Undocumented Migration and the Wages of Mexican Immigrants

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Abstract

Prior work has documented the remarkable decline in the real wages of Mexican immigrant workers in the United States over the past several decades. Although some of this trend might be attributable to the changing characteristics of the migrants themselves, we argue that a more important change was the circumstances under within Mexican immigrants competed for jobs in the United States. After 1986 a growing share of Mexican immigrants were undocumented, discrimination against them was mandated by federal law, and enforcement efforts rose in intensity. We combined data from the Mexican Migration Project with independent estimates of the percentage undocumented among Mexicans living in the United States to estimate a series of regression models to test this hypothesis. Controlling for individual characteristics helps to explain the decline in the wages of immigrants, but does not eliminate the trend, which is only explained fully when the percentage undocumented is added to the model. A key date is 1986, confirmed by a Oaxaca-Blinder decomposition analysis, when undocumented hiring was criminalized and undocumented migration revived after IRCA's legalization programs ended. As the percentage undocumented rose to new heights in the face of employer sanctions, immigrant wages fell below what we would have observed under the former policy regime. Using newly available data from Warren and Warren (2013), we examined how variation in the percentage undocumented by state and year from 1990 through 2009 affected immigrant wages and confirmed a strong negative effect, but the addition of an interaction term to the model indicated that the negative effect was confined largely to undocumented migrants, whose wage penalty rose from 8% to 18% as the percentage undocumented rose from its observed minimum to maximum.

Recent studies have documented a steady decline in the labor market position of Mexican immigrants in the United States over the past several decades. Using data from the U.S. Census and Current Population Survey, for example, Massey and Gelatt (2010) found that the wages of both native and foreign born Mexicans rose steadily and in parallel from 1950 to 1970, with both series roughly doubling in real value over the two decade. After 1970, however, the two curves began to diverge. Whereas the real wages earned by native Mexican Americans rose by 11% between 1970 and 1990, those earned by foreign born Mexicans fell by 20%; and when wages began to rise more rapidly for native born Mexican Americans during the boom of the 1990s, the earnings of Mexican immigrants remained flat, thus widening the gap. As a result, whereas native born Mexicans earned 11% more than foreign born Mexicans in 1970, by 2000 the differential was 62% and on the eve of the Great Recession in 2007 in stood at 78% (Massey and Gelatt 2010).

This growing wage differential does not appear to be linked to a decline in the quality or productivity of immigrant Mexican workers, as suggested by Borjas (1995, 1999). Indeed, from 1970 onward the quality of Mexican immigrants has steadily increased, at least with respect to observable indicators such as education and skill (Massey and Gelatt 2010). What changed after 1970 was not the quality of the human capital held by Mexican immigrants, but the rate at which their human capital was rewarded in U.S. labor markets, with diminishing returns observed for English language ability, U.S. experience, and education. Massey and Gelatt (2010) that this shift in the structure of U.S. labor markets was driven by changes in U.S. immigration policy, which criminalized the hiring of undocumented migrants while accelerating both border and international enforcement.

Ironically, the acceleration of border enforcement had little effect on the rate of undocumented in-migration from Mexico but it dramatically reduced the rate of return migration to more than double the net rate of undocumented population growth (Massey and Pren 2012). As a result, the relative share without documentation among Mexican immigrants increased precisely when official pressures for exclusion and discrimination on the basis of legal status were intensifying (Massey and Gelatt 2010). In their analysis of data from the Mexican Migration Project, Massey and Gentsch (2011) found that the shift to a new and more intense regime of harsh border and internal enforcement indeed coincided with a drop in the economic returns to a variety of forms of human and social capital, constraining both occupational attainment and earnings.

Other studies have also documented the harsh labor market conditions faced by Latino immigrants in contemporary U.S. labor markets. In their 2008 survey of low wage workers in Chicago, Los Angeles, and New York, for example, Bernhardt, Spiller, and Polson (2013:725) found that "violations of employment and labor laws are pervasive across low-wage labor industries and occupations." According to the final research report from their project, 26% of workers reported experiencing a minimum wage violation, but among immigrants the figure was 31% compared with just 16% among the native born; and among those without documents the figure was 37% compared with 21% among those with legal papers (Bernhardt et al. 2009). In her analysis of respondents to the National Agricultural Workers survey, Pena (2010a) found that undocumented migrants were more likely to be paid piece rate than other workers and to work fewer hours and earn lower wages as a result. A parallel analysis using propensity score matching and treatment effects regression revealed that undocumented agricultural workers experienced an average wage penalty of 5%-6% (Pena 2010b).

In her survey of immigrant workers in New Orleans, Fussell (2011) found that 41% had experienced wage theft; but the likelihood of wage theft was not related to legal status, education, or English language ability. Instead it was common among to immigrants, but especially to male day laborers. In their analysis of workers in the state of Georgia, Hotchkiss and Quispe-Agnoli (2013) found that wage differentials between documented and undocumented workers, to the extent they existed, reflected differences in productivity. Using data from the Current Population Survey, Orrenius and Zavodny (2009) documented a pronounced decline in employment, hours worked, and earnings among recent male Latin American immigrants that they attributed to harsher enforcement in the post-9/11 period.

In this paper we further examine the decline in immigrant wages as a function of the rise of undocumented migration in a context of rising enforcement. We argue that the steady rise in the proportion of immigrants without documents in a context of growing official exclusion increasingly places immigrants in a difficult and exploitable bargaining position. Those without documents are especially vulnerable—not only do they compete in labor markets increasingly dominated by exploitable workers lacking labor rights, but they themselves have no rights and were increasingly pushed to the margins by a rising tide of deportations. The aggregate result of these trends, documented in the studies cited above, was a decline in the wages earned by Mexican immigrants.

We begin by drawing upon the accumulation of indirect estimates of the size of the undocumented population to document the rise of illegal migration from Mexico and characterize its potential as a threat to the welfare of immigrant workers. We then describe our use of data derived from the Mexican Migration Project to specify three versions of a simple wage regression to predict the log of the real value of wages earned by Mexican migrants working in the United States: one containing dummy variables identifying successive two-year intervals from 1970 to 2009; another adding relevant individual characteristics to the equation; and a final equation including the estimated proportion undocumented among Mexican immigrants as a covariate. We show that the trend in wages earned by Mexican migrant workers is primarily a function of contextual rather than individual circumstances. We then perform a Oaxaca-Blinder decomposition analysis to confirm that the decline in wages stemmed from a pernicious temporal interaction that systematically suppressed wages in the years after 1986, when IRCA's employer sanctions went into effect.

To further establish the effect of undocumented migration on immigrant wages, we make use of a new dataset that estimated undocumented populations by state and year from 1990 to 2010. We divided these estimates by annual state population to create considerably more variation in the degree of exposure to undocumented workers and a stronger test of the effect of the rising prevalence of undocumented migrants on immigrant wages. Our reanalysis of MMP data with this expanded data series found a strong negative effect of the percentage undocumented on Mexican immigrant wages. The negative effect, however, operates only for undocumented migrants. As the supply of undocumented migrants rises, the wages of undocumented migrants falls, suggesting that the depressed wages observed for Mexican immigrants in datasets such as the Census and Current Population Survey actually pertain only to the undocumented segment of the population, who now constitute a majority of Mexican immigrants present in the United States.

The Rise of Illegal Migration

In the years since 1980, demographers have developed routine procedures to estimate the size of the undocumented population based on an indirect methodology originally developed by Warren and Passel (1987). Annual estimates are now regularly published by the Pew Hispanic Center as well as the Department of Homeland Security's Office of Immigration Statistics, and occasionally by others (see Wassem 2011). The estimation procedures, which are all similar but not identical, begin with the number of Mexican immigrants included in

the U.S. Census or Current Population Survey, which is then adjusted for undercounting and other reporting errors, from which estimated migrant deaths and return migrations are subtracted.

Although different researchers obtain slightly different absolute numbers the trends are basically the same. For our purposes we combined estimates of the size of the undocumented population done by Woodrow and Passel (1990), Warren and Passel (1987), Hoeffer, Rytina, and Baker (2011), and Passel and Cohen (2011) to produce annual population estimates for as many years as possible. Whenever multiple estimates were available for the same year, we took their mean. We then filled in missing years, most often years prior to 1990 not ending in 0 or 5, using linear interpolation

Figure 1 summarizes the results of this operation by showing the estimated size of the undocumented Mexican population from 1970 to 2010. Beginning from a small base in the neighborhood of a few hundred thousand persons in 1970 the total rose to a peak of around 1.4 million in 1979 before falling slightly during Mexico's Oil Boom of 1979-1982. It then rose rapidly once again to peak at 2.2 million in 1986, when the Immigration Reform and Control Act was passed to authorize two legalization programs, which by 1988 had cut the undocumented population in half, to around 1.1 million. After this date growth resumed, however, and by 1991 the original population of 2.2 million had been restored. During the early 1990s the rate of population growth slowed somewhat but then accelerated markedly after in the mid-1990s as Operation Blockade (1993), Operation Gatekeepr (1995), and the Illegal Immigration Reform and Immigrant Responsibility Act (1996) combined to intensify border enforcement and dramatically raise the costs and risks of unauthorized border crossing (Massey, Durand, and Malone 2002). The rapid increase in undocumented population continued up through the Great Recession of 2008 when the number peaked at around 7 million before falling back to around 6.6 million, where it stands today.

This curve indicates the growing number of Mexicans present in the United States without authorization and thus increasingly vulnerable to discrimination, mandated by congress on the basis of legal status in 1986, and eminently vulnerable to exploitation in a variety of forms, including predatory subcontracting, substandard working conditions, reduced wages, unpaid overtime, and outright wage theft (Bernhardt et al. 2009; Fussell 2011). In sum, the net effect of U.S. immigration and border policies enacted during the period from 1985 to 2010 was to increase the vulnerability and undercut bargaining power at the low end of the U.S. labor force, most notably in sectors dominated by immigrant workers.

Data and Methods

To consider what effect this trend had on the wages of Mexican migrants working in the United States we turned to the Mexican Migration Project (MMP) and assembled data on the characteristics of migrants and the wages they earned on their most recent job in the United States from the set of 128 communities surveyed between 1982 and 2009, yielding usable data on 7,464 migrants, both documented and undocumented, who held U.S. jobs between 1970 and 2009. After converting all wages to 2010 constant dollars, we regressed the natural log of the real wage on dummy variables for two-year periods. We chose two- rather than

one-year periods to achieve greater stability and maximize degrees of freedom associated with each period. This regression captured the basic trend in real wages earned by Mexican migrants included in the MMP.

We then re-estimated the equation adding in relevant individual characteristics to observe both the changes this operation induced in the period coefficients and the estimated effects on wages of the characteristics themselves. Finally, we added in estimates of the percentage of Mexican immigrants who were undocumented, which we computed by dividing the series shown in Figure 1 by annual estimates of the number of foreign born Mexicans from the U.S. Census and Current Population Surveys and computing the average value for each two-year period. Table 1 summarizes the variables used in our analysis.

As can be seen, the average wage earned was $11.96 per hour in constant 2010 dollars. Periods of observation tend to cluster in the late 1980s and early 1990s, with the peak years occurring in the periods 1988-1989 and 1990-1991 (accounting for 12% and 11% of the cases, respectively). The average age on the last trip was 32.9 years, 17% of the respondents were female, and 55% headed a household at the time of their last trip. With respect to legal status, 73% were undocumented and 2% held a legal temporary work visa on their last trip, leaving 25% as legal permanent residents or citizens (overwhelmingly the former). Education averaged around 6.6 years of schooling and on the last trip 29% qualified as skilled workers and 46% were unskilled manual workers, leaving 25% as agricultural laborers. The average migrant had taken 2.3 prior trips to the United States before the current one, and over these multiple trips had accumulated 32.2 months of total U.S. experience (around 2.7 years). The duration of the last trip, on which the wage was actually observed, stood at 42.5 months (3.5 years). On average, migrants worked in the United States during a year when 61% of all Mexican immigrants lacked legal documents.

Explaining the Decline in Mexican Wages

Table 2 show three regression models estimated to predict the log of wages from selected independent variables. Model 1 contains period coefficients alone, with 1986-1987 taken as the reference era, to capture the unconditioned trend in wages earned by Mexican migrants working in the United States. Compared to those working in 1986-1987, those employed in 1970-1971 earned 64% more in real terms, with the wage premium rising to 65% in 1972-1973. Thereafter, however, the wage premium declined rapidly, with the decline slowing between 1980 and 1985 before falling rapidly again in the early 1990s to a wage deficit of around 20% during the period 1992-1995. Wages then rose back up to a gap of around zero in the late 1990s that was generally maintained into the new century.

According to data from the Mexican Migration Project, in other words, Mexican immigrant wages declined steadily from the early 1970s through the middle 1990s and then recovered somewhat in the late 1990s and the years leading up to the Great Recession of 2008.

Model 2 adds individual characteristics to the model. These new controls reduce the size of the period coefficients but do not change the general trend: wages still decline from the early 1970s through the middle 1990s before recovering a bit, though amplitude of the swings is

reduced. In general, wages do not appear to vary much by age; but females earn 20% less than similarly qualified males and household heads receive a 4% wage premium compared to other workers.

Unsurprisingly, the model suggests that undocumented migrants earn about 20% less, on average, than legal immigrants, while temporary legal workers earn around 13% less. Compared with farm workers, those working in unskilled non-agrarian occupations earn 5.3% more whereas those working in skilled occupations earn about 17.7% more. As one would expect, wages are positively related to indicators of human capital, rising by 1.3% for each additional year of education, by 0.4% with each prior U.S. trip, 0.1% with each additional month of prior U.S. experience, and by 0.3% with each additional month spent on the current trip.

Model 3 adds in the estimated percentage of undocumented migrants among Mexican-born residents of the United States as a contextual control to reveal that, as hypothesized, wages decline sharply as the share of undocumented Mexicans rises. Indeed, real earnings fall by 2.1% for each point increase in the percentage undocumented, a highly significant effect (p<0.001). Although the addition of this important variable to the model has no effect on the coefficients associated with individual characteristics, it has rather large effects on the period coefficients, essentially eliminating the observed decline in real wages observed between 1970 and 1986. In other words, the sharp decline in wages in the years leading up to IRCA seems to stem from the rising share of illegal migrants competing in U.S. labor markets, not from shifts in individual qualities or characteristics, including individual legal status.

However, the addition of the control for the percentage undocumented accentuates the negative period coefficients observed from 1988 onward, indicating significantly lower wages across the board. Figure 2 illustrates the effect of successively adding in the three sets of covariates by plotting period coefficients associated with each model. Given that the outcome is the log of the observed wage, these coefficients state the percentage wage premium or wage gap experienced by migrants in each period relative to 1986-1987. The solid line corresponding to period effects with no controls clearly shows the sharp decline in real wages through the early 1980s and the stagnation of wages thereafter. The dotted line reveals little change in the underlying trend once individual control variables are introduced into the model. Rather, as shown by the dashed line it is the addition of the percentage undocumented as a contextual factor that dramatically alters the shape of the period-specific curve. In particular, controlling for the share of undocumented migrants eliminates the downward trend in wages from 1970 through 1986 and accentuated the negative wage gap observed thereafter, especially in the late 1990s, when wages for virtually everyone else in the United States were rising in response to tight labor markets and strong surges in labor demand (Krueger and Solow 2002; Stiglitz 2003; Massey 2008).

The final estimates in Table 2 point to 1986 as a key date. Before then the rising share of undocumented migrants undermined the wages of all immigrants by increasing competition from exploitable workers who lacked legal status a thus firm bargaining position. From 1970 to 1986 the rising share of undocumented among Mexican migrant workers brought about a decline in real wages. After 1986, the downward pressure on wages increased because of

employer sanctions and when undocumented population growth resumed and accelerated in the 1990s migrant wages were pushed below what would have been observed under the same circumstances before 1986. As others have noted (Durand, Massey, and Parrado 1999; Massey, Durand, and Malone 2002), 1986 constitutes a critical point of discontinuity in the evolution of the Mexico-U.S. migration system.

To test this interpretation of the results we divided the sample into two parts, those migrants who worked in the United States before 1987 and those who held a U.S. job in 1987 or later, effectively dividing the sample into pre- and post-IRCA periods. We then estimated separate regressions for each period and performed a Oaxaca-Blinder decomposition, whose outcome is summarized in Table 3. The highly significant coefficient for the difference between the two eras indicates that there indeed was a important structural shift in the process of wage determination before and after 1986. The decomposition suggests were it not for this structural shift both immigrant characteristics and coefficients would have raised wages (similar to what Massey and Gelatt found). In actuality, however, the average real wage fell from $11.45 during the pre-IRCA period to $8.94 in the post-IRCA era, and the highly significant negative interaction coefficient indicates that something clearly happened after 1986 to push the wages of Mexican immigrants systematically downward.

As we were revising this paper in response to reviewer comments, a new data set containing estimates of the size of the undocumented population by state and year became available (see Warren and Warren 2013). Using these data we computed the percentage undocumented for each state in each year from 1990 through 2010 and linked these data to individual records from the MMP data classified by state of destination and year of employment, thereby expanding the range of exposure to undocumented migration and creating a tighter connection to local labor market conditions. Rather than having just 41 national-level observations of the percentage undocumented for years from 1970 through 2009, we get 1,020 observations for 51 states and the District of Columbia in each of 20 different years from 1990 through 2009.

The left-hand columns of Table 4 shows what happens when we regress the natural log of Mexican wages on individual characteristics, period indicators, and the expanded percentage of undocumented migrants by year and state. As can be seen, the new percentage undocumented has a highly significant negative effect on wages. Each percentage increase in the share of undocumented migrants reduces wages by around 1.1%. The effect of undocumented status itself is also strongly negative. Other things equal, undocumented migrants earned around 14% less than those with documents. These effects are somewhat smaller than those observed in the final regression model of Table 2, where undocumented status carried a 20% penalty and wages fell by 2.1% for each point increase in the percentage undocumented. That analysis, however, included years from 1970 to 1990 when real wages were higher, and it was based on the estimated percentage of undocumented Mexican immigrants in the nation whereas here we were only able to compute the percentage of undocumented residents in the whole state population. Other effects in the model are similar to those observed before, with age displaying its characteristic curvilinear effect and females experiencing a significant wage penalty relative to men whereas wages rose with occupational skill, education, and prior U.S. experience.

The right-hand columns show a model that includes an interaction term between undocumented status and the percentage of undocumented migrants, on the theory that a rising share of undocumented should disproportionately affect undocumented migrants. Once the interaction term is added, the main effect of the percent undocumented drops to zero and the interaction term itself is significant and negative. According to the model, each point increase in the percentage undocumented reduces the real wages of undocumented migrants by around 1.3% but has no significant effect on either legal immigrants or legal temporary workers. Thus an undocumented migrant working in a state where the share of undocumented migrants is essentially zero experiences an 8.3% wage penalty, but as the percentage moves to its observed maximum of 7.8% the penalty increases to 18.4%. In other words, a rising share of undocumented migrants in a state primarily undermines the wages of other undocumented migrants, not those present legally. Thus the wholesale drop in Mexican immigrant wages observed by Massey and Gelatt (2010) likely reflects depressed wages among those lacking documents, whose share of the immigrant population rose from around 30% to 60% over the period of observation but who cannot be identified separately in either the Census or CPS.

Conclusion

We argued here that a rising share of undocumented workers competing in U.S. labor markets generally works to lower the wages of Mexican immigrants, who increasingly lack documents and labor rights in the United States and are thus uniquely vulnerable and exploitable. To test this argument we combined data on migrant earnings and characteristics from the Mexican Migration Project with annual estimates of the share of Mexican immigrants lacking documents. When a model containing only period indicators was estimated we replicated the decline and stagnation of immigrant wages noted by earlier investigators. When we added individual characteristics into the model we found that wages were lower for females than males and that low wages were predicted by undocumented status, low education, low occupational skill, a lack of prior U.S. experience, and short durations at the current job.

Taking these effects into account, however, did not change the overall trend of downward movement and stagnation, though it reduced the estimated pace of the decline somewhat. In contrast, adding the estimated percentage undocumented to the model not only eliminated the pre-1986 downward trend in wages, but significantly exacerbated the deflation of wages observed thereafter. Something thus appears to have happened in 1986 to reduce the wages of Mexican migrants beyond what would have occurred as a result of individual penalties to undocumented status and a rising share of undocumented competitors before that date. The obvious candidate for this exogenous "something" is IRCA's sudden criminalization of undocumented hiring.

Whereas before 1986 it was perfectly legal to hire an undocumented worker into a U.S. job, afterward employers faced civil penalties and fines for "knowingly" hiring undocumented migrants and possible jail time for repeated offenses. As a result of the increased costs and risks of undocumented hiring, employers lowered the wages of their employees in compensation. In a sense, sanctions imposed a new "tax" on the hiring of workers in sectors

of the economy characterized by significant undocumented employment, which employers extracted from their workers in the form of lower wages (Cobb-Clark, Shiells, and Lowell, 1995; Bansak and Raphael 1998). Employers continued to hire undocumented migrants but transferred the costs and risks of doing so to the workers themselves in the form of lower pay. In addition, after 1986 employers increasingly hired workers indirectly, through a middleman who agreed to provide a set number of workers during a certain period of time to undertake a specific task at a fixed rate of pay (Taylor, 1996; Martin, 1996). Because the migrants technically did not work for the employer but the subcontractor, the former escaped liability under the new sanctions legislation but migrants lost a portion of their wages that increasingly went to the subcontractors.

To test this hypothesis we undertook a Oaxaca-Blinder decomposition of wage determination before and after IRCA went into effect and found that a significant shift in the process of wage determination indeed occurred after 1986. Were it not for the shift, wages would have risen owing to improving worker characteristics and higher rates of return on those characteristics in the labor force, but the structural shift induced by IRCA systematically reduced immigrant wages to produce the observed decline.

Although the decomposition suggested that the decline in wages occurred to all Mexican immigrants regardless of legal status, a more detailed analysis during the period 1990 through 2009 indicated that wage suppression was centered mainly on undocumented migrants. A replication of the earlier analysis using new data on the percentage of undocumented migrants by state and year confirmed the negative effect of legal status and a rising share of undocumented migrants in the population; but inclusion of an interaction term between legal status and the percentage undocumented eliminated the main effect but was itself significant. As a result, as if the percentage undocumented were to rise from its observed minimum to maximum, the wage penalty experienced by undocumented migrants would be expected to increase from around 8% to 18%. As the findings of Bernhardt et al (2009) attest and our regressions confirm, the rising share of undocumented migrants working in low wage labor markets has placed immigrant workers, especially those without documents, in an extremely vulnerable and exploitable position.

Acknowledgments

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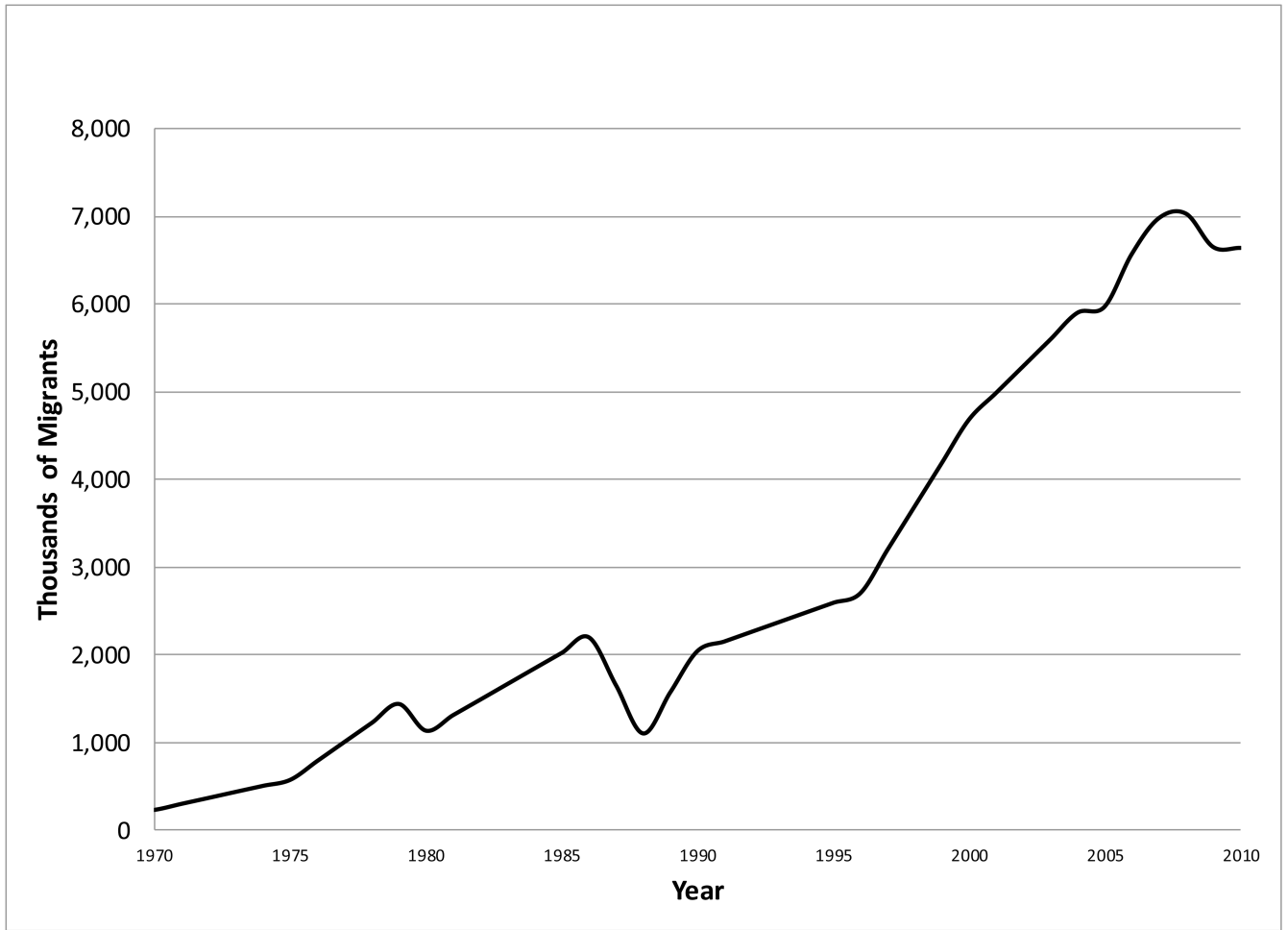
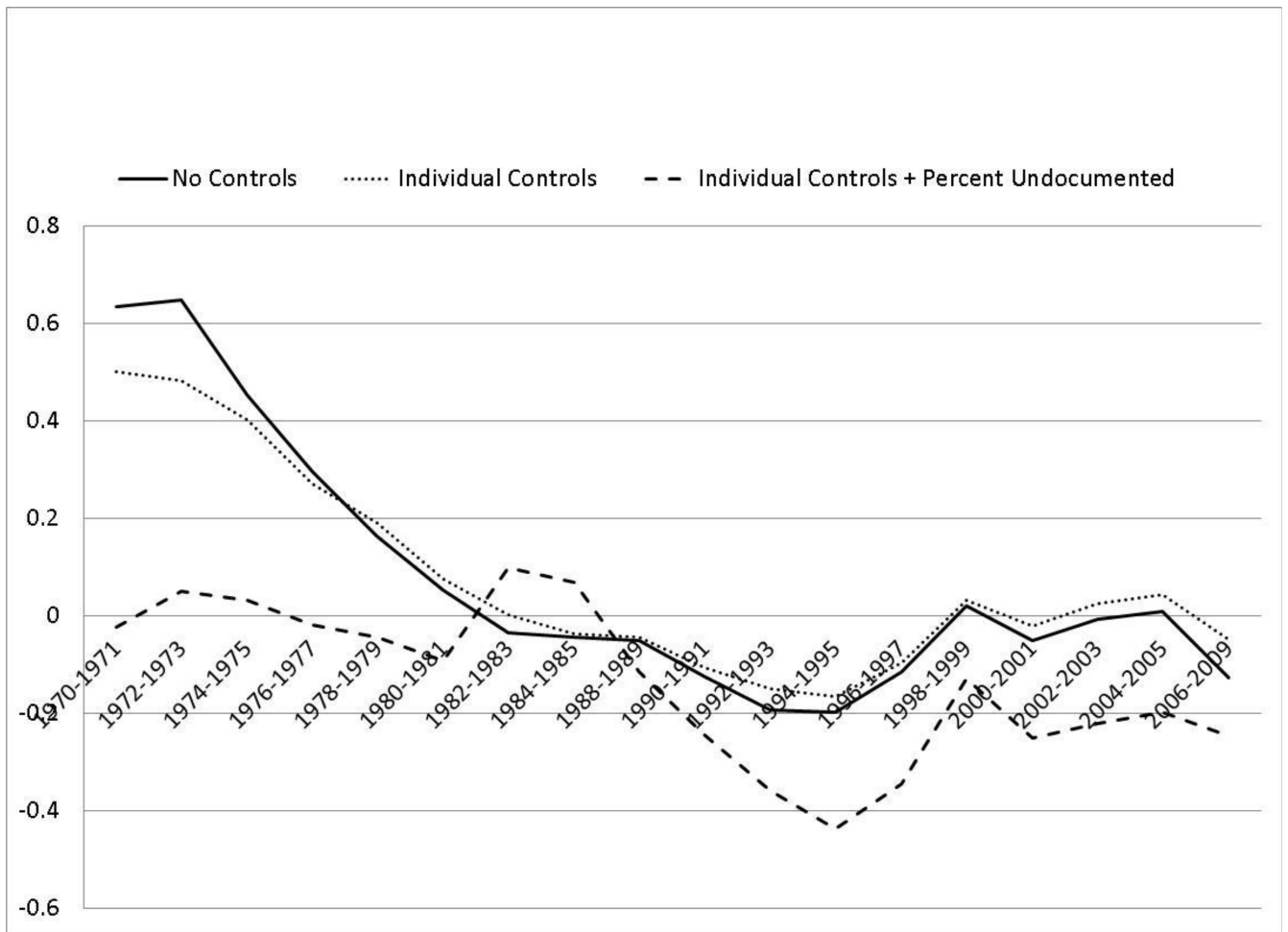**Figure 1. Estimated size of undocumented Mexican population of the United States 1970-2010**

Figure 2. Estimated effects of period on the wages of Mexican workers with no controls, individual controls, and individual plus contextual controls

Table 1

Means and standard deviations used in the analysis of wages earned by Mexican migrants to the United States 1970-2010

Variable	Mean	SD
Outcome		
Wage in 2010 Dollars	11.96	16.32
Period		
1970-1971	0.02	0.13
1972-1973	0.02	0.15
1974-1975	0.03	0.18
1976-1977	0.03	0.18
1978-1979	0.05	0.21
1980-1981	0.05	0.22
1982-1983	0.04	0.2
1984-1985	0.06	0.23
1986-1987	0.07	0.26
1988-1989	0.12	0.33
1990-1991	0.11	0.31
1992-1993	0.07	0.25
1994-1995	0.09	0.28
1996-1997	0.06	0.24
1998-1999	0.06	0.24
2000-2001	0.05	0.21
2002-2003	0.03	0.17
2004-2005	0.02	0.14
2006-2009	0.02	0.13
Individual characteristics		
Age on last trip	32.9	10.84
Female	0.17	0.37
Household head	0.55	0.5
Undocumented on last trip	0.73	0.45
Temporary worker on last trip	0.02	0.15
School years completed	6.55	3.76
Unskilled occupation on last trip	0.46	0.5
Skilled occupation on last trip	0.29	0.45
Priortrips	2.31	4.51
Prior months in U.S.	32.21	56.82
Months of last trip	42.54	61.51
Contextual Circumstances		
Percent Mexicans undocumented	60.73	6.46

Table 2

Regression of selected independent variables on the natural log of wages earned by Mexican migrants 1970-2009 (2010 dollars)

Independent Variables	Period Only B	SE	Individual Controls B	SE	Contextual Controls B	SE
Period						
1970-1971	0.635 ***	0.078	0.502 ***	0.067	-0.023	0.156
1972-1973	0.649 ***	0.062	0.482 ***	0.053	0.051	0.129
1974-1975	0.454 ***	0.054	0.402 ***	0.048	0.031	0.113
1976-1977	0.297 ***	0.051	0.271 ***	0.043	-0.018	0.091
1978-1979	0.163 ***	0.039	0.190 ***	0.035	-0.044	0.073
1980-1981	0.052	0.040	0.075 **	0.035	-0.093	0.058
1982-1983	-0.036	0.040	0.002	0.036	0.100 **	0.042
1984-1985	-0.044	0.037	-0.037	0.032	0.070	0.044
1988-1989	-0.051 *	0.028	-0.044 *	0.025	-0.115 ***	0.032
1990-1991	-0.125 ***	0.029	-0.106 ***	0.025	-0.245 ***	0.046
1992-1993	-0.194 ***	0.033	-0.150 ***	0.030	-0.358 ***	0.064
1994-1995	-0.197 ***	0.029	-0.165 ***	0.026	-0.438 ***	0.079
1996-1997	-0.116 ***	0.035	-0.097 ***	0.032	-0.346 ***	0.075
1998-1999	0.020	0.032	0.033	0.030	-0.128 ***	0.053
2000-2001	-0.050	0.035	-0.020	0.034	-0.250 ***	0.072
2002-2003	-0.008	0.032	0.026	0.031	-0.220 ***	0.074
2004-2005	0.008	0.034	0.043	0.032	-0.199 ***	0.073
2006-2009	-0.126 **	0.052	-0.048	0.052	-0.247 ***	0.073
Individual characteristics						
Age on last trip			0.008 ***	0.003	0.008 ***	0.003
Age on last trip squared			-0.0002 ***	0.00004	-0.0002 ***	0.00004

Independent Variables	Period Only		Individual Controls		Contextual Controls	
	B	SE	B	SE	B	SE
Female			-0.198 ***	0.012	-0.198 ***	0.020
Undocumented on last trip			-0.195 ***	0.016	-0.195 ***	0.016
Temporary worker on last trip			-0.130 **	0.056	-0.129 **	0.056
Unskilled occupation last trip			0.053 ***	0.014	0.052 ***	0.014
Skilled occupation on last trip			0.177 ***	0.017	0.176 ***	0.017
School years completed			0.013 ***	0.002	0.013 ***	0.002
Household head			0.037 ***	0.014	0.039 ***	0.014
Prior trips			0.004 **	0.002	0.004 **	0.002
Prior months in U.S.			0.001 ***	0.0002	0.001 ***	0.0002
Months of last trip			0.003 ***	0.0001	0.003 ***	0.0002
Contextual Circumstances						
Percent undocumented					-0.0214 ***	0.006
Constant	2.279 **	0.023	2.027 ***	0.0611	3.489 ***	0.402
Observations	7640		7471		7471	
R-squared	0.106		0.293		0.295	

*** p<0.01,

** p<0.05,

* p<0.1

Table 3

Oaxaca-Blinder decomposition of wages earned by Mexican migrants before and after the passage of IRCA in 1986

	B	SE
Characteristics	0.053 ***	0.011
Coefficients	0.277 ***	0.018
Interaction	-0.080 ***	0.016
Difference	0.249 ***	0.016
	Pre-IRCA	Post-1 RCA
Numberof Cases	2,566	4,905
Predicted Wage	$11.46	$8.94

Table 4

Regression of selected variables on the natural log of wages earned by Mexican migrants 1970-2009 (2010 dollars)

	Main Effect Model		Interactive Model	
	B	**SE**	**B**	**SE**
Period				
1992-1993	-0.051 *	0.027	-0.05 *	0.027
1994-1995	-0.057 **	0.023	-0.056 **	0.023
1996-1997	0.006	0.03	0.006	0.023
1998-1999	0.134 ***	0.028	0.134 ***	0.028
2000-2001	0.077 **	0.031	0.078 **	0.031
2002-2003	0.126 ***	0.029	0.127 ***	0.029
2004-2005	0.143 ***	0.032	0.143 ***	0.032
2006-2009	0.041	0.079	0.037	0.079
Individual Characteristics				
Age on last trip	0.019 ***	0.005	0.02 ***	0.005
Age on last trip squared	-0.0003 ***	0.0001	-0.0003 ***	0.0001
Female	-0.163 ***	0.028	-0.163 ***	0.028
Undocumented on last trip	-0.141 ***	0.021	-0.083 **	0.034
Temporary worker on last trip	-0.105 *	0.056	-0.085	0.058
Unskilled occupation on last trip	0.044 **	0.019	0.043 **	0.019
Skilled occupation on last trip	0.143 ***	0.023	0.141 ***	0.023
School years completed	0.011 ***	0.003	0.0106 ***	0.003
Household head	0.061 ***	0.017	0.06 ***	0.017
Priortrips	0.005 **	0.002	0.005 **	0.002
Prior months in U.S.	0.0002 ***	0.0001	0.0008 ***	0.0002
Months of last trip	0.004 ***	0.0003	0.004 ***	0.0003
Contextual Circumstances				
Pct undoc in state/year	-0.011 ***	0.003	-0.001	0.005
Undocumented × Pct undoc			-0.013 **	0.006
Constant	1 717 ***	0.091	1.677 ***	0.094
Observations	3714		3714	
R-squared	0.168		0.168	

*** p<0.01,

** p<0.05,

* p<0.1