Policies to Address Income Inequality and Increase Economic Opportunities for Low-Income Families

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ABSTRACT

This paper assesses tax policies and related measures that are often considered in public discussions of income inequality. The particular focus is on ways to improve incomes at the bottom of the income distribution. Greater inequality over the past several decades reflects not just soaring incomes at the top, but also stagnant earnings at the bottom and the increased return to skills and education that divides the top from the bottom. While redistributionist measures are likely to be only modestly effective in addressing inequality, efforts to improve individual incentives for work could make a meaningful impact in raising both before- and after-tax incomes at the bottom. Stagnant earnings at the bottom are of concern from both a distributional perspective and a growth-maximizing perspective, as this situation means that society is not benefiting from the full potential of human capital.

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Keywords: inequality, EITC, tax policy, assistance, entitlements, family allowances, means testing, poverty alleviation, public assistance, safety net, social welfare programs, SSI, transfer payments, transfers, welfare effects, welfare policy, welfare program, welfare provision, work welfare

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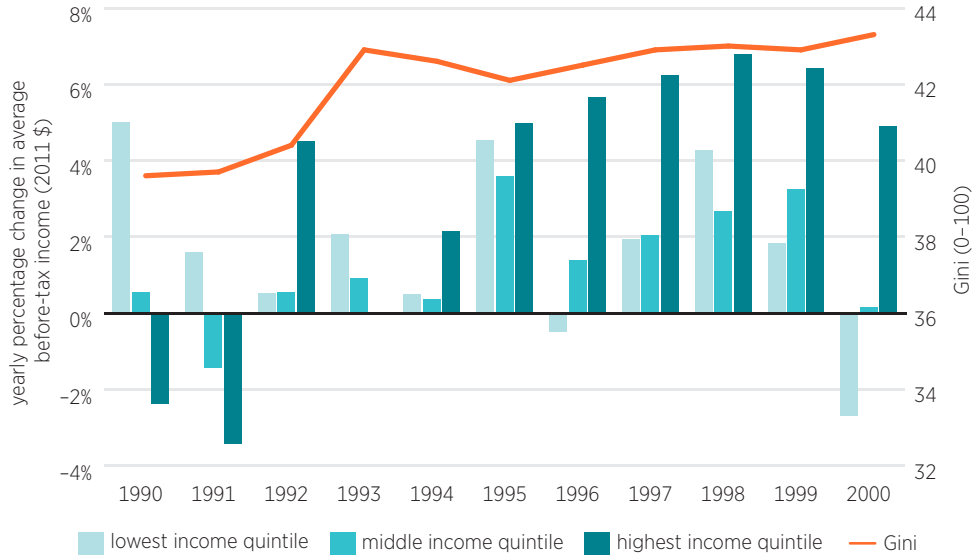
Income inequality has been among the central economic issues of the past several years, notably during the 2016 presidential campaign, as concerns related to growing inequality mixed with dissatisfaction over the modest and uneven rebound from the Great Recession. This combination of concerns is understandable, since increased inequality means many Americans do not feel that they have shared in the gains from the recovery.

This paper assesses policies that are meant to respond to income inequality, focusing particularly on policies to improve incomes for those at the bottom of the income distribution. Political rhetoric frequently focuses on the soaring incomes at the top, but research findings suggest that the more salient reasons for greater inequality are stagnant earnings in the bottom half of the income distribution and the increased return to a college education that divides the top from the bottom. Stagnant earnings at the bottom are of concern, both from a distributional perspective and from the point of view of maximizing growth, because they mean that society is not benefiting from the full potential of the human capital of its members.

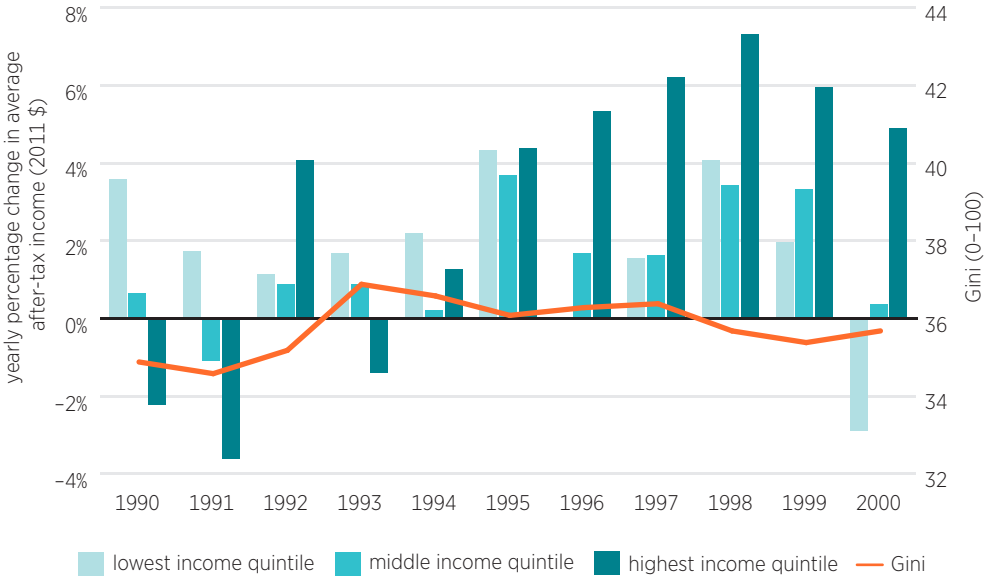
Historical reflection suggests that a focus on policies to increase low incomes, rather than to address inequality per se, is especially valuable. The late 1990s is often seen as a positive period in recent US economic history, even though inequality increased from 1995 to 2000 (figures 1 and 2). Real before-tax incomes grew for people throughout the income distribution, including people in the middle and at the bottom. But the larger gains for the top quintile in every year from 1995 to 2000 meant that inequality, as measured by the Gini coefficient, increased. Tax and transfer policies did not offset this trend toward greater inequality. It is true that the Gini measure of inequality is considerably lower for after-tax incomes during this period (figure 2) than for before-tax incomes (figure 1), but the gains in after-tax incomes for the top quintile are still much larger in percentage terms than those for the bottom or middle quintiles. The implication is that the positive development of growth in real before-tax incomes for people across the income distribution allowed society

FIGURE 1. PERCENTAGE CHANGE IN BEFORE-TAX INCOME GROWTH AND INEQUALITY, 1990–2000



Sources: Tax Policy Center, "Historical Income Distribution for All Households, 1979 to 2013," February 13, 2017; US Census Bureau, "Gini Ratios of Families by Race and Hispanic Origin of Householder," table F-4, last revised September 13, 2016.

FIGURE 2. PERCENTAGE CHANGE IN AFTER-TAX INCOME GROWTH AND INEQUALITY, 1990–2000



Sources: Tax Policy Center, "Historical Income Distribution for All Households, 1979 to 2013," February 13, 2017; US Census Bureau, "Gini Ratios of Families by Race and Hispanic Origin of Householder," table F-4, last revised September 13, 2016.

to accept the growing inequality resulting from outsized gains at the top. The recent political focus on inequality is thus somewhat misleading; what seems to matter is that incomes rise throughout the distribution—that prosperity is broadly shared, not equally shared.

As measured by Emmanuel Saez, inequality shrank in the two most recent economic recessions,[1] which Saez dates as 2000–2002 and 2007–2009. But those episodes involved across-the-board declines in before-tax incomes, as well as subsequent recoveries in which incomes at the bottom did not begin to rebound in earnest for several years after the trough of the recession. The reduction in inequality was not especially welcome during these recessions—instead, continued stagnation in before-tax incomes in the lower part of the distribution was the larger source of concern. This again suggests a focus on policies aimed at making things better at the bottom.

The experience of the 1990s suggests that policies fostering improved before-tax incomes at the bottom of the distribution might be even more important than policies aimed at reducing inequality per se. There is still a role for policies that redistribute income and thereby reduce inequality after taxes and transfers—this is a widely accepted feature of both taxes and transfers. These policies should be designed with the smallest possible efficiency costs and greatest possible effectiveness, notably through targeting benefits. Policies that have desirable distributional properties and also increase efficiency—thereby increasing economic growth—would be especially desirable. This approach suggests focusing on policies that would improve labor participation and increase pretax earnings, rather than designing policies in which the incomes, employment, and labor force participation are all taken as given.

There are important reasons why inequality itself might have negative implications for growth. Excessive

"The recent political focus on inequality is . . . somewhat misleading; what seems to matter is that incomes rise throughout the distribution—that prosperity is broadly shared, not equally shared."

1. Emmanuel Saez, "Striking It Richer: The Evolution of Top Incomes in the United States (Updated with 2015 Preliminary Estimates)," June 30, 2016.

inequality could lead to policies in which property rights are not respected, thereby causing growth to suffer. Or income inequality might lead to sociopolitical instability that reduces investment and thereby growth.[2] Inequality might also be connected to socially undesirable outcomes. For example, income inequality might reflect an inequality of opportunities that undermines the educational and occupational choices of large numbers of people within society, and thus leads to lower potential earnings.[3] This disparity of opportunity is especially relevant in an intergenerational context, in which parental income determines the opportunity for children to acquire the levels of health and education that allow them to fulfill their potential. Inequality might also be connected to societal ills, such as the segregation of groups of people by income[4] and a higher incidence of violent crimes.[5]

This paper focuses first on tax proposals, reflecting the debate during the 2016 election cycle. Mechanically, one possible response to address inequality would be to tax high-income households to fund either transfers or government programs that benefit those with lower incomes. Senator Bernie Sanders, for example, generated considerable enthusiasm by making such an approach central to his economic message. However, research suggests that even instituting quite large increases in the top tax rate in order to fund a transfer scheme would have only a modest impact on inequality.

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2. Torsten Persson and Guido Tabellini argue that income inequality harms economic growth by leading to policies in which property rights are not respected and owners of capital do not receive the returns to their private investment. Persson and Tabellini, "Is Inequality Harmful for Growth?," *American Economic Review* 84 (1994): 600–621. Alberto Alesina and Roberto Perotti present evidence that income inequality leads to sociopolitical instability that reduces investment. Alesina and Perotti, "Income Distribution, Political Instability, and Investment," *European Economic Review* 40, no. 6 (1996): 1203–28. Bebonchu Atems and Jason Jones take the same view in "Income Inequality and Economic Growth: A Panel VAR Approach," *Empirical Economics* 48, no. 4 (2015): 1541–61. On the other hand, Robert Barro claims that higher inequality encourages growth in rich economies. Barro, "Inequality and Growth in a Panel of Countries," *Journal of Economic Growth* 5, no. 1 (2000): 5–32. For example, unequal societies may choose higher levels of taxation to finance public education, which would increase human capital. Giles Saint-Paul and Thierry Verdier, "Education, Democracy and Growth," *Journal of Development Economics* 42, no. 2 (1993): 399–407. Oded Galor and D. Tsiddon argue that higher inequality during periods of technological advancement presages increased mobility and stronger growth. Galor and Tsiddon, "Technological Progress, Mobility and Economic Growth," *American Economic Review* 87 (1997): 363–82.

3. Era Dabla-Norris et al., *Causes and Consequences of Income Inequality: A Global Perspective* (IMF Staff Discussion Note, International Monetary Fund, Washington, DC, June 2015).

4. Sean F. Reardon and Kendra Bischoff, "Income Inequality and Income Segregation," *American Journal of Sociology* 116, no. 4 (2011): 1092–1153.

5. Pablo Fajnzlber, Daniel Lederman, and Norman Loayza, "Inequality and Violent Crime," *Journal of Law and Economics* 45, no. 1 (2002): 1–40.

Larger tax increases and larger transfers than those considered in the research discussed below might make more of a dent in inequality, but the tax rates required could have substantial negative impacts on economic activity. Such policies might still raise revenue—indeed, Peter Diamond and Emmanuel Saez peg the revenue-maximizing top marginal income tax rate well above 50 percent.[6] Inequality would lessen with such a tax-and-transfer approach, but in a fashion that is the reverse of the celebrated experience of the late 1990s: Overall income would decline, even while inequality shrank from having the steepest tax fall on those at the top of the income distribution. This tax cure might be worse than the inequality disease. Policies that increase incomes at the bottom can be seen as an attempt to circumvent such zero-sum limitations.

Economic theory indicates that the adverse growth impact of a redistributionist tax agenda would be especially severe if the tax increases are levied on capital income because these are, in effect, taxes on saving and investment. The traditional economic research literature on optimal tax policy reviewed by N. Gregory Mankiw, Matthew Weinzierl, and Danny Yagan suggests that higher taxes on capital income would have a large negative impact on growth and job creation.[7] Indeed, the bulk of the literature as discussed by Jason Fichtner and Jacob Feldman suggests that a lower tax rate on capital income would have beneficial effects on wages over time.[8] This is the case even though the distributional implications as conventionally measured indicate that the burdens of capital taxation fall predominantly on the upper-income households that own the capital. This paradoxical result comes about through the dynamics of capital formation and the resulting implications for wage growth. This literature is discussed below.

In addition to evaluating "macro" policies that involve changes in economywide taxes, we discuss "micro" policies that aim to address inequality and expand incomes through improved individual incentives, notably for work and participation in the labor force. For example, research indicates that the earned income tax credit (EITC) improves labor force participation and leads to increased earnings for people at the bottom of the income distribution. By increasing both pre- and posttax income, the EITC makes progress on both growth and distributional

6. Peter Diamond and Emmanuel Saez, "The Case for a Progressive Tax: From Basic Research to Policy Recommendations," *Journal of Economic Perspectives* 25, no. 4 (2011): 165–90.
7. N. Gregory Mankiw, Matthew Weinzierl, and Danny Yagan, "Optimal Taxation in Theory and Practice," *Journal of Economic Perspectives* 23, no. 4 (2009): 147–74.
8. Jason J. Fichtner and Jacob Feldman, "Why Do Workers Bear a Significant Share of the Corporate Income Tax?," chap. 4 in *The Hidden Cost of Federal Tax Policy* (Arlington, VA: Mercatus Center at George Mason University, 2015).

grounds. Reforms or expansions of the EITC could enhance these impacts. This paper also assesses potential changes to the unemployment insurance (UI) system that could improve incentives for participation and thus improve incomes. The EITC and UI are both forms of government spending (delivered through the tax system in the case of the EITC, but still effectively spending). This paper considers as well several other spending programs such as subsidies for childcare that might be seen as complements to other policies aimed at improving labor incentives and earnings for low-income workers.

This paper first briefly summarizes the extent and recent evolution of inequality in the United States and then assesses tax policy proposals related to (and typically motivated by) inequality. It does not consider some policy areas relating to inequality that are predominantly spending. Given the role of increasing returns to skills as a factor behind growing inequality, efforts to improve education and training would be a natural part of a policy agenda addressing inequality. A summary of the literature on training and education is beyond the scope of this paper, but there are clear complementarities between tax measures that foster capital accumulation and labor force participation and other policies that improve the skills of workers and thus their ability to work with the increased capital stock. The literature suggests the relevance of early childhood education as an effective and efficient way to increase earnings for those at the bottom and thereby reduce inequality, including intergenerational inequality. The same could be said for programs that subsidize childcare and otherwise address barriers to labor participation for low-income families. Such steps, if effective, might be seen as natural complements to pro-work policies such as the EITC. A range of evidence discussed by the Council of Economic Advisers suggests that reforms of licensing laws that restrict worker participation in certain fields might be useful to support higher labor force participation and ensure the greatest effectiveness of pro-growth tax and spending policies.[9]

During the 2016 presidential campaign season, a higher minimum wage was suggested in order to increase earnings at the bottom of the income distribution. The Congressional Budget Office (CBO) discusses the effects of a higher minimum wage on wages and employment, concluding that some jobs for low-wage workers would be lost, but low-wage workers overall would see higher pay.[10] A crucial problem, however, is that the policy is poorly targeted, with only 30 percent of the increased income going to families below the poverty line. Research

9. Council of Economic Advisers, *Occupational Licensing: A Framework for Policymakers*, July 2015.
10. Congressional Budget Office, *The Effects of a Minimum-Wage Increase on Employment and Family Income*, February 2014.

by David Neumark and William Wascher indicates that a higher minimum wage will have consequences beyond the direct effect of reducing employment among low-skilled workers. For example, the minimum wage interacts with the EITC to help some workers—notably poor households with children—while hurting others—households without children.[11] The interaction of the EITC and other programs thus matters for many different segments of the population. In general, an evaluation of the policy literature on the minimum wage suggests that its attraction to certain policymakers is a combination of rhetorical appeal and the lack of a fiscal cost (since the minimum wage imposes costs on businesses and some workers rather than on the government).

Addressing inequality or stagnant earnings at the bottom of the income distribution might require multiple policies for addressing both labor demand and supply (including removing barriers to growth—not just adding new incentives or new spending). If anything, the modest impact of each policy measure alone suggests that bringing about a strong overall economy with improved labor demand might well be the most effective way to drive near-term gains in earnings for those at the bottom, for whom wages constitute the bulk of income. A full macro strategy is beyond the scope of this paper. One component of a pro-growth approach would be to implement tax policy that focuses on improving incentives for saving and investment, rather than viewing tax policy merely as a means of redistribution. A strong macro economy that drives wages higher throughout the income distribution might well be accompanied by increasing inequality—as happened in the late 1990s. The experience of that period, however, suggests that what matters most is making progress at the bottom rather than comparing the bottom with the top.

INEQUALITY IN THE UNITED STATES

The United States has long been a land of opportunity, but also one of great inequality, and this gap has widened over the past four decades. Real before-tax income grew for all percentiles of the income distribution in 2015 for the first time since 2006, and the gains were larger for those at the bottom than for those at the top—a 7.9 percent increase for those in the bottom 10 percent versus a 3.7 percent increase in before-tax income for the top 5 percent. But at the same time,

11. David Neumark and William Wascher, "Does a Higher Minimum Wage Enhance the Effectiveness of the Earned Income Tax Credit?," *Industrial and Labor Relations Review* 64, no. 4 (2011): 712–46.

inequality remains high in the United States compared to other countries and to the past several decades.[12]

As discussed by David H. Autor[13] and Melissa S. Kearney,[14] the growth in inequality has been driven especially by an increased return to education and skills. While income growth for households in the top 1 percent far outpaced that for the other 99 percent—a development that received considerable attention in public debate—a larger factor behind the increased inequality is the wider gap between the incomes of those with a college degree and those without.

Analyzing income and tax data from 1979 to 2013 (summarized in table 1),[15] CBO shows that the *market incomes* of households in the top 1 percent of the distribution rose considerably, while incomes for households in the bottom 80 percent of the distribution had relatively modest gains.[16] Real income increased by 187.8 percent for the top 1 percent, but by only 18.0 percent for the lowest quintile and 18.2 percent for the middle three quintiles over those 34 years.[17] This measure refers to incomes before the impacts of taxes and transfers. In 2013, households in the lowest quintile had an average market income of $8,300, while incomes in the top 1 percent averaged $1.57 million per household.

Government policies somewhat attenuated inequality of market incomes. Transfers and progressivity in the tax code meant that households in the first

12. Council of Economic Advisers, *The Economic Record of the Obama Administration: Progress Reducing Inequality*, September 2016.
13. David H. Autor, "Skills, Education, and the Rise of Earnings Inequality among the 'Other 99 Percent,'" *Science* 344, no. 6186 (May 2014): 843–51.
14. Melissa S. Kearney, "Should We Be Concerned about Income Inequality in the United States?," in *The US Labor Market: Questions and Challenges for Public Policy*, ed. Michael R. Strain (Washington, DC: American Enterprise Institute, 2016), 264–80.
15. Congressional Budget Office, *The Distribution of Household Income and Federal Taxes, 2013*, June 8, 2016.
16. This paper focuses on dollar earnings rather than total compensation. Mark J. Warshawsky concludes that inequality in total compensation, including healthcare benefits, is not as high as inequality in earnings. Warshawsky, "Earnings Inequality: The Implications of the Rapidly Rising Cost of Employer-Provided Health Insurance" (Mercatus Working Paper, Mercatus Center at George Mason University, Arlington, VA, 2016). This is because rapid growth in healthcare costs depresses earnings growth, and the effect is especially salient for those at the bottom for whom health care is a larger part of compensation than for workers with higher incomes.
17. The measure of income used by CBO (*Distribution of Household Income*) includes wages, business income, and several types of capital income (interest received, dividends, realized capital gains, and rental income). Table 1 shows the change in real households' incomes for *market incomes* (that is, incomes before taxes and transfers); *before-tax incomes* (including transfer payments such as Social Security, Medicare, Medicaid, food stamps, and other programs); and *after-tax incomes* (including both taxes and transfers). Taxes on capital are attributed as applying three-quarters to the owners of capital and one-quarter to labor. This convention is in line with the short-term effect of changes in capital tax but less in line with economic research on the long-term effects (discussed below), in which capital taxation results in lower productivity and wages.

TABLE 1. INCOMES AND TAXES FROM 1979 TO 2013

	Lowest quintile	Middle three quintiles	81st–99th percentiles	Top 1 percent
1979–2013 gain (%)				
Market income	18.0	18.2	62.7	187.8
Before tax	39.4	31.9	65.4	186.6
After tax	46.1	40.7	69.7	192.2
Share 2013 (%)				
Market income	2.2	40.8	41.5	17.2
Before tax	5.1	43.4	37.6	15.0
After tax	6.2	46.9	36.1	12.4
2013 (%)				
Share of taxes	0.8	29.9	43.6	25.4
Average federal tax rate	3.3	13.8	23.2	34.0

Note: Columns of income shares do not add up to 100 percent in the original CBO data.

Source: Congressional Budget Office, *The Distribution of Household Income and Federal Taxes, 2013*, June 8, 2016.

80 percent of the distribution saw incomes *after taxes and transfers* grow by more than market incomes alone from 1979 to 2013. Incomes after taxes and transfers rose by a total of 46.1 percent for households in the lowest quintile, by 40.7 percent in the middle three quintiles, and by 69.7 percent in the highest quintile (other than the top 1 percent).[18] Still, it must be kept in mind that these gains took place over more than three decades. Even as government programs and the structure of the tax system offset stagnant incomes, after-tax and after-transfer real incomes for the first 80 percent of households increased by not much more than 1 percent annually for 34 years. This record of modest income gains is consistent with the dissatisfaction manifested in the 2016 elections.

Changes in federal transfer policies affected inequality more than changes in taxes during the period considered by CBO. Real incomes, including transfers but not taxes, rose by a total of 39.4 percent in the bottom quintile and 31.9 percent for households in the middle three quintiles. Over this period, total market income for households in the top 1 percent rose by nearly 187.8 percent, while income after taxes and transfers rose by 192.2 percent. These gains for the top 1 percent far outpaced those of the rest of the top quintile—real incomes for households in the 81st to 99th percentile of the income distribution rose by only 69.7 percent after taxes and transfers.

18. CBO, *Distribution of Household Income*.

Stronger income gains at the top translated into greater inequality. The Gini coefficient based on market income (before taxes and transfers) increased from 0.48 to 0.60 from 1979 to 2013, while the Gini coefficient based on incomes after taxes and transfers increased from 0.36 to 0.44. These figures illustrate the role of taxes and (especially) transfers in ameliorating the greater inequality in market incomes: Taxes reduced the Gini coefficient in 2013 by 8.8 percent, and transfers reduced the Gini coefficient by 18.7 percent, both as compared to the Gini coefficient for market income alone (without including taxes and transfers). This result is consistent with the fact that, as shown in table 1, the increase in growth from market income to before-tax income (including transfers) is larger than the increase in growth from before-tax to after-tax income.

CBO's analysis illustrates why the political and social focus on the gains accruing to the top 1 percent is understandable.[19] The gains at the top, however, turn out to be neither the most important explanation for rising inequality nor the most salient part of a policy approach to address low incomes at the bottom. Indeed, it is not clear what is driving the greater inequality at the very top, or whether it is even desirable to do something about this phenomenon. A policy role could be indicated if the gains at the top represent rents accruing to people exercising some market power. But if the gains at the top reflect the generation of economic value, then the higher incomes leading to this inequality are a source of revenue but not necessarily a reason to formulate new policy.

Inequality increased between 1979 and 2013, but table 1 shows that the US tax code was quite progressive in 2013, with the average federal tax rate much higher at the top of the income distribution—an average rate of 34.0 percent for the top 1 percent, versus average rates of 3.3 percent for the bottom quintile and 13.8 percent for the middle three quintiles. Indeed, additional statistics in the CBO report[20] (not shown in table 1) indicate that the bottom two quintiles had negative average tax rates on labor income, reflecting the refundable payments households received in excess of their income tax liability. The major program by which this took place, the EITC, is discussed below. The top 1 percent had 17.2 percent of market income and paid 25.4 percent of taxes, while the rest of the top quintile paid taxes nearly in proportion to their share of income: households in the 81st to 99th percentiles earned 41.5 percent of market income and accounted for 43.6 percent of federal taxes. Households in the bottom quintile had 2.2 percent of market income in 2013 and accounted for only 0.8 percent of federal taxes.

19. CBO, *Distribution of Household Income*.
20. Ibid.

Other analyses of income and distribution likewise show growing inequality, with especially large gains at the top. Saez documents that the share of market income accruing to the top decile has increased considerably since the late 1970s, rising from below 35 percent in 1980 to above 50 percent by 2015 (according to Saez's initial estimates for the latter year).[21] Over this period, the share of market income accruing to the top 1 percent rose from 10 percent in 1980 to over 20 percent in 2014.[22] As calculated by Saez,[23] average real incomes grew by 13 percent from 2009 to 2015, but this combines 7.6 percent income growth for the bottom 99 percent of the distribution and 37.4 percent growth for the top 1 percent—a group that had 52 percent of the total income growth over this period, according to Saez. Note that these figures reflect the recovery of asset prices after steep declines during the financial crisis. During the Great Recession of 2007–2009, average income declined by 17.4 percent, half of which was attributed to lower incomes among the top 1 percent (for whom average real incomes declined by 36.3 percent, versus an income decline of 11.6 percent for the other 99 percent).

Autor makes the point that the widening gap between the labor market outcomes of those with a college degree and those without accounts for a greater share of increased inequality than the phenomenal income growth among the top 1 percent.[24] Autor calculates that "between 1979 and 2012, the share of all household income accruing to the top percentile of U.S. households rose from 10.0% to 22.5%."[25] As discussed by Kearney and detailed by Autor,[26] if this share had remained constant at 10 percent and the additional income had instead been redistributed evenly to the remaining 99 percent of households, this additional income would have come to $7,107 per household in 2012 (an amount equal to 14 percent of the income of the median household). Autor then notes that the earnings received by a male worker who had a college degree rather than only a high school diploma rose from $17,411 in 1979 to $34,969 in 2012—a gain of $17,558.[27] Thus, the income consequence of a college degree was an additional $17,558, while the "excess" gains of the top 1 percent amounted to $7,107. In other words, the increased income share of the top 1 percent at $7,107 represents a considerably

21. Saez, "Striking It Richer," figure 1.
22. Ibid., figure 2.
23. Ibid., table 1.
24. Autor, "Skills, Education, and the Rise of Earnings Inequality."
25. Ibid., 844.
26. Kearney, "Should We Be Concerned about Income Inequality?"; Autor, "Skills, Education, and the Rise of Earnings Inequality."
27. Both figures are measured in 2012 dollars and calculated as the incremental earnings for the median male high school graduate and college graduate in those two years.

smaller amount per household for the remaining 99 percent than the return to a college education, at $17,558.

Brad Hershbein, Melissa Kearney, and Lawrence Summers provide an education-oriented counterpart to the Autor thought experiment by simulating the impact on "the distribution of earnings if one out of every ten men aged 25–64 who did not have a bachelor's degree were to instantly obtain one—a sizeable increase in college attainment."[28] This counterfactual simulation would increase the earnings and employment of those men but "will not significantly change overall earnings inequality." This is not to say that improving educational levels in the population or the quality of the US education system is pointless—far from it. If anything, the results that Hershbein and his coauthors found highlight the magnitude of US inequality when even simulating a massive increase in college attainment has only a modest impact.

"It is the case that US inequality stands out compared to inequality in other developed countries."

While the largest factor behind inequality (that is, the return to skills and education) does not match the political focus on the top 1 percent, it is the case that US inequality stands out compared to inequality in other developed countries. As noted in the AEI-Brookings report,[29] the United States in 1985 had a before-tax Gini index of 34, while the Organisation for Economic Co-operation and Development (OECD) average was less than 30. By 2013, the average before-tax Gini index among OECD countries had risen to 32, but the value for the United States was almost 41, smaller only than those for Mexico and Turkey. To illustrate the changing distributional dynamics over the past 20 years, inequality in Mexico as measured by the Gini index increased by 6 percent and Turkey experienced a decrease of inequality of around 5 percent, while the Gini index for the United States rose by more than 18 percent. In 2014, the

28. Brad Hershbein, Melissa S. Kearney, and Lawrence H. Summers, "Increasing Education: What It Will and Will Not Do for Earnings and Earnings Inequality," Brookings, March 31, 2015.
29. AEI-Brookings Working Group on Poverty and Opportunity, *Opportunity, Responsibility, and Security: A Consensus Plan for Reducing Poverty and Restoring the American Dream*, 2015.

share of before-tax income going to the top 1 percent is likewise higher in the United States than in other advanced economies—17 percent, as compared to around 14 percent in Germany and around 13 percent in Canada and the United Kingdom in the same year. The income shares at the top fell from 2008 to 2014 in these other developed economies, while rebounding in the United States after a decline during the recession and asset price collapse.[30] As noted in the 2016 *Economic Report of the President*, the share of before-tax income for the top 1 percent was not much different in the United States than in other developed economies until roughly the mid-1980s, but "since 1987 the share of income going to the top 1 percent in the United States has exceeded every other G7 country in each year that data are available."[31]

It could be that income inequality increased but that inequality in terms of consumption, or more broadly in measures of well-being, did not. Several studies—including ones by Dirk Krueger and Fabrizio Perri;[32] Richard Blundell, Luigi Pistaferri, and Ian Preston;[33] and Jonathan Heathcote, Perri, and Giovanni L. Violante[34]—find that consumption inequality rose by less than income inequality in the United States from the 1980s to the middle of the 2000–2010 period, while Mark A. Aguiar and Mark Bils[35] and Orazio Attanasio, Erik Hurst, and Pistaferri,[36] among others, find no differences in the evolutions of income and consumption inequality. In examining the effects of consumption between 2000 and 2011, Bruce D. Meyer and James X. Sullivan actually find that consumption inequality was lower in 2011 than in 2000, as "consumption inequality rose during the first half of this period but then fell after 2005. . . . By 2011, the 90/10 ratio for consumption was slightly lower than it was in 2000."[37] In a recent survey, Attanasio and

30. Council of Economic Advisers, *Economic Report of the President*, February 2016, figure 1-1.
31. Ibid., 24.
32. Dirk Krueger and Fabrizio Perri, "Does Income Inequality Lead to Consumption Inequality? Evidence and Theory," *Review of Economic Studies* 73, no. 1 (2006): 163–93.
33. Richard Blundell, Luigi Pistaferri, and Ian Preston, "Consumption Inequality and Partial Insurance," *American Economic Review* 98, no. 5 (2008): 1887–921.
34. Jonathan Heathcote, Fabrizio Perri, and Giovanni L. Violante, "Unequal We Stand: An Empirical Analysis of Economic Inequality in the United States, 1967–2006," *Review of Economic Dynamics* 13, no. 1 (2010): 15–51.
35. Mark A. Aguiar and Mark Bils, "Has Consumption Inequality Mirrored Income Inequality?" (NBER Working Paper No. 16807, National Bureau of Economic Research, Cambridge, MA, 2011).
36. Orazio Attanasio, Erik Hurst, and Luigi Pistaferri, "The Evolution of Income, Consumption, and Leisure Inequality in the United States, 1980–2010," chapter 4 in *Improving the Measurement of Consumer Expenditures*, ed. Christopher D. Carroll, Thomas F. Crossley, and John Sabelhaus (Chicago: University of Chicago Press, 2015).
37. Bruce D. Meyer and James X. Sullivan, "Consumption and Income Inequality and the Great Recession," *American Economic Review* 103, no. 3 (2013): 178–83.

Pistaferri conclude, "Despite the fact that some studies have suggested the opposite, inequality in the consumption of nondurables and services has increased substantially over the last few decades and has paralleled the increase in income and earnings."[38]

Whether income inequality matters for the economy and for society depends on its sources and its effects. As noted by N. Gregory Mankiw, it could be the case that greater inequality, including the gains at the very top of the income distribution, represents rewards for "significant economic contributions" by people with special talents, without harm to those below them in the income scale.[39] Scott Winship is skeptical that greater inequality has pernicious impacts on the US economy, in part because the unequal gains affect a relatively narrow slice of society.[40] In his view, children in families at the top of the distribution might well have opportunities not available to others, but this does not by itself remove opportunities for others, including those at the bottom.

Winship notes that people at all points of the income distribution were better off in 2007 than people at the same points in the distribution in 1979, even while inequality increased over this period.[41] Winship concludes that there is "little basis for thinking that inequality is at the root of our economic challenges, and therefore for believing that reducing inequality would meaningfully address our lagging growth, enable greater mobility, avert future financial crises, or secure America's democratic institutions."[42] A greater challenge, in his view, is that of "increasing the upward mobility of poor children," of increasing opportunity so that "one's birth circumstances do not impede the pursuit of one's American Dream." Indeed, while Winship sees improving upward mobility as "a moral imperative," he believes it is a "misdiagnosis" to conflate this challenge with inequality.[43]

Others see it differently. For example, the Council of Economic Advisers (CEA) asserts that "inequality of opportunity is in many ways both a cause and a result of income and wealth inequality. Therefore, unequally distributed

38. Orazio P. Attanasio and Luigi Pistaferri, "Consumption Inequality," *Journal of Economic Perspectives* 30, no. 2 (2016): 25.
39. N. Gregory Mankiw, "Defending the One Percent," *Journal of Economic Perspectives* 27, no. 3 (2013): 21–34.
40. Scott Winship, "Overstating the Costs of Inequality," *National Affairs* 15 (Spring 2013); Winship, "Has Rising Income Inequality Worsened Inequality of Opportunity in the United States?," *Social Philosophy and Policy* 31, no. 2 (2015): 28–47.
41. Jared Bernstein and Scott Winship, "Policy Options for Improving Economic Opportunity and Mobility" (Report, Peter G. Peterson Foundation, June 2015).
42. Winship, "Overstating the Costs of Inequality."
43. Bernstein and Winship, "Policy Options for Improving Economic Opportunity and Mobility," 32.

opportunities entrench an unequal income distribution, and an unequal income distribution leads to many of the inequities faced by low-income and low-wealth children."[44] In this view, increased inequality is in part a reflection of diminished mobility, with especially pernicious implications for children born into families near the bottom. According to this White House report, high and rising inequality would then have several negative consequences for society: "Inequality is correlated with lower mobility, and one important transmission mechanism is the distribution of opportunity. When disparities in education, training, social connection, and the criminal justice system are distributed as unequally as overall wealth, poorer families have a much harder time succeeding in the economy."[45]

The report of an AEI-Brookings working group discusses the connection between inequality and low economic mobility,[46] noting that those at the bottom of the income distribution can find it difficult to get out: 43 percent of children born into a bottom quintile family are in that quintile as adults, while only 4 percent of those children end up in the top quintile. For children born into the highest income quintile, 40 percent remain in the top with their parents, while only 8 percent end up in the bottom quintile as adults. The report notes that inequality is related to changes in family composition over the past decades. Those at the bottom of the income distribution are less likely to get married, more likely to have short cohabitations, and more likely to have nonmarital births and to be in single-mother households than those higher up the income distribution.

The AEI-Brookings report raises the concern for society from the resulting effects on child development and behavior, as children raised in a single-parent home have higher school dropout rates, lower measures of academic achievement, higher rates of teen pregnancy, more substance abuse, higher rates of psychosocial problems, and higher chances of neither working nor being in school as adolescents. Inequality also plays a role in human capital accumulation, according to the joint report, with the gaps in academic achievement and school completion rising between low-income and high-income families since 1964. Poor educational outcomes make it difficult for children in low-income families to break out of poverty.

44. Council of Economic Advisers, *Economic Report of the President*, February 2016.
45. Ibid.
46. AEI-Brookings Working Group on Poverty and Opportunity, *Opportunity, Responsibility, and Security*.

TAX POLICIES

The appropriate degree of progressivity and redistribution in a tax and spending system is a value judgment, but tax policy proposals motivated by issues of inequality typically start from the presumption that the US tax system is not progressive enough. Yet CBO shows that the US tax system includes a considerable degree of progressivity[47]—the analysis includes federal income taxes, payroll taxes, corporate income taxes, and excise taxes. The average tax rate for households in the top 1 percent under 2014 law was 34 percent—this includes the higher rate for the top marginal income tax bracket resulting from the resolution of the so-called fiscal cliff in December 2012 and the new taxes included in the Affordable Care Act.[48] This rate is significantly higher than the average tax rate of 23.2 percent for those in the 81st to 99th percentiles, 13.8 percent for the middle three quintiles, and 3.3 percent for the lowest quintile. As shown by adding the last two columns in table 1, households in the top quintile paid 69 percent of federal taxes while receiving 58.7 percent of market income and 52.6 percent of before-tax income (that is, adding transfers to market income). This compares to 5.1 percent of before-tax income and 0.8 percent of federal taxes for the bottom quintile, and 43.4 percent of before-tax income and 29.9 percent of taxes for the middle three quintiles. (All figures in table 1 are from the 2016 CBO report.)

Thus, table 1 illustrates that the United States is more progressive in the combination of taxes and spending than in market incomes alone, with federal transfer programs more progressive than taxes in the sense that the change in income shares is much larger in going from market incomes to before-tax incomes. For the bottom quintile, transfers accounted for more than two-thirds (72.5 percent) of the increase in the income share, from 2.2 percent for market incomes to 6.2 percent after both taxes and transfers (with a 5.1 percent share after transfers but before taxes). Transfers accounted for 38 percent and 34 percent of before-tax income for the bottom and second-to-bottom quintiles, respectively, compared to 24 percent for the middle quintile, and 14 percent and 5 percent of income for the top two quintiles, respectively.[49] Veronique de Rugy finds that as of 2012, the United States had "the most progressive income tax system among industrialized nations," measured in terms of the share of all income taxes that were contributed by the top 10 percent of households.[50]

47. CBO, *Distribution of Household Income*.
48. Ibid., figure 2.
49. Ibid., table 3.
50. Veronique de Rugy, "Progressivity of Taxes in OECD Countries, Mid-2000s," Mercatus Center at George Mason University, January 3, 2012.

Income Tax

William Gale, Melissa Kearney, and Peter Orszag examine the impact on inequality of a direct tax-and-transfer scheme in which high-income families are taxed to fund transfers to households at the bottom.[51] They find that even a large increase in the top marginal tax rate, with the incremental revenue used to fund direct cash transfers to households in the bottom 20 percent of the income distribution, would have only a modest impact in reducing inequality in the United States. They simulate three varieties of tax hikes, including raising the top rate from 39.6 percent to either 45 or 50 percent, and raising the top rate to 50 percent only for incomes above $750,000 for singles and $1 million for joint filers.

The Gini coefficient in their model (from the joint Brookings–Urban Institute Tax Policy Center) is 0.610 under current law for before-tax income and 0.574 for after-tax income. Applying the three variants of higher tax rates decreases the Gini coefficient to between 0.573 and 0.571—a barely perceptible decline from 0.574, even though the additional taxes collected are meaningful in dollar terms. The largest simulated tax increase examined (to 50 percent for the top tax bracket) imposes an average tax increase of $6,464 for the 95th to 99th percentiles of households and a tax increase of $110,968 for the top 1 percent, with the top 0.1 percentile of households paying an average of $568,617 each in extra taxes. This tax increase would bring in $95.6 billion in additional revenue, enough to fund a transfer of $2,650 for each household in the bottom 20 percent. This is a meaningful amount of money for those on the receiving end, as the average income after taxes and transfers is $24,500 per household in the bottom quintile.[52] But by design, the simulations do not affect incomes for households in the middle three quintiles—the transfers are focused on the bottom 20 percent—and the amount of revenue raised is still relatively modest compared to the considerable inequality in US incomes. The simulation model from the Tax Policy Center does not take into account behavioral responses, such as high-income households working less in response to the higher tax rates. Such a response would reduce inequality by depressing incomes at the top, but it would also provide less revenue for redistribution to the bottom 20 percent. The authors find that adding this response makes only a modest impact on their calculations for the change in inequality.

51. William G. Gale, Melissa S. Kearney, and Peter R. Orszag, "Would a Significant Increase in the Top Income Tax Rate Substantially Alter Income Inequality?," Brookings, September 28, 2015.
52. CBO, *Distribution of Household Income*.

While an implication of Gale et al. is that a focus on inequality requires policies other than (or in addition to) a tax increase and transfer,[53] Michael Ettlinger views the results as suggesting instead that the policy experiment was too modest: "What I see is that if one really wants to reverse the rise in inequality then the economic interventions will have to be very large, whether the lever is taxes or any other area."[54] He notes that returning to the income distribution of 1979 would require a transfer of more than $1 trillion, with the tax burden on the top 1 percent tripling as the effective (average) tax rate on this group goes up by 40 percentage points.

In their follow-up note, Gale, Kearney, and Orszag note that other tax policy options are possible, including higher rates on capital income, but they assert that their proposal of a 50 percent top marginal rate is already "clearly beyond the politically feasible in the near future."[55] The election results of November 2016 suggest that Gale, Kearney, and Orszag are correct in this analysis. This political calculus stands in contradiction to Diamond and Saez, who calculate that a top marginal rate of around 73 percent would maximize revenue, though not necessarily income or job growth.[56] Left unsaid is that, in reality, additional revenues already have many claimants for new spending programs. The tax increases needed to fund both new programs and income redistribution would be quite large indeed.

Writing in the news pages of the *New York Times*, Patricia Cohen[57] details the apparent (though anonymous) response of the Obama administration to Gale, Kearney, and Orszag,[58] which is to note that collecting an additional $95.6 billion in revenue would be enough to fund a variety of projects that might be viewed as worthwhile, such as free tuition at public universities or additional spending on roads and bridges. An oddity of Cohen's analysis, however, is the focus on the average tax rate that would be imposed on high-income households in calculating the amounts of revenue to be extracted. In reality, tax policies are set by changes in

53. Gale, Kearney, and Orszag, "Would a Significant Increase in the Top Income Tax Rate Substantially Alter Income Inequality?"
54. Michael Ettlinger, "Conventional, One-Dimensional Policies Will Not Reverse U.S. Income Inequality Growth," Washington Center for Equitable Growth, October 14, 2015.
55. William G. Gale, Melissa S. Kearney, and Peter R. Orszag, "Raising the Top Marginal Tax Rate Would Not Do Much to Reduce Overall Income Inequality—Additional Observations," Brookings, October 12, 2015.
56. Diamond and Saenz, "Case for a Progressive Tax."
57. Patricia Cohen, "What Could Raising Taxes on the 1% Do? Surprising Amounts," *New York Times*, October 16, 2015.
58. Gale, Kearney, and Orszag, "Would a Significant Increase in the Top Income Tax Rate Substantially Alter Income Inequality?"

tax brackets: it is the top marginal tax rate that is specified rather than the average tax rate. The point of Gale, Kearney, and Orszag is that the top tax rate needed to collect these amounts of revenue is larger than is politically feasible, making the spending list presented by Cohen closer to a wish list than a policy agenda.[59]

Capital Tax

Gale, Kearney, and Orszag note that additional redistribution could be achieved by increases in the tax rates on capital income.[60] This could involve, for example, changes to the corporate income tax or to tax rates on dividends and capital gains or on accumulated savings passed on through inheritances. One appeal of this source of revenue is that the bulk of capital income, as conventionally measured, accrues to high-income households. CBO notes that capital income and gains and business income together account for 27 percent of the market income of households in the top quintile, compared to no more than 7 percent for the other four quintiles.[61] Increased taxes on these sources thus might have a political appeal. As with the income tax changes discussed above, higher taxes on capital would both reduce inequality directly and generate revenue that could be used for rebates to low-income families or for other activities meant to support income growth at the bottom.

The optimal-tax literature has traditionally concluded that lower rather than higher taxes on capital are most supportive of economic growth and even of higher wages. The survey of Mankiw, Weinzierl, and Yagan, for example, notes

"In the short run, a positive capital tax might not be distortionary because it involves taxes that fall on the existing capital stock, but in the long run, a capital tax implies a reduction in the overall capital stock and thus in economic output."

59. A journalistic oddity is that the Cohen article ("What Could Raising Taxes on the 1% Do?") apparently provides the Obama administration's response to Gale, Kearney, and Orszag, but this response is not stated: neither the source of the response nor even the Gale et al. paper to which Cohen is responding are cited in her article. Cohen writes as if her words are sui generis.
60. Gale, Kearney, and Orszag, "Raising the Top Marginal Tax Rate Would Not Do Much to Reduce Overall Income Inequality."
61. CBO, *Distribution of Household Income*.

that "the taxation of capital income ought to be avoided"—that is, the optimal tax rate on capital is zero.[62] The intuition behind this conclusion is that in the short run, a positive capital tax might not be distortionary because it involves taxes that fall on the existing capital stock, but in the long run, a capital tax implies a reduction of the overall capital stock and thus of economic output. The authors argue that "households determine how much to save based on their discounting on the future and the return to capital in the economy. . . . Their saving decisions are perfectly elastic with respect to the after-tax rate of return. . . . [Thus] this distortion is so large as to make any capital income taxation suboptimal."[63] The optimality of zero capital taxes relies on at least some of the households in the economy having an infinite planning horizon and not accumulating stocks of capital to self-insure against shocks.

From a policy perspective, the reason for caution with regard to raising capital taxes to fund redistribution is that this approach would be expected to have an especially negative impact on the growth of wages and incomes. Capital taxes are effectively taxes on saving and investment (from which capital income is derived), and they would therefore be expected to result in lower investment and a smaller capital stock over time. Less capital would mean slower labor productivity growth, which in turn would lead to weaker wage growth—the opposite result of what is intended. A tax on capital thus might appear to reduce inequality in the near term because the owners of capital, and thus the direct recipients of capital income, tend to be high-income households (though capital ownership is widely shared through pension funds, especially for defined contribution rather than defined benefit pensions). The long-run incidence of the tax, however, would be expected to fall substantially on labor income, implying that the burden over time skews toward workers rather than owners of capital.

Kevin A. Hassett and Aparna Mathur discuss the empirical literature setting out the connection between capital taxes and wages, starting with their 2006 paper, which relates wage growth to corporate tax rates across 72 countries from 1981 to 2002.[64] Controlling for a wide variety of economic and institutional factors that influence wages, they report coefficient estimates implying that a 1 percent reduction in corporate taxes would lead to nearly a 1 percent increase in wages—a response they indicate "confirms our intuition that higher

62. Mankiw, Weinzierl, and Yagan, "Optimal Taxation." But Diamond and Saez ("The Case for a Progressive Tax") assert instead that "capital income should be subject to significant taxation."
63. Mankiw, Weinzierl, and Yagan, "Optimal Taxation," 21.
64. Kevin A. Hassett and Aparna Mathur, "The Cure for Wage Stagnation," op-ed, *Wall Street Journal*, August 14, 2016.

corporate taxes may feed through to lower wages, through lower capital investment per worker." Hassett and Mathur further present evidence of an association between increased wages in a country and high corporate taxes in neighboring countries—presumably reflecting the effect of the high-tax neighbor driving capital across the border.

R. Alison Felix likewise finds a considerable effect of corporate taxes on wages for both skilled and unskilled workers: "Using cross-country data I estimate that a ten percentage point increase in the corporate tax rate of high-income countries reduces mean annual gross wages by seven percent."[65] Fichtner and Feldman review the literature on the incidence of the corporate income tax, highlighting the importance of taking into account long-run reallocations of capital across countries as the corporate income tax increases.[66] They conclude that "capital bears a decreasing share of the corporate income tax burden because the United States continues to become a more open economy."[67] This conclusion is especially important because the United States taxes corporate income at a higher rate than nearly every other country. Kyle Pomerleau and Emily Potosky calculate that the "United States has the third highest general top marginal corporate income tax rate in the world, at 38.92 percent."[68] This rate compares to a worldwide average of 29.5 percent across 188 countries with rates weighted by GDP (the average is only 22.5 percent without the GDP weighting).

The opposite view is stressed by Danny Yagan, who finds that the 2003 dividend tax cut "caused zero change in corporate investment and employee compensation," undermining the theory by which capital taxation is thought to affect wages.[69] Ludwig Straub and Iván Werning provide theoretical conditions under which a nonzero tax on capital is optimal, even while noting that the ultimate answer requires empirical research.[70] The bulk of the literature to date supports the idea that lower capital taxes lead to higher wages over time, even while the topic remains an active area for research. Aparna Mathur and her coauthors

65. R. Alison Felix, "Passing the Burden: Corporate Tax Incidence in Open Economies" (Federal Reserve Bank of Kansas City, October 2007).
66. Fichtner and Feldman, *Hidden Cost of Federal Tax Policy*.
67. Ibid., 83.
68. Kyle Pomerleau and Emily Potosky, "Corporate Income Tax Rates around the World, 2016," Tax Foundation, August 18, 2016.
69. Danny Yagan, "Capital Tax Reform and the Real Economy: The Effects of the 2003 Dividend Tax Cut," *American Economic Review* 105, no. 12 (2015): 3531–63.
70. Ludwig Straub and Iván Werning, "Positive Long Run Capital Taxation: Chamley-Judd Revisited" (NBER Working Paper No. 20441, National Bureau of Economic Research, Cambridge, MA, 2015).

find that firms vary considerably in their dividend behavior, suggesting that the effects of policy changes will vary by the age, size, and industry of various firms.[71]

Other research highlights the adverse macroeconomic effects of capital taxes on economic growth. As part of a research agenda on climate change, Dale Jorgenson et al. simulate the effect of tax swaps in which the revenues from a carbon tax are used to reduce other taxes, including taxes on capital income.[72] They find that lower tax rates on capital income could offset all the economic costs of the carbon tax or actually increase economic output—a result driven by the effect of taxes on capital income in reducing saving and investment. Other tax options provide a smaller offset to the drag from the carbon tax, so that the pro-growth impact of lowering capital taxes is larger than that of other potential tax swaps, such as using the carbon tax revenue to reduce taxes on labor income. Warwick McKibbin and his coauthors further illustrate the effects on GDP growth of taxation of capital income.[73] The authors simulate the effect of various tax proposals to generate revenue in order to address the US fiscal deficit. Their simulations include a carbon tax, higher taxes on capital income, and higher taxes on labor income. They find that the increased "capital tax causes a significantly larger drop in GDP than either of the other policies [a carbon tax or a labor tax] in the short run but [the] long run effect is smaller than the carbon tax."[74]

A policy aimed at improving wages through stronger long-term growth would more likely focus on increased productivity and capital formation. Lower taxes on capital income would be one element of such a strategy, along with policies to improve both individuals' skills and the broad readiness for the workforce in order to take advantage of the increased capital. This strategy is in line with the conclusion reached by Robert Z. Lawrence, who explores the reasons behind the increased share of capital income in US GDP, a phenomenon connected to slow wage growth and rising inequality.[75] Lawrence argues that "labor-augmenting technical change in the US has been sufficiently rapid that effective capital-labor ratios have actually fallen in the sectors and industries that account for the largest

71. Aparna Mathur et al., "Dividends and Investment: Evidence of Heterogeneous Firm Behavior," *Public Finance Review* 44, no. 6 (2015): 769–87.
72. Dale W. Jorgenson et al., "Carbon Taxes and Fiscal Reform in the United States," *National Tax Journal* 68, no. 1 (March 2015): 121–38.
73. Warwick McKibbin et al., "The Potential Role of a Carbon Tax in U.S. Fiscal Reform" (Climate and Energy Economics Discussion Paper, Brookings, Washington, DC, 2012).
74. Ibid., 38.
75. Robert Z. Lawrence, "Recent Declines in Labor's Share in US Income: A Preliminary Neoclassical Account" (NBER Working Paper No. 21296, National Bureau of Economic Research, Cambridge, MA, 2015).

portion of the declining labor share in income since 1980."[76] In other words, capital accumulation has not kept up with the effective growth of labor (adjusted for technological advances that augment the contribution of labor to the production process). Lawrence concludes that increased capital formation would reverse the declining share of labor—more capital would make workers more productive and raise their wages. This again points to tax policy changes aimed at improving capital formation.

Benjamin Bridgman discounts the assertion that the labor share has fallen once depreciation and production taxes are taken into account.[77] Matthew Rognlie similarly focuses on the role of depreciation, as well as the share of housing investment out of total capital, to argue that the net share of labor has not declined once it is properly measured.[78] These findings are consistent with those of Lawrence in dismissing the idea that an excess of capital is a major driver of inequality. Loukas Karabarbounis and Brent Neiman, in contrast, see a decline in the labor share as related to decreases in the price of capital goods.[79] That is, cheaper machines (broadly speaking) led firms to install more capital, reducing the share of labor. In this alternate view, incomes overall are higher but improving workers' incomes would require policies to redistribute the higher incomes accruing to owners of capital.

Lower capital taxes that raise overall wages could still bring about greater inequality if the increased productivity goes to already highly skilled workers. The pattern of complementarity and substitutability between capital and workers at different skill levels is thus an important topic for further research. The long-run relationship between capital taxes and wages points to the varying effects of policies over time. A capital tax increase that reduces inequality in the near term might exacerbate it over time through a dynamic impact on wages.

Taxes affect business decisions, including innovation and entrepreneurship. Alexander Ljungqvist, Liandong Zhang, and Luo Zuo find that increased taxes on corporate income lead firms to undertake less risk (measured as the standard deviation of seasonally adjusted quarterly pretax returns on total assets

76. Ibid., 9.
77. Benjamin Bridgman, "Is Labor's Loss Capital's Gain? Gross versus Net Labor Shares," Bureau of Economic Analysis, October 2014.
78. Matthew Rognlie, "Deciphering the Fall and Rise in the Net Capital Share" (Brookings Papers on Economic Activity, Brookings, Washington, DC, 2015).
79. Loukas Karabarbounis and Brent Neiman, "Labour Shares, Inequality, and the Relative Price of Capital," *Vox*, November 25, 2014.

or invested capital).[80] Risk is reduced by shortening the operating cycle (thereby putting less capital at risk) and by reducing R&D risk, as firms invest in changing the quality or variety of an existing product rather than seeking to invent a new product. But Ljungqvist and his coauthors do not find that firms will be similarly responsive to a tax cut; although they should theoretically be willing to undertake more risk, their ability to do so faces more constraints, such as the covenants of creditors. In particular, the authors conclude that every increase of 1 percentage point in local state taxes reduces a firm's risk measure by 2 percent over the three years following the increase.

Enrico Moretti and Daniel Wilson find that higher state tax rates on personal and corporate income have a negative impact on private innovation by driving away star scientists (those with patent counts in the top 5 percent of the distribution) who work in the private sector.[81] They find that the long-run elasticity of mobility with respect to state tax rates is 1.6 for personal income (as star scientists are usually in the top 1 percent and therefore sensitive to changes in the 99th percentile marginal tax rate) and 2.3 for state corporate income. The authors claim that there are "enough firms and workers on the margin that relative taxes matter" for the location of star scientists.[82] Of course, this issue of mobility would be less salient for federal taxes, since avoiding increased federal tax rates would require a move out of the United States rather than merely across a state boundary. Along the same lines, Robert Carroll and his coauthors find that increasing the marginal income tax rate by 10 percent for an entrepreneur decreases the probability of the entrepreneur's hiring workers by 12 percent.[83]

Financial Transaction Tax

Leonard E. Burman and his coauthors. and George H. K. Wang assess a financial transaction tax as a source of revenue—a proposal put forward by the presidential

80. Alexander Ljungqvist, Liandong Zhang, and Luo Zuo, "Sharing Risk with the Government: How Taxes Affect Corporate Risk Taking" (NBER Working Paper No. 21834, National Bureau of Economic Research, Cambridge, MA, 2015).
81. Enrico Moretti and Daniel Wilson, "The Effect of State Taxes on the Geographical Location of Top Earners: Evidence from Star Scientists" (NBER Working Paper No. 21120, National Bureau of Economic Research, Cambridge, MA, 2015).
82. Ibid.
83. Robert Carroll et al., "Income Taxes and Entrepreneurs' Use of Labor" (NBER Working Paper No. 6578, National Bureau of Economic Research, Cambridge, MA, 2000).

campaign of Senator Bernie Sanders.[84] As with a capital tax, a financial transaction tax might be seen in the political debate as highly progressive because it appears to fall on the owners of assets that are traded. However, a financial transaction tax would affect all trading, not just "speculative" trading, and would thereby reduce the liquidity and efficiency of financial markets. While this result is in a sense by design, the effect would be to increase the cost of funding for the end users of loanable funds—that is, for families and businesses looking to borrow money. Burman and his coauthors see the financial transaction tax as possibly increasing financial market volatility rather than curbing it, concluding that the tax "appears poorly targeted at the kinds of financial-sector excesses that led to the Great Recession."[85] Wang similarly observes that the tax "would not only fail to generate the expected tax revenue, it would also likely hurt the international competitiveness of US equity and futures markets."[86] Moreover, the financial transaction tax would be levied on intermediate steps in the production process rather than on final goods, and thus it would violate the optimal tax principles of Mankiw, Weinzierl, and Yagan[87] by imposing distortions across asset classes that vary with the amount of trading for particular assets (there is no reason to believe that a lightly traded asset should be taxed more or less than a heavily traded one). The merits of a financial transaction tax as a source of revenue depend on the alternative revenue sources. The demerits, however, are considerable.

A review of policies to increase income taxes or capital taxes, or to impose a new tax on financial transactions, suggests that these steps likely would not substantially alter either the underlying causes of income inequality or the resulting levels of income inequality among US households. A better approach to tax policy is the traditional one: to set taxes in a way that funds the government at the least cost to economic activity, that is appropriately simple for households and businesses, and that satisfies societal preferences for fairness. Addressing inequality and raising incomes at the bottom is better accomplished through other policies.

84. Leonard E. Burman et al., "Financial Transaction Taxes in Theory and Practice," *National Tax Journal* 69, no. 1 (March 2016): 171–216; George H. K. Wang, "Securities Transaction Taxes and Market Quality of Equity and Futures Markets: Issues and Evidence" (Mercatus Research, Mercatus Center at George Mason University, Arlington, VA, 2014).
85. Burman et al., "Financial Transaction Taxes."
86. Wang, "Securities Transaction Taxes."
87. Mankiw, Weinzierl, and Yagan, "Optimal Taxation."

"A range of research suggests that the EITC leads to improvements in infant and maternal health, as well as in children's cognitive outcomes and educational attainment, all of which are important aspects of human capital accumulation."

MICRO POLICIES

An alternative to the "macro" policies of the previous section would be to focus on targeted policies aimed at the bottom of the income distribution. The goals guiding such policies would be to increase the labor supply of those at the bottom; to raise their before-tax earnings (for example, through increased skills) and thus their productivity; and to improve incomes inclusive of taxes and transfers. An additional goal would be to devise policies that improve incentives for participation, increase earnings, and boost after-tax and after-transfer incomes with the least possible distortion to overall growth, including through the higher taxes (on other earners) needed to fund the requisite transfers or subsidies.

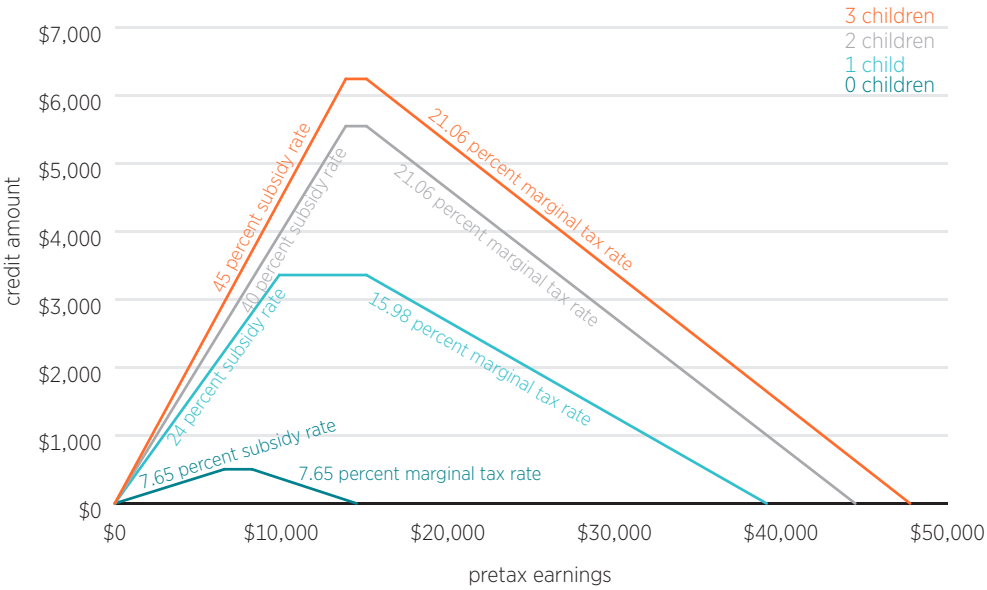
This paper does not discuss all types of transfers that might be employed in addressing inequality. The expansion of health insurance coverage through the Affordable Care Act (ACA), for example, represents a sizable increase in transfers to lower-income households. According to the CEA, the ACA not only increased access to care but also improved financial security and health outcomes for low-income families.[88] However, it remains a topic of considerable debate whether the approach taken in the Affordable Care Act is efficient or sustainable. This question is beyond the scope of this paper, but the advent of the ACA illustrates that transfer policies can include subsidies for particular purposes, such as the provision of health insurance. A key issue then becomes whether the effects of the transfer increase incentives to participate in the job market, such as by providing greater flexibility (perhaps by avoiding insurance-related job lock for some people), or instead diminishes incentives for individuals or potential employers.

Earned Income Tax Credit

Tax policy efforts aimed at low-income households could include modifications to the earned income tax credit, which

88. CEA, *Economic Record of the Obama Administration*.

FIGURE 3. EARNED INCOME TAX CREDIT SUBSIDY RATES AND MARGINAL TAX RATES



Source: Author's calculations, based on Elaine Maag, *Investing in Work by Reforming the Earned Income Tax Credit*, Tax Policy Center, Urban Institute and Brookings Institution, 2015.

provided roughly $69 billion in tax subsidies in 2015 to low-income workers, predominantly single women with children, through refundable tax credits. Chris Edwards and Veronique de Rugy provide an overview of the credit.[89] The EITC initially increases with income and then phases out, effectively acting as a negative income tax during the phase-in, raising after-tax wages for low-income workers, with the precise amount of benefits depending on income level and number of children. Figure 3 illustrates the phase-in and phase-out of the credit. While the subsidy is paid through the tax system, refundable credits that reduce tax liability below zero are considered a form of spending under US budget rules.

In 2015, working families with children whose annual incomes were a maximum of $39,000 to $53,300 (depending on marital status and number of children) were eligible for the credit. Nearly 20 percent of all tax filers and almost 44 percent of filers with children receive the EITC. In 2013, the EITC lifted 6.2 million people out of poverty according to the US Census Bureau, including 3.2 million

89. Chris Edwards and Veronique de Rugy, "Earned Income Tax Credit: Small Benefits, Large Costs" (Tax and Budget Bulletin No. 73, Cato Institute, Washington, DC, 2015).

children.[90] A range of research suggests that the EITC leads to improvements in infant and maternal health, as well as in children's cognitive outcomes and educational attainment,[91] all of which are important aspects of human capital accumulation. In addition, the EITC has been found to increase labor force participation among low-income workers.[92]

Hilary W. Hoynes and Ankur J. Patel analyze the effect of the 1993 EITC expansion, which raised benefits for families with one child but provided an even larger increase for those with two or more children.[93] The authors find that the expansion led to increases in employment for single-parent families with children and to small reductions in employment for secondary earners in married couples. The latter effect of secondary earners working less is driven by the increased after-tax income generated by the revised EITC schedule and by the primary earner's increased labor supply. The share of single women with children who were employed increased by 6.1 percentage points as a result of the EITC expansion, compared to the employment share of single women without children, who did not benefit from the expansion. The effect of the EITC expansion in improving labor participation was large and statistically significant for households with incomes from 75 percent to 150 percent of the poverty line, with the largest effects occurring around 100 percent of the federal poverty threshold (though with little effect on participation for those at the very bottom).

Importantly, the EITC—enacted in 1975 under President Ford and expanded in 1986 under President Reagan—has broad political support, with Republicans seeing it as a market-based incentive for work (though there are qualms over the number of ineligible tax filers who receive the benefit). Given this bipartisan support and the reach of the EITC as a tool to fight poverty and inequality, it is not surprising that several further changes have been proposed to extend its effect.

A natural effort would be simply to increase take-up by those eligible for the existing credit. Maggie Jones finds that 21.5 percent of families who qualified for EITC in 2009 did not claim the credit,[94] confirming earlier research by

90. Kathleen Short, "The Supplemental Poverty Measure: 2013," *Current Population Reports* P60-251, US Census Bureau, October 2014.
91. Hilary W. Hoynes and Ankur J. Patel, "Effective Policy for Reducing Inequality? The Earned Income Tax Credit and the Distribution of Income" (NBER Working Paper No. 21340, National Bureau of Economic Research, Cambridge, MA, 2015).
92. Nada Eissa and Jeffrey B. Liebman, "Labor Supply Response to the Earned Income Tax Credit," *Quarterly Journal of Economics* 111, no. 2 (1996): 605–37.
93. Hoynes and Patel, "Effective Policy for Reducing Inequality?"
94. Maggie R. Jones, "Changes in EITC Eligibility and Participation, 2005–2009" (CARRA Working Paper No. 2014-04, Center for Administrative Records Research and Applications, US Census

Dean Plueger,[95] who found that 25 percent of eligible families did not claim the credit. Jones sees the uptick in participation from 75 percent to 88.5 percent of those eligible as reflecting the worsening economic conditions during the recent recession that motivated more families to take the steps necessary to receive the EITC. Of the 21.5 percent of eligible families who did not participate in 2009, 12.8 percent did not file the tax return necessary to obtain the credit, while the remaining 8.7 percent filed a tax return but did not claim the credit even though they were eligible. Saurabh Bhargava and Dayanand Manoli find that providing information on eligibility to qualified populations increases the take-up rate,[96] suggesting that the gap in participation reflects a lack of knowledge and the challenging complexity of the filing requirements. Benjamin B. Lockwood applies behavioral insights to the EITC, noting that, by increasing the return to work, the credit can help overcome a problem of present bias: people overemphasize in their decision-making the near-term costs of taking a job at the neglect of the future benefits.[97] While pushing this margin is something hard to do practically, it is important to highlight this potential change in the EITC.

Hilary Hoynes proposes to increase the EITC for one-child families to match that for two-children families.[98] Specifically, she proposes extending the phase-in income range from $9,720 to $13,650, increasing the maximum credit from $3,305 to $4,641, increasing the phase-out rate from 15.98 percent to 21.06 percent, and extending the phase-out income range from $17,830 to $39,867. One-child families are the largest group of EITC recipients. Disposable income in those families would increase by 8 percent for those earning the minimum wage and by 5 percent for those earning 150 percent of the minimum wage. The proposal is estimated to assist 3 million people (presumably 1.5 million families) and lift 410,000 people out of poverty.

The current structure of the EITC can penalize secondary earners, since their earnings might lead a household into or further along the phase-out, raising

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Bureau, Washington, DC, July 11, 2014).

95. Dean Plueger, "Earned Income Tax Credit Participation Rate for Tax Year 2005," *IRS Research Bulletin*, June 2005.

96. Saurabh Bhargava and Dayanand Manoli, "Why Are Benefits Left on the Table? Assessing the Role of Information, Complexity, and Stigma on Take-Up with an IRS Field Experiment," *NA—Advances in Consumer Research* 40 (2013): 298–302.

97. Benjamin B. Lockwood, "Optimal Income Taxation with Present Bias" (working paper, Harvard University, Cambridge, MA, January 2016).

98. Hilary Hoynes, "Building on the Success of the Earned Income Tax Credit" (policy proposal, Hamilton Project, Brookings, 2014).

the effective marginal tax rate.[99] For example, a married couple with two children headed by a full-time worker and a nonearning spouse with adjusted gross income (AGI) of $25,000 is entitled to an EITC of $4,900. If the spouse works part time and receives the same hourly wage as the primary earner, the family is only entitled to around $2,300 in EITC benefits.[100] Incremental income from the secondary earner will also lead to a reduction in health insurance subsidies under the Affordable Care Act (ACA) and potentially lead to a reduction in benefits from other means-tested programs.[101] Elizabeth Kneebone, Jane R. Williams, and Natalie Holmes estimate that 7.5 million people qualify for subsidies from both the EITC and the ACA.[102] Such disincentives mean that some potential secondary earners might choose not to work outside the home or choose to reduce their hours.

To reduce the negative incentives of the EITC for the secondary earner in a family, Melissa S. Kearney and Lesley J. Turner propose allowing secondary earners in a married couple with children to deduct 20 percent of their earnings up to $60,000.[103] Eligibility for this deduction would phase out beginning at $110,000 in total family income, with the secondary-earner deduction rate reduced by 1 percentage point for every $1,000 increase in AGI above $110,000. Kearney and Turner calculate that the proposed change would lead to an estimated annual reduction of $8.2 billion in federal tax revenue while increasing earnings of families with incomes below $130,000 by $13.4 billion. Targeting this proposal to families with two earners means that the benefits would be available to households with earnings considerably above the median income, but not to those with incomes under $13,000.

Several proposals aim to extend or expand the benefits of the EITC for groups that now receive relatively little from the credit. Compared to workers with children, those without children receive a much smaller EITC benefit, and a narrower range of incomes is eligible before the benefit phases out. As a result, the EITC provides little assistance or improved incentives for single men. One reason for an expansion to improve participation for less educated young people

99. Congressional Budget Office, *Effective Marginal Tax Rates for Low- and Moderate-Income Workers in 2016*, November 2015.
100. Melissa S. Kearney and Lesley J. Turner, "Giving Secondary Earners a Tax Break: A Proposal to Help Low- and Middle-Income Families" (Discussion Paper 2013-07, Hamilton Project, Brookings Institution, 2013).
101. CBO, *Effective Marginal Tax Rates*.
102. Elizabeth Kneebone, Jane R. Williams, and Natalie Holmes, "Connecting EITC Filers to the Affordable Care Act Premium Tax Credit," Brookings Institution, March 2015.
103. Kearney and Turner, "Giving Secondary Earners a Tax Break."

is that increased labor force attachment will have long-lasting, positive impacts such as increasing marriage rates and reducing incarceration rates. Higher incomes for low-income single men might also encourage noncustodial parents to pay child support and stay connected with their children.

Elaine Maag proposes replacing the current EITC for childless workers with a flat refundable worker credit.[104] The credit would be available to workers of all ages without regard to the custodial situation of children, and it would mimic the current phase-in and phase-out structure of the EITC, but it would be based on individual rather than household earnings. This approach would separate work and child incentives—the EITC would simply provide an incentive for work. Under this revamped credit, families with two workers with earnings in the qualifying range would receive two worker credits. As a practical matter, however, the connection between the EITC and children is well established and receives broad political support. An expansion of benefits for childless workers might thus be more feasible than a wholesale change in the nature of the program.

Finally, Oren Cass proposes making the incentives of the EITC more predictable and transparent to workers by providing the credit as a direct wage subsidy—in effect a reverse payroll tax that shows up on the employee's W-2 payroll form.[105] Senator Marco Rubio featured a proposal along these lines in his 2016 presidential campaign. Such a proposal is aligned with the policy objective of reducing improper payments of the EITC (because of either errors or fraud). In 2013, for example, between 22 and 26 percent of all EITC payments were issued improperly, accounting for around $15 billion.[106] The IRS estimates that most of the improper payments reflect the complexity of the system, highlighting the relevance of simplifying the EITC.

Martin Feldstein provides a broader approach to addressing the impact of the tax code on secondary earners by considering the penalty under which a married couple with two full-time earners can face higher marginal tax rates and have lower after-tax income than a single-worker family with the same income.[107] Feldstein proposes that the spouse with lower earnings should have the option (but not the requirement) to file a separate tax return based on his or her own

104. Elaine Maag, "Investing in Work by Reforming the Earned Income Tax Credit," Tax Policy Center, Urban Institute, and Brookings Institution, 2015.
105. Oren Cass, "The Height of the Net," *National Review*, October 14, 2013.
106. Jason Bramwell, "Report: IRS Made up to $15.6 Billion in Faulty EITC Payments in 2013," AccountingWEB, May 13, 2014.
107. Martin Feldstein, "A Tax Boon for Working Women," *Wall Street Journal*, October 5, 2015.

wages. The goal would be to reduce the marginal tax rates on incremental earnings as well as lower the overall household tax liability. Feldstein estimates that 40 percent of two-earner couples would benefit. The lower effective marginal tax rate on the earnings of the second spouse likewise would provide an incentive for increased participation in the labor force and have some positive second-order impact on revenue that would reduce the cost of the policy compared to a static estimate that assumes no labor supply response. Jason Fichtner and Jacob Feldman propose moving to mandatory individual filing regardless of marital status, noting that optional filing (such as in Feldstein's proposal) would add complexity to the tax system.[108]

By reducing the penalty for joint filers, these proposals would reduce the disincentives facing secondary earners and also promote marriage. The latter is important, according to Chuck Marr and Chye-Ching Huang, because it promotes family stability, improves health, and lowers stress for both parents and children.[109] Marriage might thus be seen as important for reducing intergenerational inequality. Kimberly Howard and Richard Reeves note that in addition to the direct association of marriage with higher family income, there is also a positive parenting effect that helps explain why children raised by married parents do better at school, are more likely to go to college and have higher earnings, and develop stronger cognitive and noncognitive skills.[110] As discussed by David Autor and Melanie Wasserman;[111] Maureen Black, Howard Dubowitz, and R. H. Starr;[112] and Maag,[113] men who grew up without a father figure living at home have lower educational attainment, are more likely to be incarcerated, and are less likely to be employed than men who grew up with a father at home. David Ribar provides a broad survey, noting that the benefits that marriage brings to a child's well-being and development operate through a wide variety of mechanisms including "income, fathers' involvement, parents' physical and mental health, parenting

108. Jason J. Fichtner and Jacob Feldman, "Taxing Marriage: Microeconomic Behavioral Responses to the Marriage Penalty and Reforms for the 21st Century" (Mercatus Working Paper No. 12-24, Mercatus Center at George Mason University, Arlington, VA, 2012).
109. Chuck Marr and Chye-Ching Huang, "Strengthening the EITC for Childless Workers Would Promote Work and Reduce Poverty," Center on Budget and Policy Priorities, 2015.
110. Kimberly Howard and Richard V. Reeves, "The Marriage Effect: Money or Parenting?," Brookings Institution, September 4, 2014.
111. David Autor and Melanie Wasserman, *Wayward Sons: The Emerging Gender Gap in Labor Markets and Education* (Washington, DC: Third Way, 2013).
112. Maureen M. Black, Howard Dubowitz, and Raymond H. Starr Jr., "African American Fathers in Low Income, Urban Families: Development, Behavior, and Home Environment of Their Three-Year-Old Children," *Child Development* 70, no. 4 (1999): 967–78.
113. Maag, "Investing in Work."

quality, social supports, health insurance, home ownership, parents' relationships, bargaining power, and family stability."[114] Progress on some of these dimensions might be relatively difficult to achieve through policy interventions—for example, it is hard to replace an absent father—while others, such as improving physical and mental health, could be achieved through policies.

Minimum Wage

Proposals for increases in the minimum wage are a staple of the political debate regarding both inequality and policies to improve the economic situations of low-income families. Several authors have noted that the EITC provides a better incentive for participation in the workforce and therefore has a more positive effect on labor supply than an increased minimum wage would. CBO provides a survey of the literature on the minimum wage,[115] noting the effects of reduced employment at the bottom of the income distribution. CBO notes that the minimum wage is poorly targeted in the first place,[116] with only 19 percent of the gains from the higher minimum wage accruing to families in poverty. Around 30 percent of the benefits of minimum wage increases accrue to families with earnings at least three times the poverty line. The broad point is that the negative employment effects of a higher minimum wage fall especially hard on those segments of society that the proposal was meant to help.

A variety of research has assessed the effects on the EITC system of a higher minimum wage. Neumark and Wascher explain that, for single women with children and for very poor couples with children, a higher minimum wage enhances the positive effects of the EITC by boosting employment and earnings for those who are already employed.[117] This is not the case, however, for less-skilled minority men and women with no children, for whom employment and earnings are more adversely affected by the EITC when the minimum wage is higher. Because they are less likely to be eligible for the EITC, this group is made worse off in two ways. First, an increased minimum wage reduces their employment prospects because of the higher labor costs facing potential employers. And second, the EITC increases the supply of other workers (typically women

114. David C. Ribar, "Why Marriage Matters for Child Wellbeing," *Future of Children* 25, no. 2 (2015): 11–27.
115. CBO, *Effects of a Minimum-Wage Increase*.
116. Ibid.
117. Neumark and Wascher, "Does a Higher Minimum Wage Enhance the Effectiveness of the Earned Income Tax Credit?"

with children) in the market, further reducing the prospects of less skilled childless workers.[118]

Jeffrey Clemens assesses the relationship between the minimum wage and transfer programs, distinguishing between those who get the higher wage and those who lose their job because of the increased minimum wage.[119] The impact on the latter group depends on the extent to which social programs replace earned income lost from the negative impacts of the higher minimum wage. In assessing the July 2009 increase in the minimum wage, Clemens finds that safety net programs offset little of those workers' lost income so that job losers were not cushioned against earning losses. The main reason for this is that a significant fraction of these low-skilled workers are not their households' primary income earners, or they have irregular work participation and therefore are not eligible for unemployment insurance. Moreover, Clemens finds that the minimum wage increase was followed by declines in the average earnings of targeted low-skilled workers, with average income declining by $100 in the first year after the policy was implemented and by an additional $50 in the second year. These losses came about in the short run because job losses were greater than expected from the higher minimum wage, increasing the likelihood that the targeted population would not be employed. Over time, this loss of experience compounds the problem of low wages for those who might earn the minimum wage but instead are left without employment. According to Clemens, these declines in average earnings translated into reduced payroll tax collections, which in turn left the government with fewer resources to fund unemployment insurance and Medicare.

Jonathan Meer and Jeremy West find that a higher minimum wage negatively affects economy-wide job growth, particularly for younger workers and for industries with a higher proportion of low-wage workers.[120] This, in turn, can increase the inequality that the minimum wage increase is meant to address.

CBO notes that the interaction between the minimum wage and the EITC depends on the income level of each family, and thus where they are in the EITC phase-in or phase-out.[121] On the phase-in of the credit, increased earnings from a higher minimum wage (for those who are employed) lead to additional EITC

118. Ibid.
119. Jeffrey Clemens, "Redistribution through Minimum Wage Regulation: An Analysis of Program Linkages and Budgetary Spillovers," *Tax Policy and the Economy* 30 (2015).
120. Jonathan Meer and Jeremy West, "Effects of the Minimum Wage on Employment Dynamics," *Journal of Human Resources,* 2015.
121. CBO, *Effects of a Minimum-Wage Increase*.

benefits. For families initially in the phase-out, however, income gains from a higher minimum wage are partly offset by a reduction in EITC benefits.

Moreover, the existence of a minimum wage is a useful complement to an expanded EITC. The EITC encourages people in low-income families to work. This increases the overall supply of labor, which causes a decrease in workers' wages, so that some of the benefits of the EITC accrue to employers rather than to workers. If there were no minimum wage, employers could respond to an increased EITC by paying a lower market wage. The minimum wage limits the extent to which this can happen. The question, then, is about the appropriate level of the minimum wage.

Overall, the research literature suggests caution concerning the idea that a higher minimum wage is an effective way to bring about a broad increase in incomes at the bottom of the distribution. The attractions of the minimum wage as a policy tool are its simplicity and lack of direct fiscal cost (because employers pay)—both advantages from the perspective of the government, but not from the perspective of the economy. Paradoxically, however, the focus on the minimum wage might make it politically more difficult to enact a change in the EITC that would be more effective in achieving the underlying goal of helping low-income workers. One could imagine a situation in which the higher minimum wage is seen as a political sine qua non, making it difficult to reach agreement on other actions. An implication of the research literature is that it would be a mistake to insist on a higher minimum wage in return for an expansion of the EITC.

"A higher minimum wage negatively affects economy-wide job growth, particularly for younger workers and for industries with a higher proportion of low-wage workers. This, in turn, can increase the inequality that the minimum wage increase is meant to address."

Complements of Tax Policies That Affect Work Incentives

This section focuses on other policies that complement the effects of tax policies by addressing obstacles to labor participation by low-income workers, including changes to unemployment insurance and child-care subsidies. Even

though a complete list of policies that can achieve this goal is beyond the scope of this paper, the three examples analyzed in this section demonstrate ways in which encouraging labor participation can improve earnings for those at the bottom of the income distribution.

The policies discussed here should not be seen as merely a transfer of resources from the state to individuals, but more broadly as attempts to increase participation in the labor force. Indeed, as noted above, the EITC itself can be seen as a form of spending through the tax code. The policies below would also be spending that could improve increases in before-tax income for low-income families. These policies could be used in conjunction with measures such as tax reforms that aim to improve economy-wide growth and thus strengthen the labor market.

Unemployment insurance. A key policy discussion during the recent recession involved the appropriate duration for unemployment insurance benefits, which were extended repeatedly as the job market remained weak well into the recovery. As the labor market approached full employment in 2016, a policy debate remained about whether and how to change the unemployment insurance system in advance of the next downturn.

Among the important issues in the debate over UI is the balance between a system that promotes shorter unemployment durations and improves labor incentives versus one that supports incomes in the face of job loss. The unemployment insurance system has features of an automatic stabilizer in that benefit payments rise countercyclically when the labor market is weak. Benefits are typically available for qualified workers for up to 26 weeks, but an extended benefits program provides an additional 13 or 20 weeks of benefits for unemployed workers in states where the insured unemployment rate (the percentage of workers claiming unemployment insurance benefits as a share of the jobs covered by the program) reaches at least 5 percent and is 20 percent higher than the rate during the same period in the previous two years. During the recession, legislation extended UI benefits to 99 weeks in the 25 states with the highest unemployment rates in late 2009, with the extensions starting to contract in early 2012, until the UI program returned to the normal level of 26 weeks in early 2014.

It is not surprising that the effect of UI's extended duration has been a subject of considerable debate, since these benefits provide an incentive to delay finding a job but also provide important income support during weak labor markets. Henry Farber, Jesse Rothstein, and Robert Valletta use matched Current Population Survey data from 2008 to 2014 to estimate the effect of extended

benefits on exits from unemployment during both the earlier period of benefit expansion, from 2008 to 2011, and the later period of the rollback of the UI extensions, from 2012 to June 2014.[122] In both periods, the authors find that the extended benefits had little effect on reducing the rate of job finding, but they find that benefit availability slows the rate at which unemployed workers exit the labor force. The latter impact is not surprising since recipients must be looking for a job—and thus are counted as being in the labor force—even if they actually have no desire to find a job. The lack of a negative effect on job finding, however, suggests that the primary effect of the extended UI benefits was to improve labor force attachment rather than to detract from job finding. These results imply that phasing out extended benefits reduced the unemployment rate mainly by moving people out of the labor force rather than by the desired outcome of increasing the job-finding rate. Gabriel Chodorow-Reich and Loukas Karabarbounis find that the increased duration of UI benefits had modest macroeconomic impacts, increasing the unemployment rate in some states by up to 0.3 percentage points.[123]

In contrast, Marcus Hagedorn and his coauthors find that UI extensions increased wages and thus suppressed job creation, leading to higher unemployment and reduced job growth. Their results "attribute a prominent role to benefit extensions in accounting for the persistence of high unemployment following the end of the Great Recession in 2009."[124] They calculate that "unemployment in 2011 would have been 2.5 percentage points lower had benefits not been extended." The same authors then look at one state, North Carolina, in which extended benefits ended relatively early and find that the end of extended UI benefits had a statistically significant impact in reducing unemployment. Hagedorn and his coauthors find that the end of the federally financed extended UI in North Carolina in July 2013 led to a 0.1 percentage point decrease in the unemployment rate in the six months after the program ended, relative to the change in the unemployment rates of neighboring states that continued with

122. Henry S. Farber, Jesse Rothstein, and Robert G. Valletta, "The Effect of Extended Unemployment Insurance Benefits: Evidence from the 2012–2013 Phase-Out" (Working Paper, Federal Reserve Bank of San Francisco, 2015).
123. Gabriel Chodorow-Reich and Loukas Karabarbounis, "The Limited Macroeconomic Effects of Unemployment Benefit Extensions" (NBER Working Paper No. 22163, National Bureau of Economic Research, Cambridge, MA, April 2016).
124. Marcus Hagedorn et al., "Unemployment Benefits and Unemployment in the Great Recession: The Role of Macro Effects" (Staff Report No. 646, Federal Reserve Bank of New York, October 2013, revised February 2015).

the extended benefits[125]—the differential impact is statistically significant at the 5 percent level. The evidence goes against the idea that unemployment benefit extensions support the labor market by increasing the level of aggregate demand. The authors find instead that longer unemployment benefits affect the job-creation decisions of employers, causing them not to create some jobs. The authors find that after the end of UI, employment rose in North Carolina, and they see no evidence that the newly created jobs were inferior in terms of hours, employment, or wages. While specific to one state, the experience of North Carolina suggests that the extended benefits were left in place too long, though the negative effects on the job market were modest.

The authors discussed above agree that extending UI benefits leads to a higher unemployment rate, but they disagree on the cause and magnitude. Given that the unemployment rate is measured as the ratio of those actively looking for a job to those in the labor force (which include the employed and the unemployed who are actively seeking work), there are two ways in which the rate can increase: either by an increase in the number of jobless people looking for a job or a decrease in the labor force. Farber, Rothstein, and Valletta see ending the UI extension as leading to a lower unemployment rate because jobless workers stop looking for jobs and instead leave the labor force (though some of these workers might have been in the labor force simply to qualify for the benefit and were not really looking for a job).[126] For these authors, then, the decrease in the unemployment rate is something to worry about in terms of policy, as it means that people who are fit to work but are jobless decide to give up on their search. In contrast, Hagedorn and his coauthors see extended UI benefits as suppressing job finding, so the end of the extended benefits leads to increased workforce participation and job creation.[127] In that case, then, a decrease in the unemployment rate shows what is expected: more people who are looking for jobs are finding one.

It seems, then, that the effect of extended UI on the unemployment rate after a recession passes is unclear, but it is a widely used countercyclical policy when the labor market is not in the best shape. Danny Vinik therefore proposes to change the triggers for the Extended Benefits program so that an additional 13 weeks of unemployment insurance is made available each time a state's unemployment rate hits the following sequence of unemployment rates: 6.5, 7.5, 8.5, and 9.5 percent, with a maximum of 52 weeks of extended benefits on top of the

125. Marcus Hagedorn et al., "Case Study of Unemployment Insurance Reform in North Carolina," IssueLab, Foundation Center, 2014.
126. Farber, Rothstein, and Valletta, "Effect of Extended Unemployment Insurance Benefits."
127. Hagedorn et al., "Unemployment Benefits and Unemployment."

baseline 26 weeks.[128] In addition, if a state's unemployment rate rises rapidly, the proposal would trigger additional benefits. The idea is for the unemployment insurance system to react faster to poor economic conditions. According to Vinik, the problem is that currently "the triggers are broken so that they never turn on when the economy actually needs them and states are reluctant to fix it because it's not federal financing." More evidence is needed on the effects of extended UI benefits before policymakers embrace this approach, not least because the proposed change would cost $50 billion over the next 10 years and would require increased coordination between federal and state governments.

Childcare subsidies and paid leave. Programs to subsidize childcare might increase labor force participation and thereby increase pre-tax earnings (while constituting a transfer that supplements post-tax and post-transfer incomes). Currently, the United States provides a modest childcare subsidy through the tax code, the Child and Dependent Care Credit (CDCC), which covers up to 35 percent of childcare expenses up to $3,000 per year for a child under 13—the precise amount varies with income. A second child qualifies some parents for an additional $3,000 subsidy. Moreover, up to $5,000 in employer-provided child-care expenses can be excluded from taxable wages.[129]

One proposal to increase labor force participation and earnings at the bottom is to extend childcare subsidies.[130] Jack Hoffman recommends government subsidies for childcare providers in an amount that covers rates charged by 75 percent of providers, with the subsidy targeting especially families at or below the federal poverty line.[131] Hoffman's recommendation is based on the analysis of the Vermont childcare policy, noting two main issues with that state's current program: (1) a subsidy amount that covers the rates charged by only 14 percent of licensed childcare providers and (2) eligibility criteria that leave out many low-income families. Providing these government subsidies could affect the supply of childcare services in addition to increasing the demand. It could be that new providers open in response to the availability of funds, ameliorating what might otherwise be increased prices in response to the subsidies.

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128. Danny Vinik, "Obama's Budget Proposes a Major Overhaul of Unemployment Insurance," *New Republic*, February 2, 2015.
129. Kate Rogers, "Would Subsidized Child Care Boost U.S. Labor Participation Rate?," *Fox Business*, April 2013.
130. Jackie Kucinich, "Senate Panel: Affordable Child Care Could Help Shrink Gender Wage Gap," *Washington Post*, May 13, 2014.
131. Jack Hoffman, "Why Vermont's Child-Care Subsidy Needs Fixing" (Issue Brief 1303, Public Assets Institute, Montpelier, VT, April 2013).

Along the same lines, James Ziliak proposes converting the current CDCC to a refundable credit specifically targeting low- and middle-income families who use certified care facilities.[132] There would be an income eligibility cap ($70,000), and the credit would be a progressive function of both income and the age of the child. The objective of such a change is to promote employment among low-income families (that is, to improve the targeting of the current credit), as well as to expand access to quality childcare facilities.

Herwig Imervoll and David Barber note that allowing employed parents to claim tax exemptions for childcare expenses is consistent with aims to limit distortions of employment decisions and achieve a more balanced tax treatment of families with different patterns of work in the market and at home.[133] The authors push for policies to especially target single parents and low-income secondary earners, whose employment behavior is thought to be responsive to changes in childcare costs.

Another approach to increasing the incentive to work would be to provide a subsidy for employers to provide paid family leave, such as for a new parent to care for a child or for an adult child to care for an elderly parent. This subsidy might remove barriers that keep some potential workers out of the labor force because of their concerns about the lack of flexibility in the face of family-related needs. Workers at the bottom of the income distribution might not otherwise take time off work after the birth of a child, so such a policy could be connected to improved intergenerational opportunity, as empirical evidence indicates that having a parent stay home improves children's outcomes. Jack Jenkins claims that lack of family leave negatively affects the long-term health of both children and parents; in some cases it delays babies' immunizations and decreases the number of medical checkups.[134] Mothers are also more likely to breastfeed for longer if they take paid leave. Jenkins highlights that taking an additional 10 weeks (after the initial 12 weeks he proposes) reduces postneonatal mortality by an average of 4.5 percent, and he notes that offering paid family leave to fathers leads to greater paternal involvement in a child's life over time, creating a pattern of parenting that is more equally shared between mothers and fathers.

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132. James P. Ziliak, "Proposal 10: Supporting Low-Income Workers through Refundable Child-Care Credits," in *Policies to Address Poverty in America*, ed. Melissa S. Kearney and Benjamin H. Harris (Washington, DC: Brookings Institution, 2014), 109.
133. Herwig Immervoll and David Barber, "Can Parents Afford to Work? Childcare Costs, Tax-Benefit Policies and Work Incentives" (IZA Discussion Paper No. 1932, Institute for the Study of Labor, Bonn, Germany, 2006).
134. Jack Jenkins, "Real Family Values: Paid Family Leave," Faith and Progressive Policy Initiative Series, Center for American Progress, 2013.

Employers are now required to provide unpaid leave under the Family and Medical Leave Act (FMLA) of 1993, through which eligible employees have the right to take up to 12 work weeks of unpaid leave during any 12-month period for a serious health condition, pregnancy care, or care for a newborn or adopted child. Roughly 40 percent of the US workforce does not qualify for these benefits. To be eligible for this leave, employees must have been at their workplace for at least 12 months and must have worked at least 1,250 hours over the past 12 months at a location where their company employs 50 or more employees.[135] Moreover, workers in low-income families who do qualify might feel that they cannot afford to take unpaid leave.

Two variations of policy proposals have been suggested to provide either a subsidy to employers to provide paid leave or a mandate requiring it. Jenkins proposes to provide eligible employees (both men and women) with up to 12 weeks of partial wage replacement for their own serious illness or that of a family member, the birth or adoption of a child, or urgent needs arising from a service member's deployment (he proposes a 0.4 percent tax on wages to fund the program, but in principle the merits of this subsidy do not depend on this tax).[136] Similarly, Jane Waldfogel proposes to increase the assistance given to parents to care for their children because one quarter of poverty spells (periods in which a person's income places them below the poverty line) in the United States begin with the birth of a child.[137] She proposes that the United States adopt universal, paid parental leave of at least 10 months, asserting that such longer leaves are associated with improved health outcomes for women and children. She also asserts that the possibility of paid leave beyond the first 6 months is associated with higher rates of employment for women of childbearing age because the longer guaranteed leave provides an incentive for women to be employed before having children.

A second proposal is a childcare subsidy to help parents pay for nonparental care. Waldfogel notes that the United States provides a lower level of childcare support than other advanced economies, with only 15 percent of eligible low-income families receiving direct subsidized care and about 30 percent receiving some public support through tax credits or the enrollment of children in publicly provided preschools or kindergarten programs. A challenge is to devise

135. Ibid.
136. Ibid.
137. Jane Waldfogel, "International Policies toward Parental Leave and Child Care," *Future of Children* 11, no. 1 (2001): 98–111.

"Policies that simply aim to fund redistributions are likely to be only modestly effective in addressing inequality, but measures to improve individual incentives for work could make a meaningful impact in raising both before- and after-tax incomes at the bottom of the income distribution."

a metric by which to measure the impacts of such policies, so the resources needed for these proposals can be weighed against other uses.

As Immervoll and Barber point out, childcare fees, taxes, and reduced benefits account for around 70 percent of low-wage secondary earners' income.[138] For single parents, the payoff from employment can be even lower. Reducing the net costs of childcare, particularly at the beginning of a child's life, will have a combined effect of increasing incentives to work (and therefore increasing earnings) for those at the bottom, plus helping that group afford high-quality care for their infants. The latter is relevant, as discussed above, to prevent intergenerational inequality. Moreover, both policies affect work incentives for single women with children at the bottom of the income distribution and thereby impact inequality. Childcare subsidies and policies to extend paid leave might also have a positive effect on future human capital accumulation.

CONCLUSION

Public policy has a role to play in addressing the challenges raised by income inequality, but a review of the research literature suggests caution in focusing on tax measures. Tax reform instead should be part of a strategy to achieve strong and sustainable economic growth, with growth rather than inequality itself as the target. That is, tax policy might better remain geared toward promoting a system that is pro-growth, simple, and fair, with policies focused on ensuring a strong economy with appropriate degrees of progressivity in the tax code rather than on redistribution per se. A tax reform that reduces the bias against saving and investment would lead to increased capital formation, and thus over time it would improve labor productivity and wages. The implication of the bulk of the research literature is not just that a stronger economy will help workers,

138. Immervoll and Barber, "Can Parents Afford to Work?"

but that a stronger economy with more capital could be especially beneficial to labor. A tax policy oriented toward redistribution is likely to reduce growth and affect society's ability to address the challenges underlying increased inequality (which after all is an indication that too many people do not have the skills and education for a globalized economy in which technology plays an increasingly important role).

Policies that simply aim to fund redistributions are likely to be only modestly effective in addressing inequality, but measures to improve individual incentives for work could have a meaningful effect by raising both before- and after-tax incomes at the bottom of the income distribution. Macro-oriented, pro-growth policies combined with tax changes that improve work incentives would be the preferred response to inequality. An expansion of the EITC would become the centerpiece of such policy efforts.

As was the case in the late 1990s, inequality as measured might actually increase with policies that result in earnings growth across the income distribution. This could arise because stronger economy-wide growth means that incomes increase more for workers with the highest skills. But as in the late 1990s, this likely would be an outcome that is not just societally acceptable but actually welcome: the ultimate objective is a shared prosperity with higher earnings for people at all points in the income distribution, rather than progress on inequality alone.

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