

Inclusive Growth: For Once, Some Good News

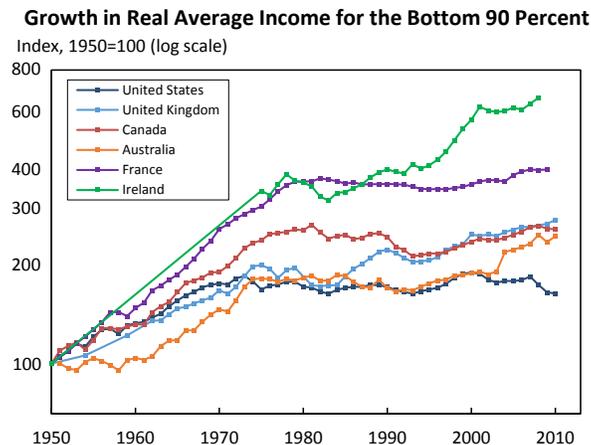
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I expect the U.S. economy will complete its recovery from the Great Recession. But even after it does, Americans will still face two related economic problems that have been building for decades: the failure to generate sustained gains in income for middle-class households or to combat falling living standards for many near the bottom of the income distribution. While much of the developed world is dogged by the same issues, my focus here is on what's happened in the United States – and, importantly, why we need not choose between sustaining economic growth and ensuring the benefits of that growth are broadly shared.

The Grim Numbers

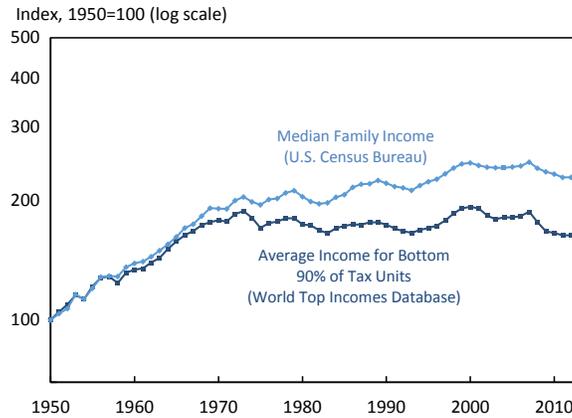
A number of indicators offer a broad sense of living standards, but one that has the advantage of being available across a host of countries and many decades is the average, inflation-adjusted income for the bottom 90 percent of households. After rising strongly in most OECD economies in the postwar years until about 1980, it has been roughly flat since then – though I should offer the important caveat that income measures including employer contributions to health insurance and other benefits are, at least in the United States, still rising slowly.



Note: Ireland data is based to 1943=1950=100 and missing for 1944-1974. U.K. and Canada series have breaks in 1990 and 1982, respectively. Australia is indexed to 1951=100.
Source: World Top Incomes Database; CEA calculations.

In the case of the United States, and I suspect other countries as well, the path of average incomes for the bottom 90 percent broadly tracks median household income. The story it tells is stark: Even though GDP grew from 2001 through 2007, the typical family did not share in the gains -- the first time an economic expansion has not translated into rising middle-class incomes. Incomes subsequently fell in the Great Recession, implying that, overall, there has been no net increase in incomes for the less-than-affluent since the late 1990s.

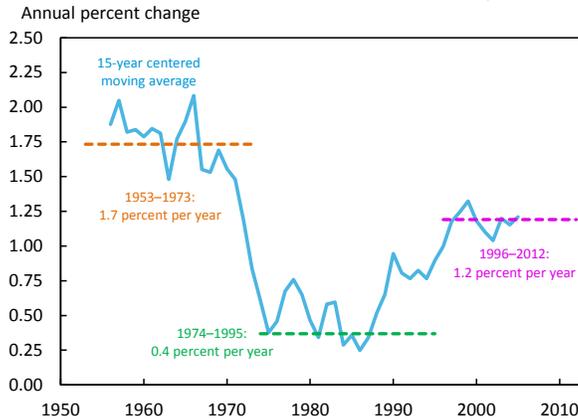
Two Measures of Real Income Growth for the United States



Source: World Top Incomes Database; U.S. Census Bureau; CEA calculations

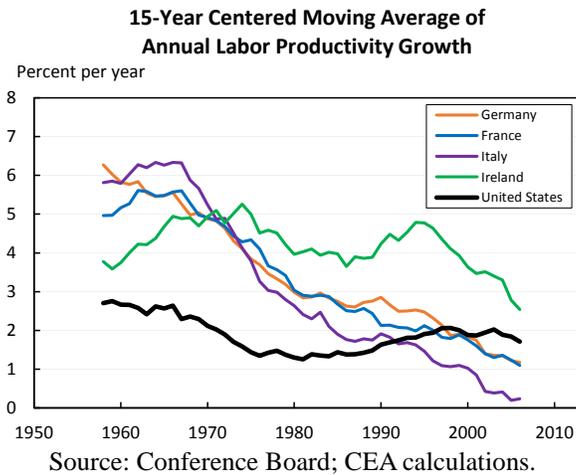
The reasons for this sobering outcome vary from country to country, but two broad forces are generally at play. The first (and less important in the United States) is productivity growth. In the United States, growth in total factor productivity (the total output generated by a given quantity of capital and labor) grew rapidly after World War II as military innovations were commercialized. But it slowed dramatically in the wake of the oil shock in the early 1970s. Productivity gains revived a bit – but only a bit -- starting with the “new economy” in the mid-1990s. And this partial recovery explains in part the failure of the bottom 90 percent to make economic headway since the 1970s, especially in the last two decades.

Growth in U.S. Total Factor Productivity

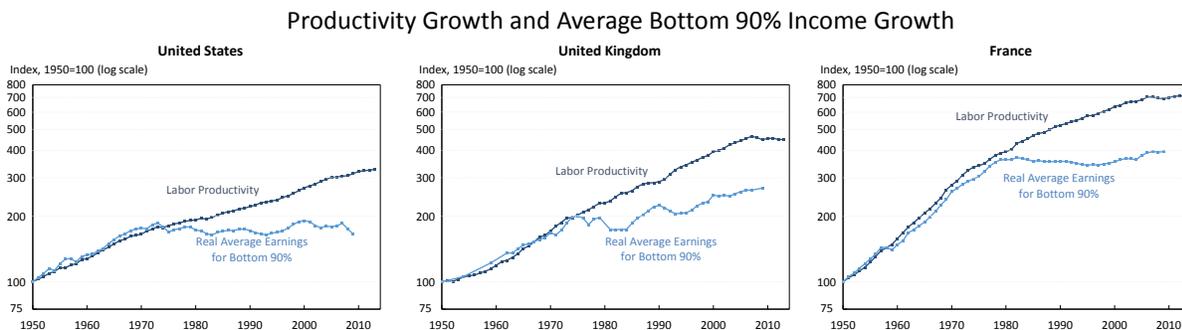


Source: Bureau of Labor Statistics; CEA calculations.

It is worth noting that slowing productivity growth is a much more important part of the explanation for why income growth has lagged in continental Europe. Several of the large European economies enjoyed very rapid productivity increases in the decades after World War II, as they rebuilt their economies and moved closer to the technological frontier largely created by the United States. But this was catch-up, and thus temporary. As the effects of World War II receded and the technology gap narrowed, many continental European economies saw their productivity growth slow. Moreover, they never experienced the modest rebound the United States did in the wake of the 1990s digital revolution.



In the United States (and other OECD countries to varying degrees) the primary source of the failure to generate sustained gains in middle-class incomes has been the fact that productivity growth has not translated into commensurately higher middle-class incomes. The fissure is particularly stark in the United States – but almost as troubling in the UK and France.



Sources of the Increase in U.S. Inequality

Traditionally, research on inequality has focused on inequality within labor income. Partly that is because labor compensation represents the bulk of all income, and changes in its distribution have (with important caveats) been the largest driver of inequality. Partly it is because we have

better theories of the workings of labor markets than of capital markets, and better data to test them.

But this is changing. One of the vital contributions of *Capital in the Twenty-First Century*, the much-discussed new [book](#) by the French economist Thomas Piketty, is to highlight the reality that the pace of investment and the returns to capital also play an important role in determining trends in income inequality.

Decomposing the Increase in Inequality

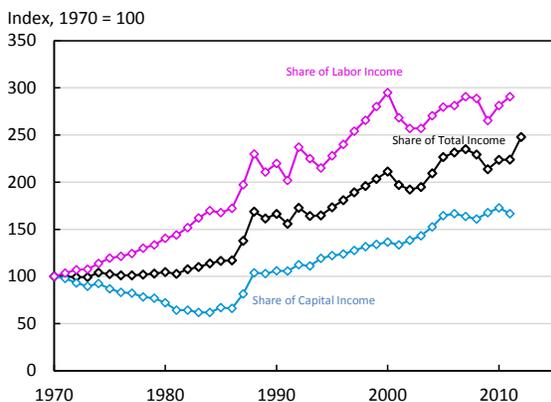
Following Piketty, it is illuminating to decompose the sources of inequality into:

- Inequality within labor income
- Inequality within capital income
- The division of income between labor and capital

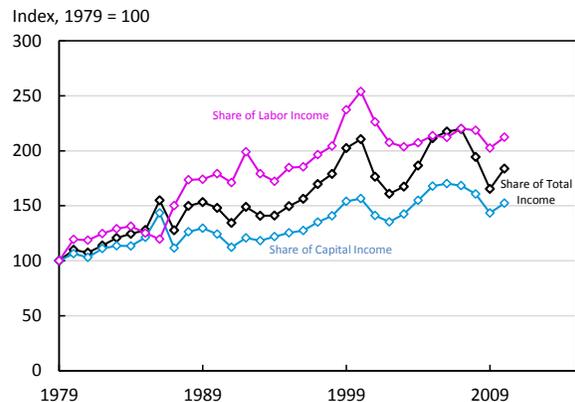
Each has different causes, dynamics and policy implications. Piketty does not quantify their relative contribution to changes in inequality in the countries he studies. But I've attempted to do the numbers here, quantifying the changes in inequality in the United States using data from multiple sources: [Piketty and his co-researcher Emmanuel Saez](#), the Congressional Budget Office, and the U.S. National Income and Product Accounts (estimated by the Department of Commerce). Unfortunately, a variety of technical issues make this decomposition less than an exact science. But a few broad conclusions do stand out.

Start with the results using data derived from Piketty and Saez. The top one percent's share of total income rose from 8 percent in 1970 to 17 percent in 2010. Throughout this period the top one percent's share of labor income rose steadily, but its share of capital income only began a sustained rise around 1990. All told, 68 percent of the increase in income for the top 1 percent across the four decades follows from increased inequality within labor income and 32 percent from increased inequality within capital income. Shifts in the division of income between labor and capital had no impact.

Share of Total, Labor, Capital Income Accruing to Top 1%



Share of Total, Labor, Capital Income Accruing to Top 1%



Source: Piketty & Saez (2013); CEA calculations.

But capital looks a lot more important when one focuses on either the extreme upper end of the income distribution, or on changes in inequality in the most recent decades. The table below shows the relative importance of the distribution of income within labor in explaining the increased share of income going to the top, with estimates based on different sources of data and different periods.

Table 1 . Increase in Income Share Accounted for by Inequality Within Labor Income

	<i>Top 10%</i>	<i>Top 1%</i>	<i>Top 0.1%</i>	<i>Top 0.01%</i>
<i>Income Excluding Capital Gains</i>				
1970-2010 (Piketty-Saez)	83%	68%	53%	39%
1980-2010 (Piketty-Saez)	71%	54%	59%	35%
1990-2010 (Piketty-Saez)	64%	51%	53%	37%
1980-2010* (CBO)	73%	48%	--	--
1990-2010* (CBO)	73%	43%	--	--
<i>Income Including Capital Gains</i>				
1970-2010 (Piketty-Saez)	80%	63%	47%	33%
1980-2010 (Piketty-Saez)	67%	50%	52%	30%
1990-2010 (Piketty-Saez)	61%	45%	44%	30%
1980-2010* (CBO)	70%	42%	--	--
1990-2010* (CBO)	64%	31%	--	--

Note: Values for any given year calculated as a centered three-year moving average.

** CBO estimates for 2010 are of that year alone.*

The higher up the income ladder you go, the less that inequality within labor income explains the overall increase in inequality -- and the more it is explained by inequality within capital income. There is a strong temporal pattern as well, with inequality within capital income becoming increasingly important over time. The relevant CBO data only go back to 1979, and do not show any finer cuts than the top one percent. But they tell a similar story.

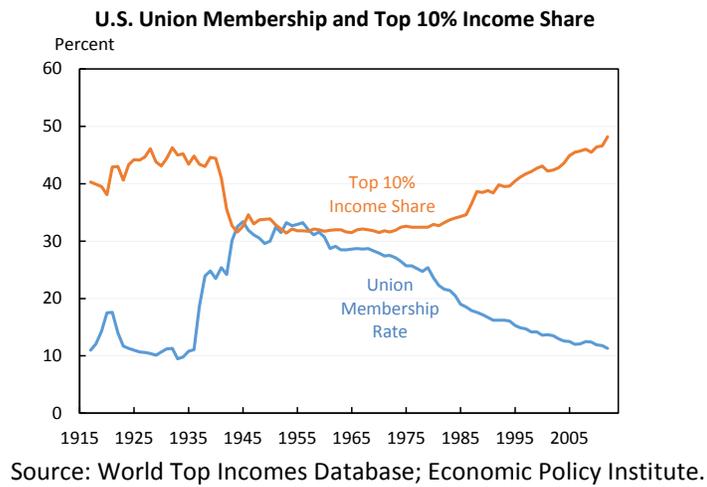
Inequality within Labor Income

Among the very top earners (top 0.1 percent) about two-fifths of the income goes to managers in non-financial industries, about one-fifth to financial professionals, and the remaining two-fifths is spread across other occupations – notably, law, medicine, real estate, private business ownership, arts, media and sports. Explanations put forward for this phenomenon include:

- The increased return to skills, in large part due a combination of the increased reach of corporations, entertainment and sports in global markets
- The slowdown in increases in educational attainment
- Changes in corporate cultures that have facilitated disproportionate increases in the compensation of senior managers.

These factors, along with institutional changes including the decline in unionization, are also important in explaining changes in the middle of the earnings distribution, The decline in the real

(inflation-adjusted) value of the minimum wage has had a particularly large impact on the bottom of the distribution.



Inequality within Capital Income

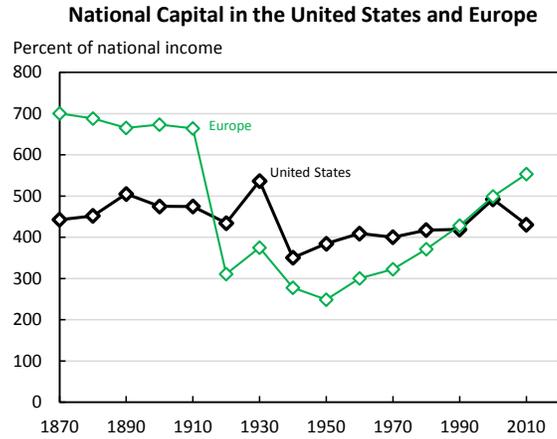
The second source of increased inequality can be attributed to changes in the distribution of capital income. In part, this is linked to the secondary impact of overall income inequality: more affluent people save more, which feeds inequality in wealth. But it also follows from the fact that wealthier investors tend to receive higher returns on their investments, and that tax rates on capital income have been cut in recent decades.

The forces driving inequality within capital income have been studied much less than labor-income inequality. But the subject clearly merits much more attention in light of its increasing importance. Indeed, rising capital-income inequality explains the majority of the increase in inequality for the very top of the income distribution over the last 40 years, and is an even more important factor in last 20 years.

Piketty points to the relationship between the returns to wealth and a nation's economic growth rate as the crucial determinant for changes in inequality. In Europe, total wealth was seven times annual income in 1870. But wealth destruction in two catastrophic wars in the first half of the 20th century cut this to about 2½ times annual income in 1950, with only a partial recovery since.

In the United States (which lost far less wealth to war in that period and averaged faster economic growth), the ratio of wealth to annual income has held steady at about four-to-one for the last 140 years. The crux of Piketty's argument is that the higher growth rate in the United States has resulted in a society with a higher income level relative to the accumulated wealth from the past.

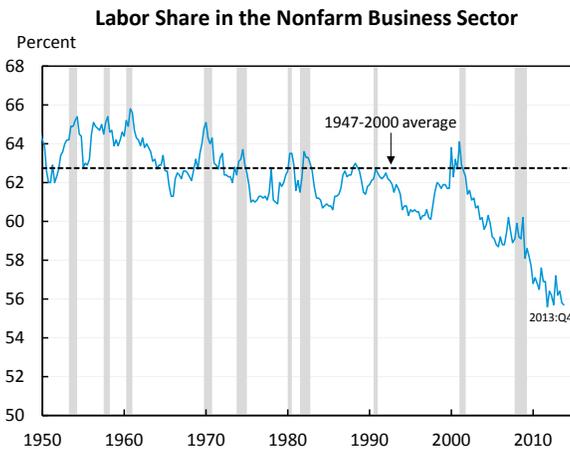
Figure 9



Source: Piketty (2014); CEA calculations.

The Division of Income between Capital and Labor

Wealth – and the income derived from wealth -- is much more unequally distributed than labor income. Thus, all else equal, when labor’s share of income falls, income inequality rises. In Europe, the share of income going to labor has been falling since about 1970, roughly the inverse of the overall rise in wealth (as one would expect). In contrast, in the United States, a marked decline in labor’s share occurred only after 2000.



Source: Bureau of Labor Statistics; CEA calculations.

The relative importance of this factor in the overall increase in inequality is harder to quantify because the data from Piketty-Saez and the CBO do not show a declining labor share of income after 2000, in part due to technical issues in distinguishing capital income from labor income for the most affluent. Using a different data set used to produce the official U.S. GDP statistics, the shift from labor to capital income is responsible for roughly one-fifth of the overall increase in inequality since 1970—although these data partly contradict the Piketty-Saez and CBO data so the truth could lie somewhere in between.

The Outlook for Inequality

The most striking argument in Piketty's book is that to the degree that growth rates slow in the future because of demographic or other factors, this will inevitably lead to a sustained increase in inequality. He argues that the distribution of wealth is a function of the after-tax rate of return on capital minus the growth rate of GDP, or $r - g$. It is intuitive that wealth grows along with the after-tax return on capital (r), while wages grow along with g . Piketty projects that g will decline over the next century because of demographic factors, and possibly other factors as well. If r does not fall by as much as g , Piketty argues that wealth will become proportionately more important than earned income in determining the degree of inequality, raising the share of income going to capital and thus raising overall inequality. Piketty further argues that the increased importance of wealth will also result in the increased importance of inherited wealth in driving inequality.

Viewing the dynamics of inequality through this simple lens is both intriguing and disturbing -- though it is unclear how much insight it actually yields. Piketty predicts that capital's share of total income will rise, pushing in the direction of increased inequality. But capital's share is only one determinant of inequality. A more important factor to date has been changes in inequality among labor income earners. Yet, for reasons not clear, Piketty assumes no future changes. Labor income inequality, after all, is tied to a mix of difficult-to-predict factors ranging from technological developments to trends in CEO compensation to changes in minimum wages.

Moreover, economic theory offers little insight into whether slower GDP growth would, in fact, result in a rise in $r - g$. In general, when the rate of GDP growth falls, the ratio of capital to income rises -- which tends to drive down the rate of return on capital. Whether the return on capital falls more or less than the growth rate falls depends on the ease with which capital can be substituted for labor: the lower the substitutability, the more r will decline as capital is added. Unfortunately, the degree of this substitutability has not been estimated with much confidence.

The return on capital is also influenced by households' willingness to save. And with people expecting to live longer in retirement, households are likely to adapt by saving more regardless of interest rates—further driving down the return on capital.

As a result, theory offers no certain answer whether $r - g$ would increase or decrease as a result of slower GDP growth. In fact, many standard economic models implicitly assume that r would fall by more than g . If that is indeed the case, slower economic growth would lead to a reduction in $r - g$, and consequently push in the direction of less inequality rather than more.

It's worth noting that, separate from Piketty's argument about increases in capital's *share* of income, it is plausible that continuing increases in income inequality within capital income will occur simply as a result of the large increases in inequality within labor income that have already occurred. Those made rich by the inequality of labor income will likely amass significant wealth.

The Relationship between Inequality and Growth

There are good reasons to believe that causality runs both ways between inequality and economic growth, and by tortuous routes. This makes it difficult to be confident about analyses of the links between the two, but it is still possible to draw some tentative conclusions.

The Effect of Inequality on Growth

There is voluminous research on the ways that specific policies change individuals' and firms' incentives -- and in the process, affect economic efficiency and income distribution. Among the most cited findings is the trade-off between equity and efficiency. Hence the often repeated "leaky bucket" metaphor [coined some 40 years ago](#) by Arthur Okun in describing the waste inevitable in policies designed to promote equity:

The money must be carried from the rich to the poor in a leaky bucket. Some of it will simply disappear in transit, so the poor will not receive all the money that is taken from the rich.

The modern microeconomic evidence is mixed, with researchers concluding that some income support policies can positively affect both equity and efficiency. Moreover, the policy mix itself has changed toward measures less likely to generate inefficiency. For example, in the United States, traditional welfare programs have been eclipsed by tax credits that are both administratively less costly and create less disincentive to work. Meanwhile, welfare programs themselves have been substantially overhauled to reduce disincentives to work.

Traditional macroeconomic theory has also led economists to conclude there was a tradeoff between equality and growth. The point often emphasized: since high-income households save more, greater inequality would translate into more savings and investment, and in turn, more output.

But newer research has identified a number of mechanisms by which greater equality could *increase* the level of output or its growth rate. The logic starts from the observation that the impact of the quantity of capital in determining output is dwarfed by the quality of capital, along with technology and entrepreneurship. Moreover, pervasive market failures -- in which prices do not reflect opportunity cost -- mean that the efficiency of outcomes may depend on the distribution of income. In particular, this approach emphasizes a number of channels by which inequality could harm growth by

- Reducing access to the education necessary for labor to reach its full potential
- Reducing entrepreneurship and risk taking
- Undermining the trust needed for a decentralized market economy to function efficiently
- Generating political instability that increases business uncertainty

Until recently, the macroeconomic evidence was ambiguous; it would be fair to say that, at a minimum, it ruled out large negative effects on growth from progressive policies that reduced inequality. But the [latest](#) cross-country regressions from Jonathan Ostry, Andrew Berg and

Charalambos Tsangarides at the IMF using a better data set are more encouraging -- although like all results from cross country regressions it should still be taken with a grain a salt.

The study finds that, other things equal, greater inequality has a *negative* impact on both the rate of growth and its sustainability. Moreover, progressive policies in themselves have no statistically significant impact on the rate of growth, with a small caveat that policies redistributing income to households in the top 25 percent – presumably, via non-means-tested entitlements -- could have a small negative effect on growth. It follows that, to the degree progressive policies reduce inequality, they spur growth.

To put these findings in context, I apply them to the recent U.S. experience. Since 2009 the United States has made three sets of permanent changes to its tax code:

- Many of the tax cuts for high-income households that were passed in 2001 and 2003 were allowed to expire in 2013;
- New taxes dedicated to Medicare (0.9 percent tax earned income and a 3.8 percent tax on investment income) were placed on high-income households in 2013;
- Tax credits for lower-income households with children and college students were expanded for 16 million households by an average of \$900 (these expansions expire after 2017, but President Obama has proposed to make them permanent).

Taken together, these policies will reduce the Gini coefficient, a standard measure of inequality, by 0.6 index points—the equivalent of a rollback of about half a decade of drift toward greater inequality.

Using the estimates from the IMF study, these tax changes should add 0.06 percentage points to the annual growth rate. This may seem a modest figure. But after a decade, it would translate into about \$500 extra per year for a typical family of four. And this is on top of the direct benefits of the tax cuts accruing to lower and middle-income households. Moreover, these estimates do not include the impact of the Affordable Care Act, which would more than double these reductions in inequality by expanding subsidies to low- and middle-income households.

The Effect of Growth on Inequality

There has been much less attention to the forces that run in the opposite direction—that is, how growth affects inequality. There is empirical research on the impact of *level* of output on inequality. The “[Kuznets Curve](#),” graphing GDP against measures of inequality, is an inverted U, with inequality high at low levels of income and low at higher levels of income, though there is little evidence that the relationship is causal. Piketty's framework, for its part, has the potential implication that growth could reduce inequality, although he does not explicitly spell out this point. Specifically, raising g relative to r would reduce inequality. Intuitively, raising g increases the importance of wages relative to wealth. This implies that the labor share increases, reducing inequality.

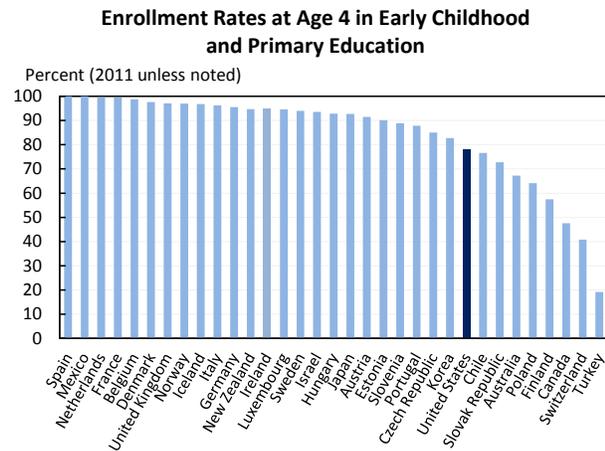
Liberation From the Big Trade-Off

Modern economics has long been in the thrall of Arthur Okun’s “big trade-off,” the view that virtually any interference with free market incentives with the goal of a more progressive distribution of income – policies ranging from higher taxes on high-income earners to minimum wage hikes to subsidized medical care for the poor – would exact a price in economic efficiency and, ultimately, growth. The insight is certainly accurate in some cases. A big asterisk belongs here, though, or, I should say, *asterisks*.

Okun implicitly assumed that markets would otherwise work with perfect efficiency. More to the point, that in a less-than-perfectly-efficient market economy, policy interventions increase inefficiency rather than to reduce it. But we know for a fact that some interventions are a win-win, reducing both inequality and inefficiency.

A good example is early childhood education, which is widely acknowledged to yield among the highest returns of any area of investment, yet disproportionately benefits families at the low end of the income distribution. The fact that this low-hanging fruit is there for the picking implies some form of market failure. The two prime candidates:

- Some of the benefits of early education are external to recipients
- Capital markets are less than perfectly efficient because poor people can’t borrow the tuition for pre-school against the prospect of a big increase in the kids’ future earnings.



Note: Data for Canada as of 2010.
Source: OECD.

By the same token, investments in higher education through subsidies that accurately reflect the demand for specialized skills have the potential to increase the growth rate, even as they ensure that the benefits of growth are broadly shared.

Another example – one in which the United States is a model – are cash subsidies to the poor that are tied to work. The Earned Income Tax Credit provides a match of up to \$0.45 for each \$1 earned by lower-income workers. This provides an incentive to work and can be an efficiency (and GDP) enhancer.

Perhaps the more striking fact is that the IMF study suggests that, on balance, progressive programs, even if imperfect in many countries around the world, may have nonetheless been growth-enhancing. It is even possible that greater awareness of the efficiency implications of policy change has led to policy design in many OECD countries in which progressive policies lead to more growth, rather than less.

That said, it is still important to remember that the potential for a trade-off should not necessarily take a policy initiative off the table. Much depends on the terms of the trade-off – the relative size of the benefits and the costs. In the case of the minimum wage, for example, our reading of the evidence is that it would have little or no impact on employment but would provide a substantial income increase for 28 million workers. But even some who believe the minimum wage has a small negative impact on employment often would still support it because these impacts are outweighed by the very large number of beneficiaries.

Integral to any effort to analyze the growth impact of policies aimed at raising the living standards of families left behind in the past four decades is the issue of how to pay for it. Indeed, part of ensuring that everyone shares in the benefits of growth is making sure that the process of enhancing medium- and long-term fiscal sustainability does not move the economy in the opposite direction.

One element of this is making sure that deficit reduction be done in a balanced manner that includes more revenue from high-income earners. In this spirit, the coverage expansions in the Affordable Care Act are partly paid for with taxes on the income of households at the top.

Moreover, the Administration's proposals for additional revenue to sustain the budget are centered around limiting tax benefits for high-income households -- specifically an across-the-board limitation of the value of tax benefits in areas like housing, health care and pensions to 28 cents on the dollar for high-income households, which is less than the up-to-39.6 cent value of the current deductions and exclusions. Note, too, that reducing tax-based subsidies (as opposed to raising marginal tax rates) can be expected to reduce growth-inhibiting distortions in private markets. In other words: another win-win.

Tax policy can also play a role in dealing with wealth inequality. This is not just true for taxes at the top, like the estate tax, but what Piketty seems to underappreciate is that it is also true of what we can do to encourage wealth accumulation by moderate-income families. In recent years a number of countries, including Italy, New Zealand, the United Kingdom and the United States, have started to take advantage of the fact taught to us by behavioral economics that automatic enrollment in retirement savings plans and other sensible default options can increase retirement security and wealth creation.

One final thought. It is time – long past time – to reject the conventional wisdom that greater inequality is the inevitable consequence of allowing technological change and global economic integration to power growth. There is just no compelling reason to believe well-designed policies to narrow this widening gap would meaningfully reduce the level or growth of output and every reason to believe they could provide a meaningful boost to working families.