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The CBPP Full Employment Project: Overview

By Jared Bernstein

Introduction: What Is Full Employment and Why is It so Important?

This overview piece makes three simple points.

First, the absence of full employment labor markets, where the vast majority of job-seekers can handily find work, has been one of the most damaging aspects of the US economy over many recent years.

Second, over the past four decades, full employment job markets have been the exception, not the norm. This has caused many economic problems, from stagnant real earnings, to rising inequality, to slower macroeconomic growth.

Third, the generalized absence of full employment is not an act of nature. It is the outcome of negligent public policy that can be corrected. There are numerous steps policy makers can take to boost labor demand, create more and better jobs, and to get the US economy on a path towards full employment.

What is Full Employment?

Full employment is broadly described as a situation where there's a tight match between the number of people seeking jobs and the number of employers seeking workers. This section adds more rigor to that definition and examines the history of the US job markets through that lens.¹

For most economists, the definition of full employment invokes the tradeoff between unemployment and inflation. More precisely, economists frame the question this way: what is the lowest unemployment rate consistent with stable inflation, otherwise known as the “nonaccelerating inflation rate of unemployment,” or NAIRU?

Most economists place the rate in the range of 5 to 5.5 percent.² However, our economic history is replete with upwardly biased estimates of the full employment unemployment rate, and the costs of overestimating the NAIRU — costs that fall hardest on the working households that have already faced wage and income stagnation for decades — are a lot higher than those of underestimating it.

Why shouldn't we just shoot for a zero unemployment rate? In fact, history shows that there is a negative correlation between unemployment and inflation, meaning that over-solving one problem — high

¹ This section draws from work by Dean Baker and I, as reported in this New York Times [blog post](#).

² The Congressional Budget Office's latest projections place the Nairu [at 5.5 percent](#).

unemployment — can generate another problem: increasing price growth. And it's not just a one-time tick-up in the level of inflation; it's a spiral. That is, both theory and evidence find that it's possible for the economy to “overheat,” generating ever-increasing inflation.

Yet knowing that this correlation exists does not provide policy makers with enough information to accurately or precisely determine the actual level of unemployment consistent with stable prices. In fact, past estimates of the NAIRU have proved to be highly unreliable, implying outbreaks of spiraling prices that never occurred (most recently, this occurred in the latter 1990s). When a [group of econometricians](#) measured the extent of this imprecision, they found a 95 percent confidence interval around NAIRU estimates that included values of less than 4 percent and more than 8 percent.

In addition, the correlation noted above between price growth and unemployment has diminished over time, meaning that we would pay a lower price in terms of higher inflation from below-NAIRU unemployment than would have been the case in the 1970s or 1980s.³ Of course, this also implies higher inflation should be harder to reduce when there's more labor market slack.

The key point is that no one should put too much faith in any particular estimate of the NAIRU. While there are risks of higher inflation at low rates of unemployment (though those risks have diminished), we simply cannot accurately pin down the level of unemployment that will lead to rising inflation. For example, in the latter 1990s unemployment started dropping to levels that economists widely believe would lead to accelerating inflation (the figure below shows how the actual unemployment rate fell below the NAIRU in these years). Yet there is little evidence accelerating inflation over this period, implying that the 2000 jobless rate of 4 percent remains a reasonable target.

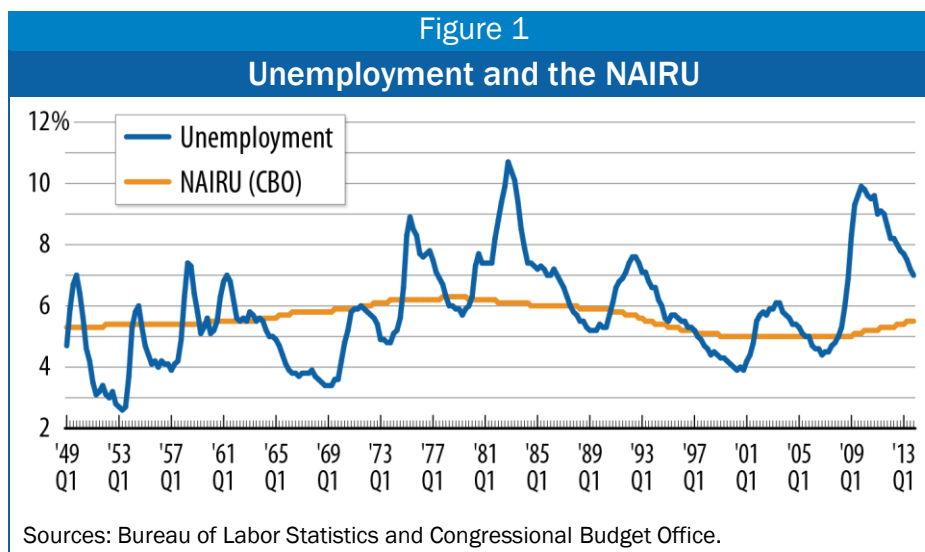
If that target is too ambitious, inflation would begin to rise and the Federal Reserve would need to take steps to raise the unemployment rate to stave off higher inflation. In fact, an honest definition of full employment right now is probably this: it is the rate of unemployment such that if policy makers tried to implement policies that would push that rate down even further they wouldn't create any more jobs. Instead, they would boost inflationary pressures.

US History of Full Employment in Recent Years

Though the NAIRU is only roughly estimated, with a wide confidence interval around the “true” rate, it is the “industry standard” for evaluating the extent to which the job market is slack or tight. In this regard, we can gain useful insights about the history of the US job market from the perspective of the continuum — slack/tight — from comparing actual unemployment to the Congressional Budget Office's (CBO) historical NAIRU series.

The first figure below plots the actual unemployment rate against the NAIRU. Just eyeballing the figure suggests that in recent decades, the actual jobless rate has spent more time above the full-employment unemployment rate than in earlier times, an impression confirmed by a closer look in Figure 2.

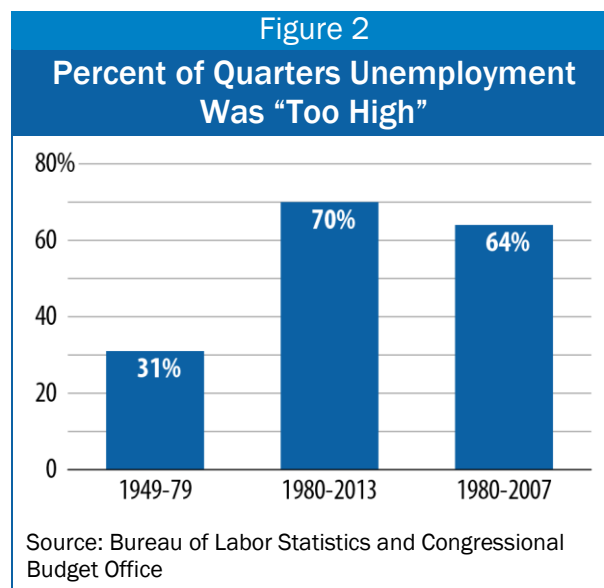
³ Regarding this diminished correlation over time, see <http://economix.blogs.nytimes.com/2013/11/25/less-need-to-worry-about-inflation/>. Recent research by Krueger et al suggest that this flattening of the Phillips curve finding is, in recent years, a function of the growth of long-term unemployment. See http://www.brookings.edu/~media/Projects/BPEA/Spring%202014/2014a_Krueger.pdf.



In that figure, I simply calculate the share of quarters that the actual unemployment rate was “too high,” i.e., above CBO’s NAIRU. In the 1950s-70s, the job market was slack one-third of the time by this metric. Since then, slack conditions have prevailed more than twice that amount of time a result that holds even if we leave out the recent downturn.

Why has the job market been so slack post vs. pre-1980? There’s no widely agreed upon explanation, though certainly the fact that two particularly deep and protracted downturns fell in the latter period are part of the answer (the recent “great recession” and the early 1980s downturn). The US economy has been a lot more open in terms of global trade in the latter period though this, by itself, would not necessary lead to more slack. The problem, as discussed below, is imbalanced trade: we not only traded more in the latter period, we maintained large trade deficits, essentially exporting labor demand to countries with whom we ran those deficits.

Fiscal and monetary policy have also played important roles. As the Federal Reserve manages the tradeoff between the unemployment and inflation rates, its actions are implicated in the latter period, although the story here is complicated by different Federal Reserve regimes. For example, most recently, Federal Reserve Chair Ben Bernanke has worked aggressively to lower the unemployment rate, but Congress has pushed fiscal policy in the other direction, cutting spending and raising taxes in ways that have counteracted the Federal Reserve’s efforts.⁴ Also, in the latter 1990s, Federal Reserve Chair Alan Greenspan ignored conventional NAIRU estimates and, as can be seen in Figure 1, allowed the unemployment rate to fall below the NAIRU without raising interest rates.



⁴ See <http://economix.blogs.nytimes.com/2014/03/18/congress-and-the-fed-need-to-think-inside-the-same-box/> for commentary on this dynamic.

Other candidates for the high levels of slack in recent years include “secular stagnation”⁵ and historically high levels of economic inequality.

Historically, causes of secular stagnation — the phrase refers to an economic expansion wherein the economy grows too slowly to full utilize all available human and capital resources — relate to the misallocation of considerable economic resources to sectors that are less associated with job growth and more associated with macroeconomic instability.⁶ An obvious candidate here is the financial sector, which in recent business cycles has been associated with large bubbles and damaging recessions. While no clear, causal chain exists between the growth in the relative size of the finance sector and stagnant growth periods, past instances of secular stagnation, such as the Great Depression and several prolonged downturns in the 19th century, have followed the collapse of asset bubbles. Arguably, the growth of such dangerous bubbles stems from a bloated financial sector.

Increased inequality is a natural candidate for the pattern seen in Figure 2 because income, wealth, and wage disparities grew quickly in the latter relative to the former period. But as I discuss in depth in a recent paper, causality is hard to determine in this case.⁷ While there are interesting ways in which inequality may slow growth — e.g., through reduced consumer spending among the “have-nots” and the formation of credit bubbles — it’s also the case, as I stress below, that slack job markets themselves boost unequal outcomes.

Global trade was much increased over the latter, slack period shown in Figure 2, but that in itself does not imply higher unemployment. The key issue is whether on net, trade boosts and reduces domestic demand. Persistent trade deficits, for example, meaning we’re consistently buying more from abroad than we’re selling, export labor demand to other countries. In this regard, the two periods are very different, with significant deficits reducing domestic labor demand in the latter relative to the former period. From 1949-79, the period covered by the first bar in Figure 2, trade was essentially balanced: the average trade balance amount to 0.3% of gross domestic product, or GDP. Since then, we have run trade deficits every single year, averaging 2.6% of GDP.

These diagnoses give rise to prescriptions in a later section emphasizing a number of policies designed to boost job creation and lower unemployment.

Why Is Full Employment Important?

The fact of persistently slack labor markets in recent decades, as shown in Figure 2 above, has created myriad problems, all of which remain with us to this day:

- **high unemployment:** By definition, full employment means a low rate of unemployment. As noted, the last time the job market was at full employment, the jobless rate was 4%. Today, it’s been near or 7% for about five years.
- **low wage growth:** As shown below, the benefits of tight labor markets are felt much more acutely by low- and middle wage workers than by those at the higher end of the wage scale and conversely, its

⁵ http://larrysummers.com/commentary/financial-times-columns/why-stagnation-might-prove-to-be-the-new-normal/?wpisrc=nl_wonk

⁶ The concept of secular stagnation was introduced by Hansen in the 1940s and recently reintroduced by economist Larry Summers. As he frames it, stagnation is caused by excess savings over investment and the inability of interest rates—with their zero lower bound—to fall far enough in real terms to equilibrate this savings imbalance.

⁷ <http://www.americanprogress.org/wp-content/uploads/2013/12/BerensteinInequality.pdf>

absence hits them hardest. This point is important, because in popular discourse slack labor markets are often considered a problem only from the perspective of the unemployed. Through this wage channel, however, the absence of full employment is keenly felt in the paychecks of most workers.

- **inequality:** In that regard, slack labor markets contribute to the serious, long-term problem of growing economic inequality, and conversely, tight labor markets push the other way: toward a more equitable distribution of growth.
- **worse outcomes for minorities and the least advantaged:** It is often said the when the economy snuffles, the poor catch pneumonia. So it is with high unemployment that such conditions mean proportionately worse outcomes for those with the least resources, those least connected to the job market, and those with relatively lower levels of educational attainment.
- **fiscal problems:** Slack labor markets means fewer people are working and many of those working are more likely to be underemployed (e.g., not working their desired number of hours per week or weeks per year). That means less tax revenue, more spending on safety net programs, and all else equal, higher budget deficits. The last time the budget hit surplus, in the latter 1990s, full employment was the main factor.
- **“hysteresis”:** When large shares of the workforce are un- or underemployed for a long time, their skills can deteriorate and they can lose their connection to the labor market. At the same time, economic slack typically leads to diminished investment. Together, these dynamics can lower the long-term growth rates of the labor force and even the broader economy.
- **long-term damage to career trajectories:** Those unfortunate enough to begin their careers in slack labor markets have often been found to have permanent lower career trajectories, in terms of occupational and compensation advancement.

Conversely, every one of these problems can be ameliorated by very tight labor markets. By facilitating a dynamic wherein employers need to bid up compensation to get and keep the workers they need, full employment raises both the pay and hours worked of low and middle wage workers relative to those at the top of the pay scale. In other words, it pushes back against the long term trend of wage and income inequality.

Moving towards full employment is clearly associated with higher tax revenues, due both to more people working and thus paying taxes, and at the same time putting less pressure on safety nets.

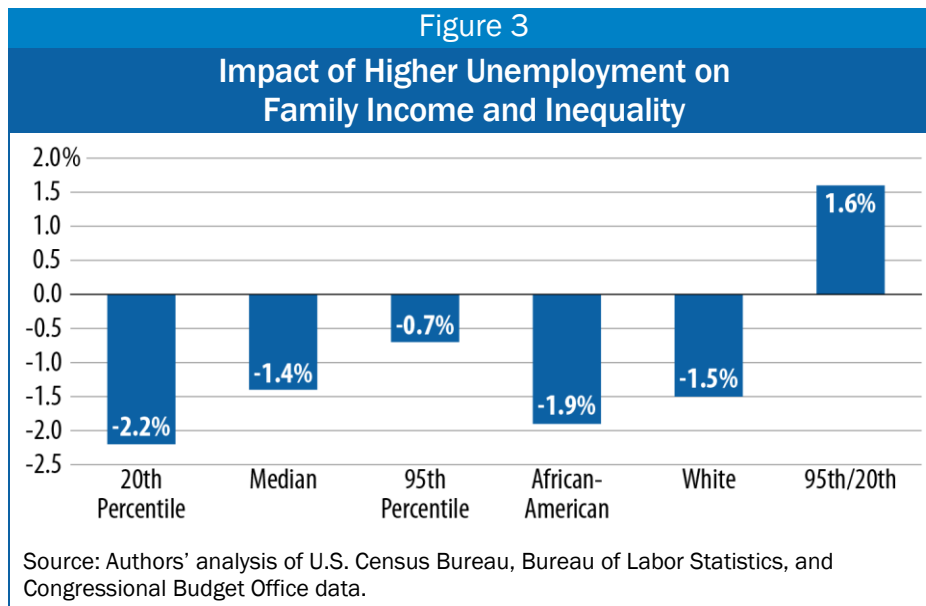
Regarding hysteresis, an important benefit of full employment is its capacity to reverse some of this damage. When people are unemployed for too long — and long-term unemployment has been a particularly pernicious problem of late in the US labor market—their skills and general employability can atrophy in ways that make them less attractive to employers. Recent research has revealed, for example, that simply being unemployed for many months is (not unexpectedly) perceived by employers as a negative attribute. But if labor demand gets strong enough, former workers will come back to the job market and employers will put aside their hesitations regarding the long-term jobless because to do otherwise would leave potential profitability “on the table.”

In other words, if policy makers have the tools to move the economy to full employment, and this paper and the larger project it is introducing strongly believe this to be the case, then not taking action against slack job markets does permanent damage to rate of economic growth, job growth, federal and state budgets, career trajectories, and living standards, particularly of the least advantaged.

The next few figures provide empirical analysis of some of these assertions. Figure 3 shows the outcomes of a simple statistical exercise that correlates the unemployment gap as shown in Figure 1 (actual unemployment minus the NAIRU) with real income trends for various groups and income classes.

The first three bars show that the lower your family income, the more you lose in slack labor markets. For families in the 20th percentile, for each percentage point that the unemployment rate was further from full employment, real incomes fell 2.2 percent; for median families, the correlation was about two-thirds that of the low-income families, and for high-income families (the 95th percentile) the growth effect loses another third of its impact. For African American families the impact of a smaller unemployment gap was similar to that of low-income families, and white families saw losses equivalent those at the median.

Consider these patterns in light of the income inequality debate that has become increasingly prominent in recent years. The forces that are driving inequality — and they are many, including globalization, technology, de-unionization, eroding minimum wages, regressive tax policy, and more — push exactly the other way, leading to more income growth the higher you go up the income scale. The last bar in the figure explicitly measures this correlation between slack labor markets and the growth of income inequality, measured here as the ratio of high to low incomes. One extra point of labor market slack is associated with a 1.6 percent increase in the ratio of high to low incomes. In this sense, by providing those with the least bargaining power more clout in tight versus slack job markets, full employment is a potent antidote to inequality, and vice-versa.



The process through which full employment drives the correlations just shown relates to hourly wages and hours of work. That is, tighter labor market pressures employers to raise their compensation offers to acquire and keep the workers they need, leading to higher hourly wages, again, especially for lower paid workers. But equally importantly, especially given the growth of involuntary part-time work, full employment increases the hours of work for those who want more work but can never seem to find it in slack labor markets.

Figure 4 shows a real-world example of this hours' phenomenon. As has been noted, the latter 1990s was the last time the US was clearly at full employment. Over these years, the increase in hours worked was

markedly highest for those in the lowest fifth of the income scale. Wealthier households showed smaller gains, in part because from the middle on up, they were already working mostly full-time, full-year.⁸

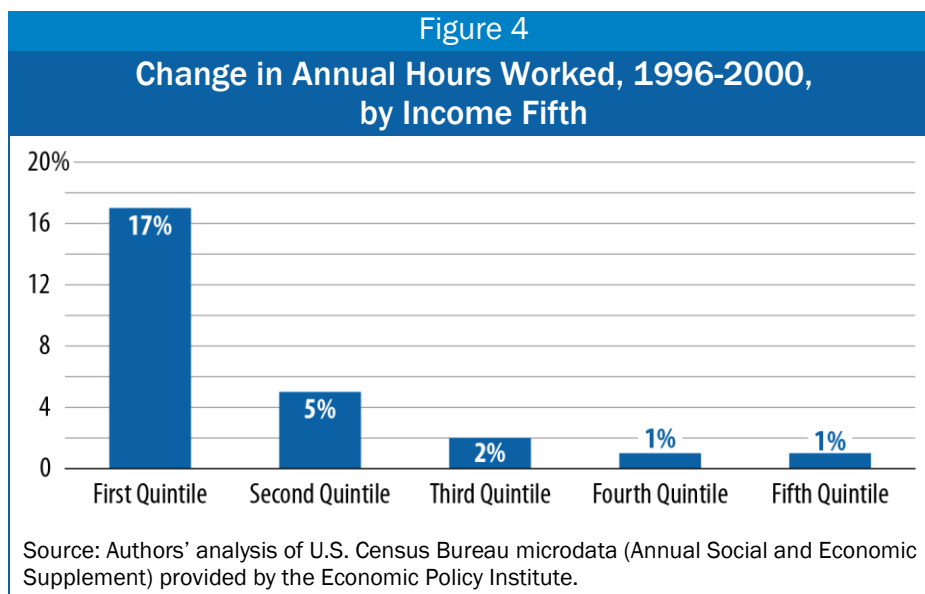
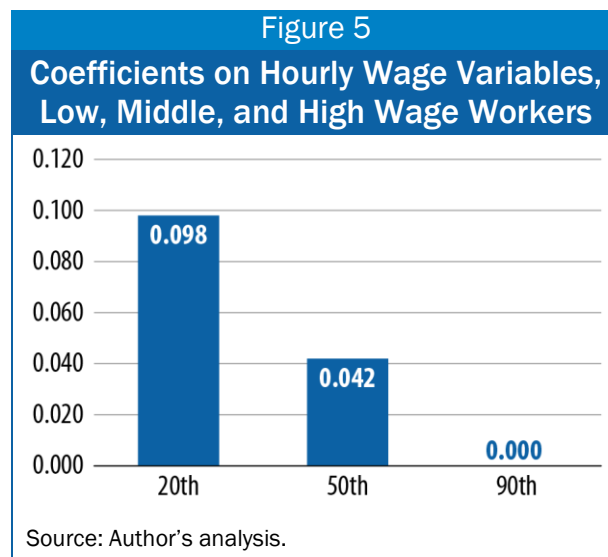


Figure 5 shows the impact of lower unemployment on hourly wages, demonstrating the now familiar equality-inducing pattern of larger gains at the low end, moderate gains in the middle, and in this case, no gains from lower unemployment at the top of the wage scale.

Full employment also provides an important lift to fiscal accounts. Clearly, if more people are working for higher wages and more hours, income and payroll tax revenues will increase and many safety net expenditures will decline. It was thus not a coincidence that the last time the budget was in surplus — 1998 to 2001 — it was full employment that was largely responsible. President Clinton's progressive early budget/deficit reduction package certainly helped improve the fiscal accounts but even accounting for those policy changes, the CBO in 1996 projected significant deficits in 2000 (2.7% of GDP). What the budget agency did not account for was the sharp acceleration in growth and jobs, and it was those factors which were largely responsible for the swing from deficit to surplus.



Another potentially big downside to persistent slack in the job market is something economists have labeled "hysteresis." Technically, this means that something happens that induces a downshift in the trend growth rate of key economic variables, like real GDP, labor supply, or investment. But how could slack in the job market lead to such a negative outcome?

⁸ Welfare reform also played a role in increasing labor supply of low-income working parents in these years, but it was strong macroeconomic demand that provided them with the job slots required to meet the expanding supply.

Imagine, as has been the case in recent years, that the unemployed experience particularly long spells of unemployment. Many might leave the job market such that the available supply of labor falls not just in the recession but in the recovery as well. Others may find that their skills depreciate, such that they're less attractive to employers (research has shown that all else equal, employers consider long-term unemployment a negative signal about the job applicant⁹). Since the supply of labor is a key growth input, these phenomenon can, and probably have, led to lower overall growth rates.

Similarly, in periods of weak consumer demand, investors are less likely to find projects with decent returns on their investment, leading to diminished investment in plants and equipment, which has obvious implications for growth and productivity.

A group of Federal Reserve economists recently produced a detailed statistical analysis of these types of developments.¹⁰ In their estimates, the economy's potential growth rate falls sharply, from about 2.5% to around 1%, due to declines in both labor supply and productivity growth, both of which are functions, at least in part, of hysteresis (some of the recent labor force decline — though less than half — is due to retiring baby boomers, not weak demand).

Finally, it can do lasting damage to the career of a young person if they begin that career in a period of significant labor market slack. Common sense would suggest that it is tougher to get a job and a desired wage in a labor market situation where supply outpace demand. But research has found that while this is the case, the damage goes beyond the near term impact of the down economy. For example, one study found that those who graduate and enter the job market during a recession can suffer an earnings loss of about 7% in their first year compared to those who entered the market in an expansion. Moreover, these effects persist "...over many years, with recession-era grads earning 4% to 5% less by their 12th year out of college, and 2% less by their 18th year out."¹¹

Put it all together, and the evidence of the costs of excessive, persistent labor market slack are extremely high. Notably, these costs fall most steeply on those lacking the economic resources to offset them. And newer research suggests macroeconomic costs regarding future growth that any rational policy maker should want to work very hard to avoid. The good news is that at least since Keynes, the problem of underperforming economies has been viewed as a "policy problem," — one that did not have to be accepted as the natural workings of some immutable set economic laws. In the final section, I offer a number of policy ideas that could set our economy back on a path towards full employment and reverse many of the steep costs described above.

The Policy Path Back to Full Employment

Clearly, reversing the damage done by slack job markets and tapping some of the elasticities shown in the figures on real wages, incomes, and hours would be highly desirable policies to pursue, especially given the lack of inflationary pressures associated with better labor market outcomes in recent decades. This section briefly lists the policy ideas that are part of this project along with the relevant authors.

More Stimulative Fiscal Policy: Larry Ball, Brad DeLong, Larry Summers examine the need for more supportive fiscal policy in periods of weak demand. The austerity measures — reducing government deficits in response to output gaps — that have dominated fiscal policy in most advanced economies in

⁹ See <http://www.theatlantic.com/business/archive/2013/04/the-terrifying-reality-of-long-term-unemployment/274957/>.

¹⁰ See <http://www.imf.org/external/np/res/seminars/2013/arc/pdf/wilcox.pdf>.

¹¹ See http://www.columbia.edu/~vw2112/The_Class_of_09_Curse_WSJ.pdf.

recent years have proven to be quite harmful to growth and jobs, and while it is often thought that U.S. policy makers practiced less austerity than some of our European counterparts, the fact is that the United States' budget deficit fell to 3 percent of gross domestic product in 2013 from 10 percent of GDP in 2009 (calendar years), the largest four-year decline since 1950. Such deep and precipitous deficit contraction before the private sector was ready to take up the mantle of labor demand is one reason why our output gaps have persisted so long.

Particularly with monetary policy stuck at the “zero lower bound,” meaning the Federal Reserve’s key interest rate is already effectively at zero, these authors show that stimulative fiscal policy is an essential complement to the Fed’s monetary stimulus.

Lowering the Trade Deficit: Dean Baker argues that taking aim at the persistent trade deficit, through which the United States exports labor demand, would help a great deal in moving the job market toward full employment. Moreover, he argues that trade is a “policy variable,” amenable to interventions that push back against competitors who place a fat thumb on the exchange-rate scale to keep their imports cheap and our exports expensive.

Baker notes various ideas that could counter currency management. First, the US could pass [legislation](#) that gave the government the right to treat currency management as a violation of international trading rules, leading to offsetting tariffs. Second, we could also tax foreign holdings of United States Treasuries, making the usual tactic of currency managers more [expensive](#). Third, we could institute [reciprocity](#) into the process of currency management: If a country wants to buy our Treasuries, we must be able to buy theirs (which is not always the case now).

Direct Job Creation: Even with better fiscal and trade policy, the quantity of jobs available to lower-skilled workers is likely to be inadequate for years to come. Donna Pavetti’s paper is about a subsidized jobs program targeted at the hard to employ, a program that was used to great effect during the Recovery Act.

Pavetti recently [summarized](#) the results from this program:

“Thirty-nine states and the District of Columbia used \$1.3 billion from the TANF (Temporary Assistance for Needy Families) Emergency Fund to place [more than 260,000 low-income adults and youth](#) in temporary jobs in the private and public sectors during the [Great Recession](#). Now...there’s [new evidence](#) that these subsidized jobs programs did what they were supposed to do: help disadvantaged individuals during hard economic times to boost their incomes and improve their chances of finding unsubsidized jobs when the subsidized jobs ended.”

Her paper explores the idea of scaling it up.

Worksharing: Kevin Hassett and Michael Strain stress the benefits of adapting worksharing primarily in firms that are now using regular unemployment insurance in the case of weak-demand-induced layoffs. Instead of laying people off in downturns and then paying them unemployment insurance benefits, worksharing reduces the hours of the broader workforce and use the benefits to partially compensate for those lost hours. In other words, instead of concentrating the impact of weak demand on a relatively smaller number of workers, spread around the pain in the interest of keeping people on the job, but for fewer hours.

Let’s say you run a company with 100 employees and your demand falls by 20 percent. The usual approach is to lay off 20 workers, but under work-sharing, everyone’s hours are cut by one-fifth, and some of the lost wages are made up through UI benefits that would otherwise have gone to laid off workers.

Germany used this approach to great effect during the recent deep recession, when its GDP fell just as much as that in the United States (if not more so) but Germany's unemployment rate [rose far less](#). German unemployment is now more than two percentage points below its pre-recession level. True, this idea distributes labor-market slack more than it reduces it, but by keeping more workers on the job, even with reduced pay, it probably helps stabilize aggregate demand better than the current American approach, especially in the long term, by avoiding long spells of unemployment that can do lasting damage at both the micro and macro levels.

Though it is not nearly widely enough known, the U.S. actually has a federal work-sharing policy that was passed by Congress [in early 2012](#) and numerous states [use it](#). But participation rates are too low. Perhaps most importantly, the authors show how worksharing could push back against long-term unemployment, a uniquely tough problem in the US job market right now.

Manufacturing Jobs: Sue Houseman's paper for the project argues that the popular notion that surging manufacturing productivity has killed job growth in the sector is not supported by a careful analysis of disaggregated data. Looking at subsectors of industries within manufacturing and controlling for some measurement anomalies, she finds that productivity in the sector is not unusually strong and the Baker's trade deficit explanation may be a larger part of what's holding back the sector than conventional wisdom would support.

Apprenticeships and On-the-Job Training: In their paper, Harry Holzer and Bob Lerman make a strong case that apprenticeship programs, or work-based learning, can be highly effective in finding decent jobs for young workers with limited prospects. Work-based, "learning-by-earning" programs can address high youth unemployment while preparing young people for "middle-skill" careers in potentially high demand sectors such as health care, advanced manufacturing, construction and information services. Moreover, these programs can include career pathways for upward mobility, as well as including post-secondary education as part of the package.

Job Quality: While most of the above ideas deal with the problems of insufficient job quantity — not enough employment — we must also be concerned with the quality of jobs. Ross Eisenbrey's paper focuses on this challenge, stressing improvement in a very wide variety of labor standards, including minimum wages, overtime coverage, misclassification (e.g., when employers classify regular workers as self-employed), and immigrant visa programs. In every case, Eisenbrey's analysis suggests policy fixes that could significantly improve the quality of employment for millions of workers.

Conclusion

Our project is motivated by the observations that full employment is very much more the exception than the rule in recent decades, and that policies like those in the papers that follow can change this very unfortunate track record. Better fiscal policy, trade and manufacturing policy, apprenticeships and so on, can help close the gap between whatever the NAIRU may be and the current jobless rate; higher labor standards can help improve job quality.

Not only will implementing these policies help working people, it will help the least well off the most. In that regard, full employment is a critical antidote to the increased inequality problem that has in recent months been elevated in the economics debate in the nation's capital. Full employment would also improve our fiscal outlook and push back on hysteresis effects that threaten to lower the economy's potential growth rate.

Finally, a pessimist (who's also a sadist) could raise the gridlocked political environment right now as a serious constraint on any of these sorts of ideas. That's certainly true, but only up to a point. If "constrained politics" is a reason not to think and write about policy solutions, those of us in that business might as well close up shop. In fact, such ideas and debates have long runways and the more we debate the path back to full employment, the more likely we'll be to have a viable agenda when cramped politics in the nation's capital loosen up.

There is much that can be done in this regard without Congress, including trade diplomacy that focuses on reducing currency manipulation and promotion of the existing work-sharing program. In addition, there is considerable action at the state and sub-state level, including subsidized jobs programs in numerous states. These efforts should be watched and evaluated.

Whatever the politics, getting back to full employment should be a truly non-partisan goal. Our project will continue to develop the best arguments as to why it's so important and about how to get there. But there should be no question regarding that destination and the urgency of getting there.

Author's note: Much of this material is adopted from earlier work with Dean Baker, including our book *Getting Back to Full Employment* and a summary of the book done for the Brookings Institution.¹²

¹² <http://www.brookings.edu/research/papers/2014/03/getting-back-to-full-employment>