Changing Patterns of Work and Poverty During and After the Great Recession

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Abstract

This study examines changes in patterns of work, poverty, and the relationship between work and poverty between 2005 and 2013. It also explores the implications of heterogeneous work-poverty dynamics for the distribution of poverty risk across race and sex groups. Our analyses address three specific objectives. First, we track changes in work and poverty status among householders during the 2005 to 2013 period. Second, we use a regression-based decomposition approach to quantify how shifts in hours and weeks worked among householders contributed to changes in poverty between 2005 and 2013. Third, we track race- and sex-based differences in work-poverty dynamics during this period. We specifically quantify how changes in work patterns among particular race- and sex- groups affected the distribution of poverty risk between groups. Our results demonstrate that changing patterns of work had a large, but not exclusive effect on poverty rates during the recession. In contrast, changes in work explain very little of post-recession poverty dynamics. We also find evidence of systematic variation in work-poverty dynamics between race and sex group. Our findings show a male and minority disadvantage during the recession and uniquely persistent disadvantages among non-Hispanic black males in the post-recession period.

Keywords labor markets, poverty, work, working poor, race, gender, Great Recession

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Introduction

In the aftermath of the Great Recession of 2007-2009[1], debates about poverty and inequality, low-wage work, and related policy interventions (e.g., the minimum wage, work supports) have increased considerably (Cooper, 2013; Mishel, 2012). The severe and enduring impacts of the recession—which extended far beyond the return to macroeconomic growth—have raised fundamental questions about access to employment and the quality of work for those who attain it. Many such questions have centered on the causes and consequences of high rates of unemployment and underemployment, and of the declines in earnings, job security, and job quality among those who are employed (Brand, 2015; Kalleberg, 2009; Kalleberg, 2011; Weil, 2014). Narratives suggesting that those willing to work will be able to secure a basic, above-poverty standard of living appear to have been fundamentally destabilized in the wake of the recession.

Despite evidence of labor market stagnation and increasing economic hardship in the U.S., surprisingly little empirical research has attempted to quantify the relationship between work and poverty in the years before, during, and after the Great Recession. Quantifying the strength of this relationship can provide insight into the extent to which declines in full-time employment had a poverty-increasing effect during this period of crisis, or if other factors (e.g., wages, household labor supply) were more salient determinants of poverty. Through a series of descriptive statistics and regression-based decomposition analyses, this study begins to address this gap by examining the effect of changing patterns of work on poverty rates from before to after the Great Recession. To

[1] According the U.S. National Bureau of Economic Research, this recession—defined in terms of a contraction of gross domestic product (GDP)—began in December 2007 and ended in June 2009.

assess the distributional effects of these changes, we also examine the implications of work-poverty dynamics for race- and sex-based gaps in poverty.

The paper proceeds as follows. In the next section, we review existing research on the recession's social and economic impacts, with particular emphasis on labor market outcomes. We next describe the data used in this study and our analytic approach. We then describe our results, discuss their theoretical and policy implications, and conclude with recommendations for future research.

Social and Economic Impacts of the Great Recession

The Great Recession was by most accounts the worst economic downturn in the U.S. during the postwar era. Housing and equity values plummeted and rates of home foreclosures spiked. The recession affected many aspects of America's social landscape, from family structure and fertility (Cherlin, Cumberworth, Morgan, & Wimer, 2013; Cohen, 2014) to the distribution of political power among parties (Bartels, 2013). Wealth inequality also increased substantially as a result of the recession, reflecting disproportionately large impacts among disadvantaged groups (Pfeffer, Danziger, & Schoeni, 2013). Unsurprisingly, the poverty rate increased from 12.3% in 2006 to 15.1% by the end of the recession (2010), equal to the highest level since 1983 (DeNavas-Walt & Proctor, 2014).[2] While an imperfect measure to be sure, the nearly 25% increase in poverty is indicative of the extent to which the recession undermined wellbeing across the U.S.

[2] The first statistically significant year-on-year decline in poverty did not occur until 2013, when it dropped only 0.5 percentage points to 14.5% (DeNavas-Walt and Proctor, 2014)

The labor market is expected to be a primary mechanism through which macroeconomic patterns translated into social and economic wellbeing at the individual and household levels, and through which impacts were distributed across social groups. The 2007-2009 downturn had uniquely negative implications for U.S. workers.[3] The most straightforward indication of these effects was the increase in the prevalence and duration of unemployment. The national unemployment rate increased from 4.4% prior to the recession to a peak of 10.1% in 2010, just after the recession officially ended. Likewise, employment—defined as the ratio of workers to the working-age population—fell more steeply and for a longer duration than any recession since the Great Depression. To place this in perspective, consider that before the 2007-2009 downturn, the average recession-related decline in employment was below 3.0%. During the Great Recession, the peak decline in employment was a full 6.3 percentage points below pre-recession levels (Freeman, 2013).

High cross-sectional unemployment rates in part reflected a large uptick in the number and share of long-term unemployed persons. In April 2010, for example, more than 7 million people had been unemployed for more than 26 weeks (Freeman, 2013); and during the entire 2009-2013 period, an average of nearly 40% of the unemployed were long-term unemployed (Nichols, Mitchell, & Lindner, 2013). The increase—a tripling at its peak—in long-term unemployment was also unprecedented in the post-war U.S.

[3] The large effects of the recession on the U.S. labor market were not only a function of the magnitude of this downtown; instead, this recession was unusually punitive for labor. In past recessions (i.e., those in the 1950s-1970s), the percentage loss of employment was often less than the percentage loss of GDP during recessions; and post-recession recoveries in GDP translated rather directly into increased employment. By contrast, the decline in GDP during the Great Recession reached 4.7% while the decline in employment peaked at 6.3%[3]; likewise, GDP increased by 7.5% from the end of the recession through 2012 while employment increased by just 1.2% (Freeman, 2013).

Overall trends in employment and unemployment mask considerable heterogeneity between groups. Increases in unemployment were not evenly distributed across demographic groups or sectors of the economy. Indeed, the recession itself was driven by particularly precipitous declines in economic activity and employment in certain industries. The largest and most rapid increases in unemployment occurred among workers in construction, manufacturing, and financial services (Hout & Cumberworth, 2014). Unemployment among workers in the public administration, education, and health care sectors increased at a substantially slower pace, but saw less improvement after the recession than other sectors.[4]

Pre- to post-recession changes in (un)employment were also uneven across demographic groups (Hoynes, Miller, & Schaller, 2012). For example, employment among prime-age men decreased from 87.5% in December 2007 to a low of 80.4% in December 2009. By November 2013, this rate had increased only to 82.8% (Hout & Cumberworth, 2014). According to the same analysis, the female prime-age employment ratio fell slower and less steeply than among men—from 72.4% in December 2007 to a low of 68.7% in November 2011—but increased only 0.7 percentage points (69.4%) by November 2013. The recession had fairly proportional effects across educational categories among both men and women. At its peak (2010), the unemployment rate had increased from approximately 7.0% to 15.0% among people without a high school degree; and increased from approximately 2.0% to 5.0% among college graduates (Hout & Cumberworth, 2014). Of course, the proportionately of these increases belies the large disparities in the absolute levels of unemployment faced by these groups.

[4] According to Freeman (2013), for instance, total employment would have been nearly a half percentage point higher in 2012 had government employment not experienced the declines that occurred between 2010 and 2012 as a result of post-recession austerity measures.

While upticks in unemployment are a salient indicator of the recession's labor market impacts, a non-trivial share and number of workers remained in the workforce during the downtown. Despite their employed status, many of these workers were exposed to forms of hardship associated with the recession. For example, workers may have experienced declines in the hours they were allowed to work, the wages or salaries they were paid, or their odds of promotion. Empirical evidence supports these expectations. For example, Elsby, Hobijn, and Sahin (2010) plot steep declines in the weekly hours per worker. From the last quarter of the 2006 to the third quarter of 2009, the average weekly hours per worker declined nearly 3 log points.[5] A significant share of workers also experienced declines in earnings and income. DeNavas-Walt and Proctor (2014) document an 8.0% decline in median household income between 2007 and 2013. While this change is partially a function of declines in employment, it also reflects two other factors: (a) stagnation in the real wages of workers employed full time, year round and (b) a steep recession-related drop in the number of workers employed full time, year round. In fact, when comparing figures from 2007 and 2011, real annual wages per full time equivalent employee increased by just 0.3% (Freeman, 2013).[6]

Other research has also documented statistically significant increases in the share of involuntary part-time workers associated with the recession (Slack and Jensen, 2014; Sum and Khatiwada, 2010). These findings underline the consequences of shifts into forms of underemployment. Finally, to the extent that unemployment risks increased during the recession, households that previously avoided economic hardship only through

[5] Notably, these declines in weekly hours were part of an unusually large decline in total labor input, but the ratio between the decline in unemployment and hours ("bodies-hours") was not unusual among recessions.

[6] To put this in international context, this change ranks as the fourth-smallest among OECD countries.

multi-worker households may have experienced declines in wellbeing as one or more of those workers lost jobs or experienced declining hours worked (Baker 2015).

Taken together, existing research documents large and multi-dimensional recession impacts, including increases in poverty and unemployment. This research also suggests that recession-related declines in employment and economic status were not evenly distributed across social groups, showing that the recession had important distributional consequences. Yet there is little available evidence regarding the linkages between changes in work and poverty during this time period. To what extent did declines in the employment increase the likelihood that families would enter poverty? Evidence about the extent to which family poverty status is determined by the primary earner's work can yield insight into the strength (weakness) of work's poverty-reducing effects and, in contrast, the poverty-increasing effect of unemployment.

Conceptualizing Linkages between Work and Poverty

Following prior research on the link between work and poverty (Lichter, Johnston, & McLaughlin, 1994; Slack, 2010; Thiede, Lichter, & Sanders, 2015), our analyses focus on work among householders and poverty status as defined by the official U.S. government poverty thresholds. These thresholds account for the pre-tax income from all family members and are adjusted according to family size and age composition. Poverty is therefore conceptualized as a fundamentally family-based measure that accounts for pooled resource generation and demand.

By linking householders' work and a family-based poverty measure, we evaluate the extent to which the poverty status of families is determined by the work of the

householder (i.e., family reference person), who is usually the primary earner. In other words, we assess whether full time work among a single adult protects against family poverty, as is often assumed or normatively prescribed. Under this framework, then, the work and earnings of other family members are included among a set of factors that may account for changes in poverty not explained by householder work. To clarify this point, we illustrate the set of factors that determine household poverty status (Figure 1).

(Figure 1)

Although work among householders is expected to be the primary determinant of poverty, this figure identifies a number of other important factors. For one, changes in the householder's hourly wages or earnings may shift family income above or below the poverty threshold even without changes in work effort (i.e., hours and weeks worked). Second, shifts in both work effort and earnings among other family members affect family income. Changes in these two factors are most likely to translate into changing poverty status among families in which the householder generates near-poverty income, and as such may be dependent upon multiple-earner strategies to avoid poverty. Third, changes in other income sources—such as unemployment supports, cash transfers, or interest income, among others—also affect family income. For families living near the poverty line, informal cash transfers and public sector supports and changes therein (e.g., the extension of unemployment benefits) are typically the most important. Fourth, changes in family size and age composition affect the threshold against which family poverty status is determined. For example, the added resource demands of a newborn child without a corresponding increase in family income may push the family below the poverty threshold. Fifth and finally, year-to-year changes in government guidance on the

poverty thresholds may shift families' poverty status without changes in any of the other factors.

While the income generated by primary earners is expected to be a main determinant of family poverty status, this figure clearly illustrates other intervening factors that make the relationship between householders' work and poverty less straightforward than typically assumed. Still, the extent to which changes in these other factors explain poverty dynamics is an empirical question—one that has been largely unanswered to date. We begin to address this gap in the current paper.

Current Study

Research Focus

This study examines changes in patterns of work, poverty, and the relationship between work and poverty between 2005 and 2013. It also explores the implications of heterogeneous work-poverty dynamics for between-group differences in poverty risk, a key metric of how economic disadvantages are distributed. The periods of interest encompasses three years prior to the Great Recession, the recession itself, and the post-recession recovery period.

To explore these issues, this study addresses the following specific objectives with respect to both the overall [7] analytic sample and race-sex group-specific subpopulations. First, we track changes in work and poverty status among householders during the 2005 to 2013 period. Here we focus on the share of householders employed

[7] Since race-sex specific estimates are only calculated for non-Hispanic white, non-Hispanic black, and Hispanic adults, the overall sample only includes members of these groups.

full time and year round, less than full time and year round, and out of work entirely. We also document the share of poor and non-poor households. Second, we use a regression-based decomposition approach to quantify how shifts in hours and weeks worked among householders contributed to changes in poverty between 2005 and 2013. As a third objective, we track race- and sex-based differences in work-poverty dynamics during this period. In particular we quantify how changes in work patterns among particular race- and sex- groups affected the distribution of poverty risk between groups. The overall aim of these analyses is largely descriptive—to track changes in work and poverty during the recession—but speak to larger theoretical and philosophical debates about work and economic wellbeing in the U.S.

Data

We draw upon micro-data files from the March Supplement of the Current Population Survey (CPS) for the years 2006-2014 (King et al., 2010). The CPS is a nationally representative household survey of approximately 60,000 households, and is the primary source of labor force statistics for the U.S. The March Supplement includes detailed information on previous year income and work history, and is commonly used in research on poverty, employment, and underemployment. Our analyses also use these previous-year data, therefore our results correspond to the 2005 to 2013 period. The weight constructed for the March supplement is used throughout the analyses unless noted (King et al., 2010).

We impose a number of restrictions on the CPS sample for analytic purposes. First, since back-to-back years of data are pooled for our analysis, all members of the

fifth through eight rotating groups (part of the CPS design) in the post-2006 samples are dropped for the analysis to avoid repeated observations.[8] Second, we consider only householders aged 18 to 64. This focuses our analysis of work and poverty to a population expected—both normatively and in terms of public supports—to work. Third and finally, we exclude all householders not identified as non-Hispanic black, non-Hispanic white, or Hispanic. The relatively small number of observations from other racial and ethnic groups prohibits reliable estimation in our race-sex group-specific analyses. To facilitate accurate comparisons, we also consider only these three groups in the overall (i.e., pooled) analyses.

For analytic purposes we pool the data into three three-year periods: 2005-2007, 2008-2010, and 2011-2013. This approach allows us to achieve sufficient sample size in group-specific models while also capturing change across substantively distinct periods of labor market conditions. We use 2005-2007 as a pre-recession baseline. The first period captures pre-recession labor market conditions. Although the recession technically began in December 2007, we included data from 2007 in this baseline period because significant increases in unemployment did not occur until the following year. The second period (2008-2010) includes all but one month of the recession and the 18 months following the official end of the downturn. This period includes the post-recession peak in unemployment (10.0% in October 2009) and the five months of 2010 in which unemployment was within 0.2 percentage points of that peak (Bureau of Labor Statistics, 2015). Finally, the 2011-2013 period encompasses a period of recovery with respect to

[8] Please also note that the full 2014 sample has not yet been released. For this year, the Census Bureau inserted an experimental income question in the survey for 3/8 of the sample. At the time the data were extracted from King et al. (2010), data for only the 5/8 of respondents that received the original question were available.

macroeconomic and labor force indicators. As one indication, consider that the national unemployment rate declined from 9.2% in January 2011 to 6.7% by the end of 2013 (Bureau of Labor Statistics, 2015).

In sum, our analytic sample of householders consists of 274,744 un-weighted observations, of which 103,161 (37.6%) are in identified as non-Hispanic white male, 89,135 (32.4%) as non-Hispanic white female, 14,890 (5.4%) as non-Hispanic black male, 22,041 (8.0%) as non-Hispanic black female, 23,429 (8.5%) as Hispanic males, and 22,088 (8.0%) as Hispanic females. 42.0% of the observations fall in period 1 (n=115,376), 31.0% in period 2 (n=85,300), and 27.0% in period 3 (74,068).

Measures and methods

Our analyses proceed in three steps. First, we track changes in the share of householders in work and at various levels of work. Here, we distinguish between individuals not working and at three levels of work. We define these three levels according to annual hours worked, which is the product of the number of weeks worked in the previous year and the usual number of hours worked per week that year. We express annual hours worked in terms of full time equivalents (FTEs), where 1.0 FTE=1,750 annual hours worked. We construct four categories of work levels: (1) 0 FTE; (2) $0<FTE<0.5$; (3) $0.5\leq FTE<1.0$; and (4) $1.0\leq FTE$. Our analyses track changes in the distribution of householders across these groups for the pooled sample and each race-sex group.

Second, we calculate the rate of poverty among householders for each year, again for the pooled sample and each race-sex group. In all cases, we define poverty according to the official, family size-adjusted U.S. government thresholds for the year of

observation. As a third step, we then calculate the probability of poverty for each year and group conditional on a set of common social and demographic correlates to poverty. These probabilities are derived from a series of logistic regression models that we estimate for each group (i.e., pooled data, race-sex groups) and period. These models take the form:

$$\frac{\pi_{pi}}{1-\pi_{ij}} = \alpha_{pi} + \beta_{npi}X_{npi} + \varepsilon$$

where π_{pi} is the probability of poverty in period p for group i, α_{pi} is the baseline risk of poverty in period p for group i, X_{npi} represents a vector of other explanatory variables measured for group i in period p, and β_{npi} represents a vector of coefficient estimates for group i in period p corresponding to each explanatory variable. The explanatory variable of interest is work status (defined above), and we include controls for age, educational attainment, marital status, industry of employment or recent employment, and region of residence. We also control for race and sex in the overall pooled model. All explanatory variables are summarized in the appendix (Table A1).

We calculate the average predicted probability of poverty for each group and year of interest using the estimated regression coefficients and holding observed covariates at their mean for the specific group and year of interest. We then estimate the effect of between-period changes in work patterns on the conditional rate of poverty using a regression-based decomposition approach similar to that used in prior demographic research (Jones & Kelley, 1984; Phillips & Sweeney, 2006; Van Hook, Brown, & Kwenda, 2004). In this case, we seek to isolate the effect of changes in the distribution of householders across the four work categories defined above from shifts in the group-

specific rates (i.e., changes in β_{npi}) and other compositional changes that affected observed poverty risk.

Assuming that p is defined (but not denoted), we let $X_{w,1}$ represent the vector of indicator variables accounting for the distribution of householders across work categories during period 1, $X_{w,2}$ represent the same vector of variables measured at time 2, and $X_{k,1}$ and $X_{k,2}$ represent the vector of the control variables measured at times 1 and 2, respectively. In our approach, the difference in the predicted probability of poverty between time 1 and 2 is expressed as a component due to changes in the distribution of X_w and a component due to the combined changes in X_k, β_k, and β_w. Two procedures are possible within this general framework (Phillips and Sweeney, 2006; Van Hook, Brown, & Kwenda, 2004):

$$\theta_1 - \theta_2 = \beta_{w,1}(\bar{x}_{w,1} - \bar{x}_{w,2}) + \left[\bar{x}_{w,2}(\beta_{w,1} - \beta_{w,2}) + \sum_{k=0}^{k=K} b_{k,1}(\bar{x}_{k,1} - \bar{x}_{k,2}) + \sum_{k=0}^{k=K} x_{k,2}(\bar{\beta}_{k,1} - \bar{\beta}_{k,2})\right]$$

and

$$\theta_1 - \theta_2 = \beta_{w,2}(\bar{x}_{w,1} - \bar{x}_{w,2}) + \left[\bar{x}_{w,1}(\beta_{w,1} - \beta_{w,2}) + \sum_{k=0}^{k=K} b_{k,2}(\bar{x}_{k,1} - \bar{x}_{k,2}) + \sum_{k=0}^{k=K} x_{k,1}(\bar{\beta}_{k,1} - \bar{\beta}_{k,2})\right]$$

where θ_1 and θ_2 are the respective predicted probabilities of poverty in periods 1 and 2, K is the total number of coefficients in the model (excluding the coefficients for the vector of work level variables but including the intercept), $\beta_{w,1}$ and $\beta_{w,2}$ are the respective vectors of regression coefficients corresponding to work level variables in periods 1 and 2, $\bar{x}_{w,1}$ and $\bar{x}_{w,2}$ are the respective mean values for each of the work level variables in periods 1 and 2, $\beta_{k,1}$ and $\beta_{k,2}$ are the respective vectors of regression coefficients corresponding to variable k in periods 1 and 2, and $\bar{x}_{k,1}$ and $\bar{x}_{k,2}$ are the respective mean values for variable k in periods 1 and 2. Since the choice of standard

population is not self-evident, we present results from both approaches and, following previous research, use the average as an indicator of composition effects (Oaxaca, 1973; Phillips and Sweeney, 2006).

Finally, we also use this decomposition framework to assess how group-specific changes in work patterns affected between-group poverty probability ratios. These figures represent the ratio of the predicted probability of poverty (described above) between two groups. Here we focus on within-race between-gender ratios and within-gender between-race ratios, respectively using males and non-Hispanic whites as the reference groups.

Results

Changing Patterns of Work

We begin by describing changes in patterns of work as revealed by the distribution of family heads across four levels of work (Table 1). Across the entire (i.e., pooled) sample, we observe substantial shifts out of full time employment, with corresponding increases in the shares out of work entirely or employed less than full time. From 2005-2007 to 2008-2010, the share of persons working at least 1.0 FTE decreased by 4.5 percentage points, while the share out of work increased by 2.1 percentage points. The shares working 0.01-0.49 FTE and 0.5-0.99 FTE increased by 1.0 and 1.4 percentage points, respectively. The share of persons entirely out of work increased a further 1.3 percentage points from 2008-2010 through the 2011-2013 period. During this period, however, the increase in householders out of work corresponded more to a decline in the shares

working less than full time (-1.1 percentage points) than to a drop in full time employed householders (-0.2 percentage points).

(Table 1)

The results from the pooled data hide considerable differences in changing work patterns across race-sex groups. While each group experienced shifts away from full time employment during the recession, we find substantial differences with respect to the absolute and percentage magnitudes of change. We also observe differences in the extent to which declines in full time employment corresponded to increases in the share entirely out of work. Hispanic men saw the largest absolute (-10.1 percentage points) and percentage (-12.8%) declines in the share of householders working full time between 2005-2007 and 2008-2010. Among this group, declines in full time work corresponded to relatively equal percentage point increases in the shares working less than full time or out of work entirely. The implication is that a substantial share of full time workers seemingly transitioned to part-time or part-year work rather than falling entirely out of the workforce. In contrast, the absolute (-1.6 percentage points) and percent (-3.0%) decline in the share of householders working full time was smallest among non-Hispanic white women, but this decline was offset almost entirely by an increase in the share out of work (1.5 percentage points).

Relative to 2005-2007 levels, the largest percentage declines in the share of householders working full time or more were concentrated among Hispanics and blacks, with absolute (i.e., percentage point) changes largest among Hispanic (-10.2 percentage points) and non-Hispanic black (-8.4 percentage points) men. Smaller, but still substantial declines in the share working full time were observed from 2008-2010 to 2011-2013

among non-Hispanic black male and female householders (-1.2 percentage points each), with a decline of smaller magnitude (-0.2 percentage points) also observed among non-Hispanic white female householders. Other groups saw small upticks in the share of householders working full time, ranging from 0.6 percentage points among Hispanic men to only 0.1 percentage points among Hispanic women. As well, a number of groups—non-Hispanic white men and women and Hispanic men—experienced over one percentage point increases in the share of householders out of work. Changes in the share of householders working, but less than full time and year round, varied inconsistently.

(Table 2)

As a whole, the observed post-2010 changes underline both the continued weakness in the labor market after the recession and the varied patterns of change across different race-sex groups. The heterogeneous changes across different groups and levels of work also highlight the limitations of binary measures of work (e.g., unemployment and labor force participation), demonstrating the prevalence of underemployment in terms of hours and weeks worked.

Changing Patterns of Poverty

Recession-related increases in the share of householders working less than full time or out work entirely shifted the distribution of this population toward categories with relatively high poverty levels. The risk of poverty at each level of work may have also increased as a result of declining wages, declining annual hours worked within each category (e.g., due to worker dislocation), declining work among other family members, and changes in the other factors illustrated in Figure 1. In this section, we describe

patterns of unconditional rates of poverty among householders, including at different levels of work. Our results highlight a steep poverty gradient with respect to work, as well as marked and changing differences in the prevalence of poverty among different race-sex groups.

On average, the share of householders in poor families increased significantly from before the recession (2005-2007)—when 12.4% of family reference persons lived in poor families—to the periods that included the recession (14.2%, 2008-2010) and subsequent recovery (15.3%, 2011-2013) (Table 3). Rates of poverty, and changes therein, varied considerably by race-sex group. The highest poverty rates were among non-Hispanic black and Hispanic female householders: by the post-recession period, greater than 30% of these householders were living in poor families. The share of householders in poverty was lowest among non-Hispanic whites.

Trends in poverty were also uneven across groups. Non-Hispanic black and Hispanic male householders saw the largest upticks in poverty between 2005-2007 and 2008-2010, at 3.9 and 4.1 percentage points (25.8% and 29.1%), respectively. Non-Hispanic white males saw comparable percentage increases in poverty (21.2%, 1.4 percentage points), evidence that the recession's poverty impacts were concentrated among male-headed families. Poverty also increased overall and among most groups from during to after the recession, with the exception of Hispanic male householders, among whom the rate of poverty dropped 0.5 percentage points.

(Table 3)

Our results indicate that the increase in poverty was not only driven by a growing share of persons working less than full time (and therefore at high risk of poverty), but

also substantial increases in the rate of poverty among family reference persons working less than full time (Table 4). For example, the share of householders working less than 0.5 FTE increased from 30.1% in 2005-2007 to 30.7% in 2008-2010, and still further to 34.0% in 2011-2013. Substantial percentage point increases were observed among persons working 0.5-0.99 FTE, and in fact these changes represent larger percentage increases given lower baseline rates of poverty at this level of work. Notably, more than 3% of family reference persons working at least 1.0 FTE lived in poor families throughout the entire period—underscoring that the working poor are often fully employed (Brady, Baker, & Finnigan, 2013; Slack, 2010; Thiede, Lichter, & Slack, 2015).

(Table 4)

Our analyses disaggregated by race-sex group membership reveal substantial between-group differences in poverty at all levels of work. A key implication is that overall race- and sex-based differences do not simply reflect variation in work effort. Instead, we find higher rates of poverty among women than men, and among Hispanic and non-Hispanic blacks than non-Hispanic whites. For example, prior to the recession 1.6% of non-Hispanic white male householders working full time or more were poor, nearly half the rate of non-Hispanic white female (2.7%) and non-Hispanic black male (2.9%) householders. Rates among non-Hispanic black female and all Hispanic householders working at least full time were all over 7.5% and, in the case of Hispanic female householders, a full 9.6%.

No clear patterns emerge when examining changes in poverty at specific levels of work over the course of the recession and recovery. Among some groups—non-Hispanic

white women, for example—poverty among full time employed householders decreased. This was not the case for all groups, and indeed we see heterogeneous patterns across all levels of work. These relatively unclear patterns likely reflect complicated changes in the composition of householders at each level of work (e.g., selective shifts out of full time employment among some low-wage workers), which we account for in our subsequent regression analyses.

Changing Patterns of Poverty Probabilities

As the basis for our decomposition analysis, we estimate logistic regression models predicting poverty status using separate equations for each group and period. Based on these coefficient estimates, we then generate the average probability of poverty for each analytic sample and year, holding values of covariates at their mean levels (Table 5). Across the pooled sample, we find large percentage increases in poverty probabilities between the pre- and post recession periods. From the 2005-2007 base of 0.0450, the mean predicted probability increased to 0.0544 in 2008-2010—a 20.9% increase from the 2005-2007 base—and further to 0.0601 in 2011-2013—a 33.7% increase from the 2005-2007 level. The implication is that the average householder was nearly a fifth to a third more likely to be poor during the recession and its aftermath than in the 2005-2007 period.

(Table 5)

Shifts in between-group patterns of poverty probabilities follow the general contours of the changing crude poverty rates described above (Table 5). Males experienced considerably larger percentage—and in most cases absolute—changes in

poverty risk. For example, the probability of poverty among non-Hispanic black males increased by 35.5%, from 0.0594 to 0.0804, between 2005-2007 and 2008-2010. In contrast, the conditional probability of poverty among non-Hispanic black females increased from 0.1696 to 0.1832, or only 8.0%, during that same period. Similar trends were evident among non-Hispanic white and Hispanic householders. These dynamics highlight the relatively large impact of the recession on male work patterns, as well as the strong linkages between work and poverty among male householders. These findings also suggest that while the gender gap in the probability of poverty was seemingly narrowed by the recession, the overall poverty probabilities increased for both sexes. Finally, despite evidence of disproportionate impacts among male householders, results still point to non-white disadvantages in within-sex comparisons.

With the exception of Hispanic male householders, we also find evidence of continued increases in poverty risk after the recession. Here, however, the male disadvantage is less evident or nonexistent. For example, the conditional risk of poverty among non-Hispanic white male householders increased by only 0.02 percentage points from during to after the recession—much smaller than the 0.58 percentage point increase among non-Hispanic white female householders. The general lack of poverty reduction during the post-recession period highlights the stagnant nature of the recovery with resect to average household economic conditions.

The Effect of Changing Work Patterns on Poverty

To quantify whether and how recession-related shifts away from full time employment contributed to changes in the prevalence of poverty, we perform a series of regression-

based decompositions. In these analyses, we generate a series of predicted poverty probabilities under the assumption that observed inter-period changes in the share of householders out of work or only working part-time, did not occur (Table 6). We also model the effect of changing work patterns between the recession (2008-2010) and recovery (2011-2013) periods to evaluate work-poverty dynamics during the early phases of the recovery (Table 7).

With respect to the pooled sample of all race-sex groups, recall that the conditional probability of poverty increased by 0.0094, or 20.9%, from 2005-2007 to 2008-2010. However, had the share of householders in each work category not changed between these two periods, the average probability of poverty would have increased by only 0.0041, or 9.2% of the baseline poverty probability. The difference between the observed and simulated predicted probability of poverty indicates that shifts away from full time work account for 56.3% of the increase in average poverty risk between 2005-2007 and 2008-2010. Had all householders' work status remained constant between these two periods, the average probability of poverty would have increased by only 43.7% of what was actually observed. This is a large difference to be sure, but also highlights the substantial effect of factors beyond the number of hours and weeks worked by householders. Many families are seemingly in such a precious position that householders' baseline work effort was not sufficient to avoid poverty in the face of shifts in wages, other family members' work and earnings, and other factors that increase poverty risk.

Shifting patterns of work had substantial (i.e., greater than 30%) positive effects on poverty probabilities across all race-sex groups, but the magnitude of these effects

varied considerably. The largest effect was observed among non-Hispanic black female householders. Among this group, the observed increase in the probability of poverty between 2005-2007 and 2008-2010 would have not only been smaller had shifts in work not occurred, but it would have actually decreased by 0.0079. This is the only group for which we observe an effect of greater than 100%. Still, shifts in work also accounted for large shares of increased poverty risk among non-Hispanic white female (93.6%) and non-Hispanic black (83.6%) and Hispanic (71.6%) male householders. In contrast, shifts in the distribution of householders across work categories accounted for the smallest share of increased poverty risk among non-Hispanic white male (51.6%) and Hispanic female (30.7%) householders.

(Table 6)

Poverty risks continued to increase after the recession officially ended in 2009. From 2008-2010 to 2011-2013, the average poverty probability across the pooled sample increased 0.0057, or 10.6% of the 2008-2010 level. Relative to the changes observed from 2005-2007 to 2008-2010, however, substantially less of the increasing poverty risk was due to shifting work patterns among householders (Table 7). From the recession to post-recession periods, we estimate that 18.5% of the change in average poverty probability can be attributed to shifts in householders' work. The implication is that much of the continued increase in poverty after the recession was driven by factors other than the hours and weeks worked by householders, such as declining wages, continued declines in employment among other family members, ands changes in other sources of income (e.g., reductions in unemployment benefits).

(Table 7)

Group-specific estimates again underscore the very different positions that various race-sex groups occupied in the labor market during the recession and subsequent recovery. Poverty risk continued to increase among most groups, and for some quite substantially. For example, the probability of poverty among non-Hispanic black male householders increased by 0.0184, or 22.9% of 2008-2010 levels. However, only 14.5% of this change was due to shifts in householders' work. A comparable absolute increase in the probability of poverty was observed among non-Hispanic black female householders, but a much larger share (31.2%) of this increase was attributable to post-recession changes in the hours and weeks worked by householders. Still, in either case the association between changing work and poverty among this group was much lower than that observed from before to during the recession.

Little change in the probability of poverty occurred among non-Hispanic white male householders, and poverty risks declined among Hispanic male householders (-0.0080, -6.6%)—the only race-sex group for which we observe this. Notably, this decline occurred despite an adverse shift in work patterns among Hispanic male householders. Our results suggest that changing patterns of employment actually offset other factors associated with declining poverty such that poverty risks would have been 0.0084 lower in 2011-2013 had shifts in work not occurred. The fact that shifts in work had an effect on poverty odds that is opposite to what was observed is represented in the work effect of -4.6%. As a final note, it is worth underlining that the anomalously high work effect observed among non-Hispanic white male householders (196.5%) is a function of the small increase in poverty probability between 2008-2010 and 2011-2013 (0.0002). Since

the work effect is calculated in reference to this change, percentage estimates are highly sensitive to very small values.

Overall, our results document persistent, if somewhat uneven increases in the average probability of poverty from 2005 to 2013. These findings also demonstrate that declines in hours and weeks worked among householders during the recession were the main, but not exclusive driver of increasing poverty during that period. In contrast, the continued uptick in poverty during the post-recession period was largely driven by other factors.

Quantifying Differences Between Race-Sex Groups

The results of our main analyses have shown that the recession's effects on work and poverty, and the link between changing work and poverty risks, have varied substantially according to race and gender. To quantify the implications of these changes for the distribution of poverty between groups, our final analyses show how heterogeneous changes in householders' work affected poverty probability ratios between groups.

Here, we begin by examining trends in the female-to-male poverty probability ratio, focusing on the 2005-2007 to 2008-2010 period and drawing within-race/ethnicity comparisons (Table 8). At the pre-recession baseline, this ratio was highest among non-Hispanic black householders at all periods (2.8567), approximately 1.0 higher than the ratio among both non-Hispanic white and Hispanic householders. The recession was associated with declining female-to-male ratios—a decline in the gender poverty gap—for all groups. The largest absolute declines occurred among non-Hispanic black householders, but both non-Hispanic groups (blacks and whites) experienced similar

percentage declines of approximately 20%. The decline among Hispanic householders was much smaller in absolute (-0.1671) and percentage (-9.1%) terms. At more than 125%, however, the combined effect of changing work patterns among Hispanic males and females on the poverty probability ratio was substantially higher than any other racial and ethnic group. Indeed, this work effect was 51.3% and 34.9% among non-Hispanic black and white householders, respectively. These work effects indicate that the shifts in patterns of householders' work contributed to declines in female-to-male poverty probability ratios: the gender gap would have decreased less or increased in the absence of recession-related shifts in work.

We also consider race and ethnicity-based gaps in poverty risk, here drawing within-sex comparisons. We find that the recession was associated with slightly increasing gaps between non-Hispanic white and minority householders, with the exception of the ratio of non-Hispanic white to Hispanic male householders (-0.1319, -3.1%). For both male and female householders, shifts in work reinforced growing black-white inequality. Indeed, the black-white poverty ratios would have declined by 7.6 percentage points among men and 5.0 percentage points among women in the absence of recession-related shifts in work. In contrast, shifts in work offset observed declines in the poverty probability ratio between Hispanic and non-Hispanic white male householders (-104.0%), and also offset observed increases in Hispanic-to-non-Hispanic white disparities among female householders (-10.6%).

(Table 8)

For non-Hispanic white and Hispanic householders, recession-related declines in the gender gap in poverty probabilities were largely or entirely reversed between 2008-

2010 and 2011-2013. For both of these groups, work had small, but positive inequality-increasing effects. In contrast, the female-to-male poverty probability ratio continued to decline among non-Hispanic black householders, reaching 2.0112 in 2011-2013—nearly 30% below pre-recession levels. This continued decline was reinforced marginally (1.9%) by shifts in work among non-Hispanic black householders.

Black-white gaps in poverty among male householders continued to increase in the aftermath of the recession. A positive work effect of 7.3% suggests that changes in hours and weeks worked by householders reinforced this increase. Shifts in work also had an inequality-increasing effect with respect to black-white poverty gaps among female householders (work effect = -13.6%). However, other factors seemingly offset this work effect such that the black-to-white ratio for female householders declined from 2008-2010 to 2011-2013. The Hispanic-to-non-Hispanic white poverty probability ratio also declined among both male and female householders, in both cases driven in part by inequality-decreasing changes in householders' work.

(Table 9)

Discussion and Conclusion

This paper examined the effect of recession-related shifts in work patterns on observed increases in the poverty rate, and explored how variation in the recession's impact on labor markets shaped inequality in poverty risks between race-sex groups. Unsurprisingly, results provide evidence of declines in work—both in terms of decreasing annual hours worked and increased unemployment or labor force dropout—and increases in poverty. The findings demonstrate that shifts out of the workforce and

from full- to part-time work played a substantial but, importantly, not exclusive role in the increased rate of poverty during the 2006-2010 period. The implication here is that declining hours and weeks worked, and increased rates of unemployment, among householders drove part of the increased burden of poverty associated with the recession. However, a substantial—in some cases, majority—share of the change in poverty cannot be attributed to downward transitions across the categories of work we have defined. This suggests that other factors, such as declining wages, declining employment among co-resident family members, and changes in other forms of income (e.g., unemployment insurance), and were important.

The outcomes we track in this paper shifted in heterogeneous ways across the different race-sex groups we examined. The overall magnitude of the recession's impact on work and poverty was highly uneven, with historically disadvantaged groups experiencing the largest declines in work and increases in poverty risk. The mechanisms of these declines were also uneven. Increases in poverty were driven largely by shifts in work among some groups—such as non-Hispanic black males—while others—such as non-Hispanic white females—experienced increases in poverty mainly driven by other factors such as declining wages and changes in employment among other family members. Such variation highlights the systematic differences in the protective effect of householders' work vis-à-vis poverty risk, and in vulnerability to downturns more broadly (Couch and Fairlie, 2010).

Overall, these findings underline the complicated and heterogeneous links between work and poverty in the U.S. The results also point to the importance of studying recessions' impacts beyond one-dimensional indicators of employment. Instead,

our findings should motivate future research focused on smaller-grained shifts in work and wages, household economy dynamics, and between-group differences in these trends.

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Figures

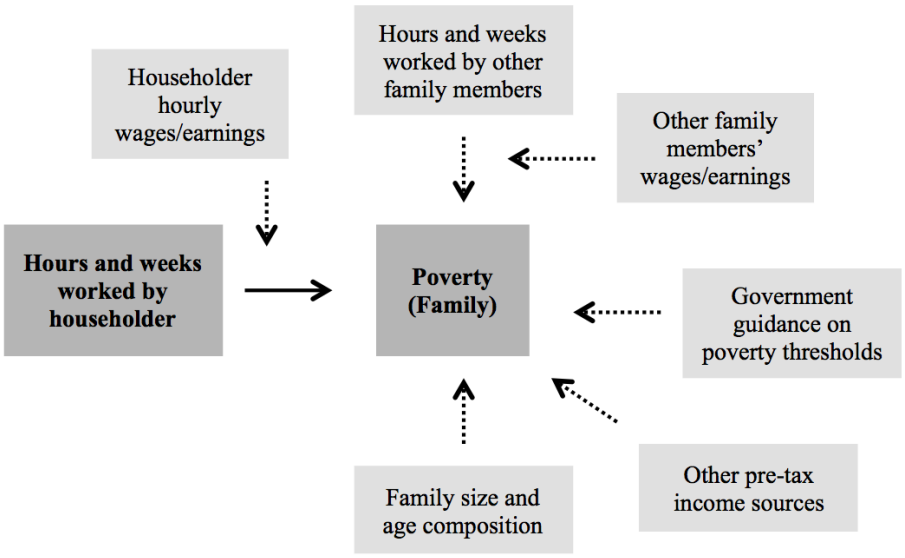

Figure 1 Factors determining family poverty status

Tables

Table 1 Share of householders by work category and period (pooled sample)			
Work (FTE)	2005-2007	2008-2010	2011-2013
0	17.6	19.8	21.1
0.1-0.49	6.7	7.7	7.4
0.5-0.99	11.2	12.6	11.7
1.0+	64.4	59.9	59.8

Table 2 Share of householders by work category, period, and race-sex group				
Group	Work (FTE)	2005-2007	2008-2010	2011-2013
Non-Hispanic white, male	0	11.4	13.3	14.8
	0.1-0.49	4.4	5.8	5.3
	0.5-0.99	8.3	10.1	8.8
	1.0+	75.9	70.8	71.2
Non-Hispanic white, female	0	22.7	24.1	25.3
	0.1-0.49	9.9	9.9	9.4
	0.5-0.99	14.6	14.9	14.2
	1.0+	52.8	51.2	51.0
Non-Hispanic black, male	0	19.0	24.1	24.6
	0.1-0.49	5.1	7.2	7.3
	0.5-0.99	8.8	10.0	10.6
	1.0+	67.1	58.8	57.5
Non-Hispanic black, female	0	24.0	27.2	28.2
	0.1-0.49	7.8	8.9	8.8
	0.5-0.99	12.3	13.1	13.5
	1.0+	55.9	50.7	49.5
Hispanic, male	0	8.4	11.7	12.9
	0.1-0.49	3.7	6.3	5.8
	0.5-0.99	9.6	13.7	12.4
	1.0+	78.4	68.3	68.9
Hispanic, female	0	31.2	31.5	31.5
	0.1-0.49	8.5	9.2	10.1
	0.5-0.99	13.5	15.4	14.3
	1.0+	46.8	43.9	44.0

Table 3 Share of householder in poverty by race-sex group and period			
Group	2005-2007	2008-2010	2011-2013
Total (pooled)	12.5	14.2	15.3
Non-Hispanic white, male	6.6	8.0	8.7
Non-Hispanic white, female	12.2	12.5	13.8
Non-Hispanic black, male	15.1	19.0	21.4
Non-Hispanic black, female	28.3	30.2	30.9
Hispanic, male	14.1	18.2	17.7
Hispanic, female	26.4	29.7	30.6

Table 4 Share of householders in poverty by race-sex group, work category, and period				
Group	Work (FTE)	2005-2007	2008-2010	2011-2013
Total (pooled)	0	37.4	39.0	41.0
	0.1-0.49	30.1	30.7	34.0
	0.5-0.99	15.5	16.7	18.3
	1.0+	3.3	3.3	3.3
Non-Hispanic white, male	0	30.7	32.2	34.5
	0.1-0.49	25.1	25.7	26.6
	0.5-0.99	9.7	11.0	12.4
	1.0+	1.6	1.6	1.5
Non-Hispanic white, female	0	29.5	29.9	32.2
	0.1-0.49	23.7	22.6	26.8
	0.5-0.99	12.0	12.0	13.2
	1.0+	2.7	2.5	2.5
Non-Hispanic black, male	0	47.8	51.5	55.5
	0.1-0.49	39.3	42.3	43.9
	0.5-0.99	23.1	18.0	21.7
	1.0+	2.9	2.9	3.8
Non-Hispanic black, female	0	64.2	62.4	61.2
	0.1-0.49	57.4	53.9	59.0
	0.5-0.99	34.1	34.3	33.3
	1.0+	7.6	7.6	8.0
Hispanic, male	0	49.0	48.1	51.7
	0.1-0.49	46.8	45.6	43.7
	0.5-0.99	21.5	26.3	27.3
	1.0+	7.9	8.9	7.4
Hispanic, female	0	47.4	53.4	53.5
	0.1-0.49	39.8	45.2	47.0
	0.5-0.99	27.7	31.8	32.8
	1.0+	9.6	8.6	9.8

Table 5 Predicted probability of poverty by race-sex group and period						
	2005-2007		2008-2010		2011-2013	
Group	Pr.	SE	Pr.	SE	Pr.	SE
Total (pooled)	0.0450	(0.0009)	0.0544	(0.0012)	0.0601	(0.0013)
Non-Hispanic white, male	0.0206	(0.0009)	0.0268	(0.0013)	0.0270	(0.0015)
Non-Hispanic white, female	0.0389	(0.0015)	0.0409	(0.0018)	0.0467	(0.0021)
Non-Hispanic black, male	0.0594	(0.0045)	0.0804	(0.0064)	0.0988	(0.0080)
Non-Hispanic black, female	0.1696	(0.0061)	0.1832	(0.0074)	0.1988	(0.0079)
Hispanic, male	0.0957	(0.0037)	0.1207	(0.0052)	0.1127	(0.0052)
Hispanic, female	0.1750	(0.0059)	0.2006	(0.0068)	0.2214	(0.0075)
Predicted probabilities derived from group- and year-specific logistic regression models of poverty (see “Measures and methods”)						

Table 6 Decomposition of change in probability of poverty explained by changes in work levels, 2005-2007 to 2008-2010

Group	Observed change		Simulated change[a]		Work effect[a]
	Absolute	Percentage	Absolute	Percentage	
Total (pooled)	0.0094	20.9%	0.0041	9.2%	56.3%
Non-Hispanic white, male	0.0062	30.1%	0.0030	14.6%	51.6%
Non-Hispanic white, female	0.0021	5.3%	0.0001	0.3%	93.6%
Non-Hispanic black, male	0.0211	35.5%	0.0035	5.8%	83.6%
Non-Hispanic black, female	0.0136	8.0%	-0.0079	-4.6%	157.8%
Hispanic, Male	0.0250	26.1%	0.0071	7.4%	71.6%
Hispanic, Female	0.0255	14.6%	0.0177	10.1%	30.7%

[a]Average of two models: (1) 2005-2007 as standard; (2) 2008-2010 as standard

Table 7 Decomposition of change in probability of poverty explained by changes in work levels, 2008-2010 to 2011-2013

Group	Observed change		Simulated change[a]		Work effect[a]
	Absolute	Percentage	Absolute	Percentage	
Total (pooled)	0.0057	10.6%	0.0047	8.6%	18.5%
Non-Hispanic white, male	0.0002	0.7%	-0.0002	-0.7%	196.5%
Non-Hispanic white, female	0.0058	14.1%	0.0050	12.1%	14.1%
Non-Hispanic black, male	0.0184	22.9%	0.0157	19.6%	14.5%
Non-Hispanic black, female	0.0156	8.5%	0.0107	5.8%	31.2%
Hispanic, Male	-0.0080	-6.6%	-0.0084	-6.9%	-4.6%
Hispanic, Female	0.0209	10.4%	0.0201	10.0%	3.8%

[a]Average of two models: (1) 2008-2010 as standard; (2) 2011-2013 as standard

Table 8 Decomposition of change in poverty probability ratio explained by changes in work levels, 2005-2007 to 2008-2010								
Comparison	Sub-group	Observed ratios		Observed change		Simulated change[a]		Work effect[a]
		2005-2007	2008-2010	Absolute	Percentage	Absolute	Percentage	
Female : male	Non-Hispanic white	1.8867	1.5274	-0.3593	-19.0%	-0.2340	-12.4%	34.9%
	Non-Hispanic black	2.8567	2.2780	-0.5788	-20.3%	-0.2821	-9.9%	51.3%
	Hispanic	1.8282	1.6610	-0.1671	-9.1%	0.0459	2.5%	127.5%
Non-Hispanic black : non-Hispanic white	Male	2.8819	3.0012	0.1193	4.1%	-0.2198	-7.6%	284.2%
	Female	4.3637	4.4762	0.1125	2.6%	-0.2165	-5.0%	292.4%
Hispanic : non-Hispanic white	Male	4.6474	4.5055	-0.1419	-3.1%	-0.2895	-6.2%	-104.0%
	Female	4.5033	4.8998	0.3966	8.8%	0.4385	9.7%	-10.6%
[a]Average of two models: (1) 2005-2007 as standard; (2) 2008-2010 as standard								

Table 9 Decomposition of change in poverty probability ratio explained by changes in work levels, 2008-2010 to 2011-2013								
Comparison	Sub-group	Observed ratios		Observed change		Simulated change[a]		Work effect[a]
		2008-2010	2011-2013	Absolute	Percentage	Absolute	Percentage	
Female : male	Non-Hispanic white	1.5274	1.7311	0.2037	13.3%	0.1974	12.9%	3.1%
	Non-Hispanic black	2.2780	2.0112	-0.2667	-11.7%	-0.2616	-11.5%	1.9%
	Hispanic	1.6610	1.9643	0.3032	18.3%	0.3026	18.2%	0.2%
Non-Hispanic black : non-Hispanic white	Male	3.0012	3.6621	0.6609	22.0%	0.6126	20.4%	7.3%
	Female	4.4762	4.2548	-0.2214	-4.9%	-0.2514	-5.6%	-13.6%
Hispanic : non-Hispanic white	Male	4.5055	4.1768	-0.3287	-7.3%	-0.2835	-6.3%	13.8%
	Female	4.8998	4.7394	-0.1604	-3.3%	-0.0931	-1.9%	41.9%
[a]Average of two models: (1) 2008-2010 as standard; (2) 2011-2013 as standard								

Appendix

Table A1 Distribution of cases per variable by period, pooled data[a]			
Variable / Group	2005-2007	2008-2010	2011-2013
	%	%	%
Poverty status			
Non-poor (family)	87.5	85.8	84.7
Poor (family)	12.5	14.2	15.3
Work status			
0	17.6	19.8	21.1
0.1-0.49	6.7	7.7	7.4
0.5-0.99	11.2	12.6	11.7
1.0+	64.4	59.9	59.8
Race-sex group			
Non-Hispanic white, male	39.9	38.9	38.0
Non-Hispanic white, female	33.3	33.2	32.7
Non-Hispanic black, male	5.3	5.5	5.8
Non-Hispanic black, female	8.2	8.2	8.5
Hispanic, Male	7.0	7.2	7.5
Hispanic, Female	6.3	7.0	7.4
Age			
18-24	7.2	6.7	6.5
25-54	72.0	70.5	68.8
55-64	20.9	22.8	24.8
Educational attainment			
No high school diploma	11.5	10.5	9.6
High school diploma	48.8	48.5	47.1
Associate's degree	9.9	10.3	11.1
Bachelor's degree +	29.9	30.8	32.2
Marital status			
Married	54.2	52.9	51.0
Separated, divorced, or widowed	22.5	22.6	22.9
Single, never married	23.2	24.5	26.2

Table A1 (continued) Distribution of cases per variable by period, pooled data[a]			
Variable / Group	2005-2007	2008-2010	2011-2013
	%	%	%
Industry			
Construction	6.8	6.2	5.5
Manufacturing	10.3	9.5	9.2
Transportation and utilities	4.4	4.2	4.0
Wholesale and retail trade	14.0	13.8	13.4
Finance, insurance, and real estate	5.8	5.4	5.5
Business and repair services	6.2	6.5	6.9
Personal, entertainment, and recreation services	4.1	4.2	4.1
Professional and related services	21.9	22.5	22.6
Public administration	4.8	4.9	4.8
Other	21.8	22.9	24.0
Region			
Northeast	17.9	17.7	17.7
Midwest	23.5	22.9	22.8
South	37.4	38.1	38.4
West	21.3	21.3	21.1
N (unweighted)	111,376	85,300	74,068
[a]Sample restricted to non-Hispanic white, non-Hispanic black, and Hispanic; summary of disaggregated race-sex samples available upon request			