

Measuring Recovery: Why the Prime-Age EPOP Ratio Tells Us to Not Raise Interest Rates

By Nicholas Buffie*

Working people between the ages 25 to 54 are typically referred to as “prime-age” workers, meaning that most are old enough to be done with school but are too young to be retired. This is the period in people’s lives when they are most likely to be employed. By examining the employment-to-population (EPOP) ratio for prime-age Americans, we can eliminate the problems posed by the Bureau of Labor Statistics’ (BLS) definition of “unemployment” and the changing age distribution of the population.

The prime-age EPOP ratio stood at 79.7 percent in December of 2007 (when the recession began). In both December of 2009 and November of 2010, the prime-age EPOP ratio hit lows of 74.8 percent, yet these lows appear to be anomalies. In both instances, the prime-age EPOP ratio recovered slightly before falling again. The last significant trough came in September and October of 2011, when the prime-age EPOP ratio fell to 74.9 percent.

Since 2011, the prime-age EPOP ratio has risen steadily; it hit a high of 77.3 percent in February of 2015 before falling back to 77.2 percent in March. If we take the aforementioned trough of 74.9 percent, we can determine that the labor market has made up 48 percent—2.3 percentage points out of 4.8 percentage points—of the employment lost during the recession. In other words, we are less than halfway recovered. (See **Figure 1**.)



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FIGURE 1

Prime-Age EPOP Ratio



Source: Bureau of Labor Statistics and author's calculations

Prime-Age EPOP Ratios by Sex

The BLS publishes seasonally adjusted prime-age EPOP ratios for both men and women. The data indicate that while men experienced a greater drop in employment during the recession, they have also recovered a greater percentage of their lost employment. This means that, as of March 2015, men and women had seen nearly equivalent net employment losses since December 2007 (See **Table 1**).

TABLE 1

Prime-Age EPOP Ratios by Sex (Seasonally Adjusted)

	December 2007 EPOP (percent)	Month of trough	EPOP at trough (percent)	Percentage Points Lost	March 2015 EPOP (percent)	Percent Recovered	Percentage Points from Recovery
All Groups	79.7%	Oct. 2011	74.9%	4.8	77.2%	47.9%	2.5
Men	87.2%	Dec. 2009	80.4%	6.8	84.7%	63.2%	2.5
Women	72.4%	Sept. 2011	68.7%	3.7	70.0%	35.1%	2.4

Source and notes: Bureau of Labor Statistics and author’s calculations. The trough experienced by the total prime-age population was actually a two-month trough from September to October of 2011.

Men and women have about equal amounts to gain from recovery. If we were to restore employment to its December 2007 levels for both men and women, prime-age men would see their EPOP ratio increase by 2.5 percentage points, while prime-age women would see their EPOP ratio increase by 2.4 percentage points.

This can be seen in **Figures 2 and 3**.

FIGURE 2

Prime-Age EPOP Ratio, Men



Source: Bureau of Labor Statistics and author’s calculations

FIGURE 3

Prime-Age EPOP Ratio, Women



Source: Bureau of Labor Statistics and author's calculations

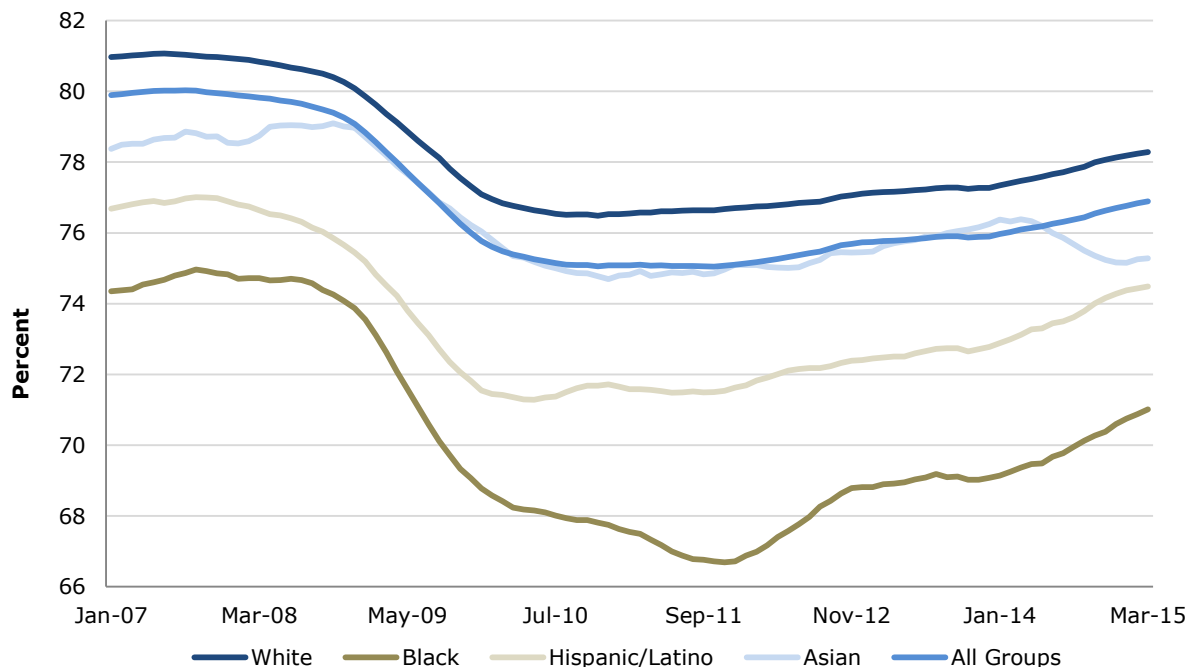
Prime-Age EPOP Ratios by Race

We see far more variation when we look at prime-age EPOP ratios by race (**Figure 4**). There are at least three notable points. First, prime-age black Americans experienced by far the greatest loss in employment: their EPOP ratio fell 8.1 percentage points between December 2007 and November 2011.¹ Second, Asian Americans are experiencing the weakest recovery: prime-age Asian American employment has increased just 0.6 percentage points since hitting a trough in December 2010. Third and finally, when examining both the initial loss in employment and the subsequent recovery, it's clear that black Americans have suffered the most as a result of the recession.

1 The BLS's data by race are not seasonally adjusted, which means part of the variation in these data reflect regular seasonal patterns rather than actual changes in the economy. This has been partially corrected for in this paper by taking averages over the most recent 12 months. However, in periods during which the labor market is improving—as has been the case over the past year—this will somewhat understate the strength of the labor market for the month shown, since the 12-month average includes the weaker months that preceded it.

FIGURE 4

Prime-Age EPOP Ratios by Race/Ethnicity, 12-month Moving Averages



Source: Bureau of Labor Statistics and author's calculations

The degree of recovery has been strongest amongst Latino Americans (57.0 percent recovered) and weakest amongst Asian Americans (15.3 percent recovered); however, while black Americans have experienced a slightly above-average recovery, their total loss of employment during the recession was so great as to negate the importance of this recovery. Even Asian Americans, who have seen only a slight recovery, are just 3.3 percentage points below their December 2007 prime-age EPOP ratio; by contrast, employment amongst prime-age black Americans is down 4.3 percentage points. Black Americans therefore have the most to gain from recovery (See **Table 2**).

TABLE 2

Prime-Age EPOP Ratios by Race/Ethnicity (12-month Moving Average)

	December 2007 EPOP (percent)	Month of trough	EPOP at trough (percent)	Percentage Points Lost	March 2015 EPOP (percent)	Percent Recovered	Percentage Points from Recovery
All Groups	79.9%	Oct. 2011	75.0%	4.88	76.9%	37.9%	3.0
White	80.9%	Nov. 2010	76.5%	4.46	78.3%	40.4%	2.7
Black	74.8%	Nov. 2011	66.7%	8.14	71.0%	46.8%	4.3
Latino	76.9%	May 2010	71.3%	5.61	74.5%	57.0%	2.4
Asian	78.5%	Dec. 2010	74.7%	3.85	75.3%	15.3%	3.3

Source: Bureau of Labor Statistics and author's calculations.

Another notable point—though not a point related to the recession or the overall weakness of the labor market—is the degree of racial inequality in employment. Even when employment for white Americans hit a trough in November of 2010, the white prime-age EPOP ratio was 76.5 percent. By contrast, in December 2007—before the recession hit—the prime-age EPOP ratio for black Americans was 74.8 percent. This means that black Americans were experiencing white Americans’ equivalent of a severe recession long before 2007.

Prime-Age EPOP Ratios by Advanced Demographics

Table 3 shows how various demographic groups, broken out by sex and race, have seen their prime-age EPOP ratios shift throughout the recession.²

TABLE 3

Prime-Age EPOP Ratios by Race/Ethnicity and Sex (12-month Moving Average)

	December 2007 EPOP (percent)	Month of trough	EPOP at trough (percent)	Percentage Points Lost	March 2015 EPOP (percent)	Percent Recovered	Percentage Points from Recovery
All Groups	79.9%	Oct. 2011	75.0%	4.9	76.9%	37.9%	3.0
White Men	88.9%	Aug. 2011	82.7%	6.2	85.7%	49.0%	3.2
White Women	72.9%	Aug. 2012	69.8%	3.1	70.9%	35.5%	2.0
Black Men	77.9%	Oct. 2011	67.7%	10.2	73.2%	53.6%	4.8
Black Women	72.3%	Dec. 2011	65.7%	6.6	69.2%	53.1%	3.1
Latino Men	88.8%	May 2010	81.1%	7.7	86.2%	67.1%	2.5
Latino Women	63.6%	Sept. 2011	59.9%	3.6	62.2%	63.2%	1.3
Asian Men	89.0%	Dec. 2010	83.3%	5.6	86.2%	50.5%	2.8
Asian Women	69.2%	Oct. 2011	65.7%	3.5	65.7%	0.6%	3.5

Source and notes: Bureau of Labor Statistics and author’s calculations. The trough experienced by white men was actually a two-month trough from July to August 2011.

White men, black women, Latino men, Asian men, and Asian women all have prime-age EPOP ratios that are 2.5 to 3.5 percentage points below their 2007 levels. However, not all groups have seen their prime-age EPOP ratios decline in the same manner. Most notably, Asian women have recovered just 0.6 percent of the employment lost between December 2007 and October 2011; the reason their prime-age EPOP ratio is only 3.5 percentage points below its pre-recession level is that they only lost about 3.5 percentage points of employment before the economy began recovering. However, the recovery itself doesn’t appear to have reached Asian women.

² Because data for Asian men and Asian women was only available beginning in 2010, I created an inferred measure going back to 2007. This inferred measure was created by assuming that the relationships between the overall prime-age Asian EPOP ratio and the prime-age EPOP ratios for both Asian men and Asian women were constant before 2010. Given that these relationships have remained completely constant since 2010, this is quite a safe assumption.

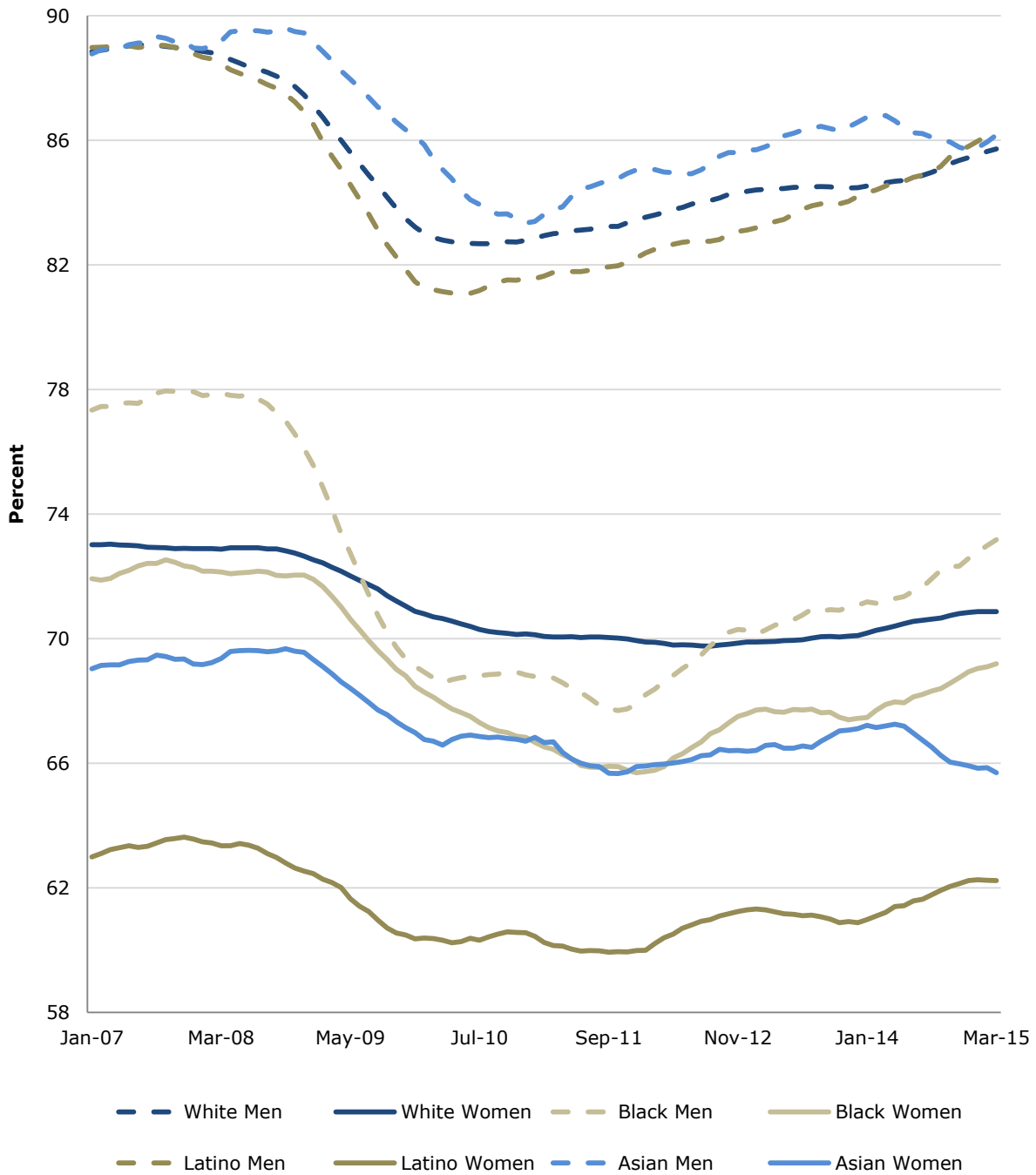
Another notable point is how various groups have deviated from the average. White women and Latino women are far closer to their pre-recession employment levels than other groups. Both groups saw far less significant declines in employment than the more general population: even though employment fell 4.9 percentage points for the entire prime-age population, it fell just 3.1 percentage points for white women and only 3.6 percentage points for Latino women. This is true for the female population more generally: women in every racial group experienced less significant declines in employment than men in the same group, and the overall drop in employment amongst men was nearly twice as great as the decline amongst women. Since hitting their respective troughs, the prime-age EPOP ratio for white women has recovered more slowly than average, while the prime-age EPOP ratio for Latino women has recovered significantly faster than average.

Finally, it's clear that black men have suffered the most as a result of the downturn. The prime-age EPOP ratio for black men fell 10.2 percentage points between December 2007 and October 2011, and while the rate of recovery has been a bit above-average, prime-age black male employment is still down 4.8 percentage points from its 2007 level. At this point in time, black men still have the most ground to make up in order to return to pre-recession levels of employment.

Figure 5 shows how different groups have seen their prime-age EPOP ratios decline and then recover over the past few years. Various tables documenting changes to these groups' prime-age EPOP ratios can be seen in the Appendix.

FIGURE 5

Prime-Age EPOP Ratios by Race/Ethnicity and Sex, 12-month Moving Averages



Source: Bureau of Labor Statistics and author's calculations

Implications for the Federal Reserve

The conclusion for the Federal Reserve should be obvious: don't raise interest rates. The labor market is still quite far from true recovery.

More specifically, by examining changes to the prime-age EPOP ratio since 2007, this paper has concluded that the labor market has only recovered about half the employment that was lost during the recession and its aftermath. Black Americans experienced the greatest loss in employment, with the prime-age EPOP ratio for black Americans falling over 8 percentage points between 2007 and November 2011. Between April 2014 and March 2015, employment amongst prime-age black Americans was over 4 percentage points lower than in 2007. The problem is even more severe for black men: prime-age black men saw their employment rate fall over 10 percentage points between 2007 and October 2011. Between April 2014 and March 2015, the prime-age EPOP ratio for black men was 4.8 percentage points below its 2007 level. This suggests that black Americans generally, and black men more specifically, have the most to gain from true recovery. They will also therefore have the most to lose if the recovery is halted.

Appendix

TABLE 4

December 2007 Prime-Age EPOP Ratio by Race/Ethnicity (12-month Moving Average)

(percent)

	Men	Women	Total	
White		88.9	72.9	80.9
Black		77.9	72.3	74.8
Hispanic/Latino		88.8	63.6	76.9
Asian		89.0	69.2	78.5
Total		87.5	72.5	79.9

Source: Bureau of Labor Statistics

TABLE 5

Prime-Age EPOP Ratio at Trough by Race/Ethnicity (12-month Moving Average)

(percent)

	Men	Women	Total	
White		82.7	69.8	76.5
Black		67.7	65.7	66.7
Hispanic/Latino		81.0	59.9	71.3
Asian		83.3	65.7	74.7
Total		80.9	68.9	75.0

Source: Bureau of Labor Statistics

TABLE 6

March 2015 Prime-Age EPOP Ratio by Race/Ethnicity (12-month Moving Average)

(percent)

	Men	Women	Total	
White		85.7	70.9	78.3
Black		73.2	69.2	71.0
Hispanic/Latino		86.2	62.2	74.5
Asian		86.2	65.7	75.3
Total		84.0	70.1	76.9

Source: Bureau of Labor Statistics

TABLE 7**Percentage Points Lost of Prime-Age Employment by Race/Ethnicity (Based on 12-month Moving Averages)**

(percentage points)

	Men	Women	Total	
White		6.2	3.1	4.5
Black		10.2	6.6	8.1
Hispanic/Latino		7.7	3.6	5.6
Asian		5.6	3.5	3.9
Total		6.6	3.6	4.9

Source: Bureau of Labor Statistics

TABLE 8**Percentage Points Recovered by Race/Ethnicity (Based on 12-month Moving Averages)**

(percentage points)

	Men	Women	Total	
White		3.1	1.1	1.8
Black		5.5	3.5	4.3
Hispanic/Latino		5.2	2.3	3.2
Asian		2.8	0.02	0.6
Total		3.1	1.1	1.9

Source: Bureau of Labor Statistics

TABLE 9**Percent Recovered by Race/Ethnicity (Based on 12-month Moving Averages)**

(percent)

	Men	Women	Total	
White		49.0	35.5	40.4
Black		53.6	53.1	53.2
Hispanic/Latino		67.1	63.2	57.0
Asian		50.5	0.6	15.3
Total		46.1	31.5	37.9

Source: Bureau of Labor Statistics

TABLE 10**Percentage Points Short of Recovery (Based on 12-month Moving Averages)**

(percentage points)

	Men	Women	Total	
White		3.1	2.0	2.7
Black		4.8	3.1	3.8
Hispanic/Latino		2.5	1.3	2.4
Asian		2.8	3.5	3.3
Total		3.6	2.4	3.0

Source: Bureau of Labor Statistics