Turnaround? The Effect of Legalization on the Occupational Mobility Trajectories of Previously Unauthorized Latino Immigrant Men

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ABSTRACT

Unauthorized experience is common among Latin American immigrants in the United States that receive legal permanent residence. However, few recent studies have examined how transitioning from unauthorized to legal status acts as a mechanism of occupational mobility for immigrants. Using panel data from the New Immigrant Survey and the Survey of Income and Program Participation, I examine how labor market outcome-generating processes change over time for previously unauthorized Latin American immigrant men and three comparison groups: unauthorized immigrants, legal immigrants, and US-born Hispanics. This analysis uses an innovative dependent variable that measures the respondent's position in their regional occupational hierarchy. Results indicate that immigrants that transition from unauthorized to legal are the only group to experience structural change in how their labor market outcomes are generated over time. Post-legalization labor market gains for previously unauthorized immigrants are primarily attributable to increased returns to human capital characteristics.

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While it is well documented that factors such as race, class, and gender powerfully shape the life chances of individuals, stratification scholars have paid less attention to how immigrants fit into the contemporary U.S. stratification system (Jasso 2011; Massey 2011). Although they make up 16% of the United States' workforce, immigrants are the only group at risk of not having proper authorization to work in the U.S. As such, legal status has tremendous implications for immigrant employment outcomes, and unauthorized immigrants are significantly disadvantaged relative to legal immigrants in the labor force (Donato and Sisk 2012; Donato and Massey 1993; Hall et al 2010).

Past research on previously unauthorized immigrants that received amnesty following the 1986 Immigration Reform and Control Act indicates that legalization did boost earnings (Rivera-Batiz 1999; Kossoudji and Cobb-Clark 2002). However, more recent research suggests that mobility prospects for immigrants – both legal and not – have deteriorated, as returns to education have declined and wages have stagnated (Massey and Gelatt 2010; Massey 2007). These trends prompted Massey and Pren (2012:15) to argue that Latino immigrants have "fallen from their historical position in the middle of the American socioeconomic distribution…to a new position at or near the bottom." At the same time, Jasso (2011:1303) writes that, "from a stratification perspective, legalizing constitutes a massive upward mobility." Thus, this analysis seeks to examine how the occupational trajectories of Latin American immigrants are shaped by legalization in an era of reduced mobility prospects for the foreign-born.

Despite an emerging literature on the pathways that immigrants take to achieve legal permanent resident (LPR) status, the socioeconomic consequences of these pathways are unclear (Riosmena 2010; Malone 2004; Jasso et al 2008; Massey and Malone 2002). To date, the only research to use the New Immigrant Survey to examine the impact of legalization on labor force outcomes is a report published by the Public Policy Institute of California (Hill, Lofstrom and Hayes 2010). The analysis by Hill and colleagues uses the retrospective migration and

employment data from the New Immigrant Survey (NIS) to compare wages pre- and post-receipt of LPR status for previously unauthorized immigrants and continuously legal immigrants. Based on their analysis, Hill et al (2011) conclude that, relative to continuously legal immigrants, low-skilled, previously unauthorized immigrants do not experience significant increases in earnings following legalization. Also, they find that high-skilled, previously unauthorized workers experience only modest increases in wages after receiving LPR status. With respect to job mobility, however, the authors find that previously unauthorized immigrants that entered the U.S. without inspection were more likely to be employed in a different occupation post-legalization than those that were continuously legal.

The Hill and colleagues analysis provides a useful baseline for this project. However, I extend the Hill et al. analysis by including comparison groups from an additional data source to clarify the impact of legalization on labor market experiences. Moreover, my analysis is focused primarily on how the outcome-generating process is changed by legalization, rather than the value of wages gained from pre-to-post legalization, and my analysis includes only Latin American immigrants rather than the entire NIS sample. Finally, this analysis looks beyond wages and develops an innovative dependent variable that indicates the respondent's location in their local economic hierarchy, thus providing insight into how legalization impacts the structural position of immigrants in the US occupational stratification system.

Utilizing multiple data sources in order to isolate the labor market consequences of transitioning from unauthorized to legal, this study examines the following question: *how does the labor market outcome-generating process for previously unauthorized Latino immigrants change after legalization relative to other Latino groups, including continuously unauthorized immigrants, continuously legal immigrants, and US-born Hispanics?*

DATA

This research takes advantage of the comparability of the New Immigrant Survey to other surveys and utilizes a quasi-experimental research design with multiple untreated comparison groups. The before and after, untreated

comparison group approach offers the ability to rule out competing, exogenous explanations, and is strengthened by the inclusion of multiple comparison groups (Meyer 1995). Therefore, along with the New Immigrant Survey (NIS) data, this project also uses data from the Survey of Income and Program Participation (SIPP). With the SIPP, I used a method that allows for the imputation of the legal status of foreign-born respondents (Hall, Greenman, and Farkas 2010).[1] With the NIS and SIPP datasets, I constructed a treatment group and several distinct comparison groups.

The treatment group is a sample of Latin American immigrant men from the NIS that received legal permanent residence in 2003 but have previous unauthorized experience[2] (n=728). The comparison groups include samples of continuously legal Latin American immigrants (from the SIPP [n=836] and the NIS [n=290]), a sample of continuously unauthorized Latin American immigrants (SIPP [n=303]), and a sample of US-born Latinos (SIPP [n=985]). Due to the longitudinal nature of the SIPP and the retrospective data in the NIS, the samples provide information on legal status and employment experiences at two points in time, referred to as t_1 and t_2. These data sets are well suited for comparative purposes because they both collected data on employment outcomes in 2003 and prior years.

This analysis comes from a larger project where a number of dependent variables are examined, but here I examine a dependent variable that represents the respondents' position within their regional, gender-specific occupational hierarchy, which I refer to as the occupational-wage quintile. The concept of the occupational-wage quintile has been used previously to examine where occupations are positioned in the economy relative to other jobs (Wright and Dwyer 2003). The NIS and SIPP both provide information on detailed occupational codes for each employed respondent. As a result, these codes can be matched to a nationally representative data set like the Current Population Survey (CPS).

[1] Please see the appendix for more detailed information on the data sources.
[2] Immigrants with previous unauthorized experience that gain LPR status are also referred to as "transitioners."

To create the occupational-wage quintile variable, I use hourly wages for all employed workers in a given year in the CPS to calculate a median hourly wage for each of the over 500 occupations in the CPS by gender and geographic region. Occupations are then ranked by median hourly wage and assigned to a quintile, where, for example, occupations with the lowest median wages are located in the first quintile and occupations with the highest median wages are located in the fifth quintile. The variable ranges from 1-5, with higher values indicating a higher position in the regional occupational hierarchy. (Please Appendix Table 1 for more detail on the average wage range and types of occupations that are included in each occupational-wage quintile) Given a respondent's occupation at t_1 and t_2, I can assess whether the relative position of that respondent changes over time within the gender and region-specific labor market context in which they operate. This kind of contextual measure provides an alternative to standard labor market outcomes like wages, as it allows researchers to evaluate the economic experiences of respondents relative to the labor force in general.

METHODS

I adopt the following panel data regression equation specification (equation 1):

$$Y_{it} = \beta_t X_{it} + \gamma_t X_i^* + \theta_t t + \varepsilon_{it}$$

where each variable is followed by the double subscript of both *i* and *t*, which denotes the indexing by both individuals and time. Moreover, *Y* represents the dependent variable, *X* includes time-variant characteristics, *X** includes time-invariant characteristics, *t* captures unmeasured period effects, and *e* is an error term.

To the extent that it is possible, the models contain similar controls across data sources. Models for the NIS sample include the following controls: national origin (Mexico, El Salvador/Guatemala, or otherwise), dummies for level of education, a dummy variable indicating good or very good English proficiency (as rated by the NIS interviewer), and a set of dummies indicating the period in which the respondent first worked in the US. For the SIPP immigrant samples,

controls include national origin, dummies for level of education, and a set of dummies for year of arrival in the US; the US-born Latino SIPP sample includes controls for education, along with Hispanic origin and year of first entry into the labor force. All of the restricted models include a dummy variable indicating the time period (time 1 vs. time 2), age (in years) and age-squared.[3]

The analysis steps discussed here are based on research by Kossoudji and Cobb-Clark (2002), which examined legalization effects for immigrants following the 1986 amnesty program. In the first step of the analysis, I conduct an omnibus test of the coefficients from a restricted version of equation 1 and unrestricted versions of equation 1 where the variables are allowed to vary over time. This is conducted separately for each comparison group. This test analogous to a Chow test and gives an indication as to whether the data can be pooled (Baltagi 1995). In this case, a significant difference between the restricted and unrestricted equations indicates if there is a significant difference in the determinants of the dependent variable from t_1 to t_2. In the second step, I examine how the individual coefficients vary across the restricted and unrestricted models, looking for evidence that previously unauthorized immigrants are better able to take advantage of productivity-related characteristics following legalization.[4]

RESULTS

Figure 1

Figure 1 displays the average occupational-wage quintile with 95% confidence intervals for each comparison group at t_1 and t_2. Figure 1 provides evidence that, on a descriptive level, the group of immigrants that transitions from unauthorized to legal status is the only group to experience a statistically significant increase in their mean occupational-wage quintile. While the labor market position of the comparison groups remains stable across the time periods

[3] Although geographic region and occupation would typically be included as controls in this type of analysis, this information is used to construct the dependent variable and thus are not included as controls.

[4] This analysis was initially conducted with both OLS and ordinal logistic regression models, and each provided similar results. Given the nature of the dependent variable (which ranges from 1 to 5) the results from the ordinal logistic regression models are presented here.

examined here, the transitioners experience an increase in their occupational-wage quintile from 1.7 to 2.1. This suggests that legalization provides avenues for mobility for previously unauthorized immigrants, and that as a result they are able to advance their occupational status. To examine this in more detail, I now turn to Table 1.

Table 1

Table 1 displays the results from tests of structural change in the wage and occupational-wage quintile generating processes from t_1 to t_2. Here, the objective is to test if there is a statistically significant shift in the outcome-generating process as the treatment group transitions from being unauthorized to being legal. To conduct this test, equation 1 from above was estimated restricting the coefficients to be the same across time periods. Following Baltagi (1995), these coefficients from the restricted equation are compared to coefficients derived from the unrestricted versions of equation 1, where the coefficients are allowed to vary across time periods. These estimates are used to test the following hypothesis:

H_o: $K_1 = K_2$

H_a: $K_1 \neq K_2$

where $\kappa = [\beta, \gamma, \theta]$ from equation 1 and the subscripts indicate the time period. A rejection of the null hypothesis (that there is no change in the outcome-generating process) for workers transitioning from unauthorized to legal indicates that legalization may have increased returns to human capital characteristics like education and US experience. However, only observing how the outcome-generating equations change over time for the treatment group would not be adequate, as the change may be accountable to macro-economic conditions and not the shift in legal status. Thus, I conduct these tests for each comparison group in the study.

The results in Table 1 indicate that, of the five groups included in the analysis, the immigrants that transition from unauthorized to legal are the only group to experience a statistically significant change in how the dependent variable is generated across time periods. Building on the results in Figure 1,

Table 1 provides further evidence that legalization leads to an improved labor market position for previously unauthorized immigrants. In order to evaluate if the structural change observed for the transitioners is attributable to better returns to human capital characteristics, in Tables 2 and 3 I examine how the individual determinants vary across time periods within each group.

Tables 2 and 3

Table 2 displays the results from the models estimating the occupational-wage quintile for the samples from the New Immigrant Survey, and Table 3 displays the results for the SIPP samples. For each group, results are displayed from models predicting the occupational-wage quintile at t_1 and t_2 and a model where the estimates are restricted over time. The t_1 and t_2 models are ordinal logistic regression models, and the restricted models are multi-level ordinal logistic regression models with individual respondents used as the second level.

In Table 2, the models for the sample of previously unauthorized immigrants (column A) indicate that when this group was working in the US without authorization, Mexicans and Central American workers experienced significant disadvantages in labor market position relative to other Latin American immigrants. Upon legalization however, these national origin differences were no longer present. Returns to education also change over time for transitioners, as only those with education beyond a high school diploma experienced a significant return to education at t_1; however, after legalization, those with a high school degree also saw a significant increase in occupational status compared to those with less than high school. Moreover, the returns to schooling beyond high school were also increased at a marginal level of significance ($p<.10$, two-tailed test, not shown), as the size of the coefficient doubled from 0.46 to 0.93. Further, the returns to US experience, represented by the dummy variables indicating period of first US employment at t_2, suggest previously unauthorized immigrants with considerable US experience benefited from that experience upon legalization (the coefficient for the 1987-1995 period is marginally significant). Lastly, the time period variable indicates that transitioners experienced significant increases in occupational-wage quintile during t_2, whereas the continuously legal did not.

The comparison groups provide additional evidence that the transition from unauthorized to legal status produced changes in the determinants of the occupational-wage quintile that other groups did not experience. In contrast to the previously unauthorized, the outcome-generating process of the continuously legal immigrants from the NIS (Table 2, column B) remains relatively stable across time periods. The coefficients for national origin, education, and English proficiency are similar for both time 1 and time 2 models.

Table 3 shows the results for the SIPP samples. Unlike the treatment group, these groups do not experience any sort of legal status transition over observed time period, and, as expected, the models are very similar across time periods for all groups. The results for the continuously unauthorized in column A, for example, show that in t_2 there is no significant effect of US experience on labor market position; this is in contrast to the case of the previously unauthorized, who, upon legalization, saw a marginally significant, positive effect from long-term US experience. In further contrast to the treatment group, the continuously unauthorized sample only receives statistically significant returns from education beyond high school, whereas the transitioners saw returns to both a high school diploma and schooling beyond high school post-legalization. Finally, the time period indicator is either non-significant (the immigrant models) or marginally significant but negative (the US-born Hispanic model). The only case where the time period indicator was positive and significant is the treatment group, suggesting that some unobserved characteristics might also be providing increased occupational mobility after legalization.

DISCUSSION

This analysis examines the effect of legalization on the labor market position of previously unauthorized immigrants, using several comparison groups to isolate the impact of gaining legal status. By examining a dependent variable that measures the respondent's location in their regional occupational hierarchy, I measure how legalization changes the structural position of immigrants in their local economic context.

The analysis provides evidence that the treatment group does experience a boost in labor market position following legalization. More importantly, that the labor market outcome-generating process for the previously unauthorized undergoes a structural change from t_1 and t_2 that the comparison groups do not experience. This is primarily attributable to changes in productivity-related characteristics. Specifically, the treatment group experiences enhanced returns to schooling after gaining LPR status: the benefits to schooling beyond a high school degree are increased, and those with a high school degree are able to take advantage of that credential to improve labor market outcomes. In addition, there is also some marginal evidence that, following legalization, previously unauthorized immigrants are able to take advantage of US experience; the treatment group saw a marginally significant, positive effect of long-term US experience at t_2, whereas the continuously unauthorized sample from the SIPP did not receive any significant returns to US experience at any time.

The observed differences within the treatment group over time, as well as the differences between the treatment and the comparison groups, suggest that there are expanded opportunities for previously unauthorized immigrants following legalization. Therefore, this analysis provides evidence that legalization acts as a mechanism of occupational mobility for previously unauthorized immigrants. Moving forward, I intend to continue developing this analysis to better understand how the experience of legalization changes returns to productivity related characteristics in the US labor market.

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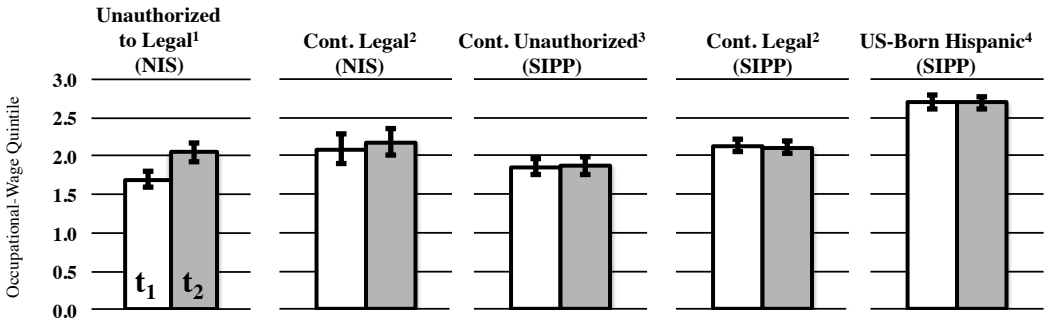
TABLES AND FIGURES

Figure 1: Average Occupational-Wage Quintile* at Time 1 and Time 2 by Comparison Group



Data: New Immigrant Survey, 2003 (NIS) and Survey of Income and Program Participation, 2001-2003 (SIPP)
*Note: Bars indicate 95% confidence intervals; data source for each comparison group in parentheses; 1. LPR recipients with previous unauthorized experience; 2. Immigrants with only legal experience; 3. Immigrants with only unauthorized experience; 4. US-born individuals of Hispanic origin; * Occupational-wage quintile ranges from 1 to 5 and indicates position in the regional occupational hierarchy.*

Table 1: Results of Hypothesis Test* Testing for Evidence of Structural Change from Time 1 to Time 2: NIS and SIPP

	Occupational-Wage Quintile		
	Test Result	*X^2 Statistic (df)*	*Sample Size*
NIS			
Unauthorized to Legal	**Reject**	24.04 (12)	728
Cont. Legal	Do not reject	8.86 (12)	290
SIPP			
Cont. Legal	Do not reject	5.16 (9)	836
Cont. Unauthorized	Do not reject	8.19 (9)	303
US-Born Hispanic	Do not reject	4.71 (12)	985

Note: Hypotheses are tested at p<.05; test statistics generated from test of unrestricted and restricted versions of equation 1; see Tables 3 and 4 for variables included in each model.
*H_o: $K_1 = K_2$; Ha: $K_1 \neq K_2$

Table 2: Determinants of Occupational-Wage Quintile for NIS Men

	A. Unauthorized to Legal			B. Cont. Legal		
	Unrestricted			Unrestricted		
	Time 1	*Time 2*	*Restricted*	*Time 1*	*Time 2*	*Restricted*
National Origin						
Mexico	-0.34^	-0.01	-0.13	0.46	0.54	1.19^
	(0.20)	(0.19)	(0.23)	(0.35)	(0.33)	(0.67)
El Salvador/Guatemala	-0.49*	-0.06	-0.34	-0.02	-0.28	-0.14
	(0.21)	(0.20)	(0.24)	(0.49)	(0.47)	(0.98)
Other Latin Am. (ref)	--	--	--	--	--	--
Education						
Less than HS (ref)	--	--	--	--	--	--
HS Degree	0.03	0.41*	0.28	0.17	0.19	0.87
	(0.21)	(0.19)	(0.22)	(0.31)	(0.32)	(0.58)
More than HS	0.46*	0.93**[a]	0.76**	0.69**	0.63*	2.03**
	(0.18)	(0.17)	(0.19)	(0.26)	(0.26)	(0.54)
English Proficiency						
Fair/Poor (ref)	--	--	--	--	--	--
Good/Very Good	0.31*	0.29^	0.60**	0.85**	0.90**	1.93**
	(0.16)	(0.15)	(0.19)	(0.24)	(0.24)	(0.50)
Year of First US Job						
1987-1995	-0.50^	0.45^	-0.13	0.76*	1.05**	1.99**
	(0.26)	(0.26)	(0.30)	(0.34)	(0.32)	(0.65)
1996-2001	-0.00	0.29	0.20	1.57**	1.50**	3.19**
	(0.27)	(0.26)	(0.31)	(0.29)	(0.28)	(0.59)
2001-2003 (ref)	--	--	--	--	--	--
Time Period						
Time 2 (ref = Time 1)	--	--	0.56**	--	--	-0.18
			(0.14)			(0.20)
N	560		1120	728		1456

^ p<.10, * p<.05, ** p<.01

Note: Time 1 and Time 2 models are ordinal logistic regression models; restricted models are multi-level ordinal logistic regression models with the respondent as the second level; models include controls for age/age-squared; a. Indicates significant difference between coefficient, Time 1 and Time 2 (p<.10).

Table 3: Determinants of Occupational-Wage Quintile for SIPP Men

	A. Cont. Unauthorized			B. Cont. Legal			C. US-Born Hispanic		
	Unrestricted			Unrestricted			Unrestricted		
	Time 1	*Time 2*	*Restricted*	*Time 1*	*Time 2*	*Restricted*	*Time 1*	*Time 2*	*Restricted*
National/Hispanic Origin									
Mexico	0.12	-0.53	-0.34	-0.66**	-0.41^	-1.06**	0.20	0.17	0.29
	(0.49)	(0.44)	(0.60)	(0.22)	(0.22)	(0.36)	(0.13)	(0.12)	(0.18)
Central America	0.47	-0.16	0.22	-0.77**	-0.37	-1.02*	-0.89**	-1.18**	-1.77**
	(0.57)	(0.51)	(0.70)	(0.27)	(0.26)	(0.44)	(0.32)	(0.28)	(0.42)
Other Latin Am. (ref)	--	--	--	--	--	--	--	--	--
Education									
Less than HS (ref)	--	--	--	--	--	--	--	--	--
HS Degree	-0.32	0.14	-0.02	0.65**	0.68**	1.12**	0.56**	0.65**	0.97**
	(0.25)	(0.25)	(0.33)	(0.15)	(0.15)	(0.25)	(0.15)	(0.14)	(0.21)
More than HS	0.94*	1.14**	1.77**	1.33**	1.21**	2.21**	1.80**	1.68**	2.81**
	(0.40)	(0.37)	(0.51)	(0.18)	(0.17)	(0.28)	(0.16)	(0.15)	(0.22)
Year of US Immigration (FB) /Year of Labor Force Entry (USB)									
Pre-1987	0.60	0.08	0.76	0.82**	0.66**	1.35**	0.58**	0.37*	-0.01
	(0.39)	(0.42)	(0.53)	(0.22)	(0.21)	(0.36)	(0.17)	(0.16)	(0.42)
1987-1995	0.08	0.21	0.34	0.47*	0.30	0.63^	0.44*	0.31^	0.28
	(0.27)	(0.26)	(0.36)	(0.21)	(0.20)	(0.35)	(0.18)	(0.18)	(0.30)
1996-2001(ref)	--	--	--	--	--	--	--	--	--
Time Period									
Time 2 (ref = Time 1)	--	--	-0.06	--	--	-0.10	--	--	-0.19^
			(0.19)			(0.11)			(0.10)
N	291		582	853		1706	985		1970

^ p<.10, * p<.05, ** p<.01

Note: Time 1 and Time 2 models are ordinal logistic regression models; restricted models are multi-level ordinal logistic regression model with the respondent as the second level; models include age and age-squared.

APPENDIX

Appendix Table 1: Top 5 Occupations and Hourly Wage Range by Occupational-Wage Quintile: Total US Labor Force, 2003

	Occupational-Wage Quintile				
	1st	*2nd*	*3rd*	*4th*	*5th*
Occupation	Cooks	Truck drivers	Sales Supervisors	Accountants/auditors	Managers/administrators
	Janitors	Nurshing aides/orderlies	Secretaries	Office supervisors	Registered nurses
	Cashiers	Retail sales clerks	Bookkeepers	Financial specialists	Lawyers
	Housekeepers/maids	Electric equipment assem.	Customer service reps.	Construction supervisors	Financial managers
	Child care workers	Receptionists	General office clerks	Production supervisors	Physicians
Average Hourly Wage Range	$9.00-10.00	$12.00-14.00	$15.00-$17.00	$18.00-23.00	$25.00-31.00

Data: Current Population Survey, 2003

Appendix – Information on NIS and SIPP

New Immigrant Survey (NIS) The NIS provides a sample of immigrants who have both legal and unauthorized migration histories and who attained legal permanent resident status in 2003. I use retrospective employment and migration histories from respondents and then match labor force experiences and legal status at two points in time: year of first U.S. job and year of current U.S. job (see Akresh 2008 and Hill et al. 2010 for examples). The NIS collected retrospective immigration and work histories from immigrants that received LPR status in 2003 as well as their accompanying spouses, and I use both sources of data to construct the sample used in this analysis. Respondents are defined as "previously unauthorized" if they reported entering the US without inspection, entering with fraudulent documents, or report working on a visa that does not allow for employment. The sample is restricted to immigrants from Latin America who were between the ages of 24 to 65 at the time of arrival, reported working at both time 1 and time 2, and first worked in the United States in 1987 or more recently.

Survey of Income Participation and Program (SIPP) The second data set in this analysis is the 2001-2003 panel of the SIPP. The SIPP is a longitudinal, nationally representative survey conducted by the U.S. Census Bureau, and contains detailed information on the demographic, income, and labor force characteristics of the respondents. Most importantly for this analysis, the SIPP includes variables on immigrant visa status and participation in public welfare programs that have can be used (see Hall, Greenman, and Farkas 2010) to deduce the legal status of immigrants. To impute legal status for immigrants, items on migration history, citizenship/LPR/visa status, and public assistance eligibility are used to reduce the foreign born population to a pool of unauthorized immigrants. I create three samples from this data source: unauthorized immigrants from Latin America, legal immigrants from Latin America, and US-born respondents that report Hispanic ethnicity. I restrict the sample to respondents between the ages 24-65 that report working at both the beginning and end of the survey.