

The Job-Filled Non-Recovery

Robert J. Barro

Harvard University

September 2016

The recovery from the recent Great Recession in the U.S. (and elsewhere) has been non-existent. The U.S. per capita growth rate 2009-2015 was 1.3% per year, below the long-run rate of 2.1% per year (1869-2015 in Table 1; 1949-2015 is similar). The growth rate during a recovery has to exceed its average to restore at least part of the cumulative loss in the level of GDP during the downturn. It is also true that the per capita growth rate 1999-2009, 0.8% per year (1.0% per year 1999-2015), was worse than any decade except the 1930s (0.6% per year).

Empirically, the growth rate during a recovery is positively related to the magnitude of cumulative decline during the prior downturn. Best evidence on this relation comes from major depressions. My research, particularly with Jose Ursua, has used the history of rare macroeconomic disasters for 40 countries as far back as 1870 (sample of countries with annual data back at least to 1913). We isolated 185 contractions for per capita GDP of size 10% or more. Average size is 21%, with fat tail. Experience dominated by wartime destructions (especially world wars) and financial crises such as Great Depression of 1930s. Many are global events, some are for individual or a few countries. My research, with Emi Nakamura and Jon Steinsson and recently with Tao Jin, has used the underlying long-term data to study recoveries.

On average, an economy eventually recovers about half of the per capita GDP lost during a prior downturn. Once a disaster event is over, the recovery is typically quick; average duration about two years. For example, a cumulative fall by 10% in per capita GDP during a contraction implies subsequent recovery (toward the trend for per capita GDP) of 5%, implying about 2.5% per year higher growth rate in the period of recovery. Analogously, a more typical recession of 4% implies an extra 1% per year in the growth rate during two years of recovery. This pattern should have applied, for example, in the U.S. for 2009-2011 but is not in the data. (Empirically, there are many recoveries that exceed 100%. Examples are the post-WWII

recoveries in Western Europe and Japan and the post-reform period in Chile.) (Randomness in recovery-period growth rates, with a sigma of 0.026 per year, implies that recovery effects can be hard to isolate using only samples with mild recessions.)

Incorrect to assert that U.S. economy did not experience recovery post-2009 because the downturn was so severe or featured a major financial crisis. That assessment gets the sign wrong—empirically, a larger decline predicts a stronger recovery, and many of the biggest contractions featured financial crises. For example, U.S. average per capita GDP growth rate 1933-40 was 6.5% per year, the highest of any peacetime interval of several years despite the 1937 recession. This strong recovery followed the cumulative decline during the Great Depression, 1929-1933, around 29%.

Given the weak recovery gauged by real GDP, a surprising aspect of the post-2009 period, starting at least by October 2010, is that employment growth was strong. The growth rate of employment (total non-farm payrolls) averaged 1.7% per year from the trough of employment in February 2010 to July 2016, despite a drop in the labor-force participation rate. The decline in the unemployment rate was correspondingly sharp, from 10.0% in October 2009 to 4.9% in July 2016. These labor-market outcomes contrast with the weak growth rate of real GDP—2.1% per year from 2009 to 2015 versus 3.3% from 1949 to 2009. Thus, post-2009 is not a *jobless recovery*. In fact, it's more of a *job-filled non-recovery*.

The key element is weak growth of labor productivity. GDP per worker growth rate from 2010 to 2015 was 0.5% per year, compared with 1.5% 1949-2009, 1.7% 1999-2009. (GDP per worker-hour growth rate was 0.2% per year 2010-2015, 2.1% 1999-2009.) The onset of the recent productivity slowdown is around 2011.

As an aside, given the growth rate of real per capita GDP, is it a good thing if employment (or worker-hours) grows faster? Abstracting from income distribution or a possible signaling value of employment growth for future GDP growth, economic reasoning would suggest that stronger employment growth was bad—because it implies less growth in leisure. That is, a job-filled non-recovery seems worse than a jobless recovery. However, at a retirement ceremony for Mervyn King in 2014, Ben Bernanke said that the main thing he learned as Fed chair from the U.S. Congress was that this conclusion was wrong. Given the growth of per capita GDP, more employment growth is viewed at least by politicians as a plus, not a minus. Economists have to explain this. One reason is income distribution—the unemployment rate is, itself, an indicator of employment inequality. Another idea is that, for given income and consumption, people like the idea of having a job. It seems unlikely that the key matter is the signaling value of employment expansion for future economic growth, given the path of per capita GDP. There are better leading indicators than employment growth or the unemployment rate.

Returning to the job-filled non-recovery, we would like to know which policies could have been implemented to promote faster recovery by enhancing productivity growth. My view is that we learn more about this issue from the determinants-of-growth literature than from business-cycle analyses, which stress aggregate demand. Elements that have been found empirically to encourage economic growth (over periods of 5 or 10 years) include strong rule of law and property rights, free trade, lack of inefficient regulation and other constraints on market activity, some forms of public infrastructure, strong institutions for education and health, fiscal discipline (including a moderate ratio of public debt to GDP), efficient taxation, and sound monetary policy as reflected in low and stable inflation. These kinds of variables appear, for

example, in conditional-convergence frameworks associated with cross-country growth regressions. Although it is hard to get precise estimated effects for individual policies, there is clear overall evidence that economic growth is fostered by pro-market policies, including well-functioning institutions.

Note that, for infrastructure, what matters for levels of productivity are service flows from stocks (highways & bridges, Keystone pipeline, etc.), not flows of investment. The latter variables are stressed in stabilization analyses that emphasize aggregate demand. A similar perspective applies to R&D outlays, education, health, etc. Stocks of innovations/technology (not the flow of research), stocks of human capital (not school enrollment or health spending) are what matter for levels of productivity. Notably, productivity-enhancing stocks are not fast moving, not amenable to sharp changes in the context of “stimulus packages.” In any event, the BEA measure of U.S. federal government gross investment as a ratio to GDP was 0.019 in 2008, remained roughly flat through 2011, then fell to 0.014 in 2015. Hence, expanded federal public investment was not a part of the stimulus package enacted in response to the Great Recession.

The main U.S. policy instruments used to counter the Great Recession were increases in federal transfers to persons and monetary expansion. U.S. federal social benefits to persons as a ratio to GDP went from 8.7% in 2007 to a peak of 11.7% in 2010, then fell to 10.9% in 2015. From 2007 to 2010 (encompassing the Great Recession and the immediate policy responses), the main increases in transfers relative to GDP were in unemployment insurance (0.7 percentage points, including here payments by state governments); Social Security, including disability (0.6); Medicaid (0.5); Medicare (0.4); and food stamps or SNAP (0.2). Since 2010, most of these transfer components remained reasonably stable relative to GDP, except UI went down 0.7 percentage points (driven especially by the ending of federal extended benefits), and Medicaid

went up another 0.3 percentage points. The broad pattern is a recession-induced upward shift in transfer payments, which have remained at a permanently elevated ratio to GDP. Cross-country growth regressions are often criticized for having too many explanatory variables. However, increased transfer payments to persons do not even appear on usual lists of policies that may promote productivity growth.

Following the Great Recession, there has been vast monetary expansion in the sense of increases in the balance sheets of the Federal Reserve and other central banks. The Fed's expansion featured a dramatic rise in excess reserves (and currency), used to fund increased holdings of Treasury bonds (including Treasury Bills) and mortgage-backed securities. The cross-country growth research gives some indication that inflation is adverse for economic growth. However, the recent experience involved vast monetary growth without inflation. These monetary events are symptomatic of an environment with extremely low (even negative) real rates of return on comparatively safe assets. In this setting, possibly induced by a rise in perceived disaster risk, private institutions exhibit a great willingness to hold the Fed's obligations (excess reserves) despite the negative real interest rates on these claims. The dramatic rise in high-powered money was good for the Fed's profits (most of which went to the U.S. Treasury). However, none of this was likely to contribute to productivity growth. Instead, the monetary changes seem mostly symptomatic of weak opportunities for private investment and growth.

We want to think about which policies—immediately post-recession or at earlier times—might explain the low productivity growth. Enlargement of inefficient government regulation is promising. Maybe deteriorating infrastructure. Maybe a decline in the rate of technological progress. Maybe fiscal recklessness with great uncertainty about future taxes and entitlement

benefits. With respect to lack of fiscal discipline, an odd implication of negative real interest rates on government securities is that the vast run-up since the Great Recession in public debt does not appear to cost much in terms of the interest payments that enter into the federal budget. In particular, the United States is able to have privately held public debt around 75% of GDP (gross public debt above 100%) without much consequence for current federal spending. Japanese gross public debt approaching 200% of GDP is even more impressive.

It is sad that prominent recent policy suggestions include trade restrictions and higher minimum wages. The former is equivalent to constraining technological progress. (Expanded trade is like better technology.) The latter is a form of inefficient regulation of the labor market; in effect, persons with productivity less than a designated level are not allowed to hold formal-sector jobs. I have never understood why the minimum wage is viewed as an attractive form of welfare program, when compared say with the earned-income tax credit or even food stamps. However, from the standpoint of limiting competition, it is not surprising that higher-wage (often unionized) workers would support higher minimum wages.

I have focused on the weak recovery post-2009. Another issue is whether the long-run growth rate has fallen for the U.S. and other countries since the Great Recession or perhaps since an earlier time, such as 2000. In my research with Tao Jin, we estimated a persisting growth component (a “long-run risk”) for the U.S. and other countries. In this framework, each country’s per capita growth rate in the very long run was fixed at a value with a cross-sectional average estimated to be 2% per year. However, a long-run shock can generate persistent deviations of a country’s per capita growth rate from the 2% norm (with an estimated adjustment back toward the norm at about 25% per year). For the U.S. and some other countries, the estimated long-run growth component was negative with a magnitude slightly greater than 1%

per year during the Great Recession, 2008-2009. (This 1% value is large compared to the mean growth rate of U.S. real GDP per worker from 1949 to 2015 of 1.4% per year.) However, this estimated long-run growth component returned to around 0 for 2010-2012. Thus, this limited evidence does not support the idea of a persistently depressed rate of per capita economic growth going forward.

Table 1	
U.S. Growth Experience	
Period	Annual Per Capita GDP Growth Rate
1869-2015	0.0206
1949-2015	0.0201
1869-1879	0.0230
1879-1889	0.0170
1889-1899	0.0189
1899-1909	0.0213
1909-1919	0.0154
1919-1929	0.0204
1929-1939	0.0059
1939-1949	0.0461
1949-1959	0.0241
1959-1969	0.0312
1969-1979	0.0220
1979-1989	0.0214
1989-1999	0.0187
1999-2009	0.0075
2009-2015	0.0132
1999-2015	0.0096

Note: Underlying data are annual.