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Debt Sustainability, Wealth Inequality and the Political Economy of Fiscal Policy in the United States: A Mathematical Scenario Analysis of Alternative Taxation, Public Investment and Distributional Reforms

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Research Article

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RESEARCH ARTICLE

Debt Sustainability, Wealth Inequality and the Political Economy of Fiscal Policy in the United States: A Mathematical Scenario Analysis of Alternative Taxation, Public Investment and Distributional Reforms

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Abstract

US federal debt held by the public reached about 100 per cent of GDP in 2026, with a deficit of 6.2 per cent and ten-year Treasury yields above 5 per cent. This paper asks whether the debt ratio can be stabilised without shifting the burden onto lower-middle and middle-income households or weakening education and productive capacity. Hypotheses drawn from Thomas Piketty's fiscal programme are tested against US data: record debt and record wealth are confirmed, the largest fortunes have risen 3.4-fold since 2015, and taxes are progressive on measured income but not on the economic income of the very richest.

A twelve-equation model linking debt dynamics, tax bases, five household classes built from ITEP incidence data, demand, potential output, prices, the current account and wealth is calibrated to 2025 and simulates three regimes over 2026–2035. Under current law, debt reaches 127 per cent of GDP in 2035. Favouring very large fortunes raises it to 128–129 per cent and concentrates gains in the top 1 per cent. Taxing large fortunes and gains at death while relieving payroll taxes on low and middle wages and protecting education and investment lowers debt to 125 per cent and raises real disposable income in the bottom 40 per cent by about 2.5 per cent.

No regime stabilises debt in 2,000 Monte Carlo draws; stabilisation requires a further primary adjustment of 2.5–2.9 per cent of GDP. A sovereign wealth fund does not reduce debt.

Keywords: *Public debt; interest rates; tariffs; wealth inequality; tax incidence; wealth tax; sovereign wealth fund; United States; scenario analysis*

1. Introduction and research problem

The United States entered the autumn of 2026 with federal debt held by the public at about 100 per cent of GDP, close to the record of 106 per cent set in 1946. The deficit for fiscal year 2026 was about USD 2.0

trillion, or 6.2 per cent of GDP, USD 218 billion more than in 2025. Revenue rose by 3 per cent and outlays by 6 per cent, and interest payments alone rose by USD 115 billion, or 11 per cent (Congressional Budget Office [CBO] data reported by American Action Forum, 2026). The Congressional Budget Office's February 2026 baseline already projected deficits of 5.8 per cent of GDP in 2026, rising to 6.7 per cent in 2036, net interest of 4.6 per cent of GDP in 2036 and debt of 120 per cent of GDP (CBO, 2026a). That baseline was prepared before two events that worsened the outlook. On 20 February 2026 the Supreme Court ruled 6–3 that the International Emergency Economic Powers Act (IEEPA) does not authorise tariffs. That removed about half of customs receipts (Penn Wharton Budget Model, 2026), and more than USD 100 billion of refunds had been paid by the end of July (Business Today, 2026). From September, an energy-price shock and a hot labour market pushed consumer-price inflation to 3.7 per cent (Joint Economic Committee, 2026). The Federal Reserve raised its policy rate for the first time since 2023, to 3.75–4.00 per cent (Central Banking, 2026). On 21 October 2026 the ten-year Treasury yielded 5.13 per cent and the thirty-year 5.42 per cent (Board of Governors of the Federal Reserve System, 2026a).

The same period has seen record private wealth and an intense argument about who should bear the cost of government. Household and nonprofit net worth reached USD 195.9 trillion in the second quarter of 2026 (First Trust, 2026). The top 1 per cent held 32.5 per cent of household net worth, the highest share in a series that begins in 1989 (Board of Governors, 2026b). The 2025 reconciliation act (Public Law 119-21) made permanent and extended the 2017 tax cuts, raised the estate-tax exemption to USD 15 million per person and cut Medicaid and nutrition spending. CBO estimates that it adds USD 4.7 trillion to deficits over ten years, including interest and economic effects (CBO, 2026a). The Yale Budget Lab estimated that the act and the 2025 tariffs together would reduce after-tax-and-transfer income in the bottom decile by about 7 per cent and raise it in the top decile by about 1.5 per cent (Yale Budget Lab, 2025).

The fiscal programme that Thomas Piketty has proposed for France (Piketty, 2026) provides the hypotheses of this paper. They are record debt alongside record private wealth, a very fast rise in the largest fortunes, under-funding of higher education, a property tax that ignores mortgage debt, a tax system that turns regressive at the top, and a sovereign wealth fund financed by payments in company shares. These are transposed to the United States and tested against US data in Section 3; none is assumed to hold.

The research problem is whether the United States can stabilise its debt ratio without shifting the adjustment onto lower-middle-income and middle-income households and without weakening education and productive capacity. The paper answers it with the same transparent twelve-equation political-economy model used for France and Germany in companion studies. The model is recalibrated to US data from the Office of Management and Budget (OMB), Treasury, CBO, BEA, BLS, the Federal Reserve and the Institute on Taxation and Economic Policy (ITEP). It simulates three fiscal regimes over 2026–2035. Scenario A continues current law. Scenario B favours very large fortunes and is run with strong and weak investment responses. Scenario C shifts the burden from middle incomes towards very large fortunes and tax expenditures while protecting education and investment.

Three findings stand out. First, current law is not sustainable at current market interest rates. Under every regime the debt ratio rises from about 100 per cent in 2026 to between 125 and 129 per cent in 2035. The cause is a persistent primary deficit of 2–3 per cent of GDP combined with an effective interest rate that rises above nominal growth as debt is refinanced near 4–5 per cent. Second, the composition of adjustment matters much more for distribution than for debt. Scenario C lowers 2035 debt by 2.4 points relative to continuation and raises real disposable income in the bottom 40 per cent by about 2.5 per cent. Scenario B raises debt by 1.1–2.0 points and gives its gains to the top 1 per cent. Third, stabilisation requires a further primary adjustment of about 2.5–2.9 per cent of GDP, and a sovereign wealth fund financed by shares does not reduce gross debt.

Section 2 sets out the theory, Section 3 the historical diagnosis, Section 4 the data, Sections 5–6 the model and scenarios, Sections 7–8 the results and their robustness, and Sections 9–13 interpretation, the sovereign fund, policy, limitations and conclusions.

2. Theoretical framework and literature

2.1 Seven lenses and where they meet

The analysis draws on seven bodies of theory. Each supplies a mechanism that operates under stated conditions, and the model switches each mechanism on or off through identifiable parameters.

Wealth concentration (Piketty). When the return on private wealth exceeds income growth, accumulated and inherited fortunes grow faster than labour incomes and concentration tends to rise (Piketty, 2014). For the United States, Piketty, Saez and Zucman (2018) document a sharp rise in top income and wealth shares since 1980 in distributional national accounts. The Federal Reserve's distributional financial accounts show the top 1 per cent share of net worth at a record in 2026. In the model this enters through group-specific returns in the wealth equation (Equation 10).

New Institutional Economics. Enforcement capacity, valuation rules and transaction costs determine how much of a statutory rate becomes revenue (North, 1990). In the United States, unrealised capital gains are not taxed during life and the basis of assets is stepped up at death. Enforcement by the Internal Revenue Service has also fluctuated with its budget. A wealth tax would face a constitutional argument over direct taxation. The model represents institutional quality by a realisation coefficient applied to static revenue estimates.

Public finance. Tax incidence, progressivity and fiscal multipliers determine who pays and what happens to output. Multipliers are larger for public investment and for transfers to liquidity-constrained households than for tax cuts concentrated at the top (Gechert, 2015; Auerbach & Gorodnichenko, 2012). The debt-dynamics identity links primary balances, interest rates and growth (Blanchard, 2019).

Post-Keynesian and demand-side economics. Households with low incomes consume a larger share of additional income (Kalecki, 1971; Carroll, Slacalek, Tokuoka & White, 2017). High saving at the top can depress demand and interest rates together while household debt rises lower down (Mian, Straub & Sufi, 2021). The United States is a large and relatively closed economy, so less of a demand impulse leaks abroad than in France or Germany.

Neoclassical growth theory. Over a decade, output is constrained by capital, labour, human capital and technology (Solow, 1956; Lucas, 1988). Education and infrastructure act with long lags; the elasticity of output to public capital is positive but modest, around 0.08 in the meta-analysis of Bom and Ligthart (2014). CBO puts potential growth at about 1.8 per cent a year. An investment boom in artificial intelligence could raise it, while lower immigration could reduce it.

Political economy of taxation. Concentrated interests organise more easily than diffuse ones (Olson, 1965), and capture shapes tax expenditures (Stigler, 1971). The carried-interest provision, the deduction for pass-through income and the step-up of basis at death are durable examples. Each is defended by organised beneficiaries while its costs are spread across all taxpayers.

International macroeconomics of the reserve currency. The United States borrows in its own currency, which is also the world's reserve currency, and the Treasury market is the global benchmark of safe assets. Its constraint is not default risk but the term premium investors demand to hold a growing stock of debt, and the risk that persistent deficits combined with inflation weaken confidence in monetary and fiscal policy. Because a large share of the debt held by the public is owned abroad, higher interest also worsens the current account.

2.2 Complementarities and contradictions

The lenses agree that the interest-growth differential, not the level of debt alone, governs sustainability, and that the distribution of the adjustment affects demand. They disagree on three points that shape the scenarios. The neoclassical view predicts that lower taxes on capital raise investment; the post-Keynesian view predicts that investment follows expected demand. The model tests both by running Scenario B with a strong and a weak investment response. The Piketty and public-finance views predict that wealth taxes raise meaningful

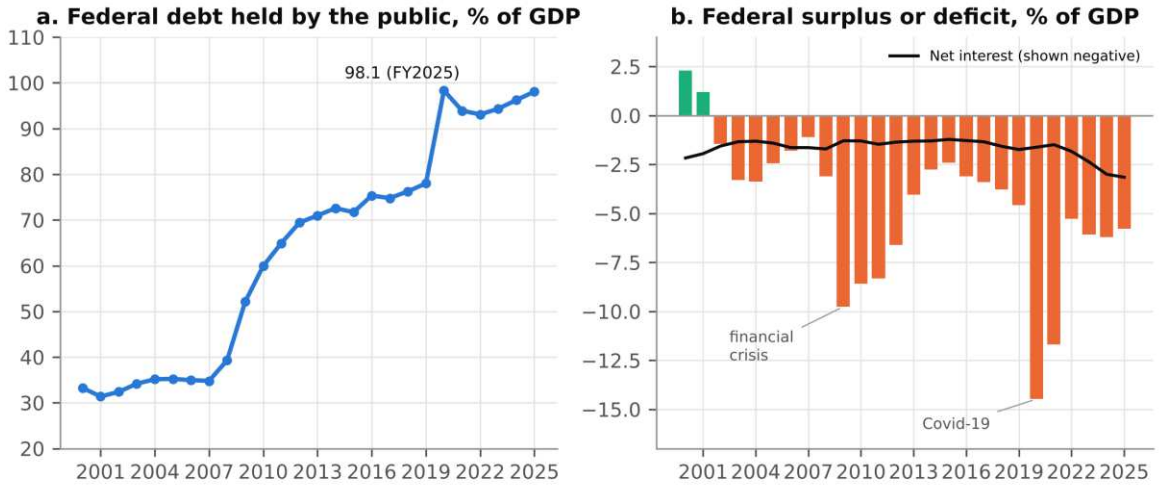
revenue; the institutional view warns that valuation, avoidance and legal challenge erode it (Jakobsen, Jakobsen, Kleven & Zucman, 2020; Advani & Tarrant, 2021). The model samples the realisation rate between 25 and 90 per cent. Finally, the demand view suggests that redistribution partly finances itself. The open-economy view stresses that the Federal Reserve offsets demand shocks that push inflation above target. The model imposes an import leakage of 15 per cent and an inflation equation anchored on the 2 per cent goal.

3. Historical diagnosis and test of the hypotheses

3.1 How the debt was accumulated

Figure 1 shows federal debt held by the public and the federal balance from 2000 to 2025, on fiscal-year data from OMB and Treasury (Federal Reserve Bank of St. Louis [FRED], 2026). Debt fell to 31.4 per cent of GDP in 2001 after four years of surpluses. It rose to 39.3 per cent in 2008, jumped to 59.9 per cent in 2010 after the financial crisis and reached 78.0 per cent in 2019 after the 2017 tax cuts. The pandemic raised it to 98.3 per cent in 2020. After a dip to 93.1 per cent in 2022 it rose again to 98.1 per cent in 2025.

Figure 1. Federal debt held by the public and the federal surplus or deficit, 2000–2025 (observed)



Sources: OMB/Treasury fiscal-year data via FRED (FYPUGDA188S, FYFSGDA188S, FYOIGDA188S). Observed values only.

The pattern is one of ratchets without recoveries. The budget has been in deficit every year since 2002. The deficit exceeded 3 per cent of GDP in 18 of the 24 years from 2002 to 2025, including 6.1–6.2 per cent in 2023–2024 with unemployment near 4 per cent, a level that historically occurred only in recessions. What has changed since 2022 is the cost of debt. Net interest fell to 1.2 per cent of GDP in 2015 despite rising debt. It then rose to 1.8 per cent in 2022, 2.4 per cent in 2023, 3.0 per cent in 2024 and 3.15 per cent in 2025, more than defence spending.

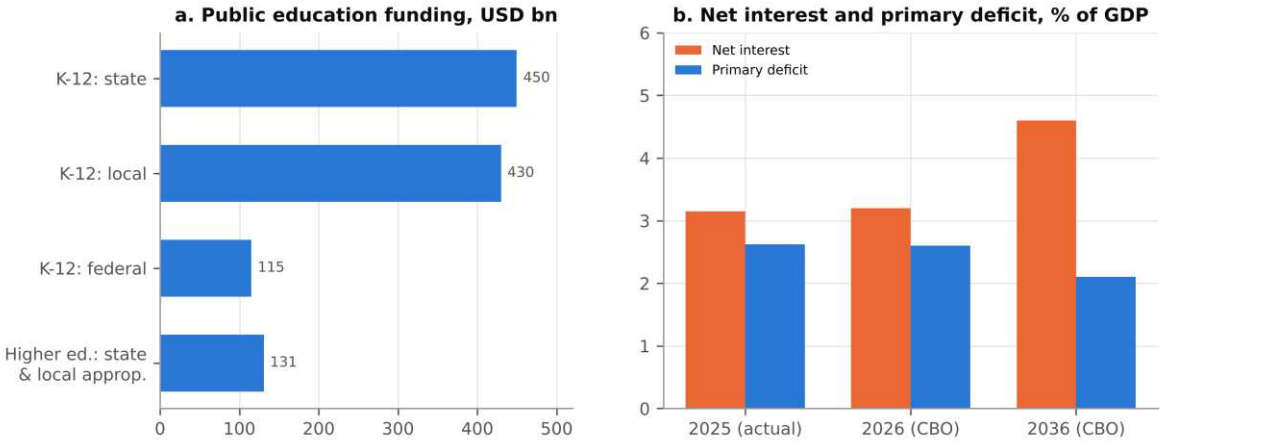
The 2025 accounts illustrate the arithmetic. Applying the debt identity (Equation 1) to the 2024 ratio of 96.2 per cent, nominal growth of about 4.8 per cent and the 5.8 per cent deficit gives 97.6 per cent. The observed 98.1 per cent implies a stock-flow adjustment of about 0.5 points, consistent with federal credit programmes. Of the 5.8-point deficit, 3.15 points were interest and 2.6 points the primary deficit. In 2026, IEEPA tariff refunds lowered net customs receipts by USD 22 billion while interest rose by USD 115 billion. That lifted the deficit to 6.2 per cent of GDP.

The first transposed hypothesis, record debt alongside record private wealth, is confirmed. Debt held by the public is approaching its 1946 peak. Household and nonprofit net worth reached a record USD 195.9 trillion in mid-2026, or 8.28 times disposable personal income (First Trust, 2026). The public sector is borrowing heavily from a private sector that has never been richer.

3.2 Public services and education

Figure 2a shows the financing of public education. In fiscal year 2024, public elementary and secondary schools spent USD 983.7 billion, or USD 17,619 per pupil, a record (US Census Bureau, 2026). Their revenue came 45.2 per cent from states, 43.2 per cent from local governments and only 11.6 per cent from the federal government, whose contribution fell by 4.4 per cent. State and local appropriations for public higher education reached USD 130.7 billion in fiscal year 2025, the highest in the series (State Higher Education Executive Officers Association [SHEEO], 2026).

Figure 2. Public education funding by source and the federal interest burden



Sources: (a) K-12 revenue FY2024 (USD 994.9bn; state 45.2%, local 43.2%, federal 11.6%), US Census Bureau (2026); higher-education appropriations FY2025, SHEEO. (b) FY2025 actual (FRED); 2026 and 2036: CBO (2026) February baseline.

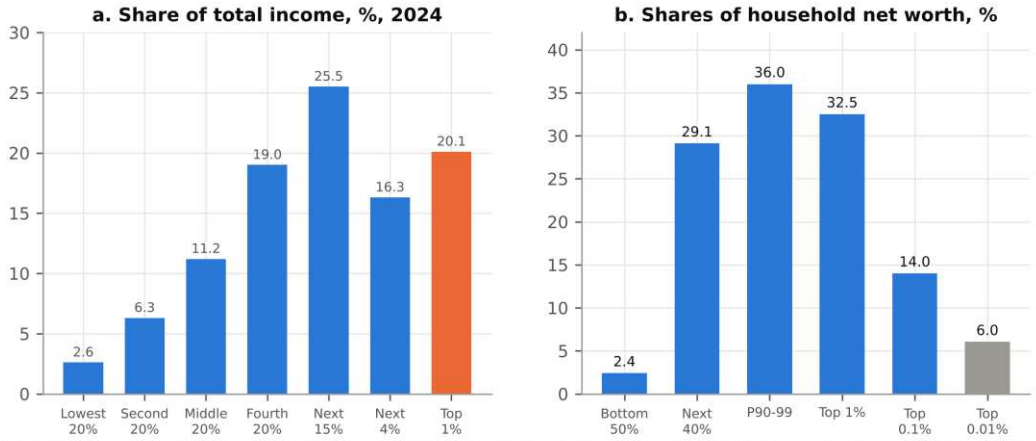
The hypothesis of a large fall in real higher-education spending per student is not supported for the United States over the past decade. In fiscal year 2025, educational appropriations per full-time-equivalent student were USD 12,082. That was 9.2 per cent above their pre-recession level of 2008 and 16.4 per cent above 2019. The first fall since 2012, of 1.0 per cent, occurred because enrolment grew by 3.6 per cent, faster than funding (SHEEO, 2026). The pressure is therefore new, not cumulative. It comes from enrolment growth, from federal cuts to research funding and student aid, and from state budgets that must absorb lower federal transfers for Medicaid and nutrition. Figure 2b shows the scale of the federal constraint: CBO projects net interest to rise from 3.2 to 4.6 per cent of GDP by 2036 while the primary deficit narrows only from 2.6 to 2.1 per cent.

Education affects output with lags of a decade or more (Hanushek & Woessmann, 2015). The model treats education as a long-lag channel with an illustrative elasticity and tests it in sensitivity analysis rather than asserting a causal effect.

3.3 Income and wealth inequality

The distributional base used here is ITEP's micro-simulation of federal, state and local taxes for seven income groups in 2024 (Institute on Taxation and Economic Policy [ITEP], 2024). The lowest fifth received 2.6 per cent of total income, the middle fifth 11.2 per cent, the next 15 per cent of households 25.5 per cent and the top 1 per cent 20.1 per cent (Figure 3a). CBO's measure, which includes in-kind transfers and is not directly comparable, gives the top 1 per cent 18 per cent of income before transfers and taxes in 2022 and 14 per cent after them, double their shares in 1979 (CBO, 2026b).

Figure 3. Shares of total income by group (ITEP, 2024) and shares of household net worth (Federal Reserve, 2024–2026)



Sources: (a) ITEP (2024). (b) Federal Reserve Distributional Financial Accounts via FRED: top 1% Q2 2026, top 0.1% Q4 2024, bottom 50% derived from USD 4.28tn; next 40% and P90-99 approximate; grey = Pareto-interpolated.

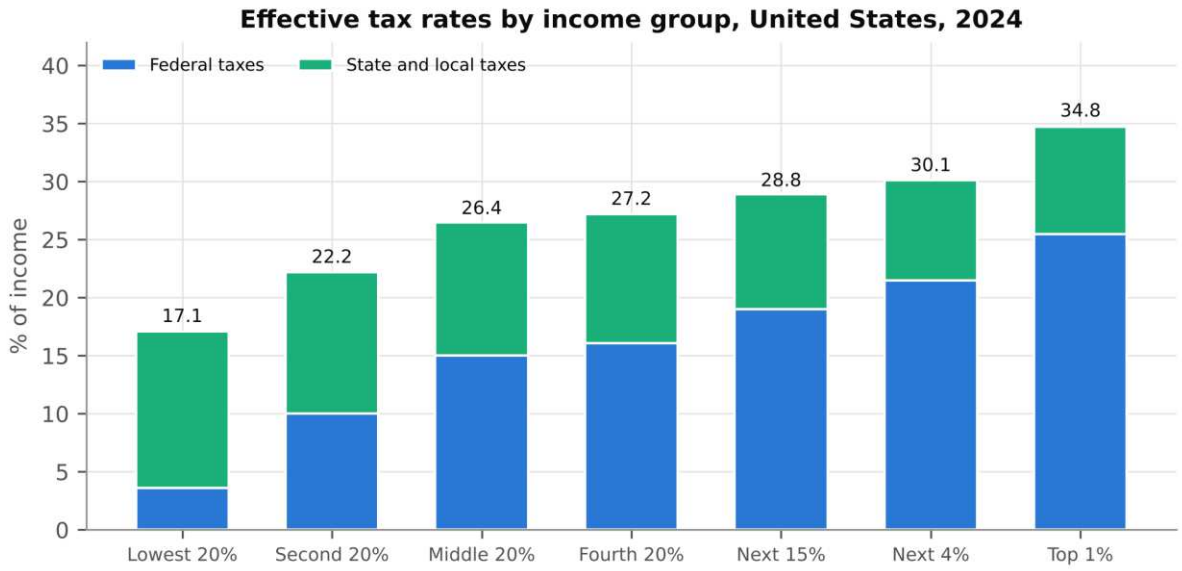
Wealth is far more concentrated. In the Federal Reserve's distributional financial accounts, the top 1 per cent held 32.5 per cent of household net worth in the second quarter of 2026 and the top 0.1 per cent 14.0 per cent at the end of 2024. The bottom half held USD 4.28 trillion, about 2.4 per cent (Board of Governors, 2026b). Anchoring a Pareto tail on the two observed top shares gives a Pareto coefficient of about 1.58 and a top 0.01 per cent share of about 6.0 per cent (Figure 3b). That last figure is an interpolation, not an observation. The Forbes 400, worth USD 8.0 trillion or about 4.4 per cent of household net worth in 2026, indicate an even fatter extreme tail.

The hypothesis that the largest fortunes rose five-fold in ten years is close for the United States but not exact. The combined wealth of the Forbes 400 was USD 2.34 trillion in 2015 (CBS News, 2015), USD 6.6 trillion in 2025 and USD 8.0 trillion in 2026. The minimum fortune needed to make the list was USD 4.4 billion in 2026 (Forbes Argentina, 2026). That is a 3.4-fold rise in eleven years, about 11.8 per cent a year in nominal terms, against nominal GDP growth of about 5 per cent a year. The direction is strongly confirmed; the magnitude is about two-thirds of the claim.

3.4 Is the tax system regressive for the middle class?

Effective tax rates by group are shown in Figure 4 and, aggregated to the five classes used in the model, in Table 1. Federal, state and local taxes together rise from 17.1 per cent of income in the lowest fifth to 26.4 per cent in the middle fifth, 30.1 per cent in the next 4 per cent and 34.8 per cent in the top 1 per cent (ITEP, 2024). Federal taxes are progressive, from 3.6 to 25.5 per cent. State and local taxes are regressive, from 13.5 per cent in the lowest fifth to 9.2 per cent at the top, because they rely on sales, excise and property taxes.

Figure 4. Effective tax rates by income group, United States, 2024



Source: ITEP (2024), Who Pays Taxes in America in 2024 (federal, state and local taxes as % of income).

Table 1. Effective tax rates by class (% of income), with an illustrative decomposition by tax type

Class	Indirect taxes	Income & wealth taxes	Payroll taxes	Total taxes	Taxes excl. payroll
C1 Bottom 20%	12.1	1.4	3.6	17.1	13.5
C2 P20-40	10.4	3.8	8.0	22.2	14.2
C3 P40-80	8.7	10.6	7.6	26.9	19.3
C4 P80-99	5.9	17.7	5.7	29.3	23.6
C5 Top 1%	3.8	29.7	1.3	34.8	33.5

Note: Source: author's aggregation of ITEP (2024) federal, state and local effective tax rates by income group, weighted by income shares. Totals are data; the split into indirect, payroll and income-and-wealth taxes is ILLUSTRATIVE (Table A3).

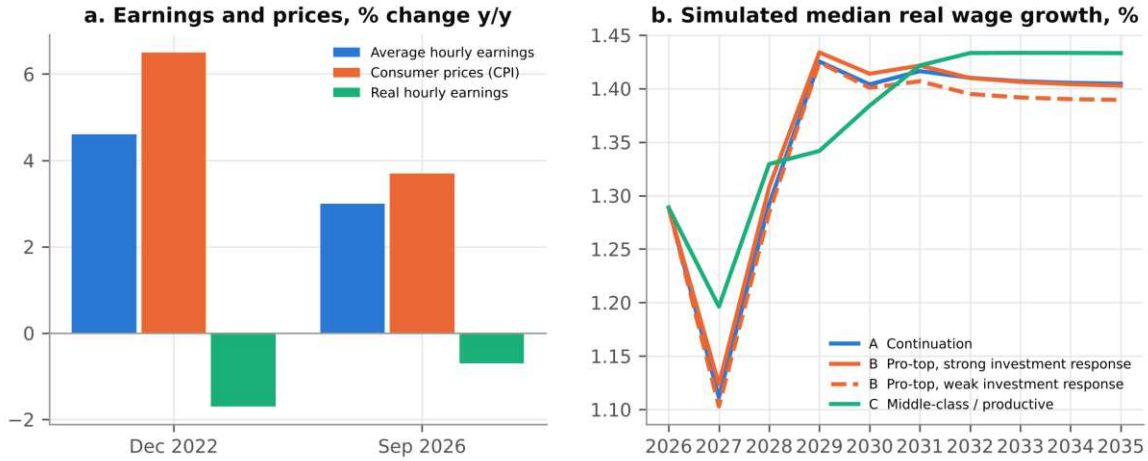
On measured income, therefore, the US system is progressive overall, and the middle is not taxed more heavily than the top. The picture changes when income is measured to include unrealised capital gains, which never enter the tax base if assets are held until death. On that measure the Council of Economic Advisers and OMB estimate that the 400 wealthiest families paid an average federal individual income tax rate of 8.2 per cent over 2010–2018, with a range of 6–12 per cent (Leiserson & Yagan, 2021). The regressivity at the very top is thus a matter of the tax base, not of statutory rates. That is why reforms that tax gains at death or tax wealth directly feature in Scenario C.

The property-tax hypothesis is correct as a matter of design. Local property taxes are levied on assessed market value without deduction of mortgage debt, so an owner with a large mortgage pays the same as an owner with none. Whether that is unfair depends on whether the tax is seen as a charge for local services or as a wealth tax.

3.5 Wages, purchasing power and inflation

Figure 5a compares two inflation episodes. In the twelve months to December 2022, consumer prices rose 6.5 per cent and average hourly earnings 4.6 per cent, a real fall of 1.7 per cent (Bureau of Labor Statistics [BLS], 2023). In September 2026 consumer prices were 3.7 per cent higher than a year earlier, driven by a 20 per cent rise in energy prices, while core inflation was 2.6 per cent (Joint Economic Committee, 2026). Average hourly earnings rose 3.0 per cent, so real earnings fell by about 0.7 per cent. Payrolls rose by only 29,000 and unemployment reached 4.2 per cent (Fox Business, 2026). Energy shocks and tariffs weigh more on lower-income households, whose budgets contain more energy, food and goods; the model therefore applies class-specific price weights (Appendix Table A2).

Figure 5. Earnings and prices, December 2022 and September 2026, and simulated median real wage growth

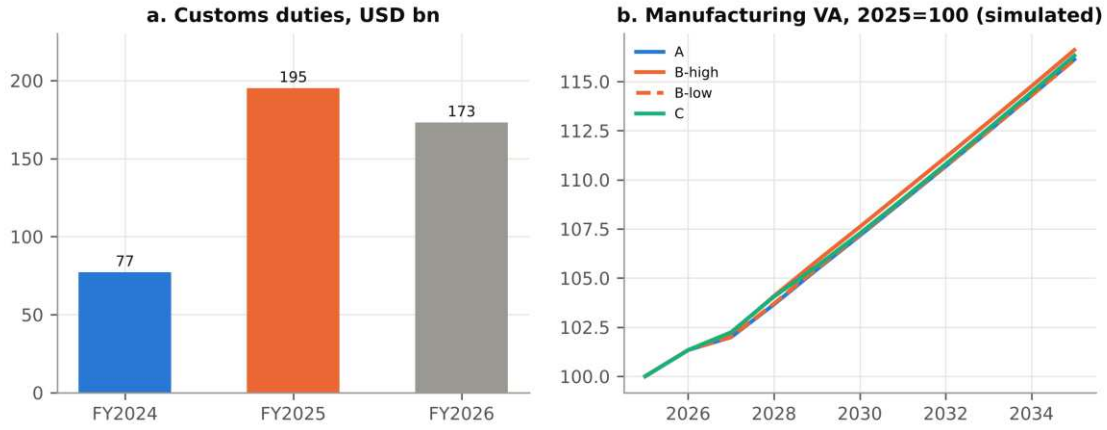


Sources: (a) BLS real earnings, December 2022 (TED); September 2026: CPI 3.7% (JEC), AHE 3.0% (BLS via Fox Business); real = author's calculation. (b) SIMULATED.

3.6 Industry, competitiveness and external balance

Manufacturing accounted for about 9.5 per cent of GDP in 2025, against about 25 per cent in the mid-twentieth century. Real manufacturing output grew by about 1.6 per cent a year from 1998 to 2023, more slowly than the economy, and more than a fifth of manufacturers report labour shortages (Dicandia, 2026). The tariffs of 2025 were justified as a way of rebuilding industry and raising revenue. Customs duties rose from USD 77 billion in fiscal year 2024 to USD 195 billion in 2025 (Committee for a Responsible Federal Budget [CRFB], 2025), then fell in 2026 after the Supreme Court ruling and refunds (Figure 6a). Industrial policy has also taken a new form. In August 2025 the government converted USD 8.9 billion of grants into a 10 per cent equity stake in Intel and took stakes in other strategic firms (Chartered Alternative Investment Analyst Association [CAIA], 2025).

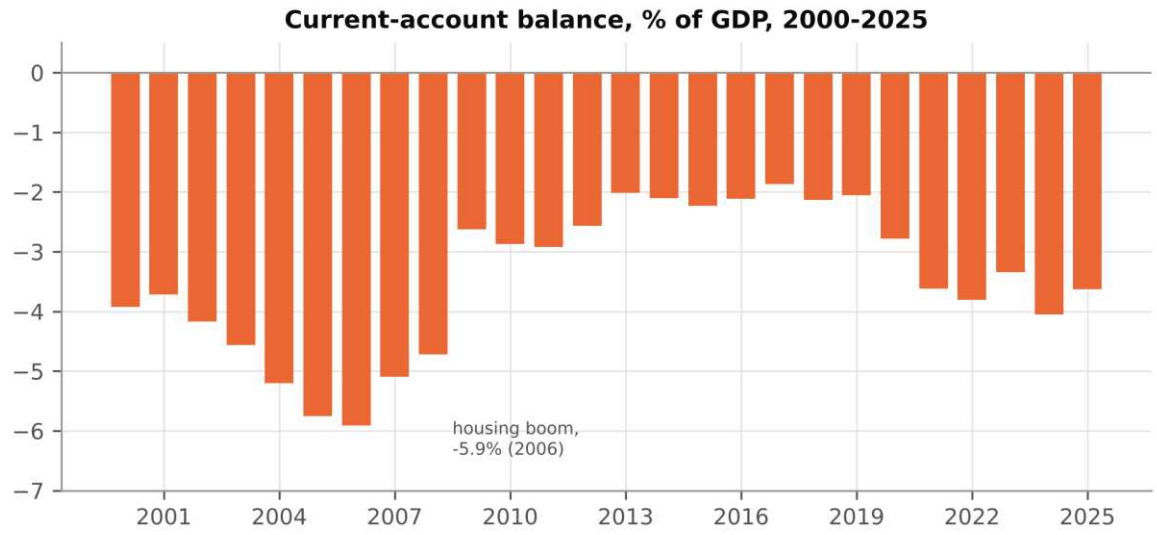
Figure 6. Customs duties, fiscal years 2024–2026, and simulated manufacturing value added



Sources: (a) FY2024-25: CRFB (2025); FY2026 (grey) implied by the reported fall of USD 22bn after IEEPA refunds (CBO via AAF). Manufacturing ~9.5% of GDP (Cleveland Fed, 2026). (b) SIMULATED (illustrative elasticity 0.9).

The current account has been in deficit throughout the period (Figure 7). The deficit peaked at 5.9 per cent of GDP in 2006, narrowed to about 2 per cent in the 2010s and widened again to 3.6–4.0 per cent in 2021–2025. It reflects low national saving, in which the federal deficit is the largest single component. Tariffs did not close it, because the external balance is set by the gap between national saving and investment, not by trade policy alone.

Figure 7. Current-account balance, 2000–2025



Source: IMF balance-of-payments data via FRED (USABCAGDPBP6); latest value may be a projection.

3.7 Summary of the diagnostic

Table 2 summarises the diagnosis, separating symptoms, mechanisms, structural causes and policy levers.

Table 2. Causal diagnostic: symptoms, mechanisms, structural causes and levers

Dimension	Symptom	Immediate mechanism	Structural cause	Policy lever
Public debt	Debt held by public ~100% of GDP; deficit 6.2% (FY2026)	Primary deficit ~2.6-2.8%; refinancing at 4-5%	Deficits in every year since 2002; tax cuts; ageing	Medium-term plan; revenue and spending
Interest	Net interest 3.15% of GDP (2025), above defence	Higher rates on a larger stock	Low-rate era over; term premium	Credibility; debt stabilisation
Education & services	Higher-ed funding per FTE −1.0% (FY2025)	Enrolment growth; federal cuts; state budgets	Federal-state cost shifting	Ring-fenced support per student
Inequality	Top 1% holds 32.5% of net worth (record)	Equity returns above growth	Untaxed unrealised gains; step-up at death	Wealth / death-time taxation
Tax incidence	400 richest: 8.2% federal income-tax rate on economic income	Gains taxed only on realisation	Tax base excludes unrealised gains	Broaden base at the top
Real wages	Real earnings −1.7% (2022), −0.7% (Sep 2026)	Energy and tariff inflation	Weak productivity outside tech	Productivity, skills, energy
Trade & industry	Customs USD 195bn (FY2025); IEEPA tariffs struck down	Tariffs as revenue and policy tool	Manufacturing ~9.5% of GDP	Lawful, evaluated trade policy
External balance	CA deficit 3.6-4.0% of GDP	Low national saving	Federal deficit; consumption	Fiscal consolidation

Note: Sources: see Sections 3.1–3.6.

4. Data, definitions and descriptive statistics

The historical dataset (supplementary file *historical_dataset.xlsx*) records each indicator with its definition, unit, period and source; all web sources were accessed on 23 October 2026. Public-finance variables refer to the federal government on a fiscal-year basis (October–September). Debt is federal debt held by the public, the measure used by CBO, which excludes debt held by trust funds; gross general-government debt as defined by the IMF is about 20 points higher. The series for debt, the balance and net interest are OMB and Treasury data obtained from FRED. Their GDP denominator differs slightly from CBO's, which puts debt at about 100 per cent in 2025 against 98.1 per cent here. Projections for 2026–2036 come from CBO's February

2026 baseline (CBO, 2026a). Monthly outturns for fiscal year 2026 come from CBO's Monthly Budget Review as reported by American Action Forum (2026). Market rates are from the Federal Reserve's H.15 release.

The distributional base is the ITEP table for 2024, giving income shares and federal, state and local effective tax rates for seven groups. The split of these rates into indirect, payroll and income-and-wealth taxes, and the composition of income in each group (wages, capital income, transfers), are not published in the table. They are set by labelled illustrative assumptions in the dataset. Shares are scaled to 2025 by nominal GDP and allocated per person. Classes are defined as follows: C1 (bottom 20 per cent), C2 (20th–40th), C3 (40th–80th), C4 (80th–99th), C5 (top 1 per cent). Wealth is modelled on a separate ranking by wealth, using the Federal Reserve's shares and the Pareto interpolation above. Income and wealth inequality are reported separately, and the rich (C4) and the very wealthy (C5) are never merged.

Table 3 lists the main starting values.

Table 3. Main starting values and their sources

Indicator	Value	Unit / year	Source
Federal debt held by the public	98.1	% GDP, FY2025	FRED FYPUGDA188S (CBO ~100)
Federal deficit	5.8 / 6.2	% GDP, FY2025 / FY2026	FRED; American Action Forum (2026)
Net interest	3.15	% GDP, FY2025	FRED FYOIGDA188S
Revenue / outlays	5.4 / 7.4	USD tn, FY2026	American Action Forum (2026)
Customs duties	77 / 195	USD bn, FY2024 / FY2025	CRFB (2025)
IEEPA tariff refunds paid	>100	USD bn, to July 2026	Business Today (2026)
10-year / 30-year Treasury	5.13 / 5.42	%, 21 Oct 2026	Board of Governors (2026a)
Fed funds target	3.75–4.00	%, from 16 Sep 2026	Central Banking (2026)
Real GDP growth	2.8 / 2.2	%, 2024 / 2025	BEA (2026a)
CPI inflation (core)	3.7 (2.6)	% y/y, Sep 2026	Joint Economic Committee (2026)
Unemployment	4.2	%, Sep 2026	Fox Business (2026)
CBO debt 2026 / 2030 / 2036	101 / 108 / 120	% GDP, Feb 2026 baseline	CBO (2026a); CRFB (2026)
K-12 expenditure	983.7	USD bn, FY2024	US Census Bureau (2026)
Higher-ed appropriations	130.7	USD bn, FY2025	SHEEO (2026)
Household & nonprofit net worth	195.9	USD tn, Q2 2026	First Trust (2026)
Top 1% / top 0.1% / bottom 50% wealth share	32.5 / 14.0 / ~2.4	%, 2026 / 2024 / 2026	Board of Governors (2026b)
Forbes 400 combined wealth	2.34 / 8.0	USD tn, 2015 / 2026	CBS News (2015); Forbes Argentina (2026)
Top 1% total effective tax rate	34.8	% of income, 2024	ITEP (2024)
Manufacturing share of GDP	~9.5	%, 2025	Dicandia (2026)
Current account	−3.6	% GDP, 2025	FRED USABCAGDPBP6

Note: Access date 23 October 2026. Full dataset with sources in historical_dataset.xlsx.

Full annual series for real wages, productivity, industrial production and business investment over 2000–2025 could not be retrieved from the statistical databases for this study. The figures show only the sourced points, and projections are always labelled as simulated. Some recent figures come from reports of official releases rather than the releases themselves; they are identified in the references.

5. The mathematical model

The model is a small annual semi-structural system with twelve blocks, identical in structure to the French and German models and recalibrated to the United States. All flows are in per cent of GDP unless stated; t

runs from 2026 to 2035 with fiscal year 2025 as the observed base. Parameters, their sources and the ranges used in the Monte Carlo analysis are listed in Appendix Table A2. The full code is in the supplementary file *model.py*.

5.1 Public debt dynamics (Equation 1)

$$d_t = \frac{1+r_t}{1+g_t}\, d_{t-1} - p_t + s_t \tag{1}$$

where d is federal debt held by the public, r the effective nominal interest rate on the debt, g nominal GDP growth, p the primary surplus and s stock-flow adjustments, which include federal credit programmes such as student loans. The debt ratio rises if the primary balance falls short of the debt-stabilising level d(r − g)/(1 + g). The effective rate adjusts gradually towards the market rate because only part of the debt is refinanced each year:

$$r_t = (1-\theta)\, r_{t-1} + \theta\, i_t, \qquad i_t = i_t^{B} + s_0 + s_d \max(d_{t-1} - 100, 0) + s_f \max(f_{t-1} - 3, 0) \tag{1a}$$

with θ = 0.25, reflecting a share of Treasury bills of about one-fifth of marketable debt and an average maturity of about six years. Here i is the average yield on new federal borrowing, a blend of bill and coupon rates, and i^B its risk-free component. The two slope terms represent a rise in the term premium when debt exceeds 100 per cent of GDP and deficits exceed 3 per cent. They are illustrative (0.015 per point of debt and 0.04 per point of deficit), within the range of empirical estimates, and sampled widely in the Monte Carlo analysis. A share of 9 per cent of inflation-protected securities passes inflation surprises into r.

5.2 Revenue (Equation 2) and expenditure (Equation 3)

$$\frac{R_t}{Y_t} = \sum_j \rho_j\, \tau_{j,t}\, b_{j,t} + c_t + \epsilon_R\, x_t \tag{2}$$

Revenue is the sum of effective rates on tax bases ($b_j = B_j/Y$) plus other revenue, with a cyclical semi-elasticity on the output gap x. The realisation coefficient ρ_j converts static yields into expected yields after behavioural responses, avoidance and compliance; it is the key parameter for wealth taxation. To avoid double counting, bases follow three categories: indirect taxes, payroll taxes and taxes on income and wealth. Expenditure is decomposed into interest, an exogenous policy path and other primary spending by function:

$$G_t = I_t^{int} + N_t + \sum_k G_{k,t} \tag{3}$$

where N captures policy changes already decided or imposed by the courts. These are the loss of IEEPA tariff revenue and the refunds, the phasing of the 2025 reconciliation act, and the drift of revenue and ageing-related spending in CBO's baseline. Education spending of all governments and government investment are tracked explicitly in per cent of GDP and in real terms per student. The model never assumes that spending equals service quality; quality enters only through the human-capital equation with an uncertain effectiveness parameter.

5.3 Household income, consumption and saving (Equations 4 and 5)

$$Y_{i,t}^{d} = Y_{i,t}^{L} + Y_{i,t}^{K} - T_{i,t} + TR_{i,t}, \qquad Y_{i,t}^{real} = \frac{Y_{i,t}^{d}}{P_{i,t}} \tag{4}$$

Cash disposable income of class i equals labour income plus capital income, minus direct taxes and payroll taxes, plus cash transfers. The imputed value of public services V, set at 14 per cent of GDP and allocated per person, is not added to spendable income. It is reported separately in the extended living standard, $Y^d + V$ − indirect taxes. Class price indices P_i weight energy and tariff inflation by class-specific exposure. Consumption and saving are

$$C_{i,t} = c_i\, Y^d_{i,t}, \qquad \Delta C_t = \sum_i c^m_i\, \Delta Y^d_{i,t} \tag{5}$$

with average propensities c_i from 1.00 in C1 to 0.60 in C5, consistent with a personal saving rate of about 4–5 per cent. Marginal propensities c^m_i run from 0.90 in C1 to 0.25 in C5, illustrative values within the range of Carroll et al. (2017).

5.4 Output, demand and investment (Equations 6 and 7)

Potential output follows a Cobb-Douglas function in growth form:

$$Q_t = A_t K_t^{\alpha} L_t^{\beta} H_t^{\gamma} \;\Rightarrow\; g^*_t = g_A + \alpha \hat{K}_t + \beta \hat{L}_t + \gamma \hat{H}_t + \theta_G \hat{K}^G_t \tag{6}$$

where hats denote growth rates and K^G is public capital with elasticity $\theta^G = 0.08$ (Bom & Ligthart, 2014). Baseline potential growth is 1.8 per cent, in line with CBO. Actual output deviates from potential through an output gap driven by fiscal impulses:

$$x_t = \rho_x\, x_{t-1} - m_c\, \Delta cons_t - m_N\, \Delta N_t - \sum_k m_k\, \Delta F_{k,t} + e_t, \qquad g^{real}_t = g^*_t + x_t - x_{t-1} \tag{7}$$

Each measure k has its own multiplier m_k. For distributive measures the multiplier is derived from incidence and marginal propensities, $m_k = \kappa\, \Sigma_i\, w_{ik}\, c^m_i$, where $\kappa = 1.0$ is the domestic multiplier after a 15 per cent import leakage. The multiplier of broad consolidation is 0.6, of public investment 0.9 and of the exogenous policy path 0.5. The term e includes an investment boom in artificial intelligence in 2026 (+0.2 points) and the drag from the energy shock, tariffs and monetary tightening in 2027 (−0.25 points). Productive business investment follows the general framework

$$I_t = I_0 + \eta\, E^{demand}_t + \theta\, \Pi_t - \phi\, r_t - \psi\, T^{prod}_t \tag{7a}$$

implemented in reduced form. Investment responds to the output gap and to the yield on federal borrowing, and in Scenario B to the tax cut through a response share (strong: 50 per cent of the static cost; weak: 10 per cent). Only a fraction of induced investment (80 per cent strong, 30 per cent weak) adds to productive capacity; the rest bids up existing assets, which raises top-end capital income and wealth instead.

5.5 Prices, labour market and external balance (Equations 8 and 9)

$$\pi_t = \pi^e + b\, x_t + M_t + W_t \tag{8}$$

Inflation equals anchored expectations (2.0 per cent) plus a flat Phillips-curve term ($b = 0.25$), an energy and tariff term M (1.2 points in 2026, 0.5 in 2027) and a unit-labour-cost term W that falls slightly when payroll taxes on low wages are cut. Unemployment follows Okun's law, $u_t = u^*_t - 0.5\, x_t$. The current account is

$$CA_t = CA^0_t - \mu\,(x_t - x^A_t) - \nu\,(INT_t - INT^A_t) + \omega\, \hat{Y}^*_t \tag{9}$$

relative to a baseline CA^0 of about −3.5 per cent of GDP. Higher demand raises imports ($\mu = 0.15$), higher interest paid to foreign holders worsens primary income ($\nu = 0.30$) and higher potential output improves competitiveness.

5.6 Wealth accumulation (Equation 10)

$$W_{g,t} = W_{g,t-1}\,(1 + r_{g,t}) + S_{g,t} - T^W_{g,t} \tag{10}$$

for six wealth groups (bottom 50 per cent, next 40 per cent, P90–99, P99–99.9, P99.9–99.99, top 0.01 per cent). Nominal returns rise with wealth from 3.5 to 6.0 per cent. These are illustrative values that reflect the weight of housing and deposits in the middle and of equity and private business at the top, and they lie far

below the 11.8 per cent annual growth of the Forbes 400 since 2015. Household net saving of 4 per cent of GDP is allocated mostly to the upper-middle groups. Wealth-related taxes T^W reduce the taxed group's wealth and raise public net worth by the same amount, so a fall in the top share does not imply a fall in national wealth.

5.7 Human and public capital (Equation 11) and inequality (Equation 12)

$$H_{t+1} = (1-\delta_H)H_t + \lambda E^{edu}_{t-L}, \qquad K^G_{t+1} = (1-\delta_G)K^G_t + \eta I^G_t \tag{11}$$

Education spending raises human capital with a four-year lag and illustrative effectiveness λ; public investment becomes public capital with efficiency η = 0.7. Inequality is measured by the Gini coefficient from grouped data,

$$G = 1 - \sum_k (F_k - F_{k-1})(L_k + L_{k-1}) \tag{12}$$

over seven income groups. Calibrated to 2025, the grouped Gini is 0.568 for gross income, 0.535 for cash disposable income and 0.435 for the extended living standard. The disposable-income value is higher than official estimates, because it is computed per person over tax units without equivalisation and because the composition of income is assumed. The level is therefore not comparable with official Gini coefficients, and the paper uses changes between scenarios, not levels. Lorenz curves are shown in Figure 13.

6. Scenario construction and calibration

6.1 Common baseline and external assumptions

All scenarios share the same external path and the same exogenous policy path. The risk-free component of the yield on new borrowing is 4.25 per cent in 2026, 4.45 per cent in 2027, 4.25 per cent in 2028, 4.0 per cent in 2029 and 3.85 per cent thereafter. Adding the term premium, the average yield on new borrowing is about 4.4 per cent in 2026 and 4.1–4.4 per cent later, below the ten-year rate of 5.1 per cent because bills are issued at money-market rates. The exogenous policy path lowers the primary balance by 0.3 per cent of GDP in 2026 relative to 2025, reflecting tariff refunds and lower customs receipts. It then improves it gradually to +0.35 per cent by 2035, following the revenue drift in CBO's baseline net of ageing pressures. Stock-flow adjustments are 0.2 points a year.

The baseline reproduces the 2026 anchors closely (Table 4). Debt is 100.1 per cent of GDP (CBO 101), the deficit 6.2 per cent (outturn 6.2), net interest 3.4 per cent (CBO about 3.2–3.3, plus the reported rise of 11 per cent), growth 2.2 per cent (CBO 2.2; BEA 2.5 and 2.2 per cent annualised in the first two quarters), inflation 3.3 per cent and unemployment 4.1 per cent. By 2030 debt is 112.5 per cent against CBO's 108 per cent, and by 2035 127.4 per cent against about 118 per cent. The difference reflects three assumptions that postdate CBO's baseline: the loss of IEEPA tariff revenue, interest rates closer to current market levels, and continuing stock-flow adjustments.

Table 4. Validation of the baseline against observed data and official projections

Check	Model	Observed / official benchmark
Debt held by the public 2026, % GDP	100.11	CBO Feb 2026 baseline 101
Deficit FY2026, % GDP	6.16	Outturn 6.2 (CBO Monthly Budget Review, Sept 2026)
Net interest FY2026, % GDP	3.37	CBO baseline ~3.2-3.3; outlays for interest +11% in FY2026
Debt held by the public 2030, % GDP	112.50	CBO Feb 2026 baseline 108
Debt held by the public 2035, % GDP	127.38	CBO Feb 2026 baseline ~118 (120 in 2036)
Real growth 2026, %	2.15	BEA Q1 2.5 / Q2 2.2 (annualised); CBO 2.2
Inflation 2026, %	3.29	CPI 3.7% y/y Sept 2026 (core 2.6)
Unemployment 2026, %	4.12	4.2 in Sept 2026; CBO 4.6

Check	Model	Observed / official benchmark
Yield on new borrowing 2026, %	4.36	10-year 5.13, 2-year 4.81, fed funds 3.88 on 21/10/2026
Identity check FY2025: implied stock-flow adjustment, % GDP	0.48	d2025 - d2024/(1+g) - deficit; nominal growth ~4.8% (APPROXIMATE)

Note: Model = Scenario A central run. The identity check applies Equation 1 to observed FY2024–FY2025 data.

6.2 Scenario A: continuation of current policies

Scenario A is current law. The 2025 reconciliation act remains in force, including the permanent extension of the 2017 individual tax cuts, the USD 15 million estate-tax exemption and the cuts to Medicaid and nutrition assistance. Tariffs remain at their post-ruling level under other statutes. No new consolidation is enacted. Education's share of GDP drifts down by 0.015 points a year as states absorb lower federal support, and government investment stays at about 3.5 per cent of GDP.

6.3 Scenario B: reforms favouring very large fortunes

Scenario B adds, from 2027 and fully by 2028, a package with a static cost of 0.5 per cent of GDP, about USD 150 billion a year. It lowers the top individual and capital-gains rates, repeals the estate tax and cuts the corporate rate to 15 per cent for domestic production. Eighty per cent of the gain accrues to the top 1 per cent and 12 per cent to the 80th–99th percentiles. Forty per cent of the package concerns capital and estate taxation (capital account) and 60 per cent current taxation. Half of the cost is financed by cuts to non-defence discretionary programmes (education 0.07, government investment 0.08 and other services 0.10 per cent of GDP); the rest is borrowed. Behavioural feedback recovers 25 per cent of the cost when investment responds strongly and 10 per cent when it responds weakly. Tax cuts for companies in general are not labelled as benefits to billionaires; the package is defined by its incidence.

6.4 Scenario C: reforms favouring lower-middle and middle incomes

Scenario C raises revenue from four sources, phased in from 2027:

- **Wealth tax.** A 2 per cent annual tax on net wealth above USD 50 million, as in the proposal costed by Saez and Zucman (2021). Its static yield of 0.80 per cent of GDP corresponds to USD 219 billion in 2023, already net of 15 per cent avoidance. A further realisation rate of 50 per cent for legal and valuation risk gives about 0.40 per cent of GDP, roughly USD 120 billion a year.
- **Gains at death.** Taxation of unrealised gains at death above USD 5 million, ending the step-up of basis for large estates: 0.15 per cent of GDP, realised at 80 per cent.
- **Tax expenditures.** A review of tax expenditures, including carried interest and the pass-through deduction at high incomes, yielding 0.19 per cent of GDP by 2029.
- **Compliance.** Stronger enforcement by the Internal Revenue Service, 0.10 per cent of GDP.

It uses the proceeds for:

- **Payroll-tax relief.** A refundable payroll-tax credit for low and middle wages, 0.35 per cent of GDP, 95 per cent of which reaches C1–C3.
- **Education and training.** 0.15 per cent of GDP, half of it to higher education.
- **Productive public investment.** 0.10 per cent of GDP.

Net of these uses, about 0.2 per cent of GDP reduces the deficit relative to A. The financing plan is explicit: higher spending and relief are paid for by identified revenue, and nothing in the scenario assumes that growth will close the gap.

6.5 Calibration hierarchy

Parameters follow a strict hierarchy. Observed starting values come from OMB, Treasury, CBO, BEA, BLS and the Federal Reserve. Literature values are used for multipliers, the public-capital elasticity, Okun's coefficient and the Phillips-curve slope. Transparent illustrative values, labelled as such, are used for wealth returns, the composition of income and taxes by group, the effectiveness of education spending, the term-

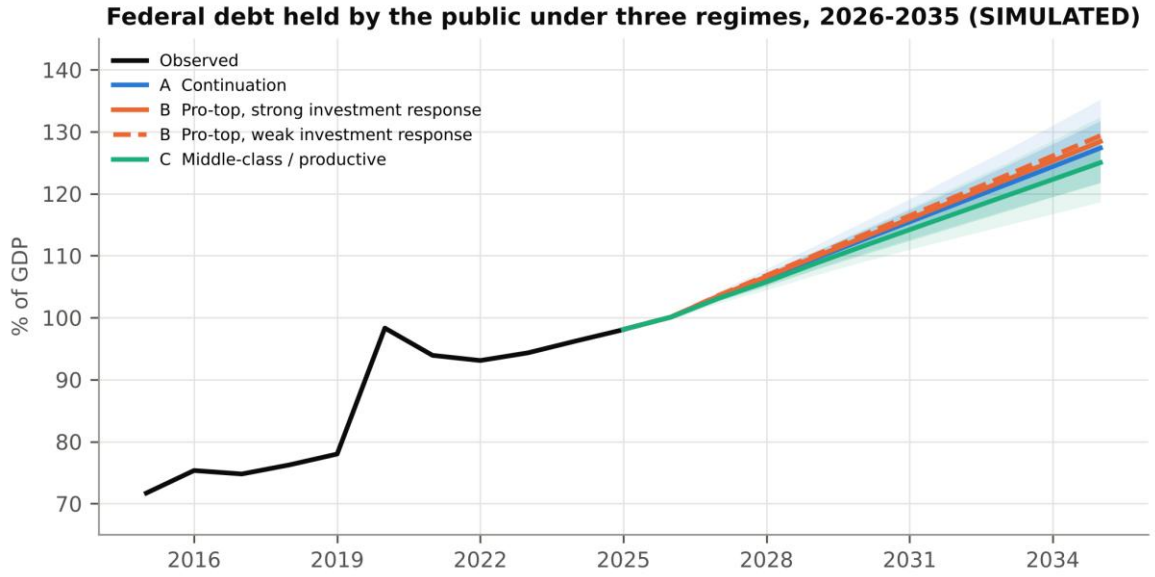
premium slopes and the investment response in Scenario B. No parameter was estimated econometrically from US time series in this study; this is a limitation, addressed by the Monte Carlo analysis.

7. Quantitative results

7.1 Debt, deficits and debt service

Figure 8 and Table 5 report the central simulations. Under continuation (A), debt held by the public rises from 100.1 per cent of GDP in 2026 to 112.5 per cent in 2030 and 127.4 per cent in 2035. The primary deficit narrows only from 2.8 to 2.3 per cent of GDP, while net interest rises from 3.4 to 5.1 per cent of GDP, so the overall deficit widens from 6.2 to 7.4 per cent. Interest absorbs 29.5 per cent of federal revenue in 2035, up from 19.3 per cent in 2026. The effective interest rate rises from 3.6 per cent in 2026 to 4.25 per cent in 2035 while nominal growth settles near 3.8 per cent, so r − g turns positive from 2027 and reaches 0.4 points by 2035.

Figure 8. Federal debt held by the public under the three regimes, 2026–2035



Lines: central simulations. Shaded bands: Monte Carlo 25-75 and 10-90 percentile ranges (2,000 draws) for A and C. Observed 2015-2025: OMB/Treasury via FRED. Conditional counterfactuals, not forecasts.

Table 5. Three-scenario comparison, 2026, 2030 and 2035 (simulated)

Indicator	Unit	Year	A	B-high	B-low	C	C − A
Federal debt held by the public	% GDP	2026	100.1	100.1	100.1	100.1	0.0
		2030	112.5	112.9	113.3	111.5	-1.0
		2035	127.4	128.4	129.4	125.0	-2.4
Overall balance	% GDP	2026	-6.16	-6.16	-6.16	-6.16	0.00
		2030	-6.82	-6.96	-7.05	-6.55	0.27
		2035	-7.38	-7.56	-7.68	-7.05	0.33
Primary balance	% GDP	2026	-2.80	-2.80	-2.80	-2.80	0.00
		2030	-2.55	-2.68	-2.75	-2.33	0.23
		2035	-2.29	-2.41	-2.49	-2.08	0.21
Interest expenditure	% GDP	2026	3.37	3.37	3.37	3.37	0.00
		2030	4.27	4.28	4.30	4.23	-0.04
		2035	5.09	5.15	5.20	4.97	-0.12
Interest expenditure	% of revenue	2026	19.3	19.3	19.3	19.3	0.0
		2030	24.7	25.4	25.6	23.8	-0.9

Indicator	Unit	Year	A	B-high	B-low	C	C − A
		2035	29.5	30.5	30.9	28.0	-1.5
Average yield on new federal borrowing	%	2026	4.36	4.36	4.36	4.36	0.00
		2030	4.14	4.15	4.16	4.12	-0.02
		2035	4.39	4.41	4.42	4.34	-0.04
Real GDP growth	%	2026	2.15	2.15	2.15	2.15	0.00
		2030	1.79	1.80	1.79	1.75	-0.04
		2035	1.80	1.80	1.79	1.83	0.03
Cumulative real GDP since 2025	%	2026	2.2	2.2	2.2	2.2	0.0
		2030	9.2	9.3	9.2	9.3	0.1
		2035	19.5	19.5	19.4	19.7	0.2
Revenue	% GDP	2026	17.5	17.5	17.5	17.5	0.0
		2030	17.3	16.9	16.8	17.7	0.5
		2035	17.3	16.9	16.8	17.7	0.5
Education spending	% GDP	2026	4.49	4.49	4.49	4.49	0.00
		2030	4.42	4.36	4.36	4.58	0.15
		2035	4.35	4.28	4.28	4.50	0.15
Higher-education spending per student	index 2025=100	2026	100.7	100.7	100.7	100.7	0.0
		2030	101.8	97.0	97.0	112.3	10.5
		2035	103.8	98.8	98.7	114.8	11.0
Public investment	% GDP	2026	3.50	3.50	3.50	3.50	0.00
		2030	3.50	3.42	3.42	3.60	0.10
		2035	3.50	3.42	3.42	3.60	0.10
Business investment	% GDP	2026	14.10	14.10	14.10	14.10	0.00
		2030	14.00	14.25	14.04	14.01	0.02
		2035	13.97	14.22	14.02	13.98	0.01
Median real wage growth	%	2026	1.29	1.29	1.29	1.29	0.00
		2030	1.40	1.41	1.40	1.38	-0.02
		2035	1.40	1.40	1.39	1.43	0.03
Consumer-price inflation	%	2026	3.29	3.29	3.29	3.29	0.00
		2030	1.98	1.98	1.98	1.99	0.01
		2035	1.99	1.99	1.99	1.99	0.00
Unemployment rate	%	2026	4.12	4.12	4.12	4.12	0.00
		2030	4.35	4.34	4.35	4.32	-0.03
		2035	4.33	4.33	4.33	4.32	-0.00
Current account	% GDP	2026	-3.80	-3.80	-3.80	-3.80	0.00
		2030	-3.50	-3.50	-3.51	-3.49	0.01
		2035	-3.50	-3.51	-3.55	-3.43	0.07
Gini, real disposable income	index	2026	0.535	0.535	0.535	0.535	0.000
		2030	0.536	0.538	0.539	0.529	-0.007
		2035	0.536	0.540	0.542	0.529	-0.007
Top-1% net wealth share	%	2026	32.7	32.7	32.7	32.7	0.0
		2030	33.4	33.7	33.9	33.2	-0.2
		2035	34.2	35.0	35.5	33.8	-0.4
Top-0.01% net wealth share	%	2026	6.1	6.1	6.1	6.1	0.0
		2030	6.3	6.4	6.4	6.1	-0.1

Indicator	Unit	Year	A	B-high	B-low	C	C − A
		2035	6.5	6.8	6.9	6.2	-0.3
Real disp. income/person, C1 Bottom 20%	USD 2025	2026	8,680	8,680	8,680	8,680	0
		2030	9,210	9,226	9,221	9,438	227
		2035	10,076	10,093	10,081	10,331	255
Real disp. income/person, C2 P20-40	USD 2025	2026	19,549	19,549	19,549	19,549	0
		2030	20,751	20,784	20,771	21,290	539
		2035	22,702	22,737	22,710	23,306	604
Real disp. income/person, C3 P40-80	USD 2025	2026	43,516	43,516	43,516	43,516	0
		2030	46,235	46,287	46,254	46,518	283
		2035	50,580	50,636	50,569	50,922	342
Real disp. income/person, C4 P80-99	USD 2025	2026	118,872	118,872	118,872	118,872	0
		2030	126,486	126,691	126,618	126,139	-348
		2035	138,364	138,585	138,417	138,085	-279
Real disp. income/person, C5 Top 1%	USD 2025	2026	980,399	980,399	980,399	980,399	0
		2030	1,045,345	1,080,134	1,092,805	998,226	-47,120
		2035	1,143,397	1,204,233	1,230,931	1,092,779	-50,618

Note: SIMULATED conditional counterfactuals. Full table with B−A differences and all indicators: scenario_table_2026_2030_2035.csv.

Scenario B raises 2035 debt to 128.4 per cent with a strong investment response and 129.4 per cent with a weak one, 1.1 and 2.0 points above A. Scenario C lowers it to 125.0 per cent, 2.4 points below A, with an overall deficit of 7.1 per cent and net interest of 5.0 per cent of GDP in 2035. No scenario stabilises the ratio. The debt-stabilising primary balance in 2035 is a surplus of 0.5 per cent of GDP in A and 0.4 per cent in C. The shortfall is 2.8 points in A and 2.5 points in C (Appendix Table A5).

What would stabilisation require? A further broad consolidation, phased in over 2027–2030, is needed for the debt ratio to stop rising by 2032–2035. It amounts to 2.7 per cent of GDP (about USD 830 billion a year at 2025 prices) on top of A, 2.8–2.9 per cent on top of B and 2.5 per cent (USD 750 billion) on top of C. The debt ratio then peaks at about 107–108 per cent in 2034. The cumulative output cost over 2027–2035 is 3.2 per cent of a year's GDP in A and 2.9 per cent in C. The composition of C reduces the additional effort required by about a tenth.

7.2 Growth, employment, inflation and industry

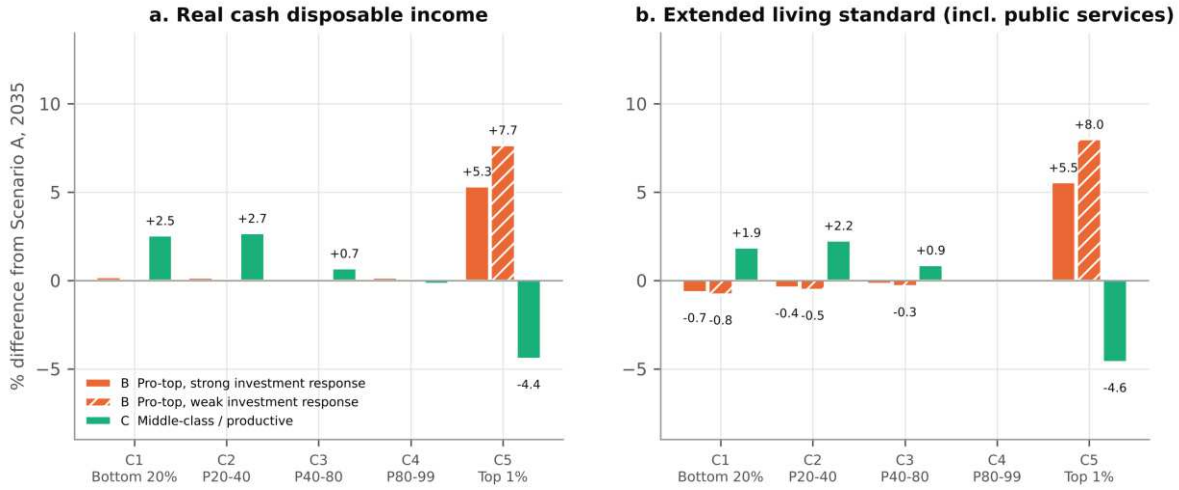
The macroeconomic differences between scenarios are small, which is itself a finding. Cumulative real growth over 2025–2035 is 19.5 per cent in A and B with a strong response, 19.4 per cent in B with a weak response and 19.7 per cent in C. Scenario B with a strong response raises business investment by about 0.25 per cent of GDP. But because part of the tax cut is financed by cutting public investment and education, the net gain in potential output is negligible within ten years. Scenario C's growth gain comes from public capital and from the higher multiplier of payroll-tax relief compared with the multiplier of the taxes that finance it. Unemployment rises to about 4.5 per cent in 2027 and settles near 4.3 per cent; inflation falls from 3.3 per cent in 2026 to about 2.0 per cent from 2029. Simulated manufacturing value added grows by about 16 per cent over the decade in all regimes (Figure 6b), close to its historical trend. The current account improves from −3.8 to about −3.5 per cent of GDP in all regimes, slightly more in C (−3.4) than in B with a weak response (−3.6).

7.3 Households: disposable income, consumption and saving

Figure 9 compares real income by class in 2035. In cash disposable income, Scenario C raises real income per person relative to A by 2.5 per cent in the bottom 20 per cent, 2.7 per cent in the 20th–40th percentiles and 0.7 per cent in the 40th–80th. It lowers income by 0.2 per cent in the 80th–99th and by 4.4 per cent in the

top 1 per cent. Scenario B raises top-1 per cent income by 5.3 per cent (strong response) to 7.7 per cent (weak response) and leaves the other classes within 0.2 per cent of A. With the value of public services included, B lowers the extended living standard of C1–C3 by 0.2–0.8 per cent because of service cuts, while C raises it by 0.9–2.3 per cent. These effects are robust to alternative class boundaries (Appendix Table A6).

Figure 9. Real disposable income and extended living standard by class in 2035, difference from Scenario A



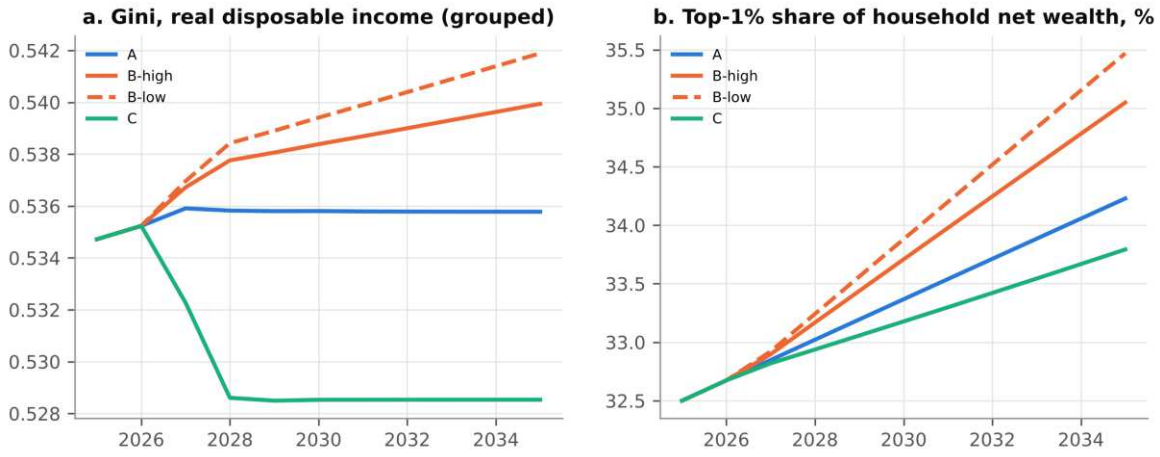
SIMULATED. (a) Cash disposable income deflated by class-specific consumer prices; (b) adds the imputed value of public services (not spendable). Author's model.

The gains in C are larger than in the French and German studies because US payroll taxes are levied from the first dollar of wages and are the largest federal tax for most low- and middle-income workers, so a refundable credit is well targeted. The wealth tax applies to about 100,000 households above USD 50 million (Saez & Zucman, 2021), out of some 3.4 million people in the top percentile, so the average loss of 4.4 per cent is concentrated at the very top. Saving per person in the top 1 per cent falls from about USD 457,000 in A to USD 437,000 in C (2025 prices) and rises to USD 482,000–492,000 in B. Aggregate consumption barely moves because the marginal propensity to consume at the top is low.

7.4 Inequality and wealth concentration

The grouped Gini of real disposable income falls from 0.535 to 0.529 in C by 2035, stays at 0.536 in A and rises to 0.540–0.542 in B (Figure 10a). The Gini of the extended living standard is 0.428 in C in 2035, against 0.435 in A and 0.441–0.443 in B. The top-1 per cent share of disposable income is 17.0 per cent in C, 17.7 per cent in A and 18.5–18.8 per cent in B.

Figure 10. Gini coefficient of real disposable income and top-1% wealth share under the three regimes



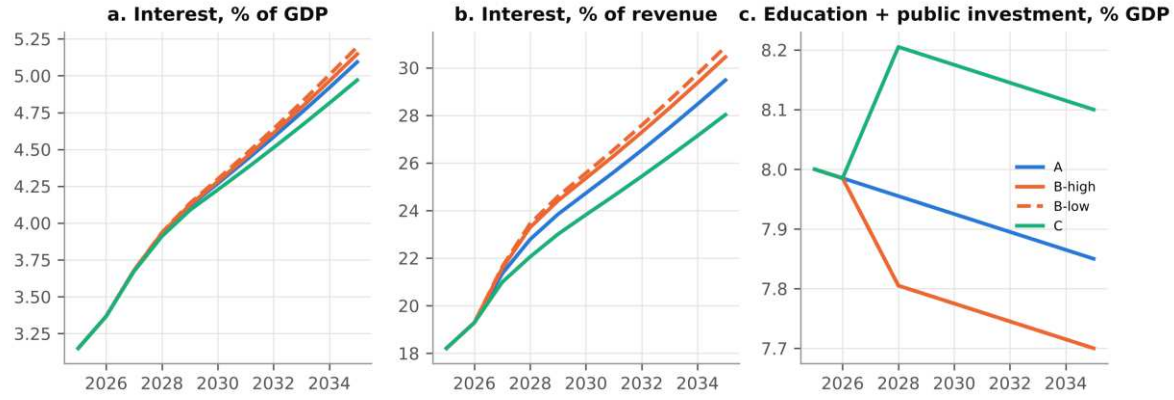
SIMULATED. Grouped Gini over 7 income groups (per person, not equivalised); levels not comparable with official measures. Wealth module uses illustrative differential returns (see Table A2).

The top-1 per cent wealth share rises in every scenario, because the return differential in Equation 10 operates regardless of policy. It goes from 32.7 per cent in 2026 to 34.2 per cent in 2035 under A, 35.0–35.5 per cent under B and 33.8 per cent under C (Figure 10b). The top-0.01 per cent share rises from 6.1 to 6.5 per cent in A, 6.8–6.9 per cent in B and 6.2 per cent in C. A 2 per cent wealth tax therefore slows but does not reverse concentration when the top earns returns several points above the rest. Household net worth is USD 330 trillion in A and USD 328 trillion in C in 2035 in nominal terms. The difference is matched by higher public net worth from wealth and estate receipts, so national wealth is essentially unchanged.

7.5 Public-service capacity

Figure 11 shows the squeeze on the budget. In A, net interest rises by 1.7 points of GDP between 2026 and 2035 and education spending falls from 4.5 to 4.35 per cent of GDP. Real public education spending per student still rises by about 15 per cent over the decade, because real GDP grows by 19 per cent and enrolment is assumed flat. Higher-education spending per student, with enrolment growing by 1 per cent a year, rises by about 4 per cent in A, falls by 1 per cent in B and rises by 15 per cent in C. By 2035 federal net interest exceeds all public education spending in every scenario; in 2025 it was about 70 per cent of it.

Figure 11. Debt service and public-expenditure capacity under each regime



SIMULATED. Net interest of the federal government; revenue = federal revenue. Education (all governments, approx. 4.5% of GDP) and government gross investment (approx. 3.5%).

8. Sensitivity analysis and robustness

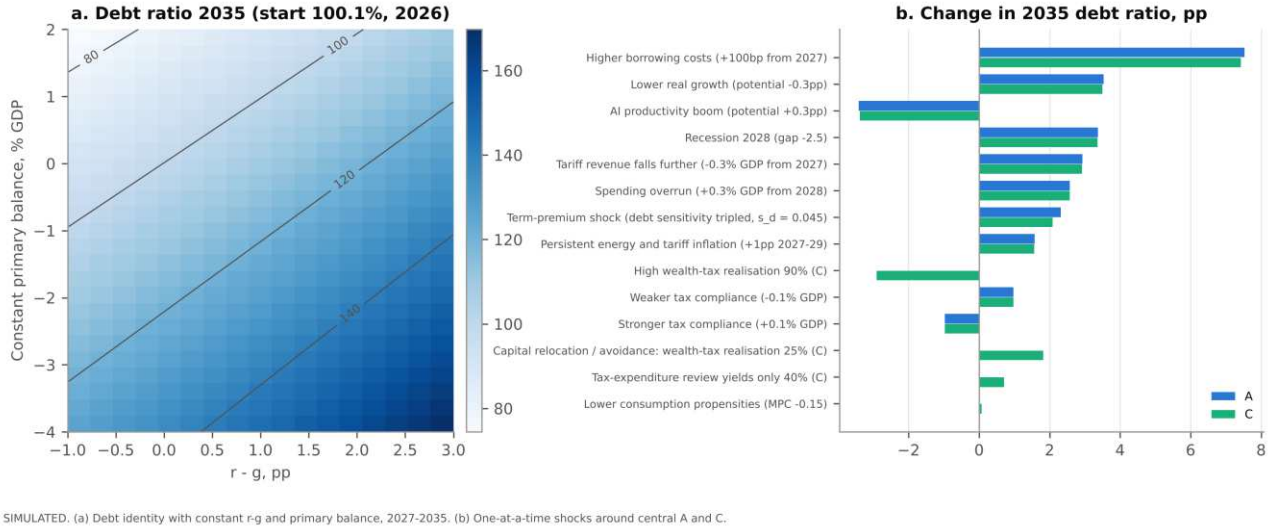
8.1 One-at-a-time shocks

Figure 12b and Appendix Table A4 report the change in the 2035 debt ratio for each shock. The ranking is the same in every scenario. The shocks that raise 2035 debt are:

- **Borrowing costs:** a permanent 100 basis-point rise from 2027 adds 7.4–7.6 points, the largest risk.
- **Potential growth:** a 0.3-point fall adds 3.5 points, while an AI-driven productivity boom of the same size lowers debt by 3.4 points.
- **Recession:** a recession in 2028 adds 3.4 points.
- **Tariff revenue:** a further loss of 0.3 per cent of GDP adds 2.9 points.
- **Spending overrun:** an overrun of 0.3 per cent of GDP adds 2.6 points.
- **Term premium:** tripling the debt sensitivity of the term premium adds 2.1–2.5 points.
- **Energy and tariff inflation:** persistent inflation adds 1.6 points.

Stronger or weaker compliance moves debt by about 1 point. Scenario-specific assumptions matter less. A wealth-tax realisation of 25 per cent instead of 50 per cent raises C's 2035 debt by 1.8 points, while 90 per cent lowers it by 2.9 points, and a weak tax-expenditure review costs 0.7 points. Making B's investment response stronger lowers its debt by 0.2 points only. Consumption propensities change the results by less than 0.1 point.

Figure 12. Debt sensitivity to interest-growth differentials, primary balances and individual shocks



SIMULATED. (a) Debt identity with constant r-g and primary balance, 2027-2035. (b) One-at-a-time shocks around central A and C.

Figure 12a generalises the point. Starting from 100.1 per cent in 2026, a constant r − g of zero and a balanced primary budget leave debt at 100 per cent in 2035. With r − g of 1 point the ratio rises to 109 per cent, and with a primary deficit of 2 per cent of GDP to about 128 per cent. Stabilising at 100 per cent with r − g of 1 point requires a primary surplus of about 1 per cent of GDP, compared with a primary deficit of about 2.8 per cent today.

8.2 Monte Carlo analysis

The Monte Carlo analysis draws 2,000 joint parameter sets from the ranges in Appendix Table A2. Each draw also includes:

- a level shift in the risk-free rate, N(0, 0.5);
- a scale of the exogenous policy path, U(0.85, 1.15);
- a shift in propensities to consume, U(−0.15, 0.10);
- an AR(1) imported-inflation process;
- a 10 per cent chance of a recession shock;
- by scenario, wealth-tax realisation U(0.25, 0.9), tax-expenditure yield U(0.5, 1.0) and B's investment response U(0, 0.5).

Uniform distributions are used where the literature gives ranges without a central tendency.

Table 6. Monte Carlo results, 2,000 draws per scenario

Scenario	Debt 2030 median	Debt 2035 P10	Median	P90	P(stabilised 2032–35) %	P(debt >120%) %	Interest/revenue 2035
A	112.7	121.8	128.1	135.2	0.0	95.5	30.3
B	113.3	123.4	129.8	137.1	0.0	97.8	31.7
C	111.5	118.7	125.2	132.4	0.0	84.4	28.5

Note: B pools strong and weak investment responses through the sampled response parameter.

The median 2035 debt ratio is 128.1 per cent in A, 129.8 per cent in B and 125.2 per cent in C. The 10–90 percentile range is about 13 points wide. In none of the 2,000 draws does the ratio stop rising over 2032–2035 in any scenario. The probability that debt exceeds 120 per cent of GDP in 2035 is 96, 98 and 84 per cent respectively. Debt sustainability, defined here as a non-rising ratio over 2032–2035, is not achieved by any regime without a larger primary adjustment. Scenario C dominates A and B on the debt criterion, but the dominance is small relative to the uncertainty about interest rates and growth.

9. Political-economy interpretation

Does redistribution raise demand, and is that demand met at home? In the model, moving 0.35 per cent of GDP of payroll-tax relief to the bottom 80 per cent while taxing the top 1 per cent raises demand, because marginal propensities differ by about 0.6. Import leakage is low in the United States, but the effect is still modest, 0.1–0.2 points of growth in 2027–2028, and in an economy near full employment with inflation above target the Federal Reserve would offset part of it. Redistribution is not a growth strategy; it is a way of making consolidation less regressive.

Does wealth taxation raise meaningful revenue after behavioural responses? At a 50 per cent realisation rate, on top of the 15 per cent avoidance already in the Saez–Zucman estimate, the 2 per cent wealth tax raises about 0.4 per cent of GDP, roughly USD 120 billion a year. That is meaningful (about a sixth of the extra adjustment required in C) but not decisive. Danish and Swiss evidence shows that wealth taxes reduce reported wealth through both real and avoidance responses (Jakobsen et al., 2020). In the United States the binding risk is legal rather than economic: a federal wealth tax would face a challenge under the constitutional rules on direct taxes. Taxing gains at death and closing tax expenditures raise less but stand on firmer legal ground.

Does closing tax expenditures create more space than rate increases? Per dollar raised, ending the step-up of basis for large estates or the special treatment of carried interest has a low demand multiplier and does not raise any statutory rate. Each provision has an organised constituency (Olson, 1965), which explains why they have survived repeated reform attempts.

Do education and infrastructure improve sustainability? Within ten years, barely: human capital acts with long lags, and public investment adds a few hundredths of a point a year to potential growth. The case for protecting them rests on avoiding long-run damage, not on short-run debt arithmetic.

Does preferential capital taxation pay for itself? No, under any tested parameter set. Even with half of the cost turned into investment and 80 per cent of that productive, the extra output and revenue recover far less than the revenue lost. When investment responds weakly, the tax cut mainly raises asset prices, which increases top wealth and top capital income more than in the strong case. CBO's own estimate that the 2025 reconciliation act raises output by 0.7 per cent in 2034 while adding USD 4.7 trillion to deficits points the same way (CBO, 2026a).

Who gains and who loses? Scenario C's losers are about 100,000 very wealthy households, heirs of large unrealised gains and beneficiaries of targeted tax expenditures. Its gainers are workers in the bottom 40 per cent, for whom payroll taxes are the largest federal tax. Scenario B's losers are users of public services, mainly lower-income households and students. Under all scenarios the largest intergenerational transfer is the rising interest bill, which by 2035 exceeds the combined education budgets of all governments. Regional effects are not modelled; states that depend most on federal Medicaid funds bear more of the 2025 cuts.

Capture and credibility. The United States pays no default premium, but the term premium has risen. In September 2026 the ten-year yield passed 5 per cent while the Federal Reserve was raising its policy rate. A credible plan that asks the very wealthy to contribute could lower the risk of a fiscal-monetary conflict. That channel is not modelled and would favour C.

10. The sovereign wealth fund

Piketty's French proposal is that a solidarity tax be paid in company shares into a sovereign wealth fund. The United States has moved towards a public equity portfolio by a different route. An executive order of February 2025 called for a plan for a sovereign wealth fund. Since then the government has taken stakes in strategic companies, most prominently 10 per cent of Intel in exchange for USD 8.9 billion of grants, without creating a legislated fund (CAIA, 2025). Three variants are compared in Table 7.

Table 7. Sovereign wealth fund variants: debt held by the public and fund assets, % of GDP

Variant	Debt 2030	Debt 2035	Fund assets 2035	Debt net of fund 2035
V1 receipts to debt reduction	111.5	125.0	0.0	125.0
V2 receipts in shares to SWF	112.9	128.5	3.5	124.9
V3 one-off 5% levy in shares (no cash to budget)	111.5	125.0	1.1	123.9

Note: Fund expected nominal return 5% (ILLUSTRATIVE). Probability that the V2 fund outperforms the cost of debt, 5,000 paths with 15% volatility: 50.6%.

V1: receipts used for deficit reduction. This is Scenario C as modelled, and it gives debt of 125.0 per cent of GDP in 2035.

V2: wealth-tax receipts paid in shares into a fund. The budget loses that cash, so debt is 128.5 per cent while the fund holds assets worth 3.5 per cent of GDP. Debt net of the fund is 124.9 per cent, essentially the same as V1, because a 5 per cent expected return on the fund barely exceeds the 4.2 per cent cost of debt in 2035. In 5,000 simulated return paths with a 15 per cent annual volatility, the fund beats the cost of the debt it implicitly displaces with a probability of 51 per cent. The 10–90 percentile range of the net position runs from minus USD 389 billion to plus USD 530 billion by 2035.

V3: a one-off 5 per cent levy on the roughly USD 14 trillion held above USD 50 million. The levy is paid in shares in 2028 and realised at 50 per cent. It leaves debt unchanged and creates a fund of 1.1 per cent of GDP; net of the fund, debt is 123.9 per cent.

Four institutional points follow:

- **No debt reduction.** A fund does not reduce debt held by the public.
- **Return versus cost.** It creates net public wealth only if its return exceeds the cost of debt. With Treasury yields near 5 per cent, a debt-financed fund is a leveraged equity position with a coin-toss payoff.
- **Existing assets.** Shares received in payment of tax, or in exchange for grants, are transfers of existing assets, not new national wealth. Government stakes in individual companies create conflicts between public policy and shareholder value that a diversified portfolio fund does not.
- **Governance.** A fund needs a statutory mandate, an independent board, arm's-length investment rules, audit by the Government Accountability Office and rules on dividends and sales. The ad hoc stakes taken since 2025 have none of these.

The fund is defensible as a governed holder of in-kind tax payments, not as debt reduction.

11. Policy recommendations

The recommendations are ranked by their expected contribution to debt stabilisation without avoidable damage to productive capacity or to middle-income households. Each lists its mechanism, revenue or cost, timing, beneficiaries, risks and indicators; Table 8 summarises them.

Table 8. Ranked policy package

Rank / measure	Mechanism	Fiscal effect (% GDP)	Timing	Main beneficiaries / risks	Success indicator
1 Medium-term plan with debt target	Revenue and spending path; lower term premium	+2.5 to +2.7 extra	2027–30	All; risk: recession, politics	Debt ratio non-rising by 2032
2 Tax gains at death	End step-up of basis above high exemption	+0.12 to +0.15	2027–28	Budget; risk: valuation, liquidity	Revenue; estate behaviour
3 Wealth or minimum tax at the very top	2% above USD 50m; anti-avoidance	+0.2 to +0.7	2027–28	Budget; risk: legal challenge, avoidance	Yield vs static estimate
4 Tax-expenditure review & IRS enforcement	Carried interest, 199A at top; compliance	+0.3	2027–29	Taxpayers generally; lobbying	Tax gap; cost of reliefs
5 Refundable payroll-tax credit	Raise net pay of low/middle wages	−0.35	2027–28	C1–C3; deadweight	Disposable income by class
6 Protect education per student	Human capital, research	−0.15	2027–30	Students; inefficiency	Spending per FTE; outcomes

Rank / measure	Mechanism	Fiscal effect (% GDP)	Timing	Main beneficiaries / risks	Success indicator
7 Appraised public investment	Public capital, productivity	−0.10	2027–35	Regions, firms; poor selection	Ex post returns
8 Lawful, evaluated trade policy	Statutory tariffs; conditional support	uncertain	2027	Exposed industry; capture	Productivity, prices
9 Distributional monitoring	Annual accounts incl. unrealised gains	~0	2027	Public debate	Published annually
10 Fund only as governed holder	In-kind tax payments, existing stakes	0 (not debt policy)	optional	Strategic stakes; return risk	Net public worth reported

Note: Positive = improves the balance. Sizes from Scenario C and the required-adjustment calculation.

1. **A credible medium-term fiscal plan with a debt target.** Stabilising debt held by the public near 108 per cent of GDP by the early 2030s requires about 2.5–2.7 per cent of GDP of additional primary adjustment, phased in over 2027–2030 and shared between revenue and spending. Each 100 basis points on borrowing costs adds about 7.5 points of GDP to 2035 debt, so credibility has a direct fiscal value.
2. **Tax unrealised gains at death above a high exemption**, ending the step-up of basis for large estates, about 0.12–0.15 per cent of GDP.
3. **A tax on very large fortunes or a minimum tax on very high economic incomes**, at 2 per cent above USD 50 million, with valuation rules, anti-avoidance provisions and an exit tax. Expected yield is 0.2–0.7 per cent of GDP depending on realisation and legal design.
4. **A review of tax expenditures**, including carried interest and the pass-through deduction at high incomes, about 0.2 per cent of GDP, and **stronger IRS enforcement**, about 0.1 per cent.
5. **A refundable payroll-tax credit on low and middle wages**, about 0.35 per cent of GDP, raising disposable income in the bottom 40 per cent by about 2.5 per cent.
6. **Ring-fenced education spending per student**, including federal support for higher education and research (0.15 per cent of GDP).
7. **Appraised public investment** at about 3.5–3.6 per cent of GDP, with ex post evaluation.
8. **A trade and industrial policy based on law and evaluation**, with tariffs set under clear statutory authority and support for strategic industries tied to measurable outcomes.
9. **Annual distributional monitoring** by income, wealth, region and generation, including unrealised gains at the top, and a distributional analysis of every major tax and spending bill.
10. **A sovereign wealth fund only as a governed holder of in-kind tax payments and existing stakes**, reporting debt, fund assets and net public worth separately.

12. Limitations and future research

The model is calibrated, not estimated; its behavioural parameters come from the literature or are illustrative. It covers the federal budget, not state and local governments, whose balanced-budget rules transmit federal cuts into spending on education and health. It has no hysteresis and no explicit monetary-policy reaction function, and it does not model the possibility of fiscal dominance. Avoidance is captured by a single realisation coefficient rather than micro-simulation of valuation, trust and migration responses. The distributional base is ITEP's 2024 cross-section scaled forward, with an assumed composition of income and an assumed split of taxes by type, and without mobility, ageing or regional detail. The levels of the income Gini are therefore not comparable with official statistics. Several recent figures come from reports of official releases. Future research should estimate the term-premium equation on Treasury data, link the scenario model to a tax micro-simulation model, and use tax-return and estate data to measure the realisation rate of wealth and death-time taxes.

13. Conclusion

The fiscal problem of the United States in 2026 is a persistent primary deficit meeting the end of cheap money. Federal debt held by the public is about 100 per cent of GDP and rising. Interest already costs more

than defence, and as debt is refinanced near 4–5 per cent the effective interest rate rises above nominal growth. Under current law, and under every alternative examined here, debt reaches 125–129 per cent of GDP in 2035 and interest absorbs close to 30 per cent of federal revenue. Within that constraint, the choice of who adjusts matters a great deal for households and somewhat for the debt path. One package taxes very large fortunes and gains at death, closes tax expenditures, relieves payroll taxes on low and middle wages and protects education and investment. It lowers debt by about 2.4 points of GDP relative to continuation and raises the real incomes of the bottom 40 per cent by about 2.5 per cent. A package that favours the largest fortunes raises debt, cuts services and concentrates gains at the top, and does not pay for itself even under generous investment responses.

The transposed hypotheses fare unevenly. Record debt alongside record wealth is confirmed. The rise of the largest fortunes is confirmed in direction and is about two-thirds of the claimed magnitude. The property-tax point is correct. The claimed long decline in higher-education funding per student is not supported, although a first fall has appeared. The tax system is progressive on measured income but not on the economic income of the very richest. A sovereign fund does not, by itself, reduce public debt. Fairness and sustainability are compatible in the United States, but fairness is not enough: stabilisation also requires a primary adjustment of the order of 2.5–3 per cent of GDP.

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Appendix A. Technical appendix

A.1 Variable dictionary

Table A1. Variable dictionary

Symbol	Definition	Unit
d	Federal debt held by the public	% GDP
r	Effective nominal interest rate on debt	%
i, i^B	Average yield on new federal borrowing; its risk-free component	%
g, g*	Nominal GDP growth; potential real growth	%
p (pb)	Primary balance	% GDP
s	Stock-flow adjustment	% GDP
f	Overall deficit	% GDP
R/Y, τ, b, ρ	Revenue ratio; effective rate; base ratio; realisation coefficient	% / ratio
G, I^int, N	Expenditure; net interest; exogenous policy path (tariffs, refunds, 2025 act)	% GDP
x	Output gap	% potential
m_c, m_k	Multipliers of consolidation and of measure k	ratio
Y^d_i, V_i	Cash disposable income; imputed public services, class i	USD per person
c_i, c^m_i	Average and marginal propensity to consume	ratio
K, K^G, H, L, A	Private capital, public capital, human capital, labour, TFP	index
π, π^e, M, W	Inflation, expectations, imported-energy and labour-cost terms	%
u, u*	Unemployment and its structural level	%
CA	Current account	% GDP
W_g, r_g, S_g, T^W_g	Wealth, return, saving, wealth taxes of wealth group g	USD bn / %
E^edu	Education spending	% GDP
G (Gini), F, L	Gini; cumulative population and income shares	index

A.2 Parameter table

Table A2. Parameters, sources and ranges

Parameter	Value	Meaning	Source / status	MC range
d0	98.1	Federal debt held by the public, FY2025, % GDP	OMB/Treasury via FRED FYPUGDA188S (CBO: about 100%)	
int0	3.15	Net interest, FY2025, % GDP	FRED FYOIGDA188S (CBO 3.2%)	
pb0	-2.62	Primary balance FY2025, % GDP	Derived: deficit 5.77 (FRED FYFSGDA188S) minus net interest 3.15	
rev0	17.3	Federal revenues FY2025, % GDP	APPROXIMATE (CBO: 17.5% in 2026)	
r0	3.3	Effective nominal interest rate on debt 2025, %	Derived: net interest / average debt	
Y0	30600.0	Nominal GDP 2025, USD bn	APPROXIMATE (BEA national accounts)	
x0	0.0	Output gap 2025, % potential	ILLUSTRATIVE (unemployment close to its natural rate)	
u0	4.2	Unemployment rate 2025, %	BLS (approx. 2025 average; 4.2% in Sept 2026)	
gpot	1.8	Baseline potential growth, %	CBO (about 1.8% a year after 2026)	1.2 - 2.4
rho_x	0.5	Output-gap persistence	ILLUSTRATIVE, standard semi-structural value	
m_cons	0.6	Multiplier of broad consolidation / household measures	Literature range 0.4-1.0	0.4 - 1.0
m_nonhh	0.5	Multiplier of the exogenous policy path (tariffs, refunds, 2025 reconciliation act)	ILLUSTRATIVE	0.3 - 0.9
m_inv	0.9	Multiplier of public investment	Literature (IMF 2014, Gechert 2015) 0.6-1.2	0.6 - 1.2
kappa	1.0	Domestic Keynesian amplification after import leakage	Derived with import leakage 0.15 (large, relatively closed economy)	
mu_imp	0.15	Import leakage of domestic demand	ILLUSTRATIVE; imports about 14% of GDP	0.1 - 0.2

Parameter	Value	Meaning	Source / status	MC range
sb_x	0.35	Federal budget semi-elasticity to output gap	ILLUSTRATIVE; CBO automatic stabilisers	
pi_e	2.0	Anchored inflation expectations, %	Federal Reserve 2% goal	
b_pi	0.25	Slope of price equation on output gap	ILLUSTRATIVE; flat Phillips curve 0.1-0.4	0.1 - 0.4
okun	0.5	Okun coefficient	Standard US value	
theta	0.25	Share of debt repriced each year	Bills ~1/5 of marketable debt; average maturity ~6 years	0.2 - 0.32
infl_idx	0.09	Share of inflation-indexed debt (TIPS)	ILLUSTRATIVE order of magnitude	
s0	0.0	Premium intercept, pp	Normalised: Treasury is the global benchmark	
s_d	0.015	Term-premium sensitivity to debt above 100% GDP, pp per pp	ILLUSTRATIVE (literature: about 1-3 bp per pp of debt)	0.0 - 0.04
s_f	0.04	Term-premium sensitivity to deficit above 3%, pp per pp	ILLUSTRATIVE	0.0 - 0.08
nonres	0.3	Share of debt held by the public owned by foreigners	ILLUSTRATIVE (order of magnitude)	
alpha	0.3	Output elasticity of private capital	Standard capital share	
KY	2.6	Private productive capital / GDP	ILLUSTRATIVE	
thetaG	0.08	Output elasticity of public capital	Bom & Ligthart (2014) meta-analysis	0.04 - 0.12
KGY	0.55	Public capital / GDP	ILLUSTRATIVE	
eta_pim	0.7	Public-investment efficiency	ILLUSTRATIVE	0.4 - 0.9
gammaH	0.6	Output elasticity of human capital (labour share)	Standard labour share	
lambdaH	0.011	Growth of H-index per 1% rise in education spending (after lag)	ILLUSTRATIVE	0.005 - 0.02
lagH	4	Lag before education spending affects human capital, years	ILLUSTRATIVE	
edu0	4.5	Public education spending (all governments), % GDP	APPROXIMATE: K-12 USD 984bn (Census FY2024) + higher education	
pubinv0	3.5	Government gross investment, % GDP	ILLUSTRATIVE order of magnitude (BEA)	
ind_el	0.9	Elasticity of manufacturing VA to GDP	ILLUSTRATIVE (real manufacturing output grew ~1.6% a year 1998-2023, Cleveland Fed)	
agg_gross	0.78	Aggregate household income (ITEP concept) / GDP	ILLUSTRATIVE scaling of ITEP shares	
mpc	[0.9, 0.8, 0.7, 0.5, 0.25]	Marginal propensity to consume by class	ILLUSTRATIVE, within literature ranges	
apc	[1.0, 0.97, 0.9, 0.8, 0.6]	Average propensity to consume by class	ILLUSTRATIVE (US personal saving rate ~4-5%)	
energy_w	[1.3, 1.15, 1.0, 0.85, 0.6]	Exposure to imported energy and tariff inflation (relative weight)	ILLUSTRATIVE	
unemp_w	[2.0, 1.5, 1.0, 0.6, 0.3]	Sensitivity of class labour income to employment	ILLUSTRATIVE	
W0	182000	Household net worth 2025/26, USD bn	APPROXIMATE: Fed Z.1 households and nonprofits USD 195.9tn (Q2 2026) less nonprofits	
adults	262.0	Adult population, millions	ILLUSTRATIVE (approx. 18+ population)	

Note: ILLUSTRATIVE = transparent assumption in the absence of an empirical estimate; never presented as an official value.

A.3 Effective tax rates by group and illustrative decomposition

Table A3. ITEP effective tax rates by income group, 2024, and the illustrative split by tax type (% of income)

Group	Income share	Federal	State & local	Total	Indirect*	Payroll*	Income & wealth*
Q1	2.6	3.6	13.5	17.1	12.1	3.6	1.4
Q2	6.3	10.0	12.2	22.2	10.4	8.0	3.8
Q3	11.2	15.0	11.5	26.4	9.2	8.2	8.9

Group	Income share	Federal	State & local	Total	Indirect*	Payroll*	Income & wealth*
Q4	19.0	16.1	11.1	27.2	8.4	7.2	11.6
P80-95	25.5	19.0	9.9	28.8	6.5	6.7	15.6
P95-99	16.3	21.5	8.6	30.1	4.9	4.3	20.9
Top1	20.1	25.5	9.2	34.8	3.8	1.3	29.7

*Note: Source: ITEP (2024) for income shares and federal, state-and-local and total rates. *ILLUSTRATIVE decomposition used only to allocate measures in the model (data_build.py): payroll share of federal taxes and indirect share of state and local taxes by group, plus federal excises of 0.6% of income.*

A.4 One-at-a-time sensitivity

Table A4. Change in the 2035 debt ratio under individual shocks, percentage points

Shock	A	B-high	B-low	C
Lower real growth (potential -0.3pp)	3.5	3.5	3.6	3.5
AI productivity boom (potential +0.3pp)	-3.4	-3.4	-3.4	-3.4
Higher borrowing costs (+100bp from 2027)	7.5	7.6	7.6	7.4
Tariff revenue falls further (-0.3% GDP from 2027)	2.9	2.9	2.9	2.9
Persistent energy and tariff inflation (+1pp 2027-29)	1.6	1.6	1.6	1.6
Spending overrun (+0.3% GDP from 2028)	2.6	2.6	2.6	2.6
Stronger tax compliance (+0.1% GDP)	-1.0	-1.0	-1.0	-1.0
Weaker tax compliance (-0.1% GDP)	1.0	1.0	1.0	1.0
Recession 2028 (gap -2.5)	3.4	3.4	3.4	3.4
Capital relocation / avoidance: wealth-tax realisation 25% (C)	0.0	0.0	0.0	1.8
High wealth-tax realisation 90% (C)	0.0	0.0	0.0	-2.9
Tax-expenditure review yields only 40% (C)	0.0	0.0	0.0	0.7
Investment response: strong vs weak (B)	0.0	-0.2	0.0	0.0
Lower consumption propensities (MPC -0.15)	0.0	0.1	0.1	0.1
Higher consumption propensities (MPC +0.10)	0.0	-0.0	-0.1	-0.0
Term-premium shock (debt sensitivity tripled, s_d = 0.045)	2.3	2.4	2.5	2.1

Note: Change relative to each scenario's central 2035 debt ratio (A 127.4, B-high 128.4, B-low 129.4, C 125.0).

A.5 Debt-stabilising primary balance and required adjustment

Table A5. Debt-stabilising primary balance and additional adjustment required for stabilisation

Scenario	Year	r	g	r − g	Debt-stabilising pb	Simulated pb	Gap
A	2030	4.05	3.81	0.24	0.25	-2.55	-2.81
A	2035	4.25	3.82	0.43	0.51	-2.29	-2.80
B-high	2030	4.05	3.82	0.24	0.25	-2.68	-2.92
B-high	2035	4.27	3.82	0.44	0.53	-2.41	-2.95
B-low	2030	4.05	3.80	0.25	0.27	-2.75	-3.02
B-low	2035	4.28	3.81	0.47	0.57	-2.49	-3.06
C	2030	4.04	3.78	0.26	0.27	-2.33	-2.60
C	2035	4.22	3.85	0.37	0.43	-2.08	-2.51

Note: Additional broad consolidation (phased 2027–30) needed for a non-rising ratio over 2032–35: A 2.71% of GDP (USD 828bn), peak 108.0% in 2034; B-high 2.83% of GDP (USD 867bn), peak 108.1% in 2034; B-low 2.93% of GDP (USD 896bn), peak 108.4% in 2034; C 2.46% of GDP (USD 753bn), peak 107.4% in 2034.

A.6 Alternative class boundaries

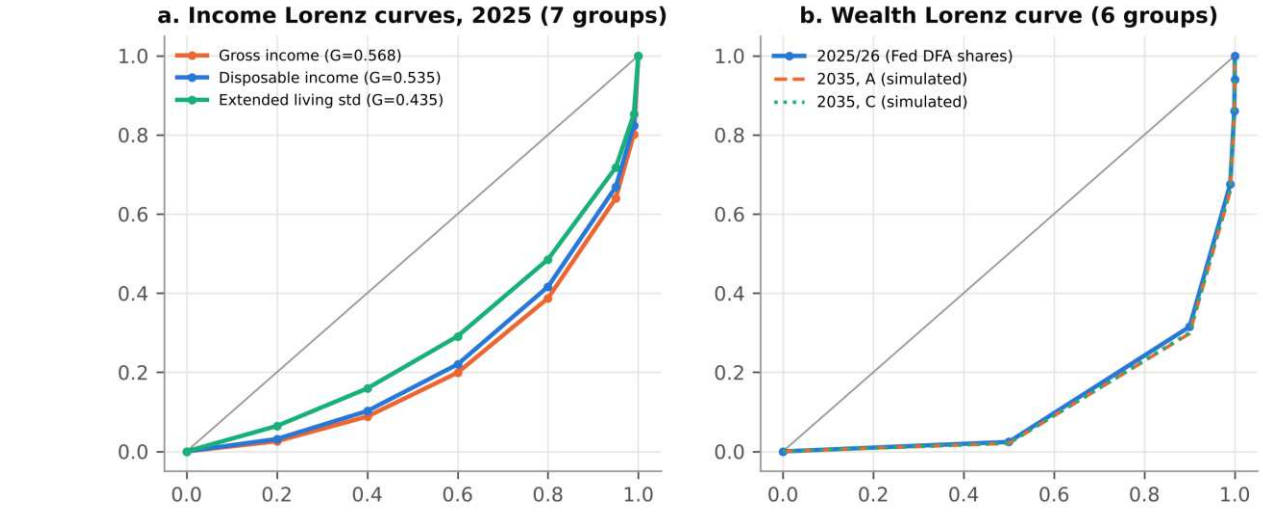
Table A6. Change in 2035 real disposable income relative to A under alternative class boundaries, %

Class boundaries	Scenario	Class 1	Class 2	Class 3	Class 4	Class 5
Benchmark 0-20/20-40/40-80/80-99/99-100	B-high	0.2	0.2	0.1	0.2	5.3
Benchmark 0-20/20-40/40-80/80-99/99-100	B-low	0.0	0.0	-0.0	0.0	7.7
Benchmark 0-20/20-40/40-80/80-99/99-100	C	2.5	2.7	0.7	-0.2	-4.4
Alt. 0-20/20-60/60-80/80-99/99-100	B-high	0.2	0.1	0.1	0.2	5.3
Alt. 0-20/20-60/60-80/80-99/99-100	B-low	0.0	-0.0	-0.0	0.0	7.7

Class boundaries	Scenario	Class 1	Class 2	Class 3	Class 4	Class 5
Alt. 0-20/20-60/60-80/80-99/99-100	C	2.5	1.4	0.7	-0.2	-4.4
Alt. 0-40/40-60/60-95/95-99/99-100	B-high	0.2	0.1	0.1	0.2	5.3
Alt. 0-40/40-60/60-95/95-99/99-100	B-low	0.0	-0.0	0.0	0.1	7.7
Alt. 0-40/40-60/60-95/95-99/99-100	C	2.6	0.7	0.2	-0.2	-4.4

A.7 Lorenz curves

Figure 13. Lorenz curves for income (2025) and wealth (2025/26 and simulated 2035)



Income: ITEP-based groups (2024 shares scaled to 2025); Gini from grouped data, per person. Wealth: Federal Reserve DFA shares, Pareto top tail; 2035 simulated.

A.8 Reproducibility

The supplementary package contains: *data_build.py*, which writes the historical dataset with sources; *model.py*, which contains the twelve equations, the parameter dictionary and the scenario definitions; *analysis.py*, which runs the central scenarios, the one-at-a-time and Monte Carlo analyses, the sovereign-fund variants and all figures; the output workbook *model_results.xlsx* with every table; *scenario_paths_annual.csv* with all annual paths; and *model_output.txt*. To reproduce the results, run python3 code/data_build.py and then python3 code/analysis.py from the project root (Python 3.11 or later with numpy, pandas, matplotlib and openpyxl). The Monte Carlo seed is fixed at 20261023.

Appendix B. Policy brief for US policymakers

Policy brief: Fair and credible fiscal stabilisation for the United States, 2027–2035

The problem. Federal debt held by the public is about 100% of GDP, the FY2026 deficit was 6.2% of GDP and the ten-year Treasury yield is above 5%. In our simulations net interest rises from 3.4% of GDP in 2026 to about 5% in 2035, close to 30% of federal revenue, and the debt ratio rises under every regime examined.

What we compared. Three conditional regimes over 2026–2035: (A) current law after the 2025 reconciliation act and the Supreme Court tariff ruling; (B) further tax relief concentrated on very large fortunes (0.5% of GDP), half financed by programme cuts; (C) a 2% tax on wealth above USD 50 million, taxation of gains at death, a tax-expenditure review and IRS enforcement, financing a refundable payroll-tax credit for low and middle wages, education and investment.

- Debt in 2035: 127.4% of GDP (A), 128.4–129.4% (B), 125.0% (C).
- Real disposable income of the bottom 40% in 2035: about +2.5% in C relative to A; unchanged in B, whose gains go to the top 1% (+5 to +8%).
- Tax relief at the top does not pay for itself, even if half of it becomes investment.
- A wealth tax raises about USD 120 billion a year at a 50% realisation rate on top of avoidance: meaningful, not decisive, and legally contested.
- A sovereign wealth fund financed by shares does not reduce debt; its net value against the cost of debt is a coin toss.
- Stabilising debt near 108% of GDP by the early 2030s requires an extra primary adjustment of about 2.5% of GDP on top of C, or 2.7% on top of A, phased in over 2027–2030.

Recommendations. (1) Adopt a multi-year fiscal plan with a debt target; (2) tax unrealised gains at death above a high exemption; (3) introduce a tax on very large fortunes or a minimum tax on very high economic incomes; (4) review tax expenditures and fund IRS enforcement; (5) introduce a refundable payroll-tax credit for low and middle wages; (6) protect education and research per student; (7) appraise public investment; (8) base trade policy on clear statutory authority and evaluation; (9) publish annual distributional accounts including unrealised gains; (10) treat any sovereign fund as a governed holder of in-kind payments and existing stakes, not as debt policy.

Main risks. Higher borrowing costs (+100 bp adds 7.5 points of GDP to 2035 debt), weaker potential growth (−0.3 point adds 3.5 points), a 2028 recession (3.4 points), further loss of tariff revenue (2.9 points) and avoidance of wealth taxation (25% realisation adds 1.8 points).