University of Illinois at Chicago

CENTER FOR URBAN ECONOMIC DEVELOPMENT

Chicago's Undocumented Immigrants:

An Analysis of Wages, Working Conditions, and Economic Contributions

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The UIC Center for Urban Economic Development

The mission of the Center for Urban Economic Development at the University of Illinois at Chicago (UIC-CUED) is to analyze disparities in the urban economy and their implications for low-income and minority communities. UIC-CUED works in partnership with low-income and minority urban communities to devise strategies for job-centered development. Through specially constructed models of technical assistance, and engaged research with community organizations, labor unions, employers and government, UIC-CUED enters into long-term partnerships to conduct implementation research, to evaluate community development programs and strategies, and to translate lessons from practice into public policy.

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EXECUTIVE SUMMARY

Undocumented immigrants are strongly committed to working in the United States and they make significant contributions to the economy. Undocumented workers account for approximately 5% of the Chicago metro area labor market and represent a growing segment of the low-wage workforce. Undocumented immigrants earn low wages, work in unsafe conditions, and have low rates of health insurance. Juxtaposed against these harsh realities is the fact that the undocumented workforce supports thousands of other workers in the local economy, pays taxes, and demonstrates little reliance on government benefits.

This study reports the findings of a survey of 1,653 documented and undocumented immigrants living in the Chicago metro area. Using a standardized questionnaire, immigrants were asked a series of questions regarding their employment status, wages and working conditions, access to health care, utilization of government safety-net programs, demographic characteristics, and legal status. The key questions that guided this analysis include:

- To what extent does working without legal status increase the likelihood of unemployment and depress workers' wages?
- To what extent do undocumented immigrants more often work in unsafe working conditions?
- To what extent do undocumented immigrants utilize government safety-net programs?
- What economic contributions do undocumented immigrants make to the local economy?

Key Findings

1. Labor force participation and unemployment

Undocumented immigrants seek work at extremely high rates (91%), and most do not experience unemployment at rates that are significantly different than the Chicago metro area average. However, undocumented Latin-American women experience unemployment rates that approach 20%, five times as high as the average unemployment rate for the remainder of the undocumented workforce. Factors that significantly increase the likelihood of unemployment include:

- the combined effect of undocumented status, being female, and being of Latin-American origin;
- the lack of dependent care; and
- obtaining work through temporary staffing agencies.

2. Wages

Most undocumented immigrants are employed in low-wage service and laborer occupations. Approximately, 30% of undocumented immigrants work in restaurant-related, hand-packing and assembly, and janitorial and cleaning jobs. The average (median) hourly wage earned by undocumented workers is $7.00.

All else being equal, working without legal status, in combination with the effects of national origin and gender, induces significant wage penalties for Latin Americans:

- Undocumented Latin-American men and women experience statistically significant wage penalties—22% and 36%, respectively—after controlling for length of U.S. work experience, education, English proficiency, and occupation.

- Eastern-European women experience wage penalties as a result of their national origin and gender, but they do not experience penalties associated with their legal status.

- Eastern-European men, documented Latin-American men, and immigrants from Asia, the Middle East, and Western Europe do not experience wage penalties associated with their national origin, gender, or legal status.

Factors including English proficiency, unionization, and obtaining employment in higher-paying occupations help undocumented Latin Americans earn higher wages. Educational attainment, however, does not have significant positive wage effects for undocumented Latin Americans. Importantly, attaining additional levels of education, having English proficiency, and accumulating additional years of U.S. residency *do not neutralize the negative wage effect of working without legal status*.

All else being equal, securing work in higher-wage occupational categories induces significant wage advantages to undocumented workers and neutralizes the negative wage effect of working without legal status. However, undocumented status limits Latin Americans' access to higher-wage white-collar jobs.

3. Working conditions

Undocumented immigrants report working in unsafe conditions at considerably higher rates relative to immigrants with legal status. Moreover, immigrants without legal status also report alleged wage and hour violations at considerably higher rates relative to documented workers.

Lack of access to health insurance is a significant problem for undocumented workers. Only 25% of undocumented workers currently employed are covered by health insurance. The most commonly reported reason for not having health insurance among immigrants who are currently employed is that their employer did not offer health insurance or the employer-sponsored plan was too expensive to access.

4. Use of government benefits and economic contributions

The vast majority of undocumented immigrants reported that they, and adults in their household, do not receive benefits under government safety-net programs, despite their low earnings. Benefit utilization is comparably low among immigrants with legal status.

The consumer expenditures of undocumented immigrants in the Chicago metro area generate more 31,000 jobs in the local economy and add $5.45 billion annually to the gross regional product. While exact tax contributions were not calculated, the survey data indicates that approximately 70% of undocumented workers pay taxes.

The results of this study strongly suggest that attaining legal status would improve the wages and working conditions of undocumented immigrants. Estimating the size of any wage increase and subsequent wage effects as a result of any changes to federal immigration policy, such as legalization or guest-worker programs, is beyond the scope of this study.

The survey was carried out during the 3rd quarter 2001 through 38 community-based organizations, community colleges, social service providers, and churches.

INTRODUCTION

> If you can make a living in America, and you can't find a job in Mexico, family values don't stop at the southern border … People are coming to work to provide food for their families. President George W. Bush (quoted in *Business Week* 2001).
>
> It remains in our national interest to legitimize those resident immigrants … and to welcome them as full participants in our society. President George W. Bush (quoted in *Los Angeles Times* 2001).
>
> The president is only recognizing, humanely and rightly, that there are [undocumented immigrants] who are contributing to our economy, who have been contributing for a long time. National Security Advisor Condoleezza Rice (quoted in *Bloomberg News* 2001).

The on-going debate over whether to grant legal status to undocumented immigrants currently residing in the United States is partly a debate over the degree to which the lack of legal status inhibits workers from obtaining fair wages for their work and from fully exercising their rights in the workplace. Implicit in statements made by President Bush is the contention that the lack of legal status prevents undocumented immigrants from fully realizing the benefits associated with participation in the labor market. However, not everyone agrees. Many of those opposed to a new legalization program maintain that granting legal status to these workers will not necessarily improve their wages because the underlying characteristics that are to blame for their low earnings are left unchanged. In other words, undocumented immigrants earn less because they immigrate with fewer skills, less education, and little or no proficiency of English—not because their status as an undocumented worker exposes them to substandard employment arrangements.

Ultimately, one of the key questions for policymakers is whether granting legal status to any or all of the approximately 6 million undocumented immigrants residing in the U.S. would actually address the root causes of the employment problems faced by these workers? While the anecdotal evidence is voluminous, there is very little current data that could inform this policy debate since traditional sources of economic and demographic data do not provide information specifically characterizing undocumented immigrants. The most current data available that provide systematic accounts of employment conditions of undocumented immigrants date back to 1989, just prior to the last legalization program.

The purpose of this study is to shed light on the impact of working without legal status on immigrants' economic conditions. Specifically, this study addresses three important policy questions. The first is to what extent do undocumented workers experience lower wages relative to other immigrants of similar backgrounds simply because they lack

legal status? In other words, are the low wages typically paid to undocumented workers a function of their skills, prior work history, poor English proficiency, or other work-related characteristics, or are they more so a function of their legal status.

The second question is how do the working conditions for undocumented immigrants compare to the conditions for immigrants who have legal status? This question concerns whether undocumented workers are disproportionately employed at work sites with unsafe conditions and whether undocumented workers experience higher rates of wage and hour violations.

The third question is what impact do undocumented workers have on the regional economy? Undocumented immigrants spend their earnings on goods and services, sending ripples through the regional economy, in the process creating jobs and incomes for other workers. The task here is to quantify the size of that contribution.

To investigate these and other questions regarding the employment, wages, and economic contributions of undocumented immigrants, the University of Illinois at Chicago Center for Urban Economic Development (UIC-CUED), in conjunction with 38 community-based organizations, community colleges, social-service providers, and churches completed a survey of 1,653 immigrants in the Chicago metropolitan area. The survey, unprecedented in terms of its size and design, was conducted during the 3rd quarter of 2001.

Several aspects of this study suggest that the results may prove useful for policymakers outside the Chicago metro area. First, the Chicago metro area serves as a representative urban center for analyzing the labor market outcomes of undocumented immigrants nationwide. The Chicago metro area is a mature immigrant-dense urban center that has historically served as a primary destination for undocumented immigrants. Approximately 302,000 undocumented immigrants currently reside in Chicago according to the U.S. Immigration and Naturalization Service (1996). Second, because of the size and scope of the survey, the results will likely represent the labor market outcomes of undocumented immigrants in other major urban centers.

This study is organized into six sections. Section 1 explores the labor force participation characteristics of undocumented immigrants. Section 2 investigates the reasons for observed wage disparities between undocumented immigrants and those with legal status. Sections 3 through 5 compare working conditions, rate of access to health insurance, and the rate of utilization of government benefits across immigrant populations. Section 6 details the local economic contributions made by undocumented immigrants in the labor force.

SCOPE, METHODOLOGY, AND SAMPLE CHARACTERISTICS

There are several points that should be made at the outset in order to familiarize the reader with the scope and limitations of this study.

This study is not an assessment of currently proposed legalization policies

This study is not intended to analyze the employment, wage, and other economic impacts associated with any specific immigration policy proposal, such as legalization or guest-worker programs. Assessing the long-run wage effects and other local economic impacts of granting legal status to the approximately 220,000 undocumented immigrants who are active in the labor force in the Chicago metropolitan area is beyond the scope of this study. While the present investigation might find that lack of legal status is one of the principal reasons why undocumented immigrants earn less than their documented counterparts, it does not necessarily follow that the legalization of undocumented immigrants would immediately equalize wages among all immigrants.

Point-in-time analysis limits scope of conclusions

One unavoidable drawback of this study is that it examines wage determinants at a single point-in-time, which is a less desirable approach than studying the wage impact of independent variables over the course of multiple years and across economic cycles. Labor markets do not immediately react to changes in worker characteristics. For example, a worker may learn English now, however, she may not see wage-related benefits to learning English until later in her career. A longitudinal study could capture the influence of changing workers' characteristics on wages over time. A point-in-time analysis cannot.

Economic recession has potentially influenced results

Results that describe labor market outcomes of undocumented immigrants are in part a function of prevailing macroeconomic conditions. The survey was conducted during the 3rd quarter of 2001, several months after the U.S. economy slipped into recession. It is likely that the on-going recession may have positively influenced unemployment rates and possibly negatively influenced average wages.

Sampling methodology

Given the methodology used for this study, the sample should not be considered a pure random sample because organizations that agreed to survey their members and constituents for this study were randomly recruited (see Appendix A). Within each survey site, on the other hand, respondents were indeed randomly selected to participate.

Characteristics of sample limit scope of analysis

Conclusions reached in this study relate primarily to lower-wage workers of Latin-American and Eastern-European origin and to recent immigrants (nearly 40% arrived within the last 5 years) who are most likely to seek the services of social-service providers and community organizations. Conclusions about how undocumented immigrants fare in the labor market are made using documented immigrants with similar backgrounds and characteristics as the comparison group. Conclusions arrived at here do not explain how undocumented immigrants fare in the labor market relative to other groups with widely different characteristics, such as U.S.-born workers.

Table 1 provides a breakdown of the sample collected by legal status, national origin, gender, and place of residence. What follows is a brief description of the sample to acquaint the reader with the background of the workforce under analysis in this study.

The share of immigrants who are undocumented varies by national origin. In total, half of the sample population is undocumented, 43% are either permanent residents or U.S. citizens, and 7% have a temporary visa. Most of the undocumented respondents are of Latin-American origin (90%). Among Latin-American (Mexican, Central, and South American) respondents, 60% are undocumented and 33% are permanent residents or U.S. citizens. Among Eastern Europeans, 22% are undocumented and 70% are permanent residents or U.S. citizens.

The average age of respondents ranges from 33 to 36 years old within most national origin groups with the exception of Western Europeans who average 41 years of age. The average length of residency in the U.S. is 10 years. Almost all immigrants surveyed reside in the U.S. year-round, including the Latin-American segment of the population. The average length of U.S. labor market experience is seven years.

Table 1: Sample characteristics by national origin, legal status, gender, and residence

Population	Percent
National/Regional origin	
Mexican	69.8%
Central and South American	5.6%
Middle Eastern	3.6%
Eastern European (predominantly Polish)	13.8%
Asian (predominantly Korean)	4.3%
Western European (predominantly Irish)	1.7%
Puerto Rican	1.2%
Legal status	
Undocumented	49.5%
Permanent resident or U.S. citizen	43.1%
Temporary visa	6.8%
Gender	
Male	41.5%
Female	58.5%
Location of residence	
Residence within the city of Chicago	55.6%
Suburban resident	44.4%
n (sample size) = 1,592	

The rate of English proficiency varies by national origin. Latin Americans have attained lower than average levels of English proficiency relative to groups from other regions of origin. Undocumented immigrants have lower than average English proficiency relative to immigrants with legal status. Latin Americans also have lower levels of educational attainment compared to other groups. Asians, Eastern Europeans, and Western Europeans have the highest levels of educational attainment. Men and women in the sample do not have significantly different levels of educational attainment. Undocumented immigrants have lower levels of educational attainment compared to immigrants with legal status.

The rate of unionization in the surveyed population is lower than the rate for all currently employed persons in Illinois. Twelve percent of immigrants surveyed who are currently employed belong to a union compared to 19% of all Illinois workers. Among those surveyed, Latin Americans have higher rates (13%) of unionization compared to non-Latin Americans (9%). Eastern Europeans are unionized at rate of 10%. Men have a higher rate

of unionization (14%) compared to women (9%). Those with legal status have a higher unionization rate (16%) compared to undocumented immigrants (8%).

The vast majority of the immigrants surveyed who are in the labor force are employed full-time. Nearly 90% of all persons in the labor force work full-time, averaging 42 hours per week. The remaining 10% in the labor force work on average 16 hours per week. The average hours worked per week does not vary significantly by gender, national origin, or legal status.

The geographic distribution of the surveyed population is split nearly evenly between the city of Chicago and the surrounding suburban counties. The survey was undertaken in seven counties: Cook, DuPage, Kane, Lake, McHenry, and Will (the Chicago Primary Metropolitan Statistical Area) and Kankakee County.

LABOR FORCE PARTICIPATION AND UNEMPLOYMENT

Labor Force Participation

Immigrants are active in the job market at rates that exceed those of all working-age adults in the Chicago metro area.

Immigrants, whether undocumented or not, seek employment at rates greater than those for the entire Chicago metro area workforce. Estimated labor force participation rates (defined as the share of the working-age population that is either currently employed or seeking work) reveal that 90% of immigrants overall (91% of undocumented immigrants) are either employed or looking for work (Table 2).

Table 2: Labor force participation rates, 3rd quarter, 2001

Population	Sample size	Labor force participation rate, survey respondents	Labor force participation rate, total metro area population
Total	1,323	90%	69%
Legal Status			
Undocumented	682	91%	NA
Documented	625	89%	NA
Gender			
Men	584	97%	84%
Women	729	85%	54%
National Origin			
Latin American	1,014	90%	73%
Eastern European	189	94%	65%
Asian	59	88%	65%

Note: Metro area labor force participation rates for undocumented workers are not available from the U.S. Department of Labor because the Bureau of Labor Statistics monthly household survey does not request information on the legal status of respondents.

Note: Labor force participation rates for the Western-European and Middle-Eastern populations were not included because their samples (n=23 and n=27, respectively) are too small for reliable analysis.

Source for labor force participation rates in the total metro area population: U.S. Department of Labor, Bureau of Labor Statistics (2001a).

The high rate of labor force participation among undocumented immigrants is partly explained by their reasons for immigrating to the United States. According to the survey

data, 68% of undocumented immigrants emigrated from their home country for reasons that are economic in nature (such as to find work, to receive higher wages, or to leave inadequate employment conditions in their home country). Two formidable barriers may have prevented an even greater proportion of undocumented immigrants from participating in the labor force: inadequate availability of dependent care and undocumented status itself. Of the 9% of undocumented immigrants who indicated that they are unemployed and not looking for work, nearly half reported that they are taking care of children or relatives, and about one quarter reported they are not looking for work because they lack legal status.[1]

Unemployment

Compared to other immigrant workers, undocumented Latin-American women experience the highest rates of unemployment.

Despite their strong commitment to work, immigrants commonly experience high rates of unemployment (Table 3). The overall unemployment rate in the Chicago metro area at the time of the survey was 5.4% (U.S. Department of Labor, Bureau of Labor Statistics 2001a). The unemployment rate among undocumented immigrants (10.0%) is slightly higher that that for immigrants with legal status, but nearly twice that for the metro area labor force as a whole.

The aggregate unemployment rate for undocumented immigrants should be viewed with caution because it masks important differences between segments of this population. In particular, the high rate of unemployment among undocumented Latin-American women exaggerates the high unemployment statistic observed for all undocumented immigrants. A large share—nearly 20%—of undocumented Latin-American women were unemployed and looking for work at the time of the survey. On the other hand, the unemployment rate among undocumented workers, excluding Latin-American women, was only 3.9%.

[1] Women comprise 80% of all immigrants who are out of the labor force. The primary reasons cited by immigrant women for being out of the labor force are child-care issues (40%) and lack of work authorization (14%).

Table 3: Unemployment rates by population segment

Population	Sample size	Unemployment rate: total surveyed immigrant labor force	Unemployment rate: undocumented immigrants in the labor force
Total	1,248	9.8%	10.0%
Legal Status			
Undocumented	640	10.0%	***
Documented	583	8.7%	***
National Origin			
Latin American		10.6%	10.8%
Male	470	4.9%	4.1%
Female	462	16.7%	19.5%
Eastern European		7.9%	2.3%
Male	68	7.4%	***
Female	121	8.3%	4.0%
Asian	53	3.8%	***

*** Sample size too small to produce statistically significant results.

Note: Unemployment rates for the Western-European and Middle-Eastern populations were not included because their samples are too small for reliable analysis.

Source for labor force participation rates in the total metro area population: U.S. Department of Labor, Bureau of Labor Statistics (2001a).

Several reasons help explain the above-average rate of unemployment among undocumented Latin-American women. First, women's unemployment rates historically have exceeded those of men and nothing suggests that the case would be different in this population. Second, historical data also indicate that undocumented im migrants experience higher rates of unemployment relative to other workers. The most recent survey of undocumented immigrants conducted by the U.S. Department of Labor in 1989 indicated that undocumented immigrants exhibited significantly higher labor force participation rates, yet also experienced higher unemployment rates relative to the total population (see Borjas and Tienda 1993). Nevertheless, that one in five undocumented Latin-American women reported they are seeking employment yet are unable to find work suggests that these workers face potentially serious obstacles in the job market. A different question that will be considered below is whether being undocumented, of Latin-American origin, or female in fact induces higher rates of unemployment.

Further examination of these data indicates that, all else being equal, three characteristics *operating in combination with each other*—undocumented status, Latin-American origin, and being female—increase by 220% the likelihood that a worker will be unemployed relative to workers who do not share these three characteristics (see Appendix B for a full explanation of the binary logistic regression model developed to test which variables increase the likelihood of unemployment in the survey population). Importantly, *independent of each other*, undocumented status, being of Latin-American origin, and being female, do not affect the likelihood of unemployment. For example, being of Latin-American origin, on its own, does not increase the likelihood of a worker being unemployed. Thus, Latin-American immigrants do not experience higher rates of unemployment simply because of their region of origin.

Other than the combined effect of being undocumented, of Latin-American origin, and female, the model found that two other factors exert a statistically significant influence on workers' employment status. The first is whether immigrant workers have a child (or children) living with them in the U.S. All else being equal, workers (both male and female) with children residing with them in the U.S. are 230% more likely to be unemployed. Working through a temporary staffing agency also significantly influences the likelihood of unemployment. Workers who obtained their last primary job through a temporary staffing agency were 172% more likely to be unemployed, all else being equal.

The primary reasons for unemployment given by respondents support the conclusions arrived at from these data. From the point-of-view of the respondents, the lack of legal status is a leading cause of their unemployment. One-third of all unemployed undocumented immigrants said they are unable to find work because they lack legal status.[2] Nevertheless, it is often thought that the higher rate of unemployment among undocumented immigrants has more to do with employability problems arising from relatively low skill levels, limited education, and lack of English proficiency. However, the model used for this analysis indicates that the variables related to prior job experience, education, and English proficiency do not exert a statistically significant influence on whether workers are unemployed. The comments made by many unemployed respondents partially echo the results of the statistical examination. Only 9% of undocumented immigrants surveyed said they lacked the necessary job skills to find employment. On the other hand, workers often

[2] Another one-third said simply that jobs were not available—potentially a manifestation of the recession that had particularly severe impacts on the manufacturing sector in which many undocumented immigrants are employed.

cited limited English proficiency as a barrier to finding employment. One in five unemployed respondents reported they were unemployed because of language barriers (presumably they encountered difficulties finding work because they are not proficient in English).

What remains unexplained is why undocumented Eastern-European women do not experience unemployment rates that are as high as their Latin-American counterparts. As explained earlier, women and workers without legal status are more often unemployed, yet the unemployment rate among undocumented Eastern-European women is only 4%. One possible explanation, later dismissed by the data, is that undocumented Eastern Europeans more often identify themselves as out of the labor force, relative to their Latin-American counterparts, thereby lowering the real unemployment rate among undocumented Eastern-European women. The data, however, indicate no substantial difference between how Eastern-European women and Latin-American women reported their labor force status. Another possible explanation, also dismissed by the data, is that undocumented Eastern-European women have greater access to occupations with low rates of unemployment. Yet, the data indicate that undocumented Eastern-European and Latin-American women are concentrated in the same narrow band of occupations.

A staff member of an English as a Second Language program offered another explanation. He explained that "Eastern Europeans are easily classified as 'white,' whereas Mexicans are subjected to racist prejudices associated with being 'non-white,' " suggesting that Latin Americans experience greater difficulty securing employment because of their nationality. Unfortunately, the data from the survey do not allow further investigation of this issue.

Whatever the reasons, the effect of undocumented status, combined with the effects of being of Latin-American origin and female, increases the likelihood of unemployment, regardless of the influence of other worker characteristics on employment. The next section examines the extent to which undocumented status, in relation to other factors, might inhibit workers from earning wages comparable to immigrants with legal status.

WAGES

Undocumented status, in combination with being Latin American and female, not only contributes to the increased likelihood of workers being unemployed, but also appears to significantly lowers workers' wages. Overall, the median hourly wage of undocumented immigrants is $7.00, whereas for immigrants with legal status, the median hourly wage is $9.00. In addition, 10% of undocumented immigrants reported that they are/were paid less than the federal minimum wage ($5.15 an hour) on their current/most recent job.

Aside from the effects of undocumented status, a host of other factors appear to influence workers' wages. Based on the survey data (Table 4), immigrants earning the highest wages tend to be:

- male;
- of non-Latin American origin;
- unionized;
- proficient in English;
- college educated; or
- employed in higher-wage occupations such as managerial, professional, technical, administrative support and sales, and precision-manufacturing and craft (building trades and repair) occupations.

Conversely, being of Latin-American origin, being female, lacking English proficiency, being employed in a service or farming occupation, or having only a high school education or less, negatively influences workers' wages.

Table 4: Median hourly wages earned at respondents' current or last primary job

Population	Sample size	Median hourly wage	% earning below minimum wage ($5.15/hr)	% earning more than $10/hr
Labor Force Participants Surveyed	1,229	$8.00	7%	23%
Legal Status				
Undocumented	636	$7.00	10%	13%
Documented	569	$9.00	3%	36%
Gender				
Male	487	$8.50	5%	29%
Female	512	$7.50	9%	19%
National Origin				
Latin American	766	$7.50	8%	23%
Latin American male	397	$8.00	6%	31%
Latin American female	369	$7.00	10%	15%
Undocumented Latin American	571	$7.00	10%	14%
Eastern European	146	$9.25	4%	47%
Eastern European male	53	$10.50	2%	61%
Eastern European female	93	$8.69	5%	38%
Undocumented Eastern European	43	$10.00	9%	49%
Asian	45	$10.58	2%	55%
Employment Arrangement				
Unionized	113	$9.34	2%	45%
Temp agency workers	146	$7.00	5%	19%
Education				
English proficient	242	$10.00	5%	50%
High school education only	622	$8.00	6%	37%
Some college education	240	$10.00	5%	53%
Occupation				
Managers and professionals	76	$11.00	4%	64%
Technical, administrative support, and sales workers	142	$9.00	3%	40%
Service workers	307	$7.00	13%	17%
Farm workers	32	$6.50	3%	0%
Precision manufacturing and craft workers	123	$10.00	2%	57%
Operators, fabricators, and laborers	319	$7.78	5%	23%

Note: Median wages for the Western-European and Middle-Eastern populations were not included because their samples are too small for reliable analysis.

The degree to which undocumented status negatively affects workers' wages in relation to other factors has been widely debated in the academic literature. A number of researchers suggest that employer discrimination on the basis of legal status is a root cause of observed wage disparities. In other words, undocumented immigrants earn less because employers actively discriminate against them, not by denying them employment, but by deliberately paying them less per hour when compared to their counterparts who have legal status (see Rivera-Batiz 1998; Bansak and Raphael 1998; Phillips and Massey 1999). Of course, this conclusion presupposes that employers can assess with a high degree of certainty the legal status of their employees, an assumption that may or may not hold. Other researchers suggest that undocumented workers earn less in part because they limit their job search to occupations where there is little risk of apprehension and deportation (see Kossoudji and Cobb-Clark 1996). Such occupations tend to be concentrated in low-wage service and manufacturing industries. Finally, other researchers have suggested that legal status explains very little of why undocumented workers earn less than their documented counterparts. These researchers explain that undocumented immigrants earn less because they immigrate with fewer skills, less work experience in their country of origin, little or no English speaking or reading ability, or lack the social networks and access to job market information that help most workers find higher-wage employment (see Chiswick 1988; Borjas 1990).

The remainder of this section explores the influence of undocumented status on wages. The central question considered here is whether working without legal status results in a wage penalty, even after controlling for other important factors that influence wages. To this point, analysis of the survey data has only explained that workers with certain characteristics earn more or less than others (e.g., on average, undocumented immigrants earn $2.00 per hour less than immigrants with legal status). What has not been explained is why this variation occurs. The $2.00 per hour variation in wages is not necessarily the result of differences in immigration status. It is possible that differences in other worker characteristics explain the wage variations observed between groups of workers. For example, immigrants with legal status have higher levels of education compared to undocumented immigrants, and perhaps this difference in educational attainment accounts for the observed variations in wages between undocumented and documented workers. It is to such an analysis that we now turn.

Description of the Wage Model

In order to determine why certain workers earn less than others and, more specifically, to quantify the size of any potential wage penalty that might be experienced by workers simply because they lack legal status, a multiple linear regression model was developed to estimate the partial effects of a host of worker characteristics on hourly wages. The wage model identifies which differences in workers' characteristics exert a statistically significant influence on wages. It does so by measuring the influence of specific variables while holding constant all other factors included in the model and testing whether the variable produces a predictable, patterned effect on wages. If the model finds wage penalties associated with undocumented status, this would establish that, all else being equal, workers with legal status earn higher wages compared to undocumented workers simply because of their differences in immigration status.

The first step in developing the wage model is to define quantifiable variables that might influence hourly wages. The variables and their expected influence on wages are shown in Table 5 (see Appendix C and D for a description of each variable and a detailed explanation of the wage model used to measure the influence of each variable).

Table 5: Model variables and their expected influence on hourly wages

Variable	Expected influence on hourly wages
Undocumented status	Negative
National origin	Negative
Gender	Positive for males, negative for females
Age	Positive until the age of 45, then negative
Total U.S. labor market experience	Positive
English proficiency	Positive
Educational attainment level	Positive
Working through a temporary help agency	Negative
Full-time employment	Positive
Unionization	Positive
City of Chicago residence	Negative
Occupation	Positive for managerial, professional, technical, administrative support, sales, precision-manufacturing and craft occupations, negative for service and farming occupations.
Immigrant density of occupation	Negative
Primary occupation in country of origin	Positive for higher-wage occupations and negative for farming occupations or if workers had no prior job experience.

Findings

Undocumented status induces significant wage penalties for Latin-American immigrants.

The wage model indicates that there are numerous factors that induce large, statistically significant variations in the wages earned by immigrants (Table 6). Wage gains are associated with unionization (20% increase), English proficiency (15% increase), additional education (5% increase for each additional level completed), and U.S. labor market experience (1% increase for each additional year of experience). Wage gains are also associated with employment in precision-manufacturing or craft occupations (26% increase) and in managerial and professional occupations (20% increase).

Conversely, a combination of national-origin, gender, and immigration-status characteristics result in statistically significant wage penalties. The model finds differing degrees of wage penalties (see Table 6 and Figure 1) associated with workers who are:[3]

- Latin American, female, and undocumented (36% penalty);
- Latin American, female, and with legal status (28% penalty);
- Latin American, male, and undocumented (22% penalty); and
- Eastern European and female, regardless of immigration status (20% penalty).

The wage penalties associated with the groups of workers identified above are measured in relation to the hourly wages of workers with the following characteristics who do not experience wage penalties as a result of their national origin, gender, or immigration status:

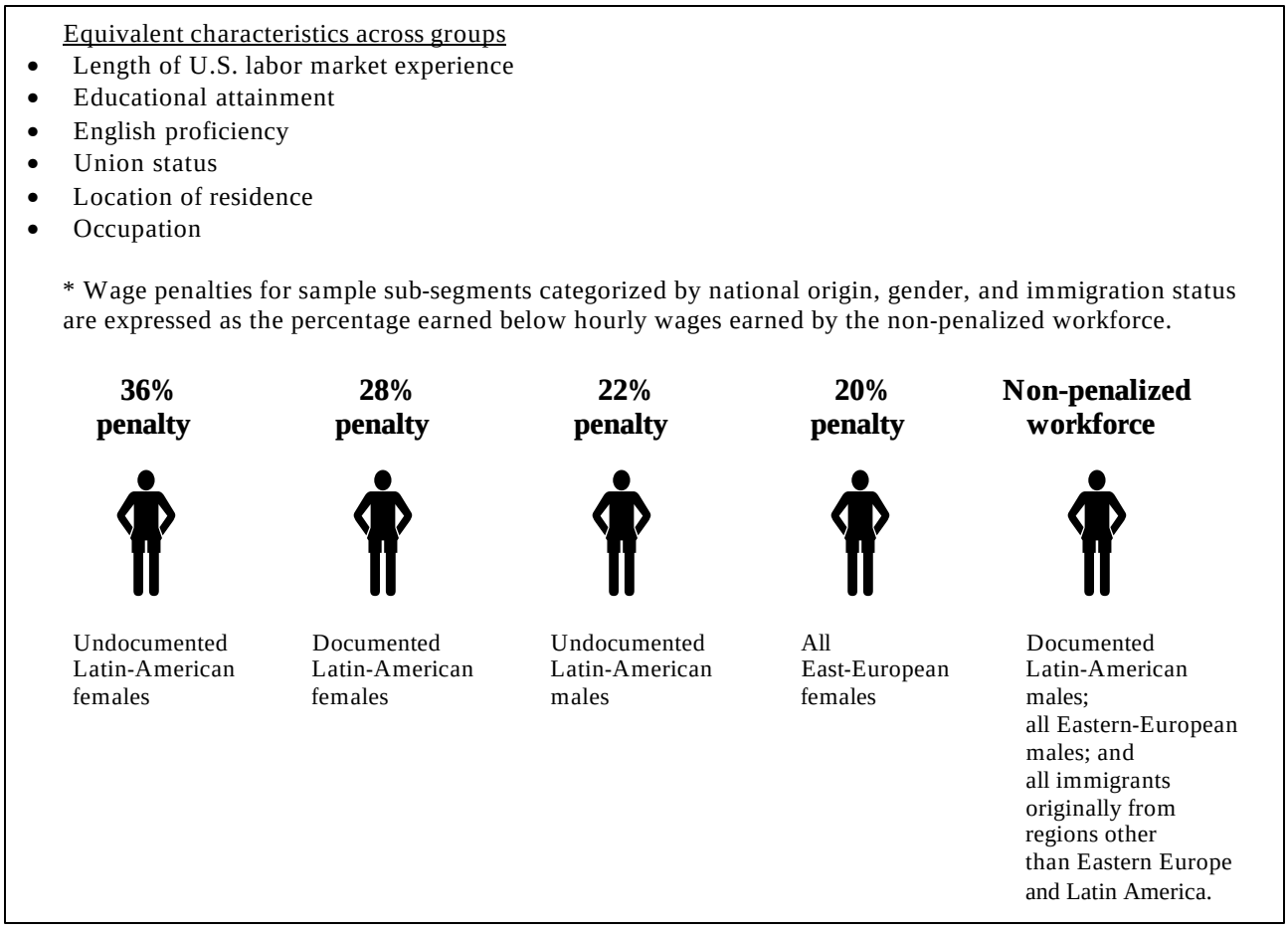
[3] The following examples further explain how to interpret the results of the model. Referring to Table 6, the results indicate that unionized workers, for example, earn a 20% per hour wage advantage for being unionized, after controlling for other factors. This means, *assuming that both groups are equal in all other characteristics* (i.e., national origin, gender, legal status, length of U.S. labor market experience, English proficiency, education, location of residence, and occupation), unionized workers earn 20% more per hour relative to all non-union workers because of their union membership. Interpreting the results for national origin, gender and legal status variables is slightly more complex. The wage penalty for being undocumented, Latin American and female is 36%. This means that, *all else being equal,* undocumented Latin-American women earn 36% less per hour compared to all workers that are not undocumented Latin-American women, except for undocumented Latin-American men and Eastern-European women. The two latter groups also experience penalties. In relation to undocumented Latin-American men, undocumented Latin-American women experience a 14% per hour penalty (36% minus 22%), and a 16% (36% minus 20%) penalty in relation to Eastern-European women. For further detailed reporting of the results of the wage model, see Appendix D.

- Latin-American males with legal status;
- Eastern-European males, regardless of their immigration status; and
- Workers originally from countries outside of Eastern Europe and Latin America, regardless of gender or immigration status.

Table 6: Wage effects of statistically significant variables

Labor segment	% effect on hourly wages of workers in labor segment
Undocumented Latin-American female	-36%
Undocumented Latin-American male	-22%
Documented Latin-American female	-28%
Eastern-European female	-20%
English proficient	15%
Education (each additional level completed)	5%
Unionized	20%
Residence in Chicago proper	-12%
Precision-manufacturing or craft worker	26%
Farm worker or landscaper	-12%

Figure 1: Combined wage effect of national origin, gender and immigration status



To this point, the model has indicated that a wide range of factors influences workers' wages, and that immigration status is a statistically significant factor only for the Latin-American immigrant workforce. Given that undocumented Latin Americans experience the highest wage penalties, it is important to determine which factors positively influence their wages. Comparing the earnings and characteristics of undocumented Latin Americans in isolation establishes that variables that influence wages in the total workforce (e.g., gender, U.S. labor market experience, English proficiency, unionization, and occupation) also influence the wages of undocumented Latin Americans with one exception—educational attainment (Table 7). Whereas Latin Americans with legal status earn 11% more for each completed level of education (e.g., high school diploma, college degree, etc.), educational attainment does not significantly affect the wages of undocumented Latin-American immigrants. This suggests that having legal status "activates" the positive influence of education, while working without legal status blocks its beneficial effect on wages.

Table 7: Wage effects in the Latin American workforce

Variable	Undocumented Latin-American workforce	Documented Latin-American workforce	Undocumented Latin-American female workforce
Male	13%	27%	NA
U.S. labor market experience (per each additional year)	2%	1%	2%
Proficient in English	4%	***	17%
Education (per each additional completed level)	***	11%	***
Unionized	28%	12%	***
Residing in Chicago-proper	***	-14%	***
Managerial or professional worker	14%	***	48%
Precision-manufacturing or craft worker	7%	***	***

*** (no statistically significant wage effect)
NA (not applicable)

The set of positive factors narrows even further for undocumented Latin-American women. This population only earns wage advantages from English proficiency,[4] working in managerial or professional occupations, and additional years in the U.S. labor market. As is the case with all undocumented Latin Americans, education does not significantly impact the wages of undocumented Latin-American women. Even unionization does not produce significant wage advantages for this population.

Education and Work Experience

Education, English proficiency, and length of U.S. residency do not neutralize the effect of undocumented status on wages.

It is expected that the negative influence of undocumented status on the wages of Latin-American immigrants would diminish with increased levels of education, additional years of residency in the U.S., or with the attainment of proficiency in English. The wage model suggests, however, that these factors do not diminish the negative influence of undocumented status on workers' wages. Table 8 reports results of the wage model for the earlier-arriving immigrant workforce (those arriving prior to 1993), the college-experienced immigrant workforce, and the English-proficient immigrant workforce. The significance (measured by the size of the t-statistic presented in the table) of undocumented status remains largely unchanged among workers with more education and work experience, or for those who have achieved proficiency in English.

Readers should be careful not to misconstrue these results. English proficiency and additional years in the U.S. labor market do indeed help undocumented Latin-American immigrants earn higher wages. However, working with undocumented status *persistently penalizes workers despite their accumulation of education and additional years of U.S. residency*.

[4] Previous research on the determinants of undocumented immigrants' wages supports some of the findings presented here. Tienda and Singer (1995), in their analysis of data collected from undocumented immigrants surveyed by the U.S. Department of Labor prior to the legalization program in 1989, found that undocumented men gained an 8% wage advantage for attaining English proficiency. Analysis of the same data by Chiswick and Miller (1999) also found that undocumented men gained an 8% wage advantage and that undocumented women gained a 17% wage advantage for attaining English proficiency. In addition, Chiswick and Miller found that undocumented immigrants gained a 2% wage advantage for each completed year of education.

Table 8: Significance of undocumented status for English proficient, college-educated, and earlier-arriving immigrant workforces (t-statistics)

Variable	Total workforce	Earlier-arriving workforce (arrived in U.S. prior to 1993)	College-educated workforce (at least two years of college-level coursework)	English-proficient workforce
Undocumented Latin-American male	-10.48	-7.62	-8.41	-5.95
Undocumented Latin-American female	-5.70	-5.27	-5.31	-5.01

Note: T-statistics indicate the significance of the variables' influence on wages. The sign associated with the statistic indicates the direction of the influence, positive or negative. The greater the value of the statistic (in either direction, positive or negative), the greater the influence.

Discussion of Unmeasured Variables

It is important to note that there are variables not included in the wage model that, if measured and included, might have diminished the effect of undocumented status on wages. Perhaps the most significant of these missing variables is a measure of the influence of workers' social networks. Prior studies of immigrant labor markets have indicated that social networks (the extent to which a worker has friends or family in the labor force) are an important influence on employment, occupational mobility, and wages (see Sassen 1995; Waldinger 1999; Wilson 1999). Given what is known about the importance of social networks on wages, it is possible that the influence of legal status observed here might be less than suggested by the wage model. Undocumented workers simply may have limited social networks that constrain their job opportunities to low-wage, immigrant-concentrated occupations. Phillips and Massey (1999) conducted one of the most thorough studies of the impacts of legal status on wages, while accounting for the influence of social networks. Their analysis of household survey data demonstrated that male Mexican immigrants experience a 22% wage penalty because of their undocumented status. Yet, at the same time, male Mexican immigrants experience comparable wage advantages for having certain characteristics that are a proxy for social networks such as having a parent or sibling already residing in the U.S. or for knowing other Latinos living in the U.S. prior to their own arrival.

In addition to social networks, prior research demonstrates that marriage also positively influences workers' wages. Marriage, particularly for men, has a positive influence on wages primarily because the responsibility of supporting a family acts as an

incentive for workers to search for high-wage jobs and to learn new skills that will help them earn higher wages (Rivera-Batiz 1998). The survey used for this study did not include a question to ascertain workers' marital status. However, it is possible to indirectly test the effects of marriage on wages by adding a proxy variable to the model indicating whether workers have children living with them in the U.S. Fifty-seven percent of surveyed workers reported that at least one child is living with them in the U.S. The model indicates that this variable does indeed positively affects wages; however, it is not a statistically significant variable, nor does it significantly alter the influence of undocumented status on the wages of Latin-American immigrants.

In all likelihood, social networks and marriage exert positive influences on the wages of undocumented Latin-American immigrants. At the same time, it is highly unlikely that these factors outweigh the negative influence of undocumented status on wages. Research demonstrating the negative impact of undocumented status on wages after implementation the last legalization program, the 1986 Immigration Reform and Control Act (IRCA), is far too consistent with the findings in this study to dismiss the explanatory power of the variable on the basis of untested factors. As explained earlier, Phillips and Massey (1999) found that undocumented status results in a 22% wage penalty among male Mexican immigrants, even after controlling for workers' social networks, English proficiency, education, and U.S. labor market experience. Rivera-Batiz (1998), in an analysis of data collected from a survey of undocumented immigrants prior to and after the passage of IRCA, found that approximately 40% of the wage gap between documented and undocumented Mexican immigrants is explained by differences in legal status (after controlling for educational attainment, English proficiency, date of immigration, occupation, and marital status).

Occupations

Workers' occupations are strong determinants of wages, regardless of factors related to workers' employment experience and abilities.

The results of the wage model further indicate that the benefits of finding work in higher-wage occupations transcend the penalties associated with other significant variables identified by the model. Regardless of their educational attainment, English proficiency, and length of U.S. labor market experience, undocumented Latin-American immigrants working in higher-wage white collar jobs (managerial or professional jobs) or higher-wage blue-collar jobs (precision-manufacturing or craft jobs), on average, earn 11% more than their

counterparts in the service, farming and landscaping, and laborer, operator and fabricator occupations (see Table 7). Undocumented Latin-American women earn nearly a 50% wage advantage for working in higher-wage white-collar jobs relative to their counterparts in other occupations.

Perhaps more importantly, working in higher-wage occupations appears to neutralize the negative wage effects of undocumented status among Latin Americans. In higher-wage occupations, wage differences are largely determined by gender, employment arrangement (covered by union contract or working for a temporary staffing agency), educational level, and the extent of workers' U.S. labor market experience rather than by immigration status. In other words, all else being equal, immigration status does not significantly influence wages in either higher-wage white-collar or blue-collar occupations (see Appendix D).[5]

Given these findings, an important question that our analysis has so far not considered is whether all immigrant workers have access to higher-wage jobs? Must workers be proficient in English or have some years of college experience to access a managerial job? Must a worker have previous experience in a similar occupation in order to secure a precision-manufacturing job? As explained above, undocumented workers do not necessarily earn wage increases simply for completing additional levels of education. However, does education indirectly help workers earn higher wages by helping them access higher-wage jobs? Most importantly, for this study, does undocumented status prevent workers from accessing higher-wage jobs?

A review of the occupational distribution of the immigrant workforce suggests that factors related to workers' experience and abilities as well as national origin, gender, and immigration status influence workers' job opportunities. The immigrant workforce as a whole is crowded into a very narrow band of low-wage service and manufacturing occupations. Almost one-third of surveyed workers are employed in cleaning, janitorial, hand-packing, assembly, or restaurant-related jobs. Fifty-eight percent of the surveyed workforce is concentrated in just 20 occupations (out of 889 possible occupations), compared to 34% for the entire Chicago metro area workforce (U.S. Department of Labor, Bureau of Labor Statistics 2001b). The undocumented workforce is even more highly concentrated in these mostly low-wage occupations. Approximately 66% of all undocumented workers surveyed are employed in 20 occupations (Table 9).

[5] Unionization also neutralizes the negative effect of working without legal status for Latin-American men. On the other hand, unionization does not neutralize the effect working without legal status for Latin-American women.

Table 9: Top 20 occupations held by undocumented immigrants

Occupation	Percent of undocumented workforce
Janitors and cleaners (except household)	7.6%
Hand packers and packagers	6.6%
Cooks (including short-order)	6.4%
Machine operators (not specified)	6.2%
Child care workers, private household	4.0%
Waiters and waitresses	4.0%
Packaging and filling machine operators	3.5%
Misc. food prep occupations	3.2%
Kitchen workers, food prep	3.0%
Farm workers	3.0%
Assemblers	3.0%
Groundskeepers and gardeners, except farm	2.0%
Painters, construction, and maintenance	2.0%
Cashiers	1.9%
Private household cleaners and servants	1.9%
Waiters' and waitresses' assistants	1.9%
Pressing machine operators	1.9%
Misc. metal, plastic, stone, and glass working machine operators	1.7%
Construction trades, not elsewhere classified	1.3%
Social workers	1.2%
Total	66.3%
n = 1,166	

The concentration of undocumented workers in low-wage occupations is even more pronounced among women and among workers of Latin-American origin, suggesting that non-ability related factors might somehow restrict access to a broader range of occupations. On the other hand, the data suggest that factors reflecting workers' education, prior work experience, and English proficiency might also help immigrants enter a broader range of occupations.

To test which variables affect workers' access to higher-wage occupations, a binary logistic regression model was developed to measure the likelihood that immigrants would find work in higher-wage occupations (see Appendix E for a detailed explanation of the model and its results). The results of the occupational achievement model support the claim that education, English proficiency, and prior work-experience strongly influence movement into higher-wage jobs. However, the model also indicates that national origin, gender, and

legal status in combination influence occupational access. The variables that exert a statistically significantly influence on workers' access to higher-wage white-collar jobs are:[6]

Positive

- being of Asian, Middle-Eastern, or Western-European origin;
- being of Latin-American origin and possessing legal status;
- being female;
- additional levels of education;
- being proficient in English; and
- having immigrated to the U.S. prior to 1993.

Negative

- being undocumented and of Latin-American origin; and
- being of Eastern-European origin.

For all surveyed immigrant workers, only gender and prior work experience in the country of origin affect access to higher-wage blue-collar jobs. Male workers and workers who do not work in a farming-related occupation in their country of origin have the greatest opportunity to access such occupations.

The results indicate that undocumented status reduces the likelihood that Latin Americans will be employed in higher-wage white-collar jobs. On the other hand, working without legal status does not restrict workers' access to higher-wage blue-collar jobs, suggesting that undocumented Latin-American women are at a dual disadvantage. Their undocumented status limits Latin-American women's access to higher-wage jobs in the white-collar segment, and their gender limits their access to higher-wage blue-collar jobs.[7]

[6] In the wage model, higher-wage white-collar jobs are defined as managerial and professional jobs in addition to technical, administrative support, and sales jobs.

[7] It is important to note that the influence of workers' social networks was not measured in this assessment of occupational opportunity and might, in part, have explained the occupational achievement of this population. Previous studies of undocumented workers have indicated that broad social networks that extend past the undocumented population positively affect job mobility.

Summary of factors influencing the wages of undocumented immigrants

This study finds that undocumented status negatively influences immigrants' wages in two ways. First, it directly negatively affects the hourly wages of Latin-American immigrant workers, regardless of education, English proficiency, occupation, work experience in country of origin, or length of U.S. work experience. Second, undocumented status significantly limits workers' access to higher-wage occupations, particularly for undocumented Latin-American women.

Despite the influence that immigration status, national origin, and gender have on wages and job opportunities in the immigrant workforce, factors that more directly measure workers' skills and abilities also exert a significant influence. Additional levels of completed education and attaining English proficiency do, for most workers, improve access to higher-wage jobs and result in higher wages. It is important to note, however, that these factors do not neutralize the negative influence of undocumented status on workers' wages.

In contrast to the findings for Latin Americans, working without legal status does not affect Eastern-European immigrants' wages or their access to higher-wage jobs. While being Eastern European and female induces wage penalties, and all Eastern Europeans face barriers to accessing higher-wage white-collar jobs, these penalties and barriers are experienced equally by documented and undocumented Eastern Europeans.

Working with undocumented status does not appear to affect workers' access to higher-wage blue-collar jobs. On the other hand, undocumented status will limit Latin-American workers' access to higher-wage white-collar jobs. For undocumented Latin-American women, this creates a unique disadvantage relative to their male counterparts who at least have access to high-paying blue-collar jobs despite their lack of legal status.

Wage penalties for undocumented status: the result of employer discrimination or workers' choices?

To this point, this investigation has explored the degree to which working with undocumented status explains the wage disparities observed in the immigrant workforce. Determining the extent to which the cause-and-effect relationship between immigration status and wages is the result of employer-initiated wage discrimination against undocumented workers or the result of undocumented workers' decisions to remain in low-wage occupations is beyond the scope of this analysis. Nonetheless, the subject is worthy of some discussion.

Several findings suggest that employer discrimination may not fully explain why undocumented workers experience wage penalties. The wage model indicates that undocumented workers obtaining employment without using any identification (which represents approximately one-third of the total undocumented labor force) do not experience statistically significantly differences in wages relative to undocumented workers who provide false identification in order to obtain work. In other words, all else being equal, employers pay equivalent wages to undocumented immigrants who do not provide identification and to workers who provide some form of false identification to hide their illegal immigration status from their employer. This suggests either that employers do not engage in wage discrimination on the basis of immigration status, or simply that the use of false identification is ineffective in masking the legal status of undocumented workers.

Perhaps the reason undocumented workers experience wage penalties is because these workers restrict their job search to lower-wage laborer and service jobs to avoid apprehension by the INS. While this hypothesis also appears plausible, the risk of apprehension seems minimal. Only 7% of workers surveyed for this study (mostly workers with legal status) reported that they had been employed at some point in their U.S. work history at a workplace where INS initiated a raid. Therefore, it seems unlikely that the risk of apprehension would deter many undocumented workers from seeking employment in higher-wage occupations. Rather, it is more likely that the wage penalties associated with working without legal status are the result of a dynamic relationship between employers' discriminatory practices and workers' decisions to remain in low-wage occupations. Representatives of a social service agency that surveyed their clients for this study explained the relationship in this way:

> Undocumented workers look for what they can find. They accept whatever it is and owners know this and can manipulate them. If a worker gets upset, the owner knows he can scare the worker by threatening his job. You don't want to lose your job so you settle for what you get and you figure that another job is going to have the same problems and the same low wages.

WORKING CONDITIONS

Undocumented workers more often experience unsafe working conditions than do immigrants with legal status (Table 10). Twenty-eight percent of immigrants surveyed indicated that they are employed at work sites with unsafe conditions. Of those reporting that their current job was unsafe, 69% are undocumented and 60% are men. Latin-American immigrants are most likely to work in unsafe conditions.

Table 10: Share of immigrant workforce reporting unsafe working conditions

Population	Sample size	Undocumented workers	Documented workers	Total
Total	1,131	36%	19%	28%
Latin Americans				
Male	441	37%	31%	35%
Female	419	36%	22%	30%
Other national origin				
Male	100	43%	13%	19%
Female	161	10%	4%	5%

Workers who reported working in unsafe conditions at some point in their U.S. labor market experience offered various reasons as to why they considered their work site to be unsafe. Table 11 identifies the reasons respondents. Respondents were given a choice of three potential responses, of which they could have chosen all three.

Table 11: Type of unsafe conditions reported

Reason	% of total reasons cited
Did not have necessary safety equipment	52%
Needed more training to do the job	24%
Other reasons (open-ended responses)	
Dangerous machines	9%
Too hot or cold in workplace	3%
Floors were slippery	2%
Risk of being burned	2%
Poor ventilation, working too fast, intimidation	9%
n = 607 (reasons reported)	
n = 489 (persons responding)	

Despite the high incidence of unsafe working conditions reported, only 6% of immigrants who indicated that they work in unsafe conditions said that they contacted the Occupational Safety and Health Administration (OSHA) to report the problem(s). Of the reasons identified for not reporting the safety issue to OSHA:

- 32% relate to the perception that contacting OSHA would not result in the correction of the problem(s);
- 32% relate to the fear that employers would punish workers for reporting the conditions; and
- 30% relate specifically to the fear that workers might be deported if they report the conditions.

Reports of serious injuries on the job vary mainly by national origin and gender, while legal status appears to be a less significant factor (Table 12). The definition of a serious injury used in the survey is the one adopted by OSHA. It includes any injury that requires medical attention or medical treatment, results in a worker losing consciousness, limits a worker's ability to work or move, or requires a transfer to another job.

Table 12: Share of currently employed immigrants reporting serious injury in U.S. work history

Population	Sample size	Undocumented	Documented	Total
Latin Americans				
Male	431	18%	16%	17%
Female	370	9%	14%	11%
Other immigrants				
Male	100	17%	12%	13%
Female	165	6%	5%	6%

Further statistical analysis suggests that the incidence of serious injuries on the job is most strongly positively correlated to being male (r^2 = .06, significant at the .05 level) or of Latin American origin (r^2 = .08, significant at the .01 level). No significant correlation exists between the incidence of a serious injury and workers' legal status.

Seriously injured immigrant workers do not appear to be accessing the workers' compensation system and, when they do, they do not necessarily receive benefits. Of those seriously injured on the job, only 29% said they filed a workers' compensation claim,[8] while only 56% of those who filed a claim received compensation. Respondents who were injured on the job were not asked why they did not file workers' compensation claims. However, the low incidence of claim filing among undocumented workers suggests that workers' legal status may be a contributing factor. Undocumented workers comprise 52% of all workers who said they suffered a serious injury, but these workers were significantly underrepresented in the share of injured persons filing claims (28%).

Alleged wage and hour violations also appear to signal additional problems for the immigrant workforce and for undocumented workers in particular. Table 13 shows the incidence of alleged wage and hour violations during the last year among immigrants. Analysis of the data indicates a strong positive correlation between undocumented status and complaints related to the underpayment or non-payment of wages (r^2 = .17, significant at the .01 level) and working without breaks (r^2 = .15, significant at the .01 level).

Table 13: Alleged wage and hour violations in the last 12 months for immigrants currently in the labor force

Population	Sample size	% reporting no payment or underpayment of wages	% reporting forced overtime	% reporting working without breaks
Total	1,186	18%	18%	12%
Legal Status				
Undocumented	604	26%	21%	18%
Documented	563	9%	16%	7%
Gender				
Male	564	21%	22%	15%
Female	613	15%	16%	11%
National Origin				
Latin American	892	20%	18%	13%
Eastern European	180	13%	20%	15%
Employment Arrangement				
Temp agency workers	179	22%	20%	15%

[8] The low rate of workers' compensation claim application could be explained in part by the possibility that a large share of workers' injuries reported here did not result in lost time at work and, therefore, no loss in wages. Furthermore, we cannot ascertain from the survey responses whether injured workers were actually eligible for workers' compensation.

HEALTH INSURANCE

Compounding the problems many undocumented workers face in the labor market is their lack of health-insurance coverage. While this appears to be a problem for nearly half of all surveyed immigrant workers, Table 14 shows that accessing health insurance is a more widespread problem for those without legal status. Seventy percent of legal immigrants reported that they have health-insurance coverage, while only 25% of undocumented immigrants reported that they have coverage. The most common reason cited by respondents explaining why they do not have health insurance is that employers do not offer their workers health insurance or employer-provided insurance is too expensive.[9] More than half of documented and undocumented workers who currently have health-insurance coverage are insured through their employer.[10]

Table 14: Health insurance rates for those currently employed

Population	Sample size	% with health insurance
Total	1,265	54%
Legal status		
Undocumented	621	25%
Documented	624	70%
National origin		
Latin American	947	42%
Eastern European	187	55%
Asian	58	70%
Western European	22	54%
Middle Eastern	27	30%
Unionization		
Union	136	76%
Non-Union	1,050	43%

Rates of health-insurance coverage among immigrants are considerably lower than the Illinois average for persons in families with at least one worker. According to the Henry

[9] Employed respondents that indicated they were not receiving health insurance through their employer were not asked if their employer offered health insurance.
[10] Note that for those that are not insured through their current employer, it is not known whether the employer offers health insurance, and if they do, if the worker chose to access the insurance elsewhere.

Kaiser Family Foundation (1999a), in the period 1997-1999, 88% of persons in households with at least one working person had health insurance coverage. Among Illinois' non-elderly Latino (foreign and U.S. born) population, regardless of employment status, 65% had health insurance (Henry Kaiser Family Foundation 1999b). It is expected that working Latin-American immigrants surveyed in this study would exhibit comparable rates of insurance coverage. However, only 42% of Latin-American immigrants surveyed reported having health insurance. While Latin-American immigrants have the lowest rate of health-insurance coverage, this is related to the higher rate of undocumented status in this population. Approximately 70% of currently employed Latin Americans with legal status have health insurance.

The primary reasons for the low rates of health-insurance coverage in the employed immigrant population are that employer-sponsored insurance is not offered or is too expensive to access, or private insurance is too expensive. The top five reasons reported for why currently employed immigrants do not have health insurance are:

1. insurance is not offered by, or is too expensive to access through their employer (29%)
2. private insurance is too expensive (26%)
3. the person does not qualify for Medicare or Medicaid (16%)
4. the person does not know how to access private health insurance (14%)
5. the person does not think they need insurance because they are healthy (5%)

Medicare and Medicaid appear to act as a safety net for a considerable share of immigrants surveyed for this study who are currently working and unable to access health care through their employer. Medicare or Medicaid covers nearly 20% of insured undocumented workers. Unionization also appears to increase access to health insurance benefits. While it cannot be ascertained from the survey whether working under a union contract necessarily carriers health insurance as a benefit, more than 75% of unionized workers have health insurance.

RECEIPT OF BENEFITS THROUGH GOVERNMENT SAFETY-NET PROGRAMS

Despite the fact that most surveyed immigrants are members of low- or moderate-income households, adult usage of government safety-net programs intended to help the working-poor is minimal. Table 15 shows that, of all benefit programs, members of immigrant households are most likely to receive Medicare and Medicaid, but demonstrate very little reliance on other safety-net programs.

Table 15: Receipt of government benefits

Program	% of undocumented immigrant respondents with adult in household receiving benefits	% of all respondents with adult in household receiving benefits
Medicare/Medicaid	9.5%	12.0%
Food Stamps	3.3%	4.7%
Social Security	1.7%	6.0%
Unemployment Insurance	1.8%	3.0%
Welfare/TANF	1.1%	2.1%
Supplemental Security Income	1.2%	3.4%
Other	1.0%	1.2%
	n = 664	n = 1,398

Adults living in households with undocumented immigrants receive benefits at rates that are substantially lower than those of all immigrants. Overall, only 12% of undocumented immigrants surveyed reported that an adult in their household was receiving any of the benefits listed in Table 15 (compared to 23% of documented immigrants). It is important to note that the data reported above does not necessarily mean that undocumented immigrants themselves are receiving public benefits.[11] The legal status of the

[11] Undocumented immigrants are only eligible to receive the following: emergency medical and prenatal care under Medicaid, immunizations, school breakfast and lunch, WIC, and short-term non-cash disaster assistance as well as programs delivered at the community level that do not condition assistance on income or resources and that are necessary to protect life or safety (ICIRR 1998). Family members of undocumented immigrants who have legal status are not necessarily restricted from accessing means-tested benefit programs. As a result of changes made to U.S. welfare laws in 1996, immigrants *with legal status* who arrived in the U.S. after August 1996 are barred from receiving food stamps, TANF, Supplemental Security Income, and other federal means-tested program benefits for five years after their date of arrival (ICIRR 2002). Therefore, only immigrants who arrived before January 1997 were eligible to receive benefits through these programs at the time this report was written.

recipient of the benefits cannot be ascertained from the survey data. Respondents were asked only whether an adult living in their household was receiving benefits.

Given that approximately half of all working immigrants in this survey do not access health insurance through their employer, government health insurance programs become all the more important for this population. The rate of Medicare and Medicaid recipiency among Latin-American immigrant households in this survey is slightly higher than the rate of Medicare/Medicaid recipiency for all Latinos in Illinois. Between 1997 and 1999, 7.3% of all adult Latinos (foreign and U.S.-born) received Medicare or Medicaid (authors' calculations based on Henry Kaiser Family Foundation 1999c and 1999d).

KidCare, a State of Illinois program that provides health care coverage to children and pregnant women, also appears to play an important role insuring the children of working, lower-income immigrants.[12] Only qualified legal immigrants and children or women of families that meet income requirements are eligible to receive KidCare benefits. According to our estimates, 16% of all respondents reported that a minor (person under 18 years old) is receiving KidCare. In the undocumented population, 24% reported that a minor in their household is receiving KidCare.

[12] For a small segment of the undocumented workforce, the lack of health insurance has had detrimental impact for their children. Seven percent of respondents to the survey with children living with them in the U.S. responded yes when asked whether their children had been denied medical treatment here in the U.S. because of their legal status.

ECONOMIC CONTRIBUTIONS TO THE LOCAL ECONOMY

By virtue of their large numbers and high rates of labor force participation, undocumented immigrants are important contributors to the local economy. In addition to the contributions made through their work, undocumented immigrants add value to the local economy through their day-to-day spending on goods and services. The total value of their contributions is estimated using the REMI model, a regional economic model that calculates the total value of goods and services consumed on each dollar spent.[13] For example, when a person purchases a meal at a restaurant, the workers at that restaurant earn a share of dollars spent to purchase that meal. Those workers, in turn, spend their earnings on food, household goods, and other needs. Workers who supply these goods and services, in turn, earn a share of the dollars spent to purchase the goods and services and subsequently spend a part of those earnings. In this manner, the dollars originally spent by undocumented immigrants ripple through the local economy, generating jobs and income.
In order to estimate the cumulative income generated as a result of spending by undocumented immigrants, the total spending annually by these workers in the local economy was estimated.

Undocumented immigrants' total annual consumer expenditures were estimated by subtracting annual savings and remittances from the sum of annual earnings and funds borrowed (Table 16).[14] Based on these estimates, undocumented immigrants in the Chicago metro area spend approximately $2.89 billion annually from their earnings.[15] These annual expenditures of $2.89 billion generate an additional $2.56 billion in local spending. Therefore, the direct, indirect, and induced spending of undocumented workers accounts for a total of $5.45 billion spent annually in the metro area economy, or 1.5% of the Gross Regional Product for 2001 (see Appendix F). This spending generates 31,908 additional jobs in the local economy (see Table 17 and 18 for a distribution of jobs created by occupation and industry, respectively).

[13] The model makes two assumptions: how consumers spend each dollar and the rate at which those dollars are subsequently spent through the local economy. See Appendix F for a description of the REMI model.
[14] Earnings estimates only apply to earnings derived from workers' primary jobs.
[15] Based on the survey results, we estimate that each undocumented immigrant remits, on average, $3,264 per year to their country of origin. Average saved income minus borrowed income per worker equals zero. Therefore, total expenditures equals total dollars earned minus total remittances.

Table 16: Estimate of total annual consumer expenditures by undocumented immigrants in the labor force, six-county metro area

Country of origin	Total adult undocumented immigrants	Average annual income minus average remittances per worker	Undocumented immigrants over 18 in the labor force	Total annual consumer expenditures
Mexico	215,469	$12,193	176,469	$2,151,611,756
Central America	13,467	$12,193	11,175	$136,249,041
Other Western Hemisphere	8,080	$20,891	7,003	$146,295,498
Eastern Hemisphere	32,320	$17,349	26,223	$454,936,912
Total	269,336		220,870	$2,889,093,208

Table 17: Distribution of job creation across top 10 supported occupations

Occupation	Total annual jobs
Food prep & service	3,139
Managerial & administrative	2,514
Other cleric & admin support workers	2,219
Teachers, librarians, counselors	1,285
Salespersons, retail	1,266
Management support	1,177
Cashiers	1,107
Helpers, laborers, material movers	1,069
Construction trades	1,012
Secretary, stenographers & typists	955
Clean & building service, except private household workers	917

Table 18: Distribution of new jobs created across top 10 supported industries

Industry	Total annual jobs
Rest of Retail	4,854
Eating & Drinking	3,189
Medical	2,814
Real Estate	2,218
Misc. Business Services	2,023
Non-Profit Organizations	2,008
Construction	1,886
Misc. Professional Services	1,346
Education	1,259
Credit & Finance	1,237

Undocumented immigrants also contribute taxes

There is a common perception that undocumented immigrants utilize government benefit programs, yet they do not contribute taxes. The previous section convincingly refutes the contention that undocumented immigrants utilize government benefits at a substantial rate. The survey data related to tax contributions suggest that contrary to popular opinion, the majority of undocumented immigrants pay taxes.

By combining the share of workers paid by check and who are not self-employed, and those paid in cash who said that their employer collects taxes from them, we estimate that employers collected payroll taxes from 70% of undocumented workers. The data also suggests undocumented immigrants do not claim any tax refunds for which they may be eligible. Sixty-five percent of undocumented immigrants from whom taxes were collected said they did not file their tax return last year and of those who did not file returns, 55% did not because of their legal status.

Previous research on the tax contributions of undocumented immigrants supports these findings. The Illinois Immigrant Policy Project found that in 1990, undocumented immigrants paid $547 million in taxes (quoted in ICIRR 1998). The Urban Institute found that annually undocumented immigrants nationwide contribute $7 billion in taxes (quoted in ICIRR 1998). Moreover, the Urban Institute found that undocumented immigrants contributed $2.7 billion in Social Security taxes and $168 million in unemployment insurance taxes, both programs they will be unable to access because of their legal status.

CONCLUSION: POTENTIAL IMPACTS OF A NEW LEGALIZATION PROGRAM

Undocumented immigrants experience significant disadvantages in the labor market despite whatever work experience and human capital they have accumulated. Undocumented status creates significant wage penalties and barriers to accessing higher-wage occupations, particularly for Latin Americans. Furthermore, undocumented workers more often work in unsafe conditions, more often experience alleged wage and hour violations, and more often experience low rates of health insurance than workers' with legal status. Despite their economic contributions (tax and otherwise), undocumented workers rarely utilize government safety-net programs, even though most live in near-poverty conditions.

This study suggests that, if granted legal status, most undocumented immigrants would earn higher wages. Whether a new legalization program would yield *wage parity* between undocumented and documented immigrants, or between undocumented immigrants and the native U.S.-born workforce cannot be answered by this study. Granting legal status to an estimated 220,000 undocumented workers in the Chicago metro area would undoubtedly generate broad labor market consequences, shifting the supply of and demand for workers across occupations. Estimating the size and direction of such supply and demand shifts and their subsequent impact on wages by occupation is beyond the scope of this study.

If the observed effect of IRCA on wages is any indication, the wage-effect of any new legalization program that is modeled after IRCA will be mixed. In the short-term, IRCA helped improve wages earned by newly legalized workers. However, some studies suggest that the wages of "at-risk" workers (i.e., Latin Americans) declined after legalization (Dávila, Pagán and Grau 1998). There are several possible explanations for this outcome. Some studies suggest that wage penalties are the result of employer sanction provisions, that some suggest are the basis of wage discrimination against "at-risk" workers, or workers who appear to be undocumented (Cobb-Clark, Shiells, and Lowell 1995; Bansak and Raphael 1998). Prior to IRCA and the advent of employer sanctions, studies found little if any wage penalty for working with undocumented status (Phillips and Massey 1999). IRCA-initiated employer sanction provisions established penalties against employers for hiring undocumented immigrants thereby creating a financial risk for knowingly hiring undocumented workers. Subsequently, employers paid at-risk workers less than workers

who either had legal documents or appeared to be documented. Supporting this hypothesis, the General Accounting Office found in a post-IRCA survey of employers that 19% of employers admitted to some form of discriminatory treatment on the basis of national origin or citizenship after the passage of IRCA (U.S. General Accounting Office 1990).

Other researchers suggest that wage discrimination does not explain the decline in wages of at-risk workers. Rather, the observed relative decline in wages of at-risk workers after IRCA was the result of a decline in their job opportunities. Post-IRCA, employers were hesitant to hire workers who appeared to be undocumented (typically Latin-American immigrants), even if they presented legal documents, because of the widespread use false documents. The overall decline in job opportunities induced heightened voluntary-attachment of at-risk workers to their present, often low-wage, jobs (Dávila, Pagán and Grau 1998).

Certainly, the aggregate wage impacts of a new legalization program are difficult to predict. Yet, regardless of its aggregate wage impacts, this study strongly suggests that legalization would improve undocumented workers' wages, working conditions, health insurance rates, and would improve access to government safety-net programs. Furthermore, any increase in wages resulting from legalization would translate into increased tax contributions and income flowing through the local economy, thereby creating more new jobs.

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APPENDIX A: SAMPLING METHODOLOGY

The sampling methodology was designed primarily to maximize the response rate within the undocumented immigrant population while preserving random sampling techniques to the greatest extent possible. Given the sensitive nature of this study, rather than conducting a household survey, the survey was implemented through community-based organizations, community colleges, social-service providers, and churches that have established relationships with undocumented immigrants.

UIC-CUED recruited organizations identified through the Illinois Coalition for Immigrant and Refugee Rights, a statewide coalition with nearly 100 member organizations in the Chicago metropolitan area. A letter requesting participation was sent to all member organizations. To augment the list of organizations that volunteered to participate in response to the recruitment letter, UIC-CUED recruited other organizations to participate based on the demographic make-up of their population and their geographic location. The intent here was to construct a sample that resembled the demographic composition of the Chicago-area immigrant population. In total, thirty-eight organizations in the six-county metropolitan area and Kankakee County volunteered to participate in the survey.

Once organizations were selected as survey sites, UIC-CUED and the UIC Survey Research Laboratory trained staff from participating organizations to randomly sample their members, constituents, and clients for participation in the survey. Trained survey administrators approached all of their members, clients, or constituents from July 1st through September 15th, 2001 to request their voluntary participation. All potential respondents were read a description of the project and then given the opportunity to stop or continue. For those choosing to continue, organization staff asked them a series of screening questions. Only volunteers who were born outside of the U.S., were older than 18 years of age, and had never completed the survey before were allowed to continue. The survey was designed in English and translated into Spanish, Polish, Korean, and Arabic.

Statistical implications of non-random sampling

The sample produced for this study is not a pure random sample. One potential implication of the sampling technique is that the organizations selected may have somehow biased the results. Respondents who belong to organizations may share many characteristics and, therefore, may not represent the broader immigrant community (this is known as a clustering effect). To account for possible cluster effects, the regression analyses presented in

this study were conducted using statistical software (StataCorp, 2001) that adjusts standard errors for the clustered sample design employed in this study.

APPENDIX B: EXPLANATION OF MODEL ESTIMATING LIKELIHOOD OF UNEMPLOYMENT

A logistic regression procedure that accounts for clustering effects resulting from the survey design was used to estimate the likelihood that surveyed immigrants currently in the labor force would be unemployed. Variables indicating the following worker characteristics were tested to determine if they significantly impacted the likelihood of unemployment:

- job experience in country of origin;
- length of U.S. labor market experience;
- whether the last or current job was obtained through a temporary staffing agency;
- whether the worker is a member of a union;
- parental status;
- age;
- level of education completed;
- national origin;
- gender;
- English proficiency; and
- legal status.

The model found that three variables significantly affect the likelihood that an immigrant worker would be unemployed. The table below presents the odds-ratio and t-statistic scores for the significant variables. The model did not find the remaining variables to be statistically significant.

Probability of Unemployment		
Variable	**Odds-ratio**	**t-score**[16]
Last job obtained through a temp agency	+172%	4.10
Parent with children in the U.S.	+230%	3.11
Undocumented Latin-American female	+220%	4.31
n = 1,162		

[16] Only variables that tested significant at the .05-level were included in the final model.

APPENDIX C: DESCRIPTION OF VARIABLES INCLUDED IN THE WAGE AND OCCUPATIONAL ACHIEVEMENT MODELS

1. **Age.** Age is expected to positively affect wages in the short-term but decline over time. The age-to-earnings profile of the workforce indicates that earnings increase between the ages of 18 and approximately 40 to 45. After age 45, earnings begin to decline for most immigrant workers in this population. The average age of workers included in the model is 35 years old. Western Europeans are slightly older averaging 41 years old.

2. **Current occupation**. Managerial, professional, technical, administrative support and sales jobs, and precision-manufacturing and craft occupations are expected to positively affect wages. Service, operator, fabricator, and laborer jobs, as well as farming and landscaping jobs are expected to negatively influence wages. Separate variables indicating workers' occupation type are included for the following: (1) managers and professionals; (2) technical, administrative support and sales workers; (3) operators, fabricators, and laborers; (4) precision-manufacturing and craft workers; (5) service workers; and (6) farmworkers and landscapers. Of the workforce included in the model, 8% work in managerial and professional occupations; 14% work in technical, administrative support and sales occupations; 14% work in precision-manufacturing and craft occupations; 31% work in service occupations; and 31% work in operator, fabricator, and laborer occupations.

3. **Education**. Each level of completed education is expected to positively affect wages. Education is scored in points, each point representing a level of education completed. One point is given to all workers completing at least primary school. Two points are given to all workers completing high school or a GED. Three points are given to workers completing at least two years of college. Additional points are given to workers who complete trade, business, or vocational training. In the sample included in the model, 64% of all workers completed high school or received a GED. Twenty-five percent completed at least two years of college. Latinos have significantly lower completed levels of education relative to all other workers. Men and women have completed equal levels of education. Undocumented immigrants have significantly lower educational attainment levels relative their counterparts with legal status. Only 56% of undocumented workers in the labor force have completed at least the equivalent

of a high school education compared to 66% of documented workers. Furthermore, only 14% of undocumented workers have completed at least two years of college versus 34% of their documented counterparts.

The education variable, as measured, does not account for the fact that educational standards vary across nations. A high school degree obtained in Poland might reflect a higher level of education relative to a high school degree obtained in Mexico. This may diminish the reliability of estimates. When comparing workers in the total labor force, the model may find that the pattern of influence of education on wages varies greatly across countries. The model may interpret that variation to mean additional levels of educational attainment does not necessarily result in a measurable change in workers' wages. Subsequently, the model may incorrectly conclude that educational attainment is a less significant or an insignificant determinant of workers' wages when in fact, a pattern of influence does indeed exist. That pattern, however, is masked by inconsistencies in the measurement of the variable.

4. **Full-time worker.** Full-time work, as opposed to part-time work, should exert a positive influence on wages. Full-time work is defined as working, on average, at least 35 hours per week. Eighty-eight percent of the workforce included in the model work full-time. The vast majority of part-time workers are women.

5. **Hourly wage**. Respondents' hourly wage for their current or last primary job is the dependent variable in the wage model. Respondents reported the hourly wage for their current or last primary job in absolute form or in categorical form. Wages reported in categorical form were converted to absolute figures by using the midpoint of the category. Wages for waiters and waitresses reported below the minimum wage were adjusted up to the state minimum wage ($5.15) to account for tips and gratuities.

6. **Immigrant density of occupation**. Immigrant density within an occupation is expected to negatively influence wages by limiting workers' information about jobs outside of typically immigrant occupations. This variable indicates the percent of the total surveyed labor force working in each of the approximately 889 U.S. Census Bureau occupational categories. The higher the score, the greater the concentration of immigrants in the occupation.

7. **Male.** Being male is expected to positively affect wages. Men, regardless of national origin or legal status, earn more than their female counterparts. Fifty percent of workers included in the model are men.

8. **National origin.** Being Latin American and Eastern European is expected to negatively influence workers' wages. Considering that the national origin effect on wages appears to vary by gender within the Latin-American and Eastern-European population, variables combing national origin and gender were also included for Latin-American women and Eastern-European women. Seventy-seven percent of workers included in the model are Latin American, 36% are Latin-American females, 14% are Eastern European, 9% are Eastern-European females, and the remainder of the sample included in the model are Asian, Western European or Middle Eastern.

9. **Proficient in English**. English proficiency is expected to positively affect wages by helping workers find and secure higher-wage employment outside of traditional low-wage immigrant occupations and by helping workers obtain more education which also helps workers move into higher-wage employment. A person is considered to be proficient in English if one of two conditions is met: (1) English is the primary language spoken at their home; or (2) they speak English on the job and said they speak English better than fairly and are able to read at least read two of the following written in English: a newspaper, a magazine, or recipe instructions. Based on this definition, 25% of the workers included in the model are proficient in English. Undocumented workers, Latinos, and recent immigrants comprise most of the sample least proficient in English. Men and women were equally proficient in English.

10. **Residing in Chicago-proper**. Residing in the city indicates that the worker reported living in a zip code area that falls with the city of Chicago boundary. Living within the Chicago city-limits is expected to have a negative effect on workers' wages for two reasons. First, living within the city will frequently mean that the worker lives in an immigrant-dense neighborhood where it would be possible to work and live without learning English, thereby inhibiting the acquisition of English proficiency. Second, living in an immigrant-dense area will tend to limit workers' information networks that are vital to learning about new job opportunities outside of the traditional immigrant,

low-wage occupations. This is particularly important for undocumented workers who tend to seek employment where the risk of apprehension is minimal. Fifty-six percent of the workforce included in the model resides in the city. There is not a significant difference in the rate of residence in the city between documented and undocumented workers.

11. **Temporary help agency.** Working through a temporary staffing agency is expected to negatively affect workers' wages. This variable indicates whether respondents obtained their last or current job through a temporary staffing agency. Thirteen percent of workers included in the model obtained work through a temp agency. Most temporary agency workers are Latin American and work in operator, fabricator, or laborer occupations.

12. **U.S. labor market experience.** Cumulative experience in the U.S. labor market, defined as the number of years a person worked in the U.S. since their first arrival, is expected to positively affect wages. The earnings-to-experience profile for the entire labor force indicates slowly increasing wages in relation to increasing experience. The rate of increase does not appear to decline even at the highest levels of experience. The average amount of U.S. labor market experience of the workforce included in the model is seven years.

13. **Undocumented status.** Undocumented status, defined as being without current legal immigration status, is expected to negatively impact wages. Fifty-three percent of the workers included in the model are undocumented. Close to 90% of the undocumented population is Latin American.

14. **Unionized.** This variable indicates union membership, but does not necessarily indicate that respondents' jobs are covered by a collective bargaining agreement. Unionization is expected to positively influence wages, assuming that respondents indicating that they belong to a union are also covered by a collective bargaining contract. Twelve percent of the workforce included in the model belongs to a union. The rate of unionization in the documented workforce (15%) nearly doubled the rate of unionization in the undocumented workforce (8%).

15. **Work experience in the country of origin**. Three variables were included to indicate the occupation workers held in their country of origin: a farming occupation, a high-skill occupation, or no occupation. It is expected that workers who arrive in the U.S. without any work history or with a background in farming will be at a disadvantage relative to workers who worked in higher-skilled occupations (precision-manufacturing, construction trades, managerial, technical or administrative support jobs). Thirty percent of the workforce had no work experience in their country of origin, 32% worked in high-skilled occupations, and 12% worked in farming-related occupations.

APPENDIX D: DESCRIPTION OF WAGE MODEL AND RESULTS

The significance of each independent variable in relation to the dependent variable (the natural log of workers' hourly wage) was tested using a regression model accounting for any clustering effect within survey sites. Variables significant at the .01 level (t-test) were included in the model and rejected at the .05 level. Only variables found significant were ultimately included in the model and reported here.

The wage effect of significant variables (reported on the next page) is reported as the percent change in the hourly wages of workers with the characteristic being tested. For example, the results for the total labor force (first column of results) indicate that unionized workers, earn a 20% per hour wage advantage for being unionized. That means, all else being equal, they earn 20% more per hour relative to all non-union workers. Interpreting the results for national origin, gender and legal status variables is slightly more complex. The penalty for being undocumented Latin American female is 36%, signifying that undocumented Latin-American women will earn 36% less per hour compared to all workers that are not undocumented Latin-American women, except for undocumented Latin-American men and Eastern-European women. The two latter groups also experience penalties. Therefore, in relation to undocumented Latin-American men, undocumented Latin-American women experience a 14% per hour penalty (36% minus 22%), and a 16% (36% minus 20%) penalty in relation to Eastern-European women.

The model was specified for several sub-segments of the labor force to test the importance of each variable within noteworthy segments of the labor force. These sub-segments include undocumented Latin Americans, documented Latin Americans, undocumented Latin-American women, earlier-arriving immigrants, college-experienced immigrants, English proficient immigrants, and workers in higher-wage occupations. The results for undocumented Latin Americans, for example, report the strength of each variable when the undocumented Latin American population is analyzed apart from all documented workers and non-Latin Americans.

At the bottom of the first table that reports the wage effects of each variable, statistics that indicate the number of cases included in the model are included. Also included is the R-squared that reflects the explanatory power of the model. For example, an R-squared of .27 means that the independent variables included in the model explain 27% of the variation in the wages of the respondents. The second table reports the test-statistics for each significant variable.

Variables	Labor-Force Segment (wage effects)									
	total workforce	undocumented Latin American workforce	documented Latin American workforce	undocumented Latin American female workforce	Latin American male workforce	Latin American female workforce	earlier arrivals (prior to 1993)	College-experienced workforce	English-proficient workforce	higher-wage blue-collar and white-collar workforce
legal status, national origin and gender variables										
undocumented Latin American female	-36%	***	***	***	***	-11%	-40%	-54%	-42%	
undocumented Latin American male	-22%	***	***	***	-25%	***	-21%	-64%	-33%	
documented Latin American female	-28%	***	***	***	***	***	-26%	-32%	-28%	
documented Latin American male		***	***	***	***	***				
Latin American female		***	***	***	***	***				
Latin American male		***	***	***	***	***				
non-Latin American without legal status		***	***	***	***	***				
Eastern European (male and female)		***	***	***	***	***				
Eastern European female	-20%	***	***	***	***	***	-23%	-25%	-38%	
Eastern European male		***	***	***	***	***	-13%	-14%	-15%	
Male (general)		13%	27%	***	***	***				22%
time-related variables										
U.S. Labor market experience (return per year)	1%	2%	1%	2%	1%	1%				2%
age (return per year)										
human-capital variables										
proficient in English	15%	4%		17%	14%	18%	17%	28%	***	
education (return per level of education completed)	5%		11%			4%	6%	8%	8%	11%
employment arrangement										
working through a temp agency										-16%
full-time worker										
unionized	20%	28%	12%		19%	13%	23%		25%	33%
Residing in Chicago-proper	-12%		-14%					-14%		
Current occupation variables										
managerial and professional worker	20%	14%		48%	56%				23%	***
Technical, administrative support, sales worker										***
Service worker								-16%		***
operator, fabricator, laborer										***

precision-manufacturing or craft worker	26%	7%			30%		28%		40%	***
farmworker or landscaper	-12%						-18%			***
average immigrant density of narrow occupation group (1% immigrant density)										
work experience in country of origin										
farming as primary occupation in country of origin										
no primary occupation in country of origin										
skilled primary occupation in country of origin										
n (sample size)	911	451	288	213	386	351	336	249	247	340
R-squared	0.39	0.26	0.35	0.13	.33	.22	0.34	0.36	0.35	0.28

Variables	Labor-Force Segment (t-statistics)									
	Total workforce	undocumented Latin American workforce	documented Latin American workforce	undocumented Latin American female workforce	Latin American male	Latin American female	Earlier arrivals (prior to 1993)	College-experienced workforce	English-proficient workforce	higher-wage blue-collar and white-collar workforce
legal status, national origin and gender variables										
undocumented Latin American female	-10.48	***	***	***	***	-2.90	-7.62	-8.41	-5.95	
undocumented Latin American male	-5.70	***	***	***	-6.64	***	-5.27	-5.31	-5.01	
documented Latin American female	-6.65	***	***	***	***	***	-5.59	-3.01	-3.59	
documented Latin American male		***	***	***	***	***				
Latin American female		***	***	***	***	***				
Latin American male		***	***	***	***	***				
non-Latin American without legal status		***	***	***	***	***				
Eastern European (male and female)		***	***	***	***	***				
Eastern European female	-4.96	***	***	***	***	***	-7.09	-2.82	-7.10	
Eastern European male		***	***	***	***	***	-3.93	-3.19	-3.47	
male (general)		3.92	7.03	***	***	***				3.55
time-related variables										
U.S. labor market experience (years)	7.03	5.91	4.95	3.07	3.09	4.53				5.47
age										
human-capital variables										
proficient in English	4.10	4.09		2.86	2.84	5.02	5.18	5.61	***	
one completed level of education	3.44		5.85			3.14	4.76	2.41	4.90	8.89
Employment arrangement										
working through a temp agency										-3.36
full-time worker										
unionized	4.30	5.15	2.12		3.10	2.54	4.31		2.64	3.62
residing in Chicago-proper	-5.27		-3.14					-3.00		
current occupation variables										
managerial and professional worker	3.32	2.78		4.04	2.56				4.91	***
technical, administrative support, sales worker										***
service worker								-3.18		***
operator, fabricator, laborer										***
precision-manufacturing or craft worker	5.32	4.19			4.63		4.09		6.14	***

farmworker or landscaper	-4.06						-2.98	-2.8		***
work experience in country of origin										
farming as primary occupation in country of origin										
No primary occupation in country of origin										
Skilled primary occupation in country of origin										
n (sample size)	911	451	288	213	386	351	336	249	247	340
R-squared	0.39	0.26	0.35	0.13	.33	.22	0.34	0.36	0.35	0.28

APPENDIX E: RESULTS OF OCCUPATIONAL ACHIEVEMENT MODEL

A logistic regression procedure that accounts for a clustered sample was used to estimate the likelihood that surveyed immigrants currently in the labor force would be employed in higher-wage blue- or white-collar occupations. The following worker characteristics were tested to see if they significantly influence the likelihood that immigrant workers are employed in higher-wage occupations:

- Job experience in country of origin;
- length of U.S. labor market experience;
- whether the last or current job was obtained through a temporary staffing agency;
- whether the worker is in a union;
- parental status;
- age;
- level of education completed;
- national origin;
- gender;
- English proficiency; and
- legal status.

The model found that six variables significantly and positively affected the likelihood that an immigrant worker would hold a higher-wage white-collar job. The table below exhibits the odds-ratio and t-statistic scores for the significant variables. The model did not find the remaining variables significant.

Probability of a holding higher-wage white-collar job		
Variable	Odds-ratio	t-score[17]
One completed level of education	+79%	7.40
Proficient in English	+126%	2.74
Undocumented Latin American	-61%	-2.86
Eastern European	-58%	-2.52
Female	+56%	-4.22
Earlier arrivals (prior to 1993)	+71%	2.80
n = 1,082		

[17] Only variables that tested significant at the .05 level were included in the final model.

Only two variables affected immigrants' access to precision manufacturing jobs: being male and not having held a farming occupation as a primary job in the country of origin. The table below reports the odds-ratios and t-statistics for the significant variables.

Probability of holding a higher-wage blue-collar job		
Variable	Odds-ratio	t-score[18]
Male	+989%	10.38
Non-farming occupation in country of origin	+46%	2.13
n = 1,145		

For undocumented Latin Americans, three variables significantly and positively affected access to managerial, professional, technical, administrative support, and sales occupations: education, English proficiency, and U.S. labor market experience. The table below reports the odds-ratios and t-statistics for the significant variables.

Probability of undocumented Latin Americans holding a higher-wage white-collar job		
Variable	Odds-ratio	t-score[19]
One completed level of education	+41%	2.73
English proficiency	104%	2.52
U.S. labor market experience (one year)	6%	2.04
n = 490		

[18] Only variables that tested significant at the .05-level were included in the final model.
[19] Only variables that tested significant at the .05-level were included in the final model.

APPENDIX F: METHODS USED TO ESTIMATE THE SIZE OF THE UNDOCUMENTED IMMIGRANT WORKFORCE AND THEIR ECONOMIC CONTRIBUTIONS

The estimate of the total share of annual income contributed for all persons in the labor force, based on their national origin, is derived from several sources of data. The authors estimated the total persons over 18 in the labor force using a several step process. Projections of the total number of undocumented immigrants by national origin provided by the INS were used to determine the total number of undocumented immigrants residing in Illinois in 2001. According to their estimates, there are currently 302,000 undocumented residents residing in Illinois (U.S. Immigration and Naturalization Service 1992).

The population of undocumented immigrants in the Chicago Metropolitan area was arrived at by using Current Population Survey (CPS) 2001 figures on the distribution of foreign-born immigrants between the Chicago metropolitan area and the rest of the state. The authors estimate that approximately 88% of undocumented immigrants reside in the six-county metro area. The authors also calculated the share of undocumented immigrants of working age (over 18 and less than 65) using averages derived from the CPS. According to the CPS for 2000, 9% of the Mexican-born and 7.8% for the remainder of the population is not of working age. Using statistics from this study on labor force participation by national origin, the authors then estimated the total number of undocumented immigrants in the labor force.

Annual income from workers' primary jobs was estimated assuming that they earned year-round the wage reported for their primary job and they worked the same number of hours per week year round without vacation. In all likelihood, this is an underestimate of workers' total income because many workers will hold two jobs at once. Because the survey did not generate specific information on workers' secondary jobs, the authors can only arrive at estimates related to the primary jobs.

The authors calculated the average income spent in the economy per worker by subtracting remittances and savings and adding borrowing to the income derived from the primary job. Average remittances and borrowing for each worker in the labor force was arrived at based on the survey data. On average, respondents in the labor force reported that they sent $272 per month back to their home country. Borrowing and savings in the undocumented population was negligible. The total income spent in the local economy by undocumented workers is the average income spent per worker multiplied by the total number of undocumented workers in the labor force.

Description of the REMI model

The REMI model is a computer-based economic modeling tool that consists of an industry input-output table that works in conjunction with other underlying economic data such as consumption expenditures, taxation rates, and county-to-county commuting flows. The REMI model is used for estimating the impact of exogenous changes in a region's economy. The 2001 estimate of GRP from the REMI model for the Chicago PMSA is $364 billion in 2001 nominal dollars. The 2001 estimate of the size of the Chicago metro area labor market is 4,330,784 persons.