

**Economic Change and the Structure of Opportunity for Less-Skilled Workers**

Rebecca M. Blank  
Brookings Institution  
E-mail: [rblank@brookings.edu](mailto:rblank@brookings.edu)

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## **Abstract**

The primary source of support for most non-elderly adults comes from their employment and earnings. Hence, understanding the availability of jobs and the wages paid to less-educated workers is key to understanding changes in the well-being of low-income populations. Expansions and contractions in the macroeconomy influence unemployment rates, wages, and overall economic growth, all of which are important determinants of the economic circumstances facing low-income families.

This chapter focuses on the trends in labor market and macroeconomic circumstances that particularly affect less-educated and low wage workers. The first section looks at changes in work behavior among individuals by skill level; the second, at unemployment and job availability. The third section investigates trends in earnings and discusses the reasons behind substantial earnings shifts among less-educated men and women since 1980. The fourth section looks at the most disadvantaged families and investigates the relationship between macroeconomic and labor market factors and poverty rates. The final section discusses policy implications.

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This chapter focuses on the trends in labor market and macroeconomic circumstances that particularly affect less-educated and low wage workers. The first section looks at changes in work behavior among individuals by skill level; the second, at unemployment and job availability. The third section investigates trends in earnings and discusses the reasons behind substantial earnings shifts among less-educated men and women since 1980. The fourth section looks at the most disadvantaged families and investigates the relationship between macroeconomic and labor market factors and poverty rates. The final section discusses policy implications.

A primary finding is that low-income families are more reliant on jobs and earnings in the 2000s than they were in past decades. This is particularly true for less-skilled single mothers, who greatly increased their earnings following welfare reform in the mid-1990s. Maintaining a high employment economy, with stable or growing wages and jobs that are readily available to less-educated workers, continues to be the most important anti-poverty policy for this country.

### **I. WORK BEHAVIOR AMONG LESS-EDUCATED PERSONS**

The economy primarily affects individuals who are working or actively looking for work. Because trends in labor force participation since 1980 have differed between less-educated men and women, I discuss the factors influencing work behavior among men first.

A. Changes in Work among Less-Educated Men

Employment has declined markedly among less-educated men between 1979 and 2006, although more of this decline occurred between 1979 and 1995 than in the past decade. Figure 1a shows the trends over this time period in the share of men 18–65 who report themselves as either working or looking for work.<sup>1</sup> The solid line shows labor force participation among men who do not hold a high school degree. The dashed line shows labor force participation among men who hold only a high school degree, while the dotted line represents men who have at least some schooling beyond high school.

Men with more than a high school degree have always been highly likely to work, with about a 90 percent labor force participation rate throughout this time period. (The slight decline is due to growing years of school and earlier years of retirement within this group.) In contrast, men with only a high school degree or less have seen substantial declines in labor market involvement. The participation rate among non-elderly men without a high school degree falls from 79 to 73 percent between 1979 and 2006; among those with exactly a high school degree it falls from 92 to 83 percent. These declines are particularly steep among black men (data not shown).

Below, I discuss wage declines for these men, particularly over the 1980s. Juhn (1992) indicates that virtually all of the decline in less-skilled men's labor force participation over the 1980s can be explained by declining wages. More recent declines are less easily understood. While labor force participation has risen slightly among the least-educated, it continues to decline among those with just a high school education. This is true even though unemployment rates have remained relatively low throughout the 1990s and early 2000s. Holzer, Offner, and Sorensen (2005) indicate that increased incarceration (making men less employable upon release) and increased child support enforcement (making work less lucrative) explains some, but not all, of the decline in labor force participation among

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<sup>1</sup>The data in Figure 1 come from the Outgoing Rotation Groups (ORG) in the monthly Current Population Survey (CPS), a representative national sample of the population. The ORG includes data from one-fourth of the CPS in each month. The monthly samples are combined to produce annual averages.

young black men. There appears to have been a behavioral change in labor market involvement among less-skilled young men, especially black men, that was unrelated to measurable economic variables.

Even more disturbing, these data underestimate the declining labor market involvement of less-skilled men because they exclude men in the Armed Forces and in prisons and jail. Over the past two decades, incarceration rates have risen rapidly, especially among lower-skilled black men (Western, 2006). Thus, fewer less skilled men are now in the non-institutionalized population used to measure labor force participation statistics.

Table 1 indicates the magnitude of this effect for selected years between 1980 and 2006. The number of men in jails or prisons under state or Federal jurisdiction grew from around 420,500 in 1980 to just over 2 million in 2006, while the size of the Armed Forces shrank from 1.86 million to 1.17 million. The first two rows show the actual employment-to-population ratio for the non-institutionalized civilian population, and the estimated ratio if one includes the Armed Forces in both the population and the employment numbers and the men in jails and prisons in the population (but not in employment). The net effect is to increase the employment-to-population ratio in 1980, from 72.0 to 72.3 percent, as the addition of the (employed) Armed Forces more than dominates the addition of (not employed) prisoners. By 2006, the growing prison population has a larger effect than the shrinking Armed Forces population, and the net effect is to decrease the employment-to-population ratio from 70.1 percent to 69.1 percent. This adjustment suggests that declines in labor force participation would have been even larger if a growing number of men had not been incarcerated.

The last three columns in Table 1 present these same data by race for 2006. In this year, adding in the Armed Forces and the prison/jail populations would reduce the employment-to-population ratio by less than 0.4 percentage points for white men, by 3.4 points for black men, and by 1.9 points for Hispanic men. This reflects the much larger rate of incarceration among black and Hispanic men.

The bottom two rows of Table 1 compare the actual unemployment rate with a simulated rate that includes the Armed Forces in the employed population and the prison population in the labor force. In this simulation, I count all of the Armed Forces as employed. I assume that 80 percent of prisoners would

**Table 1**  
**The Effect of Including Armed Forces Members and Those in Prisons and Jails in Men's Labor Force Statistics**

	Based on all Men Ages 16 and Over						
	1980	1990	2000	2006	2006		
					White	Black	Hispanic
Employment-to-Population Ratio							
Actual	72.0	72.0	71.9	70.1	70.2	60.3	76.8
Including AF + Inmates <sup>a</sup>	72.3	71.8	71.0	69.1	69.8	56.9	74.9
Unemployment Rate							
Actual	6.9	5.7	3.9	4.6	3.9	9.6	4.8
Simulated <sup>b</sup>	6.8	5.7	4.2	5.0	4.1	10.6	5.3

<sup>a</sup>Adds Armed Forces members into both employment and population; adds those in prisons and jails into population but not employment.

<sup>b</sup>Unemployment rate estimated to include all Armed Forces personnel in the labor force. This simulation assumes that all those in prisons and jails were available to work and that 80 percent of inmates would be in the labor force if it were an option, but that the unemployment rate would be 25 percent among this population.

**Sources:** U.S. Department of Labor, Bureau of Labor Statistics, <http://www.bls.gov/home.htm>. U.S. Department of Labor, Bureau of Labor Statistics, Unpublished Tables from the Current Population Survey, Annual Averages 2006. Department of Defense, Defense Manpower Data Center, DRS#21811 as of September 30, for selected years. U.S. Department of Justice, Bureau of Justice Statistics, *Prisoners at Midyear 1995* and *Prison and Jail Inmates at Midyear 2000 and 2006* reports, <http://www.ojp.usdoj.gov/bjs/prisons.htm>. U.S. Department of Justice, Bureau of Justice Statistics, *Male prisoners under state or federal jurisdiction, 1977–2004* and *Jail inmates by sex, 1978–1993*, <http://www.ojp.usdoj.gov/bjs/dtdata.htm#corrections>.

be in the labor force if they had this option, and that their unemployment rate would be 25 percent. While high, this unemployment rate is not unreasonable for those who have been incarcerated. This simulation has almost no effect on the overall unemployment rate in 1980 or 1990. By 2006, however, the simulated unemployment rate is 5.0 percent compared to the actual 4.6 percent rate, more than 8 percent higher. The simulations for 2006 by race raise unemployment among black non-elderly men by a full percentage point, from 9.6 to 10.6 percent, among Hispanics by 0.5 points, and among whites by 0.2 points.

In short, if we adjust our labor force statistics to include the Armed Forces and to take into account the growing incarceration rates among men, our labor force statistics would look worse than they do. We would have seen even faster declines in labor force participation than were actually observed, as the share of men in prison has increased rapidly. This compositional effect has also lowered unemployment rates, by removing young men who are likely to have very high unemployment rates. Of course, it is worth noting that these high rates of incarceration also reduce future employment and earnings as well once these men are released (Western, 2006; Holzer, Raphael, and Stoll, 2007).

The share of the less-skilled labor force that is composed of immigrants rather than the native-born has also increased. Table 2, taken from Borjas (2006), shows the percent of men and women who are immigrants in three different education groups, using Census data from 1980, 1990, and 2000. Among those without a high school degree, the share of men who are immigrants increased from 11.1 to 41.2 percent between 1980 and 2000; among similar women, the immigrant share rose from 12.2 to 35.1 percent.<sup>2</sup> While the groups with more education also show substantial increases in immigrant share, the numbers are much lower. For both men and women with a high school degree or with higher levels of schooling, the immigrant share is around 10 percent in 2000. Most of these immigrants are Hispanic workers, with a much smaller share who are Asian, black or white. All else equal, rising immigration has helped to raise labor force participation over time. Of course, all else may not be equal. Labor force

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<sup>2</sup>It is widely believed that these data do not fully count undocumented immigrants, many of whom are working. If undocumented workers are more likely to be less-skilled, then the numbers in Table 2 undercount the effects of immigration in the low-skilled labor market.

**Table 2**  
**Immigrant Population Share by Skill Level and Year**

	1980	1990	2000
Men: % Immigrant			
Less than High School	11.1%	23.6%	41.2%
Exactly High School	3.9%	6.6%	11.0%
More than High School	6.2%	7.8%	10.6%
Women: % Immigrant			
Less than High School	12.2%	21.6%	35.1%
Exactly High School	4.5%	6.2%	9.8%
More than High School	5.9%	6.8%	9.0%

**Source:** Census data presented in Borjas (2006), Table 2.1

participation among natives may be reduced by immigration (see Raphael and Smolensky, this volume; Borjas, Freeman, Katz, 1997).

#### B. Changes in Work among Less-Educated Women

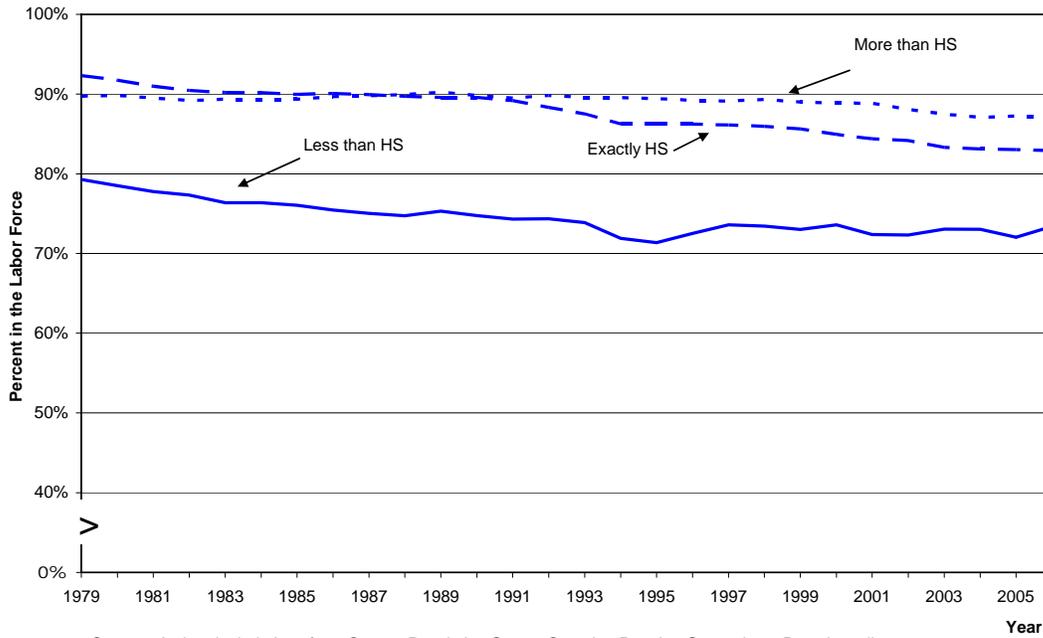
Figure 1b shows labor force participation changes among women between 1979 and 2006, differentiating between the same three education groups as in Figure 1a. The trends in work behavior in the formal labor market are quite different for women versus men. In general, all women have increased their labor force involvement since 1979, although the patterns of change differ across groups. Women with some post-high school training, the dotted line in Figure 1b, show steady increases in work, from 68.0 percent in 1979 to 78.8 percent in 1998, after which the rate falls slightly to 76.6 percent in 2006. High school graduates show a similar pattern, starting at 61.7 percent in 1979, peaking at 69.9 percent in 1998 and falling to 66.9 percent in 2006.

In contrast, women who are high school dropouts have labor force participation rates just over 44 percent from 1979 to 1994. Their rate increases to over 50 percent by 2000, then declines slightly to 47.8 percent by 2006. The increase in work among the least-educated women in the mid-1990s was related to the policy changes in welfare and in work subsidies that were enacted at that time. Cash welfare support became much less available and those on welfare were required to participate in welfare-to-work programs. A very large number of single mother families left welfare and increased their earnings. At the same time, expansions in the Earned Income Tax Credit made work more attractive. Research has linked work expansions among less-skilled women with both these EITC expansions and with the welfare reform changes (Blank, 2002; Grogger and Karoly, 2005; Cancian and Reed, this volume).

Increases in incarceration have had little net effect on women's overall labor force statistics. While the share of incarcerated women has grown substantially, the total number remains quite low.

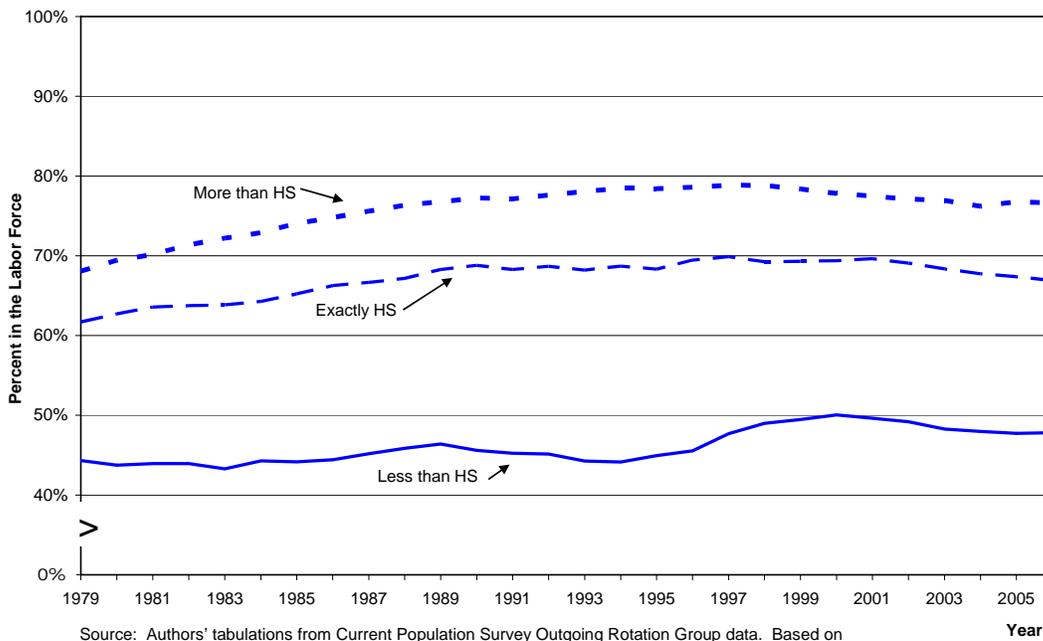
More concerning is the growing number of women who have left welfare but who have not found employment. Blank and Kovac (2008) document increases in the number of 'disconnected women,' single mothers who are neither working nor on welfare. A high share of these women face barriers to

Figure 1a  
**Male Labor Force Participation by Skill Level, 1979 to 2006**



Source: Authors' tabulations from Current Population Survey Outgoing Rotation Group data. Based on all noninstitutionalized civilian adults ages 18-65.

Figure 1b  
**Female Labor Force Participation by Skill Level, 1979 to 2006**



Source: Authors' tabulations from Current Population Survey Outgoing Rotation Group data. Based on all noninstitutionalized civilian adults ages 18-65.

employment, such as learning disabilities, mental and physical health problems, past histories of domestic violence or sexual abuse, or other issues that limit their ability to hold full-time steady employment. This population will require much more extensive interventions in order to move them to economic self-sufficiency (Blank, 2007).

Similar to less-skilled men, immigrants are a growing share of women without a high school degree, as Table 2 indicates. In 2006, 35.1 percent of these women were born outside the country. Immigrant shares remain lower among women than among men, in part because single men are more likely to immigrate. Immigrant women are also less likely to be in the labor force than are native-born women.

In sum, since 1979 men's labor force participation has fallen, but women's has risen. A primary reason for this is different wage trends among less-skilled men and women. We turn to this issue after a discussion of job availability.

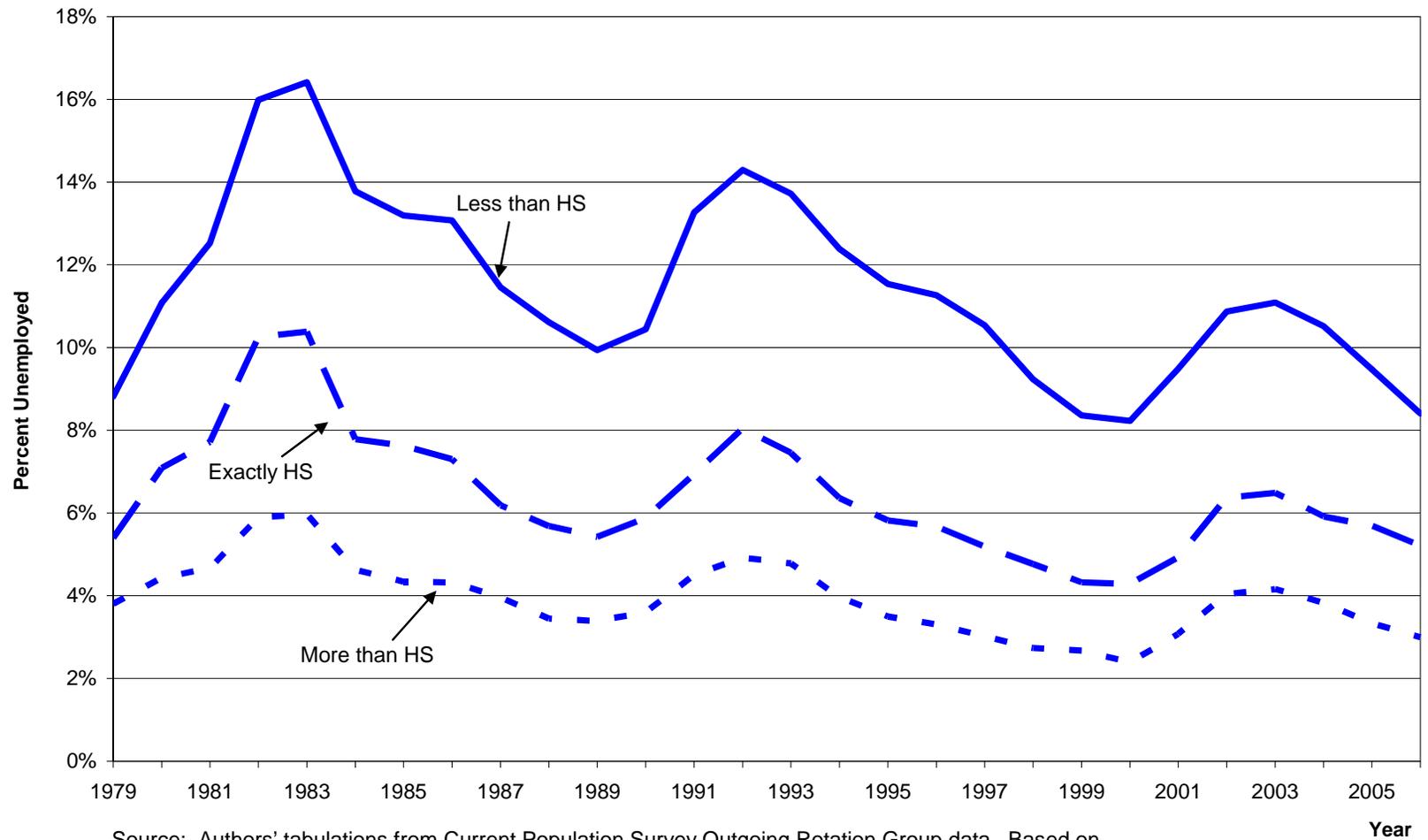
## II. JOB AVAILABILITY, UNEMPLOYMENT, AND THE BUSINESS CYCLE

Labor force participation measures the share of the population that is working or looking for work. If a high share of those in the labor force is without a job, but searching, this indicates lower well-being than when employment is high. Hence, the overall unemployment rate is an important indicator of economic well-being, particularly for lower-wage workers, who generally face higher unemployment rates than more-skilled workers.

### A Changes in Unemployment

Figure 2 plots unemployment rates by education level between 1979 and 2006 for the three groups shown in Figure 1. Data are not shown separately for men and women, in part because their unemployment rates move together very closely. Women's unemployment is slightly higher than men's in most years, particularly among high school dropouts.

Figure 2  
**Unemployment Rates by Skill Level, 1979 to 2006**



Unemployment rates have been relatively low since the mid-1990s, certainly in comparison to the early 1980s when unemployment rose steeply. Among those with less than a high school degree, unemployment was 16.4 percent in 1983. While these very high rates have not been repeated since the early 1980s, unemployment remains an ongoing issue for the least skilled workers, whose unemployment rates exceeded 8 percent in every year between 1979 and 2006, even during the booming years of the 1990s. Those with less than a high school degree have an unemployment rate of 8.4 percent in 2006, well above the 5.2 percent for high school graduates or the 3.0 percent for those with post-high school training.

## B Changes in Jobs and Job Availability

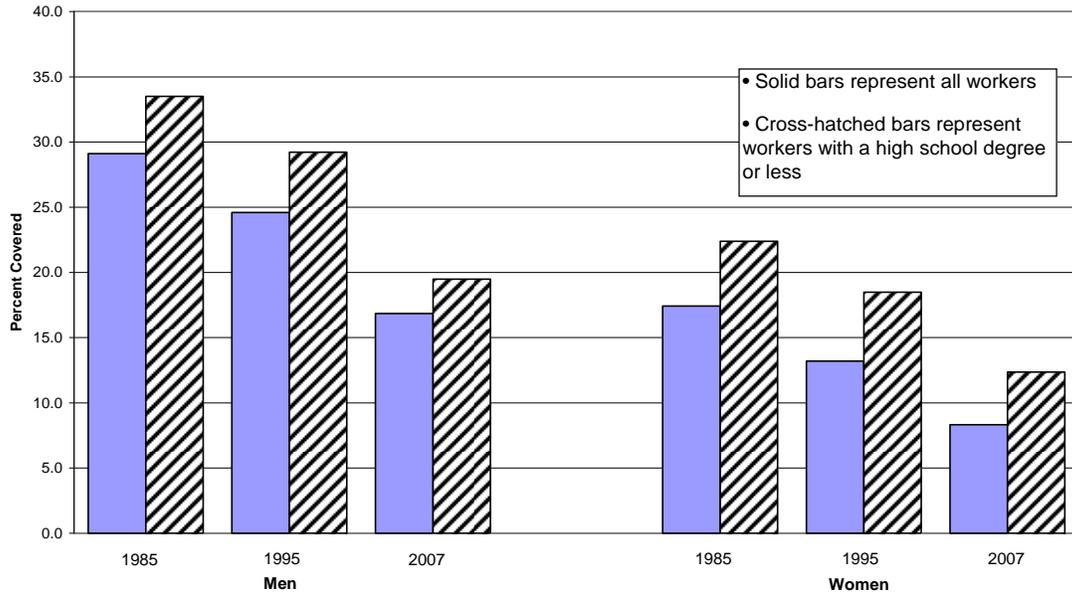
Since the mid-1980s, the labor market has absorbed a large increase in less-skilled immigrant workers and a large increase in less-skilled native-born women workers, while experiencing relatively low and stable unemployment rates. Even with some decline in male labor force participation among less educated workers, discussed above, the U.S. economy has been the envy of many other countries who have faced much higher unemployment and lower labor force participation over the past two decades. This reflects strong overall U.S. economic growth during these decades, which created a growing number of jobs.

There has been much concern about the declining number of ‘good jobs’ that pay high wages and fringe benefits for less-educated workers. Figure 3a plots changes in manufacturing jobs from 1985 to 2007 among men and women.<sup>3</sup> The solid bars show the percent of all workers employed in manufacturing. The cross-hatched bars show the share of less-skilled workers (those with a high school degree or less) working in manufacturing. Manufacturing jobs have declined dramatically—among all male workers, the share employed in manufacturing has fallen from 29.1 percent in 1985 to 16.8 percent

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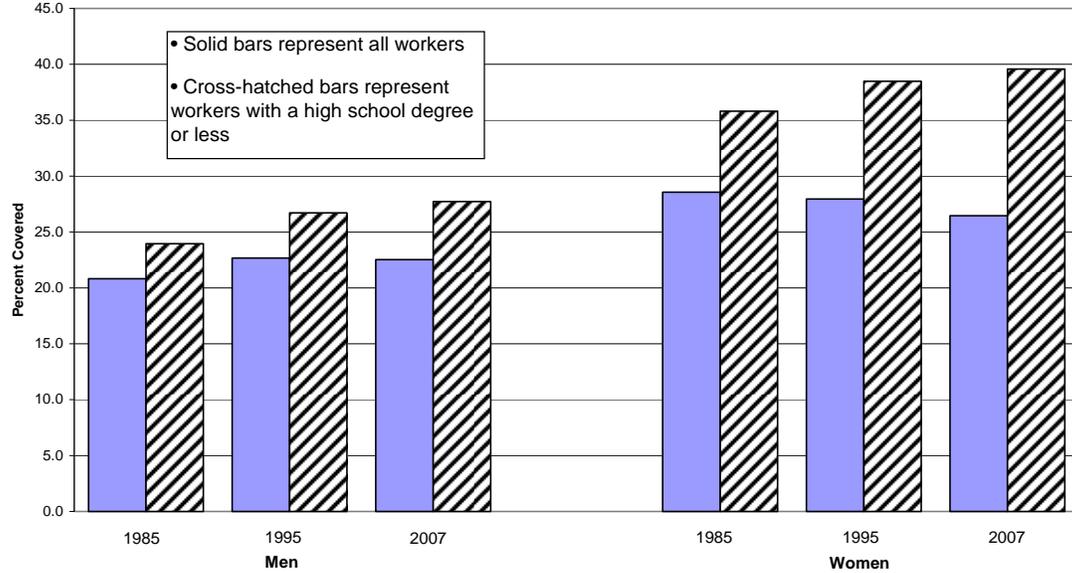
<sup>3</sup>Figures 3a and 3b are calculated with March CPS data. The industry definitions change each decade, so constructing a consistent series is not straightforward. The data start in 1985 because it is hard to reconcile these numbers with the industry definition used prior to this year. Figure 3a includes workers in durable and non-durable manufacturing. Figure 3b includes workers in retail trade, arts entertainment and recreation, accommodation, food and drinking places, and personal laundry services.

Figure 3a  
**Workers in Manufacturing Jobs by Gender and Skill, 1985-2007**



Note: Worker counts include all current employment in durable and non-durable manufacturing.  
 Source: Author's tabulation of the March Current Population Survey.

Figure 3b  
**Workers in Retail Trade and Selected Service Jobs by Gender and Skill, 1985-2007**



Note: Worker counts include all current employment in retail trade, arts and entertainment, recreation, accommodation, food and drinking places, and personal laundry services.  
 Source: Author's tabulation of the March Current Population Survey.

in 2007. Among less-educated men, this decline has been even faster, from 33.5 percent in 1985 to 19.5 percent in 2007. Women have always been less likely to work in manufacturing; by 2007, less than 10 percent of women workers were in this industry. Less-educated women have seen their manufacturing employment decline from 22.4 to 12.3 percent between 1985 and 2007.

The decline in manufacturing jobs has not meant fewer available jobs for less skilled workers; rather it has meant that different jobs are available. For instance, Figure 3b shows the share of workers in retail trade and selected service jobs, including hotels, restaurants and entertainment/tourism. The share of less-educated men in these jobs grew from 23.9 to 27.7 percent between 1985 and 2007; the share of less-educated women, from 35.8 to 39.6 percent.

Figure 3b shows growth in only one set of jobs. There has also been substantial employment growth among less-educated workers in health care and in clerical jobs. These industry shifts, reducing manufacturing jobs but increasing other job opportunities, can cause severe short-term disruptions for individuals who find themselves seeking work in very different sectors of the economy. Particularly among less-educated men, the jobs they used to hold have become much less available. In aggregate, however, there have been jobs available to less-skilled workers over the past three decades. The problem has not been job availability, but the wages that these jobs pay, as we discuss in section III below.

### C. The Effect of the Economic Cycle on Less-Skilled Workers

Less-educated workers are more affected by cyclical movements in economic growth than are more-educated workers. When unemployment rises, less-educated workers are more likely to lose their jobs, to move into part-time work, or to leave the labor force entirely. A glance at unemployment trends among more and less-educated workers (Figure 2), indicates that unemployment among the less-educated is much more cyclical than among more-educated workers (Hoynes, 2000; Blank and Shierholz, 2006).

An interesting question is whether the economic situation of less-educated workers has become more or less sensitive to changes in unemployment over time. One group that has become more vulnerable to economic fluctuations, in part as a result of welfare reform, is low-income single mother

families. Prior to welfare reform, unmarried women with children were less affected by unemployment because they had ready access to cash assistance. As this has changed, their reliance on the labor market has risen and, hence, their exposure to unemployment and economic cycles has grown.

In mid-2008, the U.S. economy was experiencing the beginnings of what could be a major economic slowdown. A mild recession in 2001 appeared to have little effect on single mothers, but this recession was concentrated in manufacturing and traded good industries, sectors where few less-skilled women are employed. In 2001, consumer spending remained strong, continuing to create demand for low-skilled workers in retail trade and in hotel and food services. If the economy does experience a major recession, this will be a test of our efforts to move women off welfare and into work. If a substantial number of single mothers find themselves unemployed and unable to find a new job, their need for public assistance might raise caseloads and welfare costs for the first time since the mid-1990s.

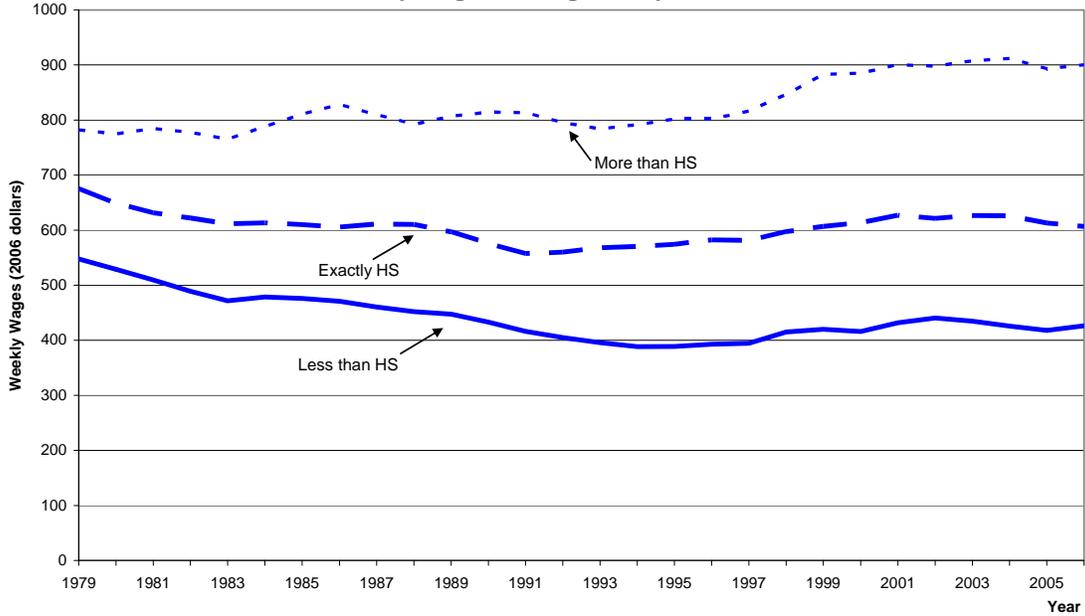
### III. WHAT DO LESS-EDUCATED WORKERS EARN AND WHY HAS THIS BEEN CHANGING?

The U.S. economy has long been praised for its very flexible labor market, which has led to substantial job creation and relatively low unemployment rates in comparison to many European nations. This flexibility also means a larger number of lower wage jobs. On the one hand, the U. S. has maintained relatively low unemployment rates; on the other hand, the wages paid in these jobs are low.

#### A. Wage Trends among Less-Educated Men

Figure 4a graphs the trends in real median weekly wage rates among men between 1979 and 2006, by the same three education groups that were shown in Figures 1 and 2. The solid line plots weekly wages among those without a high school degree; the dashed line shows wages among those with only a high school degree; and the dotted line shows median weekly wages among men with post-high school

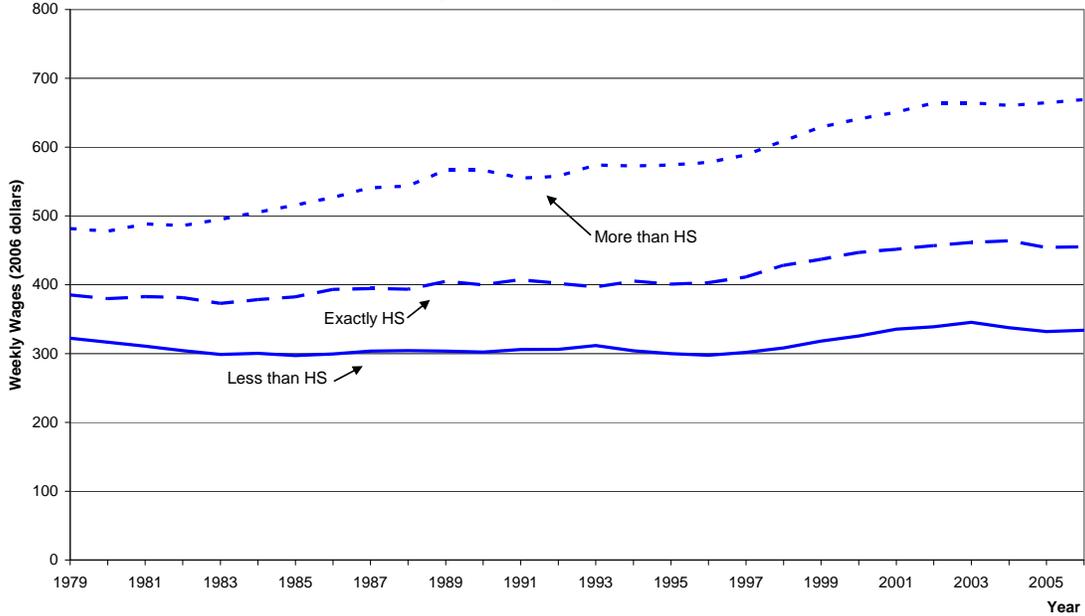
Figure 4a  
**Real Median Weekly Wages Among Men by Skill Level, 1979-2006**



Note: Adjusted to full time equivalents. Inflation adjusted to 2006 dollars using the PCE deflator from the Bureau of Economic Analysis.

Source: Authors' tabulations from Current Population Survey Outgoing Rotation Group data, 1979 to 2006. Based on all noninstitutionalized civilian labor force participants ages 18-65.

Figure 4b  
**Real Median Weekly Wages Among Women by Skill Level, 1979-2006**



Note: Adjusted to full time equivalents. Inflation adjusted to 2006 dollars using the PCE deflator from the Bureau of Economic Analysis.

Source: Authors' tabulations from Current Population Survey Outgoing Rotation Group data, 1979 to 2006. Based on all noninstitutionalized civilian labor force participants ages 18-65.

training. These data are in 2006 dollars, adjusted for inflation and expressed in ‘full-time equivalents’, so that differences in hours of work over time do not affect them.<sup>4</sup>

As has been widely noted, substantial wage losses for less-skilled men occurred after 1979. Those without a high school degree saw their weekly wages for full-time work decline from \$548 in 1979 to \$388 in 1994; for those with a high school degree, wages fell from \$675 in 1979 to a low point of \$558 in 1991. Among those with some post-high school education, wages only a little from \$782 in 1979 to \$791 in 1994 (there were much larger increases among men with a college education.) Since the early 1990s, wages have risen at all skill levels. By 2006, full-time weekly wages were \$426 for high school dropouts, \$607 for high school graduates, and \$901 for those with more than a high school degree. For the two less-educated groups, these levels are still well below where they were in 1979, however.

#### B. Wage Trends among Less-Educated Women

In contrast to less-educated men, less-educated women experienced little drop in wages over the 1980s. Figure 4b shows trends in real median weekly wages for full-time work among women by education group between 1979 and 2006. High school graduate women saw significant wage increases over this period, while wages grew much less among those with less than a high school degree. Female dropouts reported weekly wages between \$300 and \$334 between 1979 and 2006. Female high school graduates saw wage growth from \$385 in 1979 to \$455 in 2006. More skilled women experienced quite steep growth, from \$482 in 1979 to \$669 in 2006.

These changes narrowed the wage gap between less-educated women and men from 59 percent in 1979 to 78 percent in 2006. The wage gap among more-skilled men and women narrowed as well, because women’s wages are rising faster than men’s wages.

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<sup>4</sup>The data are deflated using the GDP deflator for Personal Consumption Expenditures. To adjust for differences in hours of work, I take average hours of work among full-time men (those working more than 35 hours/week) in each year and scale up wages among men who do not work full-time using the ratio of average full-time hours to their actual hours. Figure 3b makes the same calculation for women.

### C. Explaining These Wage Shifts

The period since 1979 has been a period of rising wage inequality. There is general agreement that the rise in inequality (and the decline in real wages) in the bottom half of the wage distribution occurred primarily in the 1980s. There was little change in relative wages in the bottom part of the distribution after that decade. In contrast, inequality in the top half of the wage distribution has risen steadily throughout this time period, as wages among the highest-skilled workers continue to rise rapidly (Lemieux, 2007; Autor, Katz and Kearney, 2008).

Figures 5a and 5b document these trends, using data from Autor, Katz and Kearney (2008) who provide comparable numbers from the 1960s onward.<sup>5</sup> Figure 5a shows the log (50/20) wage ratio (that is, the log of wages at the median of the distribution divided by wages at the 20<sup>th</sup> percentile of the distribution) from 1969 through 2006. The solid line shows the log (50/20) wage ratio among men, while the dashed line shows the ratio among women. The steep increase in male wage inequality in the late 1970s and early 1980s is clearly visible, with little change after the mid-1980s. Wages at the median and the 20<sup>th</sup> percentile of the male wage distribution have moved together since that time. The log (50/20) wage ratio for women rises less rapidly in the 1980s and is also largely flat since then.

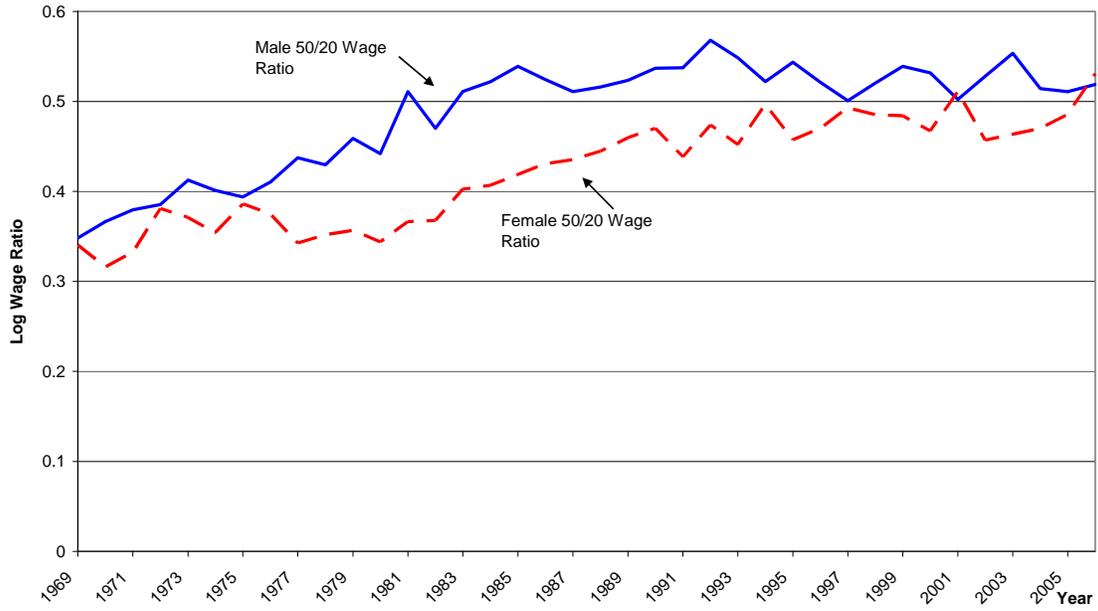
In contrast, Figure 5b graphs the log (80/50) wage ratio for men and women, showing wage changes among higher-paid workers at the 80<sup>th</sup> percentile of the distribution relative to those at the median. For both women and men, these wage ratios grow steadily from the mid-1970s onward. Autor, Katz, and Kearney (2008) note that much of the growth in high-end wages after 1990 is occurring among workers with more than a college degree, rather than among those with four-year college degrees.

In fact, the evidence suggests that wages among the least-skilled and the most-skilled have grown slightly faster over the past 15 years, while wages in the middle have stagnated. Lemieux (2007, 2008) indicates that wages grew most rapidly below the 20<sup>th</sup> percentile and above the 60<sup>th</sup> percentile of the wage distribution between 1989 and 2004. The result is a U-shaped curve in wage growth over the wage

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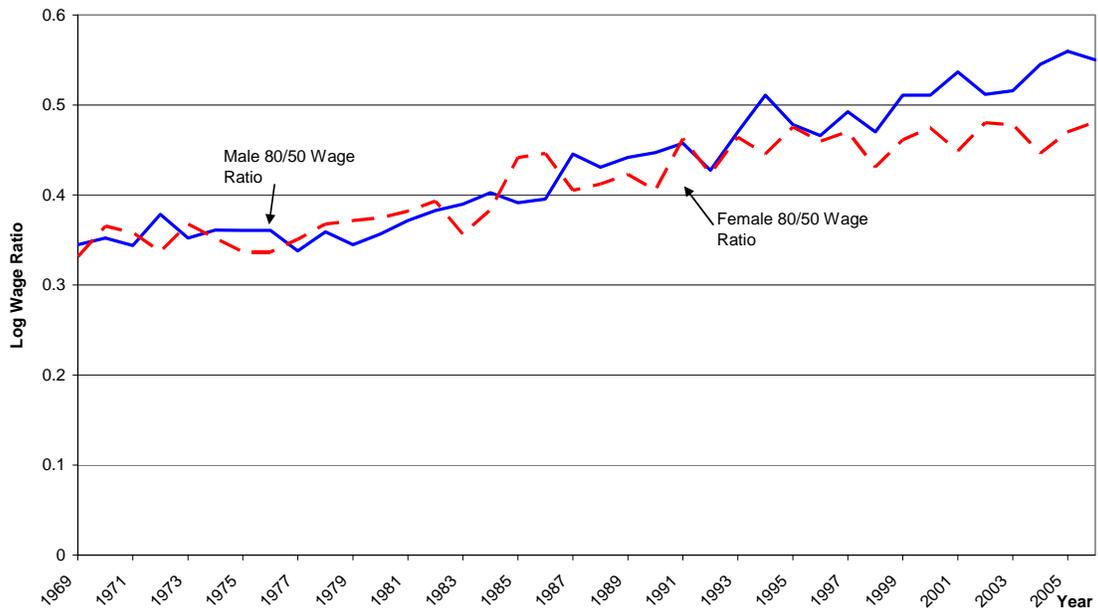
<sup>5</sup>We thank David Autor for making this data available to us for use here and in the regressions below.

Figure 5a  
**Log 50/20 Wage Ratio by Gender, 1969-2006**



Source: Data provided by David Autor from Autor, Katz, and Kearney (2008). Original data from the March Current Population Survey. Weekly wages calculated as annual earnings divided by weeks worked in the last year.

Figure 5b  
**Log 80/50 Wage Ratio by Gender, 1969-2006**



Source: Data provided by David Autor from Autor, Katz, and Kearney (2008). Original data from the March Current Population Survey. Weekly wages calculated as annual earnings divided by weeks worked in the last year.

distribution (the U ‘turns up’ much more at the upper end than at the bottom of the distribution as wage growth among high wage earners was much larger than among lower wage earners.) This U-shaped pattern in wage growth is particularly noticeable for men. Hence, while less-skilled men lost earnings power over the 1980s, they have experienced more wage growth in recent years, even if this more recent wage growth has not brought them back to the same level of real wages.

The wage losses among less-skilled workers in the 1980s appear due to numerous forces.<sup>6</sup> A primary factor is what economists call “skill biased technological change” or SBTC,<sup>7</sup> which occurs when changes in technology increase labor demand for workers at a particular skill level. Technological changes in the 1980s led to SBTC, with increased computer use in a growing number of applications, from robotics to just-in-time inventory systems. This increased demand for more skilled workers outstripped supply increases, driving up wages. At the same time, demand for less-skilled workers fell. Autor, Levy and Murnane (2003) and Autor, Katz and Kearney (2008) indicate that SBTC continues to affect the labor market in the 1990s and 2000s, but is primarily driving widening wages in the top half of the wage distribution as information technology continues to increase demand for the most-skilled workers, while displacing moderately-skilled workers who perform more routine tasks.

The popular discussion of stagnating wages often emphasizes growing trade and the internationalization of the economy. Less-skilled workers in less-developed countries typically earn much lower wages than less-skilled workers in the United States. Outsourcing production components that require only limited skill inputs can save a company money and will reduce their demand for less-skilled labor in the United States. The literature has downplayed the importance of trade in rising wage inequality and falling wages among less-skilled workers, suggesting that declining wages would have occurred even

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<sup>6</sup>While affected by all the same forces, less-educated women did better than less-educated men in the labor market over the past 25 years. Blank and Schierholz (2006) investigate why this happened. Women’s accumulating labor market experience and increasing returns to experience offset declines in the returns to education. Furthermore, the negative effects of children and marriage on women’s wages appear to have abated over this period.

<sup>7</sup>For a summary, see Acemoglu (2002). One criticism of SBTC is that it is a hard theory to prove since technological change is a difficult concept to measure (see Card and DiNardo, 2006).

without growth in global markets (Berman, Bound and Griliches, 1994). Recent work does suggest that trade in intermediate inputs, leading to changes in industrial organization, can be important (Feenstra and Hanson, 2003). Krugman (2008) provides reasons why trade shifts since the mid-1990s (particularly the rise of China) might make trade a more important factor for the evolution of less-skilled wages in the United States, although this effect is very difficult to measure.<sup>8</sup>

Some researchers have noted that institutional changes contributed to the declining wages of less-skilled workers, in addition to changes due to trade or technology. For instance, Card (1996) notes that the rapid decline in unions over this period explains about 20 percent of the wage decline among the least skilled. Unions often raise wages at the bottom of the distribution, and their decline has left less-skilled jobs that previously were somewhat protected by union bargaining efforts more open to market vicissitudes. Unionization declined rapidly among all workers between 1985 and 2007, but fell faster among the less-skilled. Among less-skilled men, collective bargaining coverage declined from 28 to 15 percent between 1985 and 2007. Fewer women are in jobs covered by bargaining—their coverage decline over the same period was from 14.1 to 8.5 percent by 2007.<sup>9</sup>

In addition, the minimum wage remained constant throughout the 1980s, and its declining real value was an important factor in pushing wages downward among the less-skilled (Lee, 1999). DiNardo, Fortin and Lemieux (1996) note that female workers were particularly affected, since a disproportionately large number work in minimum wage jobs. Of course, changes in minimum wages and in unionization may not be exogenous forces independent from changes in technology or in trade. Increasing global competition in U.S. manufacturing was one cause of declining unionization. Falling demand for less-skilled workers may have strengthened resistance to minimum wage increases over the 1980s.

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<sup>8</sup>Krugman's empirical work, however, suggests that trade remains a relatively less important factor in the determination of U.S. wages, although the increasing complexity of intermediate component outsourcing make it difficult to measure this effect.

<sup>9</sup>These numbers were tabulated by the author from the March Current Population Survey.

The declines in minimum wages in the 1980s were partially made up by minimum wage increases in 1989 and 1996, and, for workers with children, by increases in the Earned Income Tax Credit (EITC). The EITC was greatly expanded in 1993 so that a growing share of low-wage workers could receive tax refunds, even if they owed no taxes. Figure 6 shows pre-tax (dashed line) and post-tax (solid line) income, inflation adjusted, for a single mother with two children working full-time at a minimum wage job from 1979 through 2007. During the 1980s, her real wages fall steadily with inflation erosion in the minimum wage. The minimum wage increases of 1989, 1996 and 2006 are clearly visible in the graph. Even more important, however, is the expansion in the EITC, which by 2007 increases her income by over \$3000.<sup>10</sup> It is clear that policy (a non-inflation-indexed minimum wage) worked to lower wages in the 1980s, but minimum wage increases and EITC expansions helped raise earnings in the 1990s.

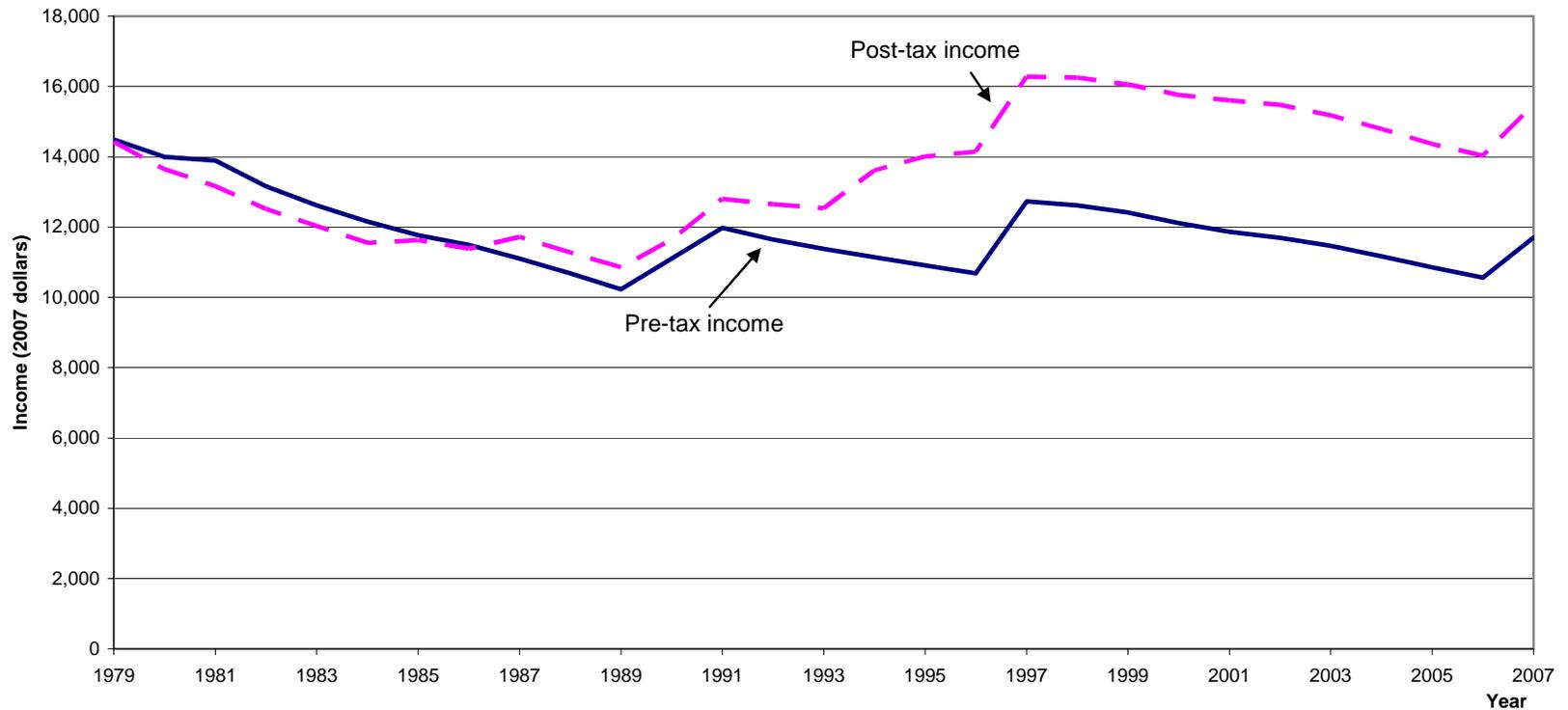
Lemieux (2008) describes the 1980s as a ‘perfect storm,’ in which multiple factors resulted in an expansion in inequality across the wage distribution. This includes technological, institutional, and policy changes. These forces, however, appear to be more quiescent in the past 15 years. Since the early 1990s, demand/wage changes have benefited highly-skilled workers and flattened wages for middle-range workers. Less-skilled workers have seen moderate wage gains.

Of course, wage changes have to be compared to price changes. If prices are falling, then lower wages may not leave families worse off. A recent paper by Broda and Romalis (2008) argues that increased trade over the past three decades has resulted in substantive price declines in the non-durable goods bought by lower-income families. This paper, however, does not look at the total market basket of goods. Housing prices, which constitute a substantial share of lower income family budgets, have risen substantially over the past three decades in many areas and the share of budgets going to housing has increased (Brennan and Lipman, 2007.)

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<sup>10</sup>The pattern in Figure 7 is not unique to a single mother. If you plot the equivalent lines for a married couple family in which the father works full-time at the minimum wage and the mother works part-time, the pattern looks very similar.

Figure 6  
**Pre-Tax and Post-Tax Income for a Single Mother Working at the Minimum Wage, 1979-2007**



Notes: This single-mother family is estimated to have one full-time worker at the minimum wage (for a total of 2000 annual hours of work) and two children. Federal income tax, FICA payroll taxes, and Earned Income Credit included in post-tax calculations. Figures inflated to 2007 dollars using the PCE deflator.

Sources: Minimum wage data from the Department of Labor, *History of Federal Minimum Wage Rates Under the Fair Labor Standards Act, 1938 - 2007*, available at <http://www.dol.gov/esa/minwage/chart.htm>. Tax liabilities and credits for all years calculated using the NBER TAXSIM Model, Version 8.0, available at <http://www.nber.org/~taxsim/>.

It is interesting to compare the U.S. experience to the experience of many western European nations. As in the U.S., unemployment rose steeply in Europe in the 1970s; unlike in the U.S., it has remained very high in the decades since, although some countries have been more successful at lowering unemployment in recent years. An extensive research literature focused on the flexibility of the U.S. labor market, with fewer job protection policies, versus more rigid European labor markets where it was expensive to hire or fire workers (for instance, see Bean, 1994; or Freeman and Katz, 1995). Indeed, most European countries have altered their labor market policies to create more labor market flexibility. This has involved changes such as shorter periods of unemployment benefit payments, more limited job severance payments, or fewer restrictions on part-time work.

Yet, while unemployment remained high in Europe, wage inequality in most European countries did not grow as it did in the U.S. And only in the U.S. were there significant wage declines among less-educated workers. European countries appear to have developed a set of institutions that better protected less-educated workers, with higher minimum wage levels, more centralized collective bargaining, or higher unemployment payments (Freeman and Katz, 1995). Hence, the flexible U.S. labor market allowed significant wage changes and widening inequality, particularly in the 1980s, but was able to offer an ongoing supply of low-wage jobs. In contrast, European labor markets were more rigid. This protected the incomes of less-educated workers but resulted in significant job loss. Reviewing this evidence, Blanchard (2006) concludes that the lesson is to protect workers but not jobs, allowing flexibility in job creation (and destruction) and assisting those who are displaced but incentivizing workers to seek new employment.

Despite the positive changes since the mid-1990s, the long-term wage outlook for less-skilled workers is not rosy. All predictions for the future suggest that global demand for more skilled-workers will increase; it is hard to tell a story in which the demand for less-skilled workers increases within the United States. The labor market for the less-skilled has been relatively robust for the past 15 years, however, with low unemployment and slowly rising wages. At best, one can hope that demand does not fall and that a growing U.S. service sector continues to need workers in low-skill jobs.

Finally, it is worth commenting on the relationship between wage changes and family income changes. Difficulties in the low-wage labor market might be expected to translate into declining family incomes and rising poverty. Poverty is based on family incomes which depend upon the composition of families, the number of earners, and the amount worked by each earner. The increase in single-parent families, all else held constant, for instance, has lowered family income.

While family incomes among lower-income families did not rise in the 1980s, neither did they fall as men's wages fell. Among married couples, this is because wives' labor force involvement expanded and wives' earnings offset the decline in male earnings (Cancian and Reed, 1999). Adults in families, particularly women, were working more in order to maintain the same level of real income. As a result, family income growth has been stronger than wage growth. While it is good that the economic situation of families has not deteriorated, extra work hours have meant less hours spent at home, either in child care or in home production. This has changed the composition of spending within households. Because they have to buy more of what used to be produced at home (child care, food preparation, other services, etc.), it is not clear what has happened to overall family well-being. A family at the same or even at higher income levels, where the adults are working more hours in the market and buying more child care to support that, may have less disposable income and be worse off (see Meyer and Wallace, this volume). Family incomes also depend upon non-wage sources of income and lower-income families are often affected by changes in public transfer policies (Moffitt and Scholz, this volume).

#### IV. POVERTY AND THE MACROECONOMY

A family of four with an income below \$20,600 is considered poor in 2006 in the United States. An ongoing literature over time has looked at the responsiveness of poverty to changing economic variables and found that the effects of unemployment on poverty appeared to have shifted over time.<sup>11</sup> Analysis of data through the 1970s indicated a very large effect of rising unemployment on rising

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<sup>11</sup>For instance, see Blank and Blinder, 1986; Blank and Card, 1993; Haveman and Schwabish, 2000; or Gunderson and Ziliak, 2004.

poverty; however, this relationship deteriorated in the 1980s, with unemployment and poverty becoming more disconnected. Recent evidence suggests the unemployment/poverty link strengthened again in the 1990s.

I revisit the question of “how is poverty related to the macroeconomy?” I add data from the 2000s, and also try to measure the effects of widening wage inequality with greater precision. The specific regression that I estimate is:

$$(1) \quad P_t = \alpha_1 + \alpha_2 * D80 + \alpha_3 * D90 + \alpha_4 * D00 + \rho P_{t-1} + \beta_1 * UR_t + \beta_2 * UR_t * D80 + \beta_3 * UR_t * D90 + \beta_4 * UR_t * D00 + \gamma * X_t + \varepsilon_t$$

The dependent variable,  $P$ , is a measure of poverty. I will show regressions using a variety of different dependent variables. These include all persons in poverty; adults (18–65), children and elderly in poverty; whites, blacks and Hispanics in poverty; and single individuals, single mothers with children, and married couples with children in poverty. Official poverty statistics start in 1959, and for some of these measures we have data from 1959 to 2006. For other groups, the data starts between 1966 and 1973. I use as much data as available for each group. I also include a lagged dependent variable, so that the coefficients on other variables measure the effect of those variables on changes in poverty.

Explanatory variables include the annual unemployment rate,  $UR$ . Because prior studies have noted that the unemployment rate has different effects post 1970, I interact  $UR$  with three dummy variables.  $D80$  equals one in every year during the decade of the 1980s;  $D90$  is a dummy variable covering the decade of the 1990s; and  $D00$  is a dummy variable for the years 2000 to 2006. The coefficients on these interactive terms will tell us whether there are differential unemployment effects in the three most recent decades.

The remaining explanatory variables, the vector  $X$  in equation (1), includes the consumer price index (CPI) to measure inflation and a measure of government anti-poverty spending, defined as federal budget expenditures on public assistance programs in each year, excluding medical care expenditures.

This measure includes most means-tested transfer programs, including cash welfare, Supplemental Security Income, energy and food assistance programs, and the EITC.<sup>12</sup>

I include a measure of where the poverty line sits in the overall income distribution, which is specified as the poverty line divided by median income. The poverty line has been adjusted only by inflation since the early 1960s when it was defined. Hence, as real economic growth and distributional changes lead to changes in the location and shape of the income distribution, the poverty line has moved from 49 percent of median income in 1959 to 28 percent in 2005 (Blank, 2008). This shift in the location of the poverty line should mechanically result in a change in poverty counts, as fewer people will be poor (i.e., will lie below the line) when the line hits at a lower level in the income distribution.

Finally, I include three dummy variables, D80, D90, and D00, to see if there are any additional shifts in the underlying poverty level during these three recent decades that this specification does not explain. Surprisingly, despite the evidence cited above about the problems of falling wages and widening wage inequality, including the 50/20 (or 50/10) wage ratio never seems important. We suspect this is because there is not enough variation in our data with annual national observations to find this effect, once we control separately for unemployment over the 1980s.<sup>13</sup>

Table 3 presents the results of this regression on poverty among different groups of persons.<sup>14</sup> Column 1 shows the estimates for the overall poverty rate, which consists of the share of all persons living in families below the official poverty line. Columns 2 through 4 show the coefficients for the share of poor non-elderly adults (ages 18–64), poor children, and poor elderly adults (over age 65). Columns 5 through 8 show the coefficients for the share of poor whites, poor blacks, and poor Hispanics.

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<sup>12</sup>The full list includes food stamps, black lung payments, SSI, direct relief assistance, energy assistance, cash welfare, WIC programs, foster care and adoption payments, payments to nonprofit welfare institutions, and the EITC. These expenditures are taken as a share of the federal budget.

<sup>13</sup>We experimented with a variety of other variables as well, such as employment-to-population ratios or overall GDP growth rates. These variables, as well as wage measures, are sometimes significant in other papers that utilize state-by-year variation and have far more observations, such as Gunderson and Ziliak (2004).

<sup>14</sup>This specification includes 11 variables and has more than 30 degrees of freedom in every regression. This is more than earlier research had available, but the small number of observations does mean that significance levels are likely to be low.

**Table 3**  
**Determinants of Poverty Among Different Groups of Persons**

Variable	Dependent Variable: Poverty Rate among						
	All Persons (1)	Adults (18–64) (2)	Children (3)	Elderly (4)	Whites (5)	Blacks (6)	Hispanics (7)
Lagged dependent variable	0.391** (0.092)	0.458** (0.079)	0.557** (0.088)	0.639** (0.112)	0.385** (0.099)	0.396* (0.156)	0.269 (0.254)
Unemployment Rate	0.269* (0.108)	0.148 (0.084)	0.503* (0.191)	0.374 (0.401)	0.205* (0.094)	0.454 (0.385)	0.480 (0.425)
Unemployment Rate * D80	-0.275** (0.101)	0.097 (0.103)	-0.363 (0.189)	-0.516 (0.395)	-0.183* (0.087)	-0.005 (0.418)	-1.314* (0.494)
Unemployment Rate * D90	-0.093 (0.119)	0.020 (0.092)	0.101 (0.210)	(0.290) (0.442)	-0.138 (0.105)	1.188* (0.542)	-0.427 (0.550)
Unemployment Rate * D00	0.002 (0.197)	0.239 (0.135)	0.022 (0.360)	-0.150 (0.491)	0.003 (0.169)	0.376 (0.621)	-0.598 (0.738)
Consumer Price Index	-0.003 (0.038)	0.007 (0.027)	0.070 (0.057)	0.155 (0.079)	0.001 (0.036)	0.075 (0.089)	-0.133 (0.226)
Share of gov't budget on public assistance	-0.611 (0.714)	-0.051 (0.556)	-0.420 (1.262)	-7.109** (2.154)	-0.374 (0.630)	-3.850 (2.319)	-1.914 (3.781)
Poverty line/median income	0.388** (0.064)	0.157** (0.041)	0.296** (0.073)	0.505* (0.241)	0.322** (0.058)	0.436 (0.246)	1.259** (0.446)
D80	2.808** (0.715)	0.893 (0.587)	4.294** (1.423)	2.204 (2.771)	2.145** (0.618)	0.231 (2.753)	10.901** (3.352)
D90	2.342** (0.785)	1.030 (0.658)	2.322 (1.448)	2.282 (3.055)	2.569** (0.708)	-6.800 (3.561)	6.840 (3.600)
D00	2.007 (1.070)	0.563 (0.773)	2.448 (1.988)	1.969 (3.539)	2.175** (0.934)	-3.895 (3.691)	5.942 (3.965)
Constant	-8.886** (1.575)	-2.253 (1.595)	-7.650** (2.337)	-9.128 (7.597)	-7.811** (1.463)	3.208 (7.375)	-31.286** (12.565)
No. of observations	47	40	47	40	47	40	34

\*\*Significant at 1% level; \* Significant at 5% level. Standard errors on parentheses.

**Notes on variables:** D80 is a dummy variable for the years 1980–89; D90 is a dummy variable for the years 1990–99; D00 is a dummy variable for the years 2000–06. Share of government budget on public assistance includes federal payments to cash assistance, energy assistance, food assistance, foster care and adoption, black lung, SSI, EITC, all as a percentage of the total federal budget.

The coefficients in Column 1, the determinants of the poverty rate among all persons, show a strong correlation between the current and lagged poverty rate, as expected. There is also a strong positive relationship between increases in unemployment and increases in poverty. Taking the lagged dependent variable into account, a two-point rise in the unemployment rate leads to a 0.9 point rise in the poverty rate. Consistent with earlier research, however, this effect disappears entirely over the 1980s (the coefficient for the unemployment rate interacted with the D80 dummy variable is of equal and opposite sign to the overall coefficient on unemployment.) After the 1980s, the strong poverty/unemployment relationship is reestablished. I would have expected this 1980s effect to be explained by the declining wages among less-skilled workers, but as noted the relative wage ratios do not have any explanatory power.

Changes in the consumer price index, have little effect on poverty, for this group or most other groups, although the effect is larger (and marginally significant) among the elderly. While the share of government expenditures going to transfer programs has a negative effect on poverty, the coefficient is small and insignificant for the overall poverty rate. The location of the poverty line in the income distribution is positively correlated with poverty, as expected, and this is true for all groups. When the poverty line hits at a higher point in the income distribution, more people are below that point and poverty is higher. The dummy variables for the 1980s and 1990s indicate that poverty was significantly higher in these two decades, even after controlling for all other variables. This upward bump in poverty is reduced in the 2000s.

Columns 2 through 4 present similar regressions for the share of persons living in poverty among nonelderly adults, children, and the elderly. Surprisingly, the unemployment rate has a strong and significant effect for child poverty, but a weaker effect on adult or elderly poverty. As with all persons, child poverty was less responsive to unemployment during the 1980s. Government expenditures have a large and negative effect only on elderly poverty.

Columns 5 through 8 analyze poverty rates among whites, blacks and Hispanics. Because there are fewer blacks and Hispanics in the Census data, their smaller samples lead to higher standard errors of

the coefficients. Hence, while all three groups show relatively large positive effects of unemployment on poverty, this is significant only for whites. The unemployment effects for blacks and Hispanics are large, albeit with a large standard error. A two-point rise in the unemployment rate is estimated to raise poverty by 0.7 points among whites, by 1.5 points among blacks, and by 1.3 points among Hispanics. Both whites and Hispanics experience the de-linkage of unemployment and poverty over the 1980s. This does not occur among black Americans; they also experience strong gains during the unemployment declines in the 1990s. Both blacks and Hispanics show relatively large (but poorly determined) negative effects on poverty from government spending.

Table 3 focuses on poverty share among persons. Table 4 presents the coefficients from estimating the regression in equation (1) on the poverty rate for single mothers with children, married couples with children, and single individuals who do not live with other relatives. The poverty rate of single mothers with children (Column 1) is relatively unresponsive to most of these factors, perhaps not surprising since they are less likely than the other groups to be in the labor force during most of this period. Perhaps surprisingly, government expenditures have no effect on their poverty. This may be because welfare payments are not large enough to raise most of these families over the poverty line. While the effects of unemployment are small and insignificant through most of the period, during the 1990s the declining unemployment rates did significantly reduce single mother poverty. A two-point decline in unemployment in this decade reduced poverty by 4.4 points among single mothers, quite a large effect.

Married couples with children (column 2) and single individuals (column 3) are both more responsive to changes in unemployment throughout the period. Single individuals show a reduced responsiveness to unemployment in the 1980s, however; the effect is large, although not significant. Both

**Table 4**  
**Determinants of Poverty Among Different Family Groups and Using Alternative Definition**

Variable	Dependent Variable: Poverty Rate among			All Persons, Alternative Poverty Rate (4)
	Single Mothers (w/ Kids) (1)	Married Couples (w/ Kids) (2)	Single Individuals (3)	
Lagged Dependent Variable	0.151 (0.169)	0.380** (0.103)	0.828** (0.103)	0.478** (0.127)
Unemployment Rate	0.242 (0.529)	0.406** (0.143)	0.511 (0.370)	0.275* (0.139)
Unemployment Rate * D80	-0.246 (0.509)	-0.047 (0.129)	-0.329 (0.311)	—
Unemployment Rate * D90	1.623* (0.625)	-0.029 (0.138)	-0.155 (0.335)	—
Unemployment Rate * D00	-0.088 (1.010)	0.073 (0.156)	-0.037 (0.542)	—
Consumer Price Index	-0.210 (0.159)	0.054 (0.040)	0.154 (0.085)	0.061 (0.064)
Share of gov't budget on public assistance	-0.064 (3.541)	-1.718* (0.724)	-4.098* (1.899)	.0415* (0.668)
Poverty line/median income	0.728** (0.194)	0.178 (0.101)	0.199 (0.142)	0.104 (0.132)
D80	2.702 (3.455)	1.409 (0.856)	1.886 (2.409)	—
D90	-9.693* (4.095)	1.960* (0.964)	2.471 (2.536)	—
D00	-4.402 (5.515)	1.312 (0.989)	2.311 (3.193)	—
Constant	8.244 (6.511)	-4.033 (2.775)	-3.600 (3.320)	-0.366 (2.698)
No. of observations	47	32	47	25

\*\*Significant at 1% level; \* Significant at 5% level. Standard errors on parentheses.

**Notes on variables:** D80 is a dummy variable for the years 1980–89; D90 is a dummy variable for the years 1990–99; D00 is a dummy variable for the years 2000–06. Share of government budget on public assistance includes federal payments to cash assistance, energy assistance, food assistance, foster care and adoption, black lung, SSI, EITC, all as a percentage of the total federal budget.

groups also benefit from increased government expenditures, particularly single individuals, whose poverty appears much reduced by expansions in government programs.<sup>15</sup>

As many have noted, there are serious problems with the current official poverty measure (Citro and Michael, 1995; Blank, 2008; Haveman, this volume.) The Bureau of the Census provides a variety of alternative poverty measures. In the last column on Table 3 I utilize an alternative definition of poverty based on a more complete measure of disposable income among families, taking into account both in-kind transfers and taxes before calculating whether a family is poor or not.<sup>16</sup> This series is only available from 1980 on, so there are relatively few observations in this regression. The results with this alternative poverty definition are not strikingly different from the results in Column 1 of Table 3. Perhaps not surprisingly, the share of government budget spent on public assistance programs is more important for this alternative measure of poverty because it includes the poverty-reducing effects of in-kind transfers and the earned income tax credit.

Overall, the regression results demonstrate that poverty remains very responsive to the economic cycle. This effect is largest in magnitude among single individuals and blacks and Hispanics. Although falling unemployment in the mid- to late-1980s had little effect on poverty, lower unemployment in the 1990s and 2000s significantly reduced poverty for most groups. Hence, the relationship between unemployment and poverty is strong at present. In contrast, inflation has virtually no effect on poverty. Several groups gain from government expenditures, particularly the elderly and single individuals. Even with a wide range of control variables, a number of groups show significantly higher poverty rates in the 1980s and/or 1990s, even controlling for all of these variables. These results also appear to be robust to an alternative poverty measure.

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<sup>15</sup>Perhaps, this effect is due to expansions in the Supplemental Security Income program, which provides payments to poor and disabled individuals.)

<sup>16</sup>This data is available (through 2003) at the Census Bureau's website on alternative poverty estimates <http://www.census.gov/hhes/www/income/reports.html>. I use Series 14. Data for 2004 and 2005 can be found in Table 2 at <http://www.census.gov/hhes/www/poverty/detailedpovtabs.html>.

## V. CONCLUSIONS

There is both good news and bad news regarding the effects of the economy on the earnings opportunities of less-skilled workers.. The good news is that low unemployment rates continue to benefit low-income persons. Poverty in the 2000s appears to be highly responsive to lower unemployment. Unemployment has been relatively low over the past two decades. Furthermore, at least since the early 1990s, wages have not fallen among less-skilled workers and have even risen somewhat. Wages among less-skilled women are higher than at any previous point in history.

The bad news is that wages among less-skilled men remain below where they were in the 1970s. And overall wage growth among all less-skilled workers has been limited. Although the economy has been in a period of sustained growth, this has benefited higher-skilled workers much more than less-skilled workers. If the economy were to experience a serious slow-down, economic prospects could look much worse for low-income families, especially female-headed families who now rely more heavily on earnings and less on cash welfare.

These results suggest several important policy issues in the years ahead. Maintaining a strong economy and low unemployment is most important for the long-term economic well-being of low-wage workers. I have written previously and have documented in this chapter that the best policy we can pursue for the poor is to keep unemployment low and the economy strong (Blank, 2000).

Given the forces that have shifted demand toward higher-skilled workers, however, economic growth by itself may not be enough to reduce poverty or substantially improve the economic well-being of low-income families. Maintaining a reasonable level of the minimum wage is also important. When the minimum wage deteriorated in the 1980s, the real earnings of less-skilled workers declined. The decline of unions has also accelerated wage losses among lower-wage workers, suggesting that effective forms of worker organizations in a global economy may also prevent wage losses for some groups of workers.

Maintaining the level of the Earned Income Tax Credit, as a subsidy to lower-wage workers in low-income families is also important. At present the EITC is primarily available to families with

children. Expanding this to other low-wage workers in low-income families without children would help reduce poverty, as others have noted (Berlin, 2007; Scholz, 2007). Such an EITC expansion might help reverse the falling labor force participation of less-skill men shown in Figure 1a. Other chapters in this volume discuss other relevant policies, such as available child care and health insurance, or revisions to the unemployment insurance system.

Finally, any long-term solution to these problems will require increasing skill levels. Reforming and improving the public school system is critical, as is increasing opportunities for post-secondary education (Jacob and Ludwig, and Holzer, this volume). Given the rapidly growing immigrant population among the less-skilled, the educational achievements of the children of these immigrants will be quite important for the future of the economy. If these children are able to reach higher educational levels than their parents, this adds to intergenerational mobility and assures that these families escape poverty over time.

The labor market has had a plentiful supply of low-wage jobs available, but the long-term outlook for jobs is uncertain. At best, there will continue to be a large low-wage employment sector; at worst, depending on broader trends in technology and economic globalization, the number of these jobs could shrink relative to the supply of low-wage workers. Or the wages on these jobs could fall, as they did in the 1980s. There is little prospect, however, that there will be substantial wage gains in low-skill jobs. Shifts in demand away from less-skilled work, combined with the large supply of less-skilled workers, will keep wages down.

Nonetheless, most families headed by less-skilled adults rely primarily on earnings. Assuring these families of stable and sufficient incomes is important, to keep poverty low and to keep these families attached to the labor market rather than idle or engaged in less-socially-desirable activities. This requires ongoing public subsidies to less-skilled workers and ongoing attention to the problems faced by low-wage workers.



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