THE WAGES OF IMMIGRATION

The Effect on the Low-Skilled Labor Market

By Steven A. Camarota

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The United States is currently experiencing the largest sustained wave of immigration in its history, with 1.2 million legal and illegal aliens now arriving each year. This influx has caused the foreign-born share of the population to nearly double from 4.8 percent in 1970 to 9.3 percent by 1996. Large-scale migration of this kind has important implications for the social, political, and economic conditions in the United States. While other areas are clearly important, this study focuses on the labor market consequences of immigration. With over 14 million immigrants holding jobs in the United States, the effects of immigration on the U.S. labor market is one of the most important and hotly debated issues surrounding contemporary immigration policy.

Because immigration increases the supply of labor, it is often suggested that it will reduce wages or make jobs more scarce for natives. Job competition between immigrants and natives is thought to be especially fierce at the bottom of the labor market because so many immigrants are employed in the low-skilled/low-wage segments of the economy. However, research that has attempted to measure such effects empirically has often come to contrary and conflicting conclusions. Studies done in the 1980s and early 1990s, which compared cities with different proportions of immigrants, generally found little effect from immigration. However, these studies have been widely criticized because they are based on the assumption that the labor market effects of immigration are confined to those cities where immigrants reside. As a recent report by the National Academy of Sciences concludes:

> "Local labor markets in the United States are certainly not completely closed economies. Labor, capital, and goods flow across localities and in doing so tend to equalize the price of labor (the wage rate). As long as native workers and firms respond to the entry of immigrants by moving to areas offering better opportunities, there may be no reason to expect much of a correlation between the wages of natives and the presences of immigrants" (Edmonston and Smith 225-226).

Therefore, the movement of labor, capital and goods between cities in the United States spreads the effects of immigration from the areas with large immigrant populations to the rest of the country.

One way researchers have attempted to deal with the problems associated with cross-city comparisons is to estimate the increase in the supply of labor in one skill category relative to other skill categories brought about by immigration nationally. The wage consequences of immigration are then calculated based on an existing body of literature that has examined the wage effects of changes in the ratio of skilled to unskilled workers. Estimates derived from this method reveal significant negative effects on the wages of unskilled workers. However, this approach is also problematic because the consequences of immigration are not measured directly, but rather are only inferred from immigrant-induced changes in the relative supply of labor.

The study seeks to determine whether there is a relationship between the concentration of immigrants in an occupation and the wages of natives in the same occupation.

Given the problems found in much of the previous work in this field, the Center for Immigration Studies has undertaken research which attempts to avoid the problems in the existing literature. The study done here relies on data from the Current Population Survey, a "mini-census" conducted each month. Adjustments are made to the data to correct for the undercount of illegal aliens. The immigration variable is created by calculating the percentage of foreign-born persons in each of the Census Bureau's occupational categories. This variable is used to measure the amount of variation in the wages of natives that is due to differences in the immigrant composition of each individual's occupation. In other words, the study seeks to determine whether there is a relationship between the concentration of immigrants in an occupation and the wages of natives in the same occupation.

The study employs a log-linear regression model with native workers as the unit of analysis. In addition to the immigrant composition of each occupation, 12 control variables are included in the regression equation. These include occupational-level attributes such as the level of unionization and the skill level of each individual's occupation, as well as individual level characteristics such as age, sex, education, and race. By treating the entire nation as one labor market and comparing the effects of immigration across occupations, this approach avoids many of the problems associated with cross-city comparison. Additionally, this method measures the effects of immigration

directly by comparing the actual wages of natives with different proportions of immigrants in their occupation, instead of inferring the effects of immigration based on changes in the relative supply of labor.

Findings

The regression equations indicate that even after controlling for a variety of factors, immigrants exert a downward pressure on both the weekly and hourly wages of natives. When all natives are considered together, the wage effects of immigration appear to be relatively modest. However, when the results are disaggregated and low-skilled occupations are examined separately, the results indicate that immigrants have a significant negative effect on the wages of natives in these occupations, while having no such effect on natives employed in higher-skilled occupations. (For the purposes of this study, low-skilled occupations are defined as those performed on average by workers with no more than a high school degree.)

Immigration has reduced the wages of the average native in a low-skilled occupation by perhaps 12 percent, or $1,915 a

- Looking at all natives in the work force, the results indicate that a one percent increase in the immigrant composition of an individual's occupation reduces the weekly wages of natives in the same occupation by about .5 percent. Since roughly 10 percent of the labor force is composed of immigrants, these findings suggest that immigration may reduce the wages of the average native-born worker by perhaps 5 percent.
- In low-skilled occupations the effects of immigration are much stronger. For the 23 percent of natives employed in these occupations (about 25 million workers), a one percent increase in the immigrant composition of their occupation reduces wages by .8 percent. Since these occupations are 15 percent immigrant, this suggests that immigration may reduce the wages of the average native in a low-skilled occupation by perhaps 12 percent, or $1,915 a year.
- The effect of immigration on the wages of natives is national in scope, and is not simply confined to cities or states with large concentrations of immigrants.
- The findings indicate that immigration is likely to have contributed significantly to the decline in wages for workers with only a high school degree or less in the last two decades.
- The presence of immigrants does not appear to have a discernible negative effect on the wages of natives employed in high-skilled occupations and may even increase wages in these occupations.

The Effect on Native-Born Minorities

- Native-born blacks and Hispanics are 67 percent and 37 percent, respectively, more likely to be employed in low-skilled occupation than are native-born whites. Therefore, a much higher percentage of minorities are negatively affected by immigration.
- Because native-born blacks and Hispanics in the negatively affected occupations earn on average 15 and 14 percent less than whites, the wage loss resulting from immigration is likely to represent a more significant reduction in material prosperity for these groups.
- Immigrants are 60 percent more likely to be employed in low-skilled occupations than native-born workers. Therefore, like native-born minorities, a larger percentage of immigrant workers are negatively affected by competition with their fellow immigrants.

Policy Implications

Knowing that natives and immigrants employed in low-skilled occupations are made poorer by immigration does not tell us what, if anything, we should do about it. The extent to which we take action to deal with the wage effects of immigration depends on how concerned we are about the wages of low-skilled workers. Over the last few years, a number of scholars have argued that the inability of low-skilled workers to earn a living wage has contributed significantly to such social problems as welfare dependency, family breakup, and crime. One need not accept all these arguments to acknowledge that a significant reduction in wages for the poorest Americans is cause for real concern. If we wish to do something about the wage effects of immigration, there are two possible sets of policy options that could be pursued.

The first set of policy responses that could be adopted in response to the wage effects of immigration would involve leaving current immigration policy in place and increasing the size and scope of means-tested entitlement programs and other measures designed to assist the working poor. This might include increases in the dollar value of the Earned Income Tax Credit as well as increased access to non-cash assistance programs such as Food Stamps and public housing. While costly, such policy changes, might offset the harmful effects of immigration on the wages of low-skilled workers without changing immigration policy. A related set of policy options might include job retraining efforts designed to increase the skill level of natives in low-skilled occupations, so that they can avoid the harmful effects of immigrant competition. While job retraining programs have produced mixed results in the past, perhaps more

funding and better implementation could make them an important part of any effort to mitigate the harmful effects of immigration.

Of course, adopting such programs would not be easy. The United States does not currently have, nor is it likely to have in the near future, a means of reallocating the resources to those made poorer by mmigration. Moverover, any attempt to develop such a system would undoubtedly lead to calls for significant cuts in the level of low-skilled immigration. Thus, if we are concerned about the impact of immigration on workers in low-skilled occupations, then reducing the level of low-skilled immigration seems to be the most effective and politically feasible solution.

Reducing labor market competition for workers in low-skilled occupations would mean a number of changes in current immigration policy. At present, only about 12 percent of legal immigrants are admitted based on their skills or education. Since roughly 70 percent of permanent residency visas are issued based on family relationships, limiting the flow of low-skilled legal immigrants would involve reducing the number of family-based visas. This might include eliminating the current preferences for the siblings and adult children (over age 21) of U.S. citizens and the adult children of legal permanent residents. These changes would reduce low-skilled legal immigration immediately. They would also limit the chain migration of low-skilled immigrants that occurs as the spouses of those admitted in the sibling and adult child categories petition to bring in their relatives.

In addition to reducing the flow of low-skilled legal immigrants, more resources should be devoted to controlling illegal immigration. This is undoubtedly the lowest-skilled flow of immigrants, with an estimated 75 percent lacking even a high school degree. There is broad agreement that a system that allows employers to accurately and quickly verify that all new hires are legally entitled to work in the United States offers the best hope of reducing illegal immigration. An increase in the number of inspectors who monitor employers and ensure compliance with the law is also likely to reduce the incentive to hire illegal aliens.

Some have also suggested more vigorous enforcement of existing labor laws as a possible solution to the negative effects of immigration. While this would certainly be helpful in preventing the exploitation of immigrants, this approach is likely to have little effect on the wages of natives in low-skilled occupations because it does not change the fact that immigration has significantly increased the supply of low-skilled labor. It is this increase that is causing the troubling decline in wages for workers at the bottom of the labor market.

There can be no doubt that immigration policy is of central importance to any country. Large numbers of immigrants cannot help but have a significant impact on the receiving society. Immigration is also a discretionary policy of the federal government. The number of immigrants allowed in each year, as well as the selection criteria used for admission, can be altered by the public and policy makers. At present, our immigration policy reflects the preferences of a number of different interest groups — unfortunately, the interests of the working poor are not among them. This study delineates the consequences of not taking into consideration the effect of mass immigration on the most vulnerable American workers. If we are concerned about the working poor in this country, then the federal government needs to either reduce the flow of low-skilled immigrants coming in each year or implement new programs designed to ameliorate their harmful effects. To do nothing is neither wise nor fair.

THE WAGES OF IMMIGRATION

INTRODUCTION

Over the last 30 years socioeconomic and political conditions, especially in the Developing World, have caused 19 million people to leave their homelands and immigrate legally to the United States. Additionally, the Immigration and Naturalization Service (INS) estimates that as of October 1996 there were 5 million illegal aliens living in the country and this number is growing by 275,000 each year. This influx has caused the foreign-born share of the population to increase from 4.8 percent in 1970 to 9.3 percent by 1996, and it is projected to reach 10 percent by the end of the decade. While this is less than the 14.7 percent in 1910, the 24.5 million immigrants[1] currently residing in the country is almost twice the number recorded earlier in this century. The impact of this influx is causing a great deal of debate in the United States. Large scale migration of this kind has profound implications for the social, political, environmental and economic conditions in any society and the United States is no exception. This study focuses only on the narrow question of wages because they are arguably one of the most important factors affecting the quality of life in the United States. Moreover, it remains one of the most contentious issues surrounding the immigration debate.

The current high level of immigration has occurred at the same time in which wages for many workers in the United States have stagnated or declined. This is especially true for high school dropouts and those with only a high school degree (henceforth referred to as low-skilled workers). The real wages (adjusting for inflation) of these workers has declined by between 15 and 30 percent since the late 1970s (Blackburn, Bloom and Freeman 1990, 227). The decline has hit male high school dropouts and younger workers the hardest (Levy and Murnane 1992, 1334). It is not simply that these workers have gotten poorer. A dramatic reduction in real wages has important implications for welfare use, family cohesion, crime rates and the opportunities available to the children of these workers. Many authors believe that the poor labor-market prospects that low-skilled workers face have greatly contributed to the creation of an underclass (Devine and Wright 1993; Blackburn et al. 1990; Ellwood 1988; Wilson 1987, 1996). This study seeks to answer the question: Does immigration reduce the wages of low-skilled natives?

There can be no doubt that the current high level of immigration has profound implications for the labor market. The foreign-born proportion of the work force increased by 35 percent in the 1980s alone. Additionally, immigration accounted for 25 percent of the total increase in the size of the American work force over the same period (Borjas, Freeman and Katz 1993, 227). Recently released numbers from the Census Bureau using the March 1996 CPS indicate that about 1 in 9 workers in the U.S. is foreign-born.

One of the most important aspects of the current immigrant flow has been the large number of immigrants who have few years of schooling. Data from the March 1996 CPS indicate that 32 percent of the immigrants in the work force had not completed 12 years of schooling, and of those immigrants who arrived in the 1990s, 39 percent were high school dropouts. In contrast, the same survey found that only 10 percent of natives in the work force were high school dropouts. Immigrants now account for 29 percent of all the high-school dropouts in the work force. In contrast, immigrants constitute only 11 of those who have completed four or more years of college. Therefore, while immigration has increased the overall size of the work force, it has not done so uniformly.

The fact that immigration dramatically increases the number of lower-skilled workers relative to other skill categories makes it possible that an examination of wage determination will find negative effects of immigration on the wages of workers with few years of schooling. However, even though immigration does increase the number of low-skilled workers, it might not reduce the wages of low-skilled natives because this is not the only effect immigration has on the economy. Advocates of high levels of immigration contend that through their consumption of goods and services, entrepreneurship, capital that they bring, and willingness to take jobs native-born Americans do not want, immigrants create more jobs than they take.

LITERATURE REVIEW

The findings of empirical studies that have examined the impact of immigration on the wages of natives have varied in their results, with older studies showing little or no evidence that immigrants affect wages. However, as newer data have become available the picture has begun to change, with some recent research indicating that immigration does have a negative effect on wages of some workers. Early research done by Butcher and Altonji and Card (1991), Card (1990), Borjas (1983, 1984), Bean, Lowell and Taylor (1988), Muller and Espenshade (1985) and DeFreitas and Adriana Marshall (1983) concluded that immigration does not have a significant negative impact on the labor market performance of natives. The basic methodology

employed by these studies is to compare labor market outcomes in cities of differing immigrant composition. Each metropolitan area is treated as a discrete labor market so that comparisons can be made in unemployment, wages, or work force participation. This type of research is referred to as a "cross-market" or "spatial" analysis and is based on the assumption that any effect of immigration will be confined to the cities where immigrants reside.

Borjas, Freeman and Katz (1993, 1997) employ a very different approach in their work on the impact of immigration on wages. They examine increases in the supply of unskilled workers relative to the supply of other workers brought about by immigration on the national level. They find that immigration was responsible for a third of the decline in wages experienced by high school dropouts in the 1980s. Using a similar methodology, Jaeger (1996) has confirmed their findings. Some studies have also examined the specific effects of immigration on native-born minorities. These studies have also come to contradictory conclusions. Kposowa (1995) used a time series of urban areas between 1940 and 1980, and found that both employment and family income for racial minorities are reduced in high immigrant cities. She concludes that it is probably the low skill-level of racial minorities that exposes them to the harmful effects of immigration. These findings contradict earlier work done by Borjas (1987) and Enchautegui (1993), which concluded that the labor market position of minority workers is not reduced in high-immigrant areas.

Recent work on the growth of income inequality between high- and low-income families has found a connection between immigration and the widening income gap. Topel (1994) found that inequality increased more rapidly in the western United States because of the high concentration of immigrants in that region. Partridge, Rickman and Levernier (1996), using a panel of states, also concluded that the level of income inequality increases in high immigrant states. Both of these studies indicate that immigration seems to be driving down wages for those at the bottom of the economic scale, thereby increasing the gap between rich and poor.

PROBLEMS WITH EXISTING LITERATURE

There are a number of problems with much of literature in this field. First, studies of immigration often aggregate data in a way that makes it very difficult to determine the affects of immigration on particular subcategories of workers or segments of the labor market. Looking at the wages of all workers may mask the consequences of immigration in a particular sector or sectors of the economy.

A second and more serious problem with much of the previous research stems from the spatial approach utilized by many

researchers. This problem is especially pronounced in the older studies, which generally examined immigration by comparing cities at one point in time. These cross-sectional spatial studies treated each city as a discrete labor market so that comparisons could be made between areas with differing levels of immigration. The primary weakness of this approach is that it is based on the assumption that the labor markets of metropolitan areas are unconnected. However, in a hypothetical absence of immigration, many native-born less-skilled workers might have improved their labor market position by migrating to areas that did, in fact, experience high levels of foreign immigration. This internal migration would not only have improved the job prospects of those who moved, it would also have improved the prospects of those left behind by reducing the supply of labor. Furthermore, if those natives harmed by immigration leave high-immigrant areas to avoid competition with immigrants, then this too may mask the effect of immigrants on wages or employment on the city level. If natives adjust their migration patterns because of foreign immigration, then this would preserve equilibrium in wages and unemployment in each metropolitan area. It also seems very likely that immigrants themselves adjust their migration patterns to avoid areas with lower wages and higher unemployment.[2] Thus, comparing wages in cities with differing levels of immigration may reveal little effect because both natives and newly arriving immigrants adjust their migration patterns when the labor market deteriorates in a particular city.

Throughout American history laborers have moved to different parts of the country to better their job prospects (Brownlee 1979, 85-90, 118-119). Most of the research on the migration of blacks from the South in the early part of this century has emphasized the importance of labor market conditions in the North as the primary factor contributing to migration (Fligstein 1981; Johnson and Campbell 1981). Kuznets (1977, 4) argues that the primary reason blacks had not come north earlier was the presence of immigrants. He concludes that it is no coincidence that large-scale migration from the South did not occur until after the number of immigrants coming from Europe decreased.

Recent demographic studies indicate that immigrants have a significant impact on the internal migration patterns of native-born workers. Card (1990) concluded that the Mariel boatlift, which increased the population of Miami by 7 percent in only a few months, had a negligible effect on the city's size because it reduced the number of native-born workers who came to the city. Separate studies conducted by demographers Filer (1993) and Frey (1993,1996) concluded that as the concentration of immigrants increases in a state or metropolitan area, the net out-migration of native-born workers increases. The work of Filer,

Frey, and Card indicates that spatial studies may have failed to pick up significant effects of immigration because they do not control for the response of native-born workers.

In addition to internal migration, the huge volume of goods and services exchanged between cities all across the country means that the labor markets of different cities are interconnected even when there is no migration between them. For example, newly arrived immigrants who take jobs in light manufacturing in a high-immigrant city like Los Angeles come into direct and immediate competition with natives doing the same work in a low-immigrant city like Pittsburgh. Like internal migration, intercity trade will diffuse the impact of immigration from high-immigrant areas to the rest of the country. Finally, the mobility of capital also should play some role in preserving labor-market equilibrium in wages between cities. Any immigrant-induced reduction in wages should result in an influx of capital seeking to take advantage of this situation.

In sum, the mobility of labor, goods, and capital makes it very difficult to determine the impact of immigration by comparing cities. It seems far more likely that any effect from immigration on the labor market is not confined to high-immigrant areas, but instead will be national in scope. As a recently released study by the National Academy of Sciences on immigration concludes:

"Local labor markets in the United States are certainly not completely closed economies. Labor, capital, and goods flow across localities and in doing so tend to equalize the price of labor. As long as native workers and firms respond to the entry of immigrants by moving to areas offering better opportunities, there may be no reason to expect much of a correlation between the wages of natives and the presences of immigrants." (Smith and Edmonston, 1997, 5-27)

The work of Borjas et al. (1993) and Jaeger (1996) avoids the problems of the spatial approach by examining increases in the supply of unskilled labor on the national level. However, the validity of their conclusions rests entirely on the underlying assumption of the model they use. They have to assume (based on previous research) the size of the impact on wages from any shift in the supply of unskilled labor relative to other skill categories. Since they assume that such a shift necessarily reduce wages, their model cannot find anything but a negative effect — it is simply a matter of how much.

The time-series approach utilized in some recent studies also has shortcomings. Looking at change over time in order to discern trends in labor market outcomes caused by immigration raises the possibility that any uncontrolled-for trend that hap-

pens to coincide with immigration may be falsely attributed to the effects of immigration. For example, when trying to explain the decline in wages for less-skilled workers or the rise of income inequality, there is no established or widely accepted way to observe and measure "skill-biased technological change"[3] even though this is likely to be an important factor in explaining the decline in wages for the low-skilled.

Given the problems found in the previous work in this field, the Center for Immigration Studies has undertaken research which seeks to correct some of these problems. Instead of comparing cities, this study compares workers in occupations with differing proportions of immigrants and attempts to measure the effect of immigration on wages on the national level. The hypothesis of this study is that an increase in the immigrant composition of an individual's occupation will reduce the wages of natives in that occupation by increasing the supply of labor.[4] In addition to avoiding the problems associated with spatial studies, this approach has the advantage of not examining changes over time, thus the possibility that there are omitted variables is reduced. Moreover, there is no assumption that any immigrant-induced increase in the supply of labor automatically reduces wages — the model will be able to reveal both positive and negative effects.

RESEARCH DESIGN & DATA

The June 1991 Current Population Survey (CPS) provides the data for the analysis.[5] To account for the impact of illegal aliens on wages, this study uses the formulation of Borjas, Freeman and Katz (1993).[6] The immigration variable is created by calculating the percentage of foreign-born persons in each of the Census Bureau's occupational categories.[7] This variable will be used in a log linear regression to evaluate the amount of variation in individual and aggregate logged wages (weekly and hourly) that is due to variations in the immigrant composition of each individual's occupation. The immigrant variable is also used to measure the effect of immigration on the average wage in each occupation.

In addition to the percentage of immigrants in each individual's occupation, four other occupational-level control variables are included in the model: the percentage of men in each individual's occupation, the average years of schooling for persons in each individual's occupation,[8] the level of unionization in the occupation, and the average age of persons in each individual's occupation. All persons in the same occupation have the same value assigned to them for these four variables. These occupational-level variables are all included because they have a large impact on individual wages. As we will see, these variables capture the occupational-level effects other than the

immigrant variable.

There are six individual-level variables in the model: the individual's employment status, age, sex, union membership, education level, and minority status. These variables are all included because they have significant explanatory power.[9]

Formally, the model takes the following shape:[10]

$$W_i = a+b_1(PM_i) +b_2(AE_i) +b_3(PU_i) +b_4(AO_i) +b_5(PI_i) +b_6(FP_i)$$

$$+b_7(A_i) +b_8(S_i) + b_9(U_i) +b_{10}(E_i) +b_{11}(M_i) +b_{12}(SEI_i) +e$$

There is reason to believe that the effect of immigration varies across occupations. Borjas, Freeman and Katz's study of the 1980s found that immigrants held down wages for only high-school dropouts. Therefore, a second regression is performed using the same variables as in the first, with the addition of an interactive term that is the product of average occupational education and the percentage of immigrants in the occupation. The purpose of the interactive model is to determine if the effect of immigrants is dependent upon the skill level of an individual's occupation. A third individual-level regression is conducted with only low-skilled workers[11] in order to examine the relationship between immigration and the poor labor market performance of these workers. Two aggregate-level regressions are also conducted, with occupations as the unit of analysis and average weekly wages as the dependent variable, in order to add further support to the model.

In addition to the effect immigration has on the native-born population generally, this study will examine the consequences of immigration for native-born minorities. The consequences of immigration for America's minority population are particularly important because minorities, especially low-skilled minorities, continue to have an especially difficult time in the labor market. Therefore, determining the extent to which immigration may have played a role in contributing to this problem is clearly an important research question.

FINDINGS

Table A.1 in the Appendix provides descriptive statistics for all the variables in the equation. Table A.2 in the Appendix reports correlations for all the variables.[12] The results of the individual regressions using the natural log of weekly wages as the dependent variable are contained in Table 1. The first column gives coefficients for a non-interactive model. The second column contains the coefficients for the interactive model. The third column contains coefficients for only low-skilled workers. All

TABLE 1

Regression Coefficients and Standard Errors for Log of Individual Weekly Wages

Variables *Occupational Level Variables*	**Non-Interactive** *Coefficient (Standard Error)*	**Interactive** *Coefficient (Standard Error)*	**Low-Skilled** *Coefficient (Standard Error)*
Percent Male	.0030 (.00019)	.0026 (.00019)	.0021 (.24166)
Average Education	.1600 (.00876)	.0584 (.01420)	.1849 (.01674)
Percent Unionized	-.0022 (.00035)	-.0015 (.00035)	.0012 (.00056)
Average Age	.0197 (.00144)	.0209 (.00144)	.0188 (.00192)
Percent Immigrant	-.0051 (.00093)	-.0290 (.00279)	-.0066 (.00124)
Interactive Term	---------	.0112 (.00123)	---------
Individual Level Variables			
Full- or Part-time	.9323 (.0120)	.9286 (.01201)	.9738 (.01600)
Age	.0065 (.0036)	.0065 (.00036)	.0052 (.00047)
Sex	.1703 (.01133)	.1708 (.01129)	.1639 (.01716)
Union	.2099 (.01352)	.2104 (.01348)	.2840 (.01846)
Education Level	.1263 (.00495)	.1274 (.00493)	---------
Minority	-.0413 (.01260)	-.0376 (.01257)	-.0499 (.01661)
State Wage Inflation	.0051 (.00031)	.0050 (.00031)	.0043 (.00044)
Constant	2.6198 (.00548)	2.828 (.05987)	2.926 (.07712)
Adjusted R^2 Standard Error N, Observation	.5883 (.5020) 12,967	.5909 (.5004) 12,967	.5529 (.5059) 6,567

All variables are significant at the .01 level

three regressions indicate that immigrants depress wages, and the effect seems to vary across occupations.

Because the dependent variable is the log of weekly wages, the coefficients can be interpreted as simple percentages. Thus, the slope of -.0051 for the immigrant variable in the first regression means that for each one percent increase in the immigrant composition of an individual's occupation a worker's weekly wages decline by about one half of one percent. Since native-born workers are in occupations that are 9.5 percent immigrant on average, these findings suggest that immigration may reduce the wages of the typical worker by perhaps 4.9 percent.

The relationship between immigrants and wages is more complex than that represented by the first model in Table 1. The interactive term and the original immigrant variable in the second regression found in column two indicate that the effect of immigrants is dependent upon the average education level of the occupation. The range for the slope of the immigrant variable is as follows: At the bottom end of the range is an occupation with an average education level of 1.6. This value multiplied by the .0112 interactive term is .018. The immigrant variable's slope in the interactive equation is -.029; therefore, in the lowest-skilled occupations the slope of the immigrant variable is -.011, indicating that immigrants have a relatively large effect. The high range for the occupational education variable is 4.9. This value multiplied by the interactive term slope is .055. The sum of the immigration variable and the interactive term in the highest-skilled occupation is .026. Therefore, the slope of the immigrant variable ranges in value from -.011 to .026. This indicates that at the highest skill-level immigrants increase wages, while in the lowest-skilled occupations they depress wages. We will deal with the higher-skilled occupations shortly; first, let us turn to lower-skilled occupations.

If we examine the 23 percent of natives employed in those jobs that on average are done by workers with only a high school degree or less (henceforth referred to as low-skilled occupations), we get the following results: The product of the interactive slope and the average occupational education level of 1.87[13] is .021. The sum of this figure and the immigrant variable is -.008. This means that in low-skilled occupations, a one percent increase in the immigrant composition of an individual's occupation reduces wages by .8 percent. Since these occupations are on average 15 percent immigrant, this suggests that immigration may reduce the wages of the average native in a low-skilled occupation by perhaps 12 percent compared to a worker with the same individual and occupational attributes except with no immigrants in his occupation.[14] This comes to $36.84 a week

for a group of workers that made only $307 a week in 1991. On a yearly basis the reduction is $1,915.68 from wages of $15,964 in 1991.

While the second regression does indicate that immigrants have a negative effect on workers in low-skilled occupations, only 40 percent of native-born low-skilled workers are employed in low-skilled occupations, and low-skilled workers comprise 80 percent of the native-born workers in these occupations. The question remains: Does immigration policy bear any responsibility for the labor market difficulties of low-skilled workers in general? The answer based on the third regression in Table 1, which reports the effects of immigration on only native-born low-skilled workers, appears to be yes. The regression coefficient for the immigrant variable is -.0066 and is slightly larger than that of the immigrant variable in the first regression. Based on the sample, the average weekly wages of low-skilled workers was $341 a week in 1991. A .66 percent reduction in weekly wages for these workers is $2.25. Low-skilled workers are in occupations that are on average 10.6 percent immigrant. Thus, the average low-skilled worker's wages were reduced by $23.86 a week in 1991 or 7 percent.

If we examine hourly wages we find a pattern similar to the one found in Table 1. Table 2 reports a series of regressions using the same control variables as in Table 1 except that the dependent variable is the log of hourly wages. The size of the effect of immigration is somewhat smaller than in the weekly regression, but the effect of immigration on wages is similar.

The slope of -.0029 for the immigrant variable in the first regression means that for each one percent increase in the immigrant composition of an individual's occupation a worker's hourly wage declines by .3 percent. Since native-born workers are in occupations that are 9.5 percent immigrant on average, the typical worker is experiencing a reduction in hourly wages of 2.8 percent as a result of immigration. This is somewhat less than the 4.9 percent figure found in the first regression in Table 1. The coefficients for the interactive model found in the second column of Table 2 indicates that, as was the case with weekly wages, the effect of immigration varies across occupations, with the negative effect being confined to lower-skilled occupations and workers. If we again examine the 23 percent of natives employed in low-skilled jobs, we get the following results: The product of the interactive slope and an average education level of 1.87 is .018. The sum of this figure and the immigrant variable is -.0042. This means that in low-skilled occupations, a one percent increase in the immigrant composition of an occupation reduces hourly wages by .4 percent.

TABLE 2

Regression Coefficients and Standard Errors for Log of Individual Hourly Wages

Variables *Occupational Level Variables*	**Non-Interactive** *Coefficient (Standard Error)*	**Interactive** *Coefficient (Standard Error)*	**Low-Skilled** *Coefficient (Standard Error)*
Percent Male	.0014 (.00018)	.0012 (.00017)	.0017 (.00021)
Average Education	.1710 (.00964)	.0835 (.01747)	.1093 (.01456)
Percent Unionized	.0033 (.00037)	.0037 (.00037)	.0024 (.00046)
Average Age	.0159 (.0013)	.0167 (.00128)	.0165 (.00153)
Percent Immigrant	-.0029 (.00082)	-.0222 (.00331)	-.0063 (.00098)
Interactive Term	---------	.0097 (.00161)	---------
Individual Level Variables			
Full- or Part-time	.2095 (.00989)	.2067 (.0099)	.2500 (.01216)
Age	.0056 (.0032)	.0056 (.00032)	.00428 (.00037)
Sex	.1118 (.01104)	.1106 (.01102)	.1135 (.01371)
Union	.2744 (.01178)	.2730 (.01176)	.2882 (.01377)
Education Level	.0752 (.00964)	.0748 (.00479)	---------
Minority	-.0438 (.01089)	-.0411 (.01088)	-.0629 (.01272)
State Wage Inflation	.0049 (.00029)	.0049 (.00029)	.00493 (.00035)
Constant	4.4499 (.05058)	4.6163 (.05757)	4.7551 (.00035)
Adjusted R^2 Standard Error N, Observation	.4493 (.3588) 7,861	.4518 (.3581) 7,861	.4434 (.3444) 4,913

All variables are significant at the .01 level

Since these occupations are on average 15 percent immigrant, an estimate of the impact of immigration on the hourly wages of natives employed in low-skilled occupations is 6 percent or about half the level found in the weekly regression. The third regression in Table 2 reports figures for only low-skilled workers. The regression of low-skilled workers indicates that for each one percent increase in the immigrant composition of a low-skilled worker's occupation, hourly wages fell by -.63 percent. Since low-skilled natives are employed in occupations that are on average 10.6 percent immigrant, this translates into a reduction in hourly wages of 6.7 percent for this category of worker. This is very similar to the third regression found in Table 1.

The results of the hourly regressions in Table 2 indicate that the effect of immigration on the hourly wages of low-skilled occupations and wages is somewhat less than its impact on weekly wages. The most likely explanation for the difference is that immigrants reduce both hours worked per week as well as hourly wages. Therefore, the effect of immigration on weekly wages is greater because it reflects both a reduction in hourly wage rates and hours worked per week. Although the reduction in wages is smaller when measured in hourly terms, the results of the hourly regression adds strong support to the findings of the weekly regressions in Table 1.

When taken together, the findings in Tables 1 and 2 shed a good deal of light on how immigrants affect the wages of low-skilled workers and occupations. The primary negative effect of immigration is in low-skilled occupations.[15] Because so many low-skilled workers are employed in low-skilled occupations, immigrants adversely affect the wages for low-skilled natives. The fact that in higher-skilled occupations immigrants do not depress wages and may increase them indicates that it is not enough simply to be low-skilled. It is a worker's occupation and not his skill level per se that makes him vulnerable to immigrant competition.

The model itself is biased toward producing occupational-level effects because the immigrant variable is assigned by occupation. However, the six individual-level variables, along with the wage-inflation variable, create significant differences in the characteristics of individuals in the same occupation. Additionally, the results make intuitive sense. The likely avenue by which immigrants affect native-born wages is by occupation or by groups of occupations in which there is a good deal of movement back and forth.

This study has focused primarily on the negative effect of immigration on low-skilled workers and occupations. There are

a number of reasons for this emphasis. First, as has already been pointed out, it is low-skilled workers who have experienced the most difficulty in the labor market. Determining whether immigration lowers the wages of this group of workers is clearly a very important question for policymakers and social scientists. Second, only about 7 percent of the workers in the top one-third most-skilled occupations are immigrants. In contrast, about 15 percent of the workers in low-skilled occupations are immigrants. Therefore, it is in these low-skilled occupations that immigrants have the greatest impact.

Third, there is reason to believe that the positive coefficients for the immigrant variable in higher-skilled occupations may not mean that immigrants cause higher wages in these occupations. This is because it is very likely that distinct labor market forces are at work at the opposite ends of the labor market. Low-skilled immigrants often come to the U.S. because they face bleak prospects in their home country. They are, in effect, pushed into the U.S. by conditions at home. In contrast, immigrants with high skill levels tend to be pulled to the U.S. by the possibility of better wages. In every country skilled persons enjoy a higher standard of living than do the unskilled. It would take a significant wage differential between the U.S. and their home country to lure immigrant professionals to this country. Therefore, since information about earnings differentials are not included in this study, we would expect to find the highest percentage of immigrant professionals in those occupations with the highest wages. The higher-paying the occupation in the United States the greater the probability that there will be a large wage differential between the U.S. and the rest of the world. The large number of immigrants in such high-skilled occupations as medicine and engineering partly attests to this phenomenon. These conditions would produce a situation in which immigrants are concentrated in the highest-paying occupations, but do not cause the higher wages.

It is certainly possible that high-skilled immigrants increase wages for natives. Immigrant professionals may be in possession of skills and knowledge that their native-born counterparts lack. This specialized knowledge may then be transferred to natives in the same occupation. This would then make natives more productive and thus might increase their wages. However, at the bottom end of the labor market this is much less likely to be true. Immigrant agricultural workers or dishwashers are unlikely to possess specialized skills that their native-born counterparts lack. Thus, the primary effect low-skilled immigrants have on natives in the same occupation is competition. It is also important to realize that if immigrants do increase wages

for those at the top of the labor market, only about 25 percent of the work force is employed in occupations that would benefit significantly from immigration, and it is the 25 percent of the work force least in need of an increase in pay.

The different signs for the percent-immigrant variable at the opposite ends of the labor market may also be due to different conditions prevailing at the opposite ends of the labor market in the United States. The decline in wages for less-skilled workers is powerful evidence that less-skilled labor is not in short supply. Additionally, the proportion of the work force employed in occupations that require few years of schooling has fallen in every decade in the postwar period. The opposite is true in higher-skilled occupations where there has been steady and continual growth in the number of jobs requiring skilled workers. This means that in higher-skilled occupations immigrant labor may be more easily absorbed into an ever-expanding pool of jobs, while in low-skilled occupations immigrants and natives are competing for an ever-dwindling supply of low-skill jobs.

One potential problem with the approach utilized in this study is that comparisons are made for individuals across occupations. This means that if the variables in the analysis fail to tap those "occupational" level effects that have a downward effect on wages, then the possibility exists that the findings with regard to the immigrant variable in lower-skilled occupations are confounded by these untapped effects. In other words, immigrants may be concentrated in jobs that do not pay very well; however, their concentration in these occupations is not responsible for the lower wages. If this were the case, then it would appear as if the percentage of immigrants in a low-skilled occupation depresses wages (since this variable is simply the aggregate of immigrants in an occupation), but in fact they would not cause the lower wages. While this line of argument seems plausible, it is not consistent with the available information.

If there is some omitted occupational-level variable that is confounding the results, then the percent-immigrant variable should be highly negatively correlated with weekly and hourly wages. However, the correlation for weekly wages and percent-immigrant found in Table A.1 is only -.22 and for hourly wages it is only -.20.[16] This indicates that immigrants are spread throughout the work force and are not simply concentrated in low-wage jobs. Additionally, a ranking of the ten occupations with the lowest average weekly and hourly wage reveals that only three are among the ten highest in immigrant composition. Thus, it would not appear that immigrants are simply concentrated in the lowest-paying jobs. Previous research also indicates that both legal and illegal immigrants have wages similar to natives of the same skill level and ethnic origin

TABLE 3

Regression Coefficients and Standard Errors for Log of Average Occupational Weekly Wages

Independent Variables *Occupational Level Variables*	**Control Model** *Coefficient (Standard Error)*	**Full Model** *Coefficient (Standard Error)*
Percent Male	.0074 (.5705)	.0072 (.5551)
Average Education	.4259 (.0250)	.3914 (.0259)
Percent Unionized	.0046 (.0011)	.0040 (.0011)
Average Age	.0204 (.0045)	.0212 (.0043)
Percent Immigrant	----------	-.0092 (.0025)
Adjusted R^2	.7513	.7665
Standard Error	(.2310)	(.2238)
N, Observation	204	204

All variables are significant at the .01 level

only a few years after arriving (Gill and Long, 1989). Most importantly, a regression using the data from this study which includes foreign-born workers reveals statistically insignificant results for being immigrant.[17] This confirms the previous research that being foreign-born, by itself, is not a significant handicap in the labor market. Therefore, if being an immigrant does not consign one to working in low-paying jobs, it is difficult to imagine that the percent-immigrant variable is picking up the effects of some omitted variable that varies with the percent-immigrant variable and individual wages.

In Table 3 the unit of analysis is the occupation, with the log of average weekly wages as the dependent variable.[18] Table 3 indicates that most of the occupational-level effects are accounted for by the four occupation control variables. The first regression includes only the four occupational-level control variables. The large R squared and small standard error lends strong support to the argument that these occupational-level control variables capture the occupational-level effects other than the percentage of immigrants. The second regression in Table 4 includes the immigration variable, which is significant and adds more support to the findings in Table 4 by indicating that the results of the individual-level regressions

are *not* simply caused by a few low-paying high-immigrant occupations, because each occupation in Table 4 is treated as a single case. Therefore, no one occupation could have undue influence on the outcome. Overall, Table 4 not only confirms the findings from the individual-level regressions, it also indicates that any occupational-level effects untapped by the model are small.

A second potential limitation of the national cross-occupation approach used here is that the effect of immigration is estimated by comparing the wages of natives employed in occupations with different percentages of immigrants. It is possible that immigrants employed outside of low-skilled occupations have also increased demand for low-skilled native labor. This could offset, at least in part, the wage reduction experienced by natives in low-skilled occupations from immigrant competition.[19] However, since immigration has increased the supply of low-skilled workers much more than that of higher skilled workers, it is unlikely that they could have increased demand enough to completely offset the increase in the supply of labor in low-skilled occupation. Further, as a relative measure, the findings remain valid: The more immigrants in a low-skilled occupation, the lower the wages of natives in that occupation.

So far little attention has been devoted to the demographic characteristics of those employed in the negatively affected occupations. The following section will examine the impact of immigration on native-born minorities.

THE EFFECT OF IMMIGRATION ON NATIVE-BORN MINORITIES

There are three reasons to consider the particular effects of immigration on minorities. First, there may be interactive effects between being a minority and in competition with immigrants. In other words, competition with immigrants may be different for minorities than for non-minorities. In statistical terms, the percent-immigrant variable may have a different slope for minorities than for the rest of the population. A steeper slope would indicate that there is an added effect for being minority and in competition with immigrants. The second reason for considering the particular effect of immigration on native-born minority workers is that they tend to make less on average than their white counterparts. This means that even if the impact of immigration is the same for all groups, any loss in wages will have a relatively greater impact on minorities. Third, minorities may be disproportionately concentrated in occupations that require few years of schooling. Thus, a larger proportion may be adversely affected by immigration. Each of these possibilities is explored below.

Interactive Effects

There is a good deal of anecdotal and some systematic evidence that immigrants are seen as more reliable and harder-working than

native-born minorities at the same skill level. Public opinion studies have found that whites continue to see minorities as lazier and less intelligent than themselves. This is especially true of white attitudes toward blacks (Schuman, Steeh and Bobo 1985; Sniderman 1993). Leading sociologist Christopher Jencks argues that even illegal immigrants are often more employable than young low-skilled blacks because employers believe that immigrants have a better work ethic. Indeed, Jencks himself seems to think employers may be correct in their assessment of young blacks (cited in Mead, 1992, 108). According to Jencks, this belief, true or not, gives immigrants competing for low-skilled jobs an advantage over low-skilled blacks. From the employer's standpoint, immigrants are more desirable employees.[20]

Interactive Effects

A recent study of the Harlem labor market by Newman and Lennon (1995) provides some systematic evidence that employers prefer immigrants to native-born blacks. Their study found that although immigrants were only 11 percent of the job candidates in the sample, they represented 26.4 percent of those hired. Moreover, 41 percent of the immigrants in the sample were able to find employment within one year, in contrast to only 14 percent of native-born blacks. The authors conclude that immigrants fare better in the low-wage labor market because employers see immigrants as more desirable employees than native-born African-Americans.

If Jencks, Newman and Lennon are correct, then immigration should affect the wages of blacks in two ways. First, as has already been argued, immigrants increase the available pool of low-skilled labor, thereby driving down wages. This affects all native-born workers in low-skilled occupations equally. However, blacks, unlike whites, will also have to contend with the perception that they are less reliable workers than immigrants. This creates a situation in which there may be an added effect on blacks from being in competition with immigrants.

For Hispanics the story is more complex. Before the 1960s, Mexican-American leaders argued that increased immigration, mostly Mexican, depressed wages and increased white resentment toward Hispanics. Today, however, Mexican-American leaders favor continued high levels of immigration and their concern about labor market competition has diminished. Skerry (1994, 304-308) argues that the reason for the change is that Mexican-American leaders now realize that increased Mexican migration to the United States means increased political power. While Hispanic leaders may have changed their position on immigration, the Hispanic population continues to see immigration as detrimental to their economic interests. The Latino National Political Survey found that 66 percent of Cuban Ameri-

TABLE 4

Regression Coefficients and Standard Errors for Log of Individual Weekly Wages with Interactive Between Percent Immigrant and Minority Status

Variables	
Occupational Level Variables	*Coefficient (Standard Error)*
Percent Male	.003** (.00019)
Average Education	.1597** (.00877)
Percent Unionized	-.0022** (.00035)
Average Age	.0198** (.00144)
Percent Immigrant	-.0047** (.00102)
Interactive Term (Minority * percent immigrant)	-.0021 (.00209)
Individual Level Variables	
Full or Part-time	.9322** (.01204)
Age	.0065** (.00036)
Sex	.1703** (.01133)
Union	.2097** (.01352)
Education Level	.1263** (.00495)
Minority	-.0197 (.02480)
State Wage Inflation	.00511** (.00031)
Constant	.00026** (.05581)
Adjusted R^2	.5883
Standard Error	(.5020)
N, Observation	12,967

**p<.01 *p<.05

cans and 75 percent of Mexican-Americans agreed or strongly agreed with the statement that there are too many immigrants in the United States. Coauthor of the survey F. Chris Garcia believes that this is the case. He states, "Latinos are the people who feel the greatest economic competition from immigrants" (Mydans, 1992).

The fact that native-born Hispanics tend to live in high-immigrant areas also makes it very likely that they are in direct competition with immigrants. While native-born Hispanics may not suffer from the same negative perception as blacks, there is probably a good deal of labor market substitutability between low-skilled native-born Hispanics and low-skilled immigrant Hispanics. This high degree of substitutability means that native-born Hispanics are, to a greater extent than whites, in direct competition with immigrant Hispanics.

By using certain statistical methods it is possible to examine the possibility that there are added effects from immigrant competition on native-born minorities. In the June 1991 Current Population Survey, 15 percent of native-born workers identified themselves as minority.[21] Table 4 reports the interactive effects of the minority variable and the percent-immigrant variable for native-born workers. The interactive term is created by multiplying the minority variable by the percentage of immigrants in each individual's occupation. The interactive term is negative, but not statistically significant. The regression in Table 4 indicates that there is no interaction between minority status and the concentration of immigrants in one's occupation. This means that the slopes for minorities and non-minorities are *not* significantly different. While the results of the interactive regression in Table 4 indicate that there is no added effect for being minority and in competition with immigrants, the findings do indicate that the effects of immigration on wages is the same for minorities and whites alike.

An alternative method for evaluating the possibility that the slopes for minorities and non-minorities are different is to calculate two separate regressions, one for minorities and one for non-minorities. Once the two slopes are created, a test is performed to see if they are parallel. This method has the advantage of controlling for the possibility that the minority variable may interact with variables other than the percent-immigrant variable. Conducting two regressions and looking at the groups separately avoids this problem. Additionally, conducting two separate regressions avoids the problem of colinearity that exists between the percent-immigrant variable and the minority interaction term. The primary disadvantage of this approach is that the small sample size of the minority-only

regression makes it more difficult to attain statistical significance. Table A.5 in the Appendix reports the results of separate regressions for minorities and whites. In both regressions the percent-immigrant variable is statistically significant at the .01 level. The slope of -.0093 in the minority regression is more than twice as large as the -.0043 slope in the whites-only regression. While this appears to be a large difference, it is necessary to determine whether the difference is statistically significant.

A t-score can be calculated to determine if the difference in the two slopes is statistically significant. By using the beta weight, sample size and residual mean squared from the two separate regressions, a test for parallelism can be conducted.[22] The t-score for the two slopes is 11.304 and thus does fall within the critical region. This means that the difference in the slopes for native-born minorities and whites is statistically significant, and the magnitude of the impact is about twice as great for minorities as it is for whites. Multiplying the -.93 percent reduction in wages from immigration found in the minorities-only regression by 11.5[23] reveals a 10.7 percent reduction in wages for native-born minorities. This is more than double the 4.1 percent reduction in weekly wages indicated by the whites-only regression.

While the above findings support the conclusion that there is an added effect for being minority and in competition with immigrants, the results should be interpreted with caution. The lack of statistical significance in the interactive regression found in Table 4 indicates that the effect of immigrant competition is the same for both immigrants and natives. The reason for the difference between the separate regressions and the interactive regression may be due to the fact that the minority variable is interacting with variables other than the percent-immigrant variable in the full model. These interactions may mask the added effect of immigration on native-born minorities in the interactive model. It is also possible that the lack of statistical significance in the interactive regression is due to the high correlation between the immigrant variable and minority interactive term. If colinearity and multiple interactions are masking the added effect of immigration on minority wages, then the separate regression more accurately reflect the consequences of immigration for native-born minorities. If the separate regressions do offer the more accurate picture of the consequences of immigration for minorities, then this is a potentially very important find. Clearly, this is an area in need of further research.

In addition to interactive effects, there are other reasons to believe that immigration may more adversely affect minorities than whites. We will now turn to those possibilities by examining the average wages of minorities and their distribution across occupations.

Average Wages of Native-born Minorities in the Negatively Affected Occupations

While there continues to be debate over why minorities earn less than whites, there is no doubt that differences do exist. The legacy of past discrimination, continuing discrimination, a culture of poverty, low-skill levels, changes in the economy and other factors have been suggested as explanations for the disparity in wages. There are cogent arguments for all these explanations. For the purposes of this study, it is enough to note that it is well-established that the average wages of native-born blacks and Hispanics are less than those of native-born whites.

As we have seen in Table 1, the negative effect of immigration on wages is primarily confined to workers in low-skilled occupations. In the June 1991 Current Population Survey native-born minorities employed in low-skilled occupations earned $272 per week on average compared to $315 per-week for whites. Table 5 reports a t-score for a comparison of mean weekly wages between native-born minorities and whites. The results in Table 5 indicate that this difference in average weekly wages for immigrants and natives is significant at the .01 level.

TABLE 5

T-test For Independent Samples for Minorities and Whites for Weekly Wages

	number of cases	*mean*	*standard deviation*	*standard error of mean*
MINORITY	609	272.90	172.52	6.99
WHITE	2429	315.69	210.22	4.27

mean difference = -42.79
Levine's test for equality of variances: F= 38.90 P= .000

T-test For Equality of Means

Variance	*T-Value*	*DF*	*2-Tail SIG*	*Standard error of difference*
EQUAL[24]	-4.65	3036	.000	9.210

The results are very similar if native-born blacks and Hispanics are treated separately. Table 6 reports the results of a one-way ANOVA test comparing the mean income of blacks to whites, Hispanics to whites and blacks to Hispanics in low-skilled occupations. The mean weekly wage for native-born blacks and Hispanics in low-skilled occupations are $267 and $272 respectively. The results in Table 6 indicate that the mean income of whites is larger than that of blacks and Hispanics, and the difference is significant at the .01 level.

Though not surprising, the results in Tables 5 and 6 have important implications for this research. The wage suppression caused

TABLE 6

Pooled Variance Estimates for Native-born Workers

Contrasts	*Value*	*Standard error*	*T -Value*	*Degrees of freedom*	*T Probability*
BLACKS TO WHITES	-48.15	11.06	-4.352	3034	.000
HISPANICS TO WHITES	-42.99	17.31	-2.48	3034	.013
BLACKS TO HISPANICS	-5.15	19.70	-.261	3034	.794

Separate Variance Estimates

Contrasts	*Value*	*Standard error*	*T -Value*	*Degrees of freedom*	*T Probability*
BLACKS TO WHITES	-48.14	8.95	-5.39	645.4	.000
HISPANICS TO WHITES	-42.99	14.78	-2.91	172.5	.004
BLACKS TO HISPANICS	-5.15	16.19	-.318	240.1	.751

by immigration in low-skilled occupations must represent a greater loss in wages for native-born blacks and Hispanics than it does for whites because minorities employed in the adversely effected occupations earn on average 16 percent less. As we have seen, the estimate derived from the second regression found in Table 1 indicates that immigration reduces the wages of workers in low-skilled occupation by about 12 percent. Since native-born minorities in these occupations earn 16 percent less ($2,236 annually) than native-born whites, it is reasonable to assume that each dollar reduction in wages represents a greater loss to minorities. Thus, even if we assume that the slope for the immigrant variable is the same for both groups, the impact of immigration must be greater for minorities.

Occupational Distribution of Native-Born Minorities

The fact that minorities in low-skilled occupations make less on average than whites is not the only reason that the impact of immigration falls more heavily on the nonwhite native-born population. In the June 1991 Current Population Survey, 21.5 percent of native-born whites reported being employed in the bottom-third lowest-skilled occupations. In contrast, 33.6 percent of native-born minorities are employed in low-skilled occupations. This means that in the sample, minorities are 56 percent more likely to be in those occupations adversely affected by immigration. A z-score can be calculated to determine if the difference in the proportion of whites and minorities in low-skilled occupations is statistically significant. The z-score for the probability that the proportions are different in the population is -6.96.[25] The z-score indicates that minorities are disproportionately concentrated in low-skilled occupations, and it is *not* the result of sampling variation. The occupational distribution of minorities is probably the result of their having

fewer years of schooling on average than non-minorities. In the sample, 61 percent of native-born minorities were high-school dropouts or had only a high-school degree. The corresponding figure for whites is 49 percent. Therefore, it is not surprising that minorities tend to be concentrated in low-skilled occupations.

Since a larger proportion of minorities are employed in low-skilled occupations, a larger proportion of the native-born minority population is adversely affected by immigration. Correspondingly, the smaller proportion of the native-born whites employed in low-skilled occupations allows a greater percentage of them to avoid the negative consequences of immigration. This same pattern exists when only native-born workers with a high school degree or less are examined. In the sample, 34.2 percent of low-skilled whites are in the bottom-third lowest-skilled occupations. In contrast, 46 percent of native-born low-skilled minorities are in low-skilled occupations. The corresponding z-score for the proportion of low-skilled native-born minorities and whites in low-skilled occupations is -23.52.[26] This very large z-score indicates that low-skilled minorities are more heavily concentrated in low-skilled occupations than are whites at the same education level. Whatever the reason for the higher concentration of low-skilled minorities in low-skilled occupations, the higher proportion of minorities in these occupations exposes a greater percentage of them to the harmful effects of immigrant competition.

If the minority variable is broken down into black, Hispanic and other, we find a very similar occupational distribution. In the sample, 36 percent of native-born blacks, 29.7 percent of native-born Hispanics and 29.5 percent of other minorities[27] are employed in low-skilled occupations. As indicated above, only 21.5 percent of whites in the sample reported being employed in the one-third lowest-skilled occupations. The corresponding z-score for the proportion of each minority group compared with whites is -46.30 for blacks, -17.61 for Hispanics and -12.85 for other minorities.[28] Thus, a larger proportion of native-born blacks, Hispanics and other minorities find themselves negatively affected by immigration because both collectively and as separate groups they are concentrated in low-skilled occupations.

While it is important to keep in mind the limitations of CPS data, the large sample size and the corresponding z-scores make it very likely that the occupational distribution of racial/ethnic groups means that some groups are more adversely effected by immigration than others. Of course, it is hardly a revelation to observe that a higher proportion of minorities compared to whites are employed in the lowest-skilled jobs. Nevertheless,

whatever the reason for this distribution, the arrival of large numbers of immigrants who find employment at the bottom of the labor market must have a greater impact on America's native-born minorities than on native-born whites.

IMMIGRANTS

The primary focus of this study has been on the consequences of immigration for the native-born population. However, the effect of immigration on the wages of immigrants themselves is also an important question. In 1991, immigrants made up approximately 10 percent of the work force. The economic progress of this large component of the U.S. population is clearly important to the future success of the United States.

Some survey data suggest that immigrants are concerned about economic competition from other immigrants. The Latino National Political Survey found that 73 percent of noncitizen Cubans and 84 percent of noncitizen Mexicans residing in the United States agreed or strongly agreed with the statement that there are too many immigrants in the country. A USA Today/CNN/Gallup poll conducted in July of 1995 found that continued high levels of immigration concern many immigrants already in the country. In the survey, 30 percent of all immigrants responded that the number of immigrants entering the country should be reduced. Additionally, 44 percent of immigrants indicated that the number of immigrants admitted should *not* be increased. Only 15 percent stated that immigration should be increased. Immigrants are well-aware of the high number of immigrants in some occupations. Therefore, it seems very likely that part of the motivation for the opinions expressed in the surveys is concern over economic competition.

Testing for the effects of competition among immigrants is difficult with the CPS data utilized in this study. The creation of a variable that tests for the interactive effects of immigrant competition with immigrants, like the one created for minorities, is not possible because immigrants tend to be employed in occupations with a high concentration of immigrants. An interactive term that is the product of individual immigrant status and the percent-immigrant variable would be so highly correlated with the occupational immigrant variable that the problem of multi-colinearity would produce unreliable results. Furthermore, the number of immigrants in the sample is even smaller than the number of minorities. This makes it impossible to split the data between native-born and immigrant and perform a test for parallelism as was done with minorities and whites.

While it is not possible to test for interactive effects, there is no reason to believe that immigrants in low-skilled occupations are somehow able to avoid competing with other immigrants. Immi-

grants working in the lowest-skilled occupations are not more skilled than native-born workers. In the sample, the average education level of immigrants in low-skilled occupations is less than that of native-born workers. If immigrants had more years of schooling on average than native-born workers, then this might help them avoid the negative effects of immigrant competition by giving them greater mobility in the labor market. However, their lack of education makes this unlikely.

It is possible that immigrants can avoid occupations where immigrants are highly concentrated by using a network of family and friends that inform them of the best job opportunities available. However, the very high concentration of immigrants in low-skilled occupations indicates that even if these networks do a reasonably good job of informing immigrants of job opportunities, immigrants are still disproportionately employed in low-skilled occupations. Moreover, the average immigrant is in an occupation that is 12.7 percent immigrant, whereas the corresponding figure for native-born workers is 9.5 percent. Therefore, it does not appear that the foreign-born are able to avoid competing with their fellow immigrants. Finally, all the regressions on weekly and hourly wages done in this study indicate that all persons in low-skilled occupations are negatively affected by immigrant competition. Thus, it is reasonable to assume that the slope for immigrants is the same as the slope for native-born workers.

As was the case with native-born minorities, any immigrant-induced reduction in wages will represent a greater loss to immigrants because they make less on average than native-born Americans. The mean weekly wage of immigrants employed in the affected occupations was $279 in 1991— only 90 percent of the mean weekly wage for natives employed in the same occupations. The difference is statistically significant at the .05 level. Since the difference is not caused by their immigrant status, other factors must be responsible.[29] Immigrants in low-skilled occupations had on average fewer years of schooling than native-born workers and were 86 percent minority. It is very likely that these factors provide most of the explanation for the lower wages of immigrants. Whatever the reason, it seems clear that the consequences of immigrant competition have a greater impact on the material prosperity of immigrants than on higher-paid natives.

The lower wage of immigrants is not the only reason immigrants may be more adversely affected by immigrant competition. Immigrants also tend to be concentrated in low-skilled occupations. This point was made earlier and bears repeating. In the sample, 37.4 percent of the immigrants in the work force

were employed in low-skilled occupations, while for natives the corresponding figure is 23.2 percent. The difference between the two proportions is statistically significant at the .01 level.[30] Thus, as was the case with native-born minorities, immigrants are more likely to be employed in occupations negatively affected by immigration. This may seem obvious, but it means that a much larger percentage of immigrants are affected by continued immigration than are natives.

With immigrants now accounting for almost 10 percent of the U.S. population, their success will have an important impact on the future of the country. Therefore, there is good reason to be concerned about the effects of further immigration on the nearly 40 percent of the immigrant work force that is employed in low-skilled occupations.

CONCLUSION

The primary advantage of the approach utilized here is that it does not suffer from the problems associated with cross-city comparisons. Instead, this study has examined the consequences of immigration on the national level by comparing workers in occupations with differing levels of immigration. Also, there is no assumption that any immigrant increase in the supply of labor automatically reduces wages. The model can and does find both positive and negative effects from immigration. And, because the study does not seek to examine change over time, it is less likely to suffer from omitted variables that may have influenced the wage structure, such as technological change, over the last 25 years.

This new research provides important evidence that immigration lowers wages for those at the bottom of the labor market. Because this study is cross-sectional, it does not directly answer the question of whether immigration contributed to the decline in wages for low-skilled workers over the last 25 years. However, the findings do strongly suggest that as the percentage of immigrants increased in low-skilled occupations, there was a corresponding decline in wages for natives in these occupations. This research also suggests that immigration should be properly understood as national issue and not simply a phenomenon affecting high-immigrant states.

In regard to America's minority population the findings of this study are certainly cause for concern. The findings indicate that immigration may be contributing significantly to one of American's most troubling social problems — the plight of its minority population.

Clearly such factors as technological change and globalization have also played a role in the deterioration in

wages for lower-skilled workers. In terms of public policy, it is precisely because other factors outside the control of policymakers have reduced the wages of low-skilled labor that necessitates the need for immigration control. For example, Congress cannot legislate a pause in the expansion of human knowledge or stop the Japanese from setting up factories in Malaysia. However, it can reduce the flow of low-skilled immigrants into the United States.

POLICY RECOMMENDATIONS

The growing body of evidence that immigration reduces the labor market opportunities available to less-skilled workers, along with the findings of this new research, strongly suggests that we should consider changing immigration policy with the intent of increasing the skill level of newly arriving immigrants. The decline in wages for less-skilled workers indicates that this type of labor is certainly not in short supply. Therefore, it is difficult to justify continually flooding the low-skilled labor market with immigrants. Of course, knowing that workers in low-skilled occupations are harmed by immigration does not necessarily mean that we should change immigration policy. There are two sets of options that could be implemented to deal with the problems identified in this study.

First, we could leave current immigration policy intact and adopt policies designed to deal with the wage suppression effects of immigration. Income support programs such as the Earned Income Tax Credit could be expanded in scope or in the amount they pay out to recipients. Since the research indicates that the negative effect of immigration on wages is confined to those at the bottom of the labor market, the most effective response would be one that increases the overall size of the credit, as opposed to increasing the number of persons covered by the program. Another possibility might be to raise the minimum wage. While this would create some disemployment effects, increasing the minimum wage would improve the wages of workers in the occupations negatively affected by immigration.[31] Other policies might also be helpful such, as allowing more low-income workers to use non-cash assistance programs such as food stamps, public housing or Medicaid. Besides increasing income support and other non-cash assistance programs, helping natives avoid job competition with immigrants might also lessen the impact of immigration. Job retraining programs designed to increase the skill level of those in the adversely affected occupations might reduce the number of natives harmed by immigration. Efforts of this kind could be targeted specifically at workers with few years of schooling and those in occupations with the highest concentration of immigrants. One advantage to the options outlined above is that they

deal with the negative effects of immigration on low-skilled workers without cutting immigration. As has already been pointed out, lower wages may lead to better returns on investment and lower prices for consumers.[32] If these gains are thought to outweigh the losses to the poor, we could attempt to redistribute some of the benefits to those harmed by immigration. Devoting more tax dollars to income support programs or job retraining and leaving current immigration policy intact would also avoid a lengthy national debate over immigration policy.

Of course, implementing new programs to assist workers in low-skilled occupations would be costly and difficult. For example, even a modest increase of, say, 10 percent in the Earned Income Tax Credit would add roughly $4 billion to the program. More importantly, the United States does not currently have, nor is it likely to have in the near future, a means of reallocating the potential benefits of immigration to those made poorer by it. It seems unlikely that the country will undertake any new large scale efforts to assist workers in the low-skilled sectors of the economy given the current skepticism of the public and policy makers concerning efforts to uplift the poor in general. Moreover, any attempt to develop such a system would undoubtedly lead to calls for significant cuts in low-skilled immigration. It is also worth noting that increased spending may only get the working poor back to where they would have been without immigration. Thus, if we are concerned about the impact of immigration on workers in low-skilled occupations, reducing the level of low-skilled immigration seems to be the most effective and politically feasible solution.

Increasing the skill level of immigrants would require changes in both the selection criteria for legal immigrants and significantly stepped-up efforts to reduce illegal immigration. Let us consider changes to legal immigration first. In order to increase the skill level of legal immigrants, the selection criteria used for admission would have to be changed from one based primarily on family relationships to one based on skills. The Commission on Immigration Reform suggested limiting family immigration to the spouses, minor children and parents of citizens and the spouses and minor children of Lawful Permanent Residents. This would eliminate the preferences now in the law for the siblings of citizens and the adult children (over age 21) of citizens and Legal Permanent Residents. The preference for spouses and children of noncitizens should also probably be eliminated, since these provisions apply to family members acquired after the alien has received a green card, but before he has become a citizen.[33] Limiting family immigration to what are currently defined as Immediate Relatives would reduce this part

of the flow to about 300,000 per year, based on the FY-96 level, and the number would likely fall to 200,000 or fewer in only a few years. Excluding parents of citizens would reduce family immigration by a further 20 percent.

Humanitarian immigration should also undergo some changes. A greater effort should be made to limit asylum and refugee status to those who are genuinely in need of permanent resettlement because of persecution or a well-founded fear of persecution. The expansion of asylum grounds to groups not originally intended is likely to undermine public support for this small but needed category of admission. Abuse of the asylum law also encourages illegal immigration by allowing those who make it into the United States to claim asylum on specious grounds in an effort to forestall deportation. As for refugees, the system must continue to remain flexible and in some years it may need to expand beyond the 50,000 originally intended by the Refugee Act of 1980. However, limiting resettlement to 50,000 in ordinary circumstances would also contribute to a reduction in low-skilled immigration.

For employment-based immigration, the most important change would be to drop the 10,000 visas for unskilled workers. As has already been made clear, it is very difficult to justify unskilled immigration. Moreover, this category also encourages illegal immigration because it offers the hope to unskilled illegal aliens that they will find an employer who will eventually petition to bring them in legally. While the number of illegal aliens that actually are able to take advantage of this provision is small, it does offer the hope of legal status to many illegals.

The Jordan Commission has also suggested eliminating the Diversity Lottery. This too seems like a good idea. While diversity immigration only represent about 6 percent of the legal immigrant flow, it makes little sense to admit immigrants based on luck. This visa lottery also stimulates further family immigration because the winner can eventually petition for brothers and sisters, adult childern and parents. Restricting family immigration to the spouses, minor children, and parents of citizens, rationalizing humanitarian admissions, ending unskilled employment-based immigration, and eliminating the diversity lottery would cut the flow of legal low-skilled immigration significantly.

Cutting illegal immigration would also be a necessary prerequisite to reducing low-skilled immigration.[34] Illegal immigration is undoubtedly the lowest-skilled flow of immigrants, with an estimated 80 to 90 percent having no more than a high school degree. Among those who study the issue, there is broad agreement that cutting illegal immigrants off from jobs offers the best

hope for reducing illegal immigration.

Since 1986 it has been unlawful to employ illegal aliens. However, to date efforts to cut off the jobs magnet have been limited and ineffective. There are at least four steps that need to be taken. First, a national computerized system that allows employers to verify that persons are legally entitled to work in the United States needs to be implemented. Second, the INS must expand worksite enforcement efforts, which is only possible if Congress significantly increases funding for such efforts. Third, the system for tracking vistors from abroad must be improved, since visa overstayers account for 40 percent of illegal immigration.

Finally, more could also be done at the border, which accounts for 60 percent of illegal immigration. Despite increases in funding over the last few years, efforts along the border remain inadequate. A real effort to control the border with Mexico would require perhaps 20,000 agents and the development of a system of formidable fences and other barriers along those parts of the border that are used extensively for illegal crossings.

The cuts in legal immigration proposed earlier would also help reduce illegal immigration, because the current system of legal immigration creates a strong incentive to come illegally. There are approximately 4 million people qualified for immigration to the United States but who are waiting their turn to receive the limited number of visas available each year in the various family categories. Such a system encourages those who have been selected, but have to wait, to simply come to the United States and settle illegally in anticipation of the day they are granted visas. Eliminating the sibling and adult children categories would alleviate this situation by doing away with the huge waiting lists.

In addition to reducing the incentive to come before a green card is issued, cuts in legal immigration would also be very helpful in controlling illegal immigration because communities of recent immigrants serve as magnets for illegal immigration, providing housing, jobs and entree to America for illegals from the same country. It is no coincidence that the top immigrant sending countries are also the top countries in sending illegal immigrants to the United States.

The changes in legal and illegal immigration policy outlined above would restore immigration levels to more traditional levels of about 300,000 to 400,000 annually in a few years. Even with these changes, the United States would remain a country of immigration, accepting more immigrants than any other nation.

The primary disadvantage to the changes in immigration policy suggested above is the cost. While cutting legal immigration would be virtually cost-free, any real effort to control illegal immigration would be expensive. In Fiscal Year 1997 the INS budget was $3.1 billion. If most of the policies listed above to control illegal immigration were implemented, the INS's budget would expand significantly. However, even a tripling of its budget would still mean that less than 1 percent of federal expenditures are devoted to securing the nation's borders and improving the plight of the most disadvantaged Americans. Given the importance of these goals, the expenditure is justified.

The costs involved in controlling illegal immigration or implementing new programs designed to help the working poor, as well as the multiple causes of wage decline for the poor, may prompt some to argue that no action should be taken. However, although economic globalization, skill-biased technological change, and the entry of women into the work force may all have contributed to the decline of wages for workers with few skills, immigration is different. Congress cannot legislate a pause in the expansion of human knowledge or instruct women to exit the work force or stop the Japanese from setting up factories in Malaysia — but it *can* reduce the number of low-skilled workers coming into the country each year. What's more, Congress exacerbated the problem of deteriorating economic prospects for the poor by instituting the policy of high immigration in the first place. Therefore, some attempt at redress is called for, whether through income redistribution or changes in immigration policy. To do neither would suggest a callous disregard for those harmed by this deliberate federal policy.