The Recovery From The Great Recession: A Long, Evolving Expansion

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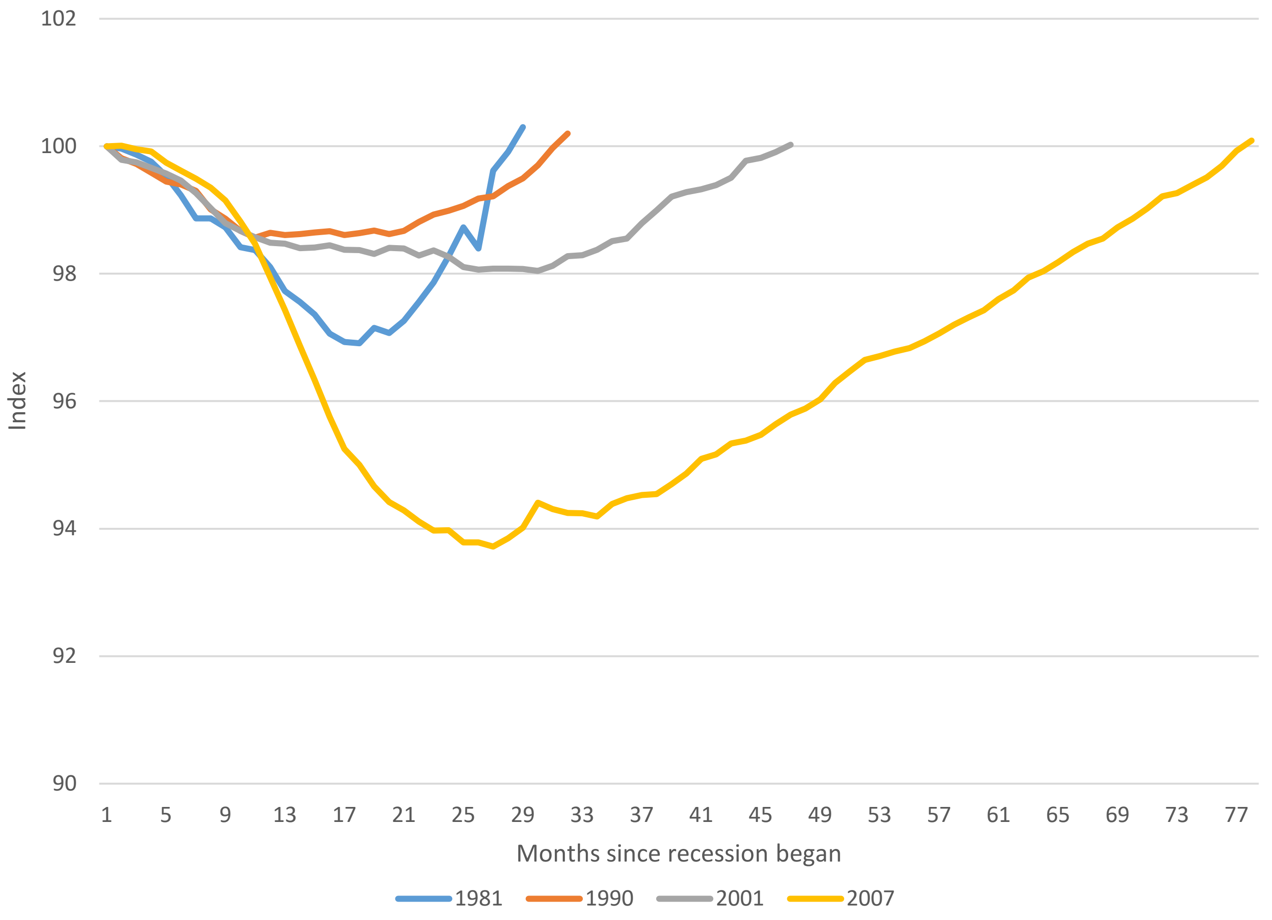
A huge shock, a long recovery

- **This paper focuses on Macro & Macro labor outcomes.**
- **The shock of the Great Recession was far larger** than other recent recessions – a much bigger hole to dig out of
- The **early period of recovery was disappointing** – arguably held back by insufficient policy stimulus
- The **length of the recovery, though, allowed it to evolve**
  - Eventually provided legitimate gains to workers
  - Spread to wide classes of workers by the end
  - Many statements that looked true at various points eventually reversed
- Emphasizes **importance of eliminating labor market slack** (and quickly) for the well-being of workers (especially oft-marginalized ones)

Huge Shock

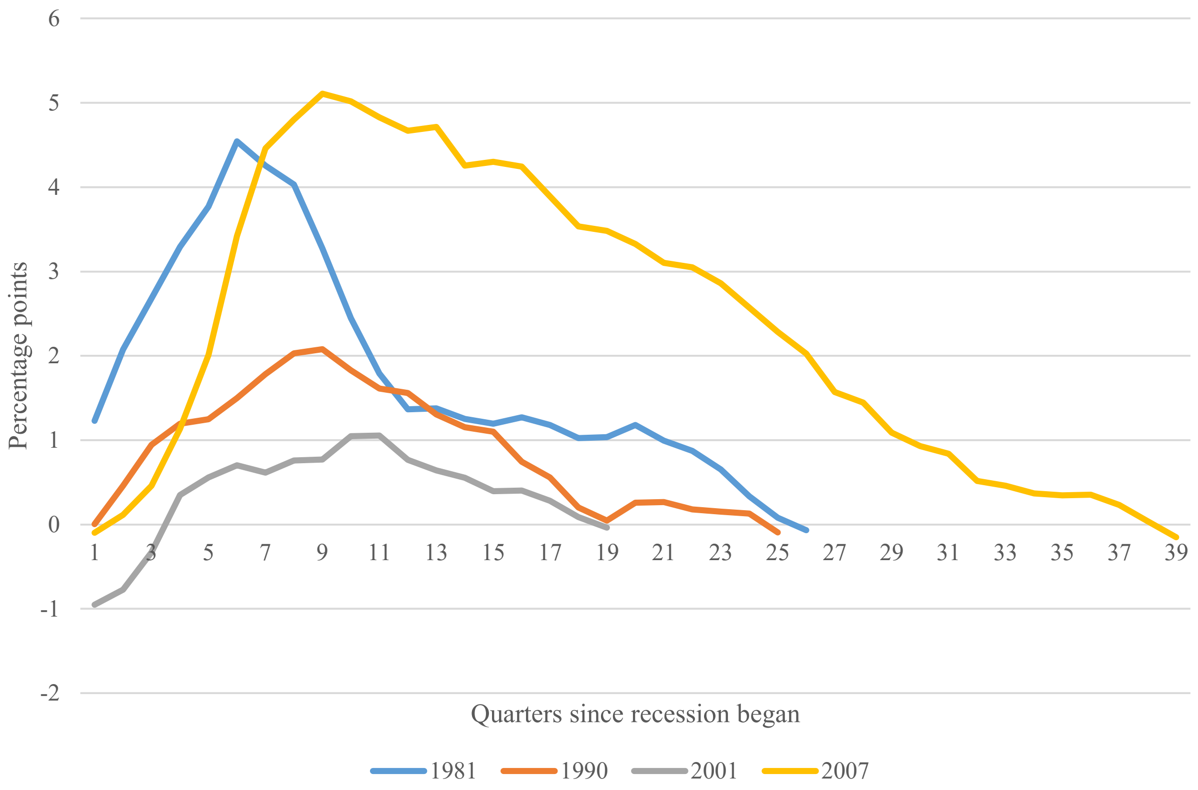
Figure 1: The Evolution of Employment Over the Business Cycle



- Familiar figure
- Always worth looking at as starting point.
- This shock was simply huge to the labor market
- Also took many many years to climb out of

Flip side of job loss

Figure 3: Difference Between the Unemployment Rate and its Natural Rate



- It took ten years to get to CBO's defined full employment.
  - Had this not been a record-breaking long expansion, recovery would've been incomplete
- Thinking of the area under that curve implies massive losses to individuals and wasted lost output.
- Not even counting labor force drop outs
- Massive failure of policy
  - 6 years after start of recession, still 2 points above natural rate

Huge Shock: truly worse than others

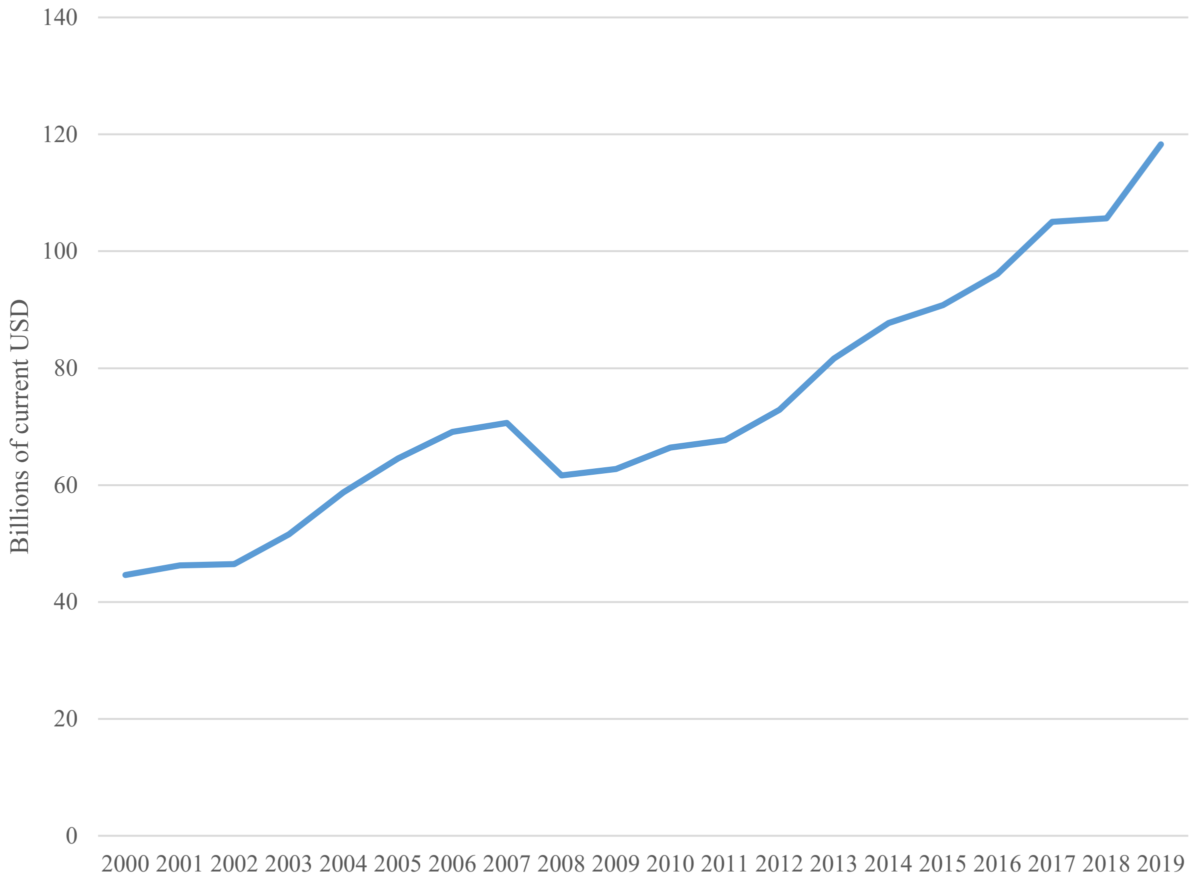
Table 1: Macroeconomic Indicators for Recent Business Cycles				
Recession	1981-82	1991	2001	2007-2009
Recession Indicators				
Cumulative job loss (millions)	-2.8	-1.5	-2.6	-8.6
Peak real GDP loss %	-2.6%	-1.4%	-0.4%	-4.0%
Peak UR increase	3.6	2.3	2.0	5.0
Prime-age emp-pop change (pp)	-2.0	-0.9	-1.6	-3.8
Recovery Indicators				
Months to reach prior peak employment	28	32	47	77
Quarters to reach CBO natural UR	26	25	19	39

Notes: Cumulative job loss is measured from the start of recession until the employment trough using nonfarm payroll employment from the Bureau of Labor Statistics. Prime-age emp-pop is the prime age (25-54) employment to population ratio. Real GDP measured in chained 2012 dollars from the Bureau of Economic Analysis. Authors' calculations.

- Loss in jobs as a percent was larger than loss in GDP
  - Implies temp productivity increase
- Note that other sharp recession recovered quickly

Not just labor market

Figure 2: Net Worth of Households and Nonprofit Organizations

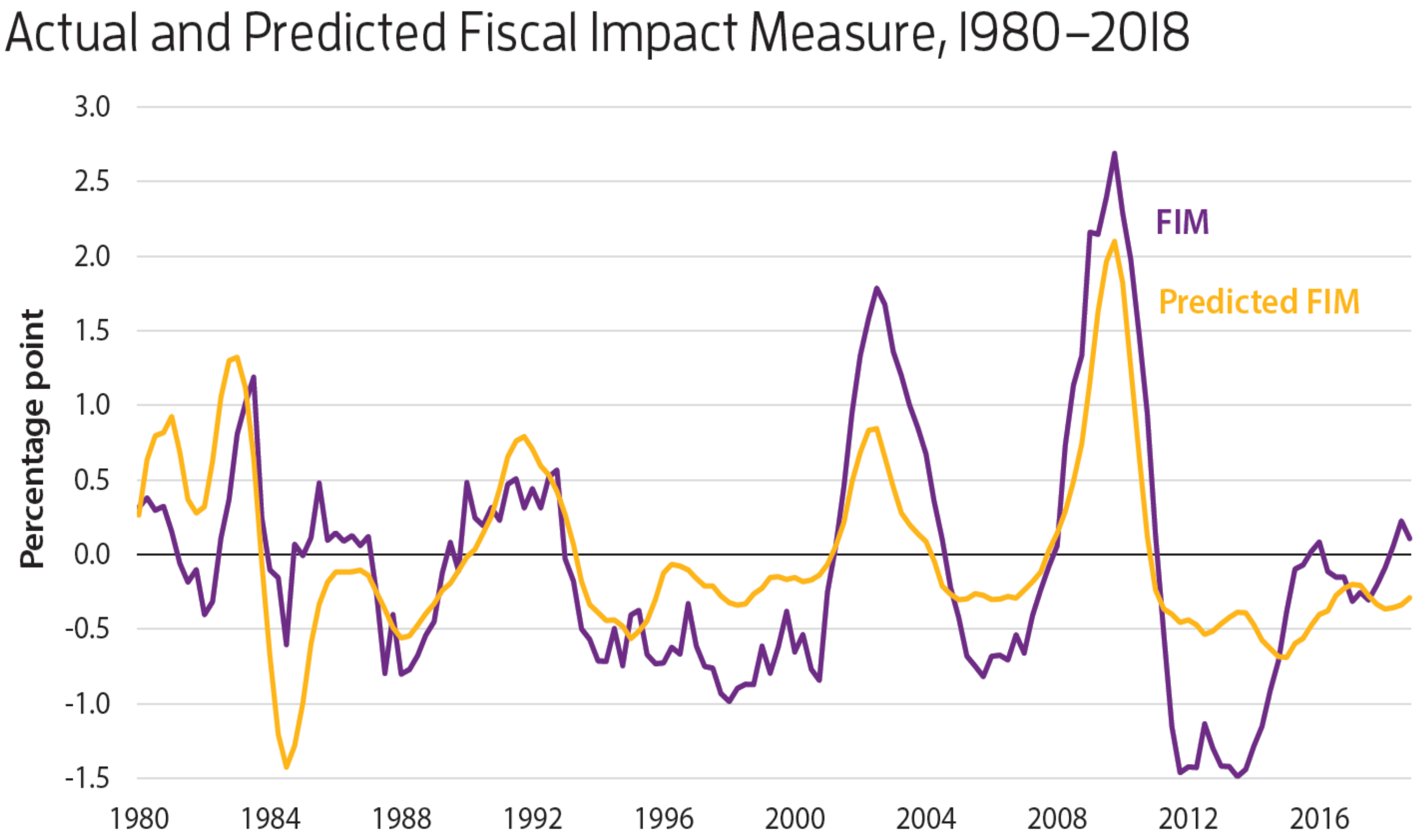


- Drop in net worth NOT typical in recessions
- The financial market shocks were huge and complicated recovery
- Generated years of deleveraging
- Not atypical for slow recovery from financial crisis (but not destiny)

Policy Response

- Monetary policy reacted swiftly, cutting rates sharply, moving to QE and other new tools
  - Eventually, Fed started to remove accommodation
    - Signaled a much tougher policy than enacted. Likely important.
    - Reversed course late, and cut rates again, despite low UR, arguing growth was slowing and there was still room for labor market to grow
- Fiscal policy was much less supportive. Initially very supportive, but turned to austerity too quickly.
  - Republican Congress refused more spending & additional measures (e.g. payroll tax cuts) just not enough support.
  - When President Trump took office, this changed and fiscal policy became more stimulative late in the expansion.
- Combined, policy did not push economy back to health quickly enough.

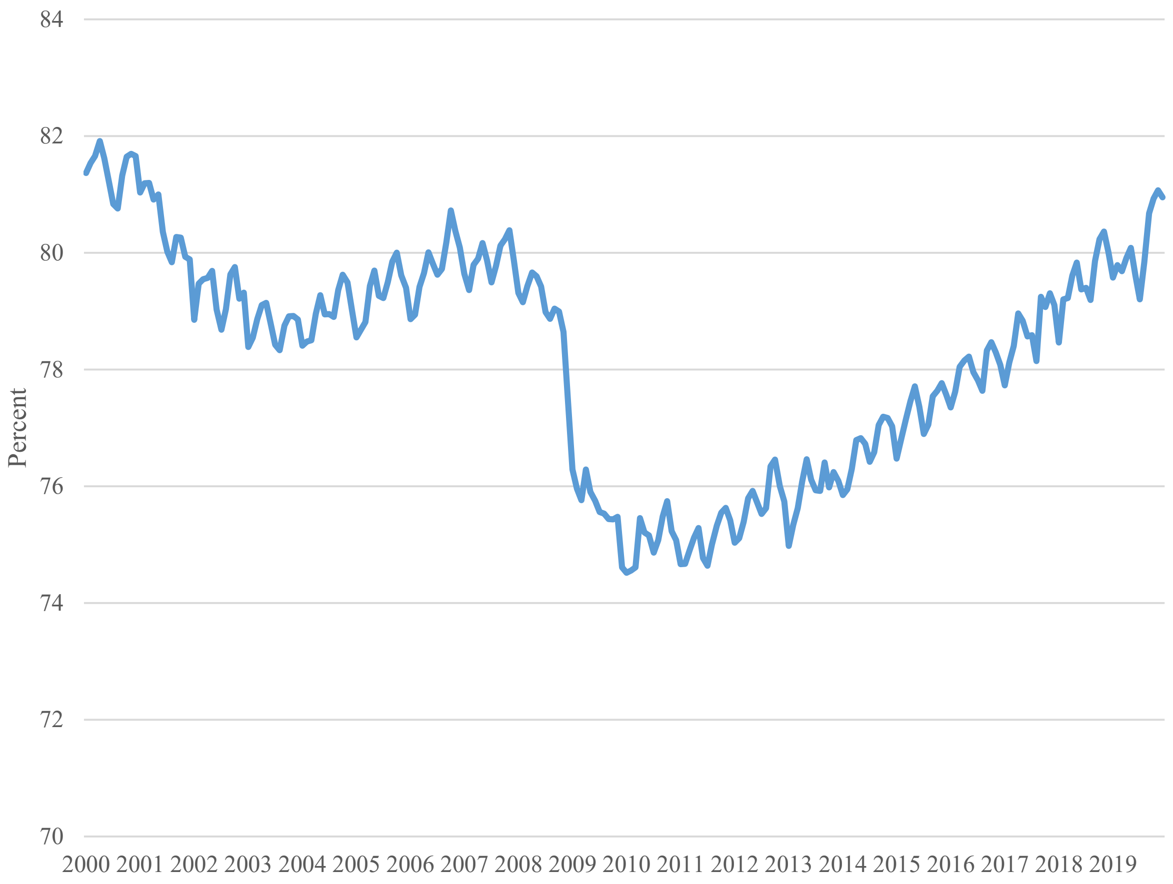
Too rapid a turn to austerity



- From Sheiner and Ng (2019)
- Pivot away from support was much larger than fundamentals would have predicted

Eventual Recovery

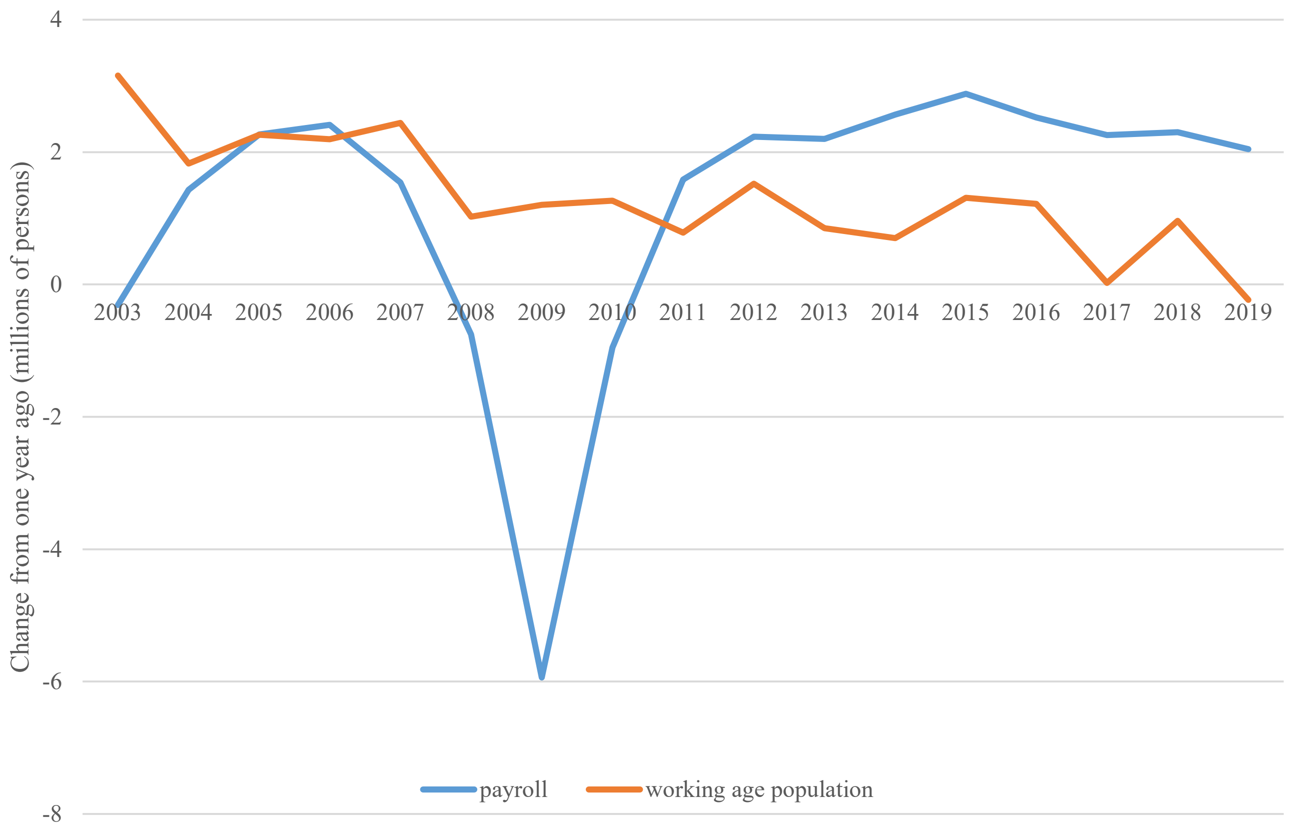
Figure 4: Prime-Age Labor Force Participation Rate



- This picture shows many key features:
    - 1. recovery from prior recession arguably incomplete
    - 2. initial shock much worse
    - 3. years of massive slack
    - 4. but eventually, labor market looked much tighter
- Note that by 2014, we are finally within 2 points of CBO LR UR rate. And finally, LFPR starts to move more.

Continual job gains > population

Figure 5: Monthly Job Growth and Working Age Population Growth



- On the one hand: good. We kept adding jobs for years
- On the other hand: proof how much slack there was for a long time

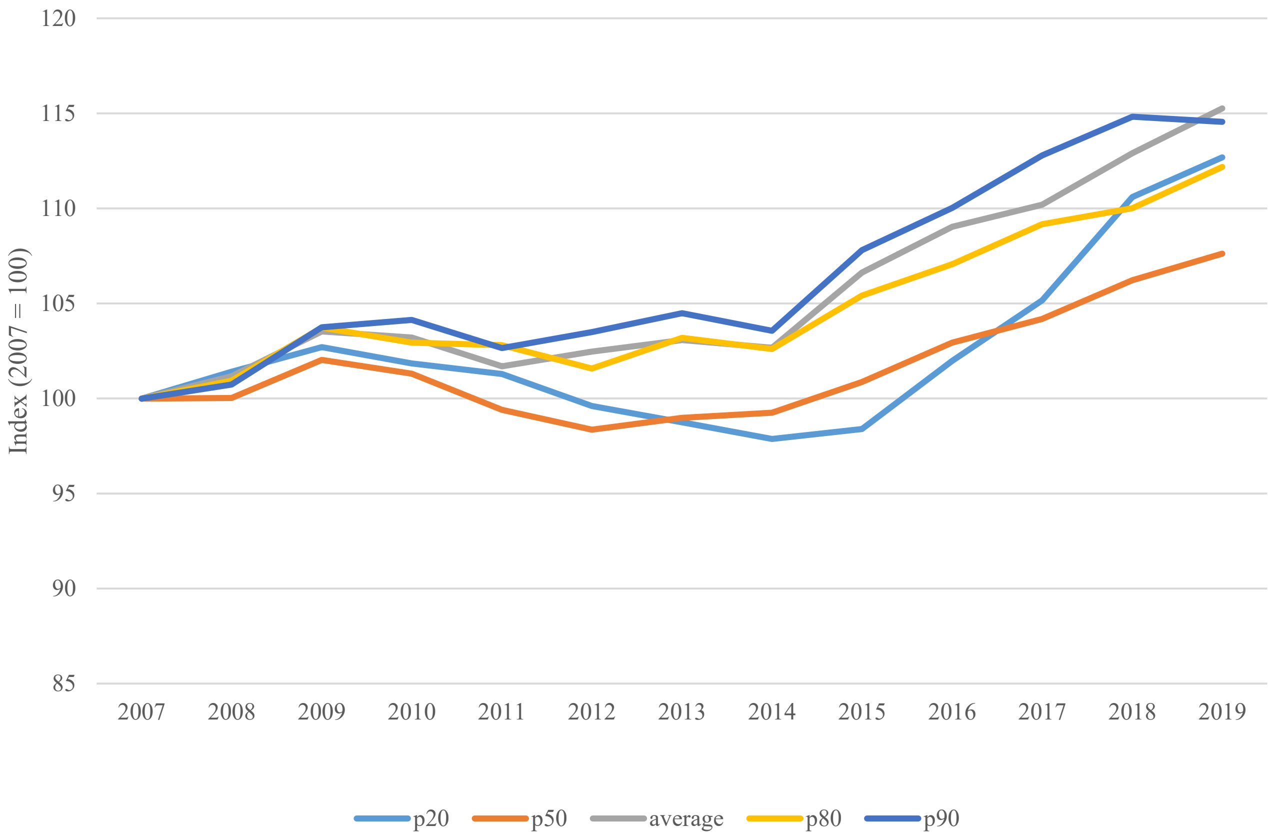
Wages and Prices

Figure 6: Annual Growth in Average Wages for Nonsupervisory Workers & PCE Inflation

- Eventually real wage gains
  - At first more due to low price growth
  - Eventually, higher wages too. But not until UR within shouting distance of LR UR rate. (after 2017)
- BUT: note no price pressure ever:
  - always below target inflation (orange line <2)
  - Nominal wage growth never hits recent peak levels

Evolving Recovery in a nutshell

Figure 7: Growth in Real Hourly Wages at Various Percentiles



- Early on, terrible outcomes for low income workers
- Eventually, gains
    - Many factors: Slack important
    - Likely also minimum wage laws affecting very bottom.

The surprisingly good (relative) wage outcomes

Table 2: Macroeconomic Indicators for Recent Business Cycles				
Recession	1981-82	1991	2001	2007-2009
Length of following expansion (months)	**108**	**128**	**81**	**147**
Cumulative real wage gains (all workers)	**5.0%**	**17.7%**	**5.2%**	**15.3%**
Average annual real wage gains (all workers)	**0.5%**	**1.6%**	**0.8%**	**1.2%**
Average labor productivity growth	**1.7%**	**2.1%**	**2.8%**	**1.3%**
Average median real wage growth	**0.2%**	**1.3%**	**0.6%**	**0.6%**
Average 20th percentile real wage growth	**-0.2%**	**1.7%**	**0.0%**	**1.0%**
Nominal annual average wage growth	**4.3%**	**3.7%**	**3.2%**	**2.8%**
Inflation rate (PCEPI)	**3.8%**	**2.0%**	**2.3%**	**1.5%**

Notes: This table measures changes in wages and prices over full business cycles (i.e., recessions and the expansions that followed them). Wage data for different parts of the wage distribution come from the Economic Policy Institute's State of Working America Data Library. The original data are from the Bureau of Labor Statistics. We reflate the EPI data using the CPI-U-RS, and deflate it using the PCE. Productivity data uses quarterly data over the span of the business cycle. Authors' calculations.

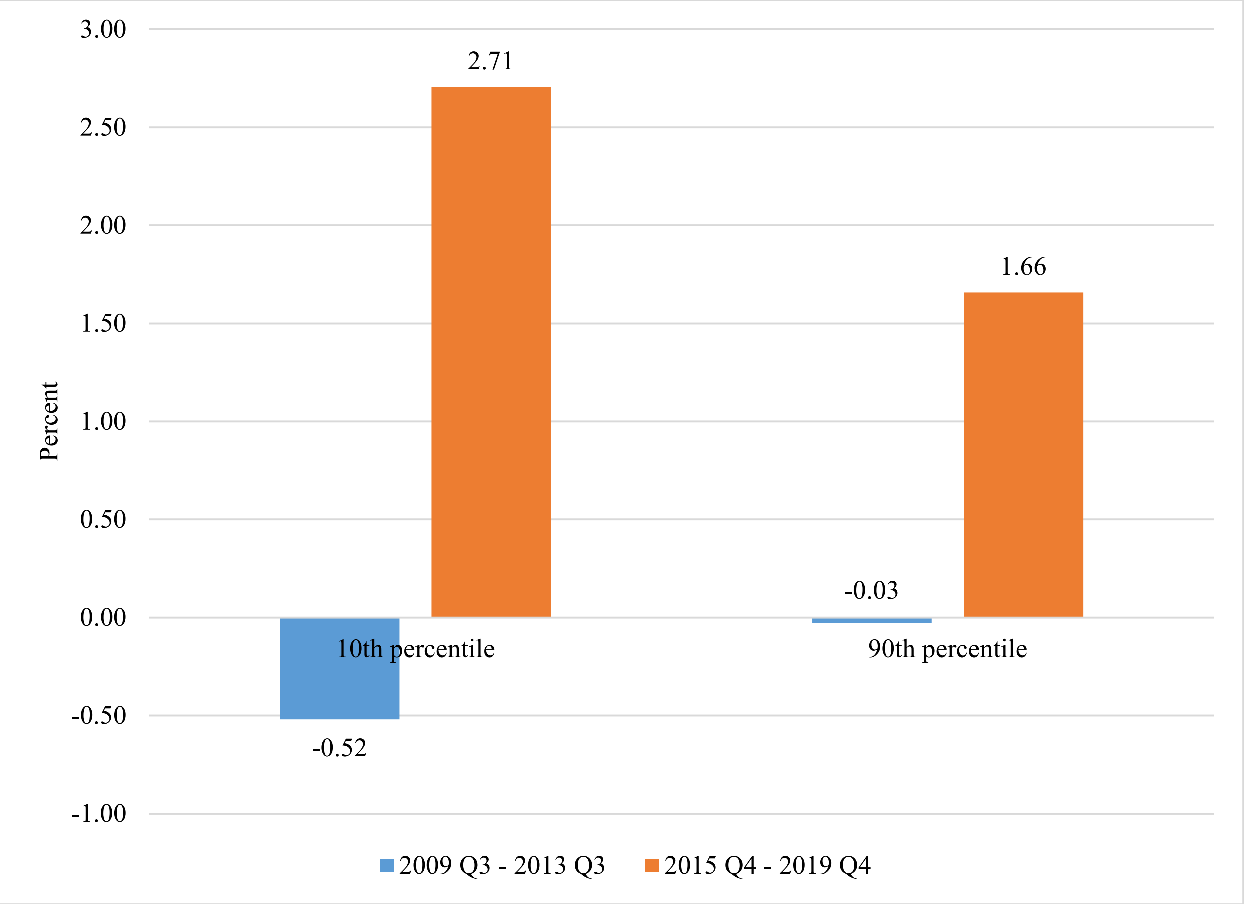
- Due to length of recovery, cumulative gains were sizable
- Even average gains weren't bad.
- Gains at the bottom were better than 80s or 00s.
- Not a claim these were great outcomes at the bottom (especially given prior outcomes at the bottom)

Late expansion wage growth crucial to often marginalized groups

- Real wages for the median Black worker grew 8 percentage points more from 2015 to 2019 than they did from 2007 to 2015.
- For Hispanic workers, growth was 9 points higher.
- For white workers, it was just 2 points higher.
  - The gap was because the median white worker was seeing gains throughout the recovery and they increased, but not as much, in the later stage.
- Still sizable wage gaps by race, employment / unemployment inequality.
- Core point is the importance of the late era of the expansion to spread gains

Another look at changing fortunes

Figure 8: Annual Growth Rate of Real Weekly Earnings



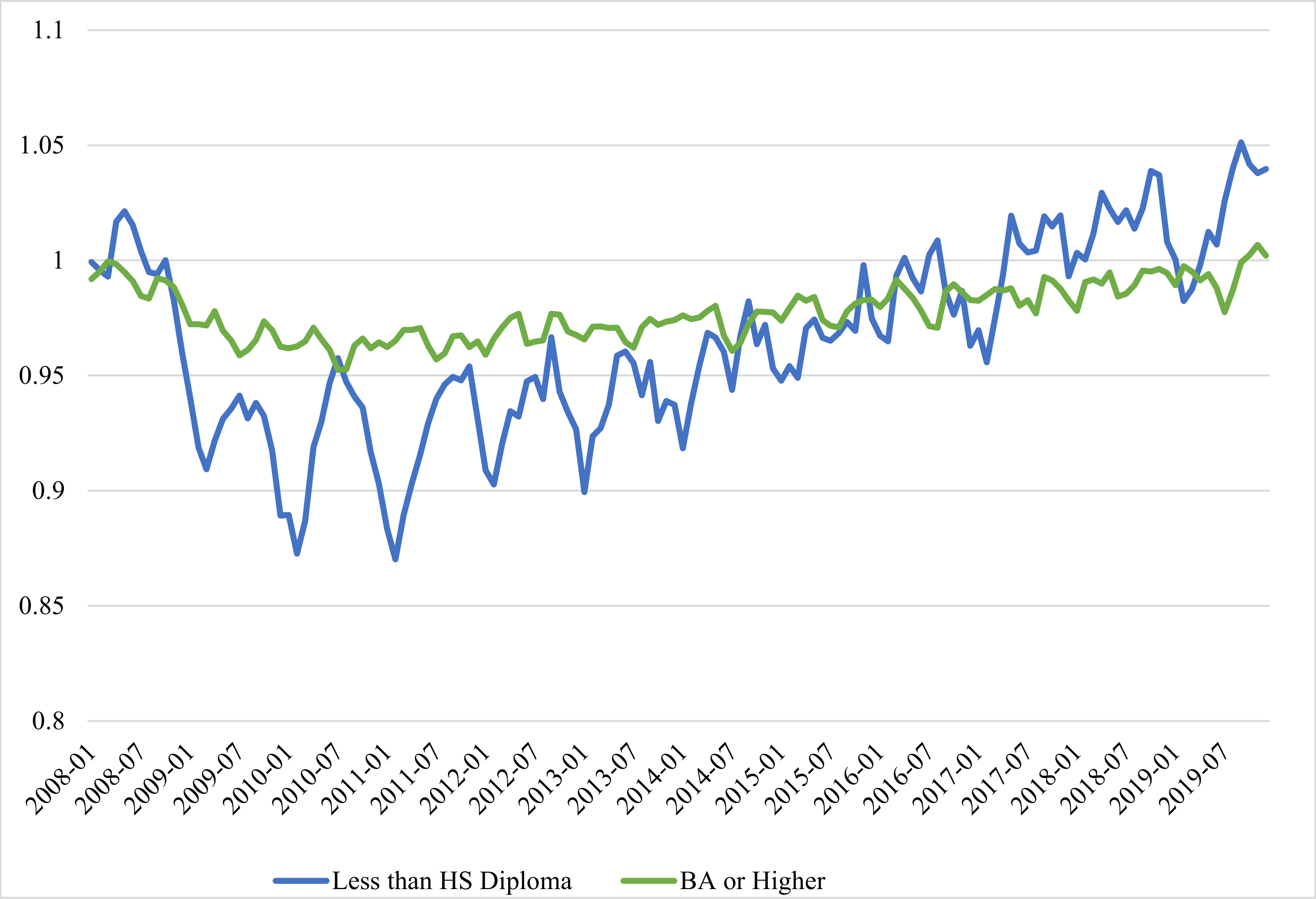
- For weekly earnings, early in the expansion low wage workers lost ground, late in recovery, they gained even more than those at the top.
- For the business cycle as a whole, weekly earnings grew at an annual rate of 1.4 percent for those in the 90th percentile, 0.9 percent at the median, and 1.3 percent at the 10th percentile.

Productivity

- Productivity growth (output per hour) was notably lower in this recovery.
- Many potential causes:
  - Declining R&D spending
  - Running out of good ideas
  - Concentration
  - Declining dynamism
  - Shifting industry mix
  - Regulatory shifts
- Puts limits on wage and living standard growth

Marginalized workers hurt more, eventually gain

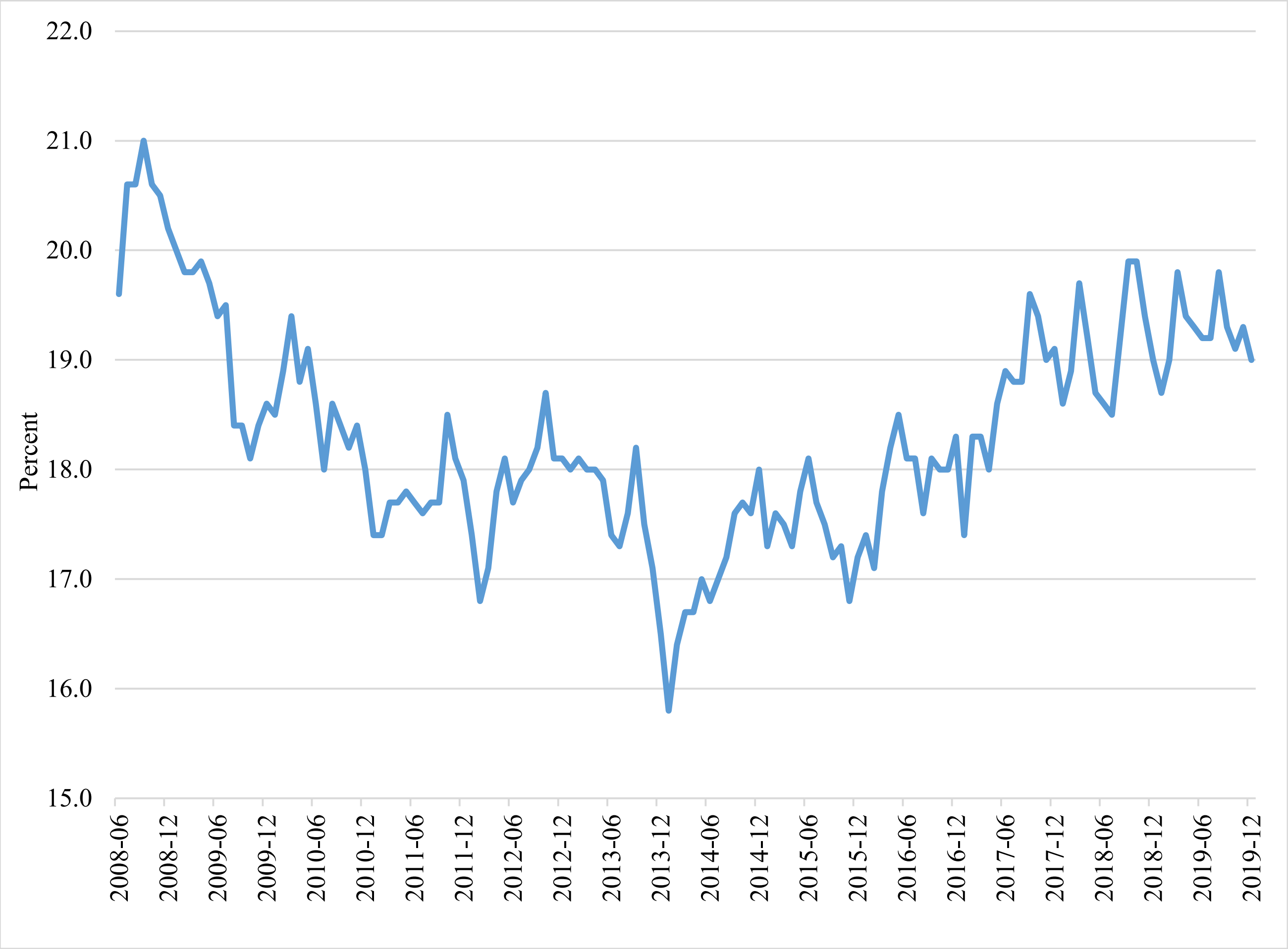
Figure 9: Prime-Age Employment Relative to Its Long-Term Average



- Again, more vulnerable groups hit harder in the crisis and did not recover for a long time, but eventually saw real gains.

Marginalized workers return to labor force

Figure 10: Employment Rate for People with Disabilities



- Problems that look structural, often do respond to aggregate demand.
- Eventually, employment rates for people with disabilities began to climb.

Summary

- This recession was worse than other recent recessions.
- The recovery was too slow, but long enough, that it eventually provided real gains.
- Once slack had sufficiently closed, there were nontrivial wage gains spread across the distribution, and gains in participation that stretched to oft-marginalized groups.
  - Many problems that drew attention early in recovery (structural unemployment, lack of wage growth) changed once economy ran hot enough.
- Clear lesson that pushing to close slack fast has value and that not cutting an expansion short before gains are shared is essential.