

**Hypothetical Examples of the Relationship Between
Earnings and After-Tax Income for Married and Single Taxpayers:
Supplemental Material for *Effective Marginal Tax Rates for
Low- and Moderate-Income Workers in 2016***

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In this document, the Congressional Budget Office illustrates the after-tax income—which is market income plus government transfers minus taxes—for hypothetical families consisting of a married taxpayer with two children and a single taxpayer with no children (see Figure 1). Those illustrations supplement the analysis of the relationship between earnings and after-tax income for a hypothetical single parent with one child.¹

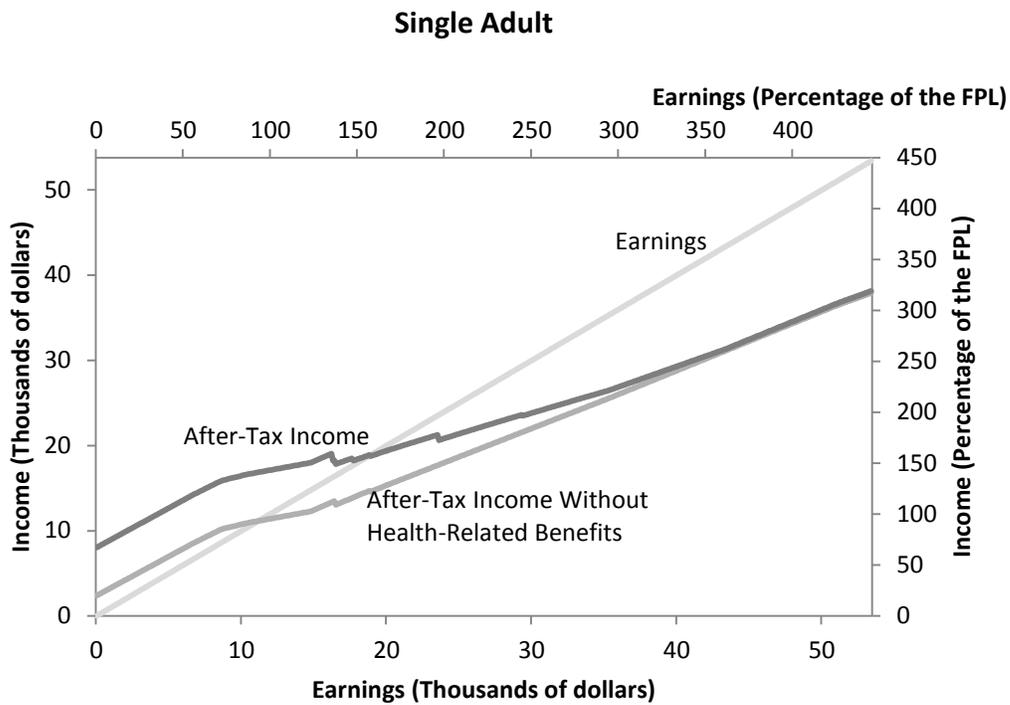
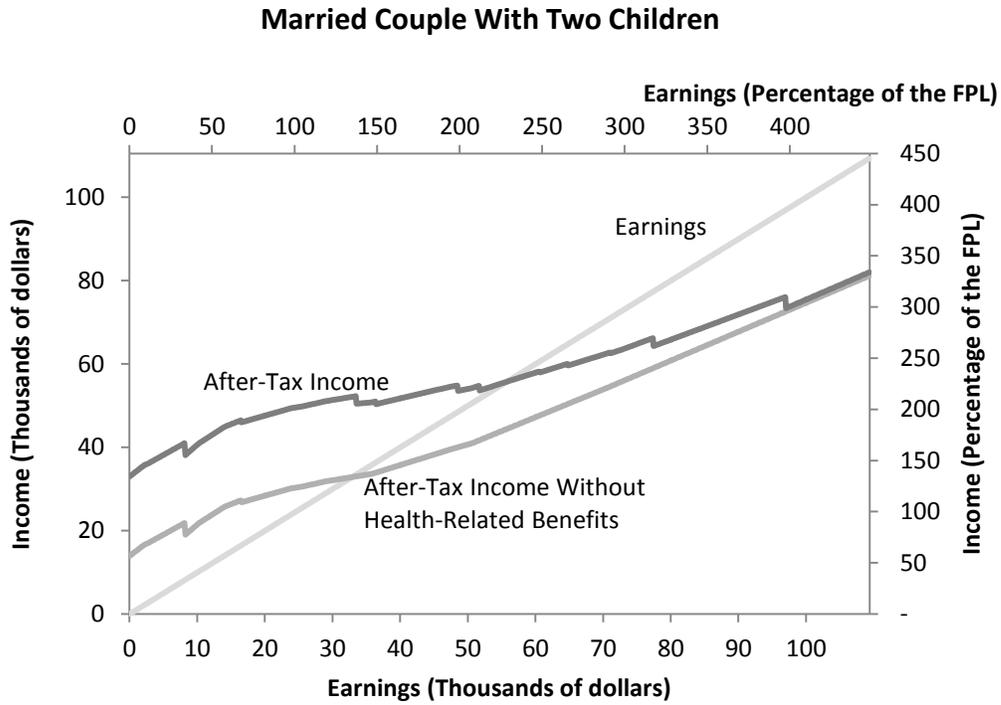
Like the full report, this supplemental material focuses on households with income below 450 percent of the federal poverty guidelines (commonly known as the federal poverty level, or FPL) in 2016. Those guidelines for 2016 are \$11,880 for a household of one, \$16,020 for a household of two, and \$24,300 for a household of four.² After-tax income is calculated as the sum of earnings and transfers—from Temporary Assistance for Needy Families, the Supplemental Nutrition Assistance Program (formerly the Food Stamp program), Medicaid, the Children’s Health Insurance Program, and cost-sharing subsidies for health insurance—minus tax liabilities (from federal individual income taxes, state individual income taxes, and federal payroll taxes). This analysis is based on income tax rates in effect in Pennsylvania as well as the rules governing transfer programs in that state in 2015. Pennsylvania was chosen because its tax and transfer systems were generally similar to those in many other states in that year.

¹ See Congressional Budget Office, *Effective Marginal Tax Rates for Low- and Moderate-Income Workers in 2016* (November 2015), www.cbo.gov/publication/50923.

² The federal poverty guidelines for 2016 used in this document are those that the Department of Health and Human Services (HHS) released in January 2016. The HHS guidelines were not available when CBO released the full report in November 2015. In that report, CBO relied on its estimates of the federal poverty guidelines in 2016 when showing the relationship between earnings and after-tax income for a single parent with one child. CBO estimated that the federal poverty guideline for a family of two in 2016 would be \$16,150, or \$130 more than the final amount that HHS announced in January. CBO has updated that figure to reflect the recently announced HHS guidelines (see the data underlying these hypothetical examples on the agency’s website).

Figure 1.

The Relationship Between Earnings and After-Tax Income for Two Hypothetical Families in 2016



Source: Congressional Budget Office.

After-tax income was calculated as the sum of earnings and transfers (from TANF, SNAP, Medicaid, CHIP, and the cost-sharing subsidies for health insurance) minus tax liabilities (from federal individual income taxes, state individual income taxes, and federal payroll taxes). State income taxes and transfer benefits from TANF and SNAP were computed by using stylized rules based on those in effect in Pennsylvania in 2015. See Congressional Budget Office, *Effective Marginal Tax Rates for Low- and Moderate-Income Workers* (November 2012), www.cbo.gov/publication/43709, for more information regarding the estimation of the state taxes and transfers.

Health-related benefits consist of the premium assistance tax credit, Medicaid, CHIP, and cost-sharing subsidies for health insurance. The amount of the family's health benefits depends greatly on the valuation of health insurance coverage, which can vary by source. In both scenarios, the workers do not have employment-based health insurance, whose value tends to be substantial for people who have it. People with such health insurance are generally ineligible for the premium assistance tax credit and cost-sharing subsidies, and if their children were insured, they would be ineligible for CHIP. Under the eligibility rules in Pennsylvania in 2015, eligibility for Medicaid and CHIP was limited to individuals whose income is below 138 percent of the FPL and 314 percent of the FPL, respectively. The value of Medicaid benefits is taken from CBO's projections of the nationwide average cost per adult and child to both federal and state governments in 2016; the average cost of Medicaid for the child is also used as the value of CHIP benefits. The value of the premium assistance tax credit is based on CBO's projections of average reference premiums for a policy covering one adult or a family policy covering either two adults or two adults and two children in 2016 nationwide.

The first example incorporates the assumption that the taxpayer files jointly, has two children, and when eligible on the basis of earnings, claims the EITC, CTC, and premium assistance tax credit. The second example is based on the assumption that the taxpayer is single and has no children, and when eligible on the basis of earnings, claims the EITC and premium assistance tax credit. Both examples incorporate the assumption that all income is from earnings and that the taxpayer has itemized deductions worth 18 percent of income and claims the greater of those deductions or the standard deduction.

CHIP = Children's Health Insurance Program; CTC = child tax credit; EITC = earned income tax credit; FPL = federal poverty guidelines (commonly known as the federal poverty level); SNAP = Supplemental Nutrition Assistance Program; TANF = Temporary Assistance for Needy Families.
