Reducing Income Inequality through Progressive Tax Policy: The Effects of Recent Tax Changes on Inequality

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To what extent have the Administration's progressive tax policies mitigated the effects of rising income inequality? Since 2009, average tax burdens decreased by several hundred dollars for the lower half of the income distribution and increased substantially among families in the top 1 percent and top 0.1 percent. As a result, after-tax income increased for lower-income families and declined among the highest-income households, causing inequality in after-tax income to fall. The reduction in income inequality is large in historical context, offsetting 8 to 29 percent of the increase in inequality since the late 1970s depending on how inequality is measured. While substantial income inequality remains, the recent experience illustrates the powerful effect that progressive tax policy can have on inequality, and indicates that additional progressive changes in tax policy could continue to play an important role in promoting shared economic growth.

Comparison of Pre-Obama Administration Law to Current Policy

The analysis presented in Table 1 compares the tax system under current policy as of 2017 (Current Policy)[1] to a counterfactual tax law that would have prevailed in the absence of the Administration's tax policies. We assume that under pre-Obama Administration law the tax cuts enacted in 2001 and 2003 are permanently extended. Tax burdens shown in the Table are computed based on the income levels currently projected for 2017.[2] Comparing distributions of tax burdens based on fixed pre-tax incomes isolates the effects of tax policy changes from other income and economic changes.

The Obama Administration tax policy changes include the increased tobacco tax in the Children's Health Insurance Program Reauthorization Act (CHIPRA) of 2009; the American Opportunity Tax Credit (AOTC), increased child tax credit (CTC) and increased earned income tax credit (EITC) enacted in the American Recovery and Reinvestment Act (ARRA) of 2009; tax provisions in the Patient Protection and Affordable Care Act (ACA); the individual income tax increases for high-income families and estate tax changes in the American Taxpayer Relief Act (ATRA) of 2012; and the permanent extension of many expiring provisions in the Protecting Americans from Tax Hikes Act (PATH) of 2015. Loosely speaking, the ATRA changes repealed much of the 2001 and 2003 tax cuts for high-income families.

The analysis excludes changes in spending associated with these pieces of legislation. For instance, the analysis does not include expanded Medicaid eligibility resulting from the ACA, which is estimated by the Congressional Budget Office to provide coverage for about 11 million low-income individuals at a cost of $67 billion in 2017.[3] Similarly, it does not include the reauthorization of the Children's Health Insurance Program in 2009, which was financed by the tobacco tax increase. Including these provisions would make the net effect of policy changes enacted during the Obama Administration even more progressive.

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[1] Current Policy includes current law and a number of temporary provisions that are scheduled to expire at the end of 2016 but are routinely extended by Congress.

[2] Using 2017 as the comparison point means that some tax provisions are not completely phased-in, e.g., the excise tax on high-cost ("Cadillac") health plans, enacted as part of the ACA, and carryover basis for assets transferred by high-wealth decedents, which is a feature of pre-Obama Administration law. Allowing more complete phase-in of these provisions would not materially change the conclusions of this analysis.

[3] An analysis that includes all of the ACA coverage provisions is shown in the Appendix. A discussion of these policy changes is also provided in the Council of Economic Advisers report: "The Economic Record of the Obama Administration: Progress Reducing Inequality."

Policies enacted during the Obama Administration increased the overall federal tax burden in 2017 by about $107 billion.[4] This measure of federal tax burden includes the effects of the individual income tax, payroll taxes, excise taxes, and an individual's allocated share of the burden of corporate income taxes and the estate and gift tax.

The enacted policies made the tax system much more progressive than it was under pre-existing law. The increase in tax burden is highly concentrated at the very top of the income distribution. The average effective federal tax rate for the top 0.1 percent of families increased by 6.7 percentage points (from 31.0 to 37.7 percent), and after-tax income was therefore reduced by 9.7 percent. This is equivalent to an average tax burden increase of nearly $550,000 per family. The rest of the top 1 percent of families experienced an average effective tax rate increase of about 3.6 percentage points (from 29.0 percent to 32.6 percent) and a decrease in after-tax income of 5.0 percent, or about $32,000 in additional federal tax burden.

By contrast, lower-income families experienced proportionately large reductions in tax burden, and middle-income families had relatively small changes in tax burden. For example, families in the lowest 10 percent of the income distribution saw their average effective tax rate fall by 9.7 percentage points (from -0.6 to -10.3 percent) and experienced a reduction in their annual tax burden of almost $850—equal to an increase in disposable after-tax income of 9.7 percent.

The reductions in tax burdens (and increases in after-tax income) among lower-income families are largely the result of the expanded tax credits enacted in ARRA (which boosted the Child Tax Credit and EITC, and created the American Opportunity Tax Credit) and financial assistance for purchasing health insurance enacted in the ACA. The increases in effective tax rates among high-income taxpayers are primarily driven by increases in income tax rates on ordinary income and capital gains and dividends. The major changes include: ATRA's repeal of the 2001 and 2003 individual income tax rate cuts for high-income families, increases in tax rates on dividends and long-term capital gains, reinstatement of the personal exemption phaseout and itemized deduction limitation, reinstatement of the estate tax, and the ACA's increase in Medicare payroll taxes and imposition of a new net investment income tax.[5]

How Changes in the Tax System Affected Inequality in After-Tax Income

The federal tax system is highly progressive, and changes enacted during this Administration have made it more progressive. Nevertheless, because the pre-tax distribution of income is highly skewed, the after-tax distribution remains quite unequal. For example, families in the bottom half of the income distribution are expected to receive only 14.6 percent of pre-tax income in 2017, and would receive about 17.1 percent of after-tax income under pre-Obama Administration law and 17.7 percent under Current Policy. By contrast, families in the top 1 percent of the income distribution are expected to receive 18.8 percent of pre-tax income in

[4] This $107 billion is not a revenue estimate because it does not incorporate behavioral responses that generally reduce realized income, and thus the actual revenue raised, by these tax changes.
[5] The restoration of the estate tax represents roughly 10 percent of the change in burden among high-income taxpayers.

2017, and would receive 16.5 percent of after-tax income under pre-Obama Administration law, and 15.4 percent under Current Policy.

That said, recent tax-induced changes are large in historical context and have substantially reduced income inequality. The top panel of Table 2 provides estimates of how inequality in after-tax income changed as a result of recently-enacted legislation, using several commonly-used measures of inequality. The bottom panel compares the effects of those changes to the historical increase in inequality estimated by the CBO starting in 1979, which is roughly when income inequality began rising.[6] Although comparisons between Treasury and CBO estimates should be made cautiously because of differences in methodology, the CBO series provide the most comparable and comprehensive estimates of the magnitude of the historical increase in inequality and therefore the best available benchmark against which to assess the efficacy of recent and proposed legislation.

By the yardstick of the CBO series, recently-enacted tax legislation has offset between 8 and 29 percent of the four-decade-long increase in income inequality. The first column in Table 2 provides estimates of the Gini coefficient of after-tax income under pre-Obama law and current policy, and shows that the Gini coefficient declined by about 0.009 because of enacted policy. This is about 8 percent of the increase in this measure of inequality between 1979 and 2007 (the pre-recession peak), according to the CBO, and 11 percent of the increase between 1979 and 2013 (the most recent estimate).

Columns 2-5 repeat these comparisons for alternative measures of inequality, starting with the ratio of the income of families at the 90th percentile of the income distribution to the 20th percentile. According to this measure, enacted legislation has offset between 27 percent and 29 percent of the increase in inequality. Similarly, recent changes in tax policy have offset between 15 and 18 percent of the increase in the ratio of income between the 99th percentile and the 20th percentile, and between 13 and 22 percent of the increase in the ratio of the average income of the top 1 percent to the average income of the middle 20 percent of families. The final column shows that enacted policy has reduced the concentration of after-tax income in the top 1 percent by 12 to 22 percent of its historical increase.

Among lower-income families, the increase in after-tax income is similarly striking. According to the CBO, the after-tax income growth of the bottom 20 percent of families averaged only 1.14 percent per year from 1979 to 2013. Hence, the 9.7 percent increase in the after-tax income of the 10 percent of families with the lowest incomes caused by tax legislation enacted in the Obama Administration is equal to over eight additional years of average income growth for this group.

These recent tax changes illustrate the powerful effects that progressive tax policy can have on the distribution of income and how further changes could further reduce income inequality. The Administration's FY 2017 budget includes several proposals that would substantially increase the progressivity of the tax system relative to current policy. While much of the increase in progressivity in the tax system enacted since 2009 arises from a combination of higher marginal rates on top income households and an expansion of tax benefits for lower-income households,

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[6] The Distribution of Household Income and Federal Taxes, 2013, Supplemental Data.

the Administration's budget proposals would increase progressivity largely by curtailing tax expenditures that benefit higher-income taxpayers and reforming existing benefits for lower-income taxpayers. For instance, the largest progressivity-increasing proposals include the limitation on value of tax expenditures for high-income taxpayers, the elimination of the exclusion for stepped-up basis, and the broadening of the tax base for the payroll tax on self-employed individuals and the net investment income tax base. Enacting these policies would further reduce inequality in after-tax income.

Table 1: Pre-Obama Law and Current Policy[1]

(2017 Income Levels under 2017 Current Law)

Adjusted Cash Income Percentile[2]	Number of Families (millions)	Distribution of Cash Income (%)	Average Federal Tax Rate[3]		Average Tax Change	Change in After-Tax Income	Distribution of After-Tax Income	
			Pre-Obama Law (%)	Current Policy (%)	Pre-Obama Law to Current Policy ($)	Pre-Obama Law to Current Policy (%)	Pre-Obama Law (%)	Current Policy (%)
0 to 10[4]	16.4	1.0	-0.6	-10.3	-848	9.7	1.2	1.3
10 to 20	17.2	2.1	0.7	-4.5	-923	5.2	2.6	2.7
20 to 30	17.2	2.8	4.7	1.4	-805	3.5	3.4	3.5
30 to 40	17.2	3.7	7.4	5.5	-613	2.0	4.3	4.5
40 to 50	17.2	5.0	10.0	9.2	-329	0.8	5.6	5.7
50 to 60	17.2	6.6	12.7	12.3	-226	0.4	7.2	7.3
60 to 70	17.2	8.5	14.9	14.9	-6	0.0	9.1	9.2
70 to 80	17.2	11.2	17.5	17.6	70	-0.1	11.5	11.6
80 to 90	17.2	15.5	20.7	20.8	135	-0.1	15.4	15.5
90 to 100	17.2	45.1	26.4	28.9	9,710	-3.4	41.6	40.6
Total[4]	172.1	100.0	20.2	20.9	624	-0.9	100.0	100.0
90 to 95	8.6	11.2	22.9	23.2	541	-0.4	10.8	10.8
95 to 99	6.9	15.2	24.6	25.4	2,706	-1.1	14.4	14.3
99 to 99.9	1.5	9.4	29.0	32.6	31,863	-5.0	8.3	8.0
Top .1	0.2	9.4	31.0	37.7	548,941	-9.7	8.2	7.4

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Notes:

[1]Both current policy and pre-Obama law include a list of individual, business and energy tax provisions that are scheduled to expire at the end of 2016 but were regularly extended by Congress (provisions referred to as “extenders”). Current policy is current law with the extenders. Pre-Obama law eliminates from current law a number of key tax provisions enacted during the Obama administration, including: the higher tax rate on tobacco enacted in CHIPRA; the AOTC and the expansions of the child tax credit and EITC enacted in ARRA; provisions in the Affordable Care Act; and the higher top ordinary and capital gains and dividend tax rates, and the reinstatement of the personal exemption phaseout (PEP) and phaseout of itemized deductions (Pease) enacted in ATRA. Pre-Obama law also replaces the AMT parameters enacted in ATRA with a more generous AMT “patch.” In addition, pre-Obama law replaces the estate tax adopted in ATRA with the carryover basis provisions provided for under EGTRRA. Finally, pre-Obama law restores the 0.2% FUTA surtax that expired in 2011.

[2] Cash Income consists of wages and salaries, net income from a business or farm, taxable and tax-exempt interest, dividends, rental income, realized capital gains, cash and near-cash transfers from the government, retirement benefits, and employer-provided health insurance (and other employer benefits). Employer contributions for payroll taxes and the federal corporate income tax are added to place cash on a pre-tax basis. Families are placed into deciles based on cash income adjusted for family size, by dividing income by the square root of family size.

[3] The taxes included are individual and corporate income, payroll (Social Security, Medicare and unemployment), excises, customs duties, and estate and gift taxes. Individual income taxes are assumed to be borne by payers, payroll taxes (employer and employee shares) by labor (wages and self-employment income), excises on purchases by individuals in proportion to relative consumption of the taxed good and proportionately by labor and capital income, excises on purchases by businesses and customs duties proportionately by labor and capital income, and estate and gift taxes by decedents. The share of the corporate income tax that represents cash flow is assumed to have no burden in the long run; the share of the corporate income tax that represents a tax on supernormal returns is assumed to be borne by supernormal corporate capital income as held by shareholders; and the remainder of the corporate income tax, the normal return, is assumed to be borne equally by labor and positive normal capital income.

[4] Families with negative incomes are excluded from the lowest income decile but included in the total line.

Percentiles begin at family size-adjusted cash income of: $10,902 for 10 to 20; $16,165 for 20 to 30; $21,713 for 30 to 40; $28,753 for 40 to 50; $37,516 for 50 to 60; $48,381 for 60 to 70; $61,100 for 70 to 80; $80,449 for 80 to 90; $117,224 for 90 to 95; $165,373 for 95 to 99; $379,371 for 99 to 99.9 and $1,734,164 for Top .1.

Table 2: Income Inequality under Pre-Obama Law and Current Policy

(2017 Income Levels under 2017 Current Law)

Policy Scenario	Index of Inequality[1]: Gini Coefficient	P90/P20	P99/P20	A(Top1)/A(Middle20)	Top 1 Percent Share
Cash Income	0.571	7.25	23.47	32.36	18.80
After-Tax Income					
Pre-Obama Law	0.536	5.83	18.26	25.59	16.50
Current Policy	0.527	5.63	17.38	23.57	15.40
Effect of Policy					
(1) Pre-Obama Law to Current Policy	-0.009	-0.20	-0.89	-2.02	-1.10
Trend in Income Inequality[2]	CBO (2016) After-Tax Income[3]	CBO (2016) Before-Tax Income[4]	CBO (2016) Before-Tax Income[5]	CBO (2016) After-Tax Income[6]	CBO (2016) After-Tax Income[7]
(2) Change in Index, 1979-2007	0.107	0.69	6.10	15.78	9.3
(3) Change in Index, 1979-2013	0.084	0.75	4.94	9.17	5.0
Effect of Policy Relative to Trend					
Enacted Tax Changes: (1)/(2)	-8%	-29%	-15%	-13%	-12%
Enacted Tax Change: (1)/(3)	-11%	-27%	-18%	-22%	-22%

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[1] The Gini index ranges from zero to one, with zero indicating perfect equality (i.e., each family has the same income) and one indicating perfect inequality (i.e., one family has all of the income). The P90/P20 index is the ratio of income at the 90th percentile of income distribution to the income at the 20th percentile of income distribution. Income are adjusted for family size for calculating these indexes. A(Top1)/A(Middle20) is the ratio of average income of the top 1 percent of the families to the average income of middle quintile families. Income groups are defined by cash income adjusted for family size.

[2] Sources: CBO (2016) "The Distribution of Household Income and Federal Taxes, 2013."

[3] CBO (2016) Supplemental Table 8, Column D

[4] CBO (2016) Supplemental Table 4, Ratio of Column I to Column C "One-Person Household"

[5] CBO (2016) Supplemental Table 4, Ratio of Column K to Column C "One-Person Household"

[6] CBO (2016) Supplemental Table 3, Ratio of Column M to Column D "Average After-Tax-Income (2013 Dollars)"

[7] CBO (2016) Supplemental Table 3, Column M "Share of After-Tax-Income (Percent)"

Appendix: Distribution of Changes in Tax Policy Since 2009 and ACA Coverage Provisions

This appendix provides a more comprehensive analysis of how changes in tax policy and ACA Coverage Provisions affected the distribution of after-tax income. The analysis incorporates the effects of coverage provisions that are included in the baseline for 2017 current law income. As a result, the distribution of after-tax income and the percentage changes in after-tax income shown in Table A-1 are slightly different and not directly comparable with the percentage changes in the paper, which are calculated with respect to 2017 current law income. This more comprehensive analysis of the effects of policy changes since 2008 is discussed fully in the Council of Economic Advisers report: "The Economic Record of the Obama Administration: Progress Reducing Inequality."

Table A-1: Pre-Obama Law and Current Policy[1]

(2017 Income Levels)

Adjusted Cash Income Percentile[2]	Number of Families	Distribution of Cash Income	Average Federal Tax Rate[3]		Average Transfer and Tax Change from Pre-Obama Law to Current Policy[4]	Change in After-Tax Income from Pre-Obama Law to Current Policy[4]	Distribution of After-Tax Income	
			Pre-Obama Law	Current Policy			Pre-Obama Law	Current Policy
	(millions)	(%)	(%)	(%)	($)	(%)	(%)	(%)
0 to 10[5]	16.4	1.0	-0.6	-10.3	-2,080	27.1	1.1	1.4
10 to 20	17.2	2.1	0.7	-4.5	-2,289	13.9	2.4	2.7
20 to 30	17.2	2.8	4.7	1.4	-2,079	9.4	3.2	3.5
30 to 40	17.2	3.7	7.4	5.5	-1,005	3.4	4.3	4.5
40 to 50	17.2	5.0	10.0	9.2	-410	1.1	5.7	5.7
50 to 60	17.2	6.6	12.7	12.3	-243	0.5	7.3	7.3
60 to 70	17.2	8.5	14.9	14.9	-7	0.0	9.2	9.2
70 to 80	17.2	11.2	17.5	17.6	70	-0.1	11.6	11.6
80 to 90	17.2	15.5	20.7	20.8	135	-0.1	15.5	15.5
90 to 100	17.2	45.1	26.4	28.9	9,710	-3.4	41.8	40.5
Total[5]	172.1	100.0	20.2	20.9	189	-0.3	100.0	100.0
90 to 95	8.6	11.2	22.9	23.2	541	-0.4	10.8	10.8
95 to 99	6.9	15.2	24.6	25.4	2,706	-1.1	14.4	14.3
99 to 99.9	1.5	9.4	29.0	32.6	31,863	-5.0	8.4	8.0
Top .1	0.2	9.4	31.0	37.7	548,941	-9.7	8.2	7.4

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Notes:

[1]Both current policy and pre-Obama law include a list of individual, business and energy tax provisions that are scheduled to expire at the end of 2016 but were regularly extended by Congress (provisions referred to as “extenders”). Current policy is current law with the extenders. Pre-Obama law eliminates from current law a number of key tax provisions enacted during the Obama administration, including: the higher tax rate on tobacco enacted in CHIPRA; the AOTC and the expansions of the child tax credit and EITC enacted in ARRA; provisions in the Affordable Care Act (including expanded Medicaid eligibility); and the higher top ordinary and capital gains and dividend tax rates, and the reinstatement of the personal exemption phaseout (PEP) and phaseout of itemized deductions (Pease) enacted in ATRA. Pre-Obama law also replaces the AMT parameters enacted in ATRA with a more generous AMT “patch.” In addition, pre-Obama law replaces the estate tax adopted in ATRA with the carryover basis provisions provided for under EGTRRA. Finally, pre-Obama law restores the 0.2% FUTA surtax that expired in 2011. Pre-Obama law is referred to as 2008 policy in the Council of Economic Advisers report: “The Economic Record of the Obama Administration: Progress Reducing Inequality."

[2] Cash Income consists of wages and salaries, net income from a business or farm, taxable and tax-exempt interest, dividends, rental income, realized capital gains, cash and near-cash transfers from the government, retirement benefits, and employer-provided health insurance (and other employer benefits). Employer contributions for payroll taxes and the federal corporate income tax are added to place cash on a pre-tax basis. Families are placed into deciles based on cash income adjusted for family size, by dividing income by the square root of family size.

[3] The taxes included are individual and corporate income, payroll (Social Security, Medicare and unemployment), excises, customs duties, and estate and gift taxes. Individual income taxes are assumed to be borne by payers, payroll taxes (employer and employee shares) by labor (wages and self-employment income), excises on purchases by individuals in proportion to relative consumption of the taxed good and proportionately by labor and capital income, excises on purchases by businesses and customs duties proportionately by labor and capital income, and estate and gift taxes by decedents. The share of the corporate income tax that represents cash flow is assumed to have no burden in the long run; the share of the corporate income tax that represents a tax on supernormal returns is assumed to be borne by supernormal corporate capital income as held by shareholders; and the remainder of the corporate income tax, the normal return, is assumed to be borne equally by labor and positive normal capital income. The denominator for the tax rates is cash income under 2017 current law, including ACA expanded Medicaid eligibility.

[4] Transfers (e.g., expanded Medicaid) are treated as negative taxes for calculating total transfer and tax changes. Pre-ACA, after-tax income under pre-Obama law is the denominator used for calculating the percentage changes in after-tax income due to the transfer and tax changes.

[5] Families with negative incomes are excluded from the lowest income decile but included in the total line.

Percentiles begin at family size-adjusted cash income of: $10,902 for 10 to 20; $16,165 for 20 to 30; $21,713 for 30 to 40; $28,753 for 40 to 50; $37,516 for 50 to 60; $48,381 for 60 to 70; $61,100 for 70 to 80; $80,449 for 80 to 90; $117,224 for 90 to 95; $165,373 for 95 to 99; $379,371 for 99 to 99.9 and $1,734,164 for Top .1.