DRAFT - Please do not cite

The Paradox of Hispanic Unemployment: Evidence and Explanations for a Hispanic Immigrant Employment Advantage

Jennifer Laird

University of Washington

Abstract

The Great Recession of 2007-2009 had a disproportionately negative impact on the employment prospects for young adult men with no education beyond high school. Hispanic immigrant men should have had very high unemployment during the recession given that they are on average, considerably less educated than native-born men. Moreover, Hispanic immigrant men were also over-represented in the occupations (construction) and regions (California, Nevada) that had the highest unemployment rates during the recession. After controlling for education and occupation, I find that Hispanic immigrant men had *lower* probabilities of unemployment than native-born white men. I test three possible explanations for the paradox: differential rates of underemployment, lack of access to unemployment benefits, and the positive selection of migrants for employment. None of these explanations fully account for the paradox, although non-citizen Hispanic men – many of whom do not have access to unemployment benefits because they are undocumented – were the least likely to be unemployed.

Direct correspondence to Jennifer Laird, Department of Sociology, University of Washington, Box 353340, Seattle, WA 98195 (jdlaird@uw.edu). *Thanks to Jake Rosenfeld, Herb Costner, and Stew Tolnay for insights on prior drafts of the article. All errors are my own.*

Email address: jdlaird@uw.edu (Jennifer Laird)

Introduction

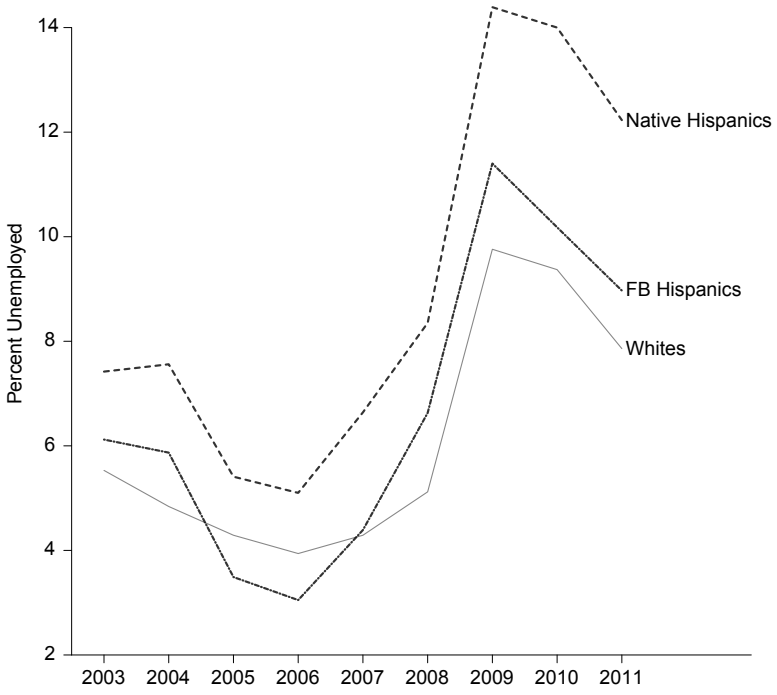
The Great Recession of 2007-2009 was the longest and, according to most indicators, the most destabilizing recession since the Great Depression. What distinguishes the most recent recession from other recessions is not the level of unemployment, but the increase in unemployment (Hoynes et al., 2012). In March of 2007 the national unemployment rate was 4.4%. By October 2009, unemployment had increased almost six percentage points to 10.1%. The extent of job losses varied widely across demographic groups. Among the workers hardest hit were males, young adults, and low education workers. In their discussion of employment trends between 2007 and 2009, Sum et al. (2011) note that no demographic group of American workers has been as adversely affected by the recession as young adult men under 30 with no post-secondary education. During the most recent recession, 78% of the job losses were experienced by workers with a high school diploma or less, a group that constitutes less than 15% of the total workforce (Carnevale et al., 2012).

Based on their demographic profile, Hispanic immigrant men should have had very high unemployment during the recession. Compared to native-born men, Hispanic immigrant men are on average, 1) considerably less educated, 2) over-represented in high-unemployment construction occupations, and 3) geographically clustered in the regions where employment during the recession was most affected by the sudden drop in new construction. According to the Current Population Survey (CPS), more than half of Hispanic immigrant men do not have a diploma. Native-born men have much higher rates of high school completion: more than 80% of native-born Hispanic men and more than 90% of white men completed high school. During the recession, one in four male Hispanic immigrants worked in construction – an industry where one in five workers was out of work at the beginning of 2009 – compared to 14% of native Hispanic men and only 12% of white men. Not only were Hispanic immigrants concentrated in the jobs most affected by the recession, but they were also concentrated in the region where construction jobs were in the least demand. Nearly a third of foreign-born Hispanic men in the CPS live in California, the state that experienced the greatest absolute loss of construction jobs between November 2009 and November 2010 (Semuels, 2010). In Nevada, the state that lost the highest proportion (22%) of construction jobs during the recession, over one in four residents are Hispanic, compared to the national average of 16%.

And yet, the employment advantage that Hispanic immigrant men have over native-born Hispanic men is large and it has grown over time (see Figure 1).[1]

[1] I use the **tile** package in R to produce all of the lineplots in this analysis (Adolph, 2012).

Figure 1: Male unemployment rates by ethnicity, 2003 - 2011.



Despite their lack of education, foreign-born Hispanic men only reached a recession peak unemployment rate of 11.4%, a rate that is closer to the peak of 9.8% for white men than the peak of 14% for native Hispanic men. The immigrant-native employment gap is particularly large among male high school dropouts. In their study of male immigrants in the 2000 Census data, Duncan and Trejo (2012) report that the employment rate for foreign-born drop-outs in 2000 was 12 percentage points higher than the rate for native-born drop-outs (85% versus 73% for natives). Employment rates in 2000 were nearly identical (roughly 88%) for immigrants and natives with at least a high school education.

Why do foreign-born Hispanic men have such low unemployment compared to the native-born? Are the low rates of immigrant unemployment evidence of another Hispanic paradox? Among demographers, the Hispanic paradox (also known as the epidemiological paradox) refers to the tendency of Hispanics — despite their relatively low socioeconomic status, reduced access to healthcare, and lower self-reported health — to have more favorable health and mortality outcomes than white non-Hispanics (Markides and Coreil, 1986; Hummer et al., 2004). The mortality advantage is significantly greater for foreign-born Mexicans (Sorlie et al., 1993; Palloni and Arias, 2004). According to the "healthy migrant" selection hypothesis, migrants have better physical and psychological health than the average person in both the country of origin and the country of destination because the hurdles of immigration are too high for the sick (Abraido-Lanza et al., 1999). Out-migrants are also selected based on health. Research based on the "salmon bias" hypothesis

finds that some (but not all) of the Hispanic mortality advantage is the result of foreign-born individuals returning to their native country when their health deteriorates (Pablos-Mendez, 1994; Turra and Elo, 2008).

This article is the first to test competing theoretical accounts of the paradox of Hispanic unemployment. I hypothesize that there are three explanations for the paradox: underemployment, lack of access to unemployment benefits, and the selection of immigrants for employment. I first investigate variation in the relative probabilities of being unemployed versus *under*employed (involuntary part-time). If Hispanic immigrants who are faced with the prospect of unemployment are more likely than similarly-situated natives to seek out or accept part-time employment, then I should find higher probabilities of underemployment (versus unemployment) among immigrants compared to natives. Next, I examine variation in employment rates based on citizenship status. If the Hispanic employment advantage is largely the result of undocumented workers not having access to unemployment insurance benefits, then I should only find an employment advantage for non-citizens and not for foreign-born citizens who are by definition eligible for unemployment benefits. Finally, I conduct an indirect test of the selective migration hypothesis by comparing migrants who came to the U.S. as children under the age of 16 to migrants who came to the U.S. when they were 16 or older. Selection for employability should not apply to migrants who came to the U.S. as children since they would be too young to find work in the U.S. when they arrived. Most studies of immigrant selection exclude those who migrated as children. By including this group in my analysis, I am able ascertain whether the Hispanic immigrant employment advantage is correlated with the capacity to work at the time of migration. If the selection hypothesis is the dominant explanation for the paradox, then I should find no employment advantage among migrants who came to the U.S. as children compared to those who migrated as adults.

The Hispanic employment paradox is important for two reasons. First, the human and social capital gained through work experience is a critical factor in the socioeconomic attainment and assimilation of immigrant populations (Piore, 1979). The immigrant employment advantage among Hispanic men may represent the positive selection of first-generation immigrants for work, as well as a decline in labor force participation across immigrant generations. Second, the Hispanic employment paradox adds a new dimension to what is already known about the consequences of economic instability on stratification. Historically, stratification research has mainly focused on earnings variation across demographic groups (Hollister, 2011; Western et al., 2012). Prior to the recent recession, sociologists generally ignored the unequal distribution of unemployment. Research on the recession has focused on those who experienced the most joblessness: men, African Americans, those with a high school diploma or less, and workers in construction, manufacturing and finance (Hout et al., 2011). The only study of immigrant employment outcomes during the recent recession ignores variation within immigrant groups by sex (Orrenius and Zavodny, 2010). As a result, the

Hispanic employment paradox has been largely overlooked by social scientists.

The Hispanic Employment Paradox: Three Possible Explanations

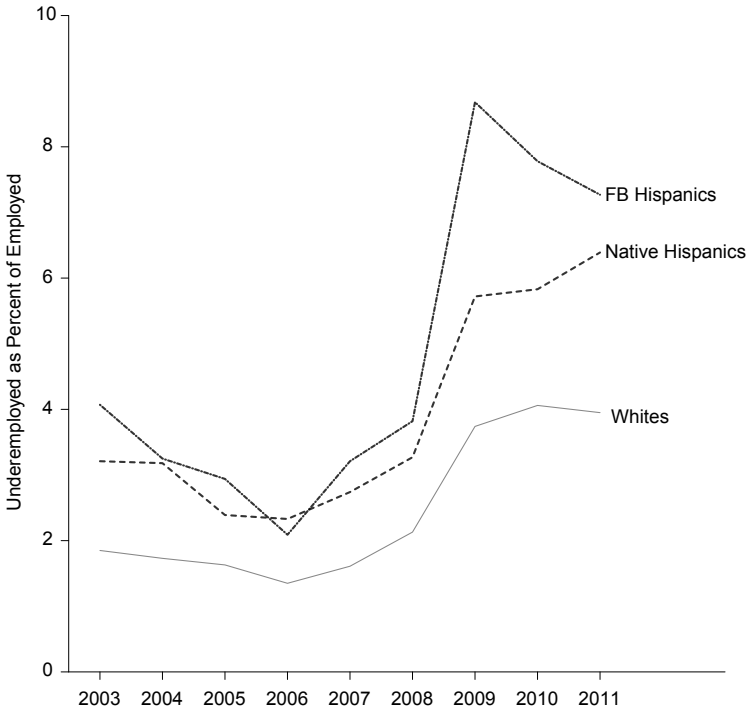
I. Underemployment

One of the reasons Hispanic immigrant men do not have higher levels of unemployment may be their propensity to seek out or accept a part-time job when faced with the prospect of unemployment. If this is the case, then Hispanic immigrant men should be over-represented among the underemployed. Since the onset of the recent recession, the deleterious effects of underemployment have received wide-spread media attention. Employers' growing dependency on part-time labor has created a situation where there are now grocery store clerks who can't get more than 28 hours per week even after five years at the same store (Greenhouse, 2012) and full-time commercial drivers who are now restricted to a 30-hour work month (Cooper, 2012). The Bureau of Labor Statistics defines the underemployed as those who want and are available for full-time work but can only find part-time employment for economic reasons, such as slack demand for work or poor business conditions (Sum and Khatiwada, 2010).[2] Underemployment doubled during the second year of the recession, reaching roughly 6.5 % in 2009 (Young, 2012). Construction and extraction, the occupations with the highest underemployment rates during the recession, also have an over-representation of Hispanics immigrants (Sum and Khatiwada, 2010).

Figure 2 below shows underemployment rates for white, native Hispanic, and foreign-born Hispanic men.

[2]In this analysis, I use the terms 'underemployed' and 'involuntary part-time' interchangeably.

Figure 2: Male underemployment rates by ethnicity, 2003 - 2011.



The sharp uptick in foreign-born underemployment in 2009 suggests that immigrant men may have shifted into involuntary part-time work as a result of the recession. Involuntary part-time jobs tend to become more common during recessions as employers seek to cut labor costs (Tilly, 1996). The trends in Figure 2 may also be indicative of occupation-specific patterns of employment. The 2009 spike among the foreign-born may simply reflect the fact that the foreign-born are over-represented in construction, the industry with the highest rate of underemployment in 2009 (Sum and Khatiwada, 2010).

In their analysis of underemployment trends in the CPS from 2007-2009, Sum and Khatiwada (2010) find that the group most at risk for underemployment are young Hispanic immigrants without a high school diploma working in food preparation, an industry with more part-time workers than full-time workers. What is lacking in prior research about underemployment is a multivariate analysis of the predictors of underemployment. Do young Hispanic immigrants have high underemployment rates because of their occupation or is it something else? Figure 2 does not take into account human capital and labor market position, but prior research suggests that these factors do not fully explain the high levels of underemployment among Hispanic immigrants. Lin (2011) finds that Hispanic immigrants – especially non-citizens – work fewer hours per week than non-Hispanic whites, even after controlling for human capital and labor market position (sector, union membership, hourly versus salary earnings).

II. Access to Unemployment Benefits

In addition to underemployment, the Hispanic employment paradox may also be the result of differential access to unemployment benefits. Among the foreign-born, there are two groups that are not eligible to receive unemployment benefits: undocumented workers and residents who are not authorized to work in the U.S. While undocumented workers may be reluctant to respond to government surveys like the CPS for fear of being detected by immigration officials, the size of the foreign-born population in the CPS is too large not to include undocumented workers (Hanson, 2006). Based on data from the Department of Homeland Security and other agencies, Camarota (2012) estimates that a little more than a quarter of the immigrants in the CPS are undocumented. Without access to unemployment benefits, undocumented workers may be under greater pressure to seek out or accept temporary part-time employment. Even for those Hispanic immigrants who are eligible for unemployment benefits, prior research suggests that compared to natives, Hispanic immigrants are less likely to know how to apply for unemployment benefits or even about the existence of the Federal-State Unemployment Insurance Program (Gould-Werth and Shaefer, 2012).

III. Selection

Finally, the Hispanic employment paradox may reflect the self-selection of migrants based on ability and motivation to find work. Measures of employability are not readily available in public datasets, but it is possible to compare the education and income profiles of migrants and non-migrants. The ideal dataset for such a comparison would contain information on all Hispanics at a point in time, indicators for which Hispanics moved to the United States during some subsequent time period, and a set of exogenous measures of each individual's skill and the return to skill in their local area (Ibarraran and Lubotsky, 2007). This ideal data set does not exist, and as a result, there has been extensive debate among economists and demographers about the best method for measuring selection in publicly available datasets. Scholars have yet to reach a consensus about whether Hispanic immigrants are positively or negatively selected with respect to earnings and education. Most of the evidence from recent studies based on characteristics of migrants prior to the act of migration points to negative selection. Migrants who leave Mexico for the U.S. are less educated and earn lower wages, on average, than those who stay in Mexico (Ibarraran and Lubotsky, 2007; Moraga, 2011; Aguayo-Tellez and Martinez-Navarro, 2013).

Regardless of where Hispanic immigrants fall on the education and earnings distribution of their native country, they may still be positively selected for employment. In their study of data from the Mexican Mi-

gration Project (MMP), Cerrutti and Massey (2001) report that the most common reason for Mexican men to initiate migration to the U.S. is to find work. In Mexican communities where migration is common, there are strong expectations within families that teenage men will migrate to the U.S. expressly to work (Kandel and Massey, 2002). Van Hook and Bean (2009) describe the "pro-employment cultural repertoires of Mexican immigrants in their analysis of longitudinal data from the Survey of Income and Program Participation (SIPP). Compared to natives, Mexican immigrants are more likely to view welfare as temporary, they have higher post-welfare employment, and they have shorter welfare durations.[3]

If selection is the primary factor in the immigrant employment advantage, then immigrants who came to the U.S. as adults should have higher employment rates than immigrants who came to the U.S. as children. Immigrant men who come to the U.S. as adults typically migrate for work-related reasons; those men who came to the U.S. as children most likely came because of a familial association with an older immigrant. In their analysis of immigrant employment rates using the American Community Survey (ACS), Duncan and Trejo (2012) present suggestive evidence for positive selection: among those with a high school diploma or less, adult immigrants have slightly higher employment rates than those who came to the U.S. as children (before the age of 16). For those immigrants with a college degree, adult immigrants have slightly lower employment rates compared to those who migrated as children. Duncan and Trejo's study does not test whether the employment differences among immigrants are statistically significant, nor do they distinguish Hispanic immigrants from other foreign-born populations.

Limitations and Alternative Explanations

There are two sampling issues that could bias my results: an undercount of immigrants and misreporting among immigrants. As Hanson (2006: 884) writes, "data sources that include illegal immigrants are almost by definition subject to sample selection problems." It is widely known that the Census Bureau (the agency that conducts the CPS) undercounts immigrants, particularly young, illegal and low-skill immigrants (Bean et al., 2001; Ibarraran and Lubotsky, 2007). If this group has higher rates of unemployment than other immigrants, then the Hispanic employment paradox may just reflect the over-representation of skilled immigrants in the CPS. Second, if Hispanic immigrant men are more likely than the native-born to report being employed when they are actually unemployed – perhaps because their permission to work in the U.S. is tied to their employment – then my estimate of the immigrant employment advantage would be over-stated. I

[3]Van Hook and Bean's analysis excludes undocumented immigrants, a group that is by law ineligible for welfare benefits.

address the challenges of mis-reporting and undersampling by differentiating the immigrant population by citizenship.[4] Citizens face no risk of deportation as a result of their employment status, and there is no evidence to suggest that the Census Bureau undercounts citizen immigrants. An immigrant employment advantage among citizen immigrants would indicate that the Hispanic employment paradox is not solely an artifact of misreporting or the undercount of undocumented workers.

Finally, if foreign-born Hispanic men are more likely to leave the U.S. when faced with unemployment, then my findings would be affected by what demographers refer to as "salmon bias" or selective return migration. Recent immigrants in particular may be likely to return home when jobs are scarce because recent immigrants tend to have a smaller supportive kinship networks than those who have been living in the U.S. for an extended period of time (Massey et al., 2003). Undocumented immigrants may return home because they are not eligible for unemployment benefits. However, if selective out-migration or sampling error were the primary causes of the Hispanic employment paradox, then immigrants would have low rates of unemployment *and* underemployment. The high rates of immigrant underemployment that I find suggest that for many immigrants, a part-time job is a more attractive option that returning home.

Data and Methods

I test my hypotheses using data from the Current Population Survey, the source of the official U.S. monthly unemployment rate. The CPS is a monthly survey of approximately 60,000 households conducted by the Census Bureau for the Bureau of Labor Statistics (BLS). I use the 2003 - 2011 merged outgoing rotation group (MORG) files of the CPS. This time period allows me to compare employment patterns before, during, and after the Great Recession. I do not include years prior to 2003 because of substantial changes to the occupation scheme in the CPS data. In addition to having large sample sizes, the MORG is ideal for an investigation of underemployment because it includes detailed information from part-time workers about their reasons for not working full-time. Similar to prior research on underemployment (Slack and Jensen, 2007), I use the BLS definition of an underemployed worker: an individual who is working part-time (less than 35 hours per week) who wants a full-time job and is available for full-time work, but can only find part-time work for economic reasons, such as slack demand for work at their firm, poor business conditions, or an inability to find a full-time job. This definition of underemployment excludes individuals who work part-time for other reasons, such as seasonal work or childcare responsibilities – the BLS classifies

[4]Immigrants are, by definition, born outside of the U.S. Those who were born abroad to American parents are designated as natives in my sample. All of the citizen immigrants in my sample became citizens through naturalization.

these individuals as voluntary part-time workers.

While the CPS is a monthly survey, new households are not interviewed each month. Households that enter the CPS are typically interviewed for four months, then ignored for eight months, then interviewed again for four more months. Households in months four and eight are considered the "outgoing rotation groups" because they are about to leave the observation sample (temporarily or permanently). To avoid observing respondents twice in one sample, I restrict my sample to respondents in their fourth interview. I exclude managers because they often have control over decisions about new hires, layoffs, and employee work schedules. Given that the pathways to full-time and part-time work vary by gender, I restrict this analysis to men, ages 16 to 64.

In all models I control for education, age, age squared, marital status, economic sector (public versus private), and occupation. I use the 21-category CPS "two-digit" detail occupation recode based on the 2000 Census occupation codes.[5] I chose this occupation scheme because it identifies occupation groups that were disproportionately affected by the recent recession (e.g., construction and extraction). The more detailed Census 2000 occupation scheme, with more than 500 categories, would yield cell counts that are too small to quantify the effect of occupation on Hispanic immigrant employment patterns.

My race/ethnicity categories are: Hispanic, non-Hispanic white, non-Hispanic black, and other non-Hispanic race. I test my hypotheses about differential access to unemployment benefits and the positive selection of immigrants for employment by disaggregating Hispanic immigrants based on citizenship and age at migration. Exact age at migration cannot be determined from the coding in the CPS. Year of entry to the U.S. is given as a range of years. For recent migrants, the range is two to three years. If the year of entry is between 1960 and 1979, the answer is given as a five year range. Prior to 1960, the coding only indicates if the immigrant arrived during the 1950s or before 1950. Given the constraints of these categories, I cannot be certain whether every immigrant arrived as a child or adult. For those who definitively arrived as children (age 15 or younger), I code as a child migrant. For those who definitely arrived as adults (age 18 or older), I code as an adult migrant. Approximately 20% of migrants fall in between these two categories. I code this group as missing on age at arrival, but I keep them in the model.

The dependent variable in all models represents four employment outcomes: unemployed, involuntary

[5]The 21 two-digit occupation categories are: business and financial operations; computer and mathematical science; architecture and engineering; life, physical, and social science occupations; legal occupations; education, training, and library occupations; arts, deign, entertainment, sports, and media occupations; healthcare practitioner and technical occupations; healthcare support occupations; protective service occupations; food prep and serving occupations; building and grounds cleaning and maintenance; personal care and service; sales; office and administrative support; farming, fishing, and forestry; construction and extraction; installation, maintenance, and repair; production; transportation and material moving.

part-time (underemployed), voluntary part-time, and full-time. Because my dependent variable consists of multiple unordered nominal categories, I estimate the outcome probability for individual *i* using a multinomial logit model:

$$\ln \frac{\Pr(y = m|\mathbf{X}_i)}{\Pr(y = n|\mathbf{X}_i)} = \mathbf{X}_i(\beta_m - \beta_n)$$

where $\mathbf{X}_i$ is the vector of explanatory variables and the β coefficients correspond to outcomes *m* and *n*. Given the number of coefficients generated by multinomial logit models, I limit the presentation in the Results section to predicted probabilities (tables of logit coefficients are included the Appendix). All models include state, metro/non-metro and year-month fixed effects to control for observed and unobserved geographic and business cycle factors that give rise to differential rates of employment. Sample sizes and descriptives of the key covariates are presented in Tables 1 and 2.

Table 1. Descriptives of CPS MORG data, 2003 - 2011.

	2003-2007	2008-2011
Percent Hispanic Immigrant	10.5	10.6
Percent Native Hispanic	6.6	7.7
Percent White (Non-Hispanic)	65.9	64.1
Percent Unemployed	5.7	10.0
Percent of Hispanic Immigrants Unemployed	4.6	9.7
Percent of Native Hispanics Unemployed	6.7	12.7
Percent of White (Non-Hispanic) Unemployed	5.1	*8.8*
Percent Underemployed	2.5	4.4
Percent Hispanic Immigrant Underemployed	2.8	5.6
Percent Native Hispanic Underemployed	2.5	4.4
Percent White (Non-Hispanic) Underemployed	1.5	3.0
Controls		
Average age	37.8	38.6
Percent less than high school	15.7	13.7
Percent high school diploma or equivalent	33.2	33.1
Percent some college	26.7	27.5
Percent BA or higher	24.3	25.7
Percent married	55.6	54.1
Percent citizen	87.8	88.3
Percent public sector	13.0	13.2
Percent construction and extraction	12.4	11.4
Total Sample Size	198,825	154,772

Source: Data come from CPS MORG supplements.
Note: Weighted means presented. Sample restricted to non-military men ages 16-64 in their fourth interview. Sample excludes the self-employed.

Table 1 shows the composition of the labor force before and after the onset of the recession.[6] Both before and after the onset of the recession, native Hispanics had high unemployment relative to Hispanic immigrants and non-Hispanic whites, and Hispanic immigrants had high underemployment relative to native Hispanics and non-Hispanic whites.

Table 2 below shows the demographic differences between Hispanic immigrant, native Hispanic, and white men in the CPS sample. The educational disparities are stark. Over half of Hispanic immigrant men are high school dropouts compared to less than 20% of native Hispanic men and only 8.9% of white men. Almost a third of white men in the sample have a college degree, compared to 12.6% of native Hispanic

[6]According to the Bureau of Labor Statistics, the recession began in December 2007 and ended in June of 2009. The sharp increase in the unemployment rate began in 2008. The unemployment rate did not reach its peak until October of 2009, four months after the recession officially ended. At the end of 2011, the unemployment rate (8.5%) was 3.5 percentage points highter than December 2009 when the recession began.

men and 7.4% of Hispanic immigrant men. Hispanic immigrant men have the highest marriage rate. Over a quarter of Hispanic immigrant men work in construction, compared to 12.6% of native Hispanic men and 11% of white men.

Table 2. Descriptives of Covariates from CPS MORG data by Ethnicity.

	Hispanic Immigrants	Native Hispanics	Whites
Average age	36.2	34.0	39.0
Percent less than high school	53.3	19.6	8.9
Percent high school diploma or equivalent	28.4	37.9	33.2
Percent some college	10.9	30.0	29.2
Percent BA or higher	7.4	12.6	28.7
Percent married	62.9	46.0	56.2
Percent citizen	22.8	100.0	97.9
Percent public sector	3.1	14.0	14.0
Percent construction and extraction	26.2	12.6	11.0

Source: Data come from CPS MORG supplements.
Note: Weighted means presented. Sample restricted to non-military men ages 16-64 in their fourth interview. Sample excludes the self-employed.

Results

To assess whether demographic or labor market factors account for the Hispanic paradox, I first consider a model that predicts the employment status (full-time, voluntary part-time, involuntary part-time, or unemployed) after controlling for education, occupation, age, marital status, and economic sector (public versus private). Logit coefficients of interest from this model are presented in Table 3.

Table 3. Logit Coefficients from Multinomial Logit Regression Predicting Unemployment (Versus Full-Time Employment): 2003-2011

Race and Ethnicity (reference is white)	Logit Coefficient	95% CI
Hispanic Immigrant	-.59***	[-.64,-.53]
Native Hispanic	.14***	[.08, .20]
African-American	.70***	[.66, .75]
Other race	.25***	[.20, .31]
Education (reference is less than high school)		
H.S. diploma	-.54***	[-.58,-.50]
Some college	-.68***	[-.72,-.63]
College degree	-.95***	[-1.01,-.89]
Age	-.13***	[-.14,-.12]
Age squared	.001***	[.0014,.0016]
Married	-.67***	[-.71,-.63]
Public sector	-.72***	[-.78,-.66]
Construction	1.08***	[.98,1.18]
State and metro effects	yes	
Year and month fixed effects	yes	
N	353,597	

*p<.05; **p<.01; ***p<.001

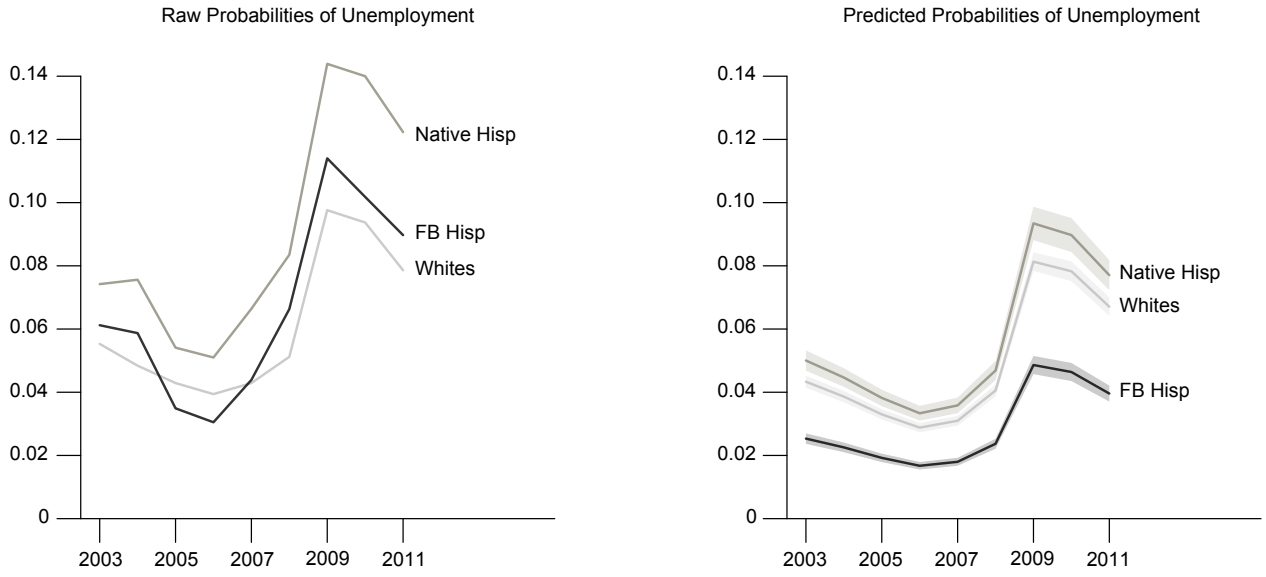
Source: Author's compilations. Data come from CPS MORG supplements.
Note: Sample restricted to non-military men ages 16-64.

After controlling for human capital, demographic characertistics, and occupation, the effect of being a Hispanic immigrant on the odds of unemployment is large and negative. As expected, education, marriage, age, and working in the public sector all have protective effects against unemployment. Working in a construction occupation significantly increases the risk of unemployment.[7] Contrary to prior research, I did not find a significantly positive association between unemployment and having children at home. Stratton's (1993) modeling of the number of children at home assumes that the difference in the effect of having zero versus one child is the same as the difference in the effect of having three versus four children. It may be that, except for relatively large families, having children at home has no perceptible effect on male unemployment after controlling for marital status.

The logit coefficients only tell part of the story. To better understand the extent of the Hispanic immigrant employment advantage, I present predicted probabilities of unemployment by year (right panel of Figure 3). By holding the control variables at their means, I am essentially creating a hypothetical situation where foreign-born Hispanics and natives have the same age, education, and occupation distributions.

[7]The effect of working in working in construction varies significantly by year. In all years construction has a stronger association with unemployment than the reference occupation (business and financial operations).

Figure 3: Raw and Predicted Probabilities of Male Unemployment, 2003-2011.



Once I take into account the low levels of education and occupational clustering of Hispanic immigrants, their employment advantage over natives increases, particularly during the recent recession. Next, I present the results of models testing the hypotheses about underemployment, eligibility for unemployment benefits, and in-migrant selection.

Underemployment

If Hispanic immigrant men have low unemployment because they are more likely than natives to seek out or accept part-time employment in lieu of being unemployed, then Hispanic immigrants should be over-represented among the underemployed (involuntary part-time), even after controlling for human capital, demographic characteristics, and occupation. I find that the underemployment probability for Hispanic immigrant men is significantly higher than the underemployment probability for white men; however, while foreign-born Hispanic men have the highest probability of underemployment, they are statistically indistinguishable from native Hispanic men. Figure 4 below shows the overlapping confidence intervals from the underemployment models.

Figure 4: Predicted Probabilities of Underemployment.

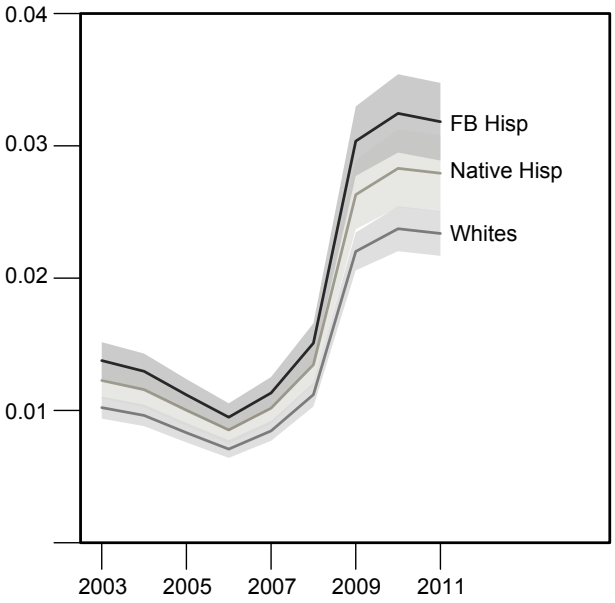
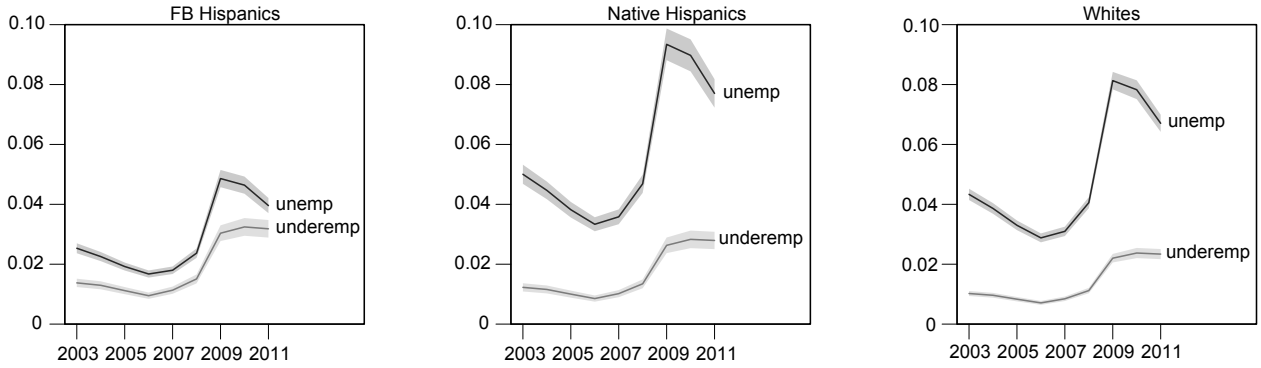


Figure 5 below shows underemployment and unemployment predicted probabilities in the same plots. The increases in unemployment during the recent recession appear even more steep when juxtaposed next to the relatively moderate increases in underemployment.

Figure 5: Predicted Probabilities of Unemployment and Underemployment by Ethnicity.

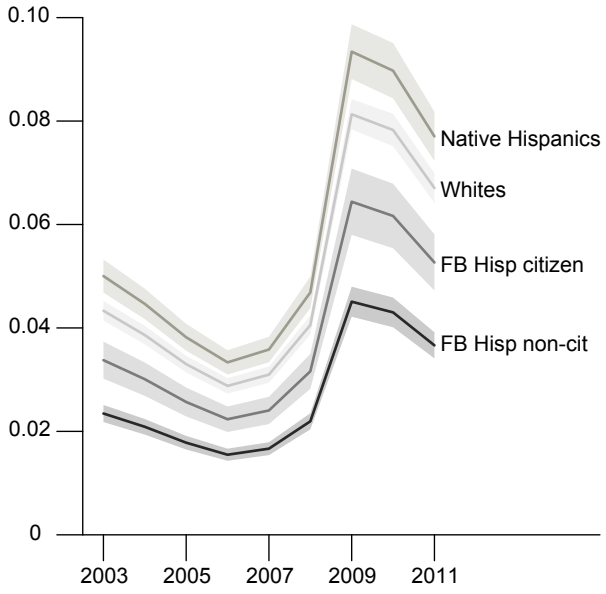


A sizeable part of the underemployment disparity is associated with occupation: when occupation is not in the model, the underemployment difference between native and foreign-born Hispanics is significant.

Citizenship and Eligibility for Unemployment Benefits

Camarota (2012) estimates that a little more than a quarter of the immigrants in the CPS are undocumented. If the Hispanic immigrant employment advantage is mainly the result of undocumented workers not having access to unemployment benefits, then I should only find a significant employment advantage among non-citizen immigrants, many of whom are ineligible by law for unemployment benefits. Figure 6 below disaggregates Hispanic immigrants' predicted probabilities of unemployment by citizenship.

Figure 6: Predicted Probabilities of Unemployment by Citizen Status.



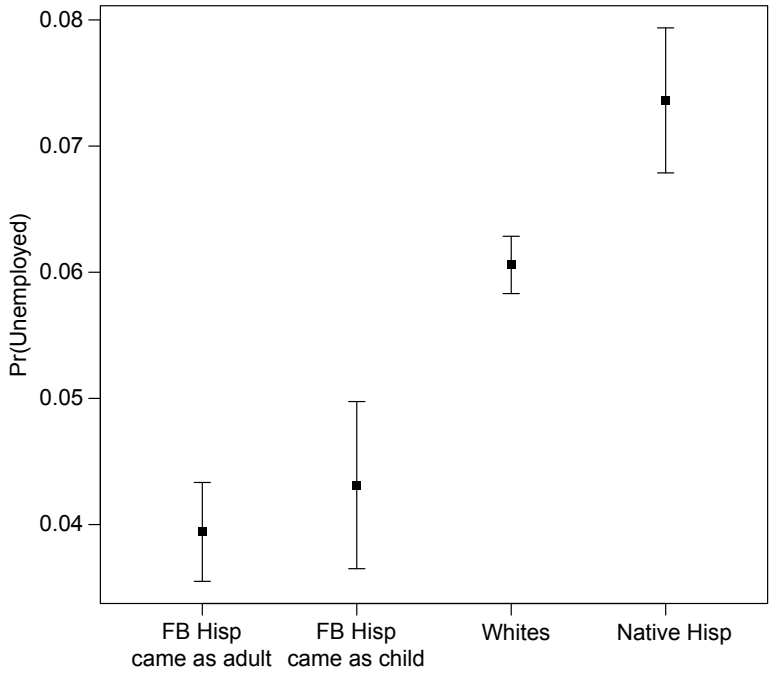
Consistent with the notion that non-citizen Hispanics are the least likely to be unemployed because many of them are not eligible for unemployment benefits, non-citizen Hispanic immigrants have the lowest predicted probabilities of unemployment. And yet, lack of access to unemployment benefits does not fully account for the Hispanic employment paradox. Even citizen immigrants have a substantive and significant employment advantage over whites.

Selection

If the selection hypothesis is the dominant explanation for the paradox, then Hispanic migrants who came to the U.S. as children should not have an employment advantage because they most likely migrated for family reasons and not for work. Figure 7 below shows the predicted probabilities of unemployment by age at migration during the recent recession (2008 - 2010). Results for all years in the sample (2003 - 2011)

will be included in the final version of this paper.

Figure 7: Predicted Probabilities of Unemployment by Age at Arrival, 2008 - 2010.



The predicted probabilities in Figure 7 show no statistically significant difference in the predicted probability of unemployment for foreign-born Hispanics who migrated as children (age 15 or younger) versus those who migrated as adults (18 or older). The wider confidence interval for immigrants who arrived as children is in part the result of relative sample sizes: approximately 20% of the immigrants surveyed during the recession arrived as children, compared to 60% of the immigrants who arrived as adults (the remaining 20% arrived at some point between the ages of 15 and 18). Even those *citizen* immigrant men who came to the U.S. as children – all of whom 1) most likely migrated to the U.S. because of family ties not work, and 2) are legally eligible for unemployment benefits – have a significantly lower probability of being unemployed compared to native white and Hispanic men. The lack of an employment difference between child and adult migrants in my analysis does not necessarily mean that Hispanic immigrant men are not positively selected for employment. Those who migrated as children may be highly motivated to find employment because they have a shared migration experience with adults who came to the U.S to work.

I also analyzed employment outcomes by country of origin. My results indicate that Mexican immigrant men have significantly lower unemployment rates than non-Mexican Hispanic immigrant men. This finding is yet another example of the employment paradox: compared to non-Mexican Hispanic immigrants, Mex-

ican immigrants earn lower wages and have less education (Jasso et al., 2000). It may be that the physical proximity to Mexico makes it easier for Mexican immigrants to return home when jobs become scarce. Massey et al. (2003), however, note that as long as border enforcement is tight, immigrants will be discouraged from returning home for fear of not being able to return.

Discussion

It is widely known among demographers that Hispanic immigrants have lower mortality than the native U.S. population, in spite of low socio-economic status (Markides and Coreil, 1986; Sorlie et al., 1993; Abraido-Lanza et al., 1999). My findings indicate that a similar paradox exists for employment, even during the most recent recession and despite the fact that Hispanic immigrants are concentrated in construction occupations and regions with high unemployment. The employment and mortality outcomes of Hispanic immigrants present a puzzle for social scientists: demographers have yet to fully account for the mortality paradox, and I was not able to "explain away" the employment paradox – even after taking into account differential rates of underemployment, access to unemployment benefits, and the positive selection of migrants for employment.

While I was not able to test for selective out-migration (immigrants returning home when jobs are scarce or difficult to obtain), the selective out-migration hypothesis is not entirely consistent with the high underemployment (involuntary part-time) rates I find for Hispanic immigrants in the CPS data. If parallels can be found in research on the mortality paradox, then selective out-migration is only part of the story. Hummer et al. (2007) document a mortality advantage for an immigrant population that has virtually no chance of out-migrating: newborn babies born to Mexican immigrant women. First hour, first day, and first week mortality among infants born to Mexican immigrant women in the U.S. are approximately 10% lower than that experienced by infants born to native non-Hispanic white women.

My test of selective in-migration was limited to immigrants already in the U.S. Future research and data collection efforts in immigrant-sending countries should document employment patters over time. By comparing the job-seeking behavior of migrants with similarly-situated non-migrants, social scientists can ascertain whether and how migrants are different from non-migrants based on their motivation and ability to find and keep work. Similar to the way demographers are now focused on the exceptional health behaviors of Hispanic immigrants, social scientists should also examine the job-seeking behaviors of Hispanic immigrant men.

The high rates of unemployment among native Hispanics, especially during the recession, are consistent

with the research on the downward economic assimilation of children born to Mexican immigrants (Portes and Rumbaut, 2001). The final version of this paper will disaggregate Hispanic immigrant employment outcomes by generation to determine at what point the Hispanic immigrant employment advantage becomes a native Hispanic employment disadvantage.

References

Abraido-Lanza, Ana F., Bruce P. Dohrenwend, Daisy S. Ng-Mak, and J. Blake Turner. 1999. "The Latino Mortality Paradox: A Test of the 'Salmon Bias' and Healthy Migrant Hypotheses." *American Journal of Public Health* 89:1543–1548.

Adolph, Christopher. 2012. "tile." `R` package, `faculty.washington.edu/cadolph/software`.

Aguayo-Tellez, Ernesto and Jose Martinez-Navarro. 2013. "Internal and International Migration in Mexico: 1995 - 2000." *Applied Economics* 45:1647 – 1661.

Bean, Frank D., Rodolfo Corona, Rodolfo Tuiran, and Woodrow-Lafield. 2001. "Circular, Invisible, and Ambiguous Migrants: Components of Difference in Estimates of the Number of Unauthorized Mexican Migrants in the United States." *Demography* 38:411–422.

Camarota, Steven A. 2012. "Immigrants in the United States: A Profile of America's Foreign-Born Population." Technical report, Center for Immigration Studies. August.

Carnevale, Anthony P., Tamara Jayasundera, and Ban Cheah. 2012. "The College Advantage: Weathering the Economic Storm." Technical report, Georgetown Public Policy Institute.

Cerrutti, Marcela and Douglas S. Massey. 2001. "On the Auspices of Female Migration from Mexico to the United States." *Demography* 38:187–200.

Cooper, Michael. 2012. "Lost in Recession, Toll on Underemployed and Underpaid." *The New York Times*. June 18.

Duncan, Brian and Stephen J. Trejo. 2012. "The Employment of Low-Skilled Immigrant Men in the United States." *American Economic Review: Papers and Proceedings* 102:549–554.

Gould-Werth, Alix and H. Luke Shaefer. 2012. "Unemployment Insurance Participation by Education and by Race and Ethnicity." Bureau of Labor Statistics, Monthly Labor Review, October 2012.

Greenhouse, Steven. 2012. "A Part-Time Life, as Hours Shrink and Shift." *The New York Times*. October 27.

Hanson, Gordon H. 2006. "Illegal Migration from Mexico to the United States." *Journal of Economic Literature* 44:869924.

Hollister, Matissa. 2011. "Employment Stability in the U.S. Labor Market: Rhetoric Versus Reality." *Annual Review of Sociology* 37:305–324.

Hook, Jennifer Van and Frank D. Bean. 2009. "Explaining Mexican-Immigrant Welfare Behaviors: The Importance of Employment-Related Cultural Repertoires." *American Sociological Review* 74:423–444.

Hout, Michael, Asaf Levanon, and Erin Cumberworth. 2011. "Job Loss and Unemployment." In *The Great Recession*, edited by David B. Grusky, Bruce Western, and Christopher Wimer, pp. 59–81. Russell Sage Foundation.

Hoynes, Hilary, Douglas L. Miller, and Jessamyn Schaller. 2012. "Who Suffers During Recessions?" *Journal of Economic Perspectives* 26:27–48.

Hummer, Robert A., Maureen R. Benjamins, and Richard G. Rogers. 2004. "Racial and Ethnic Disparities in Health and Mortality Among the U.S. Elderly Population." In *Critical Perspectives on Racial and Ethnic Differences in Health in Late Life*, edited by Norman B. Anderson, Rodolfo A. Bulatao, and Barney Cohen, pp. 53–94. National Academy Press.

Hummer, Robert A., Daniel A. Powers, Starling G. Pullum, Ginger L. Gossman, and W. Parker Frisbie. 2007. "Paradox Found (Again): Infant Mortality Among the Mexican-Origin Population in the United States." *Demography* 44:441–457.

Ibarraran, Pablo and Darren Lubotsky. 2007. "Mexican Immigration and Self-Selection: New Evidence from the 2000 Mexican Census." In *Mexican Immigration to the United States*, edited by George J. Borjas, pp. 159–192. National Bureau of Economic Research.

Jasso, Guillermina, Mark R. Rosenzweig, and James P. Smith. 2000. "The Changing Skill of New Immigrants to the United States." In *Issues in the Economics of Immigration*, edited by George J. Borjas, pp. 185–225. University of Chicago Press.

Kandel, William and Douglas S. Massey. 2002. "The Culture of Mexican Migration: A Theoretical and Empirical Analysis." *Social Forces* 80:981 – 1004.

Lin, Ken-Hou. 2011. "Do Less-Skilled Immigrants Work More? Examining the Work Time of Mexican Immigrant Men in the United States." *Social Science Research* 40:1402–1418.

Markides, Kyriakos S. and Jeannine Coreil. 1986. "The Health of Hispanics in the Southwestern United States: an Epidemiologic Paradox." *Public Health Reports* 101:253265.

Massey, Douglas S., Jorge Durand, and Nolan J. Malone. 2003. *Beyond Smoke and Mirrors: Mexican Immigration in an Era of Economic Integration*. New York: Russell Sage Foundation.

Moraga, Jess Fernndez-Huertas. 2011. "New Evidence on Emigrant Selection." *Review of Economics and Statistics* 93:72–96.

Nickell, Stephen. 1979. "Estimating the Probability of Leaving Unemployment." *Econometrica* 47:1249–1266.

Orrenius, Pia M. and Madeline Zavodny. 2010. "Mexican Immigrant Employment Outcomes over the Business Cycle." *American Economic Review: Papers and Proceedings* 100:316–320.

Pablos-Mendez, Ariel. 1994. "Mortality Among Hispanics." *JAMA* 271:1237–1238.

Palloni, Alberto and Elizabeth Arias. 2004. "Paradox Lost: Explaining the Hispanic Adult Mortality Advantage." *Demography* 41:385–415.

Piore, Michael. 1979. *Birds of Passage: Migrant Labor and Industrial Societies.* Cambridge University Press.

Portes, Alejandro and Ruben G. Rumbaut. 2001. *Legacies: The Story of the Immigrant Second Generation*. University of California Press and Russell Sage Foundation.

Semuels, Alana. 2010. "California Construction-Job Losses Among the Nation's Worst." *The Los Angeles Times*. December 20.

Slack, Tim and Leif Jensen. 2007. "Underemployment Across Immigrant Generations." *Social Science Research* 36:1415–1430.

Sorlie, Paul D., Eric Backlund, Norman J. Johnson, and Eugene Rogot. 1993. "Mortality by Hispanic Status in the United States." *Journal of the American Medical Association* 270:2464–2468.

Stratton, Leslie S. 1993. "Racial Differences in Men's Unemployment." *Industrial and Labor Relations Review* 46:451–463.

Sum, Andrew and Ishwar Khatiwada. 2010. "The Nation's Underemployed in the "Great Recession" of 2007-2009." Bureau of Labor Statistics, Monthly Labor Review, November 2010.

Sum, Andrew, Ishwar Khatiwada, Joseph McLaughlin, and Sheila Palma. 2011. "No Country for Young Men: Deteriorating Labor Market Prospects for Low-Skilled Men in the United states." *The ANNALS of the American Academy of Political and Social Science* 635:24–55.

Tilly, Chris. 1996. *Half a Job: Bad and Good Part-Time Jobs in a Changing Labor Market*. Temple University Press.

Turra, Cassio M. and Irma T. Elo. 2008. "The Impact of Salmon Bias on the Hispanic Mortality Advantage: New Evidence from Social Security Data." *Population Research and Policy Review* 27:515–530.

Western, Bruce, Deirdre Bloome, Benjamin Sosnaud, and Laura Tach. 2012. "Economic Insecurity and Social Stratification." *Annual Review of Sociology* 38:341–359.

Young, Justin R. 2012. "Underemployment in Urban and Rural America, 2005-2012." Carsey Institute, University of New Hampshire, Paper 179, `http://scholars.unh.edu/carsey/179/`, visited December 6, 2012.