

Forecasted Social Security Income Percent

Exercise 4 • Forecast Horizon: 2027–2046 • Baseline: 2026

Prepared: April 2026 • Social Security payroll tax income as % of 2026 baseline, adjusted for AI & robotics employment displacement

Purpose & Method

This artifact forecasts the impact of AI and robotics-driven employment displacement on Social Security payroll tax income from 2027 to 2046. Social Security income is defined as payroll tax receipts from covered private-sector employment. The forecast isolates the AI/robotics channel only — it does not adjust for wage growth, demographic change, or policy modifications.

Method: For each year 2027–2046, each sector's forecasted employment retention percentage (from Exercise 2) is applied to that sector's 2026 baseline payroll tax contribution (from Exercise 1). The resulting sector values are summed to produce a total forecasted payroll tax for the year, which is then expressed as a percentage of the \$1,220.7B 2026 baseline total.

The 2026 baseline total private-sector payroll tax contribution is \$1,220.7B across all 18 NAICS supersectors. Approximately 90% of annual Social Security benefit payments are funded by current-year payroll taxes, making this forecast a direct proxy for program funding pressure.

Forecasted Social Security Income from Private Sector Payroll Taxes (2027–2046)

Color coding: Green (≥95%) • Yellow (85–94%) • Pink (70–84%) • Red (<70%)

	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046
% of 2026 Baseline	100.0 %	99.5 %	98.1 %	95.9 %	93.0 %	89.3 %	85.0 %	80.3 %	75.4 %	70.5 %	65.9 %	61.6 %	58.0 %	55.6 %	54.3 %	53.7 %	53.4 %	53.2 %	53.1 %	53.1 %
Estimated Payroll Tax (\$B)	\$1221 B	\$1215 B	\$1197 B	\$1171 B	\$1135 B	\$1090 B	\$1037 B	\$980B	\$920B	\$861B	\$804B	\$752B	\$708B	\$679B	\$663B	\$656B	\$652B	\$650B	\$649B	\$648B

Key Findings

Gradual onset (2027–2031): AI displacement begins immediately but slowly. Payroll tax income remains above 90% of baseline through 2031, providing a policy window before fiscal pressure becomes acute.

Accelerating decline (2032–2040): The steepest drop — nearly 35 percentage points — occurs during 2032–2040 as AI displacement peaks across knowledge work sectors simultaneously with robotics beginning to displace physical labor. Payroll tax income falls from ~89% of baseline in 2032 to ~56% by 2040.

Plateau (2041–2046): Displacement reaches its terminal level by approximately 2041, with payroll tax income stabilizing near 53% of the 2026 baseline — roughly \$648B annually versus \$1,221B today. This implies a structural reduction of approximately \$573B per year in Social Security payroll tax income.

Largest contributing sectors to decline: Healthcare & Social Assistance (largest absolute contributor, falls to 75% of baseline), Professional/Scientific/Technical Services (falls to 45%), and Manufacturing (falls to 45%) together account for the majority of the payroll tax reduction due to their large baseline contributions and significant displacement rates.

Important Caveats

- ¹ **Gross displacement only:** This forecast models only the reduction in payroll taxes from jobs displaced by AI and robotics. It does not credit new jobs created in AI development, robotics manufacturing, oversight, or adjacent sectors. Net fiscal impact will be less severe than these figures suggest.
- ² **Private sector only:** Government workers, self-employed, and agricultural workers are excluded, consistent with Exercise 1. Government employment is not modeled as subject to the same AI/robotics displacement trajectory.
- ³ **No wage growth adjustment:** The forecast holds 2026 wage levels constant. To the extent that AI raises productivity and wages for remaining workers, actual payroll tax collections per remaining worker will be higher than shown here — partially offsetting the employment decline.
- ⁴ **90% payroll-tax funding rule:** Approximately 90% of annual Social Security benefit outlays are funded by current-year payroll taxes; the remainder comes from trust fund reserves and interest. A 47% reduction in payroll tax income (by 2046) does not automatically mean a 47% cut in benefits — but it does imply severe trust fund depletion absent policy intervention.
- ⁵ **Baseline:** All percentages are relative to the \$1,220.7B 2026 aggregate private-sector payroll tax baseline established in Exercise 1.

Source Artifacts

1. Exercise 1 — Current U.S. Private Sector Adult Employment (2026 Baseline)
2. Exercise 2 — Forecasted U.S. Private Sector Adult Employment Impacted by AI and Robotics