What are the Labor Market Effects of Immigrant Legalization?

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Abstract

Utilizing data from the New Immigrant Survey (NIS), this paper aims to assess whether receiving legal status improves the earnings of illegal immigrants. Importantly, the NIS data allow us to identify immigrant workers who were unauthorized to work prior to obtaining Legal Permanent Resident (LPR) status and to distinguish between different types of illegal immigration experience, illegal border crosser or visa abuser. We investigate whether there are different impacts of receiving legal status across these two groups. We utilize continuously legal immigrants as a comparison group in our empirical approach. Our preliminary results indicate that the pre-LPR earnings gap for illegal border crosser is about 11 percent for men and 7 percent for women. For male visa abuser the penalty is approximately 7 percent and even less for women, about 3 percent. Our estimates fail to reveal evidence that the earnings of illegal border crossers improve after receiving LPR status. However, we find that visa abusers catch-up with the continuously legal immigrant group after receiving a green card.

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1. Introduction

Recent estimates suggest the United States is home to approximately 12 million illegal immigrants (Hoefer, Rytina and Baker, 2008; Passel and Cohn, 2008). The impact of these immigrants on the economy is of ongoing concern to Americans. Policymakers continue to face difficult decisions about whether and how to legalize some of these immigrants. Central to their decision making is weighing the costs and benefits of legalization to the economy, immigrants, and their families, should they be eligible to work legally and reside here permanently. An important factor affecting these costs and benefits is the impact of legalization on employment outcomes. Past research suggests that illegal immigrants granted amnesty earn more as a result of their changing legal status (e.g. Kossoudji and Cobb-Clark, 2002). Should some form of legalization occur, this action could reshape labor force outcomes for millions of undocumented immigrants, as well as have implications for the economy in general.

In this paper we analyze how receiving Legal Permanent Resident (LPR) status affects the earnings of individuals who previously worked illegally in the U.S. Importantly, using recent data from the New Immigrant Survey (NIS), we explore whether such potential effects differ between unauthorized workers who crossed the border illegally and workers who violated the terms of a temporary visa.

Recent approaches to the question of economic benefits of legalization have generally shown an earnings penalty for undocumented status and an increase in earnings resulting from legalization, often with varying results by gender and differing returns to English skills and other human capital. Studies have applied various methods utilizing almost exclusively the Legalized Population Survey (LPS). These data have the advantage that survey respondents are observed in the working population before and after legalization. One challenge faced though is how to

construct a suitable comparison group of legal immigrants whose earnings can be meaningfully compared to those of the newly legalized group. All of the existing studies have in common that they take advantage of the 1986 Immigration Reform and Control Act (IRCA), which granted legal status to many previously illegal immigrants.

Rivera-Batiz (1999) uses the Legalized Population Survey (LPS) – a panel dataset of formerly undocumented immigrants who received legal status under IRCA – to examine the earnings of undocumented Mexican workers. He then uses the 1990 census to compare these with the earnings of the overall Mexican-born working population in the U.S. This analysis reveals a wage penalty for men and women of 14 and 26 percentage points for men and women, respectively, vis-à-vis the comparable legal working population. He goes on to compare the earnings of legalized immigrants earnings pre- and post-IRCA, finding an increase of 13 percentage points for men and 17 for women.

Kossoudji and Cobb-Clark (2002) also examine the effect of the IRCA legalizations, employing the LPS to focus on the earnings of Mexican and Central American men. They use the National Longitudinal Survey of Youth (NLSY) to construct a comparison group of native-born Latino men, and estimate the wage penalty for unauthorized status to be between 14 and 24 percent. They estimate the earnings benefit of legalization to be a rather modest six percent, and they attribute these gains to increased occupational mobility – in particular, an enhanced ability to secure employment that rewards human capital such as English or formal education.

Amuedo-Dorantes, Bansak and Raphael (2007) also use the LPS and NLSY to estimate the legalization effects of IRCA – in particular, what role occupational mobility and a change in the reservation wage might play in the labor force attachment of the newly legalized immigrants. They consider the experience of both sexes and they find a decrease in employment rates for men

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of five percent and a decrease in labor force participation by women of nearly seven percent. Like Kossoudji and Cobb-Clark, however, they find that legalization enhances the value of immigrants' human capital – particularly English skills – in commanding higher earnings.

Gass Kandilov and Kandilov (2009) use National Agricultural Workers Survey (NAWS) data from 2000-2006, focusing exclusively on unmarried male agricultural workers. Similarly to Kossoudji and Cobb-Clark, they find a five percent increase in wages resulting from legalization, but they emphasize that legalization also increases the likelihood of receiving benefits such as health care coverage or bonuses from an employer.

Our research improves on earlier work by using more recent and more detailed data, comparing any gains in earnings from legalization to those of an arguably improved comparison group, and estimating costs and benefits to a broader legalization program in advance of any legislative action. Specifically, the NIS data document the circumstances of immigrants who legalized in 2003 for whom detailed demographic and historical information is provided. The relevant comparison group is in the same dataset, attained legalization at the same time, and has the same set of demographic, human capital, employment, and immigration-related information, all of which is measured and reported in the same way as the unauthorized worker groups.

Furthermore, we are able to observe workers of both genders, in various occupations, from a wide range of countries, who arrived in the U.S. at various points in time and received their green cards through a variety of admission classes. This variety allows us to examine the importance of fixed effects (for instance, country of origin, or the macroeconomic conditions at the time of an immigrant's first U.S. job), and eventually to extrapolate our results to a wider swath of the immigrant population.

2. Data

The data utilized in this paper is the New Immigrant Survey (NIS). The NIS seeks to provide a nationally representative public-use dataset on adults and their families who have recently gained legal permanent residence in the United States. The NIS takes as its sampling frame the USCIS administrative records of all foreign-born persons admitted to LPR status. From this universe, a stratified sample is drawn and detailed interviews are conducted.

The first full cohort surveyed as part of this project used a target population of 289,478 adult immigrants granted LPR status between May and November of 2003 (Jasso et al., 2006). Enumerators gathered migration and employment histories from a cohort of over 8,000 such immigrants. The survey asked about every international trip of 60 days or more that each respondent took since leaving his or her home country for the first time. For each of these trips, information was collected on whether a visa was used for entry and, if so, what kind of visa it was, thereby allowing us to divide respondents into those here legally or illegally prior to earning LPR status.

The 2003 NIS also gathered details about historical and current employment (for example, dates, occupation, industry, and earnings), including for U.S. jobs held before admission to LPR, and work authorization attained. Other lines of questioning gathered standard socioeconomic information (for example, educational attainment, self-reported English language ability, and marital status). From these detailed data we are able to observe immigrants in their first U.S. jobs and immediately after earning green cards. We can thus measure gains for the undocumented relative to the documented in earning LPR status.

Our analysis begins with the full sample of 8,573 completed interviews. We eliminate records for which key information is missing – namely, age, sex, marital and household status,

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education, and whether the respondent worked for employment before or after gaining LPR status – and retain 7,522 records for our employment dataset. Further eliminating records without valid responses for occupation in pre-LPR and post-LPR jobs, we obtain 4,486 records for an occupation dataset. Finally, requiring valid calculable earnings information for both pre- and post-LPR jobs, we winnow down the dataset to 2,331 observations for examining earnings.

To determine each immigrant's legal status prior to earning LPR status, we look at migration and employment history. (For the purposes of this analysis, we restrict our attention to the one job taken on the last reported U.S. trip – in the words of the questionnaire, the trip on which the respondent "came to the United States to live.") If a respondent reports having arrived with no documents, or with falsified documents, he or she is classified as an illegal border crosser. If, instead, a respondent reports having worked while on a visa that did not permit employment, he or she is classified as a visa abuser. Otherwise, the respondent is classified as having worked legally on that pre-LPR job.

The outcome variable studied in this paper is annual earnings. However, we do not utilize the reported individual earnings reported in the NIS for a number of reasons. First, the data only allows us to reliably generate earnings or wages for less than one-half of the sample of individuals who report working. The reasons are either missing earnings information or missing information which allows us to determine the time period the reported earnings refer to (i.e. per year, month or week). Second, because the pre-LPR status period for about ¼ of our sample is more than five years prior to the interview date, we are uncertain that the historical earnings information, i.e. pre-LPR earnings, reported is accurate. Instead our approach is to use gender specific median earnings by three digit occupation codes for foreign born individuals.

For each job under consideration, a census occupation code is provided. Using the 5% 2000 Census Public Use Microdata Sample File (PUMS) data, we calculate the median gender-specific earnings for foreign-born persons in each occupation, then assign these earnings data to each job performed by each respondent. In this way, we can compare changes between pre- and post-LPR earnings, as well as occupational mobility, among former visa abusers, illegal border crossers, and legal workers.

3. Descriptive Statistics

We begin our analysis by comparing our sample of recent immigrants by legal experience in the U.S. We disaggregate our sample into individuals who had no illegal immigration experience, visa abusers and illegal border crossers. The NIS data reveal that slightly more than one-half of our occupation sample (those individuals who reported working in both the pre- and post-LPR period) were employed illegally in the U.S. in the pre-LPR period. Table 1 shows the percent who abused a visa, 27.6 percent, is just slightly greater that the proportion of illegal border crossers, 25.9 percent.

Immigrants in our three legal groups differ in many dimensions of observable characteristics. For example, Table 2 shows that illegal border crossers are less likely to be female, less likely to be married, and have more children than do their counterparts. Close to 90 percent of illegal border crossers come from Latin America and the Caribbean, with slightly more than 38 percent from Mexico. In the legal sub-group, Asian immigrants constitute nearly 40 percent, while only three percent are Mexican.

Class of admission also varies greatly across the three groups. While family preferences are the most common way of receiving legal permanent resident status for each group, employment

preferences are much more commonly used by continuously legal immigrants (21.0%) than by visa abusers (11.4%) or illegal border crossers (3.6%). A similar, if less pronounced, pattern emerges in the use of the diversity lottery. Illegal border crossers are the most likely group to employ the legalization[1] option – 37.3% obtained LPR status this way.

The illegal border crossers group displays low levels of education, as reflected in the mean total years of education (9.5 years) and the profile of educational attainment – 61.7 percent do not have a high school diploma, compared with 22.9 and 20.8 percent of visa abusers and continuously legal immigrants, respectively. Similarly, only 7.2 percent of illegal border crossers have a bachelor's degree, while more than a third of the visa abusers and nearly half of strictly legal respondents do. English ability also varies across the three groups with visa abusers appearing to be the most fluent group. Forty-five percent of illegal border crossers report that they speak and understand English either "not well" or "not at all," compared with only about a third of each of the other groups, and only 14.4 percent report top levels of speaking and comprehension, as compared with roughly a third for visa abusers and continuously legal respondents.

Illegal border crossers appear to earn substantially less than their counterparts, by most measures. Their group's median annual earnings in their last reported U.S. occupation prior to earning LPR status average about $15,000, more than $4,500 less than the visa abusers, and nearly $9,000 less than the continuously legal group. A similar pattern holds for the first reported post-LPR occupation: the formerly illegal workers earn roughly $18,000 on average, compared to $23,000 for former visa abusers and over $25,000 for the legal group. A simple comparison of the earnings differences, pre- and post-LPR, suggests that the two groups of formerly illegal

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[1] Legalization is not a program, but rather a collection of special legislation and other instances in which illegal residents qualified to have their deportation orders canceled. The legalization category includes those who qualified for the Nicaraguan Adjustment and Central American Relief Act of 1997.

workers stand to gain more substantially from earning green cards than do their always-legal counterparts – their earnings rise by an average of $3,100 (illegal border crossers) and $3,700 (visa abusers), compared to $1,700 for the legal group. Of course, many factors are operating at once to generate these differences, and the bulk of this analysis will be given over to identifying and examining the role of those factors.

Potentially important differences emerge when comparing employment intervals. The illegal border crossers spent an average of 3.8 years in their pre-LPR occupations, compared with 2.5 years for the visa abusers and 1.4 for the continuously legal. More dramatic are the differences in the time elapsed between the beginning of that pre-LPR occupation and the eventual NIS interview – illegal border crossers had been in the U.S. for an average of 11.0 years since taking that job, compared with 5.9 years and 2.7 years, respectively, for the visa abusers and the strictly legal immigrants. (This difference is also visible in the age comparisons at the top of the table – while age at NIS interview differs little between the groups, the age at the beginning of the pre-LPR job is about six or seven years younger for the illegal border crossers.)

To understand how legalization affects earning prospects for the various legal groups, it will be important to examine occupational mobility following legalization. Table 3 displays, for each legal category, the top ten *pre*-LPR occupations and their representation. The second column shows what percentage of these job-holders stayed in the same occupation in their post-LPR job. The last column shows each of the top ten pre-LPR period job's representation in the post-LPR era. A few patterns emerge.

First, the jobs most commonly held by former illegal border crossers tend to be in low-skill occupations. Many of these occupations appear as well among the jobs reported by former visa abusers, the new additions being retail salespersons, waiters and waitresses, and nursing,

psychiatric, and home health aides. Some of the same jobs appear near the top of the list for continuously legal workers as well, but now the additions are in more conspicuously high-skill occupations: computer software engineers and postsecondary teachers. (Also, the distribution of occupations is more concentrated for illegal border crossers than for the other groups – the top ten occupations constitute nearly half of all workers in this group, compared with roughly a third for former visa abusers and the continuously legal group.)

Second, the single most common post-LPR outcome is for these workers to stay in that occupation. Again, we are here restricting consideration to those respondents who report a job in each period, and almost without exception, the most commonly held occupation in the post-LPR job is the one held in the pre-LPR job. (The two exceptions are dishwashers, who predominantly took other jobs in the food service industry, and child care workers, who were only slightly more likely to take jobs as maids and housekeeping cleaners than to stay in their previous occupation.)

Third, the two groups of formerly illegal workers show a greater propensity towards occupational mobility than does the group of consistently legal workers. In just this sample of the ten most common occupations for each group, the former illegal border crossers stayed in their pre-LPR occupations about 26 percent of the time. The former visa abusers maintained their pre-LPR occupations 36 percent of the time. But the consistently legal immigrants stayed in their pre-LPR occupations 62 percent of the time. This may be largely a result of the aforementioned differences in recent U.S. experience – both formerly illegal groups report much more time spent here since beginning the pre-LPR job than do the consistently legal immigrants. The determinants of this evident occupational mobility displayed by the formerly illegal groups, and whether it necessarily moves in the direction of more highly remunerative occupations, will be examined in the econometric analysis.

4. Empirical Model

To assess the extent to which receiving legal status among unauthorized workers affects employment outcomes we first compare the earnings of our three groups in the pre-LPR period. Table 2 shows that earnings among undocumented immigrants in this period are lower compared to the earnings of immigrants with no illegal immigration experience. However, Table 2 also reveals that there are a number of differences across groups, particularly regarding education, country of origin and year of arrival.

Our empirical strategy is to compare employment outcomes, so far limited to earnings, of unauthorized workers (illegal border crossers and visa abusers) to immigrants with no illegal immigration history. Clearly we need to address the endogeneity concerns stemming from the possibility that individuals sort themselves into the three groups partially based on factors related to employment outcomes. It should be pointed out that we do not view the comparison of outcomes across groups as a quasi-experimental exercise since the distinction across groups is arguably due to unobservable personal decisions and characteristics which may also be linked to earnings. Our approach is to as carefully as possible control for these factors in our empirical models by including variables that arguably serve as proxies.

We use ordinary least squares (OLS) to estimate the following regression model of pre-LPR status log-annual earnings, $y_i^{\text{Pre-LPR}}$, of individual i from country j who arrived at time t.

$$y_{ijt}^{\text{Pre-LPR}} = \alpha_1 IBC + \alpha_2 VA + \mathbf{X}_{it}^{\text{Pre-LPR}} \beta + \delta_j + \tau_t + e_{ijt} \tag{1}$$

Where *IBC* and *VA* are indicator variables for illegal border crossers and visa abusers and;

$\mathbf{X}_{it}^{\text{Pre-LPR}}$ = Matrix containing demographic characteristics such as age, gender, family composition, educational attainment, geographic

location and indicator variables for eventual LPR class of

admission

δ_j =   Country of origin fixed effects

τ_t =   Year of entry fixed effects

This model specification will inform us of how undocumented status affects earnings, and given our empirical approach of sequentially adding earnings determinants, how these factors affect earnings as well as earnings differences across our three groups. However, we also want to learn whether, or to what extent, receiving legal status allows previously unauthorized workers' earnings to "catch-up" with the group of continuously legal immigrants. To do so, we specify a model of the changes in earnings between the post- and pre LPR periods . The specification contains the above general factors as well as information on post-LPR English ability and human capital obtained in the U.S. These post-LPR factors are added to the X matrix, now labeled $\mathbf{X}_{it}^{\text{Post-LPR}}$.

$$\Delta y_{ijt}^{\text{Post-Pre}} = \alpha_1' IBC + \alpha_2' VA + \mathbf{X}_{it}^{\text{Post-LPR}} \beta' + \delta_j' + \tau_t' + \varepsilon_{ijt} \tag{2}$$

The parameters of interest in specifications (1) and (2) are $\alpha_1, \alpha_2, \alpha_1'$, and α_2'. Under the assumptions that $E[e_{it} IBC \mid \mathbf{X}_{it}^{\text{Pre-LPR}}, \delta_i, \tau_t] = 0$ and $E[e_{it} VA \mid \mathbf{X}_{it}^{\text{Pre-LPR}}, \delta_i, \tau_t] = 0$. i.e. conditional on $\mathbf{X}_{it}^{\text{Pre-LPR}}, \delta_i$ and τ_t, the disturbance term is uncorrelated with legal status, OLS will yield unbiased estimates of the earnings effect of being undocumented. Similar assumptions are necessary for OLS estimates of α_1', and α_2' to be unbiased. A limitation to our OLS approach is that there is no formal test for whether these assumptions hold. Unfortunately, we are not aware of an appropriate instrument for legal status in the pre-LPR period in our data. Nonetheless, we believe that the above factors substantially reduce the concerns of endogeneity of legal status.

5. Empirical Results

Pre-LPR Status Earnings Differences

Unauthorized workers earn substantially less than legal workers. Model 1 in Table 4 shows that the pre-LPR period unadjusted earnings differences between illegal border crossers and individuals authorized to work are approximately 31 and 28 percent respectively for men and women.[2] The unadjusted undocumented earnings penalty for visa abusers is substantially smaller, 13 percent for men and 10 percent for women.

We next investigate how much of the undocumented earnings gaps are due to differences in the country of origin composition across the groups as well as differences due to the macro economic conditions at the time when immigrants arrived in the U.S.[3] The Model 2 and Model 3 results indicate that the latter factor does not contribute substantially to these differences but that differences in the country of origin composition explain roughly ½ of the earnings differences between unauthorized and legal immigrant workers. Of interest is clearly what characteristics, e.g. demographics and education, of these country of origin composition differences contribute to the earnings penalty.

We next estimate a model specification in which we exclude the country of origin fixed effects but add controls for age at arrival, marital status and number of children. These results, Model 4, show that these factors are not important for explaining the earnings penalty experienced by visa abuser. However, these simple demographic factors explain between 1/5 and

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[2] We use e^{b}-1, where b is the estimated coefficient, to convert the log point estimates into percentages.
[3] In our pre-LPR period earnings specification, the inclusion of year of arrival fixed effects controls for macro economic conditions at the time of arrival as well as possible cohort effects.

¼ of the observed lower earnings among illegal border crossers.[4] When we add a variable for years of education upon arrival, the unauthorized earnings penalty for illegal border crossers drop to 16 percent for men and 11 percent for women. The results indicate that differences in these four factors, age, marital status, number of children and pre-migration education, are as powerful in explaining earnings differences across our legalization groups as country of origin composition differences. In fact, it is likely that the country of origin contribution to the gaps is mostly due to differences in these characteristics.[5]

Immigrants can obtain LPR status through different classes of admission. The most common pathway is through family already present in the U.S. Close to 2/3 of immigrants who received a green card in our sample used these close family relations to obtain LPR status. The next most common pathways are through refugee/asylum status (11.5 percent) and employment preferences (11.4 percent). Although it is well known that immigrants in different class of admission groups differ in observable skills, they may also differ with respect to unobservable earnings related factors. For example, it may be that immigrants obtaining LPR status through employment preferences possess more of these characteristics, say motivation, ambition or ability, than immigrants who receive a green card through family. Controlling for eventual class of LPR admission may then serve to address the role of unobservable earnings related characteristics. In addition, the inclusion of country of origin fixed effects will further control for such factors, which are unobserved by the econometrician. These immigrant variables are added next to our specification.

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[4] Comparing Model 3 and Model 5 estimates indicate that the male illegal border crosser penalty drops from 28 to 23 percent while for women it decreases from 25 to 19 percent. Note that both of these specifications include time fixed effects and only differ by the discussed factors.

[5] In a model specification in which we add only country of origin fixed effects to the specification in Model 5, not shown in the tables, we find that the estimated undocumented earnings penalty coefficients are reduced somewhat, suggesting that other country of origin unobservable factors matter to some extent.

Comparing observationally similar illegal border crossers to continuously legal immigrants, we estimate that the earnings penalty of being an illegal border crosser is about 11 percent for men and 7 percent for women. For male visa abuser the penalty is approximately 7 percent and even less for women, about 3 percent. These estimates are in line with previous estimates but reveal that there are differences between undocumented immigrants depending on how they entered the U.S. The next issue we address is whether obtaining legal status leads to greater earnings growth and whether legalization allows pre-LPR status unauthorized workers to catch up with their continuously legal counterparts.

Pre-Post Changes in Earnings

Between the pre- and post-LPR periods, the annual earnings of male immigrants who were unauthorized to work in the pre-LPR period increased by roughly 13 percent more than did the earnings of continuously legal immigrants. The unadjusted differences are roughly the same for males who crossed the border illegally or abused a visa. The earnings growth difference among women is less. Female visa abusers' and illegal border crossers' earnings grew by about six and four percent respectively more than the earnings of continuously legal women. These unadjusted earnings growth differences are shown as Model 1 in Table 5. We next turn to an analysis of whether, and to what extent, these differences are due to factors other than legalization.

The estimates using Model specification 2 in Table 5 indicate that differences in the country of origin composition between the three legalization groups are not a major factor explaining the relatively higher earnings growth among pre-LPR unauthorized workers.

The Model 3 results in Table 5 show that the observed greater increase in earnings among immigrants who were not authorized to work in the pre-LPR period, compared to immigrants

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who were authorized, is to a large extent due to the fact that they have been in the U.S. for a longer time.[6] This appears to be particularly relevant to illegal border crossers for whom we do not find any greater increase in earnings once this factor is accounted for. In fact, the subsequent addition of controls for demographic, human capital, country of origin and class of admission differences across groups do not change the earnings growth estimates greatly compared to the ones shown for Model 3.

The results indicate that visa abusers benefited significantly from obtaining LPR status. Although they earned less than their otherwise observationally similar legal immigrant counterparts in the pre-LPR status period, they earn no less after receiving their green cards.[7] This holds for both men and women and suggests that legalization opened the door to labor market opportunities they could not access without authorization to work.

Illegal border crossers, on the other hand, are not as fortunate and do not improve their earnings appreciably after receiving LPR status. We fail to find evidence that the earnings of men or women increase at all between the pre- and post-LPR periods, relative to those of their continuously legal counterparts. This may be due to their low educational attainment levels which continue to limit their opportunities. It is also possible that the 2003 NIS data do not allow for a sufficiently long period for these previously unauthorized workers to truly benefit from their newfound legal status.

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[6] Note that given that all post-LPR status interviews took place within a few months, the arrival year fixed effects captures assimilation, or put differently, years in the U.S. effects on earnings.

[7] We fail to reject the hypotheses of equal earnings between observationally similar visa abusers and continuously legal immigrants in post-LPR status earnings regression model, results not shown but available upon request. Interestingly, this holds for any of the model specifications used for the Table 5 results.

6. Summary and Conclusions

In this paper we utilize data from the New Immigrant Survey (NIS), to assess whether receiving legal status improves the earnings of illegal immigrants. Importantly, the rich NIS data allow us to identify immigrant workers who were unauthorized to work prior to obtaining LPR status and to distinguish between different types of illegal immigration experience - illegal border crosser or visa abuser. We use the group of continuously legal immigrants as a comparison group in our empirical approach.

We recognize that the selection into our three legalization group raises endogeneity concern which leads to biased estimates of the earnings penalty of working illegally in the U.S. To address this we control for important observable characteristics such as demographic and human capital factors. To address factors unobservable to the econometrician, we also include country of origin, year of arrival and class of admission fixed effects.

Our analysis of an unauthorized worker earnings premium reveals different impacts of receiving legal status across these two groups. Our preliminary results indicate that the pre-LPR earnings gap, relative to authorized immigrants, for illegal border crosser is about 11 percent for men and 7 percent for women. For male visa abuser the pre-LPR gap is approximately 7 percent and even less for women, about 3 percent. Our analysis fails to reveal evidence that the earnings of illegal border crossers improve after receiving LPR status. The data do show that earnings grew by more for illegal border crossers than the earnings of continuously legal immigrants. The regression results however show that this is due to having been in the U.S. longer. That is, higher earnings for this group of unauthorized workers appears to be due to labor market assimilation and not due to legalization. Importantly and differently, we find that visa abusers benefit

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economically from legalization and that they catch-up with the continuously legal immigrant group after receiving a green card.

There are a number of possible reasons for why illegal border crossers do not benefit appreciably, at least not from the perspective of earnings, from receiving LPR status. First, the time period between receiving the green card and the NIS interview may not be enough, less than one year for most individuals in our sample, for these newly legalized immigrants for the employment benefits to materialize. This is possible but then raises the question of what it is that allows visa abusers to so quickly gain from obtaining authorization to work. Another possibility, consistent with data and our estimates, is that there are only a limited set of labor market opportunities for low-skilled workers. Close to two out of three illegal border crossers have less than a high school diploma and more than eight out of ten have no education beyond high school.

This project is in its very early stage. In our future research we will try to shed further light on currently unanswered questions such as why border crossers appear not to benefit economically from LPR status. We will also extend our analysis to include employment.

Table 1: Legal Status by Sub-Sample

Legal Status during pre-LPR job	Earnings	Occupation	Employment
Visa Abuser	27.1	27.6	18.2
Illegal Border Crosser	22.0	25.9	22.9
Legal	50.8	46.4	58.8
Number of Observations	2,331	4,486	7,522

Table 2: Descriptive Statistics for Occupation Sub-sample

Variable	Illegal Border Crosser	Visa Abuser	Legal
Demographic traits			
Mean age at NIS interview	35.8	37.1	35.0
Mean age first worked during last U.S. trip	24.8	31.2	32.3
Percent Female	36.8	45.8	44.4
Percent Married	67.8	80.7	75.5
Mean Number of Children	2.3	1.6	1.2
Country of Origin			
Mexico	38.5	16.4	3.0
Other Latin America & the Caribbean	50.1	29.0	18.5
East Asia, South Asia & the Pacific	4.5	18.0	38.8
Sub-Saharan Africa	0.8	8.3	8.2
Europe & Central Asia	2.5	18.7	22.1
Middle East & North Africa	1.0	5.4	5.0
All Other	2.6	4.1	4.4
Class of admission			
Family	43.1	63.3	43.3
Employment	3.6	11.4	21.0
Diversity	0.7	4.8	14.3
Refugee	8.2	11.5	8.6
Legalization	37.3	3.6	0.5
Other	7.1	5.5	12.3
Human Capital			
Total number of years of education	9.5	13.7	14.3
Total number of years of education in the U.S.	1.3	1.0	0.9
Proportion with less than high school diploma	61.7	22.9	20.8
Proportion with a high school diploma	22.6	28.7	21.1
Proportion with some college	8.6	12.9	10.2
Proportion with a bachelor's degree or more	7.2	35.4	48.0
Proportion with excellent English	14.4	31.1	28.8
Proportion with very good English	7.9	8.8	7.7
Proportion with good English	32.8	29.0	26.8

Table 2, continued:

Variable	Illegal Border Crosser	Visa Abuser	Legal
Outcomes			
Median Occupation Annual Earnings at pre-LPR job	$15,160	$19,727	$23,913
Median Occupation Annual Earnings at post-LPR job	$18,272	$23,418	$25,613
Mean Change in Median Occupation Annual Earnings	$3,112	$3,692	$1,700
Mean duration of pre-LPR job (years)	3.8	2.5	1.4
Mean time elapsed since start of pre-LPR job (years)	11.0	5.9	2.7
Number of Observations	945	1,071	2,470

Table 3: Occupational Distribution and Mobility from T2 to T3

Illegal Border Crossers during pre-LPR job:

Rank	pre-LPR occupation	% in pre-LPR job	% same in post-LPR job	% in post-LPR job
1	Maids And Housekeeping Cleaners	7.4	42.3	7.2
2	Other Agricultural Workers	7.3	28.1	2.7
3	Janitors And Building Cleaners	6.0	24.5	5.5
4	Dishwashers	5.2	0.0	0.5
5	Child Care Workers	5.1	13.3	1.6
6	Cooks	4.4	28.2	5.0
7	Construction Laborers	4.1	31.9	3.0
8	Cashiers	3.7	22.2	2.7
9	Grounds Maintenance Workers	3.5	36.5	2.4
10	Sewing Machine Operator	2.5	27.0	1.0
	Sum/Totals	**49.2**	**25.7**	**31.5**

Visa Abusers during pre-LPR job:

Rank	pre-LPR occupation	% in pre-LPR job	% same in post-LPR job	% in post-LPR job
1	Cashiers	5.9	23.9	2.7
2	Maids And Housekeeping Cleaners	4.4	44.4	3.4
3	Janitors And Building Cleaners	3.7	26.1	2.2
4	Cooks	3.4	52.7	3.1
5	Retail Salespersons	3.3	36.9	3.6
6	Waiters And Waitresses	3.3	33.3	2.6
7	Child Care Workers	3.0	44.3	2.2
8	Construction Laborers	2.3	28.1	1.7
9	Nursing, Psychiatric, And Home Health Aides	2.0	57.1	3.0
10	Grounds Maintenance Workers	2.0	13.9	0.3
	Sum/Totals	**33.2**	**35.6**	**24.8**

Legal during pre-LPR job:

Rank	pre-LPR occupation	% in pre-LPR job	% same in post-LPR job	% in post-LPR job
1	Cashiers	5.9	65.4	5.0
2	Computer Software Engineers	3.9	72.8	4.3
3	Waiters And Waitresses	3.4	51.0	2.1
4	Maids And Housekeeping Cleaners	3.4	77.5	2.9
5	Janitors And Building Cleaners	3.3	60.3	3.6
6	Postsecondary Teachers	3.0	37.0	1.7
7	Nursing, Psychiatric, And Home Health Aides	2.5	60.6	2.8
8	Retail Salespersons	2.4	62.1	2.5
9	Registered Nurses	2.4	79.9	2.4
10	Stock Clerks And Order Fillers	2.3	52.3	1.7
	Sum/Totals	**32.6**	**62.4**	**29.1**

Table 4: OLS Regression Results, Log of Occupational Annual Earnings, Pre-LPR Status Period

Characteristics	Model						
	1	2	3	4	5	6	7
Visa Abuser at Pre-LPR job	-0.134	-0.071	-0.135	-0.127	-0.115	-0.072	-0.057
	(2.48)	(2.03)	(2.47)	(2.57)	(2.55)	(2.25)	(1.93)
Illegal Border Crosser at Pre-LPR job	-0.370	-0.195	-0.329	-0.260	-0.169	-0.114	-0.076
	(4.47)	(4.34)	(4.22)	(3.91)	(3.43)	(3.40)	(2.63)
Female*Visa Abuser	0.024	0.043	0.023	0.035	0.029	0.040	0.057
	(0.43)	(0.89)	(0.41)	(0.66)	(0.59)	(1.00)	(1.55)
Female*Illegal Border Crosser	0.048	0.072	0.037	0.052	0.050	0.045	0.040
	(0.62)	(1.10)	(0.49)	(0.73)	(0.79)	(0.83)	(0.85)
Female	-0.410	-0.427	-0.416	-0.304	-0.279	-0.331	-0.338
	(5.13)	(6.83)	(5.40)	(3.51)	(4.19)	(5.24)	(5.70)
Age at Pre-LPR job				0.040	0.018	0.015	0.011
				(5.28)	(3.44)	(3.26)	(2.70)
Age at Pre-LPR job²/100				-0.056	-0.029	-0.026	-0.021
				(5.21)	(3.81)	(4.06)	(3.48)
Married				0.198	0.153	0.068	0.072
				(3.96)	(3.79)	(2.41)	(3.00)
Number of Children				-0.012	0.001	0.002	0.007
				(0.99)	(0.09)	(0.22)	(0.78)
Female*Married				-0.145	-0.127	-0.053	-0.069
				(2.30)	(2.09)	(1.27)	(1.79)
Married*Number of Children				-0.021	-0.020	-0.012	-0.017
				(1.67)	(1.57)	(1.10)	(1.75)
Female*Number of Children				-0.022	-0.014	-0.006	-0.014
				-1.510	-1.100	-0.530	-1.160
Female*Married*Number of Children				0.020	0.016	0.007	0.017
				(1.06)	(0.87)	(0.43)	(1.14)

				Model			
	1	2	3	4	5	6	7
Years of Education before Migration					0.032	0.020	0.015
					(5.29)	(5.24)	(4.51)
Female*Years of Ed before Migration					-0.003	-0.004	-0.001
					(0.42)	(0.66)	(0.30)
Class of Admission:							
Employment Preferences						0.469	0.382
						(6.42)	(6.44)
Diversity Lottery						-0.205	-0.188
						(5.97)	(6.60)
Refugee						-0.056	-0.071
						(1.55)	(2.42)
Legalization						-0.036	-0.045
						(1.13)	(1.64)
Other						-0.087	-0.078
						(3.40)	(3.51)
Includes Fixed Effects:							
Country of Origin	No	Yes	No	No	No	Yes	Yes
Year of Arrival	No	No	Yes	Yes	Yes	Yes	Yes
State	No	No	No	Yes	Yes	Yes	Yes
Industry	No	No	No	No	No	No	Yes
R-Squared	0.189	0.300	0.211	0.258	0.301	0.449	0.554
Number of Observations				4,486			

Note: The t-statistics, shown in parentheses, are calculated based on standard errors clustered around occupations.

Table 5: OLS Regression Results, Change in Log of Occupational Annual Earnings, Post-Pre LPR Status Periods.

| Characteristics | Model | | | | | | |
	1	2	3	4	5	6	7
Visa Abuser at Pre-LPR job	0.125	0.118	0.080	0.081	0.087	0.074	0.084
	(5.52)	(5.37)	(3.69)	(3.68)	(3.94)	(3.35)	(3.78)
Illegal Border Crosser at Pre-LPR job	0.132	0.096	0.018	0.017	0.041	0.019	0.034
	(4.47)	(3.35)	(0.55)	(0.53)	(1.27)	(0.59)	(1.05)
Female*Visa Abuser	-0.069	-0.075	-0.064	-0.054	-0.058	-0.055	-0.060
	(2.03)	(2.23)	(1.98)	(1.71)	(1.80)	(1.73)	(1.91)
Female*Illegal Border Crosser	-0.096	-0.104	-0.098	-0.078	-0.069	-0.071	-0.074
	(2.29)	(2.53)	(2.29)	(1.89)	(1.64)	(1.68)	(1.78)
Female	0.019	0.024	0.033	0.076	0.045	0.051	0.059
	(0.82)	(1.01)	(1.56)	(2.55)	(0.85)	(0.95)	(1.07)
Age at NIS interview				-0.003	0.000	-0.001	-0.002
				(0.76)	(0.06)	(0.17)	(0.32)
Age at NIS interview²/100				0.001	-0.002	-0.001	0.000
				(0.24)	(0.38)	(0.17)	(0.02)
Married				0.010	0.011	0.013	0.018
				(0.42)	(0.46)	(0.58)	(0.80)
Number of Children				0.002	0.007	0.007	0.006
				(0.21)	(0.79)	(0.75)	(0.59)
Female*Married				-0.039	-0.031	-0.034	-0.032
				(1.08)	(0.88)	(0.97)	(0.89)
Married*Number of Children				0.001	-0.001	0.000	0.000
				(0.13)	(0.05)	(0.01)	(0.01)
Female*Number of Children				-0.016	-0.008	-0.009	-0.009
				(1.40)	(0.68)	(0.75)	(0.82)
Female*Married*Number of Children				0.004	0.001	0.002	0.001
				(0.27)	(0.06)	(0.15)	(0.09)

				Model			
	1	2	3	4	5	6	7
Years of Education before Migration					0.007	0.009	0.010
					(2.45)	(2.71)	(2.94)
Years of Education in the U.S.					0.024	0.024	0.026
					(3.57)	(3.69)	(4.12)
Excellent English					-0.037	-0.031	-0.053
					(1.10)	(0.90)	(1.50)
Very Good English					-0.040	-0.039	-0.046
					(1.20)	(1.16)	(1.34)
Good English					0.045	0.045	0.037
					(1.76)	(1.75)	(1.53)
Female*Years of Ed before Migration					0.000	0.000	-0.001
					(0.08)	(0.01)	(0.17)
Female*Years of Ed in the U.S.					-0.001	-0.001	-0.002
					(0.06)	(0.11)	(0.26)
Female*Excellent English					0.072	0.071	0.081
					(1.31)	(1.31)	(1.52)
Female*Very Good English					0.109	0.113	0.110
					(1.82)	(1.91)	(1.84)
Female*Good English					-0.042	-0.041	-0.036
					(1.22)	(1.20)	(1.05)
Duration of Pre-LPR Job						0.006	0.007
						(2.71)	(3.08)
Interval Between LPR and Interview						-0.001	-0.001
						(0.28)	(0.29)

		Model					
	1	2	3	4	5	6	7
Class of Admission:							
Employment Preferences						-0.067	-0.060
						(2.05)	(1.80)
Diversity Lottery						-0.008	-0.026
						(0.38)	(1.07)
Refugee						-0.005	-0.043
						(0.18)	(1.28)
Legalization						0.003	-0.001
						(0.08)	(0.03)
Other						0.018	0.016
						(0.89)	(0.76)
Includes Fixed Effects:							
Country of Origin	No	Yes	No	No	No	Yes	Yes
Year of Arrival	No	No	Yes	Yes	Yes	Yes	Yes
State	No	No	No	Yes	Yes	Yes	Yes
Industry	No	No	No	No	No	No	Yes
R-Squared	0.018	0.035	0.108	0.118	0.139	0.144	0.155
Number of Observations				4,486			

Note: The t-statistics, shown in parentheses, are calculated based on standard errors clustered around occupations.

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