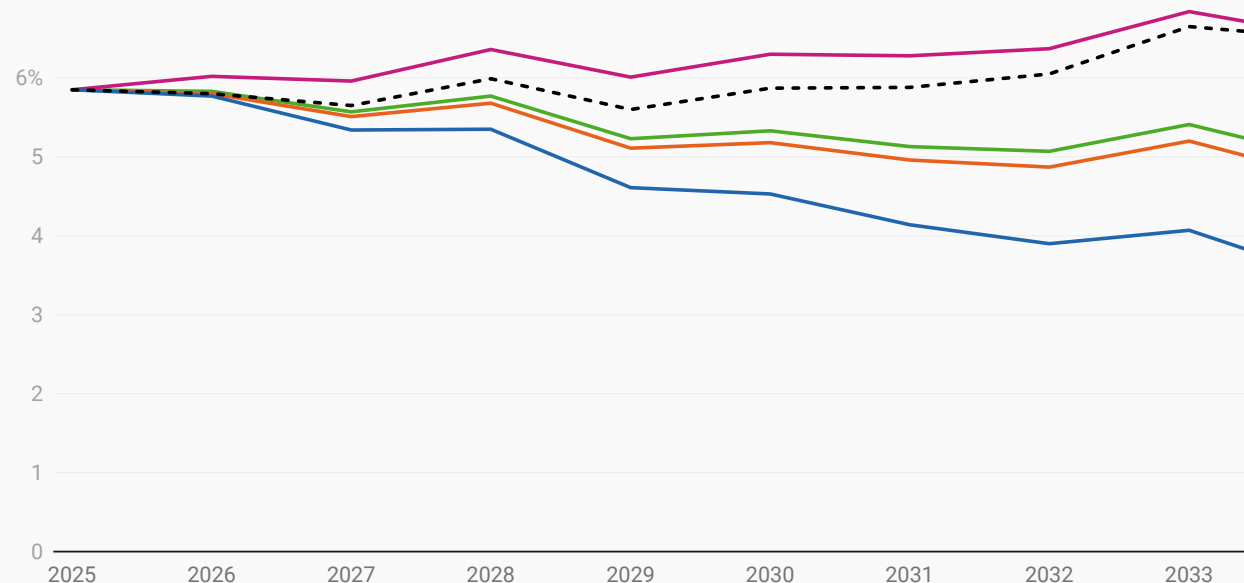


Chart: The Budget Lab • Source: BLSMM v1.0, The Budget Lab Analysis • Created with [Datawrapper](#)

Figure A2. Debt Following Rapid Adoption

Debt as % of GDP

-- Baseline S1: Productivity S2: Productivity + Labor Force S3: Productivity + Labor Force + Less-generous Spending S4: Productivity + Labor Force + More-generous Spending

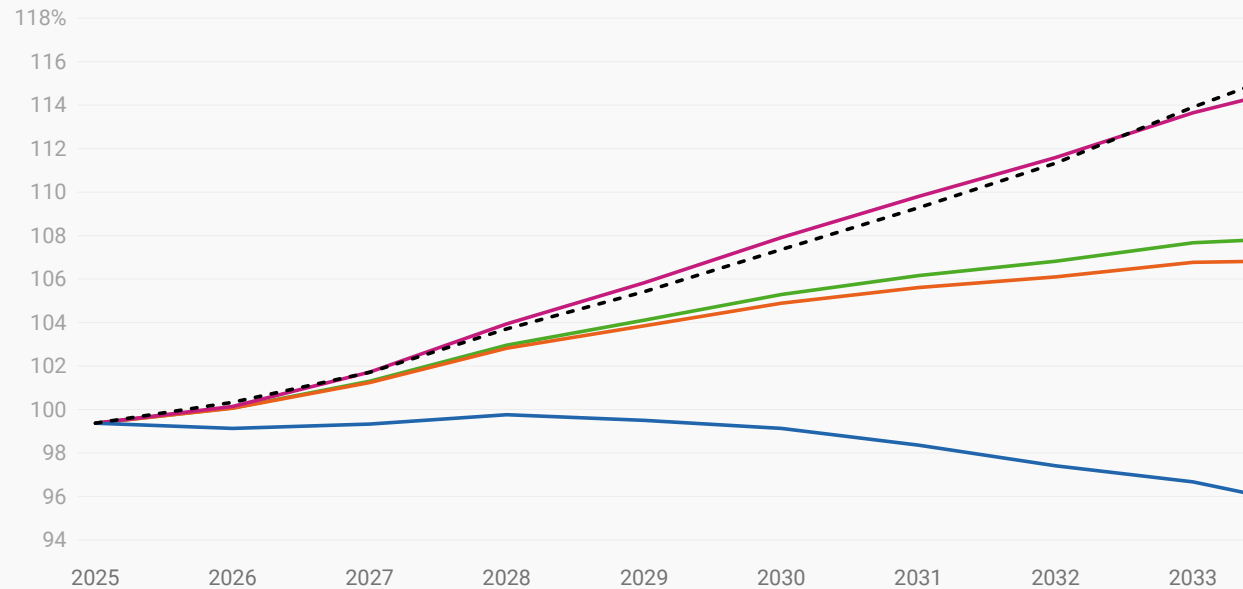


Chart: The Budget Lab • Source: BLSMM v1.0, The Budget Lab Analysis • Created with [Datawrapper](#)

Figure A3. GDP Growth Following Rapid Adoption

Real GDP Growth

-- Baseline S1: Productivity S2: Productivity + Labor Force S3: Productivity + Labor Force + Less-generous Spending S4: Productivity + Labor Force + More-generous Spending

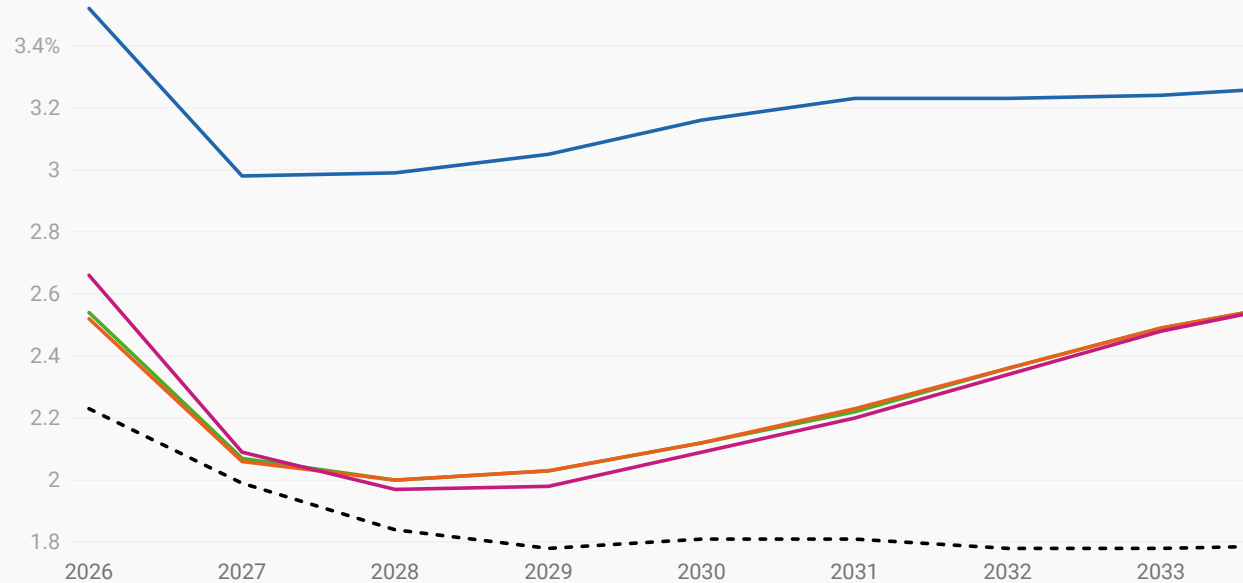


Chart: The Budget Lab • Source: BLSMM v1.0, The Budget Lab Analysis • Created with [Datawrapper](#)

Slow AI adoption scenario

Figure A4. Budget Deficit Following Slow Adoption

Budget deficit as % of GDP

-- Baseline S1: Productivity S2: Productivity + Labor Force S3: Productivity + Labor Force + Less-generous Spending S4: Productivity + Labor Force + More-generous Spending

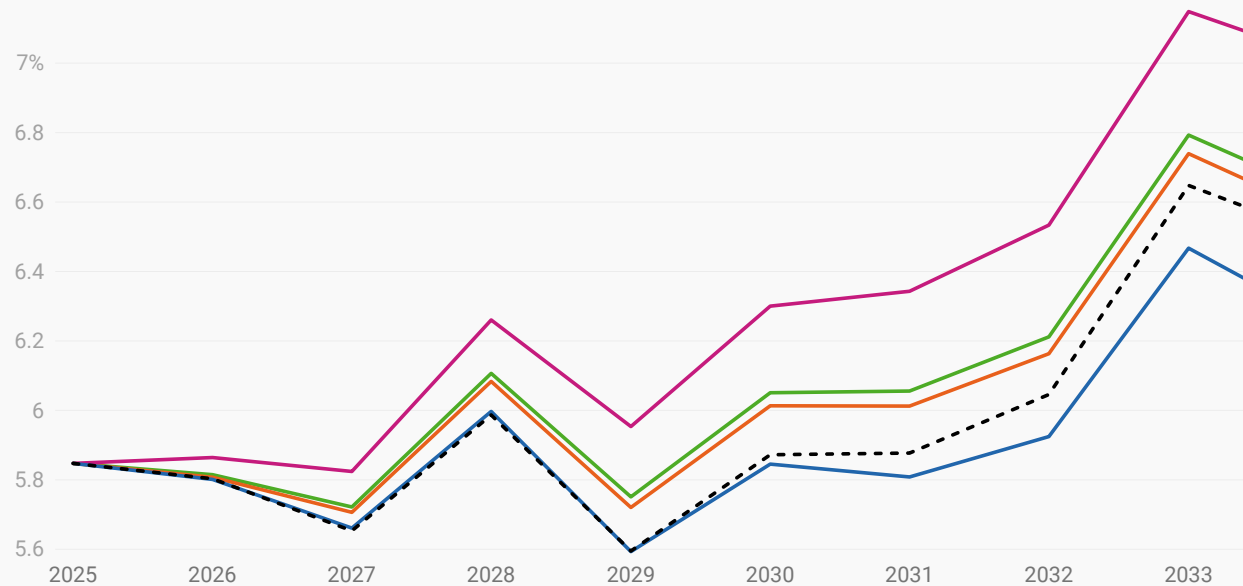


Chart: The Budget Lab • Source: BLSMM v1.0, The Budget Lab Analysis • Created with [Datawrapper](#)

Figure A5. Debt Following Slow Adoption

Debt as % of GDP

-- Baseline S1: Productivity S2: Productivity + Labor Force S3: Productivity + Labor Force + Less-generous Spending S4: Productivity + Labor Force + More-generous Spending

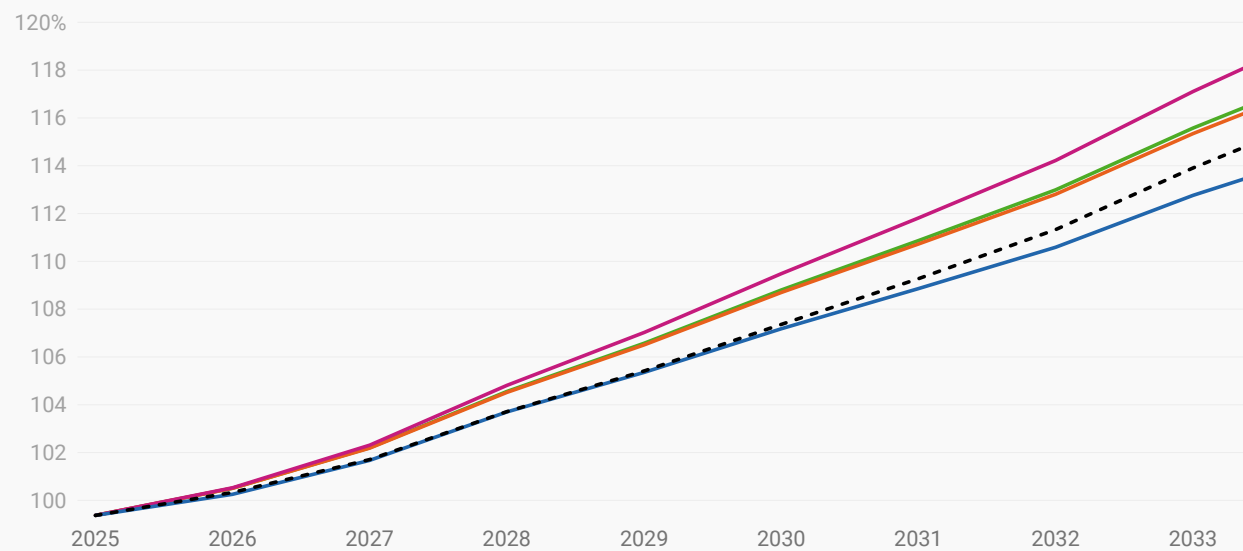


Chart: The Budget Lab • Source: BLSMM v1.0, The Budget Lab Analysis • Created with [Datawrapper](#)

Figure A6. GDP Growth Following Slow Adoption

Real GDP Growth

-- Baseline S1: Productivity S2: Productivity + Labor Force S3: Productivity + Labor Force + Less-generous Spending S4: Productivity + Labor Force + More-generous Spending

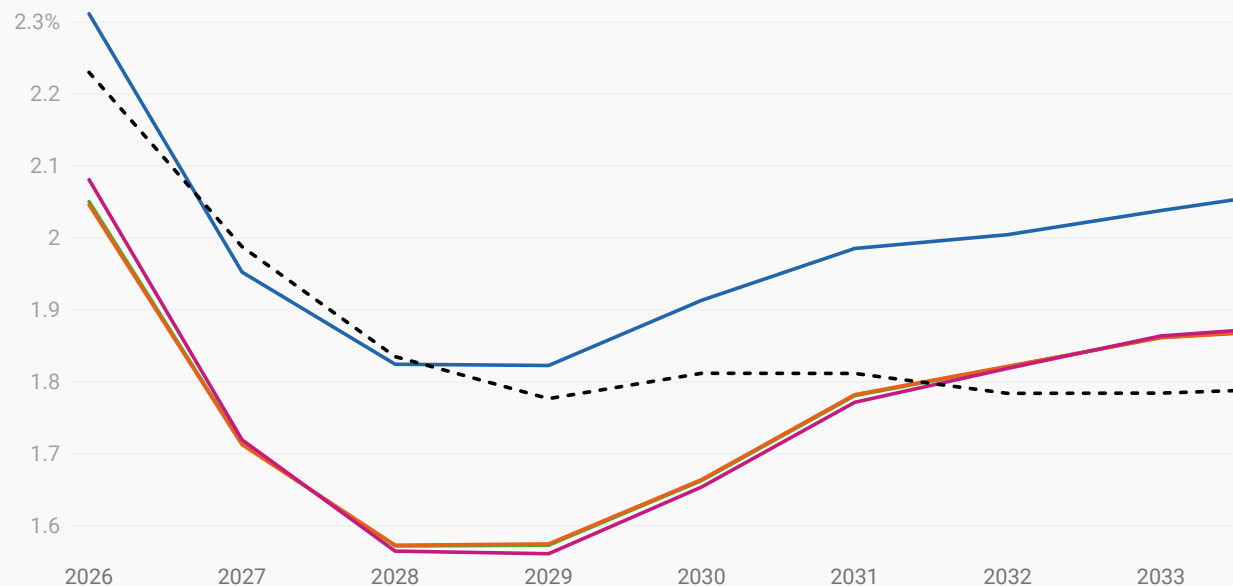


Chart: The Budget Lab • Source: BLSMM v1.0, The Budget Lab Analysis • Created with [Datawrapper](#)

Footnotes

- 1 Economist respondents consisted of “(i) economists working on AI-related topics, (ii) economists working on economic growth and technological changes more broadly, and (iii) well-known economists, such as Nobel prize winners.”
- 2 The labor productivity concept presented to survey respondents was a “per-hour” and nonfarm business concept, rather than the “per-employee” and total economy value used in BLSMM. Using details of the CBO economic outlook, we adjust the Karger et al. (2026) productivity forecasts to better align with the BLSMM concept.
- 3 We reduce labor supply growth in the model such that LFPR reaches the 2030 labor force participation forecast from Karger et al. (2026); subsequently, we exponentially interpolate between the 2030 and 2050 Karger et al. (2026) forecasts.
- 4 Regular UI benefits are ultimately funded by states, but for the purpose of this calculation we focus only on expenditures (\$39 billion), as estimated by the CBO for FY2025, and surveyed unemployed (7.15 million), as estimated by the BLS for FY2025.
- 5 For this calculation, we sum FY2025 Medicare and Social Security expenditures and divide them by the number of FY2025 adults aged 65 and older, as measured by the BLS.
- 6 BLSMM also assumes that a one percentage point deviation of potential GDP growth from baseline will raise the real neutral federal funds rate by two thirds of a percentage point. See BLSMM’s [technical documentation](#) for more details.