

Net Disposable Income in the United States, Germany, and France

Household income by quintile after taxes, transfers, and
privately borne healthcare, education, and retirement costs, 2022

Drew Karazin

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Correspondence: DKarazin@gmail.com

Abstract

This study compares household income across the income distributions of the United States, Germany, and France, by quintile. The starting measure is post-fiscal cash income: income after taxes and after cash and near-cash transfers. Three costs that standard measures omit are then subtracted: measured household spending on healthcare, including United States household-paid premiums; measured household spending on education; and a pension-security deduction built from the voluntary retirement saving US households are observed to make through employment-based plans, the private channel toward retirement provision that the German and French mandatory systems finance through contributions already netted out of measured income. The result is termed Net Disposable Income (NDI), stated per equivalent adult at purchasing-power parities built from the prices households pay.

After the three deductions, Germany's NDI at the bottom fifth is greater than that of the United States by \$4,000, and at the second fifth by \$2,200. At the bottom fifth, France's NDI is greater than that of the United States by \$1,400; at the second fifth, France and the United States are essentially even. The United States has greater NDI from the middle fifth upward: \$2,800 greater than Germany and \$5,900 greater than France at the middle fifth, \$11,900 and \$16,400 greater at the fourth, and \$84,500 and \$92,700 at the top fifth. All results are means per equivalent adult under the study's central assumptions. Pushed to their limits in any combination, the stated ranges cannot reverse three results: Germany ahead at the bottom fifth, and the United States ahead at the fourth and top fifths against both countries. Four results they can reverse: at the France bottom fifth, both second fifths, and the Germany middle fifth, the ranges overlap, so the bands alone could put either country ahead, and those results are central estimates and nothing stronger. At the middle fifth against France, the ranges do not touch: even the worst-case United States value sits above the best-case French value, by less than \$200. A 2017 leg, built to the same design, shows the same bottom-versus-upper pattern (Section 4).

The author is aware of no study that subtracts privately borne healthcare, education, and retirement-saving costs from post-fiscal cash income by quintile in a comparison of the United States and European countries; searches of the published and working-paper literature were completed August 30, 2026.

JEL codes: D31, I31, I14, H24, H55, I22, O57. Keywords: net disposable income; disposable income; income distribution; quintile analysis; purchasing power parity; post-fiscal income; out-of-pocket healthcare spending; private education spending; pension adequacy; living standards; welfare state; cross-country comparison; United States; Germany; France.

1. Overview: The Question and the Answer in Brief

Many comparisons of US and European living standards rest on a single metric: cash disposable income adjusted for purchasing power. That baseline is valuable and a necessary starting point. Americans and Europeans alike receive healthcare, education, and retirement benefits funded through their taxes; European mandatory systems cover more of these costs collectively, and American households must fund the remainder privately. These costs do not appear in cash income figures, but they are real reductions in what households can spend or save. In this analysis privately borne costs are deducted directly, and all comparisons are stated in absolute purchasing-power-adjusted dollars at corresponding quintiles. The resulting measure, Net Disposable Income (NDI), is cash income after taxes and transfers less these privately borne costs; it is not the OECD's adjusted disposable income, which adds the value of in-kind services rather than subtracting private costs.

Housing is carried as a stated scope exclusion. Substantial shares of German and French housing are rent-regulated or socially provided below market price, Germany through rent regulation and a social rental stock, France through the HLM sector, while most US housing is market-priced. This measure deducts no housing costs on either side. Where regulation or social provision lowers what German and French households actually pay, the purchasing-power-parity conversion credits the lower prices on average, because the parities are built from the prices households pay; what escapes the conversion is distributional, since social housing concentrates toward the bottom. Housing costs are left out of this measure. At the bottom fifth, the omission runs only one way: counting housing would make the German and French leads larger, not smaller, so the bottom-fifth advantages printed here are minimums on that score. Above the bottom fifth, the housing difference is small, somewhere between zero and roughly \$300, and it could favor either side, so the paper claims no direction there (Section 2.2.2).

The methodology and adjustment framework are described in Section 2. Findings by quintile begin in Section 3.

Once the cash comparison itself is corrected (Section 3) and private costs are deducted, Germany and France have greater NDI at the bottom fifth and Germany at the second; the US has greater NDI from the middle fifth upward, substantially in the upper-middle fifth and by the widest margin at the top fifth. The durability of that middle-fifth answer depends on which costs are counted and the valuation of economic security versus cash income, as this study will discuss (Sections 4 and 8).¹

A common assumption is that higher European nationwide taxes fund better social programs. However, European welfare states are partly funded by regressive consumption taxes (e.g. VAT at 19 to 27%) and social contributions that fall heavily on lower and middle earners.² The US federal income tax is more

¹All income figures in this analysis are expressed in purchasing-power-parity (PPP) adjusted USD unless otherwise noted. PPP conversion factors equalize the purchasing power of currencies by accounting for differences in price levels across countries. Source: World Bank, World Development Indicators, purchasing-power-parity conversion factor for private consumption (household final consumption expenditure), series PA.NUS.PRVT.PP, 2017 and 2022 values; the OECD's purchasing-power parities for actual individual consumption serve the named AIC sensitivity (Section 2.2.3).

²Standard VAT rates (2024): Germany 19%; France 20%; Hungary 27% (EU maximum). EU average standard VAT rate: 21.6%. Tax Foundation, "2024 VAT Rates in Europe," January 2024. On VAT regressivity see OECD, Consumption Tax Trends 2022: VAT/GST and Excise, Core Design Features and Trends (Paris: OECD Publishing, 2022), ch. 1. Social contributions (employee + employer) in France: ~43% of gross salary up to the plafond de sécurité sociale (€46,368 in 2024); Germany: ~20% employee share up to Beitragsbemessungsgrenze (€7,550/month in 2024 for pension). Eurostat, "Taxes and Social Contributions as % of GDP," 2022.

progressive in structure.³ Section 8 cites a broader accounting that counts all taxes, consumption taxes included, on both sides of the Atlantic. On that accounting, the United States has the most progressive tax system of the 27 countries measured.

2. Methodology and Definitions

Throughout this analysis, income quintiles are referred to by descriptive label: bottom (first quintile, lowest 20% of income), lower-middle (second quintile), middle (third quintile), upper-middle (fourth quintile), and top (fifth quintile, highest 20% of income). The shorthand Q1 through Q5 is used in tables. Quintiles follow each source's published ranking convention: CBO ranks households by size-adjusted income before means-tested transfers and federal taxes, with fifths containing equal numbers of people and negative-income households excluded from the lowest fifth; the European tables rank persons by equivalised disposable income. Because the United States fifths are sorted on a pre-fiscal measure while post-fiscal cash means are reported, the measured US bottom-fifth mean is somewhat higher, and the top-fifth mean somewhat lower, than a disposable-income sorting would produce; no corresponding adjustment arises on the European side. Quintiles are defined on each source's published income ranking throughout; households are not re-ranked on net disposable income, and all results are means within those fifths.

Assumptions and limitations. Four assumptions frame the measure.

Comparability: NDI treats the healthcare received on the two sides as roughly comparable in kind; this document adopts no position on quality or efficacy. The assumption is safest for insured households from the middle fifth up, and shakiest around the second fifth, where insurance gaps concentrate, or in the bottom fifth; if it fails there, it fails against the United States, so the European bottom-fifth advantages reported later are floors, understatements, rather than ceilings. A completed screen of the European social-protection accounts found the only in-kind gaps of size, excluding the three channels the measure already treats (healthcare, education, and pensions), to be childcare and community long-term care, both sized at the end of Section 2.2.2.

Coverage: the cash measure counts measured cash income and measured private outlays only; programs delivered in kind sit outside it, in an uncounted in-kind layer, and within that layer of uncounted services, the omission runs one way: the free and subsidized services this measure cannot see are worth most in Germany and France and least in the United States, so counting them could only raise the European positions relative to the US. On that margin, the European figures printed here are minimums, and any European lead at the bottom fifth is understated. Two measured items lean the opposite way, and the paper says so where they occur: the European healthcare figures leave out supplementary insurance premiums, which makes German and French net income look somewhat better than it is (Section 5), and

³US tax-to-GDP ratio: 25.2% in 2023 (OECD, Revenue Statistics 2024 [Paris: OECD Publishing, 2024], United States country note). EU-27 taxes and social contributions as % of GDP: 39.9% in 2023, as revised (Eurostat, “EU and Euro Area Tax-to-GDP Ratio Up in 2024,” October 31, 2025; the October 2024 release announcing the 2023 figure printed 40.0% before revision). Both measures include mandatory social contributions: the OECD total already counts US payroll taxes, so 25.2% is the all-in US ratio; the US ratio stood at 27.6% in 2022 (OECD Revenue Statistics), before capital-gains-related income-tax receipts fell in 2023. The post-fiscal baseline subtracts US state and local income and property taxes directly (BLS Consumer Expenditure Survey Table 1101, 2022 and 2017 editions, equivalised), closing the asymmetry against SILC disposable income, which nets taxes at all levels of government (variables HY140 and HY120). Sales and excise taxes remain excluded on both sides, internalized in the consumption price parities.

the pension deduction likely overstates the American burden (Section 2.2.5.3). The only gaps of size in that layer, childcare and community long-term care, are sized at the end of Section 2.2.2.

Pension symmetry: the deduction is symmetric in aim (money available to live on now at comparable retirement security), implemented through the observed-saving stand-in that Section 2.2.5.3 constructs, but likely overstates the American burden and understates precarity at the bottom fifth, where the required saving is largely out of reach. Against Germany, the deduction likely overstates the American burden at every quintile, concentrated at the middle fifth. Against France it likely overstates only from the middle fifth up; below the middle fifth the bias reverses, understating the American burden. The overstatement shows most clearly above the bottom, where the saving is affordable in context and builds an owned, bequeathable asset. A 0/50/100% pension sensitivity leaves every Section 4 verdict unchanged (Section 2.2.5.3).

Age composition: quintiles are compared within each country's own distribution, without standardizing age mix.

The findings come in two layers. The first is what this study measures: cash income after taxes, minus the costs households pay from their own pockets. The second is what no household budget line prices: the free and subsidized services people receive. For Germany and France, that second layer is not a blank. Its direction is known: those services are worth more there than in the United States, so leaving them out only understates the European results, and the bottom-fifth leads printed here are minimums. Part of it can even be sized: the services outside the three systems this study treats come to roughly \$400 to \$700 per equivalent adult at the middle fifth, small against the printed margins.⁴ What published tables cannot price is the subsidized core of healthcare, education, and pensions beyond what households pay. That is the honest limit, and the paper holds it plainly: wherever a reasonable value for that remainder could change which country comes out ahead, this paper asserts no verdict at that fifth.

The subsidy boundary: the measure counts as a cost only what the household itself pays; any subsidized remainder belongs to the uncounted in-kind layer (Tier 2). Because the price conversion is built from the prices households actually pay, part of that subsidy is already reflected in the price conversion, which is why the in-kind layer is sized from spending totals rather than inferred from price differences.

2.1 Methodology and Comparison to Other Studies

The income comparison literature divides into two methodological traditions.

One tradition adds state-provided benefits to household income, valuing them at cost to the state. The OECD's Adjusted Disposable Income measure, and the distributional national accounts work of Blanchet, Chancel, and Gethin (2022), augment household income by imputing the value of public services, healthcare, education, social housing, that governments provide. On this view, a French household earning less in cash than an American counterpart may nonetheless be better off once the value of what the French state provides is credited to household income. The approach is methodologically rigorous and

⁴The \$400 to \$700 estimate comes from the program-by-program screen in Section 2, which goes through the services outside the three treated systems one category at a time, with sources. The direction claim rests on how the systems are designed: in Germany and France, healthcare, university education, and public pensions are provided to everyone or nearly everyone, while in the United States comparable public provision depends on a means test or on employment. The services this measure cannot see are therefore worth more in Germany and France than in the United States at every fifth. What no published table can price, the subsidized core of the three treated systems beyond what households pay, is why the text draws no verdict on that layer.

well-sourced. This analysis instead focuses on the remainder: the net disposable income left after paying privately to reach the levels of care Germany and France provide.

The other tradition stops at cash income. Analyses in this tradition, Pew Research (2017) and Noah Smith (2022) among them, report household income in the United States above that of most Western European countries at the median. Annunziata (2024) goes further, reporting United States income above that of Germany, France, and other major European economies at every quintile of the income distribution when incomes are converted at market exchange rates, with Switzerland and Luxembourg as the exceptions he notes at the bottom quintile. Those cash-income findings are roughly the starting point here. Annunziata does quintile-level cash income with no cost adjustments. Pew does PPP-adjusted middle-class comparisons without a quintile breakdown of costs. Smith notes the healthcare distortion but does not resolve it by quintile. Bruegel examines hours-worked productivity but nothing on household costs. Gramm, Ekelund, and Early (2022) recount US transfers comprehensively but stay entirely within the United States. Agresti (2019) does a consumption-based cross-country comparison at the bottom quintile only, with no cost adjustments. Garfinkel, Rainwater, and Smeeding (2010) redefine the scope of the US welfare state but do not produce a quintile-by-quintile net comparison against European peers.

This analysis takes post-fiscal cash income as the baseline, accepting the cash-income literature's core finding, and then subtracts the private costs that American households pay for services that European mandatory systems provide collectively: out-of-pocket healthcare, education spending, and a pension-security deduction (measured spending and a constructed deferral). The result is Net Disposable Income (NDI): the income actually available for discretionary spending after mandatory private social expenditures are met. The first tradition calculates what households receive; the second, what they earn. This study presents what households keep after paying privately for the services that German and French systems finance through taxes.

LIS cross-check for income. An independent, differently built income archive, the Luxembourg Income Study, corroborates this document's baseline: bottom-40% income shares from this study's SILC-derived means sit within ± 1.3 percentage points of LIS for Germany and France in both analysis years, and the concept-aligned US cash chain lands within 2.5% of LIS's US figures. The full cross-check, and a bottom-tenth exhibit derived from it, are in the released workbook.

Two designs are coherent for government-provided healthcare in cross-national comparison: augment both sides' incomes by the value of services, or keep a cash baseline on both sides and deduct what households pay privately, the design locked here. The cash design was chosen for three reasons: valuation (counting benefits at government cost would have imported the US price level into US incomes), purpose (in this case answering the question of what households have left to spend after paying for what they must buy), and symmetry (both sides stated on the same basis).

The paper's adjustments are particularly interesting at the middle quintile. At Q1, prior work, particularly Gramm, Ekelund, and Early (2022) and Agresti (2019), has established that US means-tested transfers compare favorably with European universal systems for the lowest earners. At Q4 and Q5, the cash advantage is large enough that the question of adjustments is largely academic. It is at Q3, the middle fifth, where the three adjustments, stacked, cut deepest into the cash advantage: for those households, the central-case US advantage over Germany in 2022 is \$2,800, and the worst-case ranges overlap. That finding does not appear in the literature reviewed here. It is worth being precise about what kind of finding it is: this analysis draws on published distributional data from primary sources rather than original survey or administrative data, making it a synthesis of published data rather than original empirical research. The combination, three independently sourced adjustments applied simultaneously by quintile to

a comparison of the United States with Germany and France, is the methodological contribution. The confidence bands are wide enough that the Q3 result is better described as a central estimate inside overlapping ranges rather than as a definitive verdict. A margin this narrow, inside bands this wide, is itself an argument for why the question deserves more precise empirical attention. What the sensitivity apparatus establishes is that the ordering is the durable result: every 2022 verdict is printed with its band-edge status in Table 4, the advantages that hold at every edge are identified there as such, and where the ranges overlap, as at the middle fifth, the paper claims a central estimate and no more.

2.2 Data and Methods

This section defines the study's measure, documents its sources, and states each construction and convention needed to reproduce the results. Every figure in the paper derives from a traceable workbook published alongside it, in which each root input is tagged to its primary source; the derivation lines referenced below appear on that workbook's Derivation Spine tab.

2.2.1 Income concept and sources

The income concept throughout is post-fiscal cash income, the cash remaining to a household after taxes and after transfers in cash and near-cash form, with no value imputed for benefits in kind.

United States incomes come from the Congressional Budget Office's distribution of household income series. The 2022 figures are taken from CBO publication 61911 and the 2017 figures from publication 56575, each in the nominal dollars of its own year. CBO's headline measure, income after transfers and taxes, counts government health programs and employer-paid health insurance premiums as income at their cost to the government or the employer. Three components are therefore removed at their recorded cost to reach a cash concept. Medicaid and the Children's Health Insurance Program and Medicare are removed as benefits in kind, and employer-paid premiums are removed because the European income source never counts them. The removals use CBO's supplemental tables for each year. Benefits from the Supplemental Nutrition Assistance Program (SNAP) remain in income as a near-cash transfer. This treatment is symmetric with the European source, which likewise includes near-cash benefits, and the amounts are material where the comparison is closest. At the bottom quintile in 2022, SNAP benefits amount to roughly \$2,700 per household, about \$1,800 per equivalent adult. Housing assistance likewise remains inside income on both sides: CBO counts United States housing assistance benefits among means-tested transfers, within its other-transfers category, and the European source counts French housing allowances as cash transfers in disposable income. Because CBO constructs its measure from tax records and administrative program data rather than from household survey responses alone, the transfer underreporting that depresses survey-based income figures, the substance of the Gramm–Ekelund–Early critique of Census statistics, is corrected at the source in the baseline used here.

CBO nets only federal taxes. State and local income taxes and property taxes are therefore subtracted separately, taken from the Consumer Expenditure Survey's Table 1101 for the matching year, published by the Bureau of Labor Statistics, and expressed per equivalent adult.⁵

German and French incomes come from the European Union Statistics on Income and Living Conditions (EU-SILC) as published by Eurostat, using the distribution of income by quintile (series `ilc_di01`) converted to quintile means. Eurostat disposable income arrives net of all direct taxes and social insurance contributions, so no re-basing is required, and its scope matches the concept above. It includes transfers in

⁵The Q1 2022 state and local income tax cell is suppressed in the published Consumer Expenditure Survey table; its value is reconstructed by residual and carried under that flag in the released model workbook.

cash and near-cash form and excludes benefits in kind. The income reference year precedes the survey year by one, so the 2023 survey carries 2022 incomes and the 2018 survey carries 2017 incomes. The paper compares two independent cross-sections, 2017 and 2022, and makes no claim about change over time; the German survey instrument changed between the two years, and the French survey extended its geographic coverage between them (metropolitan France for the 2017 leg; the overseas departments added for the 2022 leg), so cross-year likeness in Germany or France should be read as two snapshots agreeing in shape, not a measured trend. The 2017 French leg pairs metropolitan-only incomes with a national purchasing-power parity; the overseas departments hold roughly three percent of the French population, so the parity's non-metropolitan content is proportionally small and the seam sits well inside the plus or minus 6 percent income band. Both sources describe the noninstitutionalized household population: CBO's universe is the civilian noninstitutionalized population, excluding residents of nursing facilities and correctional institutions (a scope CBO discloses in the 2017 report, footnote 5), and EU-SILC covers private households only, so long-term care residents fall outside both frames, a symmetric exclusion. One further definitional asymmetry is disclosed with its magnitude rather than adjusted. CBO income includes realized capital gains as they appear on tax returns; the European disposable-income standard does not count gains as income. Within CBO's published fifths, realized gains averaged 0.5, 0.2, 0.5, 0.9, and 10.2 percent of income before transfers and taxes from the bottom fifth to the top in 2017, and 0.8, 0.2, 0.5, 0.8, and 11.3 percent in 2022. The concentration sits in the top fifth and, within it, particularly in the top percentile, where gains were 26.0 percent of that group's income in 2017 and 27.8 percent in 2022. Counting them raises measured US income at every fifth: the European bottom-fifth advantages reported later are understated, and the United States upper-fifth advantages overstated, by the value of the gains. The margin is bounded: removing gross realized gains from United States income entirely, with no offsetting reduction in the federal taxes paid on them, leaves every advantage reported in Section 4 standing at every fifth in both years, and moves the one essentially-even cell, the United States and France at the second fifth in 2022, from a United States edge of about sixty dollars per equivalent adult to a French edge of about one dollar; the essentially-even reading there is unchanged.⁶

2.2.2 Net disposable income

Net disposable income (NDI) is post-fiscal cash income minus the costs a household bears privately for healthcare, education, and retirement saving. It is computed per equivalent adult, by quintile, for each country and year. The three deductions are defined in Section 2.2.5. In Germany and France, most of the cost of these services is collected through the taxes and mandatory contributions already netted out of disposable income, so the remaining private payments are small. In the United States, the payments are larger and fall directly on measured cash income. Net disposable income as used here is this paper's defined measure: cash income after taxes and transfers, less household healthcare, education, and pension-security costs. It is not the OECD's adjusted disposable income, which adds the value of in-kind services rather than subtracting private costs.

⁶Capital-gains shares are computed paper-direct from CBO's supplemental data workbooks, Table 5 (income before transfers and taxes and its sources): publication 56575, 2017 rows, capital-gains column L cells L92, L133, L174, L215, and L256 with income column B at the same rows, top-percentile detail L297–L420; publication 61911, 2022 rows, column L cells L97, L141, L185, L229, and L273 with income column C, top-percentile detail L317–L449. Per-household gains: 2017, \$100/\$100/\$400/\$1,000/\$31,600 from the bottom fifth up; 2022, \$200/\$100/\$500/\$1,200/\$46,600. The removal bound divides each fifth's per-household gains by the square root of CBO household size for that fifth and applies the result against the Section 4 values.

Table 1. From CBO income after transfers and taxes to net disposable income: United States, bottom fifth, 2022.

Rung	Operation	US Q1 2022 (\$/yr)	Who stops here
1	Income after transfers and taxes, per household, CBO's headline measure; government health (Medicaid, CHIP, Medicare) and employer-paid premiums counted in at cost (spine row 39)	44,800	The at-cost camp stops at or above this rung: CBO; Gramm, Ekelund and Early. PSZ, Auten–Splinter, and BCG allocate all government spending and sit higher still
2	Minus Medicaid and CHIP, at government cost (row 40)	–12,600	
3	Minus Medicare, at government cost (row 41)	–4,100	
4	Minus Employer-paid health premiums (row 42)	–900	
5	Equals Cash income per household, in-kind health stripped out (row 43)	27,200	
6	Divided by $\sqrt{\text{household size}}$ (1.539), carried at the model's \$100 reporting convention (rows 44–47)	17,700	
7	Minus State and local income and property taxes per equivalent adult (rows 51–55)	–686	
8	Equals Cash income after all taxes; European incomes enter here: Eurostat disposable income is already net of all taxes (row 56)	17,014	The cash camp stops here: OECD disposable income and the Income Distribution Database; Pew (LIS). OECD adjusted disposable income is this rung plus government health and education added back at cost
9	Minus Private healthcare spending (CEX) (rows 58–64)	–2,700	
10	Minus Private education spending (CEX) (rows 66–68)	–515	
11	Minus Observed retirement saving: constructed deferral $\times$ plan access (rows 70–74)	–50	
12	Equals NET DISPOSABLE INCOME (NDI) (row 76)	13,749	This study only: the author is aware of no cross-country study that subtracts privately borne costs below rung 8

Rounding note: the walkthrough column carries income at the model's \$100 reporting convention at rung 6 and at dollar precision below it, so the printed rungs chain exactly as shown; the headline equals the released workbook's Derivation Spine value for the United States bottom fifth, \$13,748.79, at the nearest dollar, and Section 4 reports the same figure in thousands as 13.7.

The comparability screen. Every flow in the household ledger (income received, benefit enjoyed, necessary cost borne) passes one test: does it travel through a systematically different channel in the systems being compared? Same-channel flows (market-priced food and clothing; cash transfers counted as income everywhere) cancel by construction; housing is carried as a stated scope exclusion with its direction disclosed (Section 1). Different-channel flows must be caught by one of three nets: counted in income on both sides, deducted symmetrically, or absorbed into the price conversion. That is why the baseline strips the imputed in-kind values the US source counts as income, and why three costs are deducted: healthcare, education, and retirement provision, the necessities peer welfare states socialize and American households buy privately. Anything that slips all three nets biases NDI toward the country that subsidizes least, the United States; the misses the screen carries (the European premium exclusion, Section 5, and the capital-gains asymmetry, Section 2.2.1) arise on the measured side and are disclosed

there; within the in-kind layer itself, every miss cuts one way. Program-level questions were resolved by a completed screen of each country's full social-expenditure accounts against these tests, described next.⁷

Could a social program outside the three deducted categories change these results? A program-by-program audit addressed the question directly. Cash benefits (unemployment insurance, child allowances, public pensions in payment) already appear in disposable income on both sides of the comparison, so an omitted program could matter only if it delivers services in kind that European households receive publicly and American households purchase privately. Screening each country's full social-expenditure accounts (Germany's Sozialbudget and France's DREES social protection accounts) and the most expansive published inventory of more than one hundred US transfer programs against that test leaves two categories outside the deduction set: childcare and long-term care. At population-wide averages, each amounts to a few hundred dollars or less per equivalent adult per year: an order of magnitude below the top-half differences; the combined charge sized below runs to about a quarter of the middle-fifth advantage over Germany at its adverse edge, the one comparison the paper already flags as a central estimate inside overlapping ranges. Charging the United States for the two surviving categories and the housing exclusion together (childcare on the spending basis, roughly \$300 per equivalent adult; community long-term care, roughly \$100; and housing, zero to roughly \$300, direction uncertain) adds, taking each term at its edge adverse to the United States, on the order of \$400 to \$700 per equivalent adult at the middle quintile, against a middle-fifth advantage over Germany of \$2,800; at the bottom two fifths, where Germany is ahead, the uncounted categories are smaller still, because United States childcare subsidies concentrate there. The larger childcare cost facing the minority of households purchasing full-time paid care is acknowledged in Section 4 rather than averaged into the measure.

2.2.3 Conversion to United States dollars

European incomes and costs are converted at purchasing-power parities for household final consumption expenditure (HFCE), taken from the World Bank's World Development Indicators private consumption series (PA.NUS.PRVT.PP), with each analysis year converted at its own year's rate. The choice follows from matching the price basis to the income concept. The quantity being converted is household cash income, and the HFCE rate prices the basket households buy for themselves. The alternative basis, actual individual consumption (AIC), prices that basket plus the government-provided individual services households consume, chiefly health and education. In Germany and France those services are financed through taxes already netted out of the incomes being compared, so households pay for little of them out of cash income. Converting cash income at AIC rates would therefore apply a price level that partly reflects services cash income does not pay for; the HFCE rate prices only the goods and services households buy for themselves, which is the quantity being converted. The AIC basis remains informative as a sensitivity; results under it are carried in the released model workbook as a named sensitivity, using the OECD's purchasing-power parities for actual individual consumption. No purchasing-power conversion exists for the residual basket left after the three costs are subtracted; HFCE parities, priced on household consumption, are the closest available instrument and are used throughout. Tax incidence on the US side follows CBO's published assumptions; one residual overlap, indirect taxes embedded in

⁷The class “privately borne social costs” is anchored in the OECD’s private-social-expenditure accounts: private social spending (mandatory and voluntary private health insurance, private pensions, and other private social benefits) reached 12.8% of GDP in the United States in 2021, the second highest in the OECD after Switzerland (OECD, “Social Spending,” updated April 2025, its footnote 12). The deductions in this study are the household-paid portion of that layer plus out-of-pocket outlays.

purchaser prices also being present in the conversion price level, is worth on the order of one percent of income and is disclosed rather than adjusted.

2.2.4 Adjustment for household size

Both regions are equivalised by the square root of household size. The United States sources arrive as unit totals, CBO income per household and CEX spending per consumer unit, and each is divided by the square root of its own unit's size: household income uses CBO's demographic counts by quintile, and spending lines use the persons-per-consumer-unit line of the same Consumer Expenditure Survey table that supplies them. German and French figures are published by Eurostat per equivalent adult on the modified OECD scale, which assigns a weight of 1.0 to the first adult, 0.5 to each further household member aged fourteen and over, and 0.3 to each child. Each country's published figures are converted to that common basis by a fixed country factor, the ratio of the modified OECD equivalent-adult count to the square root of household size computed from that country's household composition, at Germany 1.0226 and France 1.0248. The factor is computed from national household composition and applied uniformly across quintiles; household size varies by fifth, so quintile-specific factors would differ modestly, a refinement reserved for later editions. The square root of household size is the prevailing scale in cross-national income comparison, which is the basis for naming it the primary scale here. Results on the unconverted modified OECD scale are carried in the released model workbook. The conversion factor is applied to each country's income and NDI results. European means are per equivalent adult by construction; all cross-country comparisons in this paper are made on the per-equivalent-adult basis, using the square-root equivalence scale.

2.2.5 Privately borne costs

Because the healthcare and education deductions are measured from observed household spending, and the pension deduction is constructed from observed contribution rates and plan access (Section 2.2.5.3), the three record what households paid, not what they needed; where need goes unmet, measured costs understate the burden, and the deductions should be read as floors rather than ceilings.

2.2.5.1 Healthcare. United States healthcare spending is the full healthcare line of Consumer Expenditure Survey Table 1101, which includes household-paid insurance premiums and out-of-pocket care, per consumer unit, equivalised, and carries a band of plus or minus 15 percent (the band's basis is stated in Section 2.2.6). German and French spending is built from Eurostat's Household Budget Survey. The health share of consumption (COICOP division 06) is multiplied by mean consumption per equivalent adult, both by income quintile. The survey reports in purchasing power standards, the artificial common currency of the European Union's surveys, so the product is multiplied by the country's price level index to reach national prices and then converted to dollars at the purchasing-power parity. The 2020 survey wave serves the 2022 analysis year and the 2015 wave serves 2017; the German 2020-wave fieldwork was conducted in 2018, before the pandemic period, and re-priced to the 2020 reference year (Eurostat fieldwork documentation), a vintage seam parallel to the French one named in Section 5.

2.2.5.2 Education. United States education spending is the education line of Table 1101 per consumer unit, equivalised. German and French spending is the Household Budget Survey education category (COICOP division 10), which covers tuition and fees at all levels and excludes books and student accommodation, converted as above. Where a category is genuinely absent, the workbook records an explicit zero rather than an omission, and the same convention governs the German and French retirement rows below.

2.2.5.3 Retirement saving. In Germany and France, retirement provision is financed through taxes and mandatory contributions deducted before disposable income is measured, so no further deduction is taken. In the United States, households reach comparable retirement benefits partly through voluntary contributions to employment-based plans, paid out of measured cash income, and an observed-saving deduction is therefore constructed in five steps. Wages and salaries per consumer unit from the Consumer Expenditure Survey are divided by earners per unit to give a per-earner wage. That per-earner wage selects the deferral-rate band in Vanguard's *How America Saves* report for the plan year (2022; the 2017 leg applies the 2022 ladder to 2017 wages, the vintage seam disclosed in Sections 4 and 7), a rate that averages over participants and non-participants within the plans Vanguard administers. The selected rate is applied to wages and salaries per unit, capturing all earners in the unit; the result is multiplied by 0.65, a factor derived from the participant-to-total contribution ratio reported in the same Vanguard publication (7.3 percent of 11.7 percent, about 0.62, carried at 0.65), a disclosed stand-in whose two known defects run in opposite directions and offset to less than about \$150 at the middle quintile, divided by the square root of persons per unit, and multiplied by the share of workers with access to an employment-based retirement plan, interpolated to income quintiles from the wage categories of the Bureau of Labor Statistics National Compensation Survey for the matching year. The interpolation treats worker wage percentiles as aligned with household income quintiles, an approximation. The band sets the low value at 65 percent of the mid value and the high value at the construction without the access adjustment. The band's purpose, bracketing the construction's main uncertainty, is stated with the ranges in Section 2.2.6; the band's 65-percent-of-mid low setting is a separate dial from the 0.65 contribution-share factor above.

One property of this deduction runs in a known direction and is disclosed. Observed contributions measure what households actually set aside, not the saving required to match the retirement benefit the comparison systems deliver. Where actual saving exceeds that required level, the deduction overstates the cost of matching the benefit and understates United States net disposable income. The gap concentrates in the upper quintiles, where United States net disposable income already exceeds that of Germany and France by wide margins, so the direction of no reported comparison depends on it. A variant built on required saving, which appears to be possible, is not carried in this paper and may be a basis for an updated document or extended study. A sensitivity setting the deduction at zero, half, and full value has been computed: every Section 4 finding stands at all three settings, and the check is arithmetic on the Section 4 tables, where the deduction is reported by fifth; even at zero, the European-ahead margins move by \$310 or less per equivalent adult, because bottom-quintile households defer little.

2.2.6 Uncertainty ranges

Results are computed three times: at the central estimate (the value reported in the tables), at the worst case (a country's lowest plausible income paired with its highest plausible costs), and at the best case (the highest plausible income paired with the lowest plausible costs). Incomes carry a range of plus or minus 6 percent in every country: author-set judgment, sized to span the sampling error of survey-based quintile means and the second-order error of the purchasing-power conversion, held uniform across countries so that no verdict rests on a country-specific assumption. United States healthcare carries a range of plus or minus 15 percent, an author-set band wider than the income band because a single expenditure line carries more relative sampling variability than total income and must span differences in how households pay for care, premiums versus out-of-pocket. The German and French cost lines are carried at their measured values without bands: no country-specific variance basis was identified for them, and they are small relative to the corridors, since a plus or minus 15 percent band on Germany's bottom-fifth healthcare and education costs together would move German NDI by about \$110 per equivalent adult, against a bottom-fifth separation between the United States and German corridors of about \$1,350; the asymmetry is

disclosed rather than repaired here. Education is carried flat pending a real range derivation. The pension deduction carries a constructed range: the band brackets the construction's main uncertainty, participation; the high value removes the plan-access adjustment entirely, and the low value applies a deeper discount at 65 percent of the mid. When two countries' ranges overlap at a quintile, the central verdict there is an estimate, not a settled result, the convention every verdict sentence in this paper observes.⁸

These ranges are not statistical confidence intervals. Studies built on a sampling design report standard errors derived from that design. This study, like other accounting-style constructions including the distributional national accounts, combines published aggregates and survey means from several sources and has no single sampling framework from which such errors could be derived. It therefore reports disclosed sensitivity bands, and statements about differences falling within the ranges are statements about input sensitivity, not tests of statistical significance.

The corridors already assume the worst case for the banded inputs at once: each printed worst-case value pushes every band to its adverse edge in the same calculation, and each best case does the reverse. The imperfections that sit outside the bands are each labeled with the direction they lean, but they are not combined into the corridors, and no calculation here estimates what would happen if several of them leaned the same way together. The major studies this paper draws on stop at the same place: they test their assumptions one at a time, sometimes at the extremes, and none publishes combined error ranges.

2.2.7 Averaging and reporting conventions

Unless otherwise noted, every quintile result in this paper is a mean for households in that fifth, stated per equivalent adult, computed under the study's central assumption settings; alternative settings appear in the uncertainty ranges (Section 2.2.6) and the sensitivity exhibits. Results are stated on this basis throughout, and individual result sentences do not repeat it.

Mid incomes are rounded to the nearest \$100, healthcare to the nearest \$10, education to the nearest \$1, and the retirement deduction to the nearest \$10. Reported differences between countries are computed from unrounded values carried in the workbook, so a stated difference can depart by small amounts from the difference of the rounded figures shown.

3. The Cash-Only Baseline

The cash baseline construction and its sources are stated in Section 2.2.1; this section reports the cash-only comparison, before any private-cost adjustment.

⁸Didem Bernard, Cathy Cowan, Thomas Selden, Liming Cai, Aaron Catlin, and Stephen Heffler, "Reconciling Medical Expenditure Estimates from the MEPS and NHEA, 2007," *Medicare & Medicaid Research Review* 2, no. 4 (2012): household-reported out-of-pocket expenditures run 5.5 percent below the scope-adjusted National Health Expenditure Accounts. Ann C. Foster, "Out-of-Pocket Health Care Expenditures: A Comparison," *Monthly Labor Review* (Bureau of Labor Statistics), February 2010: methodological differences account for the larger unadjusted divergences among CE, MEPS, and NHEA out-of-pocket estimates.

Table 2. Post-fiscal cash income, 2022 (income year), after transfers and all federal and state/local taxes, per equivalent adult, \$K, HFCE-PPP USD.

Quintile	US	Germany	France	US vs DE	US vs FR
Q1 (Bottom 20%)	17.0	18.5	15.6	−1.5	+1.4
Q2 (20–40%)	29.4	29.0	26.0	+0.3	+3.3
Q3 (40–60%)	43.8	37.5	33.4	+6.3	+10.4
Q4 (60–80%)	64.2	48.3	42.3	+16.0	+21.9
Q5 (Top 20%)	176.5	82.3	72.6	+94.2	+103.9

Table 3. Post-fiscal cash income, 2017 (income year), after transfers and all federal and state/local taxes, per equivalent adult, \$K, HFCE-PPP USD.

Quintile	US	Germany	France	US vs DE	US vs FR
Q1	13.9	12.8	13.7	+1.1	+0.2
Q2	23.2	22.4	21.5	+0.9	+1.8
Q3	34.6	29.0	26.8	+5.6	+7.7
Q4	50.4	37.1	33.4	+13.3	+17.0
Q5	131.0	64.4	57.8	+66.6	+73.2

Sources: CBO publications 61911 (2022) and 56575 (2017), supplemental data; Eurostat ilc_di01/ilc_di03 (SILC survey 2023 = income year 2022; survey 2018 = income year 2017), derived means verified against the raw files (the verification record is the workbook's Sources and Verification tab); conversion at household final consumption expenditure (HFCE) purchasing-power parities, each analysis year at its own rate: 2022, Germany 0.719272 and France 0.744307 EUR per international dollar; 2017, Germany 0.799178 and France 0.847836 (AIC-parity results are carried in the released model workbook as a named sensitivity). US state and local income and property taxes: CEX Table 1101, 2022 and 2017 editions, mean dollars per consumer unit by quintile, equivalised by the square root of persons per unit, with ITEP's Who Pays? (7th edition) as an incidence cross-check; the CEX line runs below ITEP at the third and fourth fifths, so the correction understates the state and local tax burden at those fifths and leaves the United States position there higher than an ITEP-based correction would. Caveats carried: Eurostat flags SILC series breaks at Germany 2020, France 2020, and France 2022, so any 2017-to-2022 change language carries the break caveat. German and French cells are stated on the square-root basis via the Section 2.2.4 country factors (Germany 1.0226, France 1.0248). The 2017 leg is validated against Blanchet–Chancel–Gethin at their terminal year: residual signatures pass in every modeled country, and the one systematic break, this study above WID at the bottom fifth, is diagnosed as a bottom-end unit artifact in that source, not a fault in this pipeline.

The question the rest of this analysis asks is unchanged: whether the cash positions above survive adjustment for costs that are socialized in Europe but privatized in America. At the 2017 bottom quintile, France is ahead after the adjustments (by \$2,000) even though the US is ahead on cash there (by \$200).

4. Combined Adjustment Table

The table below reports Net Disposable Income (NDI): cash income after transfers and all taxes, minus the three measured private-cost adjustments (healthcare, including household-paid premiums; education spending; and a pension-security deduction), per equivalent adult, 2022.

Range status, read from the corridors defined in Section 2.2.6: the bottom-fifth verdict against Germany holds at every band edge, the United States and German ranges there not overlapping; the bottom-fifth verdict against France, the second-fifth verdicts against both countries, and the middle-fifth verdict against Germany are central estimates inside overlapping ranges; the United States and French ranges separate at the middle fifth; and the fourth- and top-fifth advantages survive every range at its adverse edge. The essentially-even call at the second-fifth United States–France cell is a stated case-by-case judgment rather than a fixed threshold: the central gap is about sixty dollars per equivalent adult, smaller than any band in Section 2.2.6, and the capital-gains bound in Section 2.2.1 moves it by about the same amount.

One caution when citing the middle fifth: the \$2,800 advantage over Germany is small enough that counting the full uncounted in-kind layer (Section 2), which extends well beyond the \$400 to \$700 of surviving categories sized there, could tip it, and welfare conclusions about the middle quintile should carry that caveat.

Table 4. NDI 2022, \$K per equivalent adult, HFCE-PPP USD (positive gap = US ahead).

Quintile	US NDI	DE NDI	FR NDI	US – DE	US – FR	Verdict (cash NDI)
Q1	13.7	17.7	15.1	–4.0	–1.4	Germany ahead by 4.0 (holds at every band edge); France ahead by 1.4 (ranges overlap)
Q2	25.6	27.8	25.5	–2.2	+0.1	Germany ahead by 2.2 (ranges overlap); the US–France cell is essentially even (ranges overlap)
Q3	38.8	35.9	32.8	+2.8	+5.9	US ahead of Germany by 2.8 (ranges overlap) and of France by 5.9 (ranges separate)
Q4	58.1	46.2	41.7	+11.9	+16.4	US ahead by 11.9 and 16.4; both margins hold at every band edge
Q5	164.2	79.7	71.5	+84.5	+92.7	US ahead by 84.5 and 92.7; both margins hold at every band edge

Crossover stability across 2017. 2017 shows the same bottom-versus-upper pattern as 2022 (Germany and France ahead at the bottom fifth, the United States ahead from the middle fifth upward) with one cell different: France also leads the second fifth in 2017, where 2022 is essentially even; Germany leads the second fifth in both years. The corrected-comparison story is therefore stable across both analysis years, not a 2022 artifact. Flags carried on the 2017 leg: the pension deduction’s contribution-rate ladder is 2022-vintage against 2017 wages (bounded: first-party Vanguard data show deferral rates by income moved ≤ 0.5 pp over 2008–2017 and the average about half a point further by 2022), while plan-access rates are matching-vintage (BLS NCS March 2017); EU healthcare uses the HBS 2015 wave, the exact pairing for that analysis year; the narrowest 2017 margins are France ahead by about \$840 at the second fifth and Germany by about \$950 at the bottom fifth.

Table 5. NDI 2017, same design, \$K per equivalent adult, HFCE-PPP USD.

Quintile	US NDI	DE NDI	FR NDI	US – DE	US – FR	Verdict (cash NDI)
Q1	11.2	12.2	13.2	–0.9	–2.0	France ahead by 2.0 and Germany by 0.9
Q2	20.2	21.5	21.0	–1.3	–0.8	Germany ahead by 1.3 and France by 0.8
Q3	30.7	27.8	26.3	+2.9	+4.4	US ahead by 2.9 (Germany) and 4.4 (France)
Q4	45.2	35.6	32.9	+9.6	+12.3	US ahead by 9.6 and 12.3
Q5	120.2	61.8	56.9	+58.4	+63.3	US ahead by 58.4 and 63.3

Table 6. Component cost mids by fifth, 2022 and 2017, \$K per equivalent adult.

Component (mid)	Q1	Q2	Q3	Q4	Q5
US healthcare, 2022	2.70	3.10	3.80	3.90	4.90
US education, 2022	0.52	0.35	0.43	0.69	2.06
US pension, 2022	0.05	0.31	0.84	1.55	5.36
Germany healthcare, 2022	0.64	1.04	1.38	1.71	2.00
Germany education, 2022	0.12	0.20	0.24	0.38	0.62
France healthcare, 2022	0.30	0.40	0.51	0.51	0.65
France education, 2022	0.16	0.10	0.09	0.13	0.39
US healthcare, 2017	1.97	2.62	2.94	3.39	4.46
US education, 2017	0.62	0.29	0.37	0.69	2.55
US pension, 2017	0.03	0.12	0.56	1.15	3.87
Germany healthcare, 2017	0.46	0.66	0.99	1.23	2.19
Germany education, 2017	0.10	0.14	0.20	0.29	0.42
France healthcare, 2017	0.27	0.35	0.45	0.46	0.57
France education, 2017	0.14	0.09	0.08	0.12	0.35

Central (mid) values; European figures at HFCE parities, stated on the square-root basis via the Section 2.2.4 country factors; German and French pension deductions are structural zeros, because mandatory provision is already netted out of disposable income (Section 2.2.5.3). Rounding follows Section 2.2.7; component cells display at two decimals in thousands (Table 1 carries the education line at the nearest dollar; unrounded values are in the released workbook).

Childcare is not deducted in NDI. Only a minority of lower-middle and middle-fifth households have a child under five, and only a single-digit share purchase full-time paid center care at any given time, and no household-budget line measures it symmetrically across the three countries; its population-wide magnitude (roughly \$300 per equivalent adult) is instead carried in the Section 2 in-kind screen.

5. Healthcare Costs

For the United States, the measure counts everything first and subtracts second. At the bottom quintile in 2022, the full pre-paycheck health stack (government in-kind health, Medicaid and CHIP plus Medicare at cost, plus employer-paid insurance premiums) is about \$17.6K per household, roughly 39 percent of measured income after transfers and taxes, before a dollar reaches the household as cash; Table 1 in Section 2.2.2 walks the full chain rung by rung. The employer-sponsored-insurance tax expenditure is a memo line only: it is government cost via forgone revenue already embedded in federal taxes, and adding it to the in-kind bucket would double-count.

Table 7. Where every health dollar sits in NDI.

Component	Income side	Cost side	Net effect	EU mirror
ESI, employer share	Stripped (CBO had added it)	Not deducted	Zero	Employer social contributions: outside SILC income by construction. Symmetric.
ESI, household share	Never in CBO income	Deducted (CEX Healthcare line)	Reduces US NDI	Household premiums/contributions where they exist; EU OOP deducted
Medicaid/CHIP, Medicare	Stripped (counted at cost by CBO)	Not deducted	Zero	Public coverage: never in SILC income, never deducted. Symmetric.
OOP cost-sharing	Never income	Deducted	Reduces US NDI	EU OOP deducted likewise
Taxes/contributions financing public health	Removed upstream of the baseline	—	Pre-paid	Same; dominant channel in DE/FR

NDI compares the cash remaining after households have paid, through whichever channel their system uses (taxes, contributions, premiums, or out-of-pocket) for the same necessities; the full screen is stated in Section 2.2. The measure assigns no value to differences in the coverage, care, schooling, or benefits actually received.

Quintile-level values. The operative healthcare deductions are measured household spending, not coverage-based composites. US: CEX 2022 Table 1101 Healthcare line (including household-paid premiums, deductibles, copayments, dental, vision), equivalised. Germany and France: measured HBS household health spending (COICOP CP06), stated per adult equivalent; the 2017 leg uses measured 2015-wave values. Mids by fifth for all three countries and both years are in the Section 4 component table. Seams carried: CEX ranks consumer units by pre-tax unequivalised income (ranking seam); CEX consumer-unit size differs from CBO household size at the bottom fifth; the French “2020” HBS wave is re-priced earlier fieldwork, collected 2016–2017 (named vintage seam). Plan-cost composites such as the KFF family-premium exhibits measure what a family plan costs, not what the average household in a fifth actually pays; expenditure surveys record the latter, which is the operative concept here.⁹

One asymmetry in the healthcare deduction pair is structural and runs in one direction. The United States deduction is measured from the Consumer Expenditure Survey healthcare line, which includes household-paid insurance premiums. The German and French deductions are measured from household budget survey consumption spending, a concept that excludes insurance premiums by design. The preferred design would deduct German supplementary and French complementary premiums symmetrically; no harmonised quintile-level source for them was identified in this study's searches, and one aim of publishing the construction is to surface such a source. Private premiums that German households pay for supplementary insurance and French households pay for complementary health coverage are therefore

⁹KFF, Employer Health Benefits Survey 2023 (San Francisco: KFF, 2023), Exhibit 1.1 (average family premium: \$23,968), Exhibit 6.4 (average employee contribution for family coverage: \$6,575), Exhibit 8.4 (average general annual deductible for single coverage: \$1,735). German GKV co-payments: capped at 2% of gross income per year (1% for chronically ill), Sozialgesetzbuch V §62. French effective out-of-pocket: typically €400–900/year for an employed household after mutuelle top-up coverage; Eurostat household health expenditure data, 2022.

real health outlays the European deductions do not capture. The direction is one-way: correcting the omission would lower German and French NDI at every fifth and could not raise it, shrinking the European advantages reported at the bottom two fifths and widening the US advantages from the middle fifth up. The German and French deductions are floors and their NDI levels ceilings on this margin. A measured premium build remains deferred; no magnitude is asserted here.

The healthcare adjustment carries the highest confidence of the three adjustments presented in this analysis. The underlying cost figures are measured expenditure-survey lines (CEX Table 1101; Eurostat HBS CP06), with KFF, the Peterson-KFF Health System Tracker, and OECD Health Statistics as context for system-level costs. The principal source of uncertainty is the outcome comparability assumption: a dollar of US healthcare expenditure does not purchase identical outcomes to a dollar of European expenditure, and the direction of that difference varies by condition type. The figures in this adjustment reflect cost differentials only and do not imply outcome equivalence.

6. Education Costs

University education in the European anchor countries is provided at minimal or no direct cost to students. Public institutions in Germany charge nominal administrative semester fees; France sets tuition for EU citizens at approximately €175 per year at the bachelor's level. In the United States, about half of public university bachelor's graduates borrow. Among borrowers, average debt at graduation is approximately \$27,400; averaged across all graduates, borrowers and non-borrowers alike, roughly \$13,000. The median outstanding federal student loan balance among borrowers is just under \$20,000 (College Board, Trends in College Pricing and Student Aid, 2025 edition, and the federal portfolio distribution reported there).¹⁰

Operative construction: the education adjustment is measured household education spending. US: CEX Table 1101 Education line, equivalised. Germany and France: HBS education spending (COICOP CP10) in PPS, multiplied by the Eurostat price level index and converted at the purchasing-power parity. Mids by fifth are in the Section 4 component table. Flags carried: Low = Mid = High pending a real range derivation (flagged, not fabricated); the German and French figures are small because education there is predominantly publicly financed: they are the private costs households pay, not the cost of education; the 2017 leg uses the HBS 2015 wave, the exact pairing for that analysis year. What the re-basing changes conceptually: measured spending captures tuition, fees, and supplies actually paid this year; the debt-service framing below remains the right lens for the stock question (how past education was financed) and is kept as a memo, not as the operative number. The concept choice is not neutral, and the direction belongs on the record: at Q2–Q3 the spending basis yields a far smaller US deduction than the debt-service memo would (\$0.35K and \$0.43K against the memo's \$2.75K and \$3.75K), so the choice runs pro-US at exactly the contested quintiles (it was made for EU-symmetry and double-counting reasons, not for outcome), while at Q5 the direction reverses, running against the United States (\$2.06K against a negligible memo figure). A population-average debt-service sensitivity bound remains an open task for later editions.

¹⁰OECD, Education at a Glance 2025 (Paris: OECD Publishing, 2025), Table B5.1: tuition fees at public bachelor's programs. Germany: €0 tuition (all 16 states eliminated fees by 2014); semester administrative fees €100–400. France: €175/year for EU citizens (fixed by Ministry of Higher Education, arrêté du 19 avril 2019).

7. The Pension Deduction

The OECD's Pensions at a Glance (2025) reports an average net replacement rate from mandatory pension schemes of 63.2% of pre-retirement net earnings for a full-career average-wage worker across OECD members. Replacement rates for the European anchor countries are as follows: Germany, 53.3% (below the OECD average); France, 70% net, including the mandatory complementary AGIRC–ARRCO occupational scheme.¹¹

The US mandatory system, Social Security, replaces approximately 43% of pre-retirement earnings for a medium earner, 57% for a low earner, and 28% for a high earner at the taxable maximum (SSA career-average earnings basis).¹² The OECD table cited above reports 51.3 percent for the United States on a different construction, a modeled full-career average-wage worker claiming at 67, so the OECD and SSA figures measure different quantities rather than disagreeing. The steep progressivity of the US system means the pension savings gap, defined as the additional voluntary saving required to reach European mandatory replacement levels, varies substantially by quintile, with lower earners receiving proportionally larger benefits relative to their pre-retirement income.¹³

Operative construction: pension deduction = CEX quintile wages × Vanguard How America Saves employee deferral rate for the income band × 0.65 employee share ÷ √persons, with a plan-access adjustment from BLS National Compensation Survey rates (2017 leg: matching-vintage NCS March 2017; DC-plan access 39/62/73/82 and participation 19/41/56/70 by wage quartile). Mids by fifth for both years are in the Section 4 component table (band: low = 65 percent of the mid; high = the construction without the plan-access adjustment). Vintage flag, bounded: the contribution-rate ladder is 2022-vintage against 2017 wages, but first-party Vanguard data (HAS 2018, Figure 36) show deferral rates by income moved ≤0.5pp over 2008–2017, and the average moved about half a point further by 2022 (6.8 percent in

¹¹OECD, Pensions at a Glance 2025 (Paris: OECD Publishing, 2025), Table 4.4 and the Figure 4.4 data file: net pension replacement rates from mandatory schemes, full-career average-wage worker. OECD average: 63.2%. United States: 51.3% (at age 67). Germany: 53.3% (confirmed in OECD 2025 Germany country pension note; flagged as below OECD average). France: 70.0% net (56.6% gross), average earner, mandatory schemes including the complementary AGIRC–ARRCO tier: OECD Pensions at a Glance 2025, Figure 4.4 data file (stat.link/y2ue6z; OECD pension models v1, updated 27-Nov-2025; retrieved July 19, 2026). OECD, Pensions at a Glance 2025, notes that France has a mandatory pension contribution rate of 27.8% and that countries with higher contribution rates often have above average pension benefits. France's mandatory system combines the Régime Général (public PAYG) and the mandatory AGIRC–ARRCO occupational points scheme.

¹²Social Security Administration, Actuarial Note 2024.9, "Replacement Rates for Hypothetical Retired Workers," by Kyle Burkhalter and Karen Rose, May 2024: medium earner ~43%; low earner ~57%; maximum earner ~28%: scheduled benefits at Normal Retirement Age (66 years 8 months for the 2024 cohort), career-average wage-indexed earnings basis; at age 65 the rates run roughly 3–8 points lower. Congressional Budget Office, "Social Security Replacement Rates and Other Benefit Measures: An In-Depth Analysis," April 2019 (quintile-level estimates).

¹³The deduction as constructed measures observed retirement saving, the cash amount households at each quintile actually divert toward retirement, and preserves the study's measured-cash basis. It does not measure the saving that would be required to match any particular European replacement level, which is a modeled quantity dependent on a target country, an assumed investment return, a career length, and a drawdown period. A preliminary author construction of that required-saving alternative, using the per-earner wage ladder and the replacement rates cited above, indicates that the two constructions differ by amounts small relative to every stated advantage, and that no Section 4 finding would change under the alternative: against Germany the required-saving deduction would be smaller than the observed deduction at every quintile, while against France it would be modestly larger from the middle quintile upward, at quintiles where the United States advantages are widest. The alternative construction, its assumptions, and its verification requirements, beginning with the 2022 average-wage anchor, are reserved for subsequent editions of this study, whose planned program extends the comparison set to additional European countries and continues to examine, test, and where warranted revise the study's methodological choices.

2016 to 7.3 percent in 2021, HAS 2022); applying the 2022 ladder to 2017 wages therefore overstates the 2017 deduction slightly, a bias against the United States absorbed within the pension band.

The US Social Security replacement rates are sourced directly from SSA actuarial data and carry high confidence. The European mandatory replacement rates are from OECD Pensions at a Glance 2025, with Germany and France confirmed at the country level through independent sources. The operative deduction is the observed-saving construction above. Adjustment ranges by quintile are carried in the accompanying model workbook, whose Derivation Spine rows 340 to 360 hold the sourced construction for both years.

8. How This Analysis Compares to Other Studies

Several studies compare post-tax, post-transfer cash income by quintile. The author is aware of none, in a search of the published and working-paper literature completed August 30, 2026, that subtracts measured privately borne healthcare spending (including household-paid premiums), measured private education spending, and a pension-security deduction from that income.¹⁴ This analysis fills that gap for Germany and France. The goal is to extend it across the full set of OECD and EU countries, both as a broad comparison and as a basis for groupings such as US vs. the Nordic countries, Canada, or the 10 Largest Peer Countries. The studies in the table below represent the closest adjacent work. Each covers one or two dimensions of the question; none covers all three at the quintile level.

¹⁴de Lima Lopes Junior (2026, SSRN, posted August 11, 2026) compares compulsory-payment burdens (labor taxes, consumption taxes, and employer-sponsored insurance premiums treated as compulsory payments) as shares of labor costs or income across earnings strata in the United States and fourteen Western European countries. The study's premium-inclusive comparison usefully documents that middle-income American compulsory burdens may approach European levels. The construction differs from this paper's in kind: the study compares payment burdens as ratios; this paper subtracts measured private healthcare, education, and retirement-saving outlays from post-fiscal cash income to produce comparable net income levels by quintile. The study's health layer is insurance premiums rather than measured household spending, and private education and retirement-saving costs are outside its scope.

Table 8. Related studies: income basis, quintile detail, cost treatment, and scope.

Study	Income basis	Quintile detail	Cost treatment	Scope
Blanchet–Chancel–Gethin (2022)	national income, public services imputed at cost	full distribution	in-kind added, nothing deducted	US + 26 European countries
OECD Adjusted Disposable Income	household income plus imputed public services	distributional	in-kind added	OECD members
Pew Research (2017)	PPP-adjusted disposable income	income-class bands	none	US vs Western Europe
Smith (2022)	cash income, healthcare distortion flagged unresolved	median	none	US vs Europe
Annunziata (2024)	cash income at market exchange rates	every quintile	none	US vs major European economies
Bruegel	productivity and hours per worker	aggregate	no household costs	US vs EU
Gramm–Ekelund–Early (2022)	income with transfers recounted at cost	quintiles	transfers added, no private costs deducted	US only
Agresti (2019)	consumption-based	bottom quintile only	none	cross-country
Garfinkel–Rainwater–Smeeding (2010)	welfare-state scope incl. in-kind and tax expenditures	aggregate	added, not deducted	US vs peers
This study	post-fiscal cash income	all five quintiles	healthcare, education, and pension costs deducted	US, Germany, France

The analysis compares the US to Germany and France. Several European countries (Ireland, Romania, and Malta, the EU's three lowest) have tax-to-GDP ratios near US levels but substantially smaller welfare states. Using the EU-27 average rather than Germany and France would produce a materially different picture and is beyond the scope of the present analysis.

The United States, Germany, and France have different mixes of young and old, workers and retirees, immigrants and native-born, and other demographic groups, in each income group. This paper does not

adjust for those population differences, a refinement that could easily help explain some of the differences between countries.

The long-run fiscal position of both systems introduces an asymmetric risk not reflected in current-year figures. Federal debt is rising and the Social Security trust fund faces projected depletion by approximately 2034, after which the system could sustain only approximately 83% of scheduled benefits absent legislative intervention (SSA Trustees Report, 2026). European mandatory pension systems face demographic pressures but no equivalent statutory depletion mechanism: the German and French systems are pay-as-you-go, backstopped by general revenue (in Germany, total federal payments to the statutory pension system, subsidies plus contribution payments and reimbursements, already finance roughly a third of statutory pension benefit outlays: €103 billion against €323 billion in 2022, 32 percent), and France legislated a 2023 increase in the minimum retirement age from 62 to 64 against projected deficits.¹⁵ These items, and other determinants and results regarding fiscal health, are beyond the scope of this study.

Several material dimensions of economic well-being are not quantified in this analysis, including statutory paid parental leave, statutory vacation entitlements, employment protection legislation, and housing stability. A comprehensive welfare comparison would require separate treatment of each.¹⁶

The method produces comparable numbers where cross-country differences in household burdens flow through private outlays that expenditure surveys measure. In the Nordic countries, including Sweden, provision is predominantly in kind in exactly the categories this paper subtracts: households face little private cost because taxes finance publicly provided or heavily subsidized services, such as municipal childcare with capped parent fees, tuition-free higher education, tax-financed health care with capped patient charges, and municipally provided long-term care. None of that value appears in a measure built on cash income and private spending, so the construction returns a figure for Sweden that reflects the structure of welfare delivery rather than household living standards. Extending the comparison requires an additional accounting row: the quintile-allocated, per-equivalent-adult value of tax-financed in-kind services, covering at minimum early childhood care and education and long-term care, valued on a stated basis, converted at parities appropriate to government services, and constructed for every country compared, the United States included. Allocations of that kind exist today mainly as individual research

¹⁵Congressional Budget Office, *The Long-Term Budget Outlook: 2024 to 2054* (Washington, DC: CBO, March 2024): federal debt projected to reach 166% of GDP by 2054 under current law. SSA Trustees Report 2026 (as cited in Section 8): OASDI depletion projected 2034 (third quarter). Potential benefit cuts or tax increases post-depletion would reduce Q2–Q4 net income and widen the pension gap. German Federal Government, *Rentenversicherungsbericht 2023*: total federal payments to the statutory pension system (subsidies plus contribution payments and reimbursements) of €103 billion against statutory pension benefit outlays of €323 billion in 2022, 32 percent; *Deutsche Rentenversicherung* (2024): €112 billion against €340 billion in 2023, 33 percent. U.S. Social Security Administration, *International Update*, June 2023: France's 2023 reform raises the minimum retirement age from 62 to 64, phased to 2030; the Conseil d'orientation des retraites projects the reform to roughly halve, not eliminate, the 2030 system deficit (from about 0.4 to about 0.2 percent of GDP).

¹⁶Paid parental leave data: ILO, "Maternity and Paternity at Work," 2023 (EU 14–52 weeks paid; US 0 federal). Vacation: EU Working Time Directive 2003/88/EC (20 days minimum); US: none (FLSA). Monetization attempts: OECD, *How's Life? 2020* (Paris: OECD Publishing, 2020), ch. 4, attempts to value non-cash well-being factors but does not produce household-income-equivalent figures by quintile. Childcare: US infant care ~\$10,000–15,000/year (Economic Policy Institute, "Child Care Costs in the United States," 2023); Germany Kita subsidies result in effective costs of ~€100–300/month (BMFSFJ, 2023); France crèche: means-tested, typically €200–600/month effective cost. Most material for Q2–Q3 households with young children.

estimates rather than regularly published statistical tables comparable across countries; assembling that row from published sources is the condition for Nordic coverage in a subsequent edition.

Read as a body, the comparative studies reviewed here, together with this paper's own tables, establish four points and leave one open. First, the US makes the largest net transfer to its bottom half of any of the 27 countries measured (6% of national income, robust to the study's allocation variants), with the same verdict reached independently by the transfer-recount literature (Gramm–Ekelund–Early 2022) and the total-spending literature (Garfinkel–Rainwater–Smeeding 2010). The same accounting carries a companion result, quoted as the study states it: the United States has the most progressive tax system of the 27 countries measured, the US and 26 European countries, with all taxes counted, including sales taxes, on the study's headline measure of progressivity (under the study's alternative working-age measure, only the United Kingdom ranks ahead); the progressivity is driven by light taxation at the bottom, not heavy taxation at the top. Second, the answer to who is better off at the bottom, the American, German, or French bottom fifth, depends on the accounting rung. On pretax income, counted before taxes and government transfers, the US bottom ranks worst among developed countries (Blanchet–Chancel–Gethin 2022). Counting transfers at what they cost the government favors the United States. The corrected cash comparison in this study's Section 3 shows those bottom fifths nearly even, with small gaps each way: Germany a little ahead of the United States on 2022 cash, and the United States a little ahead of France, which reconciles Annunziata's threshold comparison. None of those earlier accountings subtracts what households must pay privately for healthcare, education, and retirement; that subtraction is the step this study adds. Third, the annual hours gap is large (OECD 2022) and its mechanism is contested at the highest level of the field (Prescott 2004 vs Alesina–Glaeser–Sacerdote 2005), which is why this paper draws no per-hour welfare verdict. Fourth, the aggregate-level commentary dispute, whether Europe's economy has fallen behind America's or merely looks that way depending on the price conversion, is the same corrections-versus-choices structure at the scale of whole economies; for a household living-standards question, current-year purchasing-power conversion is the defensible instrument. The open discussion, the magnitude of the US top-share rise (PSZ vs Auten–Splinter), does not bear on this study's results: nothing here relies on top-income shares or the contested assumptions about assigning income that never appears on tax returns; where BCG top-share figures are cited, the Auten–Splinter variant from BCG's own appendix is footnoted.

This study's contribution: it presents a new way to compare one measure of economic well-being, the money left over after paying for the largest social programs. It subtracts required private outlays for health, education, and pension security from correctly converted post-fiscal cash income, by quintile, across countries. The result for the countries this study covers is a crossover: Germany and France ahead at the bottom fifth; Germany at the second; a US middle-fifth advantage over both (Section 4); a US fourth-fifth advantage; and the widest US advantages at the top fifth. The bottom-fifth result combines a cash comparison with measured private costs; the dispute in the literature concerns the cash comparison. Three independent lines support the cash comparison used here: decile means from the Luxembourg Income Study, on a conversion basis separate from this paper's; the distributional-national-accounts tradition's own cumulative growth accounting; and the tracing of the one series pointing the other way, the WID bottom-decile gap, to a unit-of-measurement artifact its own producers have documented (Fisher-Post and Gethin, WID Working Paper 2023/17). The study also offers an opportunity, mentioned above, to expand the analysis to other countries and to delve deeper into demographics as a way to explain some of the differences between countries.

This study's tables find a crossover in both analysis years: Germany and France ahead of the United States on net disposable income at the bottom fifth, Germany at the second, and the United States ahead

from the middle fifth upward, by wide margins at the fourth and top fifths, with the middle fifth carried as a central estimate inside overlapping ranges (Section 4). The same tables locate where the bottom-of-the-distribution difference arises: in seven of the eight cells across the two years where Germany or France ends ahead or even, the United States enters with as much or more post-fiscal cash, and the ordering is set on the cost side of the ledger, chiefly healthcare; the exception is Germany at the bottom fifth in 2022: Germany leads by about \$1,500 on cash income, and the private-cost subtraction widens its lead to about \$4,000; there, the costs, not the cash, create most of the gap. On the question these findings are often recruited to answer (whether the United States should redistribute more, or organize provision as Germany and France do) this study takes no position; the crossover, the transfer ranking, and the cost-side arithmetic are what any account of these systems must accommodate.

Further work. The method extends naturally in four directions: a quintile-level treatment of the uncounted in-kind layer, engaging the European incidence literature and extending coverage to the Nordic systems; benchmarking of the survey-based cost inputs against administrative and accounts-based totals; a required-saving variant of the pension deduction, calculating the saving needed to meet a target replacement rate rather than subtracting observed contributions; and extension of the framework to additional OECD countries as comparable published tables permit. Each is an extension of the present method rather than a revision of it; the estimates reported here are the baseline those extensions would test.

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Supplementary material. The traceable model workbook is deposited at Zenodo (concept DOI 10.5281/zenodo.21962538); supplementary materials may be added to the same record in later versions.