GENDER EQUALITY IN THE U.S. LABOR MARKETS IN THE "GREAT RECESSION" OF 2007-2010

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Abstract

The "Great Recession" of 2007-2009, the worst economic downturn faced by the U.S. economy since the Great Depression, has also come to be known as the "Great Man-cession" in that job loss hit males harder than females. By contrast, this paper argues that the "man-cession" story is far too simple. Using a broad range of indicators from the Current Population Survey (CPS) and taking a historical perspective, we show that several demographic groups have been especially hard hit by the recession, including African American males and females, Hispanic males and females, young females, and families maintained by single women. In addition, the gender gap in unemployment is much smaller once underemployed and marginally attached workers are counted. Data from the Current Employment Statistics cast further doubt on the man-cession story, indicating that women lost over 10 times more jobs in the current recession than in the previous two recessions compared to men, who lost 2.3 times more jobs. Following this review of the trends, the paper surveys federal and state government responses to the needs of workers hardest hit by the recession and concludes that "man-cession" label has led to misidentification of the most vulnerable groups who should be the explicit beneficiaries of economic recovery policies.

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I. Introduction

Both in the academic literature and the popular press, the 2007-2010 recession¹ has come to be known as the Great "Man-cession" (Perry 2010, Thompson 2009, Wall 2009). Analysts have used two pieces of evidence to support this claim: first, that job loss hit males harder than females in 2007-2009 in all racial and demographic groups; and second, that the female-male 'unemployment gap' is larger in this recession than in previous recessions. For instance, Sahin, Son and Hobijn (2010) argue that men's and women's unemployment rates were roughly the same when the recession started—5.1 percent for males versus 4.9 percent for females—but by the third quarter of 2009, they had risen to 11 percent for men and 8.3 percent for women. In testimony before the House Ways and Means Committee Subcommittee on Income Security and Family Support, Mark Perry (2010) argues that this 2.7 percentage point gap was larger than the maximum gender unemployment rate gaps during the previous three recessions. Looking over the long-term, this finding is even more striking because, before the 1980s, the unemployment rate for women tended to be higher than that for men, both in normal times and recessions.

While this evidence is compelling, is it enough to suggest the characterization of the 2007-2009 recession as a "man-cession"? This paper argues that the picture is considerably more complicated. Using a variety number of labor market indicators-- including full- and part-time status, marginally attached workers, alternative measurements of unemployment and employment--and disaggregating the labor force by race, income, marital status, age, and education, we argue that hardest hit groups include less educated and younger male and female workers, African American and Hispanic males and females, and single mothers. As will be seen below, this heterogeneity in unemployment is a key structural feature of most recessions. Economic crises have always had different effects on males and females as a whole and in

different racial and ethnic groups.² Labeling the worst economic downturn faced by the U.S. economy since the Great Depression as a 'man-cession' leads to misidentification of the most vulnerable groups who should be the explicit beneficiaries of economic recovery policies. It also masks the fact that key gender gaps—in earnings, underemployment rates and other dimensions—continue to persist and merit policy attention and resources to redress.

The data for this paper come from two main sources. The first source is the Current Population Survey (CPS), a monthly survey of about 60,000 households that asks whether individuals in households are employed, unemployed or not in the labor force due to various reasons such as serving in the military or going to school. Our measures of employment status-including labor force participation rates, employment-to-population ratios, unemployment rates, underemployment rates and other dimensions of labor force status--come from the CPS. A second source of data is the Current Employment Statistics (CES) survey, a monthly survey of 140,000 non-farm businesses and government agencies, together representing approximately 410,000 individual worksites, which provides data on women and men on establishment payrolls. While the CES is a much larger sample than the CPS and it provides information on the number of jobs lost or gained on private sector payrolls in different industries each month, it contains no information on unemployment or employment for different demographic groups. The CES also excludes the self-employed, unpaid family workers, agricultural workers, private household workers and members of the military. These two surveys thus provide complementary information on weekly earnings and work hours.

The paper is organized as follows. The next section provides a brief historical overview of the labor market conditions of men and women in the post-war period followed by an examination of racial and demographic labor market indicators from the CPS and CES to

illustrate the comparative impact of the Great Recession on men and women. The fourth section analyzes the establishment survey data, particularly job creation and job destruction, and uses other indicators of employment from the CPS to explore the extent of underemployment among men and women. Finally, the fifth section examines whether federal and state government responses to the recession adequately address the needs of workers hardest hit in the current period and concludes with some implications for recession and recovery policies.

II. Trends in Employment of Men and Women in the Post-War Period

a. Men's and Women's Employment in the Post-War Period

It is useful to begin with a brief look at female and male employment and unemployment over the post-war period. The first trend to note is the moderately steep secular rise in the female labor force participation rate since the middle of the 20th century (from 32 percent in 1948 to nearly 60 percent in 2010) and the smaller, more gradual secular decline in the male rate over the same period (from 87 percent to 72 percent) (Figure 1). The labor force participation rate reflects the share of all women or men of a particular age range who are working or seeking work. Although the male rate is still well above the female rate, the two are slowly converging. While many explanations have been offered for this convergence between the male and female participation rates in the post-war period, it is believed that women's increased participation is primarily driven by higher educational attainment of females, changing social attitudes, changes in the industrial composition of the economy, increased wage rates and declining fertility rates (Francine, Ferber, & Winkler, 2008).



Source: Current Population Survey, U.S. Department of Labor, U.S. Bureau of Labor Statistics. Note: Shaded areas represent the NBER recession dates.

The second trend to note in this figure is what happens to labor force participation rates during recessionary periods. The female labor force participation rate increases or stays constant during all but the 2001-02 recession and even in the early stages of the current recession. The male labor force participation rate, by contrast, has declined in all recessions. In other words, generally more men dropped out or stopped joining the labor force during recessionary periods than women, a trend that conforms to the secular convergence in the labor force participation rates for men and women.

A third observation is illustrated in Figure 2 which depicts the secular trends in male and female monthly unemployment rates, defined as the number of unemployed as a percent of the active labor force (the sum of the employed and unemployed). A close look shows that female

monthly unemployment exceeded male monthly unemployment in the recessions that took place between 1948 to 1980, but this pattern reversed beginning after the 1980-82 recession. Women's unemployment rates also stayed higher than men's in the post-recession years from the 1960s through the early 1980s, but then closely tracked male rates in post-recession years from the mid-1980s to the present.



Source: Current Population Survey, U.S. Department of Labor, U.S. Bureau of Labor Statistics. Note: Shaded areas represent the NBER recession dates.

The gender jobless gap (the difference between the male and female unemployment rate) was largest in the 1960s and 1970s (in favor of men) and widened again in the Great Recession (in favor of women). The 2.7 percent gap between male and female jobless rates in 2009 was three times greater than the maximum 0.9 percentage point gap during the 2001 recession, and more than two times higher than the maximum 1.2 percentage point gap in 1982 and maximum

1.1 percentage point gap in 1990-1991 (Perry 2010). During the recessions in the 1970s, the gender jobless rate gap was reversed; female unemployment rates exceeded male rates by more than 2 percentage points during the peak gaps.

Since the unemployment rate uses the labor force as its base and does not take into account people who enter or drop out of the labor force over time, the employment-to-population ratio (number of employed persons as a percent of the civilian population aged 16 and above) or "epop ratio" better reflects the changes in employment and unemployment across the entire population. Figure 3 shows the epop ratio for men and women. The figure reaffirms that the post-war period is marked by a secular fall in the epop ratio for men, from 84 percent in 1948 to 64 percent in 2010, and a steep increase for women, from 31 percent in 1948 to 58 percent up until the 2001 recession, then taking a mild downward trend to reach 53 percent in 2010.



Source: Current Population Survey, U.S. Department of Labor, U.S. Bureau of Labor Statistics. Note: Shaded areas represent the NBER recession dates.

During and after recessions, the two "epop" ratios behaved in a similar manner—first falling and then rising—although the magnitudes of the declines and the recoveries have been larger for men than for women. The gender gap has remained fairly constant since the early 1990s with the difference between monthly male and female epop ratios changing at most by 5 percent (varying between 10 and 15 percent). For example, between December 2007 and May 2010, the gender gap narrowed from 12.3 percent to 10.3 percent.

Historically, then, the following picture emerges. Men have experienced a secular decline in labor force participation and the employment-to-population ratio over the post-WW2 period, and rising unemployment, falling epop ratio and falling labor force participation in times of recession. Women, by contrast, have experienced a secular rise in labor force participation and the epop ratio, and rising unemployment, a falling or steady epop ratio and rising labor force participation in times of recessions. There also seems to have been a structural break in the 1980s, when male unemployment rates began to exceed female rates during recessions (with the exception of 2001-2002 when female unemployment rates were on par with male rates). Overall, the economic lives of men and women in the U.S. have become more similar over the post-war period. ³ However, it is important to note that the rates of convergence in main labor market indicators seem to have slowed down in the past 20 years, and there remain considerable gender gaps.

III. Labor Market Outcomes for Men and Women in the "Great Recession"

This section explores male and female employment and unemployment changes as well as a broader range of labor market outcomes and conditions in the current recession in greater demographic detail, including by race/ethnicity, age, education, marriage, and full- versus parttime status. Also, alternative measures of employment, unemployment and underemployment are

analyzed to unpack the impact of the recession on men and women. This detailed analysis reveals that the crisis has hit certain demographic groups harder than others, both within and across genders, with burdens falling especially on African American and Hispanic males and females, and on single mothers. The overall analysis suggests that labeling the greatest economic downturn faced by the U.S. economy since the Great Depression as a "man-cession" misidentifies the most vulnerable groups.

a. Labor force participation rates

Changes in men's and women's labor force participation rates in the 2007-2009 recession are consistent with the two longer-term trends discussed above (see Figure 4). After the start of the Great Recession in late 2007, men's labor force participation rate slid appreciably, while the rate for women held up well into the recession and only started to decline in 2009. This is consistent with anecdotal evidence of women making extra efforts to find or remain in paid employment to avoid income interruptions for their households.



b. Unemployment rates

As shown in Figure 5, the Great Recession caused unemployment rates to rise for workers of all genders, races and ethnicities. As tends to be true at other times, during the Great Recession, unemployment rates were highest for African-Americans, next highest for Hispanics, followed by whites and Asians. For African-American men, the rate rose from about 10 percent when the recession began to about 20 percent in early 2010, but the rate for white men rose from about 5 to 10 percent. However, cutting the data in this way masks an equally important trend. Looking across genders shows that unemployment rates have been higher throughout the period for black and Hispanic women compared to white and Asian men. Thus, comparing all men to all women obscures the fact that some groups of women have experienced significantly higher rates of unemployment than some groups of men.





Figure 6 also reinforces the point that gender gaps in unemployment by race and ethnicity were not uniform. Among African Americans, the gap between men and women was sizable and persistent after the recession intensified in fall 2008, averaging almost 5 percentage points from then through January 2010. For whites and Asians, the gender gap in unemployment averaged just over 1 percentage points over this period. For Hispanics, male and female unemployment rates tracked each other closely until mid-2009, both averaging about 10 percentage points, when the rate leveled off for women but continued to rise for men. In addition, in nine of the thirty months between December 2007 and May 2010, Hispanic female unemployment exceeded Hispanic male unemployment. Again, this does *not* paint a uniform picture of men doing worse than women across socio-demographic groups.



Figure 7 shows unemployment rates for men and women by age and education. While the gender gap in unemployment was relatively modest for people aged 25 years and older, it was much larger among those aged 16-24 whose lower levels of skill and experience tend to make their unemployment rates relatively high. But again, disaggregating by gender shows that the unemployment rate for women 16-24 has been considerably higher than that of men ages 25 and over. The youngest female workers, ages 16-19, did much worse (average of 18.6 percent) than all but the youngest male workers (average of 25.2 percent), while males and females aged 25 or above had very similar unemployment rates (see Appendix Figure 2). Gender-based differences



across the two youngest age groups, 16-19 and 20-24, were as small as 1.2 percentage points (in August 2008) and as large as 8.9 percent for 16-19 year olds and 11.6 percent for 20-24 year olds (in January 2010). By contrast, unemployment rates for those 55 and older averaged only 6 percent, and gender-based differences were small with a mean difference of one percent or less.

Disaggregating by education reveals that less educated workers suffered higher unemployment rates compared to other groups regardless of gender (see Appendix Figure 3); men and women without a high school degree had the highest unemployment rate over the recessionary period (averaging 12 percentage points). Unemployment rates for men across all educational levels, except those with associate degrees, have seen two moderate dips in early 2008 and in the middle of 2009. The unemployment rate for college educated women, on the other hand, has continued to increase since the third quarter of 2008, but women with some high school education or diploma experienced a small recovery in early 2010.

The unemployment rates of women and men with college educations show little difference during the recession, both remaining at relatively modest levels between 2-4 percentage points, while the gap between women and men who did not complete high school was for the most part fairly small. In contrast, the gap has been more notable for men and women with high school degrees but no college education, widening to almost 4 percentage points in later 2009. Still, the rate for men with high school degrees always remained below the rates of both men and women without high school degrees.

Another notable finding emerges with respect to marital status, specifically differences between married men and women living with their spouses versus women maintaining families on their own. As shown in Figure 8, the unemployment rate for women maintaining families on their own moved from about 7 percent at the outset of the recession to a high of 13 percent at the end of 2009. For married men living with their spouse, the rate rose from 2.7 to 7.5 percent over this period, which is indeed a larger increase than was experienced by married women living with their spouse (for whom the rate rose from 3.1 to 6.3 percent) (also see Appendix Figure 4). But this should not divert attention from the much higher rates for young single women ages 16-

24, who had the highest unemployment rates among single women at 15.5 percent compared to 7.1 percent for single women aged 55 and older in April 2010, and single mothers, whose unemployment rates averaged 10 percent and peaked at 13 percent, and who often have no other income earners to rely on in times of crisis and few other adults to help with unpaid care-giving.



State-level evidence confirms that women maintaining families on their own have been particularly vulnerable due to declining labor-market conditions during the downturn. For example, the California Budget Project (Anderson 2010) estimated that unmarried women with children were nearly twice as likely as their married counterparts (both men and women) to be unemployed in California in 2009; moreover, their average weekly hours of work declined more than at any point in the last 20 years, diminishing their total earnings. Additionally, married women in California increasingly became the sole breadwinners for their families as their husbands lost their jobs; the number of married-couple families with children relying solely on the earnings of wives increased by 77.7 percent between 2006 and 2009 (Anderson 2010).

Finally, full-time male and female workers had higher unemployment rates than part-time male and female workers since the third quarter of 2008 (Appendix Figure 5).⁴ Monthly unemployment rates for full-time men and full-time women workers both increased steadily; the unemployment rate for part-time men has remained above the rate for part-time women and has been slightly more volatile, fluctuating within a two percent interval over the course of the crisis.

Between December 2007 and November 2009, the number of unemployed full-time male workers looking for full-time jobs increased by 142 percent from 3.6 million to 8.5 million, while the number of unemployed full-time women workers looking for full-time jobs increased by 111 percent from 2.7 million to 5.4 million. The trends flipped in May, 2010, when the number of unemployed full-time men workers fell to 7.8 million, while the number of full-time women remained above 5 million (see Appendix Table 1 for more detailed, seasonally unadjusted data on employed and unemployed full-time and part-time workers by sex and labor market status).

c. Unemployment duration

Figure 9 reveals that average durations of employment rose sharply for both men and women during the Great Recession. A key difference from previous recessions is that average durations for men and women have tracked each other closely in the most recent downturn. Traditionally, average durations of unemployment were longer for men than they were for women, although the difference between the two has steadily narrowed since the 1980s. In the years before the 2007-10 recession, average durations of unemployment fluctuated around 15-17 weeks for both men and women; as the economy contracted, average durations of unemployment

doubled to around 35 weeks for both. In April 2010, the average duration reached a historic peak for the entire workforce, reaching 36.8 for men and 34.3 weeks for women. This underlines that, conditional on becoming unemployed, the difficulty of exiting from unemployment did not appear to be any different for women than it was for men.



Figure 10 shows trends in unemployment durations by gender across race and ethnic groups. Among males, African Americans and Asians experienced the longest average durations of unemployment, which continued to rise in 2010 to more than 42 and 38 weeks, respectively. The average duration of unemployment for white and Hispanic men spiked at 35 weeks in the second quarter of 2010. The average duration of unemployment among females is similar, and highest among African Americans and Asians. The duration of African-American male unemployment has been more volatile than African American female unemployment, ranging between 17.8 and 42.4 weeks, while the opposite is true for Asians, with Asian women's average duration ranging between 14.2 to 41.2 weeks. The duration of Asian female unemployment



spiked between February 2010 and May 2010, rising from 24.3 weeks to 41.2 weeks, and surpassed that of African American females, which like whites and Hispanics began to decline in

April-May 2010. Overall, women's duration of unemployment, regardless of ethnicity, was on average greater than all but African-American and Asian men.

There are relatively small gender differences in the average duration of unemployment by age and marital status (figures not shown). For men, there appears to be an inverse relationship between the average duration of unemployment and age: men older than 45 have considerably longer average unemployment (25-51 weeks) than younger men; however, changes over the course of this crisis have been similar for all age groups and shown a clear upward trend since December 2007. On the other hand, women over 25 have had long but relatively volatile unemployment durations, ranging between 10 to 43 weeks. The average time spent unemployed more than doubled for men and women across all marital statuses. Even though these genderbased differences are not great, the story is still more nuanced than one would get from simple male-female comparisons.

d. Discouraged, marginally attached and involuntary part-time workers

Standard unemployment rates are computed for workers who are employed or unemployed, both of which are counted by the BLS definition as active labor force participants. But there also are workers who are willing and able to work and who have looked for a job in the recent past but who stopped looking for one reason or another, and so are classified as being out of the labor force. The BLS counts people as 'discouraged workers' if they looked for a job within the previous year but stopped looking at least one month before the time of the survey due to discouragement over job prospects; people who cite other reasons for having stopped looking are referred to as 'other marginally attached workers'. In addition, the BLS categorizes workers who work less than their preferred number of hours due to economic reasons as 'involuntary part-time workers' or for non-economic reasons as 'voluntary part-time workers'. Taken

together, workers in these categories are thought to represent underutilized labor, as they might well be willing and able to work more under stronger labor-market conditions. In particular, economic downturns would be expected to boost the ranks of discouraged and involuntary parttime workers, as labor-market conditions are what cause people to wind up in these categories. Working part-time can be especially disadvantageous given evidence of lower returns on future earnings than full-time work experience and because part-time workers do not receive key benefits such as health insurance, vacation or sick leave and pension coverage (Sum, Khatiwada, and Palma, 2009; Tienda et al 2010).

As shown in Table 1, both men and women have flowed into these "underemployment" categories since the recession began. The number of marginally attached male workers increased by 56 percent from December 2007 to May 2010, reaching 422,000, with over 96 percent (406,000) discouraged by reduced economic opportunities. The number of marginally attached female workers during the same period was even greater, 457,000, with only 68 percent discouraged by job prospects; the remaining 32 percent became marginally attached due to "non-economic" reasons, such as more family responsibilities, going to school, ill health and discrimination in the labor market (see Appendix Figure 6).⁵

But again, cutting the data in a different way tells a slightly more nuanced story. The number of involuntarily part-time employed women, who accepted working a fewer number of hours because of the economic downturn, increased at a much higher rate than men, reaching 3.3 million in May 2010. And, whereas voluntary part-time employment for men increased during the recession by 24 percent (probably because the large pool of unemployed men started taking part-time jobs), voluntary part-time employment among women, which has been historically higher than part-time male employment (mainly because of unpaid labor work), fell in this

			Change	Percent change
			(Dec 2007-	(Dec 2007-May
	Dec 2007	May 2010	May 2010)	2010)
Men				
Unemployed	4,201,000	8,252,000	4,051,000	96
Marginally attached ⁽¹⁾	755,000	1,177,000	422,000	56
Discouraged workers ⁽²⁾	238,000	644,000	406,000	171
Other marginally				
attached ⁽³⁾	516,000	533,000	17,000	3
Involuntary part-time ⁽⁴⁾	1,299,000	4,436,000	3,137,000	241
Voluntary part-time ⁽⁵⁾	7,017,000	8,703,000	1,686,000	24
Women				
Unemployed	3,170,000	6,117,000	2,947,000	93
Marginally attached	589,000	1,046,000	457,000	78
Discouraged workers	125,000	438,000	313,000	250
Other marginally				
attached	464,000	608,000	144,000	31
Involuntary part-time	627,000	3,956,000	3,329,000	531
Voluntary part-time	16,348,000	15,681,000	-667,000	-4

Table 1. Change in labor force attachment and underemployment by sex (not seasonally adjusted)

Source: Authors' calculations from the Current Population Survey. Notes: (1) Marginally attached workers include persons who want a job, have searched for work during the prior 12 months, and were available to take a job during the reference week, but had not looked for work in the past 4 weeks. (2) Discouraged workers include those who did not actively look for work in the prior 4 weeks for reasons such as thinks no work available, could not find work, lacks schooling or training, employer thinks too young or old, and other types of discrimination. (3) Other marginally attached workers include those who did not actively look for work in the prior 4 weeks for such reasons as school or family responsibilities, ill health, and transportation problems, as well as a number for whom reason for nonparticipation was not determined. (4) Involuntary part-time employees include those who worked 1 to 34 hours during the reference week for an economic reason such as slack work or unfavorable business conditions, inability to find full-time work, or seasonal declines in demand. (5) Voluntary part-time refers to persons who usually work part time for noneconomic reasons such as childcare problems, family or personal obligations, school or training, retirement or Social Security limits on earnings, and other reasons. This excludes persons who usually work full time but worked only 1 to 34 hours during the reference week for reasons, holidays, illness, and bad weather.

recession by 4 percent (see Appendix Table 1 for more detail on the labor market status of

employed and unemployed male and female workers).

While male unemployment has increased faster than female unemployment, this is not

the case for underemployment. Overall, the number of underemployed workers has more than

doubled since 2007, both among males and females. In fact, adding the number of involuntarily

underemployed and marginally attached workers to the number of unemployed workers reduces

the difference between the number of male and female workers who are unemployed and underemployed to one million (7.6 million men versus 6.6 million women).

Table 2 shows the underutilization rate for men and women workers using alternative measurements for the unemployed, underemployed and the total labor force. The most comprehensive measure of labor force underutilization, U-6, which includes unemployed, marginally attached and involuntarily part-time employed workers, has increased by 88 percent for women, five percentage points higher than the increase for men (83 percent). The second most comprehensive measure, U-5, defined as U-6 minus involuntary part-time workers, and the third most comprehensive measure, U-4, which includes unemployed and discouraged workers, increased by 89 percent for both men and women. Similarly, U-1, which measures the percentage of long-term unemployed workers (those unemployed for 15 weeks or more) in the civilian labor force, has increased dramatically for both men and women, although male workers comprised a larger fraction of the total labor force in May 2010.

				Percent change		
	Dec 2007		May 2010		(Dec 2007-May 2010)	
	Men	Women	Men	Women	Men	Women
U-1	1.6	1.5	6.7	5.1	306.2	243.0
U-2	3.2	2.0	6.8	4.5	114.2	129.2
U-3 (official unemployment rate)	5.1	4.4	10.1	8.5	96.8	92.1
U-4	5.4	4.6	10.8	9.1	99.8	97.2
U-5	6.0	5.2	11.3	9.8	89.6	88.6
U-6	9.2	8.1	16.8	15.3	83.1	87.9

 Table 2. Alternative Measures of Labor Utilization by Sex (not seasonally adjusted)

Source: Current Population Survey. Notes: (1) U-1 Persons unemployed 15 weeks or longer as a percent of the civilian labor force. (2) U-2 Job losers and persons who completed temporary jobs as a percent of the civilian labor force. (3) U-3 Total unemployed as a percent of the civilian labor force (official unemployment rate). (4) U-4 Total unemployed plus discouraged workers as a percent of the civilian labor force plus discouraged workers. (5) U-5 Total unemployed plus discouraged workers, plus all other persons marginally attached to the labor force, as a percent of the civilian labor force plus all persons marginally attached to the labor force. (6) U-6 Total unemployed plus all persons marginally attached to the labor force, as a percent of the civilian labor force plus all persons marginally attached to the labor force.

More tellingly, comparing changes in U-6 (the broadest rate) to changes in U-3 (the official unemployment rate) shows that the magnitude of male unemployment relative to female unemployment may not be as large as the mainstream story suggests. The male U-6 rate increased 7.6 percentage points from December 2007 to May 2010 compared to a 5 percentage point increase in the official male unemployment rate.⁶ Over the same period, the female U-6 rate increased by 7.2 percentage points, compared to a 4.1 percentage point increase in the official female unemployment rate. In other words, the increase in male unemployment is not as large when labor underutilization is measured broadly (7.6–7.2=0.4 percentage points) as it is according to the official unemployment rate (5.0–4.1=0.9 percentage points). Thus, taking a broader view of how declining labor market conditions have affected male and female opportunities to work casts further doubt on the "man-cession" story.

IV. Explanations for Changes in Employment and Unemployment

Several hypotheses have been put forward to explain the differential gender impacts of recessions. First, women workers tend to be concentrated in industries and occupations that are relatively insulated from cyclical variations in output and employment, which is thought to protect them relative to men in economic downswings (the "industry/occupational segmentation" hypothesis). Second, women bear the brunt of cyclical variations in employment, being shed disproportionately in downswings and recruited intensively in upswings (the "reserve labor force" hypothesis). Third, as cheaper labor, women replace male labor in economic downturns (the "substitution" hypothesis).

The first hypothesis is the most popular explanation for the patterns of male job loss in both current and past recessions. For instance, Perry (2010) has argued that men are overrepresented in the industries that have been most adversely affected by the current recession,

especially construction and manufacturing, while women are overrepresented in the sectors that were least affected, namely, education, healthcare and government. Goodman et al. (1993) explore gender differences in employment changes during the 1990-91 recession and conclude they result from men's concentration in cyclically-sensitive industries and occupations. Similarly, Williams (1985) argued that the effects of the downtown in the early 1980s were due to the recession's impact on the goods-producing sector in which the male proportion of employment was relatively high.

Examining first the industry segmentation hypothesis, Table 3 shows data on payroll employment by gender in both goods-producing and service-providing industries, taken from the BLS's Current Employment Statistics. Consistent with Perry's argument, sectors in which men constitute a relatively large share of total payroll employment (especially manufacturing and construction) experienced relatively large declines in employment in the two years after the recession started. In contrast, employment in health and education, in which men constitute a relatively small share of payrolls, actually grew a bit over the period. Yet this analysis neglects two other important dynamics to which attention should be paid.

rable 3. Change in payron employment (seasonarry adjusted)					
	Men's share of	Percentage change in employ		mployment	
	employment in	(Dec 2007-May 2010)		2010)	
	Dec 2007	Overall	Men	Women	
Total nonfarm	51.2	-5.3	-7.1	-3.5	
Goods-producing sectors	77.2	-18.1	-18.4	-17.2	
Construction	87.5	-25.2	-25.7	-21.3	
Manufacturing	71.1	-15.0	-14.4	-16.7	
Service-producing sectors	46.3	-2.9	-3.5	-2.4	
Health and education	22.7	5.1	5.1	5.1	
Government	43.0	2.7	4.2	1.6	

Table 3. Change in payroll employment (seasonally adjusted)

Source: Current Employment Statistics.

First, as shown in Figure 11, unlike in previous recessions, this different distribution of male men and women across industries did not insulate women from job loss in the 2007-2010 recession. Whereas in earlier recessions, women's payroll employment tended to hold steady (or even increased) when men's dropped, in the most recent recession women's employment also fell absolutely. According to the CES data, men lost 2.8 jobs for every job gained by women in the 1980-81 recession; this net gain was even larger in earlier recessions, at 3.5 jobs and 8.4 jobs in the 1973-75 and 1969-70 recessions, respectively. Women and men both began to lose jobs after the 1990-91 recession, but men lost 55 jobs for every job lost by a women. In 2000-2001, the ratio fell dramatically to 6 male jobs lost for every female job, and in the current recession, it fell to 2.2 jobs. In other words, women lost over 10 times more jobs in the current recession than in the previous two recessions combined (0.25 million versus 2.6 million jobs), while men lost only 2.3 times more jobs (see Appendix Table 2).⁷ Moreover, ever since male and female employment hit bottom in the current recession, men started to gain more jobs than women, a total of 0.7 million versus 0.4 million by May 2010 (1.86 jobs for every job gained by women). When seen in this way, the picture that emerges is one of greater vulnerability and job insecurity for men and women—women have been hit disproportionally, both compared to men as well as compared to their own performance in previous recessions, and women's job recovery rate has been slower than that of men.⁸

Second, within industries the extent of job loss or gain for women tended to be quite similar to that of men. Between December 2007 and May 2010, payroll employment in manufacturing dropped by 14.4 percent for men and 16.7 percent for women, while that in health and education rose by 5.1 percent both for men and women (Table 3 above). These numbers also

cast some doubt on both the "reserve labor force" and "substitution" hypotheses as general phenomena (also see Appendix Figure 7).



A brief look at the limited information available on workers in the lower parts of the income distribution provides additional insight on the relevance of the latter two hypotheses, at least for this segment of the labor market. As shown in Figure 12, between 2007 and 2009, the number of part-time workers paid at or below the federal minimum wage increased at similar rates for men and women—but the ranks of female workers paid at or below the minimum wage had become twice as large as ranks of male workers by 2009. As a result, the difference between the number of women in this category and the number of men rose from 451,000 workers in 2007 to 745,000 workers in 2009. The magnitude of this gender gap in part-time employment at or below minimum wage was 50 percent lower in the previous recessionary period, averaging about half a million in 2000 and 2001, and it was even lower and more or less constant during the 2002-2007 expansion.

Overall, this evidence indicates that the most insecure form of employment, part-time minimum wage jobs, tends to increase more for women than it does for men during recessionary periods, which does in fact provide limited support for the substitution and reserve labor force hypotheses. Nevertheless, it is important to bear in mind that the role of these two possible explanations on aggregate employment of men and women is difficult to assess because of the secular upward trend in female labor market participation in the post-war period (which may be moderating the impact of cyclical variations) and the growing similarity between the cyclical changes in the unemployment rates of male and female workers since the 1980s.



V. Impact of the American Recovery and Reinvestment Act on Males and Females

In this last section, we examine whether the response to the recession by federal and state governments addresses the needs of the groups of workers who have been hardest hit by the current recession—African-American and Hispanic males and females, young and less educated females and males, and single mothers. In response to the severity of the recession, the U.S. government passed a \$787 billion stimulus plan in 2009, the American Recovery and Reinvestment Act (ARRA), which consisted of individual tax cuts and similar payments; business tax incentives; state fiscal relief; aid to those most directly hurt by the recession through expanded access of the unemployed to programs such as Temporary Assistance for the Neediest Families (TANF), food stamps, Medicaid, and Unemployment Insurance; and direct government investment spending on infrastructure, health information technology, and research on renewable energy. Evaluations of the stimulus funds have generally been positive, concluding that unemployment would have been higher overall in the absence of government support. A recent report from the Congressional Budget Office (CBO 2010) estimated that in the first quarter of calendar year 2010, the ARRA's policies lowered the unemployment rate by between 0.7 percentage points and 1.5 percentage points, increased the number of people employed by between 1.2 million and 2.8 million, and increased the number of full-time-equivalent jobs by 1.8 million to 4.1 million—compared to what would have been observed in the absence of the package. Because of the short-term nature of the package, the CBO expects these effects to increase further during the second half of 2010, but then diminish in 2011 and fade away by the end of 2012.

In practice, it is difficult to evaluate the impacts of the package across men and women. States and agencies are not required to report sex-disaggregated information, although a handful of states are attempting to track spending by sex, such as Vermont, Massachusetts, and California.⁹ A few state-level studies have attempted to gauge the potential gendered employment impacts and impacts of the stimulus on family resources. Albelda et al. (2010) examined ARRA's impacts in Massachusetts and found that aspects of the Act benefit men much more than women: men benefit more than women from funds directed toward physical infrastructure improvements and 'green economy' funding, two sectors where women's employment is limited. Funds allocated to tax benefits, support to unemployed workers, and workforce development are likely to impact males and females roughly equally. One area that is likely to benefit women differentially is the sizable portion of spending to states to stave off cuts in "social" infrastructure, such as Medicaid and education.

While the ARRA may have saved jobs, the stimulus funds have not been enough to offset declining state revenues due to the recession, and states have consequently made a number of spending cuts in services, for instance, cuts in health care and K-12 education (30 states), and services to the elderly and disabled (25 states and DC) (Center for Budget and Policy Priorities 2009). These cuts will likely affect males and females differentially in terms of jobs, access to services, and time use.¹⁰ California represents a stark example of these gender effects. The state faced a massive state budget shortfall of \$59.5 billion for 2008-09 and 2009-10 as the recession deepened and state revenues plummeted. In response, state policymakers reached two budget agreements in 2009 that included more than \$30 billion in state spending reductions, including deep cuts to the California Work Opportunity and Responsibility to Kids (CalWORKs) Program, the Supplemental Security Income/State Supplementary Payment (SSI/SSP) Program, and the In-Home Supportive Services (IHSS) Program—three programs that together provide cash assistance and services to 2.8 million low-income Californians (Graves 2010). Women comprise roughly 60,000 (61.8 percent) of the adults enrolled in these programs, and the majority of caregivers to recipients of In-Home Supportive Services.¹¹ The Governor has proposed even deeper cuts to these programs in 2010-11. Analysts have pointed out that these reductions in public services, reductions of cash income, and loss of jobs are likely to affect women disproportionately (Graves 2010). But there is likely to be a fourth, less visible effect, which is an increase in women's unpaid work, both to stretch reduced household income to make ends meet and to provide care to those who formerly received public assistance. Unfortunately, time use survey data are not available to determine the extent of this latter effect, but analysis of the California budget suggests that current state policies will do little to mitigate these adverse effects.

VI. Conclusion

Throughout the paper we have argued that the characterization of the current recession as a man-cession is not correct. Digging deeper into the data reveals that African-American and Hispanic women had higher unemployment rates than white, Hispanic, and Asian males; that the youngest female workers fared worse than all but the youngest workers; that the unemployment rate for families maintained by single women was two times greater than the unemployment rate among married men and married women; and that women lost over 10 times more jobs in the current recession than in the previous two recessions, compared to men who lost about 2.3 times more jobs.

The descriptive evidence illustrates that simple female-male comparisons of unemployment yields partial results and potentially misleading policy conclusions. In that regard, the limited federal and state-level evidence suggests that post-crisis policies have so far addressed the needs of women sporadically and only in an indirect way, while the various dimensions of vulnerability for women and the specific needs of the hardest hit groups have not been addressed systematically in federal and state level policies. Clearly, future policy efforts must make better use of the growing evidence to develop job creation and income support policies that address the needs of the workers who have been hardest hit. There is also a need for future research on the effects of stimulus funds and state actions that are disaggregated by both sex and race. Such research would be an important counter to catchy but inaccurate sound bytes.

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Appendix

Appendix Table 1. Change in employed and unemployed full-time and part-time workers by sex (seasonally unadjusted)

				Change Dec	Percent change
		Dec-07	May-10	2007 and May	Dec 2007 and
				2010	May 2010
Total Employed Men		77,970,000	73,776,000	-4,194,000	-5
Full-time	e workers	69,654,000	64,239,000	-5,415,000	-8
	at work 35 hours or more	63,168,000	58,007,000	-5,161,000	-8
	at work for 1-34 hours for economic reasons	1,384,000	1,619,000	235,000	17
	at work for 1-34 hours for non-economic reasons	3,590,000	3,221,000	-369,000	-10
	not at work	1,512,000	1,392,000	-120,000	-8
Part-time	e workers	8,316,000	9,537,000	1,221,000	15
	at part-time work for economic reasons	1,408,000	3,205,000	1,797,000	128
	at part-time work for non- economic reasons	6,507,000	5,927,000	-580,000	-9
	not at work	402,000	404,000	2,000	0
Total Ur	nemployed Men	4,201,000	8,252,000	4,051,000	96
Looking	for full-time work	3,587,000	7,514,000	3,927,000	109
Looking for part-time work		614,000	738,000	124,000	20
Total En	nployed Women	68,364,000	65,721,000	-2,643,000	-4
Full-time	e workers	51,388,000	48,570,000	-2,818,000	-5
	at work 35 hours or more	45,581,000	43,223,000	-2,358,000	-5
	at work for 1-34 hours for economic reasons	655,000	705,000	50,000	8
	at work for 1-34 hours for non-economic reasons	3,910,000	3,379,000	-531,000	-14
	not at work	1,241,000	1,263,000	22,000	2
Part-time	e workers	16,975,000	17,151,000	176,000	1
	at part-time work for economic reasons	1,607,000	3,494,000	1,887,000	117
	at part-time work for non-	14 596 000	12 830 000	1 766 000	17
	economic reasons	14,570,000	12,050,000	-1,700,000	-12
	not at work	773,000	827,000	54,000	7
Total Ur	nemployed Women	3,170,000	6,117,000	2,947,000	93
Looking	for full-time work	2,458,000	5,081,000	2,623,000	107
Looking	for part-time work	712,000	1,036,000	324,000	46

Source: Authors' calculations based on Current Population Survey. Note: (1) Employed persons are classified as full-time or part-time workers based on their usual weekly hours at all jobs. (2) Part-time workers include some persons at work 35 hours or more classified by their reason for working part time. (3) Number of voluntarily and involuntarily unemployed workers vary from those cited in the main text because of seasonal adjustment.

Recession period	Employment (number of workers)		Change in employment over recession			
	Beginning of recession	End of recession	Net change	Percent change	Ratio of jobs lost by men to jobs lost by women	
1969-70						
men	46,079,000	45,135,000	-944,000 113,000	-2.0	-8.4	
1973-75	23,101,000	23,274,000	113,000	0.4		
men women	49,176,000 28,733,000	47,412,000 29,237,000	-1,764,000 504,000	-3.6 1.8	-3.5	
1980-82						
men	53,301,000	50,135,000	-3,166,000	-5.9	-2.8	
women	37,499,000	38,635,000	1,136,000	3.0		
1990-91						
men	58,068,000	56,850,000	-1,218,000	-2.1	55.4	
women	51,707,000	51,685,000	-22,000	0.0		
2000-01						
men	68,800,000	67,431,000	-1,369,000	-2.0	6.0	
women	63,700,000	63,470,000	-230,000	-0.4		
2007-09						
men	70,690,000	64,873,000	-5,817,000	-8.2	2.2	
women	67,261,000	64,666,000	-2,595,000	-3.9		
2009-10						
men	64,873,000	65,544,000	671,000	1.0	1.9	
women	64,666,000	65,026,000	360,000	0.6		

Appendix Table 2. Change in payroll employment in recessions since 1969 by sex (seasonally adjusted)

Source: Authors' calculations based on Current Establishment Survey. Note: (1) For the 2007-2010 recession, the ending month is taken to be the period in which employment for each sex troughed (October 2009 for men and December 2009 for women), since the NBER is yet to determine the end date of the Great Recession. (2) Negative numbers in the last column indicate that men lost jobs while women gained jobs. Positive numbers indicate that both men and women lost jobs.

















Notes

¹ According to the National Bureau of Economic Research (NBER), a recession is a significant decline in economic activity spread across the economy, lasting more than a few months, normally visible in real GDP, real income, employment, industrial production and wholesale-retail sales (Leamer, 2008). Although the NBER announced the recession officially ended in June 2007, GDP growth in 2010 was sluggish, unemployment remained at all-time high levels, and the popular press continued to refer to ongoing hard times. Our analysis, therefore, uses data from December 2007 through May 2010 and we refer to this entire period as the 2007-2010 recession.

² While a focus on paid work is clearly an important starting point, a broader feminist economic analysis of recessions goes beyond simply job loss to examine changes in time spent by males and females in unpaid work to provision families and compensate for the loss of jobs and earnings. Many studies of past recessions document that unpaid work intensifies during times of crisis and is often an invisible safety net (Thomas, Beegle, & Frankenberg, 2003). Unfortunately, time use data are not sufficiently disaggregated nor conducted over a long enough period of time to conduct a meaningful analysis of changes in male and female time use.

³ The most widely cited explanations for this growing similarity are the secular convergence and the nearly equal composition of the civilian workforce by men and women (see Appendix Figure 1c).

⁴ Part-time workers are those who work less than 35 hours per week.

⁵ Although the BLS describes these reasons as "non-economic," it could be that they are related to recessionary effects such as reduced income or job loss by other household members.

⁶ These numbers differ somewhat from those given earlier because the BLS does not make seasonal adjustments to the alternative measures of labor underutilization so seasonally unadjusted estimates are reported in the text.

⁷ Similarly, the CPS data shows that between the start of the recession and the trough period, men and women lost 7.6 million and 3.6 million full-time jobs, respectively. These figures were partially offset by the increase in part-time employment, by 1.4 million for men and 0.6 million for women, between December 2007 and May 2010.

⁸ We have also examined changes in the working hours of men and women using the CPS data. Our analysis showed that there has been a universal decline in the average number of hours spent by men and women at work during this recession. While men working in part-time and full-time occupations, on average, worked three to five hours more than women; changes over the recessionary period have been very similar for the two gender groups.

⁹ At the national level, public employment, which is an important aspect of the ARRA, shows different trends for men and women over the course of the current recession. After an initial decline until the second quarter of 2008, government employment for men increased steadily and then spiked upward by about 0.3 million workers between February and May 2010, likely when the stimulus funds kicked in. Public employment for women has been much more volatile, increasing by 0.2 million in the first six months of the recession, then falling by a little less than 0.2 million in the last three quarters of 2009, and finally growing by almost 0.3 million in early 2010 (see Appendix Figure 8).

¹⁰ To their credit, some states have protected key services that are important to women, such as child care (Alabama and Arizona).

¹¹ CalWORKs provides cash assistance for low income families with children, while helping parents find jobs and overcome barriers to employment. CalWORKs primarily reaches children, who make up more than three out of four recipients (77.9 percent). Women comprise more than three-quarters (77.7 percent) of all adult recipients, and an even larger share (92.5 percent) of single parents who receive cash assistance. The SSI/SSP Program provides cash assistance to help low income seniors and people with disabilities meet basic living expenses. More than half (57.3 percent) of SSI/SSP recipients are women. The IHSS Program helps low-income seniors and people with disabilities live in their own homes. Sixty three percent of recipients are women and girls, and women comprise nearly four out of five IHSS service providers (Graves 2010).