The Role of Race, Ethnicity, and Gender in the Internal Migration Decline

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Abstract

Since 1980, internal migration rates within the U.S. have declined precipitously. Given the importance of migration for exposing individuals to economic and social opportunities, this decline is concerning. However, we have relatively little knowledge about how race/ethnicity and gender have structured declines in migration propensities and/or changes in the returns to migration over time. In this study, I utilize restricted, geocoded National Longitudinal Survey of Youth (NLSY) data and harmonize these data for the 1979 and 1997 cohorts in order to explore these relationships. I find that average migration propensities have declined the most for black women and men and that the returns to migration have likewise declined more substantially for black women and men relative to other demographic groups. These findings are problematic, suggesting that internal migration, historically an important avenue for improving outcomes among blacks, may be a less viable means of reducing racial disparities in outcomes over time.

Introduction

Since World War II, the United States has undergone a number of important demographic transformations, including the decline in internal U.S. migration rates. In fact, since 1968, the probability that individuals migrate within the U.S. has declined by roughly half for inter-county migration (7 percent in 1968 to 3.7 percent in 2009) and by 55.6 percent for inter-state migration (3.6 percent in 1968 to 1.6 percent in 2009) (Cooke 2011). As internal migration rates have declined, a second transformation has occurred, with women becoming increasingly well-represented in the employment sector and experiencing decreases in their income gaps with men (Women's Bureau 2017a; 2017b). As of 2016, women comprise 46.8 percent of the labor force,

compared to 37.8 percent in 1968 and 28.6 percent in 1948 (Women's Bureau 2017a). These demographic transformations have been accompanied by a third demographic transformation: the increase in racial and ethnic diversity within the U.S. In fact, by 2044, non-Hispanic whites are expected to make up less than half the population (Colby and Ortman 2015). These three transformative demographic phenomena suggest that the U.S. is undergoing numerous changes that have important implications for its population distribution, economy, and opportunity structures.

It is valuable to ask whether these changes are linked. Indeed, there are numerous reasons to expect that the migration decline has been shaped by the changes occurring amongst women and men of different races and ethnicities and that the migration decline may have varying implications for individuals depending on their demographic backgrounds. For example, the dramatic increase in the size of the prison population over the past four decades and the disproportionate representation of Hispanic and, especially, black men in prison (National Research Council 2014) may have increasingly limited the resources black and Hispanic families can harness to fund a move and limited their abilities to move where they would like. Likewise, the end of the Great Migration of southerners to the North in the 1960s-1970s (Tolnay 2003) may have contributed to the decline in migration rates and a reduction in the returns to migration as individuals engage in less dramatic moves, and this could particularly be the case for blacks who participated in the Great Migration at disproportionate rates.

Gender could also play a role in explaining the migration decline and/or in structuring the consequences of the decline. For instance, while the increase in women's labor force participation should enhance the potential benefits of migration for women, the concomitant growth in dual-earner couples (Raley et al. 2006) may have decreased families' desires to move

if it means disrupting both partners' careers. Moreover, the costs of moving for one partner's career (most frequently the male partner's career) may have amplified with the rise in women's earnings (Department of Labor 2017), dampening families' motivations to migrate and decreasing the potential returns to migration. Gender gaps in earnings and in labor force participation are also, themselves, shaped by race and ethnicity in addition to gender (Department of Labor 2017). Hence, it is possible that the migration decline is associated with varying implications for black, Hispanic, and white women and men, such as differing changes in the returns to migration. However, we have very little knowledge of whether this is the case.

The extent to which the economic returns to migration are changing or not for a diverse group of individuals provides important theoretical insights into whether the migration decline might be driven by economic changes or whether, as some researchers have argued, the migration decline reflects an increasing tendency towards "rootedness" to one's origin area (Cooke 2011). This is an important theoretical debate because these explanations have widely different implications for our understanding of the decline and our expectations about its implications for individuals and families. Specifically, if the migration decline is associated with economic changes occurring amongst migrants and/or non-migrants, then the migration decline may have economic consequences for individuals and families that inform whether policy should be developed to enhance individuals' migration opportunities or counteract any potentially harmful economic changes. If the migration decline is being driven by changes in the returns to migration, this may also inform how we theorize about migration and its role in facilitating individuals' and families' access to economic opportunities. In contrast, if the migration decline is driven by individuals' preferences for "rootedness," then the decline could be considered a benign or even beneficial phenomenon that does not require policy intervention and this

preference for rootedness could shape how we understand migration and the factors that lead individuals to decide to move or remain in place.

In evaluating the potentially changing economic returns to migration, I provide a first step in assessing whether the migration decline may indeed, be associated with individuals' economic wellbeing in ways that inform this theoretical debate. Studying how race/ethnicity and gender shape these relationships provides further insight into whether it might be important to attend to race, ethnicity, and gender effects in our investigations of the migration decline and whether the migration decline may be associated with inequitable economic changes that have social and policy relevance. Finally, the extent to which the returns to migration have changed for different demographic groups could point to potential mechanisms behind the migration decline. However, to my knowledge, no study has, thus far, examined how changes in the returns to migration are shaped by race/ethnicity and gender during the period of the migration decline. I therefore utilize linked, cohort National Longitudinal Survey of Youth-1979 (NLSY79) and National Longitudinal Survey of Youth-1997 (NLSY97) data to explore the following questions:

1. Do inter-cohort changes in the average probability of migrating differ across race, ethnicity, and gender?
2. Do race, ethnicity, and gender shape inter-cohort changes in the economic returns to inter-state migration?

I find that the economic returns to migration have declined the most for black women and men. In contrast, white men and especially white women have experienced increases in their economic returns to migration, while Hispanic women and men exhibit little change in their returns to migration over time. These changes in the returns to migration tend to correspond to changes in the average probabilities that each of these groups migrate.

Background

Explaining the Migration Decline

To motivate my exploration of inter-cohort changes in the economic returns to migration for black, Hispanic, and white women and men, it is helpful to examine whether the migration decline is explained by economic changes and whether those explanations might be associated with race/ethnicity and gender. For instance, if the migration decline is explained by the changing demographic characteristics of the U.S. population, then we would not expect to observe changing returns to migration once those characteristics are accounted for. Likewise, if the migration decline is explained by a cultural shift in priorities towards greater "rootedness," then the migration decline may not be associated with systematic economic changes among migrants and non-migrants. In contrast, if the migration decline is explained by economic changes, then the decline could have consequences for individuals' economic wellbeing, consequences that could interact with race, ethnicity, and gender in integral ways. For example, declines in unionized jobs and union membership (Card 2001), the diminishing relative wages of the lower and middle classes relative to the upper class (Fry and Kochhar 2016; Kochhar 2018), and, as outlined below, lowering returns to job changes (Molloy et al. 2011, 2014, 2017) could all be economic changes that decrease the economic accessibility of moves and, when moves do occur, hamper the potential economic benefits associated with them. These changes may particularly affect racial/ethnic minorities' outcomes and migration opportunities as they are less likely to be a part of the modestly increasing upper class, more likely to belong to the growing lower class (Kochhar 2018), and more likely to have benefitted from unionization's salutary effects on wage inequality (Card 2001). If the migration decline is driven by economic changes, it does not necessarily imply that migrants and/or non-migrants are experiencing systematic

changes in their wellbeing, though it does make it more likely that the migration decline is associated with economic consequences than if the migration decline is explained by changing demographics or rootedness to place. Understanding why the migration decline is occurring therefore provides suggestive, though not definitive insights into whether we expect to see changes in the returns to migration and/or in the economic wellbeing of migrants or non-migrants during the period of the migration decline.

Unfortunately, explaining the continuous decline in migration probabilities since 1980 has proven somewhat elusive, with no study able to fully explain the decline and with various explanations receiving more or less support depending on the study in question. In particular, changes in demographic characteristics have received considerable attention as potential explanations for the migration decline. Some researchers have found that the aging of the U.S. population, rising probabilities of homeownership, and the growing prevalence of dual-earner couples play roles in the decline (Cooke 2011; Foster 2017; Karahan and Rhee 2017; Molloy et al. 2011, 2014, 2017). (Spring et al. 2013; Greenwood 2015). Likewise, Foster (2017) demonstrated that the increasing racial and ethnic diversity of the U.S. explained about 12-15 percent of the decrease in internal migration rates because non-Hispanic whites are more likely to migrate than other racial/ethnic groups. These explanations do not, however, explain the majority of the decline and some studies have found that aging and homeownership play relatively small roles in the reduction in inter-state migration (Foster 2017; Kaplan and Schulhofer-Wohl 2015; Molloy et al. 2011, 2014, 2017)[1], while other studies have indicated that

[1] Karahan and Rhee (2017) provide a contrasting view of this finding, however, demonstrating that the aging of the workforce may explain as much of half of the migration decline by decreasing the costs for employers to hire labor locally and thereby indirectly dampening migration rates for individuals of all ages.

the prevalence of dual-earner families explains virtually none of the decline[2] (Molloy et al. 2011, 2014).

Economic and job-related explanations have also received considerable attention as potential mechanisms behind the decline. For instance, the 2008 economic recession was associated with declines in internal migration (Cooke 2011; Foster 2017; Johnson et al. 2017), though it too cannot explain the longer-run reduction in migration probabilities. Moreover, migration is becoming less responsive to shifts in labor-market demand (Partridge et al. 2012) because the compensation for particular occupations is becoming more geographically similar (Kaplan and Shulhofer-Wohl 2015), individuals are transitioning between jobs less often, and young males are earning lower returns to job changes (Molloy et al. 2011, 2014, 2017). Less frequent labor market churning could therefore partially explain the migration decline as well.

The variety of mechanisms explored in these studies illustrates that there are a multitude of potential explanations for the decline in internal migration, all of which may play a role and none of which have entirely explained the migration decline (either alone or in combination), particularly for inter-state migration. Cooke (2011) theorizes that the unexplained decline in migration probabilities reflects an increasing tendency towards societal "rootedness." While this is possible, it is also possible that the migration decline is partially due to alternative explanations that have not yet been explored and that may have important implications for individuals' wellbeing. Examining how the returns to migration have changed for women and men of varying races/ethnicities may point towards these alternative potential explanations. Additionally, multiple studies have found that economic changes play roles in explaining the migration decline, suggesting that the economic returns to migration may have changed during

[2] This lack of significance could be the results of the increasing omnipresence of dual-earner couples, however.

this period. However, we do not know whether this is the case because studies concerning the reasons behind the decline do not clarify what changes are occurring at the individual-level. It is thus useful to examine how individuals' economic outcomes have changed during the context of the migration decline in order to understand whether the decline may have implications for individuals' economic wellbeing.

Race/Ethnicity and the Implications of the Migration Decline

It is likely that the migration decline *does* have consequences for individuals' economic wellbeing because moving across neighborhoods, counties, states, and regions has long been an important means for individuals and families to explore and pursue new social and economic opportunities. For example, Ham et al. (2011) find that internal migration is associated with a 10 percent increase in college-educated migrants' wages between their first and second jobs. Other authors have found that internal migration is associated with increases in family income (Cooke et al. 2009), individual wages—particularly for men (Clark and Withers 2002; Cooke et al. 2009; Krieg 1997; Yankow 1999), wage and income growth (Knapp et al. 2013; Yankow 2003), and occupational status (Flippen 2013). Similar benefits associated with internal migration have been found in other high-income countries, including Canada (Grant and Vanderkamp 1980), Germany (Lehmer and Ludsteck 2011), and the U.K. (Boheim and Taylor 2007; Cooke et al. 2009), suggesting that the benefits of internal migration are relatively consistent across contexts for high-income countries.

While these studies have found that migration has economic benefits in a variety of contexts, the returns to migration and the resulting consequences of the migration decline may be influenced in important ways by race and ethnicity. Indeed, race and ethnicity frequently shape the economic opportunities available to individuals. Likewise, internal migration is often

precipitated by economic opportunities and, in turn, influences subsequent economic outcomes. Consequently, it is plausible that the opportunities for and returns to migration are also influenced by race and ethnicity. The Great Migration is an important illustration of this. For much of the 20th century, black southerners were particularly likely to migrate to the North because they faced an especially hostile economic and social environment in the South (Gregory 2005; Tolnay 2003; Wilkerson 2010). The benefits of migrating North therefore tended to be larger for African Americans and their children relative to whites (Alexander et al. 2017; Lieberson 1978; Lieberson and Wilkinson 1976; Tolnay 2001; Tolnay 2003).

The Great Migration is an example of race shaping the returns to migration in ways that may, over time, lessen racial disparities in outcomes. However, racial and ethnic minorities continue to experience important economic disadvantages that could influence their opportunities for and returns to migration in more inequitable directions. These economic disadvantages include less efficient job networks (Mouw 2002), residential segregation and spatial mismatch (the greater distance between blacks' and Hispanics' residences and potential job opportunities) (Jackson 1987; Kain 1965; Kain 1992; Kneebone and Holmes 2015; Massey and Denton 1993; Wagmiller 2007), lower school quality (Massey and Denton 1993; Sharkey 2013; Sharkey and Faber 2014; Squires and Kubrin 2005), and racial/ethnic discrimination and stereotypes (Pager et al. 2009). These racially and ethnically disparate factors may reduce minorities' opportunities for obtaining different and/or better jobs in new areas (through job transfers, promotions, referrals, etc.). It is therefore possible that the migration decline is occurring to different degrees for different races/ethnicities and that its implications are shaped by race/ethnicity because the opportunities for migration, the ability to migrate, and the returns to migration are themselves shaped by race and ethnicity. Because blacks are the most socially and residentially segregated

(Brown and Chung 2006; Charles 2003; Iceland 2004; Lee et al. 2008; Massey and Denton 1993) and tend to experience especially persistent interpersonal and housing market discrimination (Charles 2003; Emerson et al. 2001; Pager and Shepherd 2008; Pager et al. 2009; Roscigno et al. 2009), these disadvantages may particularly constrain the economic and migration outcomes of blacks relative to Hispanics and, of course, whites.

It is possible that race and ethnicity are associated with temporal changes in the returns to migration as well, especially if segregation and/or racial/ethnic discrimination are changing in nature and/or magnitude over time. Indeed, segregation has declined since the 1960s (Glaeser and Vigdor 2012; Iceland 2004; Logan et al. 2004) and survey research has found that housing (Pager and Shepherd 2008) and interpersonal discrimination (Firebaugh and Davis 1988) have decreased modestly over recent decades. As these obstacles to migration and economic advancement have declined in magnitude, the returns to migration may have increased for minorities. Nevertheless, the extent to which declines in discrimination are authentic and not based on survey desirability or changes in the way discrimination is expressed is debatable and highly contested, with other studies finding little to no decline in discrimination over time or across cohorts (Bonilla-Silva 2003; Kluegel 1990; Stewart et al. 2009). Survey research has also demonstrated that whites continue to feel hostile to the idea of living near black neighbors, regardless of their socioeconomic status, though they do not express such feelings towards potential Hispanic neighbors once their prospective neighbors' socioeconomic status is accounted for (Emerson et al. 2001). Likewise, the segregation of blacks from non-blacks has declined much more precipitously than the segregation of blacks from whites, potentially indicating that it is exposure to other races (and not whites) that is primarily responsible for the decline in segregation between 1970 and 2000 (Massey et al. 2009). The meaningfulness of

segregation declines for increasing racial/ethnic minorities' exposure to economic opportunities and spaces of advantage is therefore somewhat suspect.

Moreover, increases in incarceration rates (National Research Council 2014) suggest that the returns to migration for minorities and, particularly, minority men may actually have decreased, leading to lower probabilities of migrating. Because blacks experience the highest probabilities of incarceration (Bonczar 2003; Pettit and Western 2004; Wildeman 2009) and are the most likely to be stereotyped as criminals by potential employers (Pager et al. 2009), the rise of the carceral system may have limited blacks' abilities to migrate and their returns to migration in particularly dramatic ways. The end of the Great Migration in 1970 (Spring et al. 2015; Tolnay 2003) could also have contributed to a decline in migration probabilities and in the returns to migration, especially among blacks, as individuals engage in less dramatic and potentially economically beneficial moves. Indeed, the rise of return migration to the South among both blacks and whites (Adelman et al. 2000; Sharkey 2015) may signal a move towards migration that is motivated more by family-related reasons for moving than by economic reasons for moving (Brown 2017; Stack 1996), potentially translating into declining economic returns to migration.

Hence, it is probable that race and ethnicity structure the returns to migration and temporal changes in the returns to migration, though it is unclear exactly how they might do so. However, the rise of incarceration, the persistence of particularly hostile discriminatory attitudes towards blacks, and the end of the Great Migration suggest that any positive changes in economic wellbeing as a result of declines in discrimination, segregation, or other factors could be tempered for blacks relative to whites or Hispanics.

Gender and Migration

Gender could also shape individuals' access to economic opportunities, the opportunities and benefits associated with migration, and changes in the returns to migration over time. Numerous studies show that migration tends to economically benefit males, often at the expense of their female partners (Cooke 2008; Cooke et al. 2009; Geist and McManus 2012; Jacobsen and Levin 1997; Maxwell 1988; Shauman and Noonan 2007). Likewise, families are far less likely to move for females' occupations than for males' occupations (Cooke 2008; McKinnish 2008; Shihadeh 1991), suggesting that females face fewer opportunities to capitalize on the potential economic benefits associated with migration.

While migration tends to be associated with larger economic returns for single females than for partnered females (Cooke 2008; Geist and McManus 2012; Jacobsen and Levin 1997; Maxwell 1988), females' lower average earnings (Bureau of Labor Statistics 2017) will still likely translate to smaller average returns to migration compared to males. Moreover, women tend to sort into more geographically ubiquitous jobs and into jobs with fewer opportunities for migration, both of which are associated with lower earnings and, of course, lower probabilities of migration (Shauman and Noonan 2007). Job networks are also frequently predominantly male, thereby disadvantaging women and their opportunities to obtain jobs and then advance in their careers (Brass 1985; Campbell 1988; Drentea 1998; Durbin 2010; Fernandez and Sosa 2005; Kmec et al. 2010; McGuire 2002). By limiting women's access to new job opportunities and promotions, gender-segregated job networks may reduce the potential opportunities for and benefits associated with migration for women. However, the narrowing of gender gaps in income (Women's Bureau 2017a; 2017b) and the modestly increasing representation of women in nontraditionally female occupations (Blau et al. 2013; England 2010; Jacobs 1989; Reskin 1993) suggest that the effect of these gender-related forces may have lessened for recent cohorts.

The Interaction of Race/Ethnicity and Gender

Race and ethnicity could interact with gender, so that these relationships vary in fundamental ways for women and men of different races and ethnicities. For example, gender disparities in income are smaller for blacks and Hispanics than for whites (Bureau of Labor Statistics 2017). Gender could therefore limit the potential benefits of migration more for white females than for black or Hispanic females.

For minority men, incarceration and even stereotypes about black and Hispanic male incarceration limit the economic opportunities and, as a result, the migration opportunities they face (Pager 2003; Pager et al. 2009). Because incarceration can create sex-ratio imbalances within predominantly minority neighborhoods, black and Hispanic females could face increased difficulties finding partners, potentially making it more likely that minority females are the breadwinners of their families (Charles and Luoh 2010). Indeed, black and Hispanic women are less likely to be married than white women (Raley et al. 2015). As a result, black and Hispanic women's individual economic outcomes may benefit more from migration than white women's individual economic outcomes because of their lower likelihoods of being tied movers who move to accompany a spouse. At the same time, racial/ethnic discrimination and the interaction of racial/ethnic and gender discrimination for minority women could limit the opportunities and obstacles associated with migration for racial/ethnic minorities relative to whites. Consequently, there are numerous reasons to expect that race/ethnicity and gender interact to shape the returns to migration, as well as the potential economic consequences of the migration decline.

Examining for whom economic changes have been occurring during the period of the migration decline informs how we understand the decline and its potential consequences, signals whether the migration decline might be associated with harmful economic changes and, if it is

harmful, whether it is harmful for a diverse group of individuals or for particular demographic groups. The extent to which the consequences of the migration decline differ across race/ethnicity and gender also has implications for understanding the role of internal migration and the internal migration decline in changes in racial/ethnic and gender disparities over time. Finally, exploring these relationships provides insights into potential mechanisms behind the decline that may be valuable for future research to investigate.

This Study

In this study, I aim to examine changes in the returns to migration during the period of the migration decline, as well as racial/ethnic and gender differences in these relationships. To do this, I utilize linked, longitudinal NLSY79 and NLSY97 cohort data for black, Hispanic, and white women and men who are between 20-34-years-old. I utilize the findings from my analyses to suggest what the implications of the migration decline might be for individuals' economic outcomes and whether those implications depend on one's race/ethnicity and gender. This is therefore a purely descriptive analysis aimed at exploring how the economic returns to migration have changed during the period of the migration decline.

Throughout this analysis, I am guided by the following hypotheses: (1) The returns to migration will have changed most over time for white men because the benefits of migration are expected to be largest for white men, they may, as a result, have the farthest to fall. (2) The returns to migration for minority men will have changed across cohorts, though it is unclear in which direction they might do so. (3) The returns to migration will have increased for women in the 1997 cohort relative to women in the 1979 cohort, because of the increase in women's wages and labor force participation during this period. (4) Race/ethnicity and gender will structure

changes in the returns to migration for women, though it is unclear in what directions they would do so.

Data and Methods

Sample

The NLSY79 and the NLSY97 studies are both longitudinal, panel studies that have the capability of being made comparable and linked. This is advantageous for my purposes because it enables me to capture a relatively large group of migrants and non-migrants during a substantial period of the migration decline and thereby allows me to examine how the returns to migration have changed across the 1979 and 1997 cohorts.

The NLSY79 began in 1979 with 12,686 women and men and was conducted annually until 1994 and then biennially thereafter. The NLSY97 began in 1997 with 8,984 individuals who were interviewed annually until 2011 and then reinterviewed in 2013 (subsequent data are not available as of the time of this writing). Both of these studies are designed to be nationally representative after accounting for their minority oversamples. Because one of my primary focuses in this study is how race and ethnicity shape changes in the returns to migration over time, I retain these oversamples in my analysis.

In order to ensure that the two NLSY cohorts are comparable, I solely examine individuals who are between 20-34-years-old (in any of the survey waves). I do this because the oldest individuals in the 1997 cohort are 34-years-old as of the 2013 survey. However, the oldest individuals in the 1979 cohort are in their mid-50s as of the latest survey available (in 2014). Restricting my analysis to 20-34-year-olds ensures that my results are not confounded by the differing age profiles of the samples.

Focal Independent Variables

To examine how the returns to migration have changed, I focus on inter-state migration. I do this because inter-state migration is more likely to correspond to job changes than shorter-distance moves such as inter-county migration (Schwartz 1973; White and Lindstrom 2005; Yankow 2003). As a result, focusing on inter-state migration better allows me to explore changes in the economic returns to migration. I examine the returns to inter-state migration using three focal independent variables: a dummy variable indicating if the respondent has ever migrated across state lines, a continuous variable indicating the number of years the respondent has lived in their current state of residence *as a working adult*[3], and a count variable representing the number of moves the respondent has engaged in as of the survey year[4]. I also interact the dummy inter-state migration variable and the continuous years of residence variable. The "ever moved" variable allows me to examine how a move itself is associated with a change in one's wages or work hours over time, while including residential tenure in a state and interacting it with the migration dummy variable allows me to directly compare the outcomes of migrants and non-migrants as both of their residential tenures within a labor market increase. This interaction also means that I can assess migration's association with economic outcomes at the point of migration at 0 years of residential tenure. Table 1 illustrates what these variables would look like for a hypothetical migrant and non-migrant in the NLSY79 cohort, the former originating in California, the latter in Washington State.

[TABLE 1 HERE]

[3] For non-migrants, residential tenure begins when an individual enters my sample as an adult 20-years or older who is not enrolled in school. Residential tenure therefore captures residential tenure in a particular labor market.
[4] I control for number of moves, but do not separately explore the unique trajectories of subsequent (second, third, etc.) moves given the additional complexity this would add to already rather complex models, though it is certainly possible that onward moves are associated with unique wage/work hour growth trajectories.

Additionally, I include a dummy variable indicating if the respondent belongs to the 1997 cohort (*1=1997 cohort, 0=1979 cohort*). I interact this cohort indicator variable with the three focal, migration-related variables mentioned above, and I conduct a three-way interaction between the 1997 cohort dummy variable, the ever-migrated dummy variable, and the years of residence continuous variable. These interactions allow me to show how the economic wellbeing of migrants and non-migrants and the returns to migration have changed across the 1979 and 1997 cohorts.

Outcomes

In this analysis, I examine logged hourly wages, weekly hours worked, and logged weekly wages. Hourly wages and weekly hours worked both capture elements of economic wellbeing, though they do so in distinct ways. Hourly wages are important signals for job quality, as well as for the financial resources available to an individual. The number of hours an individual works each week indicates whether she is under-employed or fully-employed. Even if an individual claims relatively high wages, these wages will not go as far if the respondent is underemployed[5] (Jensen and Slack 2003). Moreover, women and minorities are particularly likely to be underemployed (Slack and Jensen 2003). Weekly work hours therefore capture a related, though distinct element of the job experience and economic wellbeing. Examining weekly wages helps to reconcile the findings from these two outcomes in order to better illustrate changes in the overall returns to migration.

Covariates

To help account for the fact that migrants tend to be a select group of individuals (Greenwood 2015; Lee 1966; Spring et al. 2013), I include a host of control variables.

[5] Underemployment refers to an individual being employed in a job that is less than full-time or that underutilizes their skills and training (Merriam Webster 2018).

Specifically, I include the quadratic relationship with age (age and age-squared) to capture the fact that older individuals migrate less frequently than younger individuals (Spring et al. 2013), but that this relationship may not be linear. I also control for marital status and the number of children in the family, because married individuals and those with children may be more tied to place and/or experience larger costs associated with moving. I account for the respondent's educational attainment (a continuous variable representing the years of education completed), professional job status, and a lagged variable representing the respondent's average wage gain over the three years prior to the observation year to capture the potential socioeconomic selectivity of migrants. Additionally, I control for whether the respondent was in the armed forces because military-related occupations frequently involve job-related moves. Finally, I include region of residence (Northeast—reference group, North Central, South, and West) and whether the respondent lives in an urban (relative to a rural) location to address potential geographic differences in economic opportunities. I do not control for the year of observation because year was highly correlated with age in my sample (~0.90) given the cohort structure of the data.

Analytic Strategy

To examine the relationship between migration and economic wellbeing across migrants and non-migrants in the NLSY79 and NLSY97 cohorts, I employ within-person fixed effects models. Within-person fixed effects models use the within transformation in order to eliminate unobserved heterogeneity and detect changes in economic outcomes in response to changes in migration status, controlling for changes in the other control variables. Specifically, this process can be modeled using the following equation:

$$EO_{it} - \overline{EO}_i = (Migrate_{it} - \overline{Migrate}_i)\beta_1 **(Tenure_{it} - \overline{Tenure}_i)\beta_2 **(Cohort_{it} - Cohort_i)\beta_3 + (x_{it} - \bar{x}_i)\beta_k + (a_{it} - \bar{a}_i) + (u_{it} - \bar{u}_i)$$

Where EO_{it} refers to the economic outcome in question for each individual i at time t, $Migrate_{it}$ indicates whether individual i has migrated by time t, *Tenure* refers to the residential tenure, *Cohort* represents the cohort the individual belongs to, x_{it} refers to the matrix of covariates, a_{it} captures the unobserved, time-invariant individual effects, and u_{it} refers to the error term. The ** illustrate that migration status, residential tenure, and cohort status are fully interacted in this model. The betas represent the coefficients that accompany each variable. By subtracting each of these variables from their means for each individual averaged across all person-years, the variation over time can be observed. Thus, when an individual becomes a migrant, the effect of the switch on their economic outcomes can be approximated. Moreover, the effects of time-invariant characteristics are removed because these characteristics are fixed. The removal of unobserved heterogeneity is a huge asset to this study because numerous characteristics affect the likelihood of migrating as well as one's economic outcomes, such as one's propensity to take risks, willingness to sacrifice for career advancement, etc. All of these time-invariant factors, and others, would be accounted for by fixed-effects models.

However, because the influence of time-invariant characteristics is removed, this makes analyzing the cohort indicator more problematic. Individuals do not change cohorts over time, the main effect of cohort status therefore drops out of the model. It is possible to identify inter-cohort changes in economic returns to migration by interacting cohort status with migration status and residential tenure. This is because these interactions do change in value for individuals. The consequences of this strategy are that I can identify inter-cohort changes in the returns to migration, though I cannot make any statements about the level of wages or work

hours exhibited by each cohort. In other words, while I can determine whether the returns to migration have declined across cohorts, I cannot definitively say whether the overall wages or work hours of the 1997 cohort have declined because the main effect of belonging to the 1997 cohort cannot be identified. Nevertheless, I examined these relationships using multilevel growth curve models with individual- and state-level random intercepts which do allow for the inclusion of time-invariant characteristics and found substantively very similar relationships. I do not include these results here because they are less clear to interpret and they do not fully remove time-invariant unobserved heterogeneity, which is problematic given the selectivity of migrants. These results are available upon request.

I conduct separate models by race/ethnicity and gender in order to examine whether race/ethnicity and gender structure changes in the returns to migration over time. Because of the complexity of these models and the difficulty interpreting multiple interactions, I present graphs of the predicted values of my outcomes as residential tenure increases for black, Hispanic, and white male and female migrants and non-migrants in both the 1979 and 1997 cohorts. The full set of regression results are presented in the Appendix.

Results

It is possible that the migration decline is occurring to different degrees for individuals of different races/ethnicities and genders. To explore this possibility, Table 2 illustrates *changes* and *percent changes* in the probability that individuals have ever migrated across the NLSY97 and NLSY79 cohorts by age, race/ethnicity, and gender. For example, if 15 percent of 20-21-year-old black males have ever migrated in the NLSY79 cohort, but only 13 percent of 20-21-year-old black males in the NLSY97 cohort have ever migrated, Table 2 would record a -2.00

percent absolute change for this group and, in parentheses, a 13.33% decline in the magnitude of these migration probabilities across the two cohorts.

[TABLE 2 HERE]

Table 2 illustrates that Hispanic females and males largely do not exhibit declines in their average probabilities of ever migrating across the NLSY79 and NLSY97 cohorts and, at many ages, they are actually migrating at somewhat higher rates over time. Likewise, white females in the NLSY97 cohort are consistently migrating at reasonably higher rates on average than white females in the NLSY79 cohort, suggesting that they too may not be contributing to the migration decline. In contrast, white males in the NLSY97 cohort exhibit very modest declines in the probability that they have ever migrated relative to white males in the NLSY79 cohort. The greatest participators in the migration decline appear to be black males and, particularly, black females, both of whom exhibit reasonably substantial declines in the average probabilities that they have ever migrated for most ages. Thus, it is largely among blacks that evidence for the migration decline is found among the NLSY cohorts, a finding reasonably consistent with Sharkey's (2015) finding using the PSID and exploring intergenerational changes in the probabilities of migration. These findings suggest that average changes in the probabilities of migrating vary across gender, race, and ethnicity and motivate an analysis of economic changes occurring amongst migrants and non-migrants across race/ethnicity and gender.

[TABLE 3]

[TABLE 4]

It is possible that the greater decline in average migration probabilities for black women and men is reflective of a reduction in their economic wellbeing over time. Tables 3 and 4 for men and women respectively offer some support for this possibility. While average lagged wage

growth has declined for all groups, it has declined particularly precipitously for black women and men and for Hispanic women. This suggests that individuals' wages are not growing as much as in the past and that this is particularly the case for blacks and Hispanic women. Average weekly work hours and the probability that individuals are married have also declined for all groups, though these declines tend to be somewhat steeper for blacks relative to same-gender whites and Hispanics. The probability that individuals are employed in professional jobs has, however, increased sharply. Hence, it is possible that the greater migration decline exhibited by blacks is due to the changing average characteristics of individuals, which could make migration increasingly out of reach. It is also possible that the economic returns to migration have decreased more for blacks than for other groups, making migration a less appealing and/or economically viable option.

To explore these possibilities in more depth, I turn to the fixed effects models that examine changes in the returns to migration for black, Hispanic, and white females and males across the NLSY79 and NLSY97 cohorts. Throughout, I focus on the multivariate results because characteristics such as educational attainment, professional job status, and marital status are extremely important for shaping individuals' migration probabilities, economic outcomes, returns to migration, and changes in these relationships across cohorts. I therefore focus on the multivariate results in order to ensure that my results are not based largely on changes in the characteristics of individuals across cohorts, though the results for the bivariate models are presented in the Appendix.

Hourly Wages

Females

I first explore whether the hourly wage returns to migration have changed for females in the 1997 cohort relative to females in the 1979 cohort. Figure 1 illustrates the results from the fully-specified multivariate fixed effects models, holding covariates at their means. The predicted values for logged hourly wages have been exponentiated to represent unlogged wages in order to make the values for meaningful.

[FIGURE 1]

Overall, I find that changes in the hourly wage returns to migration across the 1979 and 1997 cohorts differ only modestly by race and ethnicity for women. In the multivariate models, the returns to migration have changed little for white women. White female migrants in the 1979 cohort earn wages that are approximately 15-18 percent higher than their non-migratory counterparts. For the 1997 cohort, this improvement translates into a 25 percent increase in wages for white female migrants. Thus, the returns to migration have slightly, though non-significantly, increased for white women in the 1997 cohort.

Black female migrants in both cohorts also earn significantly higher wages than their non-migratory counterparts. Black migrant women in the 1979 cohort earn wages that are 16-22 percent higher than their non-migratory counterparts, and black migrant women in the 1997 cohort earn wages that are 12-18 percent higher than their non-migratory counterparts. The returns to migration have therefore tended to trend downward for black women, though this change is not significant.

Hispanic women, in contrast, experience no significant wage benefits associated with migration for either cohort. Consequently, while black and white women experience significant hourly wage returns to migration, Hispanic women do not. The returns to migration have also not

tended to increase for black women as they have for white women. Race and ethnicity therefore modestly structure changes in the returns to migration for women.

Males

[FIGURE 2]

The results for males suggest some similarities and some important differences relative to the results for females. As was the case for white females, white males experience significant returns to migration, though these returns have changed even less for white men than they have for white women, with both cohorts experiencing gains in wages associated with migration of 20-25 percent.

The results for black males differ in important ways from the results for white males. Specifically, black males in the 1979 cohort experienced relatively consistent wage benefits associated with migration, though these wage benefits are considerably smaller than the ones exhibited by white men. In contrast, black males in the 1997 cohort experience only short-lived wage benefits associated with migration. While black male migrants in the 1997 cohort earn significantly higher wages than non-migrants when they have spent less than 4 years in a state, migrants and non-migrants earn statistically equivalent wages after this point. This is because the wages of black male migrants are stagnant after the point of migration, while the wages of black male non-migrants rise over time.

As was the case for Hispanic females, Hispanic males experience no significant hourly wage returns to migration nor have the returns to migration changed across cohorts. Race and ethnicity therefore structure inter-cohort changes in the returns to migration, with white males experiencing substantial returns to migration and relatively little change in these relationships,

black males experiencing declines in their returns to migration, both within their lifetimes and across cohorts, and with Hispanic males earning no wage returns to migration for either cohort.

Weekly Work Hours

Hourly wages provide only partial insights into one's economic wellbeing. If one is underemployed (i.e. works fewer hours per week than one prefers), then higher hourly wages will not go as far. This may particularly be the case for minority men and women and for white women, for whom employment may be more tenuous (Slack and Jensen 2002). To examine this possibility, I turn to the results for average weekly work hours.

Females

[FIGURE 3]

In the 1979 cohort, white women do not earn significant work hour returns to migration, with both migrant and non-migrant women working a predicted 36-38 hours per week. White women in the 1997 cohort do, however, earn work hour returns to migration. Migrant white women in the 1997 cohort work significantly more hours than their non-migratory counterparts when they have spent less than 6 years in a state, and these differences are quite substantial in the early years after migration.

Similar to the results for white women, black women in the 1979 cohort experience no work hour returns to migration. While black migrant women in the 1997 cohort work significantly more hours than black non-migrant women at the point of migration, this benefit is small and quickly disappears. Thus, black women in the 1997 cohort largely do not appear to exhibit the substantial work hour benefits associated with migration that were found for white women, though the returns to migration have slightly increased across cohorts because the 1997 cohort is experiencing modest work hour returns to migration.

While the multivariate results presented in Appendix Table 3 suggest that the work hour returns to migration may have increased for Hispanic women, the predicted results illustrate that these changes across cohorts do not translate into meaningful differences in work hours between migrants and non-migrants in either cohort. As was the case for hourly wages, Hispanic women therefore do not appear to earn significant work hour returns to migration, nor have these relationships meaningfully changed over time.

Males

[FIGURE 4]

White migrant men in the 1979 cohort work significantly more hours than white non-migrant men in the 1979 cohort, though these work hour gains diminish as residential tenure increases. These patterns are similar for white males in the 1997 cohort, though the work hour returns to migration have substantially increased for this group. In contrast, black and Hispanic men do not experience significant work hour returns associated with migration in either cohort.

Weekly Wages

Finally, I examine these relationships for weekly wages (hourly wages*weekly work hours) in order to reconcile the results for hourly wages and weekly work hours. I exponentiate the predicted values for logged weekly wages so that they represent unlogged weekly wages and are therefore more interpretable.

[FIGURE 5]

For weekly wages, white women have experienced an increase in their returns to migration. Migrant white women in the 1979 cohort earn wages that are approximately 24 percent higher than the wages of their non-migratory counterparts at the point of migration, and about 16-17 percent higher thereafter. At the point of migration, migrants in the 1997 cohort earn

wages that are a substantial 44 percent higher than those of non-migrants, with this benefit narrowing to a gain in wages of 15 percent relative to their non-migrant counterparts after they have spent 6 years in a state. Prior to this point, however, the weekly wage returns to migration are significantly larger for the 1997 cohort relative to the 1979 cohort, suggesting that the returns to migration have increased for white women.

The results for black women are substantially different. Black women in the 1979 cohort experience significantly higher wages relative to non-migrants at each year of residential tenure, though these weekly wage returns narrow over time. In contrast, black female migrants in the 1997 cohort only earn higher weekly wages relative to non-migrants when they have spent less than 4 years in a state and migrants in this cohort experience no wage growth over time.

Similar to the results for the other outcomes, Hispanic women do not experience significant weekly wage returns to migration in either cohort. Thus, changes in the returns to migration differ across race/ethnicity, with white women experiencing increasing returns to migration, black women experiencing declining returns to migration, and Hispanic women experiencing no returns to migration in either cohort.

Males

[FIGURE 6]

For white males, the weekly wage returns to migration have increased slightly. While migrants in both cohorts earn significantly higher wages than non-migrants, the wage benefits associated with migration narrow with increasing residential tenure for the 1979 cohort. At the point of migration, migrants in the 1979 cohort earn wages that are roughly 38 percent higher than non-migrants, though this difference narrows so that after 6 years in a state, migrants earn 20 percent higher wages than non-migrants. For the 1997 cohort, the wage benefits associated

with migration vary little across residential tenure, with migrants earning approximately 30-35 percent higher wages than non-migrants during most time periods. Migration is therefore associated with weekly wage benefits for white men in both cohorts, and those wage benefits have tended to increase modestly over time.

Changes in the weekly wage returns to migration for black men are not as straightforward as the results for white men. Specifically, black males in the 1979 cohort experienced modest wage benefits associated with migration when migrants spent less than 6 years in a state, with migrants earning approximately 16 percent higher wages than non-migrants. Migrants in the 1997 cohort, however, only earn significantly more than non-migrants when they have spent less than 4 years in a state. While this may suggest that the returns to migration have declined over time for black males, black male migrants in the 1997 cohort earn 40 percent higher wages at the point of migration, with this wage gain narrowing to 19 percent after 2 years spent in a state and to 11 percent after 4 years in a state, a non-significant difference. The initial wage benefits associated with migration have therefore increased across cohorts for black males, though the stagnant wage growth black male migrants in the 1997 cohort experience after migration translates into declining long-term returns to migration.

The predicted results for Hispanic men indicate that, in both cohorts, migrants earn slightly higher weekly wages than non-migrants in their early years of residential tenure, though these wage returns disappear after 4 years spent in a state. Moreover, the wage disparity between migrants and non-migrants has changed little across cohorts. While the multivariate results in Appendix Table 6 suggest that the weekly wage returns to migration have declined slightly for the 1997 cohort, the predicted results in Figure 6 indicate that any inter-cohort changes do not translate into particularly meaningful changes in the returns to migration.

To summarize, during the period of the migration decline, black men have seen their hourly wage returns to migration and their long-term weekly wage returns to migration decline. In contrast, the work hour returns to migration have increased for white men, translating into a modest increase in their weekly wage returns to migration. Hispanic men have experienced little change in their returns to migration over time, with both cohorts experiencing very modest weekly wage benefits associated with migration.

Black women's weekly wage returns to migration have declined even more dramatically than black men's returns to migration, while white women have experienced consistently increasing returns to migration. Migration is not associated with economic benefits for Hispanic women and Hispanic women have experienced no changes in these relationships over time. The variations in these relationships across gender and race/ethnicity illustrate that these demographic characteristics do structure changes in the returns to migration across cohorts.

Discussion

This manuscript explored whether race/ethnicity and gender shape the economic returns to migration during the period of the migration decline. By doing so, these results illuminate how the economic wellbeing of different demographic groups has changed across cohorts and whether migration plays into those changes. The widening gaps in incomes and wealth in the U.S. (Sommeiller and Price 2018) suggest that it is valuable to understand whether migration remains an important means of increasing individuals' and families' access to economic and social opportunities, whether it remains so for a diverse group of individuals, and whether some groups are increasingly being left behind by transformations to the U.S. economy.

Indeed, I show that changes in the returns to migration are structured by race/ethnicity and gender, demonstrating the value of taking an intersectional approach when studying the

migration decline and internal migration more generally. Specifically, though the returns to migration have tended to decline for black men and, especially, black women they have increased modestly for white men and increased relatively dramatically for white women. Additionally, Hispanic men and, especially, Hispanic women appear to benefit relatively little from migration. These findings contrast with my first hypothesis, where I expected white men to experience the largest declines in their returns to migration, though these findings do support my second hypothesis that these relationships would differ by race and ethnicity for males. Likewise, my results provide only partial substantiation for my third hypothesis that the returns to migration would have increased for women overall, with support for this hypothesis found in the results for white, but not black or Hispanic women. The variations in these relationships across race/ethnicity support my fourth hypothesis that these relationships would vary for black, Hispanic, and white women.

Because of the general correspondence between demographic groups experiencing declines (increases) in average migration probabilities and declines (increases) in their returns to migration, these findings provide suggestive evidence that changes in the economic returns to migration play a role in changes in the probability of migrating. It would thus be valuable for future studies to directly explore the role of changes in the returns to migration as an explanation for declines in the probability of moving. Additionally, the changes in the economic returns to migration I observe provide tentative support for theoretical explanations of the decline that emphasize economic factors, rather than an increasing tendency towards rootedness.

My findings are also important because migration has historically been a central avenue for reducing racial and ethnic disparities in outcomes. Indeed, the results demonstrate that for the 1979 cohort, migration was associated with narrower black/white disparities in outcomes.

However, the declines in the returns to migration among black women and men indicate that migration may be becoming a less important means of reducing racial disparities in outcomes between blacks and whites. The lack of benefits associated with migration for Hispanics in both cohorts further illustrates that migration may be associated with wider ethnic disparities in outcomes. Particular attention should be given to understanding why migration may widen racial/ethnic disparities in economic outcomes and why they may even increasingly be doing so in order to ensure that any changes in these relationships over time do not threaten to further exacerbate racial/ethnic disparities in economic outcomes.

It is thus vital to attend to race, ethnicity, and gender effects when studying the returns to migration because race, ethnicity, and gender structure the returns to migration in diverse and important ways. By failing to examine how demographic characteristics play into these relationships, we could be fundamentally misunderstanding the benefits and costs of internal migration, as well as the causes and consequences of the migration decline itself. Indeed, the declining returns to migration and average probabilities of migration for blacks suggest that the migration decline could be particularly associated with blacks' outcomes and experiences. Consequently, it may be worthwhile to explore explanations for the internal migration decline that are particularly informed by black experiences.

For example, the rise in incarceration could play a role in the migration decline. Incarceration places economic strains on individuals and families (deVuono-Powell et al. 2015; Johnson 2008; Phillips et al. 2006; Schwartz-Soicher et al. 2011; Sugie 2012), potentially limiting their abilities to fund a move. Additionally, families may be unwilling to move while their family member is incarcerated if the move translates into an increase in distance and, as such, greater difficulties visiting an incarcerated relative. The terms of parole also often put

geographic restrictions on formerly-incarcerated individuals, constraining their abilities to migrate (Travis and Stacey 2010). Moreover, employers frequently stereotype black males as "criminal," regardless of whether they have previously been convicted of a crime (Pager et al. 2009). Because job offers and promotions are important catalysts for migration, these employer stereotypes could limit the job opportunities blacks face and, as a result, their opportunities for migration. If the rise in incarceration plays into these relationships, it could help explain why black males and females are experiencing declines in their returns to migration if black females' migration choices are limited by a need to stay near incarcerated partners.

Furthermore, supplementary analyses indicate that migration probabilities have declined the most for blacks in the Northeast and North Central regions of the U.S., areas that have been particularly hard hit by the decline in manufacturing, which could translate into fewer employment opportunities for blacks. Additionally, the decline of manufacturing could prompt individuals to change occupations and employers. As Krieg (1997) found, moves that were accompanied by both occupation and employer changes were associated with declines in earnings, a possibility that would correspond well with the declines in returns to migration for blacks.

The dramatic reduction in union membership since the 1970s could also influence these relationships. Indeed, the decline of unions explains a large portion of the rise in income inequality over recent decades (Western and Rosenfeld 2011) and the diminishing role of unions has increased racial disparities in wages, particularly for women (Rosenfeld and Kleykamp 2012). As such, blacks may face lower-quality job opportunities as a result of the decline in unions. This could translate into lower returns to migration if these unionized jobs previously provided opportunities for migration or motivated individuals to migrate to areas with more

plentiful unionized jobs, as was the case for many Great Migration migrants who encountered greater unionization rates in their northern destination areas than in the South. All of these possibilities suggest that the opportunities for economically-beneficial migration may be declining, particularly for blacks.

It is also possible that migration is becoming a less important means of enhancing blacks' access to economic opportunities. For example, the migration decline could be a function of the end of the Great Migration and the consequent declines in the probability that individuals are experiencing substantial changes in their economic outcomes as a result of South to North migration. Because many individuals participated in the Great Migration in order to improve their access to economic opportunities, it is possible that with the end of the Great Migration, individuals are migrating less frequently for economic reasons, perhaps instead migrating for family- or housing-related reasons. If these possibilities hold, the migration decline could be reflective, not of harmful economic changes, but of an equilibration in interregional migration and interregional economic opportunities.

Another possibility is that migration rates are declining because of decreases in discrimination among more recent cohorts, which may have reduced search costs and increased the probability that black men and women find jobs in their origin locations, lessening the need for migration. Considerable research has cast doubt on the idea that discrimination is declining (Bonilla-Silva 2003; Kluegel 1990; Stewart et al. 2009). Nevertheless, like the explanations associated with the Great Migration, if this possibility holds, it would suggest that the migration decline is not necessarily economically harmful, but is rather a function of increasing economic opportunities in one's origin area. While this study was unable to parse out these various explanations, it provides a valuable first step in understanding how race, ethnicity, and gender

structure economic changes occurring among migrants and non-migrants and points to important avenues for future research.

Limitations

There are limitations to this analysis that suggest the need for further research. First, I only compare two cohorts of individuals. Including more cohorts of individuals, particularly before the onset of the migration decline, would provide stronger evidence that race/ethnicity and gender structure changes in the average probability of migrating and the returns to inter-state migration over time. Nevertheless, my finding that migration rates have declined the most for blacks is consistent with Sharkey's (2015) findings using four generations of individuals in the PSID, suggesting that this finding is likely not an artifact of these two particular cohorts.

I am also only able to examine 20-34-year-olds. Focusing on this age range has important limitations, as demonstrated in the life course literature. This is the period during which many individuals complete their education, enter the labor force, cohabit and marry, and have children. It is also a particularly mobile period during the life course, partially as a result of life events such as the transition out of school and to a first job (Spring et al. 2013; White and Johnson 2015). As such, my mobility estimates may be upwardly biased by examining this group of young adults. At the same time, the increase in the average age at which individuals get married and have children (U.S. Census Bureau 2018; Matthews and Hamilton 2016) should have heightened the average probability of migration among the 1997 cohort relative to the 1979 cohort given that these life events tend to dampen migration probabilities (White and Lindstrom 2005). The fact that I still observe a migration decline among black women and men and white men in this age group, may indicate that even stronger forces are counteracting this demographic shift and corresponding to an average decline in migration probabilities across cohorts. Focusing

on this age range may also exacerbate the decline in the returns to migration for blacks because it is black men in this age range that are the most likely to experience incarceration (Federal Bureau of Prisons 2019). The decline in blacks' returns to migration I observe might therefore be more modest if I included older black men and women. Thus, while I am able to capture a particularly rich and migratory age range and an age range that much of the migration literature focuses on for these reasons (Dahl 2002; Ham et al. 2003; Kennan and Walker 2011; Yankow 2003), my findings are not generalizable to a wider range of ages and would likely be more modest with a more representative sample.

Additionally, I do not directly explore why the returns to migration have changed. It is possible that the declines in the returns among blacks are reflective of positive changes, such as decreases in workplace discrimination. While the Great Migration was largely completed by the time the NLSY79 cohort began migrating, it is also possible that more members of this cohort were engaging in the relatively dramatic South-North moves that characterized the Great Migration and thereby receiving larger returns to inter-state migration than more recent cohorts who may be less likely to engage in such dramatic moves. However, the decline in the returns to migration could also be due to more insidious influences, such as the mass incarceration of blacks. My study therefore provides insights into potential explanations for these changes, though it would be valuable for future research to explore possible mechanisms behind the returns to migration directly.

Despite these limitations, my study offers a number of valuable contributions to the literature on the migration decline and the literature on racial, ethnic, and gender stratification. In particular, I demonstrate that blacks are experiencing the largest declines in their returns to migration and that, more broadly, race, ethnicity, and gender structure changes in the returns to

migration over time. Thus, investigations of explanations for the migration decline and debates over the relative relevance of economic explanations over "rootedness" explanations may do well to attend to race, ethnicity, and gender effects because these explanations may have varying levels of relevance for different demographic groups. Moreover, given that migration has historically been an important means of decreasing racial disparities in outcomes, my findings that blacks are experiencing declining returns to migration while whites are experiencing increasing returns to migration are concerning and suggest that migration may be associated with increasing racial stratification. Likewise, the stagnant economic returns to migration found among Hispanics indicate that migration may widen ethnic disparities in economic outcomes as well. Research and policy should therefore be guided towards ensuring that the changes associated with the migration decline do not affect individuals in racially and ethnically disparate ways. As income inequality in the United States has grown and as the probability that individuals will migrate has shrunk, these issues have only increased in importance and will likely continue to do so unless equitable access to economic opportunities becomes a national priority.

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Table 1: Focal independent variables for a hypothetical individual

	Migrant				Non-Migrant			
	State of Res.	Ever Migrated	Residential Tenure	Number of Moves	State of Res.	Ever Migrated	Residential Tenure	Number of Moves
1979	Lives in CA	0	0	0	WA	0	0	0
1980	CA	0	1	0	WA	0	1	0
1981	CA→WA	1	0	1	WA	0	2	0
1982	WA	1	1	1	WA	0	3	0
1983	WA→OR	1	0	2	WA	0	4	0
1984	OR	1	1	2	WA	0	5	0
1985	OR	1	2	2	WA	0	6	0

Table 2: Changes in the percentage of respondents in the NLSY79 and NLSY97 cohorts that have ever moved by age, race/ethnicity, and gender (Δ = Proportion Ever Migrated NLSY97 – Proportion Ever Migrated NLSY79)

Change in % Ever Moved Inter-State						
Age	White Females	Black Females	Hispanic Females	White Males	Black Males	Hispanic Males
20-21	**3.02** (18.7%) *N = 4,136*	**-0.74** (-5.96%) *N = 1,860*	**-1.79** (-14.32%) *N =1,552*	**0.25** (1.61%) *N = 4,623*	**-1.17** (-8.38%) *N = 2,213*	**-1.93** (-17.58%) *N = 1,856*
22-23	**2.21** (9.58%) *N = 6,174*	**-2.10** (-12.51%) *N = 2,664*	**1.51** (11.41%) *N = 1,902*	**-0.03** (-0.14%) *N = 6,488*	**-0.85** (-4.76%) *N = 2,793*	**1.47** (11.86%) *N = 2,199*
24-25	**2.64** (9.13%) *N = 6,950*	**-2.93** (-13.45%) *N = 3,075*	**-1.33** (-6.89%) *N = 2,154*	**-0.75** (-2.57%) *N = 7,424*	**-1.56** (-6.75%) *N = 3,214*	**1.72** (10.87%) *N = 2,398*
26-27	**4.53** (14.20%) *N = 6,565*	**-4.94** (-19.12%) *N = 3,114*	**2.24** (11.43%) *N = 2,092*	**-0.98** (-2.94%) *N = 7,267*	**-3.44** (-12.76%) *N = 3,230*	**0.58** (3.27%) *N = 2,420*
28-29	**3.47** (10.14%) *N = 5,800*	**-5.59** (-18.93%) *N = 2,769*	**1.34** (5.93%) *N = 1,912*	**-0.45** (-1.25%) *N = 6,351*	**-4.28** (-14.13%) *N = 2,982*	**-1.11** (-4.78%) *N = 2,211*
30-31	**4.62** (12.71%) *N = 4,755*	**-2.16** (-7.19%) *N = 2,377*	**2.82** (12.52%) *N = 1,542*	**-0.74** (-1.92%) *N = 5,200*	**-2.30** (-7.49%) *N = 2,475*	**1.51** (6.58%) *N = 1,800*
32-34	**3.34** (8.75%) *N = 4,385*	**-6.82** (-22.08%) *N = 2,348*	**5.27** (23.23%) *N = 1,467*	**-0.42** (-1.06%) *N = 4,860*	**-1.01** (-3.21%) *N = 2,502*	**0.45** (1.75%) *N = 1,713*

Table 3: Means and, in parentheses, SDs for outcome variables and covariates in race and gender-specific person-years

	White Women (1979)	White Women (1997)	Black Women (1979)	Black Women (1997)	Hispanic Women (1979)	Hispanic Women (1997)
Outcome Variables						
Hourly Wages						
Logged Hourly Wages	2.515	2.512	2.396	2.403	2.498	2.464
	(0.589)	(0.708)	(0.529)	(0.588)	(0.574)	(0.611)
Hours/Week	36.497	34.820	37.203	34.583	37.081	34.962
	(10.961)	(12.880)	(9.686)	(11.548)	(9.874)	(11.263)
Weekly Wages						
Logged Weekly Wages	6.040	5.938	5.964	5.856	6.054	5.933
	(0.771)	(0.975)	(0.665)	(0.802)	(0.716)	(0.823)
Migration Variables						
Yrs of Residence (State)	6.383	6.079	7.282	8.871	7.387	8.919
	(4.287)	(4.569)	(4.413)	(4.237)	(4.414)	(4.221)
Ever Moved (Inter-State)	0.303	0.321	0.251	0.193	0.199	0.191
	(0.460)	(0.467)	(0.433)	(0.395)	(0.399)	(0.393)
Number of State Moves	0.534	0.565	0.438	0.331	0.342	0.324
	(1.012)	(0.997)	(0.926)	(0.783)	(0.831)	(0.806)
Covariates						
Lagged Wage Growth	1.053	0.781	0.983	0.525	1.003	0.572
	(4.997)	(5.652)	(4.154)	(5.194)	(6.839)	(4.838)
Age	26.728	25.554	27.313	25.431	27.077	25.376
	(3.947)	(3.325)	(3.957)	(3.381)	(4.078)	(3.378)
Married	0.563	0.373	0.332	0.142	0.535	0.360
	(0.496)	(0.484)	(0.471)	(0.349)	(0.499)	(0.480)
Number of Children	0.825	0.660	1.217	1.170	1.156	1.071
	(1.026)	(0.944)	(1.175)	(1.227)	(1.187)	(1.161)
Years of Ed.	13.042	13.200	12.838	12.222	12.183	12.009
	(2.192)	(2.568)	(1.827)	(2.211)	(2.307)	(2.143)
In Military	0.003	0.000	0.006	0.000	0.004	0.000
	(0.057)	(0.009)	(0.079)	(0.021)	(0.059)	(0.019)
Professional Job	0.327	0.518	0.206	0.490	0.259	0.447
	(0.469)	(0.500)	(0.405)	(0.500)	(0.438)	(0.497)
Live in Urban Area	0.725	0.739	0.831	0.862	0.919	0.919
	(0.446)	(0.439)	(0.375)	(0.345)	(0.273)	(0.274)
Northeast	0.199	0.176	0.146	0.151	0.150	0.141
	(0.399)	(0.381)	(0.353)	(0.358)	(0.357)	(0.348)
North Central	0.297	0.279	0.158	0.165	0.084	0.092
	(0.457)	(0.448)	(0.365)	(0.371)	(0.277)	(0.289)
West	0.168	0.206	0.064	0.061	0.453	0.479
	(0.374)	(0.404)	(0.245)	(0.239)	(0.498)	(0.500)
South	0.336	0.339	0.632	0.623	0.315	0.290
	(0.472)	(0.473)	(0.482)	(0.485)	(0.464)	(0.454)
N	26,334	12,622	11,357	6,904	7,094	5,585

Table 4: Means and, in parentheses, SDs for outcome variables and covariates in race and gender-specific person-years

	White Men (1979)	White Men (1997)	Black Men (1979)	Black Men (1997)	Hispanic Men (1979)	Hispanic Men (1997)
Outcome Variables						
Hourly Wages						
Logged Hourly Wages	2.770	2.673	2.550	2.466	2.693	2.622
	(0.560)	(0.712)	(0.543)	(0.701)	(0.551)	(0.645)
Hours/Week	43.452	39.061	40.755	36.653	42.101	38.369
	(10.423)	(12.781)	(10.180)	(12.090)	(9.878)	(11.336)
Weekly Wages						
Logged Weekly Wages	6.508	6.253	6.216	5.982	6.401	6.203
	(0.647)	(0.915)	(0.653)	(0.841)	(0.614)	(0.786)
Migration Variables						
Yrs of Residence (State)	6.323	8.343	6.875	8.660	7.271	8.842
	(4.340)	(4.536)	(4.414)	(4.307)	(4.395)	(4.240)
Ever Moved (Inter-State)	0.314	0.289	0.260	0.214	0.191	0.174
	(0.464)	(0.453)	(0.439)	(0.410)	(0.393)	(0.379)
Number of State Moves	0.549	0.517	0.460	0.391	0.328	0.273
	(1.014)	(0.994)	(0.968)	(0.870)	(0.806)	(0.691)
Covariates						
Lagged Wage Growth	1.229	0.907	1.080	0.472	0.963	0.903
	(6.432)	(6.884)	(5.156)	(8.686)	(6.037)	(7.197)
Age	26.827	25.519	27.171	25.325	27.021	25.361
	(3.950)	(3.357)	(3.996)	(3.392)	(4.056)	(3.418)
Married	0.493	0.271	0.277	0.140	0.474	0.239
	(0.500)	(0.445)	(0.448)	(0.347)	(0.499)	(0.427)
	0.625	0.364	0.549	0.369	0.858	0.516
	(0.692)	(0.741)	(0.996)	(0.778)	(1.174)	(0.878)
Years of Ed.	12.709	12.561	12.207	11.537	11.703	12.589
	(2.358)	(2.404)	(1.893)	(2.011)	(2.412)	(1.906)
In Military	0.002	0.002	0.002	0.002	0.001	0.001
	(0.041)	(0.046)	(0.042)	(0.044)	(0.026)	(0.036)
Professional Job	0.294	0.340	0.145	0.213	0.201	0.249
	(0.456)	(0.474)	(0.352)	(0.410)	(0.401)	(0.432)
Live in Urban Area	0.707	0.731	0.827	0.815	0.913	0.921
	(0.455)	(0.443)	(0.378)	(0.388)	(0.282)	(0.369)
Northeast	0.191	0.198	0.166	0.133	0.154	0.122
	(0.393)	(0.399)	(0.372)	(0.340)	(0.361)	(0.327)
North Central	0.327	0.306	0.165	0.169	0.061	0.102
	(0.469)	(0.461)	(0.371)	(0.375)	(0.240)	(0.302)
West	0.165	0.195	0.077	0.066	0.501	0.469
	(0.371)	(0.396)	(0.267)	(0.249)	(0.500)	(0.499)
South	0.317	0.302	0.592	0.630	0.285	0.308
	(0.465)	(0.459)	(0.491)	(0.483)	(0.452)	(0.461)
N	28,043	14,334	12,737	6,757	8,566	6,078

Figure 1: The Predicted Relationship between Inter-State Migration and Hourly Wages by Cohort and Race/Ethnicity for Women. Based on results from multivariate fixed effects models (presented in Appendix Table 1, columns 2, 4, and 6); *Source: NLSY79 and NLSY97*

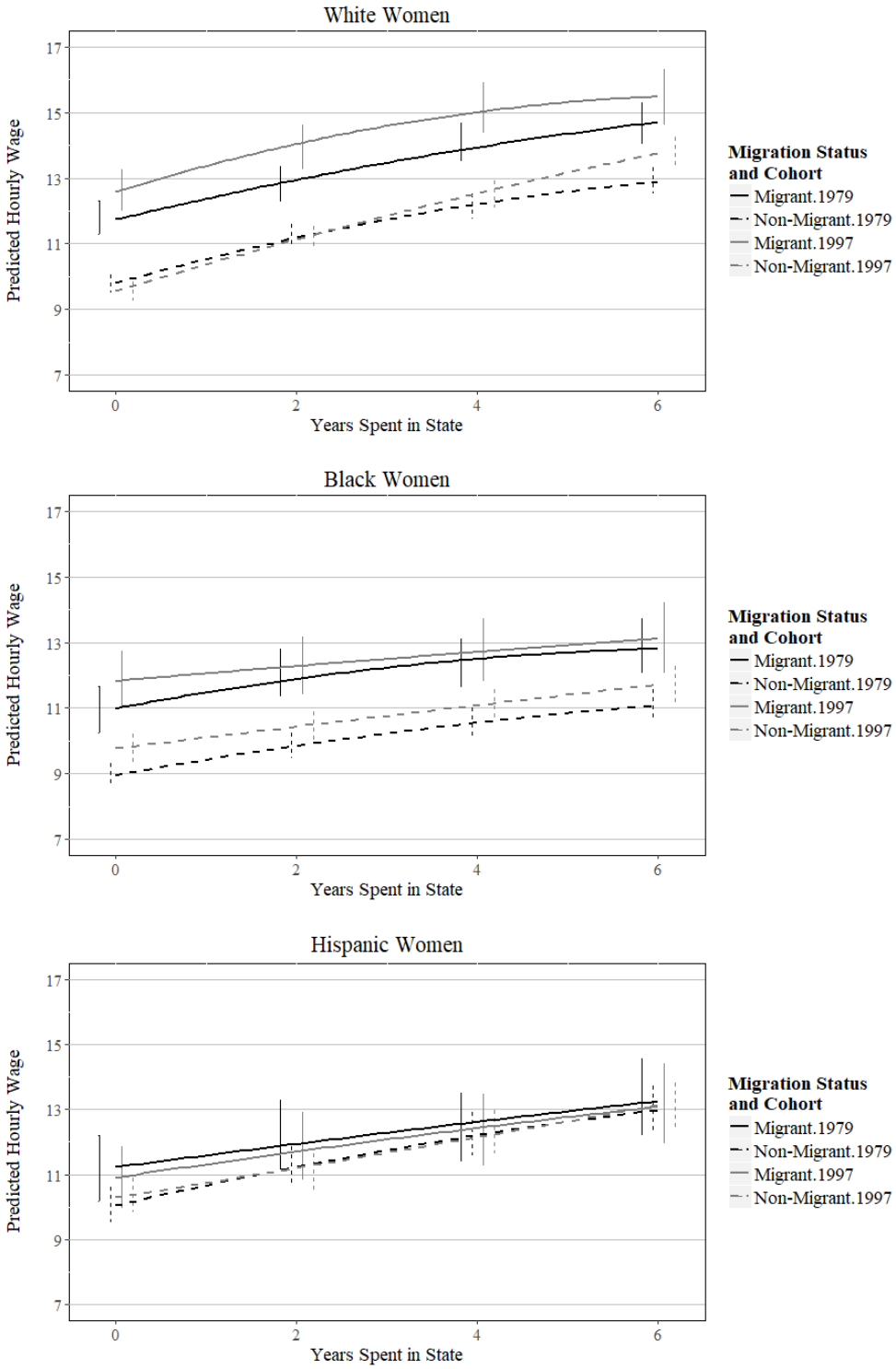


Figure 2: The Predicted Relationship between Inter-State Migration and Hourly Wages by Cohort and Race/Ethnicity for Men. Based on results from multivariate fixed effects models (presented in Appendix Table 2, columns 2, 4, and 6); *Source: NLSY79 and NLSY97*

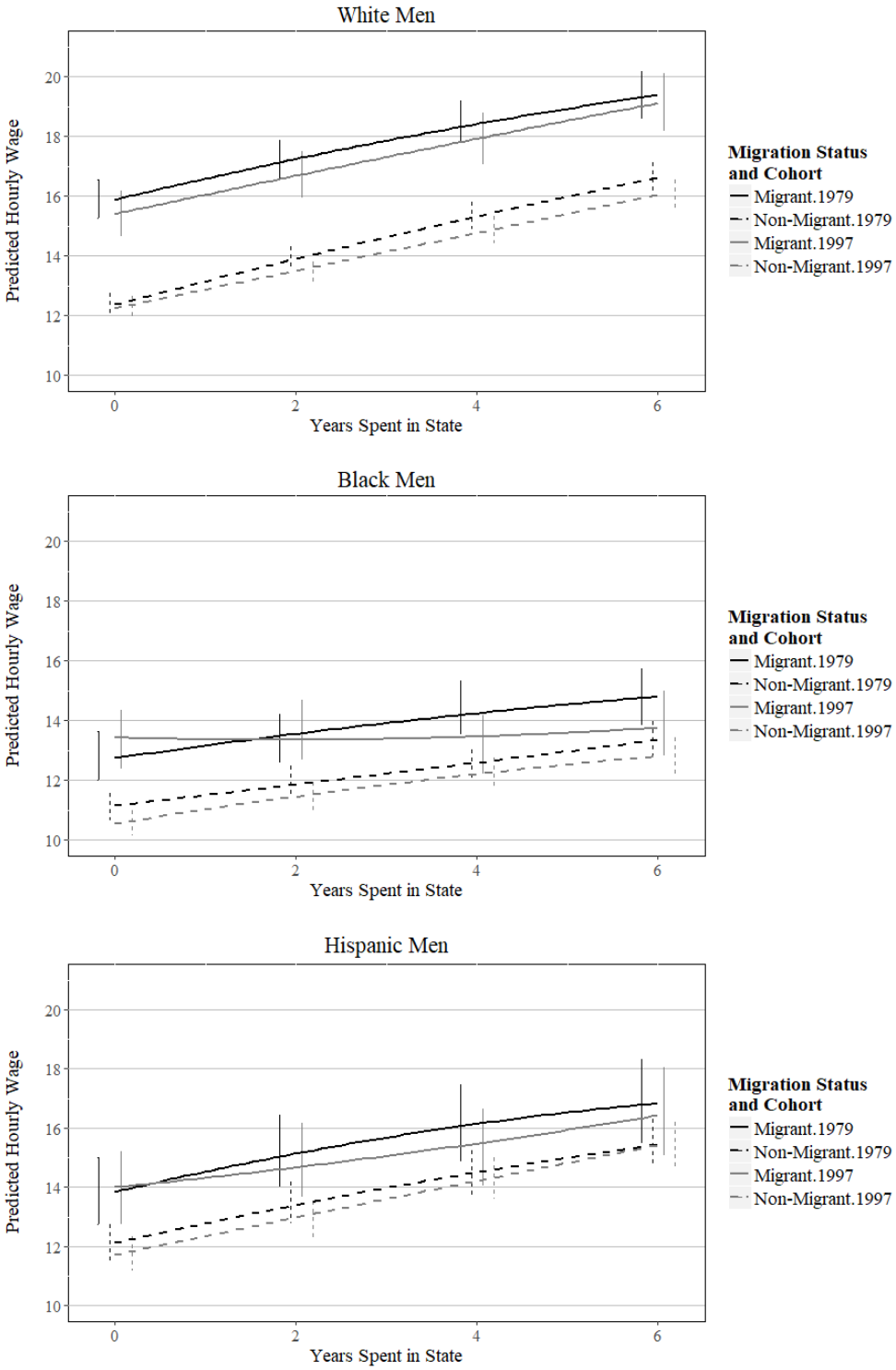


Figure 3: The Predicted Relationship between Inter-State Migration and Weekly Work Hours by Cohort and Race/Ethnicity for Women. Based on results from multivariate fixed effects models (presented in Appendix Table 3, columns 2, 4, and 6); *Source: NLSY79 and NLSY97*

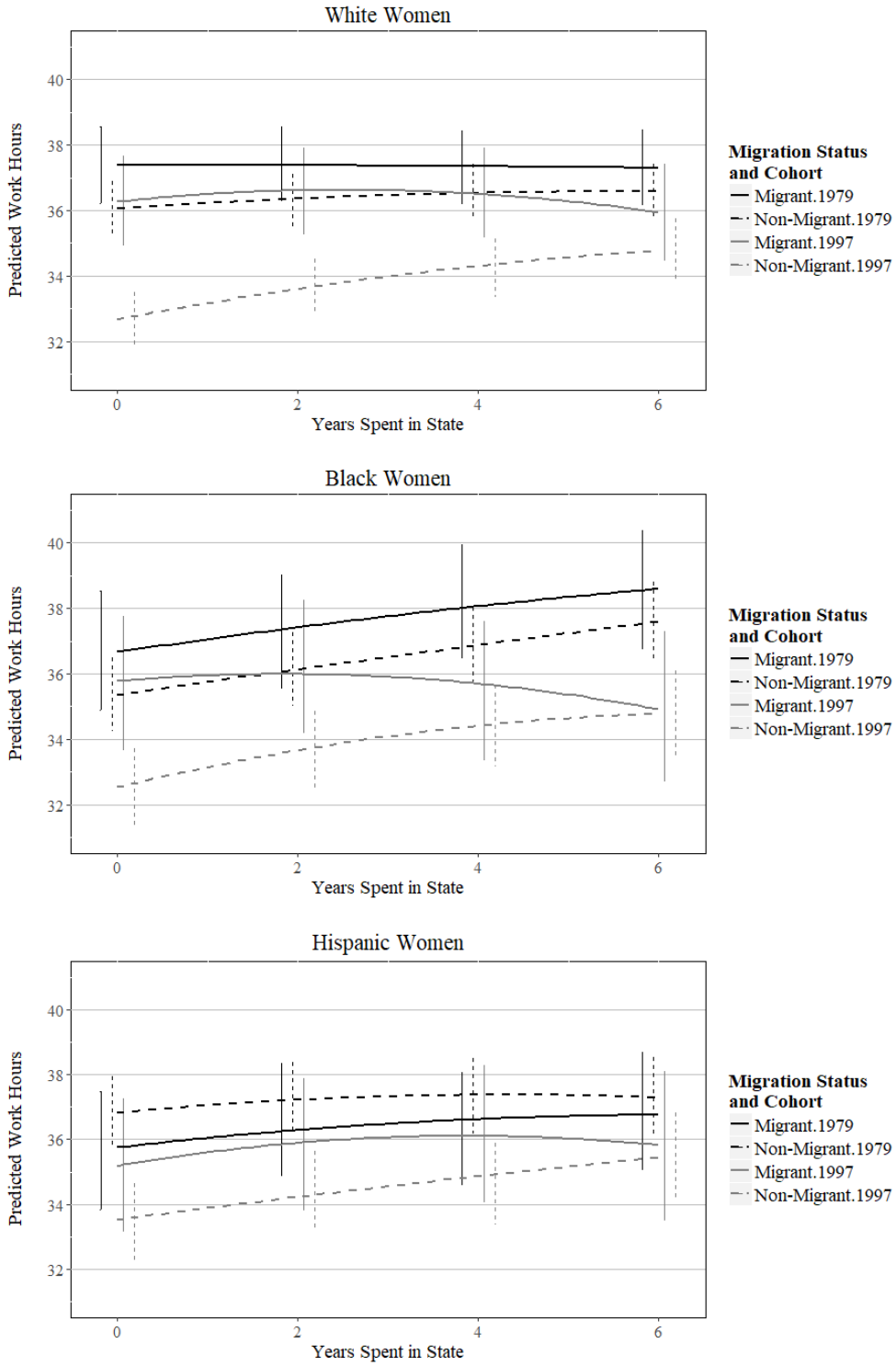


Figure 4: The Predicted Relationship between Inter-State Migration and Weekly Work Hours by Cohort and Race/Ethnicity for Men. Based on results from multivariate fixed effects models (presented in Appendix Table 4, columns 2, 4, and 6); *Source: NLSY79 and NLSY97*

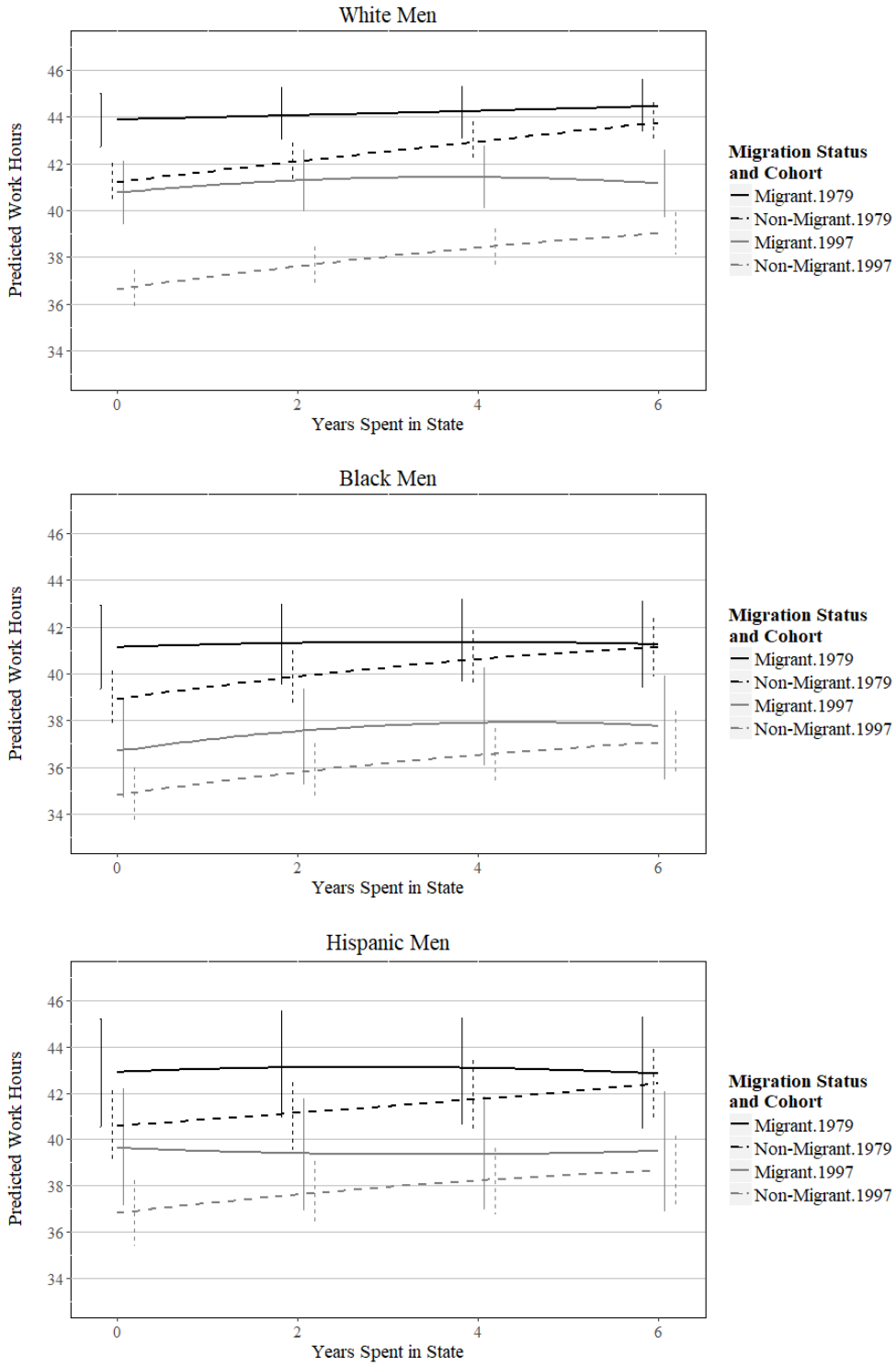


Figure 5: The Predicted Relationship between Inter-State Migration and Weekly Wages by Cohort and Race/Ethnicity for Women. Based on results from multivariate fixed effects models (presented in Appendix Table 5, columns 2, 4, and 6); *Source: NLSY79 and NLSY97*

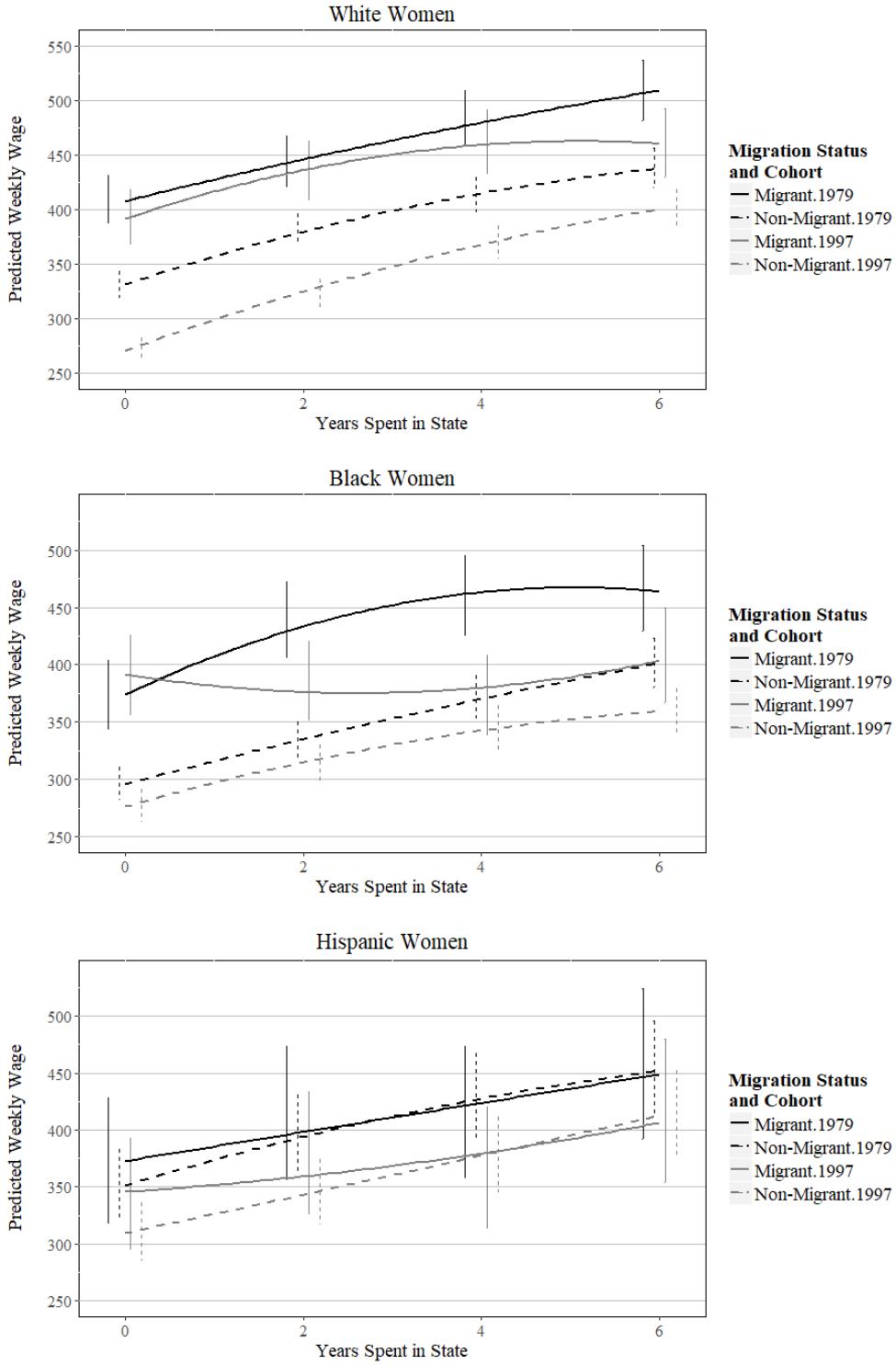
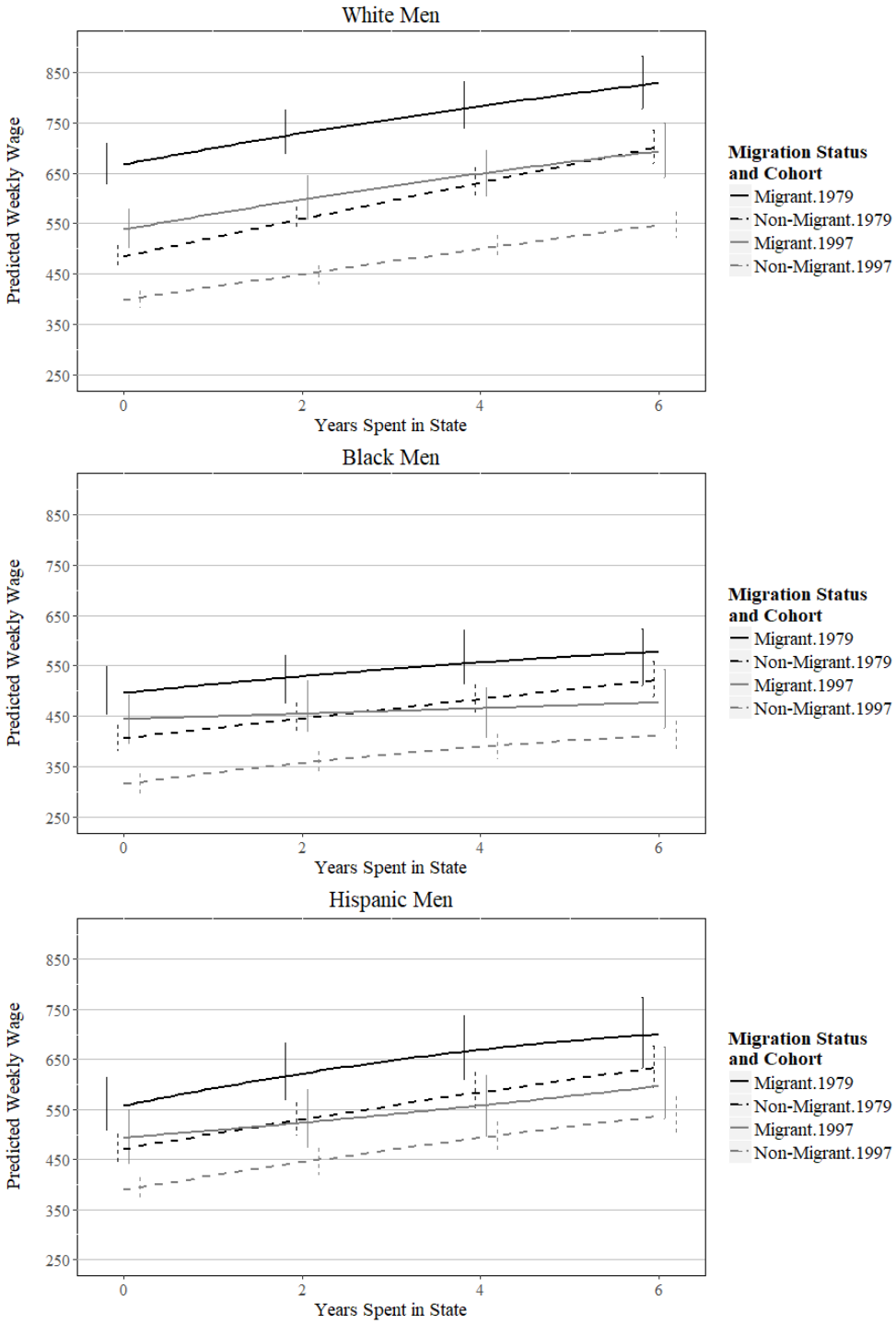


Figure 6: The Predicted Relationship between Inter-State Migration and Weekly Wages by Cohort and Race/Ethnicity for Men. Based on results from multivariate fixed effects models (presented in Appendix Table 6, columns 2, 4, and 6); *Source: NLSY79 and NLSY97*



Appendix Table 1: Fixed Effects Regressions of the Relationship between Inter-State Migration and Logged Hourly Wages for Female 1979 and 1997 NLSY Cohorts

	(1) White Women	(2) White Women	(3) Black Women	(4) Black Women	(5) Hispanic Women	(6) Hispanic Women
Focal Independent Variables						
Yrs of Residence (State)	-0.003	-0.004^{+}	0.003	0.003	0.004	-0.001
	(0.003)	(0.002)	(0.004)	(0.004)	(0.005)	(0.004)
Ever Moved (State)	-0.027	-0.057***	-0.023	-0.032	-0.047	-0.035
	(0.018)	(0.016)	(0.029)	(0.027)	(0.040)	(0.036)
Ever Moved*Yrs of Res.	0.012***	0.012***	0.007*	0.010***	0.009*	0.009*
	(0.002)	(0.002)	(0.003)	(0.003)	(0.004)	(0.004)
Years of Res*1997 Cohort	0.005**	0.005***	-0.010***	-0.011***	-0.005*	-0.002
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Ever Moved*1997 Cohort	0.035	0.030	-0.106**	-0.088**	-0.060	-0.056
	(0.025)	(0.022)	(0.036)	(0.032)	(0.043)	(0.039)
Yrs of Res.*EvMove*1997 Cohort	-0.003	-0.002	-0.003	-0.010*	0.006	0.004
	(0.004)	(0.003)	(0.006)	(0.005)	(0.007)	(0.006)
Number of Moves	-0.011	-0.008	0.022	0.019	0.007	-0.005
	(0.009)	(0.008)	(0.014)	(0.013)	(0.018)	(0.016)
Covariates						
Age	0.083***	0.083***	0.075***	0.092***	0.109***	0.102***
	(0.009)	(0.008)	(0.012)	(0.011)	(0.014)	(0.013)
Age^2	-0.001***	-0.001***	-0.001***	-0.001***	-0.002***	-0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Married		0.020***		0.016^{+}		0.018^{+}
		(0.006)		(0.009)		(0.010)
Number of Children		-0.048***		-0.022***		-0.036***
		(0.004)		(0.005)		(0.006)
Lagged Wage Growth		0.037***		0.034***		0.025***
		(0.000)		(0.001)		(0.001)
Years of Education		0.050***		0.026***		0.032***
		(0.004)		(0.006)		(0.007)
Work Hours		-0.001***		-0.002***		-0.002***
		(0.000)		(0.000)		(0.000)
In Military		-0.010		-0.060		-0.026
		(0.047)		(0.049)		(0.079)
Professional Job		0.102***		0.043***		0.063***
		(0.005)		(0.007)		(0.009)
Urban Area		0.022**		0.048***		0.026
		(0.007)		(0.013)		(0.017)
Northeast		Ref.		Ref.		Ref.
North Central		-0.024		0.001		-0.106*
		(0.021)		(0.035)		(0.053)
West		0.069***		0.032		-0.042
		(0.021)		(0.040)		(0.041)
South		-0.007		-0.068*		-0.102**
		(0.019)		(0.026)		(0.038)
Constant	1.057***	0.339**	1.120***	0.557***	0.761***	0.504*
	(0.126)	(0.119)	(0.169)	(0.166)	(0.200)	(0.200)
Observations	38629	38629	18186	18186	12563	12563

Standard errors in parentheses

$^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Appendix Table 2: Fixed Effects Regressions of the Relationship between Inter-State Migration and Logged Hourly Wages for Male 1979 and 1997 NLSY Cohorts

	(1) White Men	(2) White Men	(3) Black Men	(4) Black Men	(5) Hispanic Men	(6) Hispanic Men
Focal Independent Variables						
Yrs of Residence (State)	0.008***	0.007***	0.000	0.002	0.007	0.003
	(0.002)	(0.002)	(0.004)	(0.003)	(0.005)	(0.004)
Ever Moved (State)	0.023	0.014	0.030	0.028	-0.001	0.001
	(0.017)	(0.015)	(0.028)	(0.024)	(0.038)	(0.032)
Ever Moved*Yrs of Res.	0.013***	0.013***	0.013***	0.014***	0.010**	0.008*
	(0.002)	(0.002)	(0.003)	(0.002)	(0.004)	(0.003)
Years of Res*1997 Cohort	-0.004**	-0.002	-0.001	-0.002	-0.001	0.000
	(0.002)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)
Ever Moved*1997 Cohort	0.018	-0.024	-0.036	-0.066*	-0.037	-0.049
	(0.023)	(0.020)	(0.037)	(0.032)	(0.045)	(0.038)
Yrs of Res.*EvMove*1997 Cohort	0.000	0.001	-0.021***	-0.011*	-0.007	-0.005
	(0.004)	(0.003)	(0.006)	(0.005)	(0.006)	(0.005)
Number of Moves	0.042***	0.042***	0.001	0.009	0.027	0.018
	(0.008)	(0.007)	(0.012)	(0.011)	(0.016)	(0.014)
Covariates						
Age	0.099***	0.090***	0.093***	0.098***	0.123***	0.125***
	(0.008)	(0.007)	(0.012)	(0.010)	(0.013)	(0.011)
Age^2	-0.001***	-0.001***	-0.001***	-0.001***	-0.002***	-0.002***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Married		0.071***		0.066***		0.057***
		(0.006)		(0.010)		(0.009)
Number of Children		0.012***		0.019***		0.004
		(0.003)		(0.004)		(0.004)
Lagged Wage Growth		0.027***		0.031***		0.030***
		(0.000)		(0.000)		(0.000)
Years of Education		0.035***		0.037***		0.012+
		(0.004)		(0.007)		(0.007)
Work Hours		-0.003***		-0.002***		-0.002***
		(0.000)		(0.000)		(0.000)
In Military		-0.049		0.029		-0.366***
		(0.052)		(0.082)		(0.100)
Professional Job		0.049***		0.039***		0.021*
		(0.006)		(0.010)		(0.009)
Urban Area		0.038***		0.042***		-0.027+
		(0.006)		(0.012)		(0.015)
Northeast		Ref.		Ref.		Ref.
North Central		-0.076***		-0.035		-0.106*
		(0.020)		(0.035)		(0.052)
West		0.018		0.023		-0.163***
		(0.021)		(0.038)		(0.042)
South		-0.050**		-0.024		-0.165***
		(0.018)		(0.026)		(0.038)
Constant	1.062***	0.817***	1.069***	0.577***	0.742***	0.743***
	(0.110)	(0.107)	(0.168)	(0.165)	(0.183)	(0.173)
Observations	41970	41970	19306	19306	14531	14531

Standard errors in parentheses

+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Appendix Table 3: Fixed Effects Regressions of the Relationship between Inter-State Migration and Weekly Work Hours for Female 1979 and 1997 NLSY Cohorts

	(1) White Women	(2) White Women	(3) Black Women	(4) Black Women	(5) Hispanic Women	(6) Hispanic Women
Focal Independent Varaibles						
Yrs of Residence (State)	0.018	0.133*	-0.067	-0.062	-0.203+	-0.158
	(0.065)	(0.064)	(0.099)	(0.099)	(0.116)	(0.117)
Ever Moved (State)	0.452	0.721	-0.072	0.279	-2.409*	-2.038*
	(0.449)	(0.446)	(0.747)	(0.750)	(0.976)	(0.973)
Ever Moved*Yrs of Res.	-0.063	-0.077	0.123	0.106	0.314**	0.286**
	(0.050)	(0.049)	(0.075)	(0.074)	(0.097)	(0.097)
Years of Res*1997 Cohort	0.187***	0.161***	-0.075	-0.094+	0.157**	0.133*
	(0.043)	(0.042)	(0.052)	(0.052)	(0.058)	(0.057)
Ever Moved*1997 Cohort	2.140***	1.607**	2.209*	1.747+	2.137*	2.072*
	(0.603)	(0.593)	(0.898)	(0.900)	(1.054)	(1.048)
Yrs of Res.*EvMove*1997 Cohort	-0.036	-0.040	-0.018	0.017	-0.336*	-0.244
	(0.091)	(0.090)	(0.138)	(0.138)	(0.159)	(0.158)
Number of Moves	0.330	0.378+	-0.312	-0.393	-0.050	-0.129
	(0.224)	(0.221)	(0.355)	(0.354)	(0.434)	(0.435)
Covariates						
Age	1.051***	1.534***	1.375***	1.533***	0.523	1.041**
	(0.220)	(0.217)	(0.302)	(0.305)	(0.348)	(0.351)
Age^2	-0.021***	-0.027***	-0.020***	-0.023***	-0.006	-0.014*
	(0.004)	(0.004)	(0.005)	(0.005)	(0.006)	(0.006)
Married		-1.428***		-0.825**		-0.759**
		(0.154)		(0.254)		(0.262)
Number of Children		-2.837***		-0.448**		-1.165***
		(0.106)		(0.144)		(0.165)
Lagged Wage Growth		-0.072***		-0.082***		-0.094***
		(0.011)		(0.017)		(0.015)
Years of Education		1.010***		1.064***		0.648***
		(0.105)		(0.160)		(0.188)
Hourly Wages		-0.691***		-0.854***		-0.494*
		(0.126)		(0.194)		(0.202)
In Military		-2.690*		-2.842*		-2.376
		(1.290)		(1.381)		(2.174)
Professional Job		1.364***		0.261		0.567*
		(0.146)		(0.207)		(0.235)
Urban Area		0.248		-0.153		-1.155*
		(0.194)		(0.367)		(0.460)
Northeast		Ref.		Ref.		Ref.
North Central		0.096		-0.640		-0.538
		(0.568)		(0.989)		(1.412)
West		1.064+		-1.448		0.413
		(0.563)		(1.134)		(1.102)
South		0.436		-1.407+		-0.348
		(0.508)		(0.742)		(1.001)
Constant	22.412***	3.537	14.790***	2.904	27.376***	15.221**
	(3.052)	(3.242)	(4.265)	(4.685)	(4.883)	(5.361)
Observations	38775	38775	18210	18210	12627	12627

Standard errors in parentheses

+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Appendix Table 4: Fixed Effects Regressions of the Relationship between Inter-State Migration and Weekly Work Hours for Male 1979 and 1997 NLSY Cohorts

	(1) White Men	(2) White Men	(3) Black Men	(4) Black Men	(5) Hispanic Men	(6) Hispanic Men
Focal Independent Variables						
Yrs of Residence (State)	0.025	0.046	-0.141	-0.129	-0.239*	-0.233*
	(0.057)	(0.057)	(0.090)	(0.090)	(0.110)	(0.110)
Ever Moved (State)	0.831*	0.766+	0.594	0.536	-1.150	-1.139
	(0.420)	(0.423)	(0.676)	(0.676)	(0.920)	(0.924)
Ever Moved*Yrs of Res.	-0.071	-0.076+	0.016	0.023	-0.018	-0.010
	(0.045)	(0.044)	(0.071)	(0.070)	(0.089)	(0.088)
Years of Res*1997 Cohort	-0.030	-0.043	-0.029	-0.028	-0.077	-0.074
	(0.037)	(0.037)	(0.053)	(0.053)	(0.054)	(0.053)
Ever Moved*1997 Cohort	1.314*	1.056+	-0.819	-1.134	1.700	1.612
	(0.566)	(0.564)	(0.892)	(0.891)	(1.092)	(1.089)
Yrs of Res.*EvMove*1997 Cohort	0.189*	0.200*	0.211	0.192	-0.144	-0.146
	(0.086)	(0.085)	(0.141)	(0.141)	(0.147)	(0.147)
Number of Moves	0.027	0.088	-0.768*	-0.738*	-1.277**	-1.256**
	(0.192)	(0.191)	(0.301)	(0.301)	(0.399)	(0.399)
Covariates						
Age	1.541***	1.461***	1.701***	1.700***	1.928***	1.969***
	(0.196)	(0.196)	(0.290)	(0.291)	(0.318)	(0.318)
Age^2	-0.024***	-0.023***	-0.024***	-0.025***	-0.027***	-0.028***
	(0.003)	(0.003)	(0.005)	(0.005)	(0.005)	(0.005)
Married		0.626***		0.932***		0.311
		(0.157)		(0.279)		(0.272)
Number of Children		0.092		0.059		-0.069
		(0.092)		(0.123)		(0.128)
Lagged Wage Growth		-0.061***		-0.069***		-0.115***
		(0.008)		(0.013)		(0.014)
Years of Education		0.808***		0.386+		0.510*
		(0.109)		(0.200)		(0.199)
Hourly Wages		-1.241***		-1.390***		-0.946***
		(0.117)		(0.180)		(0.200)
In Military		3.391*		5.419*		5.135+
		(1.440)		(2.319)		(2.903)
Professional Job		1.739***		0.186		0.651*
		(0.157)		(0.271)		(0.271)
Urban Area		0.194		0.193		-0.911*
		(0.179)		(0.346)		(0.425)
Northeast		Ref.		Ref.		Ref.
North Central		-0.140		-0.627		-1.775
		(0.572)		(0.990)		(1.501)
West		0.089		2.134*		-0.356
		(0.593)		(1.079)		(1.219)
South		0.687		0.402		-0.982
		(0.502)		(0.726)		(1.102)
Constant	17.628***	11.351***	12.551**	11.116*	10.896*	8.359+
	(2.718)	(2.985)	(4.054)	(4.648)	(4.471)	(5.007)
Observations	42222	42222	19411	19411	14602	14602

Standard errors in parentheses

+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Appendix Table 5: Fixed Effects Regressions of the Relationship between Inter-State Migration and Logged Weekly Wages for Female 1979 and 1997 NLSY Cohorts

	(1) White Women	(2) White Women	(3) Black Women	(4) Black Women	(5) Hispanic Women	(6) Hispanic Women
Focal Independent Variables						
Yrs of Residence (State)	0.002	-0.001	-0.004	-0.002	-0.003	0.001
	(0.004)	(0.003)	(0.006)	(0.004)	(0.007)	(0.006)
Ever Moved (State)	0.010	-0.037^{+}	-0.037	-0.038	-0.187**	-0.082^{+}
	(0.029)	(0.021)	(0.043)	(0.033)	(0.061)	(0.048)
Ever Moved*Yrs of Res.	0.008*	0.010***	0.013**	0.012***	0.022***	0.010*
	(0.003)	(0.002)	(0.004)	(0.003)	(0.006)	(0.005)
Years of Res*1997 Cohort	0.009***	0.002	-0.011***	-0.009***	-0.001	-0.004
	(0.003)	(0.002)	(0.003)	(0.002)	(0.004)	(0.003)
Ever Moved*1997 Cohort	0.093*	0.002	0.007	-0.058	0.042	-0.042
	(0.038)	(0.028)	(0.052)	(0.040)	(0.066)	(0.051)
Yrs of Res.*EvMove*1997 Cohort	-0.007	-0.003	-0.009	-0.015*	-0.012	-0.002
	(0.006)	(0.004)	(0.008)	(0.006)	(0.010)	(0.008)
Number of Moves	0.006	-0.006	-0.002	0.006	0.024	0.016
	(0.014)	(0.010)	(0.021)	(0.016)	(0.027)	(0.021)
Covariates						
Age	0.110***	0.072***	0.146***	0.115***	0.127***	0.100***
	(0.014)	(0.010)	(0.018)	(0.013)	(0.022)	(0.017)
Age^2	-0.002***	-0.001***	-0.002***	-0.002***	-0.002***	-0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Married		0.021**		0.010		0.013
		(0.007)		(0.011)		(0.013)
Number of Children		-0.061***		-0.028***		-0.035***
		(0.005)		(0.006)		(0.008)
Lagged Wage Growth		0.038***		0.033***		0.024***
		(0.000)		(0.001)		(0.001)
Years of Education		0.049***		0.030***		0.025**
		(0.005)		(0.007)		(0.009)
In Military		-0.099		-0.047		-0.045
		(0.061)		(0.061)		(0.107)
Professional Job		0.073***		0.031***		0.043***
		(0.007)		(0.009)		(0.012)
Urban Area		0.022*		0.063***		0.019
		(0.009)		(0.016)		(0.023)
Northeast		Ref.		Ref.		Ref.
North Central		-0.025		-0.037		-0.084
		(0.027)		(0.044)		(0.069)
West		0.059*		-0.022		-0.044
		(0.026)		(0.050)		(0.054)
South		-0.003		-0.107**		-0.067
		(0.024)		(0.033)		(0.049)
Constant	4.249***	2.601***	3.559***	2.407***	3.979***	2.732***
	(0.194)	(0.152)	(0.248)	(0.207)	(0.306)	(0.263)
Observations	38765	38765	18207	18207	12621	12621

Standard errors in parentheses

$^{+}$ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Appendix Table 6: Fixed Effects Regressions of the Relationship between Inter-State Migration and Logged Weekly Wages for Male 1979 and 1997 NLSY Cohorts

	(1) White Men	(2) White Men	(3) Black Men	(4) Black Men	(5) Hispanic Men	(6) Hispanic Men
Focal Independent Variables						
Yrs of Residence (State)	0.009**	0.008**	-0.007	-0.001	0.001	0.005
	(0.003)	(0.003)	(0.005)	(0.004)	(0.006)	(0.005)
Ever Moved (State)	0.056*	0.021	0.056	0.030	-0.055	-0.012
	(0.024)	(0.020)	(0.038)	(0.030)	(0.052)	(0.042)
Ever Moved*Yrs of Res.	0.011***	0.013***	0.011**	0.012***	0.013**	0.010**
	(0.003)	(0.002)	(0.004)	(0.003)	(0.005)	(0.004)
Years of Res*1997 Cohort	-0.006**	-0.003*	-0.002	-0.003	-0.001	0.002
	(0.002)	(0.002)	(0.003)	(0.002)	(0.003)	(0.002)
Ever Moved*1997 Cohort	0.064*	-0.022	-0.043	-0.045	-0.043	-0.107*
	(0.033)	(0.027)	(0.051)	(0.040)	(0.062)	(0.049)
Yrs of Res.*EvMove*1997 Cohort	0.009+	0.003	-0.009	-0.006	-0.014+	-0.006
	(0.005)	(0.004)	(0.008)	(0.006)	(0.008)	(0.007)
Number of Moves	0.042***	0.041***	-0.037*	-0.004	-0.007	0.020
	(0.011)	(0.009)	(0.017)	(0.013)	(0.023)	(0.018)
Covariates						
Age	0.146***	0.089***	0.151***	0.101***	0.182***	0.122***
	(0.011)	(0.009)	(0.016)	(0.013)	(0.018)	(0.014)
Age^2	-0.002***	-0.001***	-0.002***	-0.002***	-0.003***	-0.002***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Married		0.079***		0.070***		0.071***
		(0.007)		(0.013)		(0.012)
Number of Children		0.009*		0.020***		0.001
		(0.004)		(0.006)		(0.006)
Lagged Wage Growth		0.029***		0.031***		0.031***
		(0.000)		(0.001)		(0.001)
Years of Education		0.038***		0.038***		0.037***
		(0.005)		(0.009)		(0.009)
In Military		-0.266***		0.022		-0.409**
		(0.068)		(0.104)		(0.131)
Professional Job		0.008		-0.006		-0.017
		(0.007)		(0.012)		(0.012)
Urban Area		0.041***		0.078***		-0.001
		(0.008)		(0.016)		(0.019)
Northeast		Ref.		Ref.		Ref.
North Central		-0.060*		-0.058		-0.145*
		(0.027)		(0.044)		(0.068)
West		0.037		0.013		-0.181***
		(0.028)		(0.048)		(0.055)
South		-0.006		-0.031		-0.170***
		(0.024)		(0.033)		(0.050)
Constant	4.007***	3.197***	3.741***	2.813***	3.506***	2.891***
	(0.157)	(0.142)	(0.230)	(0.208)	(0.253)	(0.225)
Observations	42213	42213	19409	19409	14597	14597

Standard errors in parentheses

+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$