





America the Unequal: Origins and Impacts of a Policy Revolution

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INTRODUCTION

n the three decades after the Second World War, low- and middle-income households enjoyed income gains that grew in tandem with rising GDP levels and actually outpaced the gains enjoyed by the richest households. In short, if you wanted to report how "the U.S. economy was doing" or "how the U.S. economy was working for the vast majority," you could just recite overall income growth rates.

Since the late 1970s, answering these questions requires a lot more nuance. Low- and middle-income families have seen income growth lag far, far behind overall averages, while income growth at the top has risen much faster than average. So how is "the U.S. economy" doing? Depends on which U.S. economy you are asking about. Figure 1 below shows this divergence in these two epochs. The blue bars show annual income growth—average first and then growth for various income fractiles—between 1947 and 1979. What's key is that there's just not much variance in growth rates; they range from a high of 2.6 percent annual growth to 1.3 percent. The lighter bars show annual growth rates for the same fractiles from 1979 to 2007. Here the growth rates range from 0.2 percent to 6.2 percent—reflecting a more than thirty-fold gap compared to only a two-fold gap in the earlier period.¹

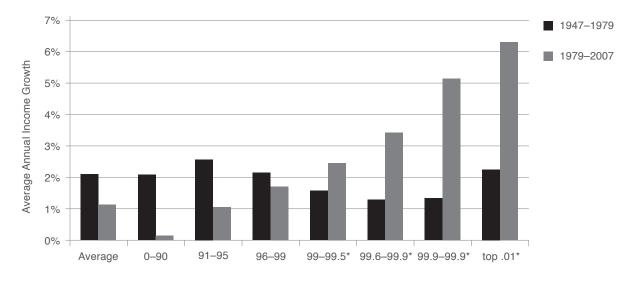


Figure 1. Average Annual Income Growth by Fractiles, by Time-Period

This fracturing of economic experience is the consequence, many now recognize, of a sharp rise in income and wage inequality since the late 1970s. While much attention is paid to our rising Gini coefficient and other measures of inequality, how inequality is playing out in terms of aggregate economic gains is less well-understood. When looking strictly at market-based cash incomes (*i.e.*, not counting government transfers like Social Security or non-cash benefits like employer-provided health benefits), the top 1 percent accounted for just under *60 percent* of the rise in overall average income between 1979 and 2007. Even when including the value of government transfers like Social Security, Medicare, and Medicaid, as well as including non-cash benefits like employer-provided health benefits, the top 1 percent accounted for just under 40 percent of the rise in overall average income between 1979 and 2007, more than the bottom 80 percent combined. In the same period, nearly all Americans—95 percent of households—experienced below-average income gains compared to their counterparts in the three decades after World War II.

While few analysts deny the evidence of inequality, there is far less agreement on why this is happening. The most prevalent type of explanation focuses on broad forces in the global economy, particularly globalized labor competition and rapid technological change. Together, these trends have driven a wedge, so the argument goes, between the highest skilled American workers and everyone else. But this type of explanation, while broadly compelling, is seriously incomplete. In fact, the weight of the evidence points to specific changes in domestic policy and politics, not global forces, as the primary driver of growing inequality.

This paper argues that growing inequality is not just the most salient economic fact of life for the vast majority of American families over the past generation; it is also a direct consequence of profound changes in economic policy, with systematic distributional implications.

[†] Author's analysis of data from Piketty and Saez (2003, updated)

We begin by charting out the changes in policy that were undertaken, and then provide an examination of why these changes were proposed and (more importantly) what led to their adoption. The paper concludes by assessing what can be learned about policy impacts on the distribution of economic rewards, and by identifying the challenges and opportunities inherent in undertaking a political campaign to brake or reverse the rise in inequality.

A CONSERVATIVE PARADIGM SHIFT

Until fairly recently, the role of policy changes in driving these stark trends in inequality were strangely under-examined. As noted, attention focused largely on disembodied, apolitical forces like "technology" or "globalization."² The inattention to policy was particularly strange given that, in a range of areas with significant distributional implications, dramatic changes in policy are quite evident in recent decades. At the same time, these changes were often interconnected and advanced together in an ideologically unified way. Thus, we describe the policy origins of growing inequality as part of a "conservative paradigm shift" (CPS). In what follows below, key elements of the CPS are detailed and assessed.

The label "conservative paradigm shift" is not, admittedly, the most illuminating descriptor. But because the conservative paradigm shift really *was* a paradigm shift and not one single discrete policy change, it is the best overall descriptor of the bundle of policy changes that have had, *in toto*, such strong effects over the past generation. Before naming some of these discrete policy changes, it's useful to note what largely unites them: they all undercut bargaining power for low- and middle-income households in the marketplace, while boosting bargaining power for already well-placed economic actors—both high-income households as well as corporations.

The two most visible policy changes in the conservative paradigm shift revolve around the federal minimum wage and top income tax rates:

Minimum Wage

For the first thirty years following its enactment (in 1938), the value of the federal minimum wage largely tracked overall productivity growth in the US economy. But the inflation-adjusted value of the minimum wage peaked in 1968—never rising past the 1968 level again even as economy-wide productivity more than doubled over that time-period. Further, between January 1981 and April 1990, the nominal value of the minimum wage was completely frozen—the longest stretch without a legislated raise in its history.

Top Income Tax Rates

Conversely, top incomes were boosted by changes in tax policy. Tax rates on high-income households coming out of World War II were over 90 percent, dropping to 70 percent in the early 1960s, and largely sticking there for the next twenty years. Between 1980 and 1988, however, top rates fell from 70 to 28 percent. Since then, they have risen and fallen in a much narrower band—rising to just under 40 percent during the Clinton administration and falling back to 35 percent during the Bush administration. As of 2013, the top rate is 39.6 percent.

While political battles over taxes and the minimum wage are clearly visible and the political economy of their outcomes clear, many other seemingly less direct policy changes have had significant impacts on bargaining power and the distribution of economic rewards:

Policy Barriers to Organizing Unions

One example of these less-transparent policy changes is the failure of labor law to keep pace with rising employer hostility and aggressive tactics mobilized against attempts to organize unions. In 2007, for example, well over half of all non-union American workers expressed the desire to be in a union or related organization. The rise in employer aggressiveness against unions has been well-documented by now, and a large body of research indicates that the resulting decline in unionization has had powerful effects on inequality.⁴ The direct benefits of unionization for union workers are progressive in and of themselves, with the "union premium" for wages and benefits being larger for low-wage workers than for higher-wage workers. But research has also indicated that the spillover effects of declining unionization on the entire labor-force are large, and a significant portion of the rise in wage inequality has been attributed to the decline in unionization. Lastly, there is evidence that unions actually provide a needed check on excessive executive pay. Given that there seem to be deep market failures associated with corporate governance in the United States, and these failures are often exploited by managers of firms to divert large portions of overall firm growth to managerial pay, any countervailing pressure provided by unions can block this important channel of inequality.

Globalization's Rules of the Game

Globalization and how it has been managed provides perhaps the best example of how policy commissions and omissions combined to do maximal damage to low and moderate-wage workers. Any such integration between the labor-abundant non-U.S. global economy and the United States was going to provide a drag on living standards growth for most American workers. Yet this integration has been consistently pursued and managed in ways that do even further damage to these workers. For example, trade agreements consistently provide comprehensive protections for capital-owners looking to invest abroad, essentially harmonizing laws governing the treatment of investors' incomes up to the highest levels of national protection. Yet these same agreements provide no enforceable protections to insure that conditions for workers are harmonized up to the same high standards (nor do they include enforceable protections for environmental concerns). Further, many well-placed economic actors in the United States have been able to carve-out protections from competition from less well-paid equivalent workers in the rest of the global economy.⁴

The Unleashing of Finance

It is well-known by now that many of the highest incomes earned in the American economy are associated with the financial sector. This was not always the case. The wage-premium in financial sector incomes was large in the years preceding the Great Depression, but shrank quickly during the "Great Compression" between the 1940s and 1970s. Starting in the late 1970s—and, not coincidentally, hard on the heels of the beginning of extensive deregulation of financial markets—this wage-premium rose quickly again. Since the late 1970s, rising financial sector incomes nearly doubled finance's share of GDP by the mid-2000s. Yet this trend has *not* coincided with any measurable increase in the efficiency of the sector in the form of higher levels of tangible investments in plants and equipment or in a reduction of the frequency and/or severity of financial crises.⁵

The Retreat from the Commitment to Full Employment

Perhaps the least-recognized policy change that has hamstrung the ability of low, moderate, and middle-income workers to see acceptable living standards growth is the shift in macroeconomic policy makers' focus (particularly that of the Federal Reserve) from insuring full employment to insuring that inflation never threatens to go above the very low single-digits. A growing body of evidence suggests that less than full employment disproportionately reduces the wages of low and middle-income workers.⁶ Throughout the 1980s and early 1990s policymakers consistently failed to reduce actual unemployment rates to even the overly conservative official estimates of full employment (or, in the jargon, the non-accelerating inflation rate of unemployment, or NAIRU) and the result was a fifteen-year wage meltdown for most workers. Real median wages actually fell between 1979 and 1995. Then, in the late 1990s, external events (international financial crises which forced the Federal Reserve to keep interest rates low) and admirable pragmatic heterodoxy from the Federal Reserve allowed unemployment rates to reach far below official estimates of the NAIRU, and the result was the first across-theboard growth in wages in decades, all with no uptick in inflation.

The Assault on Rights and Regulation

Other, more targeted policy changes further weakened bargaining power and economic opportunity in myriad ways. Draconian budget cuts to the Equal Employment Opportunity Commission reduced enforcement of equal opportunity laws. Labor standards (health and occupational safety standards, or prevailing wage standards, or standards as to which workers qualify for overtime pay), were either weakened or increasingly unenforced. Mechanistic comparison of "monetized" costs and benefits threw a wrench into environmental regulation, product safety, and other key areas of public well-being. Criminal justice policies and attacks on the social safety net further eroded economic opportunity in historically disadvantaged communities.

THE SUM OF POLICY IMPACTS IS GREATER THAN THE PARTS

While each of these policy shifts has had discrete distributional impacts, they often interact in ways that amplify their impacts.

For example, the growing influence of the financial sector clearly has contributed to the elevation of inflation concerns over employment concerns in macroeconomic policymaking. Lenders have an interest in insuring that inflation rates do not rise and erode the purchasing power of wealth, whereas debtors have an interest in higher rates of inflation that erode the value of their debt. Financial sector influence is not the only reason for the emphasis on inflation targeting—professional macroeconomists deserve at least part of the blame for this shift, for sure. But it surely did not hurt the cause of privileging inflation targeting over unemployment targeting to have such a powerful economic interest behind it.

Finally, the interaction of financial deregulation and the very sharp reductions in tax rates faced by the highest-income households likely led to larger amounts of income being transferred to the very top of the income scale than would have been predicted by simply adding up their separate impacts. To put it simply, much of the incomes claimed by the richest households likely stem from economic *rents*—that is, they are the excess returns that greatly

exceed what these households would get if competitive markets were operating smoothly. It is well recognized by now, for example, that the market for chief executive officers (CEOs) and other corporate managers is likely plagued by failures that keep competitive forces from keeping CEO compensation in check. Similarly, it is well recognized that deregulated financial sectors often create so many transactions of such opacity that it is very hard for market players to determine the economic worth of many of them. For example, much of what the financial sector of the U.S. did during the 2000s was to simply *disguise* financial risk (from exposure to assets backed by bubble-inflated home prices) that should have been dispersed and managed.

In a very real sense, then, the deregulation of finance expanded the opportunity for rent-seeking in the U.S. economy enormously. This *opportunity* was supplemented by the increased *motive* for engaging in this rent-seeking provided by large cuts in tax rates for the highest-income households. As tax policy changes allow corporate executives and financiers to keep much more the marginal dollar they claim in pre-tax incomes, this greatly increases the return to rent-seeking.

STRONG MEDICINE FOR AN AILING ECONOMY?

The relative inattention focused on these policies in driving inequality is even odder given that this whole constellation of policies was put forward as a large-scale *response* to major economic challenges thought to be facing the U.S. in the late 1970s, most prominently, the marked slow-down in productivity growth and the simultaneous rise of both high rates of inflation and unemployment. The CPS, in both its component parts and its broader business-friendly ideology, was thought to be strong economic medicine for what many felt was the most significant economic crisis since the Great Depression.

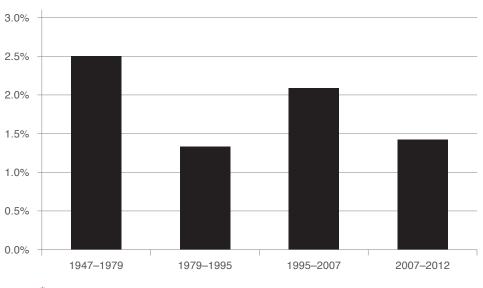
A key driver in generating respectability for the CPS in the 1970s was the growing backlash against Keynesian demand-management among macroeconomic theorists. This backlash was essentially codified and given momentum by Milton Friedman's 1968 Presidential Address to the American Economic Association, in which he asserted that Keynesian efforts to reduce unemployment by managing aggregate demand were hampering a more optimal balance between unemployment and low inflation.

The Friedman concept of an immutable "natural rate" of unemployment was sharpened into the "non accelerating inflation rate of unemployment," or NAIRU, in later extensions of Friedman's work, but the broader indictment of Keynesian demand management as inflationary had a deeper influence in the political sphere. In the meantime, core elements of the CPS gained academic respectability when Friedman won the Nobel Prize in Economics in 1976, followed by a string of similarly sympathetic Nobel prize winners including George Stigler, James Buchanan, Gary Becker, Robert Coase, and Robert Lucas. Among policymakers, the growing academic chorus arguing against active macroeconomic management merged with growing calls to remove what were seen as microeconomic "inefficiencies" such as wage floors, labor standards, unions, financial regulations, and any form of capital controls in trade agreements. Starting in the late 1970s, all of these perceived markers of "statist" inefficiency in the U.S. economy were subject to attack, from conservatives, of course, but often from self-identified centrists as well. The perceived technocratic seal of approval for this quite radical shift in policymaking explains some portion (not all, as the simple material interests of powerful economic players also, surely, played a significant role, which we'll discuss in the next section) of the success in effecting this change.

THE STRONG MEDICINE PROVED TO BE A WEAK CURE

There seems to be very little scope for argument as to whether or not the conservative paradigm shift actually happened. Where there is much more debate is on the success of the CPS, even on its own terms of revitalizing productivity and economic growth.

When assessing the CPS's growth payoff, it is important to keep the historical context in mind. Between 1947 and the business cycle peak of 1973, productivity growth in the U.S. economy averaged 2.5 percent annually, without a lot of variation (outside of predictable variation over the business cycle). Over the business cycle between 1973 and 1979, productivity growth slowed dramatically, to just 1.6 percent annually. This slowdown provided great impetus for advocates of a radical change in U.S. economic strategy, and between 1979 and 1989 (the next full business cycle), the changes had fully taken place. Over this business cycle, productivity growth averaged just 1.2 percent.





^{*} Growth rates are average the of three-year moving averages of the quarter over quarter change total economy productivity.

[†] Author's analysis of data from Piketty and Saez (2003, updated)

The productivity malaise continued deep into the next business cycle (starting from the 1989 peak). Between 1989 and 1996, productivity growth averaged just 1.3 percent annually. It was not until the late 1990s that productivity growth in the U.S. saw a clear resurgence, averaging 2.1 percent between 1996 and 2002. The impetus for the late 1990s productivity resurgence is largely well understood; it was driven by a substantial increase in capital investments in information and communications technology (ICT) equipment, as firms saw opportunities afforded by falling ICT prices and the introduction of the Internet in most American households. However, as investment in ICT equipment decelerated rapidly in the 2000s business cycle, so did productivity growth, and productivity has continued to decelerate in the early phases of recovery from the Great Recession. Given that it took almost two decades after the conservative paradigm shift before productivity growth rates accelerated, and given as well that the mechanism of this acceleration—capital-deepening as firms invested in newly available ICT equipment—was impossible to foresee and essentially unconnected to the conservative policy portfolio, it seems extraordinarily hard to persuasively argue that the CPS was successful on its own terms of boosting productivity.

There are, in fact, very few sophisticated defenders of the conservative paradigm shift who emphasize its beneficial impacts on productivity growth. Occasionally one will hear a half-hearted defense to the effect that the productivity slowdown would have been even worse without this policy shift. More often one hears that that the productivity slowdown was inevitable, driven by global events—particularly rising competitiveness of U.S. trading partners—far outside the control of U.S. policymakers (see Conard [2011] for the most drawn-out version of the claim that rising foreign competitiveness was always doomed to end the era of high productivity growth).

There are a number of things to note about these pro-growth defenses of the CPS. First, as an empirical matter, there is zero support for the proposition that the slow-down in living standards growth post 1979 can be linked to rising international "competitiveness." The first-order determinant of average living standards growth is simply domestic productivity growth, which is driven by labor force quality, the size of the capital stock, and the state of technology. It is hard indeed to understand how, for example, a larger capital stock in Singapore or South Korea or Italy has any effect at all on these first order determinants of U.S. productivity. Of course, international competition could theoretically introduce a growing wedge between domestic productivity and domestic living standards growth if such competition eroded a country's terms of trade with the rest of the world. Imagine if the U.S. only produced automobiles. Now assume that, even though there has been no change in the pace of productivity growth in automobile production, international competition drives down the global price for automobiles, so we get less and less on global markets for each auto produced. This is possible, but it's important to note that even if this happened it would not affect measures of domestic productivity; it would only change measured terms of trade (that is, the value of exports compared to the value of imports). Most importantly for assessing this argument, it hasn't happened. The negative change in U.S. terms of trade between 1947 and 1979 was larger than the negative change between 1979 and 2007, so it was the earlier period where average living standards growth was dragged down more by foreign competition.

Second, it is difficult to square the claim that increased globalization has greatly damaged U.S. productivity growth with the advocacy of those who argue that breaking down barriers to global integration is the key to reviving U.S. productivity. The argument seems to run like this: "globalization is why U.S. living standards growth has sputtered so badly over the last generation, so we should try to spur lots more globalization."

Third, if the productivity slowdown was inevitable given the rise of global competition, then what, exactly, *did* the conservative paradigm shift accomplish except a large rise in income and wage inequality? The idea that this shift was always about changing the distribution of income, not economic growth, is explored in a later section.

WHITHER INFLATION? TALLYING THE GAINS AND LOSSES

Defenders of the conservative paradigm shift have an admittedly stronger empirical hand to play when claiming that its adoption slew American inflation. The 1970s was indeed the time of what Brad DeLong has called "America's Only Peacetime Inflation," and inflation clearly receded in the 1980s and into the 1990s.

The key drivers in this disinflation were contractionary macroeconomic policies—particularly monetary policy. Macroeconomic policymakers (particularly the Federal Reserve) consistently overshot even their own too-conservative estimates of the NAIRU during most of the 1979 to 1995 period.⁷

Of course, keeping unemployment rates consistently above the NAIRU is an expensive way to reduce inflation. This begs some questions: was this really necessary (*i.e.*, is there no other less-costly anti inflation strategy that could have worked?), and was it worth it?

Proponents of the CPS certainly thought the costs were worth it—in fact, they viewed these costs as essentially *inevitable*. In their view (best formalized by Friedman's 1968 address), inflationary pressures had been building up for at least a decade, as misguided Keynesian policymakers had used aggregate demand management (*i.e.*, expansionary monetary and fiscal policies) to keep the unemployment rate below its "natural" rate. Over time, these boosts to aggregate demand would fail to boost output and employment, and would spill entirely over to rising prices. Further, these proponents argued that institutions impeding the flexibility of labor markets—mini mum wages, unions, labor standards—actually raised this natural rate of unemployment. Thus, even efforts to just keep unemployment *stable* were inflationary given how government interference in labor markets was already keeping unemployment artificially low.

Evidence that inflation rates like those experienced in the U.S. economy of the 1970s are deeply damaging to either income growth or its fair distribution is very hard to find.⁸ In the U.S. post-war experience, there is no consistent relationship between inflation rates and aggregate growth. Conversely, there clearly are large *distributional* shifts that can occur with unanticipated bursts of inflation. Most directly, inflation reduces the real value of wealth stocks. Inflation hawks tend to emphasize particularly sympathetic economic actors who

might be hurt by this—retirees living on fixed incomes, for example. Of course, even by the 1970s, most retirees' incomes were mainly comprised of Social Security benefits, which were largely shielded from price increases. When assessing the distributional impact of inflation on wealth, however, one must keep a crucial point in mind: most wealth is *inside* wealth, meaning that one person's asset is another's liability. So, just as inflation reduces the real value of assets, it also reduces the real value of liabilities. In essence, it causes a redistribution from net creditors to net debtors. So, for example, Americans who bought a home with a fixed interest rate mortgage in the late 1960s or early 1970s saw a windfall wealth gain as inflation eroded the real burden of their mortgage obligation.

Against these at best uncertain aggregate benefits, and largely regressive benefits of engineering disinflation, one should weigh the extremely large and regressive costs of recessions engineered largely to break inflationary expectations. The recessions of the early 1980s and 1990 were both caused in large part by interest rate hikes undertaken by the Federal Reserve to reduce inflation. The cumulative output loss of the two early 1980s recessions approached 80 percent of one-year's GDP at the time, while the early 1990s recession exacted a cumulative cost of nearly one-third of one-year's GDP.⁹

Given the considerable cost associated with engineering the disinflations of the 1980s and early 1990s, it is also worth exploring whether or not this costly intervention was even necessary to reduce the 1970s inflation. While the 1970s inflation was the first in history to not be associated with an all-consuming war effort, this does not mean that the inflationary episode's root cause is particularly mysterious. Clearly, it was oil price shocks caused by political unrest in the Middle East. The real price of oil tripled in 1973 (the Yom Kippur war) and then (after some significant declines after 1975) it doubled again in 1979 (the Iranian revolution). Further, these exogenous oil shocks were then amplified by wage-price spirals, as both firms and workers tried to raise the nominal prices under their control (product prices and nominal labor costs, respectively) to avoid bearing the full brunt of adjusting to higher input costs.

Implicit in this analysis is a view that inflation is at least in part an outcome not just of over accommodative macroeconomic policy (the conservative macroeconomic view), but of distributional conflict between capital and labor. When bargaining power is more equal, exogenous price shocks take longer to propagate through the economy and cause higher and more persistent inflation. After an exogenous price shock, firms raise their price level to preserve profit margins, at the expense of real (inflation-adjusted) wages. Workers who have some degree of bargaining power can respond by demanding higher nominal wages to claw back the lost ground. Firms then pass on the higher wage costs into higher prices and so on. The longer this process goes on, the steeper and more persistent is the inflation. Conversely, if firms are able to pass on higher prices in response to the initial cost-shock and workers lack the bargaining power to demand higher nominal wages in response, then the shock is muted and leads to lower and less persistent inflation.

What made the oil price shocks especially effective in generating subsequent wage-price spirals in the 1970s were the atypically strong perceptions held by American workers about

their own bargaining power, as well as expectations of real-wage growth fostered by decades of rapid and equal economic growth.

Coming into the 1970s business cycle, American workers had seen wage-growth track productivity growth for most of the past three decades, and this productivity growth averaged 2 percent per year. They had also come off a decade from 1959 to 1969 that saw unemployment average 4.8 percent, and that had reached lows of 3.5 percent in 1969. Further, key labor standards in the U.S. labor market were quite strong in historical terms. Private-sector unionization rates were 24.2 percent in 1973, more than twice as high as they are today. The inflation-adjusted value of the minimum wage reached its highest point ever in 1968 after three decades of rising (roughly) with economy-wide productivity.

An objection to an analysis putting the 1970s inflation at the feet of wage-price spirals has traditionally been that it implicitly "blames the workers" for inflation's rise, and seems to acknowledge the need for reducing workers' bargaining power as an anti-inflation strategy. This is not so. For one, the root causes of the inflationary episode of the 1970s were two oil price shocks. For another, a wage-price spiral following such an exogenous shock requires, by definition, *both* wages (driven by workers' desire to protect wages' purchasing power) *and* prices (driven by firms' desire to protect their profit margins) to rise. Blaming this spiral on workers alone would be odd. It's true that one hears the phrase "labor militancy" more than "capital militancy" when the subject is inflationary wage-price spirals, but I'd argue that this is mostly because it is generally *taken as given* that capital will be militant in protecting its share of income. What is remarkable are those episodes where the economic context actually provides labor the chance to push back and try to protect their gains when such an exogenous cost-shock happens.

As "labor militancy" is generally synonymous with broadly-shared distribution of economic growth during normal times, it seems that attacking American labor's bargaining power in the name of forestalling once-in-a-generation wage-price spirals occurring after large and unpredictable outside shocks is a demonstration of throwing the baby out with the bathwater. Given this, as well as the huge macroeconomic costs inherent in the early 1980s episode of recession-induced disinflation, Galbraith (1997) makes the obvious inference from this episode:

It would therefore be reasonable to approach anti-inflation policy in general as a matter, first and foremost, of designing circuit breakers for shock episodes, so as to reduce the cost of adjusting to a new pattern of relative prices and therefore the need to do it through the brute-force method of mass unemployment. Some simple steps, like coordinating the timing of wage bargains and providing the president with limited discretion over cost-of-living adjustments in Social Security, federal pensions and other payment streams might help a great deal, as I once proposed.

In short, while the 1970s inflation was indeed tamed in the wake of the conservative paradigm shift, this does not mean that the CPS was most efficient way to tame this inflation, or that the benefits of the CPS's anti-inflation rationale outweighed the costs it imposed on both the broader economy, and, especially, on the living standards of low and moderate-income households.

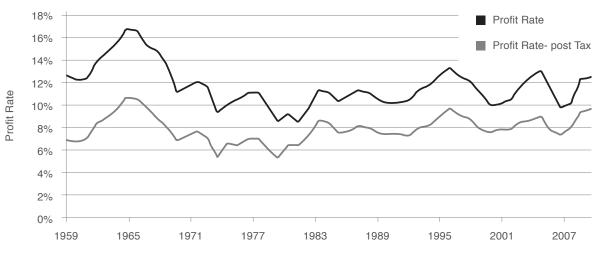
BOOSTING PRODUCTIVITY, OR JUST PROFITS? COMBATING PRICE INFLATION, OR JUST WAGE-INFLATION?

If there is little evidence to link the conservative paradigm shift to either accelerating productivity or efficiently-realized and valuable declines in inflation, the question is, *should the CPS be considered a failure for the U.S. economy?* The answer to this question brings us back to our opening observation: it depends which U.S. economy one is referring to.

If the economy in question is the one experienced by the vast majority of American workers and households, the answer is clearly, *"Yes, it has been a failure."* If the economy in question is the one experienced by the richest 1 percent of American workers and households, the answer is clearly, *"No, it has been a roaring success!"*

Of course, the fact that the conservative paradigm shift has had much more profound effects on distribution than growth may well be no accident at all. Another way to view the trajectory and purpose of the conservative paradigm shift is to redefine the problem it sought to solve: not lower productivity growth and inflation, but simply reduced profitability.

The extremely tight labor markets and strong labor standards in the late 1960s and early 1970s boosted wage-growth and provided what some authors have labeled the "full employment profit squeeze." It is clearly the case (see Figure 3) that the corporate profit rate—which had been quite healthy during most of the post-war period, began falling in the late 1960s and fell further throughout the early 1970s.





Author's analysis of data from Bureau of Economic Analysis National Income Product Accounts tables (table 1.14) and Bureau of Economic Analysis Fixed Assets Accounts tables (Table 6.1) Further, the inflation of the 1970s was largely unanticipated—driven by exogenous shocks and unexpectedly strong (implicit) bargaining demands from American workers. This unanticipated inflation (along with a still tightly regulated financial sector, compared to today's) led to negative real interest rates for a significant portion of the 1970s (see Figure 4). In this light, Smithin (1996) has described the conservative paradigm shift as the "revenge of the rentier." In particular, low returns to investing pushed the financial sector to lobby ferociously for deregulation that would allow them to undertake more profitable (but risky) activities.¹⁰



Figure 4. Real Interest Rates on 10-year Treasury bills, 1964-2012

Besides the increased bargaining power enjoyed by American workers as a result of the full employment period in the late 1960s, corporate interests also saw threats from other social movements. The famous "Powell Memo" is in some sense the Rosetta Stone of the conservative paradigm shift. In it, Lewis F. Powell (then a corporate lawyer working in the tobacco industry, later appointed to the Supreme Court in the Nixon administration) wrote of the dangers of all perceived threats to corporate profitability, including labor unions, consumer and environmental movements, and progressive taxation:

"No thoughtful person can question that the American economic system is under broad attack... We are not dealing with episodic or isolated attacks from a relatively few extremists... Rather, the assault on the enterprise system is broadly based and consistently pursued... In addition to the ideological attack on the system itself (discussed in this memorandum), its essentials also are threatened by inequitable taxation and—more recently—by an inflation which has seemed uncontrollable."

[†] Author's analysis of Federal Reserve Economic Data, Federal Reserve Board, St. Louis (2013)

Seen more simply as an attempt to insure that corporate profitability would no longer be threatened by overly-empowered workers (including workers able to force nominal wage increases rather than submit to having exogenous price increases show up solely as reductions in real wages) and other progressive social forces, the conservative paradigm shift looks like a much more sensible and straightforward exercise. It also looks like an exercise that could hardly fail once it was enacted; and it did not fail. Measuring from peak to peak, corporate profitability rose throughout the 1980s, 1990s and 2000s. And even today, with the overall economy depressed at levels *far* below the worst points of the recessions of the early 1990s and early 2000s, corporate profits are healthy—having long ago passed pre-recession peaks and registering the highest share of total corporate income since the early 1950s.

Corporate profitability is front-and-center in this narrative of the forces leading to the transformation of economic policies over the last generation. Skeptics might argue that, as a matter of arithmetic, the shift from labor income to corporate profits explains a non-majority (though still significant) portion of the entire rise income inequality. This is true. Yet the focus on profitability still serves extraordinarily well as a proxy for larger issues of inequality and economic power.

For example, while the single largest contributor to the rising share of total income claimed by the top 1 percent is growing inequality of labor income, in fact, the labor income enjoyed by the top 1 percent is influenced heavily by stock options and profit-based performance bonuses. In short, much of the "labor income" enjoyed by corporate executives and financial professionals (who together account for more than 60 percent of top 1 percent incomes) is actually more profit-like in origin and is tied mechanically to enhanced corporate profitability.

Further, while the decline of corporate profitability spurred the corporate defection from the prevailing social contract and gave rise to the conservative paradigm shift, the fallout of this defection was an across-the-board rewriting of the rules of the game concerning income distribution. So, beyond allowing well-placed economic actors to boost firm profits, norms regarding relative pay of managers versus production workers, and executives versus other white-collar workers, were often jettisoned. Take the influence of unions. Clearly, a suppression or rollback of union power was undertaken in large part to boost corporate profitability. Equally as clearly, unions not only influence the division of value-added between profits and wages, but also set norms concerning the intra-wage distribution. For example, unions are an important check on excessive executive pay.

So, while the immediate spur to the conservative paradigm shift was the perceived crisis of profitability, the resulting re-writing of the economy's rules of the game was not limited to enlarging capital's share of income compared to labor's share. Instead, well-placed economic actors strove for bigger gains across and within all income categories, and generally achieved them.

WHAT ALLOWED THE CONSERVATIVE PARADIGM SHIFT TO HAPPEN?

We have argued that the marketing rationale for the conservative paradigm shift was that it could solve the problems of slow productivity growth and stagflation, but the real rationale was to preserve (and expand) the economic rewards going to the very top. This begs the question—how is it possible for this policy shift, no matter how well-marketed, to have been passed by policymakers that are (presumably) answerable to the great mass of voters who were made worse off by it? Another angle on the same question recognizes that, presumably, it would always have been good for elite business interests to kick away props of labor's bargaining power to boost their own profits. So why were these props allowed to persist as long as they did, and/or what changed in the late 1970s that allowed the conservative paradigm shift to happen?

Levy and Temin (2007) identified the matrix of economic and social institutions that shaped income distribution in the thirty years after the end of World War II as "The Treaty of Detroit," and argued that it essentially constituted a social contract between American house-holds, corporations and government to insure the broad distribution of gains from economic growth. The Treaty of Detroit was associated with steady and high profitability to business interests throughout the post-war period. Developments in the 1970s threatened this. One could imagine it was never worth the risk to business elites in the decades after World War II to mount a full assault on the prevailing social contract. Once profitability began falling and negative real returns to financial investment reared their head, this balance changed.

But there remains the puzzle of why this corporate defection was allowed. Part of the explanation for this is that the U.S. economy did indeed begin performing poorly in the 1970s relative to previous decades. This was an objective change in circumstances. Productivity slowed and inflation began accelerating. In short, the returns to American households historically delivered by the Treaty of Detroit began looking much less certain.

Additionally, there really was an objective change in the stance of the economics profession towards the desirability of active Keynesian demand management. Much of the academic macroeconomics community came to argue that such demand management could not keep unemployment lower in the long run, and would only lead to a buildup of inflationary expectations. It may seem aggrandizing to chalk up much of the actual change in policymaking to academic economics, but that does not make it untrue. A key lesson of much recent political science literature is the wide flexibility policymakers have to ignore public opinion. A related lesson is the heightened sensitivity of policymakers to elite opinion.

Academics and the recommendations they put forward are one form of elite opinion that may disproportionately influence policymakers. Another far more salient form of elite opinion is that proffered by corporations and individuals providing the financing for politicians' electoral campaigns. The increased role of money in politics (aided by several Supreme Court decisions that have rolled back limits) over the past generation does not map *perfectly* onto policy changes over this time, but the evidence is overwhelming that policies favored by the affluent are much more likely to be adopted by policymakers than those favored by low and moderate-income voters.

Finally, it should be noted that one external, largely apolitical development may have also changed much of the calculus of business elites regarding the social contract: the acceleration of global integration with much-poorer countries. Trade "openness," measured simply as the sum of imports and exports measured as a share of GDP, actually grew more rapidly in the 1970s than in the 1980s—even when excluding oil. This growing global integration could be seen as vastly improving capital's bargaining position vis-à-vis labor. Essentially, the prospect of moving production offshore gave firms a much improved fallback position in bargaining over wage-demands. Previously, if such bargaining broke down, production stopped. Now, a breakdown in bargaining could lead to moving production offshore.

Between the objective change in economic circumstances that provided the motivation for undertaking a potentially risky campaign to radically change the terms of the social contract, the support from professional macroeconomists to begin targeting low rates of inflation regardless of the short term effect on unemployment, and the greatly improved fallback position in bargaining afforded by globalization, the conservative paradigm shift can actually begin to seem almost over-determined.

INEQUALITY BEFORE AND AFTER THE GREAT RECESSION

We noted before how damaging the rise in economic inequality was for the living standards of low and moderate-income American households in the three decades before the Great Recession began. This section will look more closely at the impacts of growing inequality, both in terms of living standards and in relation to analyses of the Great Recession and its causes.

Inequality's Relevance Before the Great Recession Began

The rise in inequality since 1979 had by 2007 essentially constituted an annual tax of 27 percent on the comprehensive household income of families in the middle-fifth of the income distribution. That is, had income growth for the middle quintile tracked average growth in the 1979-2007period (as it had in the decades following World War II) instead of lagging behind average growth, incomes for middle-quintile families would have been 27 percent (nearly \$20,000) higher in 2007. The wedge between average income growth and middle-quintile growth is, of course, nothing but a function of rising inequality (as extraordinarily high growth rates at the top pulled up the overall average). The size of this "inequality tax" contrasts rather sharply with the roughly 3 percent federal income tax that these families pay. Further, this rise in inequality was much more damaging to income growth for moderate income families, compared to the impact of declining overall growth rates after 1979.

The figure below shows the wedge between growth in average *overall* comprehensive income (as measured by the CBO, and which includes non-cash benefits like employer-provided health care and the full value of all government transfers) and growth of the middle

quintile of the income distribution, from 1979 to 2007. Middle-quintile comprehensive income growth was 19 percent over this period, or roughly 0.6 percent per year, compared to overall growth rates of 1.5 percent.¹¹

Figure 5 below shows actual comprehensive incomes for the middle quintile between 1979 and 2007 as well as what growth for the middle quintile would have been in two scenarios. In the first scenario, we essentially calculate what middle-quintile incomes would have been if *overall* income had risen at the rate that prevailed between 1947 and 1979 but the wedge between middle-quintile and average growth from 1979 to 2007 remained in place. In short, it shows the trajectory of middle-quintile incomes in the scenario where pre-1979 overall income growth came to pass, but post-1979 distribution prevailed.

In the second scenario, we simply allow middle-quintile income to rise at the overall average rate between 1979 and 2007. This scenario essentially charts their income if post-1979 average growth, but pre-1979 distributional patterns, held. By comparing these two scenarios, we can assess the sources of slower living standards growth at the middle, comparing the relative impacts of slower overall growth versus rising inequality.

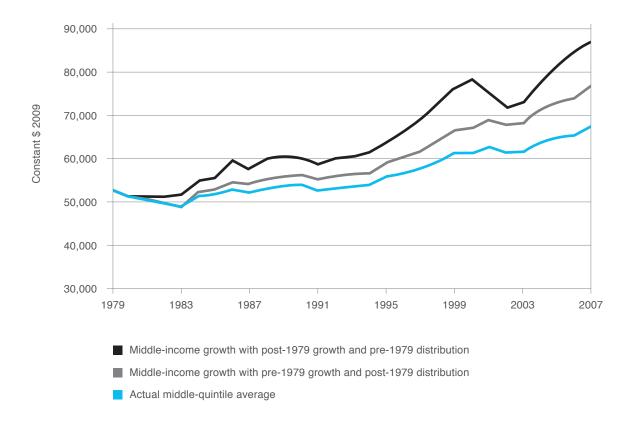


Figure 5. Actual Middle-Quintile Growth and Two Scenarios

† Author's analysis of Congressional Budget Office (2012), as described in text

The findings are simply that the pre-1979 *average growth* combined with post-1979 *distribution* does indeed boost middle-quintile averages, from growth of 19.8 percent over the entire period to 28.9 percent growth. However, post-1979 (slower) *average growth* combined with pre-1979 *distribution* boosts middle-quintile income growth from 19.8 percent over the period to 53.5 percent.

In short, while the average income of middle-quintile households have clearly lagged in the latter period due to both influences, it is the post-1979 distribution that has more than twice the effect in stunting incomes for this group. Lastly, nearly 60 percent (19.8 percentage points) of the cumulative 34.4 percentage point gap between middle-quintile income growth and overall average growth between 1979 and 2007 can be accounted for solely by income growth of the top 1 percent.¹³

Inequality after the Great Recession

In the wake of the Great Recession, employment issues have supplanted growing inequality in the policy debates of concerned leaders. It is clearly correct that joblessness and underemployment are the most pressing challenges facing most people in the economy today. This is particularly true when considering how the impacts of high unemployment and underemployment reach far beyond those directly affected. For example, wage and income growth even for those workers and households that remain employed is much lower during periods of high unemployment, due to labor market slack. If unemployment follows the projected path seen by official and private-sector forecasters in the coming years, it is almost certainly the case that middle-income families will see two full decades of lost income growth, with incomes in 2018 below what prevailed in 2000.

However, there is much to learn about the crisis of joblessness from examining the conservative paradigm shift described in this paper. For one, even in the recovery from the worst recession since the Great Depression, inequality trends seem determined to plough forward. Top 1 percent incomes actually fell more sharply than others' in the *immediate* aftermath of the recessions of 2001 and 2007/09. The reason for this is pretty clear: recessions caused by bursting asset bubbles—as in 2001 and 2007 compared to the early 1980s and the early 1990s—are likely to strike hardest, initially, at the wealth-heavy households at the top of the income distribution The large drops in top 1 percent incomes following the past two recessions led some to speculate that the recessions could provide a permanent break in the rise of the top 1 percent's share (see DeParle [2011] and McCardle [2011]). Both times, however, this idea proved false and income growth of the top 1 percent quickly began outpacing middle- and low-income growth by large margins.

Figure 6 below shows some summary measures of how damaging recessions are to the income trajectory of various fractiles. The bars show the average time-lag between the peak and trough income registered for each fractile following recessions, the time for the previous peak to be surpassed, and how far back in the past one must go to find an income level below the given recession's trough (which we call "lost years" of income due to recession losses).

The figure averages data for recessions between 1979 and 2007. The take-away from the figure is clear: the top 1 percent sees fewer years of income declines, regains previous peaks more quickly, and actually experiences fewer "lost years" due to income declines accompanying recessions.

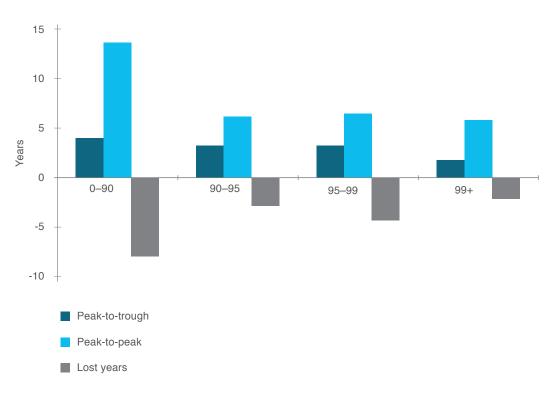


Figure 6. Income Losses During Recessions and Subsequence Bounceback by Income Percentiles: Years-to-Trough, Years-to-Peak, and Years Between Trough and Previous Instance of Low Income Levels, 1979–2007

† Author's analysis of Congressional Budget Office (2012), as described in text

For fractiles between the 0 and 90th percentile, the income trough following a recession is reached in 3.7 years on average, pre-recession peaks are reached an average of 12.7 years following, and a recession's trough is associated with 7.3 lost years of income. For fractiles below the top 1 percent but above the 90th percentile, the trough tends to be reached in 3 years, the pre-recession peak is regained in 5.7-6 years, and the trough represents 2.6-4 lost years of income. For the top 1 percent, the trough is reached in fewer than 2 years, the pre-recession peak is regained in 5.3 years, and the trough represents 2.0 lost years of income.

For the latest recession, this pattern has continued. For the fractiles between the 0 and 90th percentile, 2011 (the latest year available) represents the trough, while for the topmost three fractiles, incomes have been rising since 2009. The pre-recession peak has not been reached by any of the fractiles yet. Most strikingly, incomes for the 0 to 90th percentiles in 2011 were last this low in 1967 (note that no other recession since 1979 saw this group's

market-based cash incomes pushed back so far). Fractiles above the 90th percentile, on the other hand, experienced only modest losses; even at the trough in 2009, incomes for the top ten percent of households were only pushed back to levels that prevailed in the early to mid-2000s. Again, while it is true that, during the past two recessions, the top 1 percent have seen very large one-year declines in income associated with collapsing asset prices, it is very hard to make the case that recessions are somehow harder on the top 1 percent, or that we should expect the Great Recession to have broken the trend towards ever-greater inequality.

Further, there are lots of reasons to think that the cause and solution to the recession and its impact on labor markets is intimately tied up with long-run trends regarding inequality. For example, there is suggestive evidence that the housing bubble was not just the source of the Great Recession, but was itself a coping mechanism seized on by American households in the years before the Recession to provide living standards growth (ephemeral as this growth turned out) in the face of wage and income stagnation.

Moreover, the most direct way that inequality is relevant to the weakness of the current recovery is rooted in the extreme profit-bias of recent income gains. 2012 saw the highest corporate profit share since the mid-1960s, and since 2008, profits have accounted for about 66 percent of total income gains in the corporate sector. At the same time, while business fixed investment is actually performing well relative to historic averages (the only component of GDP for which this is true), it still lags far behind the rise in retained earnings, meaning that American corporations continue to accumulate ever-growing hoards of cash on their balance sheets. If these income gains were instead directed towards labor compensation increases rather than profits, it is a sure bet that aggregate demand would have grown faster and the recovery would be stronger.

Most importantly, the failure of public policy to support a robust recovery is itself, arguably, a consequence of growing inequality. As noted above, while most aspects of the U.S. economy remain deeply depressed relative to pre-recession performance, corporate profitability has fully recovered and then some. This aspect of inequality not only mechanically hurts recovery by concentrating income gains in the hands of those actors less likely to use them to spur demand, it also blunts the incentive for powerful actors (the corporate sector) to lobby aggressively for policies to reflate the economy. As a result, the traditional role of fiscal stimulus is undermined: if government spending since the official end of the Great Recession had simply matched its historical average over previous business cycles, the U.S. economy would have had roughly 5.5 million more jobs by the middle of the 2013 and would be two-thirds of the way back to full labor market health. Instead, government spending has been extraordinarily contractionary in relative terms over the most recent recovery. Normally, the corporate sector should be a powerful ally in demanding that deep recessions be countered with expansionary public spending, but when historically high profits exist with high unemployment, there is much less pressure for U.S. firms to join the fight for full employment.

CONCLUSION

Academics and policy-minded social scientists have begun to examine how rising inequality may or may not affect overall economic growth. This is clearly an important topic worthy of study. But it probably starts at too high a level of abstraction; for assessing whether or not rising inequality has been "good, bad, or neutral" with respect to either overall growth or low- and middle-income growth, one really needs to know what drove this rise in inequality. If we believed that inequality was being driven by efficient and competitive markets for labor and capital, rewarding skills and savings to the degree needed simply to elicit their supply, proposals to fix inequality would be seriously vulnerable to concerns about tradeoffs with economic growth.

As argued in this paper, such an understanding does not adequately describe the causes of rising inequality in the U.S. economy over the past generation. Instead, rising inequality is the direct result of a range of policy choices that predictably boosted bargaining power for those at the top of the income and wage distributions. Further, the evidence seems clear that this sort of inequality has clearly not boosted overall growth—meaning that it has simply resulted in stunted living standards growth for those at the bottom and middle of the income distribution. Given all of this, studies of what a "generic" rise in income inequality might or might not tend to do in a cross-section of country/year experiences seems uninformative as to just how damaging the rise in American inequality has been, and what will be needed to reverse it.

In closing, it is important to note the good news in this analysis. Inequality that is the outcome of competitive and efficient markets simply allocating talent and savings would be quite hard to solve without damaging economic growth. In short, the equity/efficiency trade-off would be steep indeed, due to binding economic constraints. Conversely, inequality that is the result of political choices can be solved without running into these steep trade-offs. To be clear, *political* constraints to reversing inequality are clearly daunting, but they are always preferable to genuine *economic* constraints.

- It should be noted this data uses the cash, market-based incomes dataset compiled by Piketty and Saez (2003, updated). While the comprehensive income measure (which includes government transfers and non-cash employer benefits like health insurance) compiled by the Congressional Budget Office shows better growth at the bottom and middle, it also shows huge increases in inequality, and, the CBO data does not cover years before 1979, making these epochal comparisons impossible.
- 2. One of the most persuasive efforts at putting politics front and center in the debate over rising inequality was Hacker and Pierson (2010).
- 3. For evidence on policy's barriers to willing workers forming unions, see Freeman (2007) and Schmitt and Zipperer (2007). For evidence on unionization's impact on inequality, see Western and Rosenfeld (2011).
- 4. See Baker (2003) for examples of some of these protections. Perhaps the most obvious example is new licensing rules that cut the flow of foreign-trained physicians into the United States by 50 percent, following the lobbying of the American Medical Association for such restrictions.
- 5. See Haldane (2009).
- 6. See Mishel et. al. (2012).
- 7. See Mishel et al. (2012) for evidence on this.
- 8. See Blinder (1987), Bruno and Easterly (1996) and Epstein (2000).
- 9. Calculated as output lost during the official recession, as well as periods during the early recoveries when the output gap exceeded 1 percent.
- 10. Sherman (2009) has a good review of the regulatory changes made since the 1970s in the financial sector.
- 11. In the latest edition of CBO's comprehensive income data, they deflate nominal incomes by growth in the deflator for personal consumption expenditures. We are not convinced that this is the appropriate deflator, and maintain the CBO's earlier practice of deflating with the CPI-U-RS. While there are some problems potentially addressed by the PCE deflator (the problem of substitution bias and the too-small share of health expenditure in the CPI consumption basket), it remains the case that the universe covered by the PCE deflator is larger than households, and contains non-profit institutions. This potentially introduces problems; for example the share of PCE expenditures on information communications technology and equipment is significantly larger than their share in the CPI consumption basket. This has real consequences as ICT prices have fallen extraordinarily fast in recent decades.
- 12. While the comprehensive income measure does not go back beyond 1979, we know that overall personal income growth per capita (measured from NIPA data) was slower between 1979 and 2007 compared to the 1947 to 1979 period—2.2 percent in the former period compared to 1.7 percent in the latter. We also know that government transfer payments and non-wage market incomes did not grow faster in the latter period overall, so unless these have become much more directed towards the middle-quintile and less directed towards the top reaches of the income distribution, it is unlikely that these substantially offset the much slower growth rate of money income in the later period. Given this it seems possible to get a sense of what the impact of rising inequality between 1979 and 2007 has been on middle-quintile income growth, and to compare it to the likely impact of the slowdown in overall growth compared to the 1947-1979 period.
- 13. Of course, this exercise implicitly presupposes that one can assume that redistribution away from the top could have been (or could be) accomplished without damaging overall economic growth. Is this a safe assumption? We think the data bears it out. Besides the evidence assembled above indicating that the growth of these incomes are largely rents, a number of recent studies have looked directly at the issue of shifting top shares on overall economic growth. Piketty, Saez and Stantcheva (2012) and Andrews, Jencks and Leigh (2011) use international evidence to see if there is stark evidence that top shares effect overall growth.

BIBLIOGRAPHY

Baker, Dean (2003). "Professional Protectionists: The Gains from Free Trade in Highly Paid professional Services." Center for Economic and Policy Research. Washington, DC.

Bivens, Josh and Lawrence Mishel (2013). "The Pay of Corporate Executives and Finance Professionals as Evidence of Rents in Top 1 Percent Incomes." *Journal of Economic Perspectives*, Vol. 27(3), pp. 57-78.

Blinder, A.S. (1987). Hard Heads, Soft Hearts: Tough-Minded Economics for a Just Society. New York: Addison Wesley.

Bruno, M. and W. Easterly (1996). "Inflation and Growth: In Search of a Stable Relationship." Federal Reserve Bank of St. Louis *Review*, 78 (3), pp. 139-46.

Conard, Edward (2011). Unintended Consequences: Why Everything You've Been Told About the Economy is Wrong. New York City: Portfolio/Penguin Books.

DeLong, J. Bradford (1997). "America's Peacetime Inflation: The 1970s," NBER Chapters, in: *Reducing Inflation: Motivation and Strategy*, pages 247-280 National Bureau of Economic Research, Inc.

DeParle, Jason. 2011. "Top Earners Not So Lofty in the Days of Recession." *The New York Times*. http://www.nytimes. com/2011/12/13/business/economy/recession-crimped-incomes-of-the-richest-americans.html?_r=0.

Epstein, Gerald (2000). "Myth Mendacity and Mischief in the Theory and Practice of Central Banking." PERI, University of Massachusetts, mimeo.

Freeman, Richard (2007). "Do Workers Still Want Unions? Now More Than Ever!" Briefing Paper. Economic Policy Institute.

James K. Galbraith (1997). "Time to Ditch the NAIRU," *Journal of Economic Perspectives*, American Economic Association, vol. 11(1), pages 93-108, Winter.

Hacker, Jacob and Paul Pierson (2011). *Winner-Take-All Politics: How Washington Made the Rich Richer—and Turned Its Back on the Middle Class.* New York: Simon and Schuster.

McCardle, Megan. 2011. "The 1% Ain't What It Used To Be." *The Atlantic Monthly*, blog post. http://www.theatlantic. com/business/archive/2011/10/the-1-aint-what-it-used-to-be/247011/

Mishel, Lawrence and Josh Bivens, Elise Gould and Heidi Shierholz (2012). *State of Working America, 12th Edition*. Economic Policy Institute and Cornell University Press.

Piketty, Thomas, and Emmanuel Saez (2003). "Income Inequality in the United States, 1913–1998." *Quarterly Journal of Economics*, 118(1): 1–39.

Piketty, Thomas & Saez, Emmanuel & Stantcheva, Stefanie (2011). "Optimal Taxation of Top Labor Incomes: A Tale of Three Elasticities," CEPR Discussion Papers 8675, C.E.P.R. Discussion Papers.

Pischke, Jörn-Steffen, DiNardo, John E. and Hallock, Kevin F. (2000). "Unions and the Labor Market for Managers." IZA Discussion Paper No. 150. Available at SSRN: http://ssrn.com/abstract=233901.

Schmitt, John and Ben Zipperer (2007). "Dropping the Ax: Illegal Firings During Union Election Campaigns." Briefing Paper. Center for Economic Policy Research

Sherman, Matthew (2009). "A Short History of Financial Regulation in the United States." Center for Economic and Policy Research. Washington, DC.