Race, Identity and Work

Occupational Composition and Racial/Ethnic Inequality in Varying Work Hours in the Great Recession

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ABSTRACT

A varying number of work hours from week to week creates considerable hardships for workers and their families, like volatile earnings and work–family conflict. Yet little empirical work has focused on racial/ethnic differences in varying work hours, which may have increased substantially in the Great Recession of the late 2000s. We extend literatures on racial/ethnic stratification in recessions and occupational segregation to this topic. Analyses of the Survey of Income and Program Participation show varying weekly hours became significantly more common for White and Black, but especially Latino workers in the late 2000s. The growth of varying weekly hours among White and Latino workers was greatest in predominantly minority occupations. However, the growth among Black workers was greatest in predominantly White occupations. The chapter discusses implications for disparities in varying hours and the salience of occupational composition beyond earnings.

Keywords: Work hours and schedules; the Great Recession; occupational racial/ethnic composition; group threat hypothesis; minority power hypothesis

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INTRODUCTION

Despite long-standing and profound White-Black and White-Latino disparities in unemployment rates and earnings, relatively little research has examined racial/ethnic stratification in stability of weekly work hours. For decades, unemployment rates for Black workers have remained more than twice the rate for Whites. Unemployment is also consistently higher for Latino workers than Whites, with considerable growth in these gaps during the Great Recession of the late 2000s (Hoynes, Miller, & Schaller, 2012; Mishel, Bivens, Gould, & Shierholz, 2012).[1] Moreover, racial/ethnic wage gaps were larger in 2010 than 1980 (Mandel & Semyonov, 2016). Much of the literature on racial/ethnic labor market inequality focuses on these disparities, but hours instability may also have increased in recent decades. This study examines racial/ethnic disparities in varying numbers of hours from week to week, and how any such disparities are structured by local occupational composition.

Measures differ, but as many as 40 percent of workers exhibit some form of work schedule variability from week to week, including varying numbers of hours, or irregular or unpredictable schedules (Golden, 2015; Lambert, Fugiel, & Henly, 2014). Some research finds workers of color are more likely to report varying numbers of hours (Golden, 2001), while others find little racial/ethnic differences (Lambert et al., 2014). Recent research has documented a number of deleterious consequences of varying weekly hours and schedules, motivating its consideration as a stratification outcome. Particularly for hourly workers, varying weekly hours lead to volatile earnings. Irregular and unpredictable hours are also associated with work–family conflict (Henly & Lambert, 2014; Presser, 2005), stress and poor health (Schneider & Harknett, 2016), and even sleep disruption (Maume, Sebastian, & Bardo, 2009). Our study focuses on hourly workers because they are most exposed to, and affected by, varying hours (Golden, 2001, 2015). Any racial/ethnic disparities in varying numbers of weekly hours could thus contribute to disparities in their social and economic consequences.

We test the hypothesis that varying weekly hours are more common for Black and Latino workers than Whites. The Great Recession may also have compounded any preexisting racial/ethnic disparities in varying weekly hours. Past research provides evidence that racial/ethnic employment discrimination increases during recession periods. For example, the "first fired, last hired" hypothesis (Couch & Fairlie, 2010; Freeman, 1973) contends that discriminatory employers fire minority employees first as the recession begins, and hire minority applicants last when economic conditions improve. An analogous process may occur with hour cuts in the recession, affecting workers of color before and more persistently than Whites.

The chapter also examines the role of local occupational racial/ethnic composition to understand the structural contexts for any inequalities in varying weekly hours. Past literature demonstrates the importance of occupational composition for a number of other racial/ethnic labor market disparities (DiTomaso, Post, & Parks-Yancy, 2007; Reskin, McBrier, & Kmec, 1999). For example, workers in predominantly minority jobs or occupations have lower earnings

than those in predominantly White occupations (Huffman & Cohen, 2004; Kmec, 2003; Semyonov & Herring, 2007; Tomaskovic-Devey, 1993). We develop and test two competing hypotheses for how the racial/ethnic composition of local occupations may be associated with disparities in varying weekly hours. Building on the group threat hypothesis (Blalock, 1956; Blumer, 1958), more minority workers in local occupations may lead to greater discrimination by White managers or coworkers. Thus, racial/ethnic disparities in varying weekly hours may be larger in predominantly minority occupations than predominantly White ones. Conversely, the minority power thesis (Semyonov & Herring, 2007) predicts minority workers secure more positive outcomes, like higher wages or lower risks of job loss, with greater numbers. Greater representation for Black and Latino workers in local occupations may buffer them from marginalization within those occupations, and reduce racial/ethnic disparities in varying hours.

This study empirically tests these hypotheses using nationally representative longitudinal data on hourly workers from the 2004 and 2008 panels of the Survey of Income and Program Participation (SIPP), and measures of local occupational composition (occupation-industry cells within states) from the American Community Survey (ACS). This examination makes multiple contributions to the literature. First, we provide estimates of recent trends in varying weekly hours for White, Black, and Latino workers. Panel data also allow us to examine the persistence of varying hours over time. Second, this study estimates the growth of any racial/ethnic disparities during the most recent and severe economic downturn. Third, we extend research on occupational segregation from its more traditional focus on earnings to work hours. In doing so, we demonstrate the salience of occupational segregation for racial/ethnic stratification in employment precarity and its array of economic and social consequences (Golden, 2015; Henly & Lambert, 2014; Kalleberg, 2011).

RACIAL/ETHNIC DISPARITIES IN VARYING WEEKLY HOURS

Varying weekly hours are one form of uncertain and irregular work, also called precarious work (Kalleberg, 2011). Particularly in service industries, employers use variable schedules to reduce labor costs (Appelbaum, Bernhardt, & Murnane, 2003; Lambert, 2008). Strategies include using computer software to predict required staffing down to 15-minute intervals, requiring workers to stay on-call for last-minute shifts, cutting scheduled shifts short due to slow business, or informal layoffs where workers' hours are reduced to zero (Halpin, 2015; Henly, Shaefer, & Waxman, 2006; Lambert, 2008; Schneider & Harknett, 2016). Though varying hours could ostensibly reflect employee-driven flexibility rather than employer-driven instability, past research finds workers with the least stable employment have very low levels of schedule control (Henly et al., 2006; Lambert et al., 2014). Retail workers, who have high volatility in weekly hours, overwhelmingly report desiring a greater number of hours and greater stability from week to week (Schneider & Harknett, 2016). High levels of varying weekly

hours likely indicate that workers, rather than businesses, bear the risk of any volatility in demand (Lambert, 2008).

The number of hours, their timing (i.e., day shifts versus night or rotating shifts), and their predictability represent analytically distinct dimensions of work schedules that have different consequences (Alexander & Haley-Lock, 2015; Schneider & Harknett, 2016). This study focuses specifically on varying numbers of weekly work hours, which often have nonstandard timing and little advanced schedule notice. Even with standard timing and predictability however, varying numbers of hours lead directly to earnings and income volatility for hourly workers. Moreover, instability in numbers of work hours reflects a form of employment hardship that unemployment rates otherwise miss.

Given pervasive racial/ethnic stratification in most aspects of the labor market, we expect Black and Latino workers experience varying weekly hours significantly more than comparable Whites. Past quantitative research on racial/ethnic differences in work schedules is relatively limited. We are aware of only one study showing that Whites are less likely to report varying weekly hours than non-Whites using the 1991 Current Population Survey (Golden, 2001). Some past research has found nonstandard schedules (shifts other than regular daytime) or irregular schedules, which often lead to varying numbers of hours, are more common for Black and Latino workers than Whites (Golden, 2015; Presser, 2003; Presser & Ward, 2011). Recent data on early career workers do not find greater hours variability among Black and Latino workers than Whites, however (Lambert et al., 2014).

Existing large-scale quantitative research on racial/ethnic stratification in the labor market has generally focused on employment rates and earnings. Conditional on human capital and other individual characteristics, sociologists often attribute residual differences in unemployment rates or average earnings between racial/ethnic groups to discrimination. Though standard survey data leave many relevant individual attributes unobserved, audit studies consistently find profound discrimination in job callbacks and hiring (Pager & Shepherd, 2008; Quillian, Pager, Hexel, & Midtbøen, 2017). Hiring discrimination also channels workers of color into occupations and industries that, on average, have lower pay and prestige (Reskin et al. 1999; Stainback & Tomaskovic-Devey, 2012). Moreover, discrimination in other domains, like education or criminal justice records, contributes to racial/ethnic disparities in human capital prior to job interviews or hiring (Reskin, 2012). As a result, residual differences in earnings or unemployment could be interpreted as lower bounds for the total extent of racial discrimination in the labor market (McCall, 2001).

Workers of color may similarly experience disadvantages in hours stability in multiple ways. First, educational disparities and occupational segregation push workers of color disproportionately into less stable jobs (Reskin, 2012; Reskin et al. 1999; Stainback & Tomaskovic-Devey, 2012). For example, Black and Latino workers are employed in retail and construction occupations at higher rates than Whites (Catanzarite & Trimble, 2008; Mishel et al., 2012). Demand for both types of work are strongly contingent on economic conditions, so Black

and Latino workers would be disproportionately exposed to management practices designed to cut labor costs, like varying hours.

Second, employers may treat work hours as a valuable and scarce resource for their employees. Plentiful, consistent, or otherwise desirable hours can be a reward for favored workers, while reduced or undesirable hours can be a punishment (Halpin, 2015). Though perhaps less starkly visible than wage gaps or discrimination in hiring and firing, racial/ethnic power inequalities pervade workplaces and jobs in many ways (Reskin et al., 1999; Tomaskovic-Devey, 2014). Not only might workers of color be relegated to the least rewarding tasks within workplaces (Wingfield & Alston, 2014), they may also be rewarded least often with sufficient and stable numbers of hours. As with racial/ethnic earnings disparities, we could interpret residual differences in varying hours (i.e., controlling for education, occupation, etc.) as the result of this kind of discrimination. Our first hypothesis predicts Black and Latino workers experience varying hours more often than Whites.

> *H1a.* Varying weekly hours are more common for Black and Latino workers than Whites.

Racial/ethnic disparities in varying hours may be most pronounced during economic downturns. The "first fired, last hired" hypothesis (Freeman, 1973) contends that employers lay off workers of color first in economic recessions, disproportionately preserving jobs for Whites. In economic recoveries, employers hire White workers more readily than minorities, again maintaining privileged access to employment. Research consistently finds larger unemployment inequalities in recession periods (Couch & Fairlie, 2010; Hoynes et al., 2012). Latino workers' disproportionate unemployment in recent years is entirely driven by their segregation to jobs strongly affected by business cycles, like construction and manufacturing (Laird, 2015).

An analogous process to the "first fired, last hired" hypothesis may occur with stable work hours. In addition to disproportionately preserving jobs for White workers, discriminatory employers may also try to preserve their supply of working hours. As a result, workers of color may be the first to have their hours changed in response to changes in demand, and the last to have them restored.

> *H1b.* Varying weekly hours increased more for Black and Latino workers than Whites during the Great Recession.

We implicitly hypothesize varying hours increased for all workers in the Great Recession. Empirical tests of *H1b* will also test that general increase by extension.

OCCUPATIONAL COMPOSITION AND DISPARITIES IN VARYING WEEKLY HOURS

Beyond documenting the size and trends in any racial/ethnic disparities in varying weekly hours, we also assess underlying theoretical mechanisms by examining occupational racial/ethnic composition. A sizable literature demonstrates

that occupational segregation is a powerful mechanism driving racial/ethnic labor market stratification (Catanzarite, 2002, 2003; Huffman, 2004; Kmec, 2003; Reskin et al. 1999; Semyonov & Herring, 2007; Stainback & Tomaskovic-Devey, 2012; Tomaskovic-Devey, 1993). As described above, workers of color are disproportionately relegated to the lowest-paying jobs through combinations of racial stereotyping and discrimination (Kaufman, 2002; Kornrich, 2009; Tomaskovic-Devey, 1993). Existing literature has also examined racial/ethnic disparities *within* occupations of different racial/ethnic compositions, but the results have been mixed (Reskin et al., 1999). We test two competing sets of hypotheses, predicting either larger or smaller racial/ethnic disparities in varying weekly hours with a greater presence of minority workers in local occupations.

Larger Racial/Ethnic Disparities in Predominantly Minority Occupations

Based on the group threat hypothesis, we could predict larger racial/ethnic disparities in varying weekly hours in occupations with more minority workers. The group threat hypothesis predicts Whites will increase social closure in response to greater minority presence (Blalock, 1956; Blumer, 1958). According to Blumer (1958), racial prejudice stems from a sense of group position, where Whites feel "property claims" over resources like particular jobs, occupations, and other economic advantages. In this conceptualization, prejudice intensifies in response to perceived threats to White advantage. Following Blalock (1956), empirical tests of the group threat hypothesis have generally examined the size or growth of the minority population in a geographic area, but that presence may be most visible in the workplace. Workers of color may experience worse outcomes relative to Whites in the same local occupations when their representation in that occupation is greater.

Following group threat, we predict Black and Latino workers will experience varying hours more often than their White counterparts in predominantly minority local occupations. When workers of color are more numerous, White managers or coworkers may enact greater social closure over a steady supply of hours, above and beyond traditionally studied outcomes like employment or wages.[2] The corresponding hypothesis is as follows.

> *H2a.* Racial/ethnic disparities in varying hours are greater in minority-dominated occupations than White-dominated occupations.

By extension, we expect racial/ethnic disparities increased most in predominantly minority occupations during the recession. The strength of group threat may be greater under economic adversity (Quillian, 2006). Whites may not feel threatened by large fractions of workers of color in their occupations when hours are plentiful. Threat might be activated when hours become scarce. Intensification of group threat need not rely on explicit growth of anti-minority prejudice. Implicit racial bias can also lead to discrimination (Quillian, 2006), and bias increases among Whites in response to economic scarcity (Krosch & Amodio, 2014). Whites may also respond to economic adversity with greater

within-group favoritism (DiTomaso, 2013), similarly resulting in greater racial inequality.

> *H2b.* The growth of racial/ethnic disparities in varying hours during the Great Recession was larger in minority-dominated occupations than White-dominated occupations.

Despite the prominence of these theoretical perspectives, empirical support for their applicability to occupational composition is somewhat limited.[3] Huffman (2004) finds some evidence of larger White-Black wage disparities in Black-dominated jobs. Other studies explicitly testing for racial differences in the association between occupational composition and wages fail to find stronger negative effects for workers of color (Kmec, 2003; Semyonov & Herring, 2007; Tomaskovic-Devey, 1993). Instead, most research emphasizes differences in the distribution of racial/ethnic groups across occupations, rather than differential effects of racial/ethnic composition.

Smaller Racial/Ethnic Disparities in Predominantly Minority Occupations

Literature also provides reason to expect the opposite pattern – that racial/ethnic disparities will be smaller in minority-dominated occupations than White-dominated ones. Greater representation of workers of color in an occupation may increase their power within it, thus limiting any disparities in varying weekly hours. Drawing on literature in organizational demography (Shenhav & Haberfeld, 1992), Semyonov and Herring (2007) call this potential process the "minority power thesis." When workers of color are highly represented in an occupation, "they can gain control and hegemony over the market; hence, they can enjoy relative advantages not available elsewhere" (Semyonov & Herring, 2007, p. 246). Supporting the hypothesis, Semyonov and Herring (2007) found Latino workers in predominantly Latino occupations earned more than they otherwise would. Though occupational segregation increased White-Black earnings inequalities, its contribution to White-Latino inequalities was less substantial. These findings contrast with earlier work on Latinos' earnings by Catanzarite (2002) which focused on the Los Angeles labor market. Similarly, Kornrich (2009) found less White-Black wage inequality in local labor queues with higher proportions of Black workers.

With respect to employment, employee exit rates in a longitudinal study of a large firm were lower when same-race representation at the time of hire was greater (Sørensen, 2004). White, Black, and Latino workers were less likely to perceive discrimination in workplaces where the majority is their own group (Stainback & Irvin, 2012). Moreover, verified charges of racial discrimination are less likely in workplaces with more minority employees, especially with more minority managers present (Hirsh & Kornrich, 2008). Thus, high minority concentration within occupations or workplaces may mitigate discrimination in general.

The minority power thesis is similar to arguments about local ethnic occupational niches or ethnic economies. Minority workers in mono-ethnic labor markets face less competition from the majority group, and thus can obtain

positions and resources normally reserved for the majority (Semyonov, 1988). Workers in immigrant ethnic enclaves may overcome disadvantages or discrimination in the mainstream economy through ethnic solidarity and beneficial social networks (Bailey & Waldinger, 1991; Wilson & Portes, 1980). High minority representation in local occupations and industries may also occur with minority representation in management or minority business ownership, which has been shown to reduce White-Black disparities (Kornrich, 2009).[4]

The minority power thesis, and similar ethnic niche arguments, predict smaller racial/ethnic disparities in varying hours in predominantly minority occupations. When workers of color are more prevalent, they may have greater power to resist marginalization in working hours. Additionally, employers may have little choice but to give steady hours to workers of color as often as Whites, or little desire to discriminate in the first place.

> *H3a.* Racial/ethnic disparities in varying hours are smaller in minority-dominated occupations than White-dominated occupations.

Similarly, workers of color may be insulated from greater discrimination in economic downturns in predominantly minority occupations. They may still experience varying hours more often during the recession than before it, but the increase would be less disproportionate relative to their White peers with more minority representation in their occupations.

> *H3b.* The growth of racial/ethnic disparities in varying hours during the Great Recession was smaller in minority-dominated occupations than White-dominated occupations.

The corresponding null hypothesis to alternatives *H2a* and *H3a* would simply be an equal association between varying hours and occupational composition for White, Black, and Latino workers. The null hypothesis for *H2b* and *H3b* would be equal associations between occupational composition and the growth of varying hours in the recession for all groups.

DATA AND METHODS

The units of analysis are White, Black, and Latino/a hourly workers from the 2004–2007 and 2008–2013 panels of the Survey of Income and Program Participation (SIPP), accessed through the National Bureau of Economic Research (NBER).[5] The SIPP interviewed approximately 50,000 households every four months, with 12 waves in the 2004 panel and 16 in the 2008 panel. We retain the first 12 waves (four years) of each panel for symmetry. The 2004 SIPP panel is the pre-recession time period, and was fielded between January of 2004 and December of 2007. The 2008 SIPP panel is the during/after recession time period. The first 12 waves were fielded between August of 2008 and July of 2012.

The sample includes observations of prime-age (25–55), non-self-employed workers who report a primary job with non-zero earnings. We also removed a small number of individuals who were likely misidentified between waves, indicated by inconsistent sex and age between waves. The Census Bureau uses hot

deck imputation for missing values. Finally, all analyses apply SIPP-provided sample weights to adjust for sampling design, making the estimates nationally representative.

Varying Weekly Hours

The dependent variable, *Hours Vary*, is the number of waves respondents report varying weekly hours in their primary job. The SIPP asks employed respondents how many hours they usually work per week during the four months since their last interview. Respondents generally reply with the number of usual hours/week, but starting in the 2004 panel they could report "hours vary" instead of a number. We create a binary variable for whether workers report "hours vary" (= 1) rather than a usual number of hours per week (= 0). This question format tends to underestimate hours variability, as many workers estimate a usual number of hours/week despite significant variation (Lambert et al., 2014). This tendency should make our estimates conservative, likely providing a lower bound for rates of varying hours. Finally, the dependent variable, *Hours Vary*, is a count variable for the number of waves a person reports varying weekly hours (the binary variable = 1). The count over time measures the cumulative risk of varying hours and its persistence for individuals.

The report for varying hours unfortunately cannot specify the magnitude of hours variability. An alternative measure is the variance in usual hours/week between waves for each person. As expected, we find a larger between-wave variance for those who ever report "hours vary" (51.9) than those who do not (30.9). However, the variance can only be calculated for respondents who report a usual number of hours/week in at least two waves. Those reporting "hours vary" in all waves or all but one are excluded, significantly understating varying hours.

Self-reported varying hours also cannot specify whether workers experience cuts or gains to their expected number of hours. We find that workers transitioning from stable to varying hours between waves experience earnings declines on average, even controlling for hourly wage rates, suggesting hours cuts tend to be more common.

The dependent variable is a person-level outcome, so the analytic sample includes only the first observation per person. The first observation is the first wave of the SIPP panel for 58 percent of persons, and in the first three waves for 71 percent of persons. Supplementary analyses described below include all person-waves.

Finally, the dependent variable is affected by sample attrition. The count *Hours Vary* can take higher values for respondents with a greater total number of observations in the survey. The average number of waves reporting varying hours does not represent the average duration over four years because many workers were not observed for the full panel. Also, any differences between panels or racial/ethnic groups could be confounded with group differences in the average number of observations per person. To adjust for attrition, the regression analyses below control for the number of waves per person. The regression-predicted values

set the number of waves per person to 12, the total number of possible observations.

Race/Ethnicity and Recession

Respondents were coded as White or Black if they self-reported White or Black as their sole racial category, and did not report Hispanic origin. Latinos include those reporting Hispanic origin of any race. Sample sizes for other racial groups are too small for reliable analysis.

Race/ethnicity was replaced with the modal category for individuals reporting different categories between waves, affecting only 0.2 percent of all person-months. Individuals with multiple modal categories were recoded as "Other Race." This recoding is not meant to negate the potentially fluid nature of racial identification (Saperstein & Penner, 2012). However, fixed categories facilitate comparison of longitudinal and cumulative employment outcomes between groups. Additionally, we emphasize that most inconsistencies within persons resemble misidentification based on inconsistent age and sex, and a very small fraction of person-months are recoded.

Occupational Composition

Some of the mixed evidence in past research on racial/ethnic occupational composition has been due to different levels of measurement. Earlier research on occupational segregation often focused on the demographic composition of occupations at the national level, but the sizes of racial/ethnic groups vary significantly by place. Thus, many have used local areas, like metropolitan areas, as the appropriate geographic scale for measuring occupational composition (Huffman, 2004; Huffman & Cohen, 2004; Kornrich, 2009). Others argue workplaces (Catanzarite & Aguilera, 2002; Stainback & Tomaskovic-Devey, 2012; Tomaskovic-Devey, 2014) or specific jobs within workplaces (Kmec, 2003; Semyonov & Herring, 2007; Wingfield & Alston, 2014) are most salient. Following Huffman and Cohen (2004), we use intersections of occupations and industries within states (i.e., state-occupation-industry cells) to measure "jobs" or "local occupations." Though this measure does not capture unique dynamics within workplaces or jobs, the racial/ethnic composition at these levels are heavily shaped by the composition of the local labor force in their respective sectors (Reskin et al., 1999). If local occupation-industry cells are noisy measures of workplaces or jobs, our findings should underestimate the true associations.

Data for the demographic composition of local occupations come from the American Community Survey (ACS), accessed from the Integrated Public-Use Microdata Samples (IPUMS) database (Ruggles, Genadek, Goeken, Grover, & Sobek, 2015). The samples are limited to working-aged adults (18−65) reporting an occupation and industry. The pooled 2004−2006 ACS waves are the pre-recession time point, and the pooled 2008−2010 ACS waves are the during/after recession time point. The IPUMS recodes detailed occupations into a harmonized set of 340 occupations, based on the 1990 Census classifications. We also

applied this coding scheme to the SIPP respondents using IPUMS-created crosswalks for merging the data. We use 13 major industry categories to avoid overly small cell sizes. Finally, we estimate occupational composition separately by state, the smallest geography available in the publically accessible SIPP. The data include 12,063 occupation-industry-state cells matched between the SIPP and ACS in the 2004 panel, and 11,053 cells in the 2008 panel. Local occupational characteristics are based on an ACS sample size of 913 for the average SIPP respondent. More than 90 percent of SIPP respondents have local occupation data based on at least 20 workers in the ACS.

The primary occupation-level variable of interest is *% White*. We code race/ethnicity in the ACS identically to the SIPP. In supplementary analyses described below, we also examine *% Black* and *% Latino*. Finally, the analyses described below using occupation data also control for *% Female* and *Median Annual Earnings* of each local occupation. The median annual earnings are logged, *ln(Median Earnings)*, to adjust the right-skewed distribution, and adjusted for inflation with the Consumer Price Index (CPI).

Individual-level Control Variables

Perhaps the most relevant controls are job characteristics associated with variable hours or schedules in past research (Golden, 2001, 2015; Lambert et al. 2014; Schneider & Harknett, 2016): logged hourly wage rates, adjusted for inflation; job tenure, in years and months; public employment (yes = 1); union membership (yes = 1); 23 major occupation categories; and 13 major industry categories. These controls may be particularly stringent, as they largely capture overall job quality and stability. Other controls include: age; sex (female = 1); marital status (married, separated, divorced, widowed, never married); nativity and citizenship categories (US-born, foreign-born citizen, foreign-born noncitizen); household size; the presence of children under 6 years (yes = 1); metropolitan status (in a metro area, not in a metro area, not identified); four geographic regions; and education (less than high school, high school, some college, college, postgraduate).

Analytic Strategy

Zero-inflated negative binomial (ZINB) regression models predict *Hours Vary*. Regression analyses of count variables typically use Poisson models with the logarithmic link function. Zero-inflated negative binomial regression corrects for two features of our dependent variable's distribution that make Poisson regression inappropriate. First, an excessive number of individuals never report varying hours relative to a standard Poisson distribution (see Table 2 below). Some individuals may have very stable jobs with constant hours per week. Alternatively, they may have jobs with the potential for varying hours but do not experience them during the survey. Excessive zeroes may also result from workers experiencing varying hours but estimating a usual number of hours per week anyway (Lambert et al., 2014). Zero-inflated regression fits two models: a

logistic regression model predicts the probability of having a zero value for the count variable relative to the standard count distribution; a count model predicts the value of the count variable conditional on the probability of having an inflated zero value. The results of a Vuong test between a Poisson regression and zero-inflated Poisson regression favor the zero-inflated model.

Second, the distribution of *Hours Vary* is overdispersed (a variance greater than the mean), violating an assumption of Poisson regression. Negative binomial regression adds an additional parameter to adjust for overdispersion. A Vuong test between zero-inflated poisson and zero-inflated negative binomial models favors the ZINB. The negative binomial and logistic regressions contain the same covariates for all models.

In the first stage of the analysis testing *H1*, ZINB models predict *Hours Vary* with the race/ethnicity indicators, an indicator for the 2008 SIPP panel, and interactions between them. We fit these models with and without all individual-level control variables. Interaction coefficients in logistic regression and other nonlinear models can be misleading, due to both their nonlinearity and potential unobserved heterogeneity between groups (Ai & Norton, 2003; Allison, 1999). To circumvent these complications, we present the results as predicted values and average marginal effects (Mood, 2010) using the "margins" command in Stata. The predicted values of *Hours Vary* by race/ethnicity test *H1a*, and the predicted increase between SIPP panels by race/ethnicity test *H1b*.

The second stage of the analysis predicts *Hours Vary* with a ZINB model including all occupation-level variables. The model also includes three-way interactions between the race/ethnicity indicators, the occupational *% White*, and the 2008 SIPP panel indicator. The predicted racial/ethnic differences in *Hours Vary* by the occupational *% White* test *H2a* and *H3a*, and the predicted increases between SIPP panels by race/ethnicity and *% White* test hypotheses 2b and 3b.

Robustness Checks

Following the primary results, we summarize results from supplementary analyses to establish the robustness of our findings. First, we repeat the main regression analyses predicting varying hours as a binary variable in all person-waves (i.e., varying within individuals over time). These models are logistic regressions, and adjust the standard errors for repeated observations of persons using the "cluster" option in Stata. Second, we conduct the regression analysis with the occupation-level *% Black* or *% Latino* instead of *% White*. Third, we reproduced the main analyses with Latinos separated by nativity, expanding from three groups to four total (i.e., White, Black, US-born Latino, and foreign-born Latino).

RESULTS

Table 1 presents basic descriptive information on the sample. The top row displays the average number of waves reporting varying weekly hours. This

Table 1. Variable Means and (Standard Deviations) by Race/Ethnicity and SIPP Panel.

Variables	White		Black		Latino/a	
	2004	2008	2004	2008	2004	2008
Hours Vary	0.076	0.102	0.082	0.112	0.068	0.122
Occupational Composition						
% White	73.850	72.034	59.133	57.291	46.825	47.325
	(19.46)	(19.08)	(20.88)	(20.37)	(23.29)	(22.54)
% Black	10.480	11.028	23.903	23.697	9.905	10.284
	(11.74)	(11.39)	(18.78)	(17.60)	(10.75)	(10.56)
% Latino/a	10.492	11.372	12.035	13.556	35.261	34.598
	(13.86)	(13.75)	(14.24)	(14.75)	(23.59)	(22.63)
% Female	48.307	49.724	54.001	52.380	40.884	40.381
	(33.90)	(33.42)	(31.71)	(31.24)	(31.95)	(31.48)
Med. Wages ($1,000s)	24.330	23.482	20.784	20.220	19.405	19.086
	(13.54)	(13.73)	(11.70)	(12.59)	(10.99)	(11.15)
Selected Individual Characteristics						
Age	39.847	39.756	38.776	39.336	37.129	37.994
Female	0.517	0.520	0.554	0.555	0.405	0.408
Married	0.609	0.573	0.384	0.355	0.631	0.599
Native born	0.941	0.942	0.878	0.856	0.419	0.443
Children <6 yrs	0.243	0.261	0.287	0.296	0.429	0.455
Hourly Wages	17.521	17.146	14.730	14.401	14.309	13.982
	(7.59)	(8.02)	(6.41)	(6.53)	(6.30)	(6.27)
Job tenure (years)	5.303	5.444	4.862	4.522	4.251	4.386
	(6.95)	(6.98)	(6.69)	(6.10)	(5.50)	(5.57)
High School/GED or less	0.375	0.351	0.414	0.399	0.644	0.623
College+	0.201	0.226	0.119	0.144	0.067	0.091
Public Sector	0.114	0.117	0.144	0.130	0.081	0.084
Union member	0.133	0.124	0.165	0.122	0.110	0.101
Number of Waves	4.623	5.111	4.366	4.635	4.799	5.199
	(3.31)	(3.69)	(3.14)	(3.55)	(3.43)	(3.76)
N	20,459	18,389	4,290	3,960	3,978	4,649

distribution is described in greater detail below. For brevity, we focus our discussion on the average occupation-level characteristics. On average, White workers are in local occupations that are more than 70 percent White. Black and especially Latino workers are in occupations with much lower fractions of Whites. Black workers have the highest average percentage of Black workers in their occupations on average, about 24 percent. Similarly, Latino workers have the highest average Latino representation in their occupations, over one-third.

Average occupational racial/ethnic composition does not change substantially between panels.

H1: Racial/Ethnic Disparities in Varying Hours

We first test *H1a* and *H1b*, that workers of color have higher levels of varying hours than Whites and greater increases during the recession. Fig. 1 displays trends in the percentage of each group reporting varying weekly hours by year. Levels were relatively low in the 2004 panel through 2006, around six to eight percent. Black workers had slightly higher rates than Whites in some years, but not all. Latino workers consistently reported the lowest levels. Rates of varying hours began to increase in 2007, continuing into the 2008 panel.

Aside from higher rates of varying hours, around 10 to 13 percent, the pattern of racial ethnic differences is notably different during and after the Great Recession. In the 2008 panel, Whites consistently report the lowest levels of varying hours. Varying hours are slightly higher for Black workers, and consistently the greatest for Latino workers. Increases for White and Black workers over time were comparable, while Latino workers experienced the greatest growth in varying hours.

Table 2 compares longitudinal experiences of varying hours by race/ethnicity and SIPP panel. As previously described, cumulative reports of varying hours are constrained by the attrition from the sample. Though each SIPP panel has 12 waves, the average number of observations per person in each racial/ethnic group and panel is between 4.4 and 5.2. The cumulative reports of varying hours

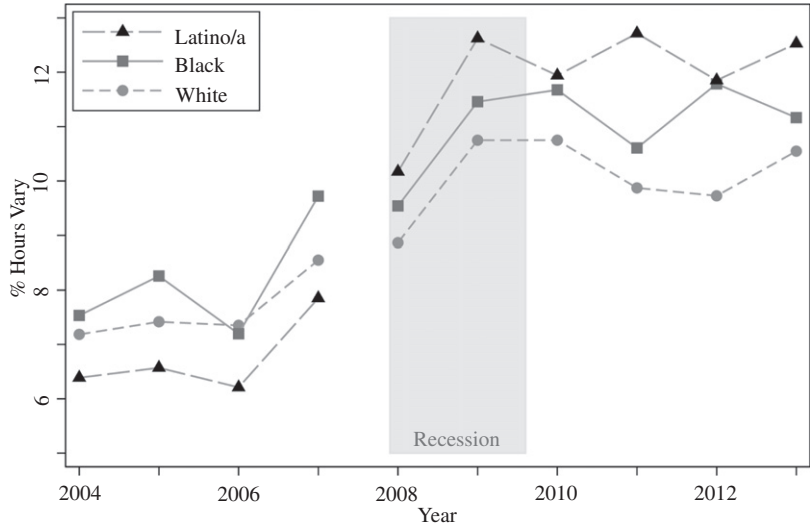

Fig. 1. Trends in Self-reported Varying Weekly Hours by Race/Ethnicity among Hourly Workers, Ages 25–55.

Table 2. Distribution of Number of Waves with Varying Hours, by Race/Ethnicity and SIPP Panel.

Number of Waves that Hours Vary	White		Black		Latino/a	
	2004 Panel	2008 Panel	2004 Panel	2008 Panel	2004 Panel	2008 Panel
0	79.64%	72.75	77.39	73.28	81.30	69.34
1	13.02	15.64	14.48	15.63	12.00	17.06
2	3.98	5.75	5.09	5.65	3.69	6.37
3+	3.36	5.87	3.04	5.44	3.01	7.24

in Table 2 are underestimated as a result, and racial/ethnic disparities may be understated as well.

Similar to the patterns in Fig. 1, Latino workers have the lowest rate of ever reporting varying hours in the 2004 panel, 19 percent. About 20 percent of White workers and less than 23 percent of Black workers ever report varying hours in the pre-recession panel. In the 2008 panel, more than 30 percent of Latino workers ever report varying hours, compared to around 27 percent of White and Black workers. The percentage of Latino workers reporting varying hours for at least a year total (three four-month waves) in the 2008 panel is also greater than among White or Black workers.

Fig. 2 presents the predicted number of waves reporting varying hours by race/ethnicity and SIPP panel from the ZINB regression models along with 95% confidence intervals. Setting the number of observations per person to the full 12 waves, the predicted values of *Hours Vary* are much higher in Fig. 2 than the means presented in Table 1. Predicted values are lower in the 2004 panel when holding all control variables constant at their means, particularly for Latinos. Coefficients from the ZINB model are presented in Tables A1 and A2 of the appendix. Varying hours are consistently more common among workers with lower hourly wages and shorter job tenure, older workers, the never married, and those in rural areas.

The predicted number of waves with varying hours is slightly higher for Black workers than Whites in the 2004 panel, 1.02 and 0.93 respectively. The difference is only marginally statistically significant ($p = 0.06$), assessed using the "margins" command in Stata. The difference is close to zero and not significant in the 2004 panel with controls held constant at their means. The White-Black difference is also close to zero and not significant with or without controls in the 2008 panel.

The predicted value is significantly lower for Latinos than Whites in the 2004 panel, with and without controls. The predicted value in the 2004 panel is significantly lower by one-tenth of a wave for Latinos than Whites without controls, and by around one-third of a wave with controls. However, the value is significantly higher for Latinos in the 2008 panel by about one-fifth of a wave, with and without controls.

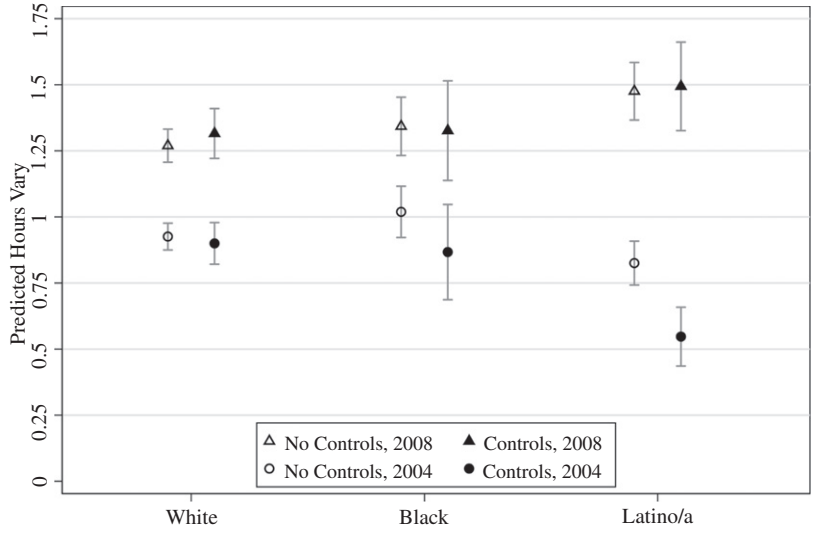

Fig. 2. Predicted Number of Waves Reporting Varying Weekly Hours by Race/Ethnicity and SIPP Panel.

Table 3. Predicted Increase in Varying Hours Between 2004 and 2008 Panels by Race/Ethnicity, with [95% Confidence Intervals].

	No Controls	With Controls
White	0.344	0.416
	[0.285, 0.402]	[0.319, 0.513]
Black	0.323	0.459
	0.192, 0.455]	[0.226, 0.693]
Latino/a	0.650	0.947
	[0.525, 0.776]	[0.778, 1.116]
N	55,725	55,725

Notes: Predicted increases in number of waves with varying hours, calculated from regression models as described in the methods section.

Varying hours significantly increased for all groups in the recession. Table 3 presents the predicted increases between SIPP panels by race/ethnicity, based on the same ZINB regression models as Fig. 2, as well as 95% confidence intervals. The predicted increase was comparable for White and Black workers. Latino workers have the largest increase between SIPP panels, statistically significantly greater than increases for White and Black workers. Holding controls constant, varying hours among Latinos increased by almost a full wave between the 2004 and 2008 panels.

The descriptive and regression-based results provide consistent patterns for testing *H1a* and *H1b*. White-Black differences are relatively small and not statistically significant, providing limited support for either hypothesis. There is greater support when comparing White and Latino workers. Though Latino workers have significantly lower rates of varying hours than Whites before the recession, contradicting *H1a*, they are significantly greater during and after it, supporting *H1a*. The difference between periods is due to Latino workers' significantly greater increase in varying hours during the recession, supporting *H1b*.

H2 & H3: Racial/Ethnic Disparities in Varying Hours by Occupational Composition

The ZINB regression model testing *H2* and *H3*, the association between racial/ethnic disparities in varying hours and occupational composition, includes two- and three-way interactions between race/ethnicity, the indicator for the 2008 panel, and the occupation-level percentage of White workers. To illustrate the model's multiple comparisons, we present a series of figures with predicted values. All control variables are held constant at their means. The coefficients for the model are presented in Tables A1 and A2 in the appendix. Recall the model controls for local occupations' median earnings, and individual workers' hourly wages. The association between varying hours and the occupation-level percentage of White workers are then net of earnings devaluation documented by past research (Huffman, 2004; Kmec, 2003).

Fig. 3 presents the predicted number of waves with varying hours by the occupation-level *% White* for each racial/ethnic group. The percentage of White workers in the graphs ranges from 20 percent, roughly the 5th percentile of the distribution, to 100 percent, the observed maximum. Stronger negative slopes for Black and Latino workers than Whites are consistent with *H2a*, and weaker slopes are consistent with *H3a*.

White and Black workers have negative slopes in the 2004 panel, but the confidence intervals for these slopes are wide. Latino workers have a positive slope, also with wide confidence intervals. The pattern is notably different in the 2008 panel, however. The slopes for Black and Latino workers switch directions between panels. White and especially Latino workers have negative slopes, but Black workers have a positive association. Despite wide confidence intervals, the slopes also have stronger magnitudes in the 2008 panel than the 2004 panel. During/after the recession, White and Latino workers experience varying hours more in predominantly minority occupations than in predominantly White ones. However, Black workers experience varying hours less in predominantly minority occupations. These disparate associations have implications for *H2* and *H3*, tested below more directly.[6]

To compare the slopes between racial/ethnic groups more clearly, Fig. 4 presents the predicted racial/ethnic differences in varying hours in each SIPP panel with 95% confidence intervals. *H2a* predicts larger racial/ethnic disparities in local occupations with more workers of color. *H3a* predicts the opposite, that racial/ethnic disparities are smaller in local occupations with more workers of

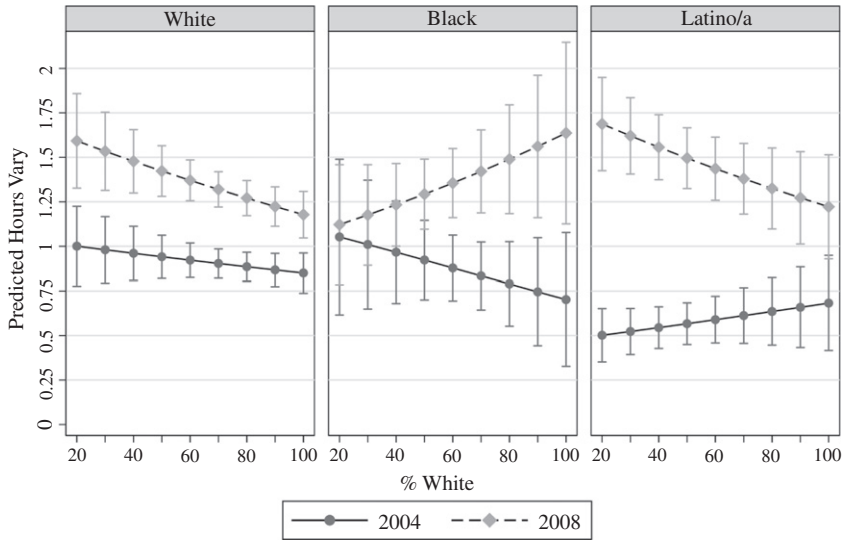

Fig. 3. Predicted Number of Waves Reporting Varying Weekly Hours with Occupation-level Racial Composition, by Race/Ethnicity and SIPP Panel with 95% Confidence Intervals. *Note*: Predicted values are from zero-inflated negative-binomial regression model with all controls, as described in the methods section.

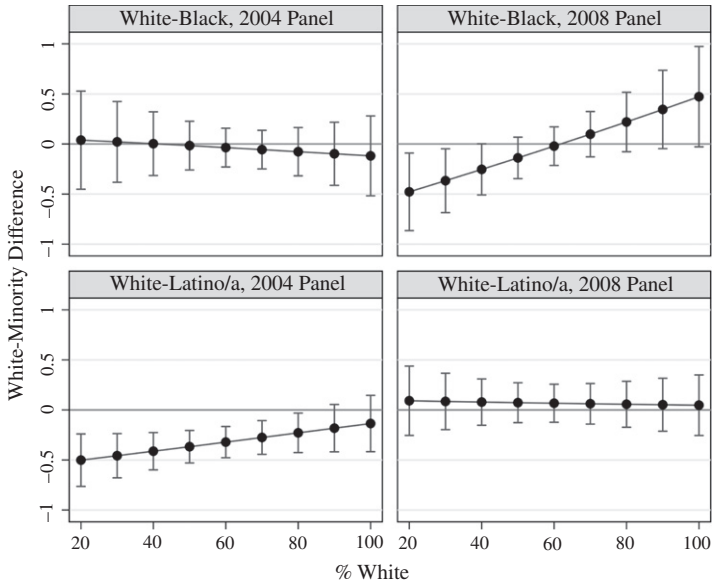

Fig. 4. Racial/Ethnic Difference in Predicted Number of Waves Reporting Varying Weekly Hours with Occupation-level Racial Composition, by SIPP Panel with 95% Confidence Intervals. *Note*: Predicted values are from zero-inflated negative-binomial regression model with all controls, as described in the methods section.

color. In the 2004 panel, the White-Black difference in varying hours is close to zero and not statistically significant at any percentage of White workers. However, Latinos experience varying hours significantly less than Whites in predominantly minority occupations. In occupations with 20 percent White workers, Latinos experience varying hours by 0.5 fewer waves than comparable Whites. In all-White occupations, there is no White-Latino difference. The slope for the White-Latino difference provides support for *H3a*, that Latino workers are less disadvantaged compared to Whites with more minority presence.

The pattern between groups flips in the 2008 panel. Holding all controls constant, the White-Latino difference is not significant for any percentage of White workers in local occupations. Meanwhile, the slope for the White-Black difference is significantly positive. In occupations with 20 percent Whites, Black workers have 0.5 fewer waves with varying hours than Whites. In all-White occupations, Black workers have 0.5 more waves with varying hours. The slope for the White-Black difference is consistent with *H3a*, that racial inequality is smaller in occupations with more minority workers.

Fig. 5 presents the predicted increase between the 2004 and 2008 SIPP panels by race/ethnicity, with 95% confidence intervals. *H2b* predicts the slope is more negative for Black and Latino workers than Whites, and *H3b* predicts the reverse.

The increase in varying hours among White workers was slightly larger in predominantly minority occupations than predominantly White ones, but the association is relatively weak. Consistent with *H3b*, Black workers have a positive slope that contrasts with the weak association among Whites. Varying hours did not increase between panels for Black workers in occupations with 20 percent White workers. However, varying hours significantly increased by almost one wave in all-White occupations.

Latino workers exhibit a stronger negative slope than among Whites, consistent with *H2b*. Varying hours increased by 1.17 waves between panels for Latinos in occupations with 20 percent White workers. The increase was only 0.52 waves in all-White occupations.

Combining these patterns, White-Black inequality in varying hours became larger during the recession in predominantly White local occupations, but smaller in predominantly minority ones. The pattern supports *H3b*, that Black workers in occupations with more minority workers were less vulnerable to the recession than comparable Whites. In contrast, White-Latino inequality in varying hours became larger in predominantly minority occupations than predominantly White ones. The pattern supports *H3b* that Latino workers were more vulnerable to the recession than Whites in minority-dominated occupations.

Robustness Checks

We conducted a variety of alternative analyses to help establish the robustness of our findings, as described in the methods section. First, logistic regression models predicted the probability of varying hours as a time-varying variable among all person-waves of data. The patterns in Figs 2 through 5 are

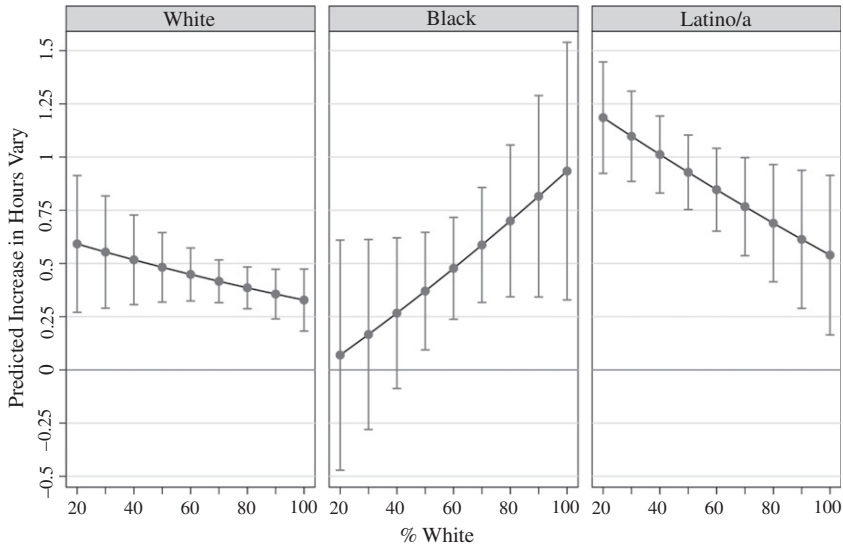

Fig. 5. Increase in Predicted Number of Waves Reporting Varying Weekly Hours During Recession with Occupation-level Racial Composition, by Race/Ethnicity with 95% Confidence Intervals. *Note*: Predicted values are from zero-inflated negative-binomial regression model with all controls, as described in the methods section.

substantively the same. Notably, these patterns are also similar using a lagged dependent variable model, which controls for varying hours in the previous wave. Lagged dependent variable models help control for unobserved characteristics of individuals, reinforcing the conclusion that our results are not driven by unmeasured individual-level differences between racial/ethnic groups.

Second, supplementary analyses testing *H3* and *H4* used the occupation-level *% Black* or *% Latino* instead of the *% White*. Again consistent with *H3b*, varying hours among Black workers increased most during the recession in occupations with the lowest percentage of Black workers. The increase was smaller and not significant in occupations with more Black representation (40 percent or greater). Consistent with *H2b*, the recession-related increase in varying hours among Latino workers was largest in predominantly Latino occupations. Third, we repeated the analysis with US-born and foreign-born Latinos as separate categories. The patterns for Latino workers were extremely similar by nativity.[7]

DISCUSSION

This chapter extends literature on racial/ethnic labor stratification by examining disparities in varying numbers of work hours from week to week. First, the chapter found reports of varying weekly hours are not rare, and increased significantly for White, Black, and especially Latino workers during the Great Recession of the late 2000s (Fig. 1). Despite profound and enduring White-

Black inequalities in unemployment rates, there is little average difference in rates of varying weekly hours. Latino workers reported varying hours significantly less than Whites before the recession, but more often during and after it (Fig. 2).

Next, the chapter examined the role of occupational composition to test theoretical predictions about structural sources of disparities in varying hours. Varying hours among White workers were least related to occupational composition (Fig. 3). Consistent with hypotheses based on group threat theory (Blalock, 1956; Blumer, 1958), varying hours among Latino workers increased most in predominantly minority occupations (Fig. 5). Black workers experienced the opposite pattern. Consistent with the minority power thesis (Semyonov & Herring, 2007), varying hours among Black workers did not significantly increase in predominantly minority occupations.

Taken together, the results reinforce past research highlighting starkly different processes generating White-Black and White-Latino labor market stratification (Catanzarite & Trimble, 2008; Semyonov & Herring, 2007). Employers racialize Black and Latino workers differently (Waldinger, 1997), creating different degrees and patterns of occupational segregation for each group. In the face of segregation to predominantly minority occupations, many Black workers are able to resist increases in varying weekly hours. In contrast, the "brown collar" occupations (Catanzarite, 2002) to which many Latino workers are confined appear much more vulnerable to economic downturns (Hoynes et al., 2012; Laird, 2015). The differences between groups are surprising, given that the group threat hypothesis was developed to explain White-Black disparities (Blalock, 1956; Blumer, 1958) and the minority power thesis has previously explained patterns of White-Latino earnings inequalities (Semyonov & Herring, 2007). The atypical context of the Great Recession may contribute to these apparent discrepancies. The expansion of White-Black unemployment inequalities was typical compared to previous recessions, but the growth of White-Latino inequality was unprecedented (Mishel et al., 2012). White-Latino occupational segregation may well continue to make Latino workers disproportionately vulnerable to economic contexts in the future.

Aside from its substantive findings, this chapter also makes methodological contributions to literatures on racial/ethnic labor market stratification and precarious work. First, it examines an understudied measure of varying weekly hours, which are associated with substantial hardships for workers and their families (Henly & Lambert, 2014; Schneider & Harknett, 2016). Second, it uses nationally representative panel data to examine cumulative experiences of varying weekly hours. Third, the data contain a particularly rich set of controls, including hourly wage rates and job tenure at the individual level. The analysis also controls for median earnings at the occupation level, ensuring our results are not confounded with well-demonstrated earnings devaluation (Catanzarite, 2002; Huffman, 2004; Kmec, 2003). Finally, the combined SIPP panels measure changes in varying hours during the Great Recession, the worst economic downturn in several decades.

Our analysis also has limitations common to other studies of this type. We measure local occupational composition using detailed occupations within major industry groups, separately by state. This measure is as detailed as possible with publically accessible SIPP data, and similar to other analyses of large-scale survey data (Huffman & Cohen, 2004). We cannot observe actual workplaces or jobs within them, which may be the most relevant scale for work and employment inequalities (Kmec, 2003; Tomaskovic-Devey, 2014). Despite this limitation, workplace or job racial/ethnic composition is heavily influenced by the local composition of workers (Reskin et al., 1999). If these data provide a noisy measure for actual job composition, the true associations with varying hours may be even stronger than those found here.

The analysis of multiple SIPP panels has many advantages over traditional cross-sectional surveys, like the CPS. The SIPP panels are relatively short, however, and do not observe the same workers in the pre- and post-recession periods. Relatively limited within-person variation in local occupational composition (only 10 percent of the total variance in occupation-level *% White*), and no within-person variation in pre/post-recession timing precludes approaches like fixed-effects models. The short SIPP panels also limit us from assessing long-term racial/ethnic differences in varying hours. Black and Latino workers may cumulatively experience varying weekly hours much more than Whites over their careers due to periodic recessions, if nothing else.

We hope our findings provide a foundation for future research on mechanisms linking occupational composition and labor market disparities. Our results are consistent with different prominent theoretical explanations, but we cannot observe the underlying dynamics empirically. As DiTomaso et al. (2007) note, these mechanisms have been a "black box" in much of the empirical literature. Aside from lacking observations of actual workplaces, our data cannot distinguish between racial/ethnic groups' numerical composition and actual differences in status or power. We also cannot observe the race/ethnicity of workers' managers or establishment owners. If varying weekly hours indicate marginal status in eyes of frontline managers (Halpin, 2015; Lambert, 2008), racial/ethnic disparities in status or power are crucial mechanisms for patterns we observe.

Finally, our findings speak to ongoing policy initiatives to limit varying and unpredictable work hours, particularly for service workers. For example, San Francisco passed multiple ordinances in 2014 through 2016 comprising what labor activists called the "Retail Workers Bill of Rights."[8] These ordinances require retail employers to provide their workers with estimates of their work hours when hired, schedules at least two weeks in advance, pay for last-minute schedule changes, and pay for "on-call" shifts. Similar ordinances are being enacted in other large cities like Seattle and New York. Given minority workers' disproportionate segregation to service occupations and exposure to varying work hours, these ostensibly race-neutral policies may help limit racial/ethnic disparities.

NOTES

1. The NBER-defined recession began in December 2007, and ended in June 2009. However, the recession's reach extended well beyond the official end date. The unemployment rate peaked at 10.0 percent in October 2009, and remained well above the pre-recession level through 2012.

2. Unfortunately, the SIPP does not measure the race/ethnicity of respondents' managers. An alternative explanation would be that group threat reduces minority representation in management (Cohen & Huffman, 2007). Minority workers may experience lower access to stable hours because there are fewer same-race managers, rather than stronger discrimination among White managers.

3. Notably, Blalock (1956) found little or no association between White-Black economic disparities and the size or growth of metropolitan Black populations.

4. The contact hypothesis (Allport, 1954) would also predict smaller White-minority disparities in occupations with more minority workers. Interactions between White coworkers or managers and minority colleagues could undermine racial prejudices based on stereotypes. However, ideal conditions for such positive interactions are likely rare in the contexts of low-wage work and the Great Recession.

5. The data are available from http://www.nber.org/data/survey-of-income-and-program-participation-sipp-data.html

6. The pattern of predicted values in Figure 3 is similar to simple descriptive patterns of mean values for *Hours Vary* by race/ethnicity, SIPP panel, and ten-point categories for *% White*.

7. We also reproduced the entire analysis separately by sex, motivated by substantial intersectional inequalities in the labor market (Browne & Misra, 2003; Mandel & Semyonov, 2016). General substantive conclusions are similar, with some notable differences between male and female workers. Confidence intervals for estimates from the split samples are quite large, encouraging cautious interpretation. Full results are available upon request.

8. The San Francisco Office of Labor Standards Enforcement describes the ordinances here http://sfgov.org/olse/formula-retail-employee-rights-ordinances

REFERENCES

Ai, C., & Norton, E. (2003). Interaction Terms in Logit and Probit Models. *Economics Letters*, *80*, 123–129.

Alexander, C., & Haley-Lock, A. (2015). Underwork, Work-Hour Insecurity, and A New Approach to Wage and Hour Regulation. *Industrial Relations*, *54*(4), 695–716.

Allison, P. (1999). Comparing Logit and Probit Coefficients Across Groups. *Sociological Methods & Research*, *28*(2), 186–208.

Allport, G. (1954). *The Nature Of Prejudice*. Reading, MA: Addison-Wesley.

Appelbaum, E., Bernhardt, A., & Murnane, R. (Eds.), (2003). *Low-Wage America: How Employers Are Reshaping Opportunity in the Workplace*. New York, NY: Russell Sage Foundation.

Bailey, T., & Waldinger, R. (1991). Primary, Secondary, and Enclave Labor Markets: A Training Systems Approach. *American Sociological Review*, *56*(4), 432.

Blalock, H. (1956). Economic Discrimination and Negro Increase. *Sociological Review*, *21*, 612–633.

Blumer, H. (1958). Race Prejudice as a Sense of Group Position. *Pacific Sociological Review*, *1*(1), 3–7.

Brown, I., & Misra, J. (2003). The intersection of gender and race in the labor market. *Annual Review of Sociology*, *29*(1), 487–513.

Catanzarite, L. (2002). Dynamics of Segregation and Earnings in Brown-Collar Occupations. *Work and Occupations*, *29*(3), 300–345.

Catanzarite, L. (2003). Race-Gender Composition and Occupational Pay Degradation. *Social Problems*, *50*(1), 14–37.

Catanzarite, L., & Aguilera, M. B. (2002). Working with Co-Ethnics: Earnings Penalties for Latino Immigrants at Latino Jobsites. *Social Problems*, *49*(1), 101–127.

Catanzarite, L., & Trimble, L. (2008). Latinos in the United States Labor Market. In H. Rodríguez, R. Sáenz, & C. Menjívar (Eds.), *Latinaslos in the United States: Changing the Face of América* (pp. 149–167), New York, NY: Springer.

Cohen, P., & Huffman, M. (2007). Black Under-Representation in Management across US Labor Markets. *The Annals of the American Academy of Political and Social Science*, *609*(1), 181–199.
Couch, K., & Fairlie, R. (2010). Last Hired, First Fired? Black-White Unemployment and the Business Cycle. *Demography*, *47*(1), 227–247.
DiTomaso, N. (2013). *The American Non-Dilemma: Racial Inequality Without Racism*. New York, NY: Russell Sage Foundation.
DiTomaso, N., Post, C., & Parks-Yancy, R. (2007). Workforce Diversity and Inequality: Power, Status, and Numbers. *Annual Review of Sociology*, *33*, 473–501.
Freeman, R. (1973). Changes in the Labor Market for Black Americans, 1948–1972. *Brookings Papers on Economic Activity*, *1*, 67–131.
Golden, L. (2001). Flexible Work Schedules: What Are We Trading off to Get Them. *Monthly Labor Review/U.S. Department of Labor, Bureau of Labor Statistics*, *124*, 50.
Golden, L. (2015). Irregular Work Scheduling and Its Consequences." *Economic Policy Institute Briefing Paper* 394. Retrieved from http://www.epi.org/files/pdf/82524.pdf
Halpin, B. (2015). Subject to Change Without Notice: Mock Schedules and Flexible Employment in the United States. *Social Problems*, *62*, 419–438.
Henly, J., & Lambert, S. (2014). Unpredictable Work Timing in Retail Jobs: Implications for Employee Work–Life Conflict. *Industrial & Labor Relations Review*, *67*(3), 986–1016.
Henly, J., Shaefer, H. L., & Waxman, E. (2006). Nonstandard Work Schedules: Employer-and Employee-Driven Flexibility in Retail Jobs. *The Social Service Review*, *80*(4), 609–634.
Hirsh, C. E., & Kornrich, S. (2008). The Context of Discrimination: Workplace Conditions, Institutional Environments, and Sex and Race Discrimination Charges. *American Journal of Sociology*, *113*(5), 1394–1432.
Hoynes, H., Miller, D., & Schaller, J. (2012). Who Suffers During Recessions? *Journal of Economic Perspectives*, *26*(3), 27–47.
Huffman, M. (2004). More Pay, More Inequality? The Influence of Average Wage Levels and the Racial Composition of Jobs on the Black-White Wage Gap. *Social Science Research*, *33*(3), 498–520.
Huffman, M., & Cohen, P. (2004). Racial Wage Inequality: Job Segregation and Devaluation across U.S. Labor Markets. *The American Journal of Sociology*, *109*(4), 902–936.
Kalleberg, A. (2011). *Good Jobs, Bad Jobs: The Rise of Polarized and Precarious Employment Systems in the United States, 1970s to 2000s*. New York, NY: Russell Sage Foundation.
Kaufman, R. (2002). Assessing Alternative Perspectives on Race and Sex Employment Segregation. *American Sociological Review*, *67*(4), 547–572.
Kmec, J.. (2003). Minority Job Concentration and Wages. *Social Problems*, *50*(1), 38–59.
Kornrich, S. (2009). Combining Preferences and Processes: An Integrated Approach to Black-White Labor Market Inequality. *The American Journal of Sociology*, *115*(1), 1–38.
Krosch, A. R., & Amodio, D. M. (2014). Economic Scarcity Alters the Perception of Race. *Proceedings of the National Academy of Sciences of the United States of America*, *111*(25), 9079–9084.
Laird, J. (2015). Unemployment among Mexican Immigrant Men in the United States, 2003–2012. *Social Science Research*, *49*, 202–216.
Lambert, S. (2008). Passing the Buck: Labor Flexibility Practices That Transfer Risk onto Hourly Workers. *Human Relations*, *61*(9), 1203–1227.
Lambert, S., Fugiel, P., & Henly, J. (2014). *Precarious Work Schedules among Early-Career Employees in the US: A National Snapshots*. EINet, University of Chicago. Retrieved from https://ssascholars.uchicago.edu/sites/default/files/einet/files/lambert.fugiel.henly_.executive_summary.b_0.pdf
Mandel, H., & Semyonov, M. (2016). Going Back in Time? Gender Differences in Trends and Sources of the Racial Pay Gap, 1970 to 2010. *American Sociological Review*, *81*(5), 1039–1068.
Maume, D. J., Sebastian, R. A., & Bardo, A. R. (2009). Gender Differences in Sleep Disruption among Retail Food Workers. *American Sociological Review*, *74*(6), 989–1007.
McCall, L. (2001). *Complex Inequality: Gender, Class, and Race in the New Economy*. New York, NY: Routledge.

Mishel, L., Bivens, J., Gould, E., & Shierholz, H. (2012). *The State of Working America* (12th ed.). Ithaca, NY: Cornell University Press.
Mood, C. (2010). Logistic Regression: Why We Cannot Do What We Think We Can, and What We Can Do about It. *European Sociological Review*, *26*(1), 67–82.
Pager, D., & Shepherd, H. (2008). The Sociology of Discrimination: Racial Discrimination in Employment, Housing, Credit, and Consumer Markets. *Annual Review of Sociology*, *34*, 181–209.
Presser, H. B. (2003). Race-Ethnic and Gender Differences in Nonstandard Work Shifts. *Work and Occupations*, *30*(4), 412–439.
Presser, H. B. (2005). *Working in a 24/7 Economy: Challenges for American Families*. New York, NY: Russell Sage Foundation.
Presser, H., & Ward, B. (2011). Nonstandard Work Schedules over the Life Course: A First Look. *Monthly Labor Review | U.S. Department of Labor, Bureau of Labor Statistics*, *34*(7), 1–16.
Quillian, L. (2006). New Approaches to Understanding Racial Prejudice and Discrimination. *Annual Review of Sociology*, *32*, 299–328.
Quillian, L., Pager, D., Hexel, O., & Midtbøen, A. H. (2017). Meta-Analysis of Field Experiments Shows No Change in Racial Discrimination in Hiring over Time. *Proceedings of the National Academy of Sciences*. Retrieved from http://www.pnas.org/content/early/2017/09/11/1706255114.abstract
Reskin, B. (2012). The Race Discrimination System. *Annual Review of Sociology*, *38*, 17–35.
Reskin, B., McBrier, D., & Kmec, J. (1999). The Determinants and Consequences of Workplace Sex and Race Composition. *Annual Review of Sociology*, *25*, 335–361.
Ruggles, S., Genadek, K., Goeken, R., Grover, J., & Sobek, M. (2015). *Integrated Public Use Microdata Series: Version 6.0* [dataset]. Minneapolis: University of Minnesota.
Saperstein, A., & Penner, A. (2012). Racial Fluidity and Inequality in the United States. *American Journal of Sociology*, *118*(3), 676–727.
Schneider, D., & Harknett, K. (2016). Schedule Instability and Unpredictability and Worker and Family Health and Wellbeing. *Washington Center for Equitable Growth Working Paper Series*. Retrieved from http://cdn.equitablegrowth.org/wp-content/uploads/2016/09/12135618/091216-WP-Schedule-instability-and-unpredictability.pdf
Semyonov, M. (1988). Bi-Ethnic Labor Markets, Mono-Ethnic Labor Markets, and Socioeconomic Inequality. *American Sociological Review*, *53*(2), 256.
Semyonov, M., & Herring, C. (2007). Segregated Jobs or Ethnic Niches? The Impact of Racialized Employment on Earnings Inequality. *Research in Social Stratification and Mobility*, *25*(4), 245–257.
Shenhav, Y., & Haberfeld, Y. (1992). Organizational Demography and Inequality. *Social Forces*, *71*(1), 123–143.
Sørensen, J. (2004). The Organizational Demography of Racial Employment Segregation. *American Journal of Sociology*, *110*(3), 626–671.
Stainback, K., & Irvin, M. (2012). Workplace Racial Composition, Perceived Discrimination, and Organizational Attachment. *Social Science Research*, *41*, 657–670.
Stainback, K., & Tomaskovic-Devey, D. (2012). *Documenting Desegregation: Racial and Gender Segregation in Private Sector Employment Since the Civil Rights Act*. New York, NY: Russell Sage Foundation.
Tomaskovic-Devey, D. (1993). The Gender and Race Composition of Jobs and the Male/Female, White/Black Pay Gaps. *Social Forces; a Scientific Medium of Social Study and Interpretation*, *72*(1), 45–76.
Tomaskovic-Devey, D. (2014). The Relational Generation of Workplace Inequalities. *Social Currents*, *1*(1), 51–73.
Waldinger, R. (1997). Black/Immigrant Competition Re-Assessed: New Evidence from Los Angeles. *Sociological Perspectives*, *40*(3), 365–386.
Wilson, K., & Portes, A. (1980). Immigrant Enclaves: An Analysis of the Labor Market Experiences of Cubans in Miami. *American Journal of Sociology*, *86*(2), 295–319.
Wingfield, A. H., & Alston, R. S. (2014). Maintaining Hierarchies in Predominantly White Organizations: A Theory of Racial Tasks. *The American Behavioral Scientist*, *58*(2), 274–287.

APPENDIX

Table A1. Negative Binomial Coefficients From Zinb Models, Predicting the Number of Waves Reporting Varying Weekly Hours.

Variable	Model 1	Model 2	Model 3	Model 4
Main effects				
Black (ref = White)	0.096*	0.174**	0.049	−0.001
	(1.98)	(3.10)	(1.35)	(−0.01)
Latino/a (ref = White)	−0.115*	−0.090	−0.064	−0.170
	(−2.19)	(−1.42)	(−1.56)	(−1.14)
2008 Panel (ref = 2004 Panel)	0.316***	0.311***	0.339***	0.378***
	(11.62)	(10.52)	(4.39)	(3.58)
Occ. % White			−0.002	−0.003*
			(−1.71)	(−2.14)
Two-way interactions				
Black × 2008 Panel	−0.040	−0.195**		−0.447*
	(−0.63)	(−2.83)		(−1.98)
Latino/a × 2008 Panel	0.265***	0.077		0.153
	(4.11)	(1.12)		(0.89)
% White × 2008 Panel			−0.001	−0.002
			(−1.16)	(−1.41)
% White × Black				0.003
				(1.00)
% White × Latino/a				0.001
				(0.57)
Three-way interactions				
% White × Black × 2008 Panel				0.004
				(1.22)
% White × Latino/a × 2008 Panel				−0.002
				(−0.77)
Controls				
Occ. % Female			−0.001	−0.001
			(−1.85)	(−1.89)
Occ. ln (Median Earnings)			−0.054	−0.057*
			(−1.86)	(−1.98)
Age		0.006***	0.005***	0.005***
		(3.56)	(3.31)	(3.31)
Female (ref = Male)		0.028	0.041	0.044
		(0.94)	(1.28)	(1.38)
For. Born Citizen (ref = US Born)		−0.014	−0.021	−0.028
		(−0.31)	(−0.45)	(−0.60)
For. Born Noncitizen (ref = US Born)		0.048	0.043	0.040
		(0.92)	(0.83)	(0.76)

Table A1. (*Continued*)

Variable	Model 1	Model 2	Model 3	Model 4
Separated (ref = Married)		−0.020	−0.016	−0.025
		(−0.31)	(−0.25)	(−0.38)
Divorced (ref = Married)		0.047	0.049	0.046
		(1.29)	(1.35)	(1.28)
Widowed (ref = Married)		−0.086	−0.088	−0.087
		(−0.84)	(−0.86)	(−0.84)
Never Married (ref = Married)		0.080*	0.079*	0.076*
		(2.52)	(2.45)	(2.38)
HH Size		0.007	0.006	0.007
		(0.87)	(0.76)	(0.80)
Children under 6 y.o. (yes = 1)		0.001	0.004	0.003
		(0.05)	(0.14)	(0.09)
HS/GED (ref = <HS)		−0.048	−0.041	−0.039
		(−1.23)	(−1.03)	(−0.98)
Some College (ref = <HS)		−0.088*	−0.077	−0.076
		(−2.21)	(−1.93)	(−1.90)
Bachelor's Degree (ref = <HS)		−0.042	−0.029	−0.026
		(−0.79)	(−0.54)	(−0.49)
Postgrad Degree (ref = <HS)		0.026	0.037	0.044
		(0.33)	(0.47)	(0.55)
ln (Hourly Wage)		−0.140***	−0.129***	−0.128***
		(−4.62)	(−4.18)	(−4.12)
Job Tenure		−0.008***	−0.008***	−0.008***
		(−3.90)	(−3.54)	(−3.60)
Public Sector (ref = Private)		−0.074	−0.073	−0.071
		(−1.35)	(−1.28)	(−1.26)
Union Member		−0.035	−0.032	−0.031
		(−0.83)	(−0.74)	(−0.73)
Rural (ref = Urban)		0.237***	0.236***	0.242***
		(8.12)	(8.05)	(8.26)
Urban not Identified (ref = Urban)		0.048	0.066	0.072
		(0.77)	(1.06)	(1.16)
Number of Waves	0.139***	0.226***	0.226***	0.226***
	(38.82)	(69.32)	(68.67)	(69.16)
ln (alpha)	0.800***	0.301***	0.284***	0.286***
	(41.92)	(8.11)	(7.05)	(7.03)
N	55,725	55,725	55,725	55,725

Notes: Controls include, but do not display, 24 occupation and 13 industry categories, and 4 region categories. Coefficients are jointly estimated with the logistic regression coefficients in Table A2. The models apply SIPP sample weights.
*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

Table A2. Logistic Regression Coefficients from Zinb Models, Predicting the Probability of Never Reporting Varying Weekly Hours.

Variable	Model 1	Model 2	Model 3	Model 4
Main effects				
Black (ref = White)	−0.803	0.396	0.093	−0.144
	(−1.53)	(1.76)	(0.64)	(−0.17)
Latino/a (ref = White)	−0.052	0.715***	0.099	1.124*
	(−0.11)	(3.44)	(0.67)	(2.24)
2008 Panel (ref = 2004 Panel)	−0.270	−0.148	−1.162***	−0.258
	(−1.18)	(−1.31)	(−4.28)	(−0.62)
Occ. % White			−0.007	−0.000
			(−1.94)	(−0.01)
Two-way interactions				
Black × 2008 Panel	1.244*	−0.463		0.353
	(2.09)	(−1.67)		(0.34)
Latino/a × 2008 Panel	0.161	−1.059***		−1.324*
	(0.29)	(−4.53)		(−2.27)
% White × 2008 Panel			0.011**	0.001
			(2.82)	(0.25)
% White × Black				0.009
				(0.69)
% White × Latino/a				−0.009
				(−1.11)
Three-way interactions				
% White × Black × 2008 Panel				−0.013
				(−0.81)
% White × Latino/a × 2008 Panel				0.007
				(0.76)
Controls				
Occ. % Female			−0.002	−0.003
			(−0.82)	(−1.12)
Occ. ln (Median Earnings)			0.282*	0.263*
			(2.51)	(2.36)
Age		−0.008	−0.009	−0.008
		(−1.14)	(−1.38)	(−1.25)
Female (ref = Male)		−0.162	−0.113	−0.098
		(−1.39)	(−0.95)	(−0.82)
For. Born Citizen (ref = US Born)		0.227	0.227	0.192
		(1.25)	(1.29)	(1.02)
For. Born Noncitizen (ref = US Born)		0.132	0.154	0.116
		(0.76)	(0.90)	(0.66)

Table A2. (*Continued*)

Variable	Model 1	Model 2	Model 3	Model 4
Separated (ref = Married)		−0.170	−0.116	−0.170
		(−0.58)	(−0.41)	(−0.57)
Divorced (ref = Married)		0.093	0.104	0.097
		(0.68)	(0.77)	(0.72)
Widowed (ref = Married)		−0.438	−0.411	−0.389
		(−0.80)	(−0.77)	(−0.69)
Never Married (ref = Married)		−0.024	−0.005	−0.012
		(−0.19)	(−0.04)	(−0.10)
HH Size		−0.022	−0.021	−0.019
		(−0.65)	(−0.66)	(−0.58)
Children under 6 y.o. (yes = 1)		0.207	0.193	0.197
		(1.85)	(1.76)	(1.77)
HS/GED (ref = <HS)		0.174	0.137	0.191
		(1.12)	(0.92)	(1.21)
Some College (ref = <HS)		0.095	0.053	0.096
		(0.60)	(0.34)	(0.59)
Bachelor's Degree (ref = <HS)		0.089	0.039	0.101
		(0.42)	(0.19)	(0.47)
Postgrad Degree (ref = <HS)		−0.172	−0.240	−0.194
		(−0.41)	(−0.56)	(−0.45)
ln (Hourly Wage)		0.410***	0.341**	0.351***
		(3.85)	(3.27)	(3.31)
Job Tenure		0.035***	0.034***	0.034***
		(5.32)	(5.29)	(5.25)
Public Sector (ref = Private)		0.295	0.310	0.317
		(1.58)	(1.56)	(1.62)
Union Member		−0.208	−0.191	−0.196
		(−1.50)	(−1.37)	(−1.41)
Rural (ref = Urban)		−0.079	−0.112	−0.088
		(−0.73)	(−1.06)	(−0.82)
Urban not Identified (ref = Urban)		0.138	0.128	0.164
		(0.70)	(0.66)	(0.85)
Number of Waves	−1.900***	0.363***	0.339***	0.350***
	(−8.94)	(10.39)	(8.74)	(8.63)
N	55,725	55,725	55,725	55,725

Notes: Controls include, but do not display, 24 occupation and 13 industry categories, and 4 region categories. Coefficients are jointly estimated with the negative binomial regression coefficients in Table A1. The models apply SIPP sample weights.
*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.