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*The Effect of Immigration on Wages:  
A Review of the Literature and Some New Data*

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## **Executive Summary**

Illegal immigration is currently the dominant labor issue in the political arena. This report seeks to answer two questions: How much, if at all, does immigration actually hurt native workers? And if immigration does have negative consequences for the native-born workforce, do the remedies proposed—especially the increased restrictions on the mobility and rights of immigrants—repair the harm?

An increase in the supply of workers able and willing to do a particular job puts downward pressure on the wages of workers in that job, whatever the cause of the increase—i.e., whether from immigration, the de-mobilization of the armed forces, a decision of large numbers of unwaged household workers to seek waged work, or a sudden shift in the occupational preferences of those already in the waged workforce. But wages are not determined by supply factors alone. The demand for labor also affects the wage level. Generally speaking, when the demand for labor is greater than the supply, wages will go up; and when the demand is less than the supply, wages will go down.

This report uses unpublished data from the Current Population Survey to explore how the balance between these two opposing tendencies has been struck in recent years. A comparison of the rates of change in wages and in the share of non-citizens in twenty-two low-wage occupations between 1994 and 2007 reveals almost no correlation between them. In other words, in a sample of low-wage occupations for which data is available, wages did not lag behind in the occupations where the immigrant share increased dramatically; and they did not forge ahead in those occupations where the share of immigrants increased only slightly or declined.

This result is consistent with David Card's analysis of the relative wages of high school graduates to high school dropouts in 175 cities in the year 2000. Card found no significant differences among the ratios of high school graduate to high school dropout wages, regardless of whether the city in question had a large or a small proportion of immigrants.

Card's conclusion, however, is based on the assumption that immigrant high school leavers did not compete for jobs with native high school graduates. Data from the

Current Population Survey reveals this not to be the case. Occupations in which most native workers were high school graduates also included a sizeable proportion of immigrants without a high school diploma (or its equivalent), suggesting that immigrants without a high school diploma compete directly with both high school graduates and high school leavers in the US labor market.

This latter point also raises doubts about the results in George Borjas's influential 2003 study of the impact of immigration on wages. He estimated that the surge in immigration between 1980 and 2000 reduced the wages of high school leavers by 8.9 percent and of high school graduates by 4.9 percent. However, if immigrant workers without a high school diploma compete with both high school graduates and high school leavers in the US market, the discrepancy in the experience of the two groups of native workers pointed to by Borjas's study remains unexplained.

The report concludes with a discussion of policy options. The empirical evidence suggests that immigration is not an important cause of economic hardship for native workers. Even if immigration reduced the wages of workers without a high school education by 8.9 percent (assuming that Borjas' estimate is correct), they would have still been poor in its absence. The economic impact of immigration is simply too small a factor to hinge major policy changes on it. The decline in union density, the absence of a strong social safety net, and inadequate investment in public services such as education and health care are much bigger concerns.

To make matters worse, the proposed "solutions" to the "problem" of immigration will leave all workers worse off. Closing the borders is probably not possible, for both practical and political reasons; and even if it were possible, it is not necessarily desirable. Making it harder to enter the country will make it less likely that those who come in search of jobs will leave when the jobs disappear. It will also intensify the competition for the jobs that remain among those who are here and have nowhere else to go.

Punishing unauthorized entrants or their employers is also self-defeating. Workers who are ineligible for welfare, housing subsidies or school lunches are destitute and have no choice but to work for whatever wage they are offered. Employers who are severely punished for hiring may not hire anyone at all, forcing the immigrants to compete even harder for jobs.

Depriving immigrant workers of their rights will not improve the economic prospects of low-wage workers. Protecting their right to organize and expanding their educational opportunities will.



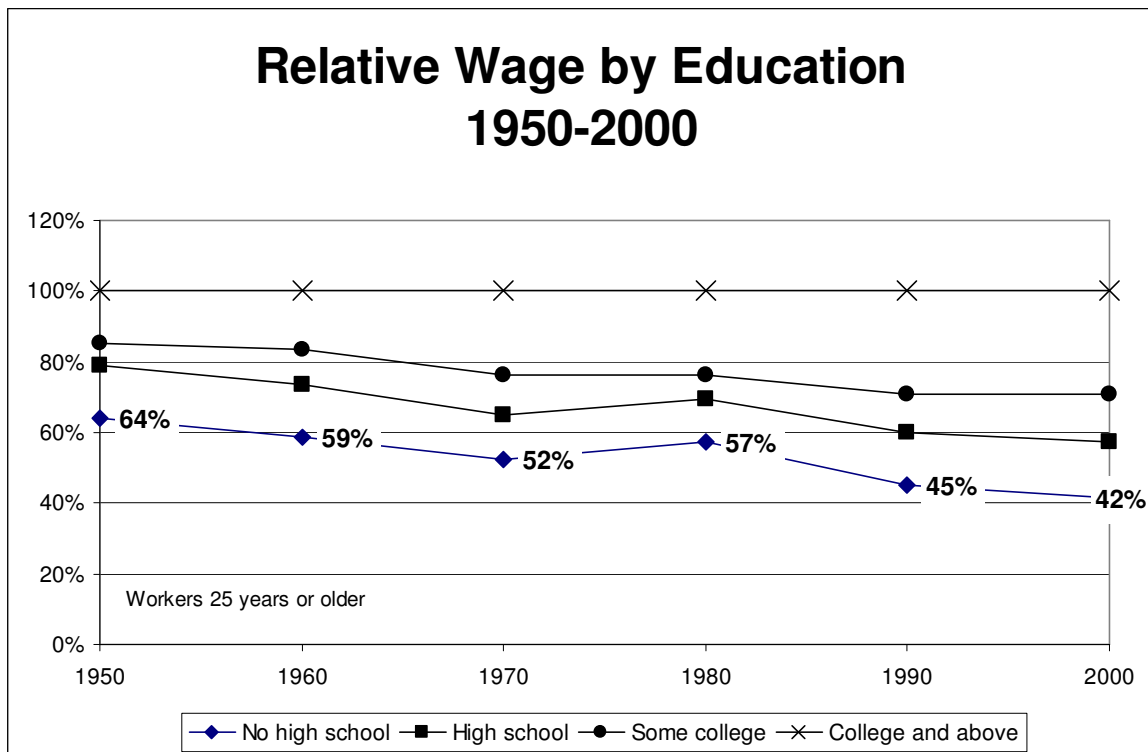
## Immigration: Does It Matter and What Should Be Done About It?

Illegal immigration is currently the dominant labor issue in the political arena. This raises two questions: Beyond the rhetoric, does illegal immigration actually hurt native workers? And if it does, do the remedies proposed, especially the increased restrictions on immigrant worker mobility and rights, repair the harm?

### **Background: Fifty years of declining wages**

The debate about immigration is occurring after 50 years of continuous decline in the relative wage of US workers without college educations and the persistent failure of the education system to respond to this decline. In 1950 the wage of a worker without a

**Figure 1: Relative Wage by Education, 1950-2000**



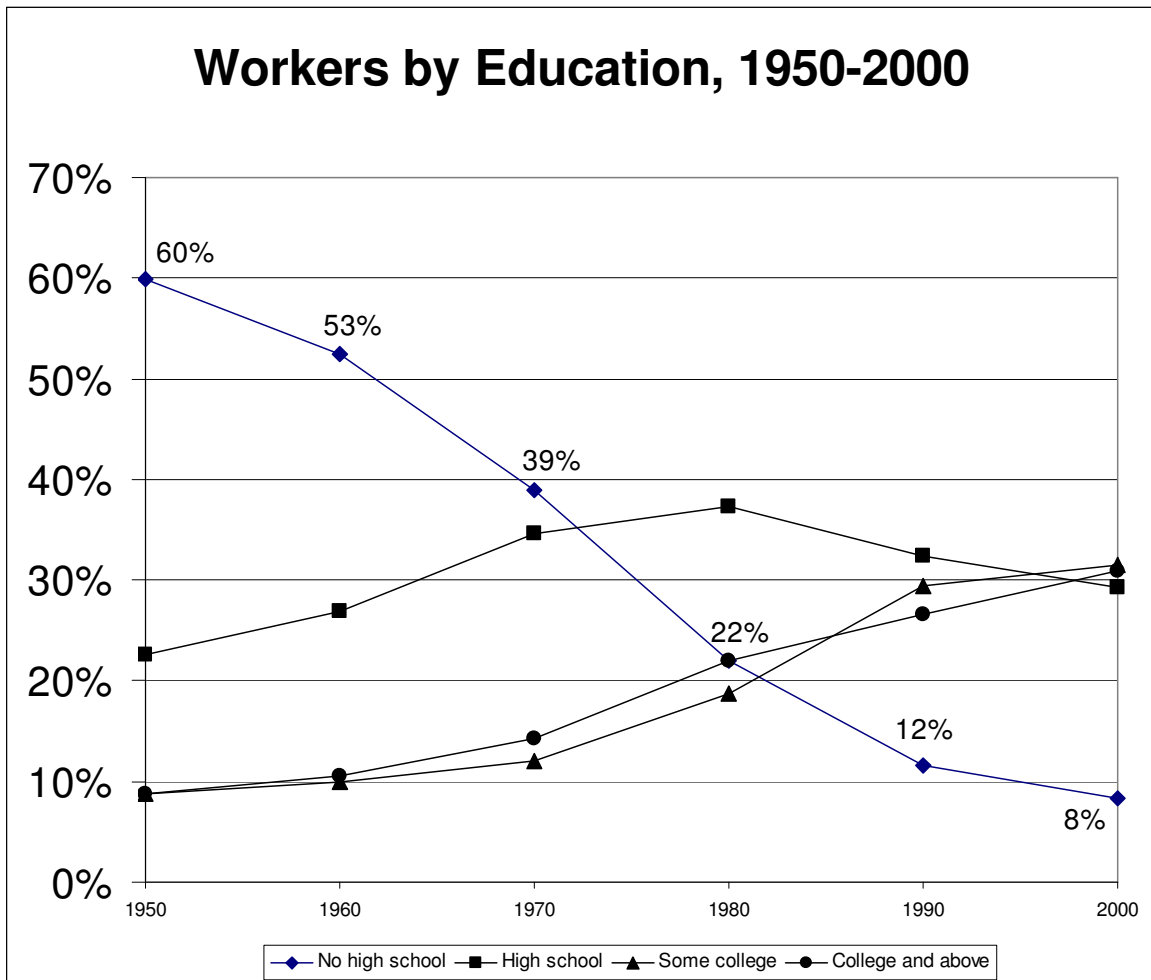
high school education was 64 percent of the wage of a college-educated worker; but in 2000 it was 42 percent, a drop of one-third (Figure 1). For workers with high school

education the decline has also been substantial, if not quite as dramatic, falling from 79 percent of the college wage in 1950 to 57 percent in 2000. For workers with some college education, their relative wage has declined from 85 percent to 71 percent.

As the relative value of a college education has increased so has both the number and the proportion of college educated workers, growing from 9 percent in 1950 to 31 percent in 2000 (Figure 2). This increase is, of course, a positive development.

Nevertheless, more than two-thirds of workers do not have a college education and they

**Figure 2: Workers by Education, 1950-2000**



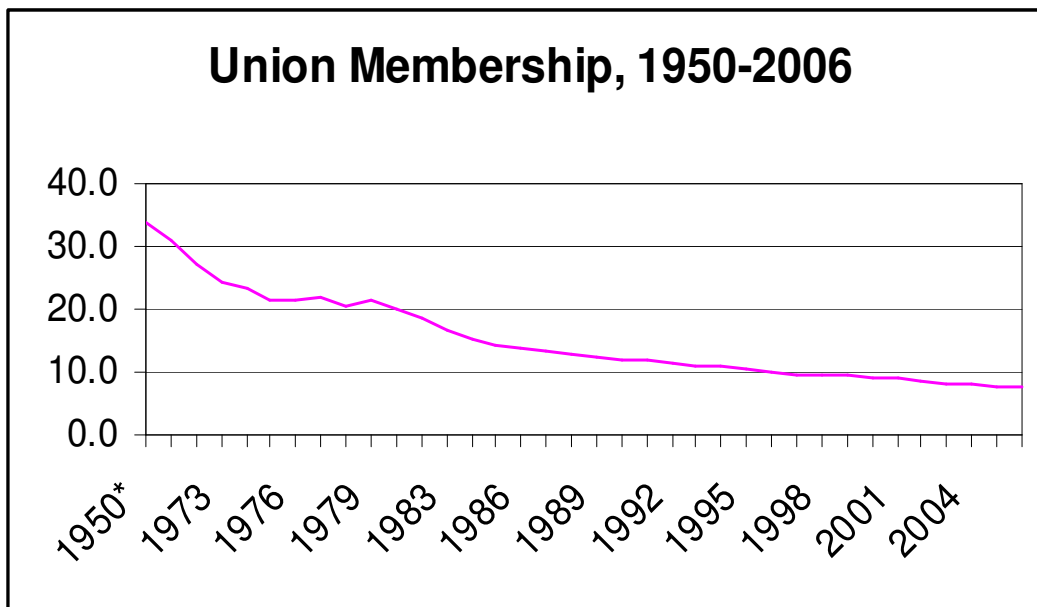
are losing ground economically relative to those who do.

Why is this happening? Since college graduates are becoming more abundant and



the rest of the workforce relatively more scarce, it would be reasonable to expect that the wages of college graduates would fall relative to the rest. Shouldn't the growing number and proportion of college educated workers drive down their wages relative to those segments of the workforce that is becoming increasingly scarce? Other things being equal, as they say, it would. But two factors served to weaken the bargaining power of workers who have not graduated college, despite their growing relative scarcity in the US. First, the rate of union membership has declined; and, second, globalization has flooded the labor market with millions workers without a college—or even a high school—education and with limited rights.

**Figure 3: Union Membership, 1950-2006**



In 1950, union members accounted for 35 percent of the private sector labor force; in 2006, they accounted for only 7 percent (Figure 3). One important reason for this decline was that jobs moved from the unionized high-wage North to non-unionized,

low-wage South. Between 1970 and 1980, for example, the number of jobs in the South increased by 43 percent, but in the North the increase was only 9 percent.<sup>1</sup>

Globalization has had a similar effect, adding to the labor pool millions of workers with only minimal schooling and rights to unionize. In China, for example, enrollment in higher education is one-fourth what it is in the US. And while official Chinese unions claim approximately as many members as belong to unions everywhere else in the world, most of these unions are agencies of the government and not independent organizations. Indeed, Chinese workers do not have the right to form independent unions. Moreover, in 2003 some 140 million Chinese workers were part of a “floating population” of internal “immigrants” who did not have the legal right to live in the cities where they worked. It is not surprising, therefore, that workers in China (and other developing countries) are paid just a tiny fraction of the wages of American workers, even when they work for exactly the same companies, doing exactly the same jobs, with exactly the same educational credentials (Ashenfelter and Jurajda, 2001).

In short, with the consolidation of a global labor market, global factor shares increasingly govern the bargaining power of different segments of the labor force. The college-educated workforce has grown rapidly in the US but there is still a severe shortage of college-educated workers globally. Similarly, the share of the workforce without a high school education has shrunk dramatically in the US; but globally there is an overabundance of such workers willing and able to work for wages much lower than those which prevail in the US. This shifting balance has affected not only the relative wages of the different segments of the labor force. It has also affected the ability to organize and to secure a more equitable share of the wealth they all cooperate to produce.

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<sup>1</sup> Pearl Kreamer, *Crisis in Urban Public Finance*.

***Immigration and Immigrants: Basic Facts***

What about immigration? Immigration is a significant contributor to the growth of the US labor pool. Nearly one-third of the growth in the US labor force between 1994 and 2007 came from immigration (Table 1). In this period, the share of naturalized citizens in the labor pool nearly doubled, from 4 percent to 7 percent; and the share of non-citizens increased by 50 percent, from 6 percent to 9 percent. Overall, non-citizens were responsible for 18 percent of the growth of the US labor pool, while recently naturalized citizens were responsible for another 15 percent.

	<b>1994</b>		<b>2007</b>		<b>Growth</b>	
	<b>Number</b>	<b>Percent</b>	<b>Number</b>	<b>Percent</b>	<b>Number</b>	<b>Share of Growth</b>
<b>Citizen</b>	71,494,576	90%	89,796,850	84%	18,302,274	67%
<b>Naturalized</b>						
<b>Citizen</b>	2,915,118	4%	7,099,794	7%	4,184,676	15%
<b>Non-Citizen</b>	4,868,566	6%	9,644,576	9%	4,776,010	18%
<b>Total</b>	79,278,260	100%	106,541,220	100%	27,262,960	100%

Source: CPS  
Workers 25 years or older with wage > \$.75/hour

A distinction is generally made in the public debate between “legal” and “illegal” immigrants. Although reliable estimates of the numbers of illegal immigrants do not exist, for the purposes of this report I will assume that the number of non-citizens in the workforce can serve this purpose. To be sure, some among the non-citizens are legal. But if one assumes, as we do, that the number of legal non-citizen respondents is at least as large as the number of “illegals” who did not respond, then the number of non-citizens estimated by the census can serve as a conservative estimate of the number of illegal immigrants for the purposes of our analysis; and we so assume.

By the same token, we will also assume that the educational attainment of

unauthorized immigrants is the same or lower than that of the legal non-citizens.

First, let us review some basic facts. Immigration has a significant effect on the number and share of workers in the labor pool without high school education (Table 2). Without immigration, the share of workers without high school education would have been 6 percent, but with them they account for 9 percent. The share of no other group of workers increases because of immigration. On the contrary, the share of workers with high school education is actually lower and the share of workers with higher levels of education is unchanged.

In addition, immigrant workers, particularly non-citizens, are overwhelmingly male (Table 3); and a disproportionate number are from Latin America, primarily Mexico, but also its southern neighbors (Table 4).

Second, non-citizens are concentrated in a relatively small number of occupations. Appendix A lists the occupations that employ at least 1 percent of all non-citizens in the workforce in descending order from the largest number employed to the smallest (above the 1 percent threshold). The largest number of non-citizens work as construction laborers (655,000); maids and housekeepers (480,000); carpenters (430,000); and cooks (397,000). The smallest number (over the 1 percent threshold) are employed as personal and home care aids (59,000); butchers and meat processing workers (65,000); food service managers (67,000); and designers (68,000).

**Table 2: Education by Immigration Status**

	<u>No High School</u>	<u>High School</u>	<u>Associate</u>	<u>Bachelor</u>	<u>Advanced</u>	<u>Total</u>
<b>Citizen</b>	6%	50%	11%	22%	11%	100%
<b>Naturalized Citizen</b>	17%	36%	8%	24%	14%	100%
<b>Non-Citizen</b>	39%	31%	6%	15%	9%	100%
<b>Total</b>	9%	47%	11%	22%	11%	100%

Workers 25 years or older, with wage > \$.75

Source: March Suppt. 2007

**Table 3: Citizenship and Gender**

	<u>Male</u>	<u>Female</u>
<b>Citizen</b>	50%	50%
<b>Naturalized Citizen</b>	54%	46%
<b>Non-Citizen</b>	66%	34%
<b>Total</b>	51%	49%

Workers with wage > \$0.75/hour

Source: CPS March Suppt 2007

**Table 4: Immigration by Hispanic/Non Hispanic Origin**

	<u>Not Hispanic</u>	<u>Mexican</u>	<u>Puerto Rican</u>	<u>Cuban</u>	<u>Other Countries</u>
<b>Citizen</b>	97,553,832 92%	5,642,801 5%	1,441,939 1%	272,196 0%	1,444,352 1%
<b>Naturalized Citizen</b>	5,099,948 68%	1,371,822 18%	- 0%	211,462 3%	864,257 11%
<b>Non-Citizen</b>	4,231,893 37%	4,473,523 39%	- 0%	237,873 2%	2,456,725 22%
<b>Total</b>	106,885,673 85%	11,488,146 9%	1,441,939 1%	721,531 1%	4,765,334 4%

Workers with wage > \$0.75/hour

Source: March Suppt. 2007

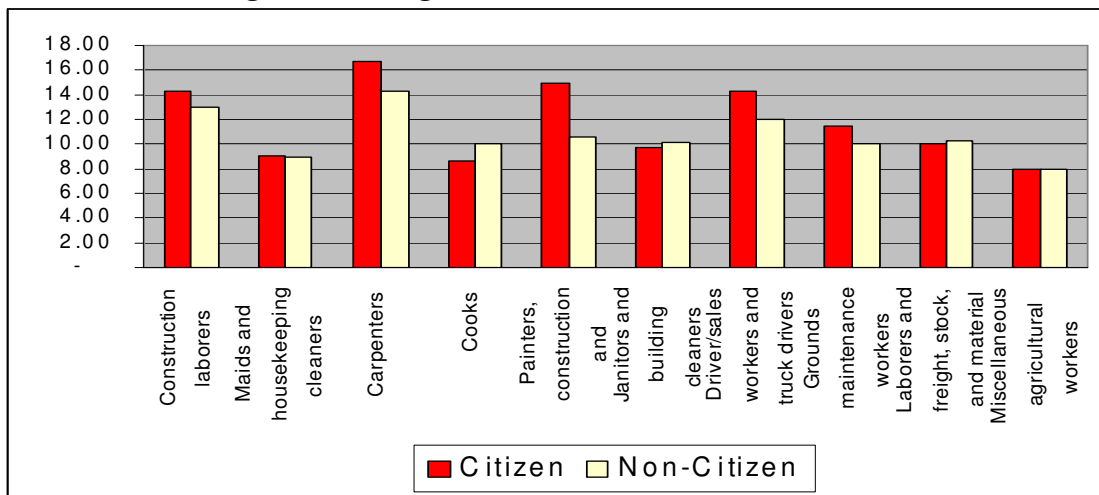
The list in Appendix A also includes the factor by which non-citizens are over-represented. For example, non-citizens account for only 9 percent of the workforce as a whole but they account for 43 percent of all construction laborers. Among construction laborers, therefore, non-citizens are over-represented by a factor of 4.7 (43 percent ÷ 9 percent = 4.7). The occupations with the largest over-representation of non-citizens are roofers (151,000 workers with an over-representation factor of 6.8), painters (329,000; 6.1), and sewing machine operators (150,000; 5.8). (Except for the last, these occupations are also male dominated, reflecting the over-representation of male among the non-citizen labor force.) The occupations in which non-citizens are under-represented (i.e., have an “over-representation factor of less than 1, in occupations which employ at least 1 percent of all non-citizens) are, not surprisingly, largely female-dominated: secretaries and administrative assistants (76,000; 0.3), cashiers (101,000; 0.4), retail salespersons (124,000; 0.4), and miscellaneous managers (97,000; 0.4).

It is often claimed that non-citizens mainly do jobs that native-born Americans don't want to do. This does not appear to be the case. The occupation with the largest number of non-citizens is construction laborer. But native workers are a greater proportion of construction laborers than are non-citizens, by 49 percent to 43 percent (for this and similar comparisons, see Appendix A). The occupation with the second largest number of non-citizens is maids. But 51 percent of maids are natives and only 36 percent are non-citizens. Even among painters, roofers, and sewing machine operators, where non-citizens are the most heavily represented, more than a third of those engaged in these occupations are natives.

### *Comparing the wages of immigrants and native workers*

Do immigrants earn less than natives in the same occupation? Figure 4 shows the median wage of citizens and non-citizens in the 10 occupations that employ the largest number of non-citizens (in decreasing order from left to right). As is evident, citizens had significantly higher wages in five of the ten occupations. Strikingly, however, in four of the ten occupations the differences in wages were negligible; and among one group of workers (cooks), immigrants earned noticeably more than natives.

**Figure 4: Wages of Natives and Non-Citizens**



Source: CPS, March Suppt. 2007

More generally, 44 percent of citizens in 2007 held occupations in which the median wage for citizens was higher than the median wage for non-citizens; and 25 percent held occupations in which the opposite was true. The remainder, about 30 percent, held occupations in which there were no non-citizens working at all. (It should be noted that these comparisons do not control for the age or work experience of the worker, which may explain some of the discrepancies.)

These facts raise interesting questions. An increase in the supply of workers able and willing to do a particular job can be reasonably expected to put downward pressure

on the wages of workers in that job, whatever the cause of the increase—i.e., whether from immigration, the de-mobilization of the armed forces, a decision of large numbers of unwaged household workers to seek waged work, or a sudden shift in the occupational preferences of those already in the waged workforce. This downward pressure is visible in Table 4 above, where the wages of newcomers—immigrants, in this case—are significantly less than native workers in five of the ten occupations shown; and the downward pressure would be felt by the 44 percent of citizens who work in occupations where they earn more than their non-citizen counterparts.

However, newcomers including immigrants may also exert *upward* pressure on wages—as is the case in the 25 percent of occupations where non-citizens actually earn more than native workers. How might this happen? Generally speaking, immigrant workers, especially non-citizens, have fewer employment opportunities than do natives; nearly one-third of all occupations employ no non-citizens at all. As a result, employers can often recruit more highly skilled and productive non-citizens to occupations that otherwise, for whatever reason, attract only less skilled or less productive native workers. Because the non-citizens are more productive, employers are willing—and can afford—to pay higher wages than they would or can pay the less skilled native workers.

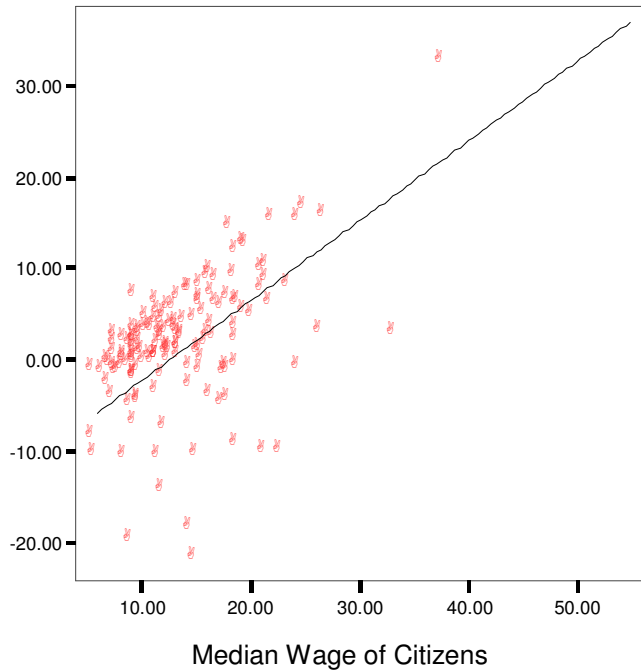
Figure 5 below plots the data points for this comparison. Each point represents an ordered pair  $(x,y)$ , where  $x$  = the median wage of citizens in that occupation; and  $y$  = the wage gap between citizens and non-citizens in a given occupation. A linear regression analysis of the data yields a straight-line approximation (also shown in Figure 5) that every dollar increase in the median wage of citizens increases the gap in the median wage between citizens and non-citizens by \$0.87. It also yields a reasonably high correlation



coefficient between the median wage of citizens and the difference between citizen and non-citizens median wages of 0.67, which indicates a fairly strong relationship.

**Figure 5: The Wage Gap**

**The Higher the Wage, the Larger the Wage Gap between Citizens and Non-Citizens**



Source: CPS March Suppt. 2007

There are two things to notice. First, there are a sizeable number of points below the zero line. Each of these points represents an occupation in which the median wage of immigrants exceeds that of native workers. In each of these occupations, therefore, the presence of immigrant workers is putting *upward pressure* on wages.

Second, the average median wage in the occupations below the median line—that is, those in which immigrant non-citizens earn more than native workers—is \$10.00, whereas the average median wage of the occupations above the zero line—that is, those in which immigrant non-citizens earn less than native workers—is \$14.25. In other

words, non-citizens have a higher median wage than native workers in occupations that otherwise pay the least —and therefore exert *upward pressure* on the wages of native workers in those occupations. They have a lower median wage than native workers in those occupations that pay comparatively more—and therefore exert *downward pressure* on wages in these situations.

These results are especially relevant to our discussion of George Borjas’s influential finding, which we will discuss in more detail later in this report, that an 11 percent increase in the labor supply of working men between 1980 and 2000 due to immigration “reduced the wages of the average native worker by 3.2 percent.” As he observed, different education and work experience cohorts in the labor force experienced this reduction differently. Thus, he estimated that immigration reduced the wages of high school leavers by 8.9 percent over the 20-year period of his study; the wages of college graduates by 4.9 percent; and the wages of high school graduates by 2.6 percent. (The wages of workers with less than four years of college were not significantly affected.)

If immigrants typically earn more than citizens in the lowest paid occupations, however, their presence would not explain the lower wages of native workers in those occupations. Instead, in these circumstances, employer demand would seem to be more important than labor supply. Employers appear unwilling to hire native workers at lower wages when they can hire more productive immigrant workers at a higher but even more profitable wage. This is just one of the many anomalies we discover when trying to understand the labor market.

### *The effect of immigration on wages*

What impact does immigration have on the wages of natives? Does the empirical evidence show that immigrants do in fact lower the wages of natives? And if so, by how much? Or is it the case that other factors appear to intervene.

There have been several attempts to measure the impact of immigration on wages, including one by this author, and they are described below. As we shall see, measuring the effect of immigration on wages is difficult. The method that we employ here is to investigate how relative (percent) changes in wage rates in occupations that experienced large increases in the share of non-citizens compare to relative (percent) changes in wage rates in occupations in which the share of non-citizens increase only slightly or not at all. (The reason for comparing the relative changes in wages rather than the changes in the wages themselves is that the levels of wages vary widely across occupations for factors that have nothing to do with immigration. Assuming that these factors remain constant over time, it is the changes in the levels wages that reflect the effect of immigration)

Is it the case that workers in occupations in which there was a large increase in the share of non-citizens saw their wages go down relative to workers in occupations where there was not a large increase? Table 6 includes those occupations listed in Appendix A that: 1) do not require higher education; and, 2) for which data is available for the years 1994 to 2007. For each of these occupations, Table 6 shows the growth in the share of non-citizens between 1994 and 2007 and the growth in the median wage of native workers. The entries in the table are also plotted in Figure 6.

It is clear that the correlation between changes in the share of non-citizens and changes in the median wage is weak. For example, the share of non-citizens among

construction laborers has increased by 259 percent between 1994 and 2007. Yet this very large increase did not prevent the median wage from increasing by 73 percent. Over the same period the share of non-citizens among stock clerks increased by only 11 percent, yet the median wage of stock clerks increased by only 2 percent.

**Table 6: Changes in the Share of Non-Citizens and in the Median Wage, Selected Occupations, 1994-2007**

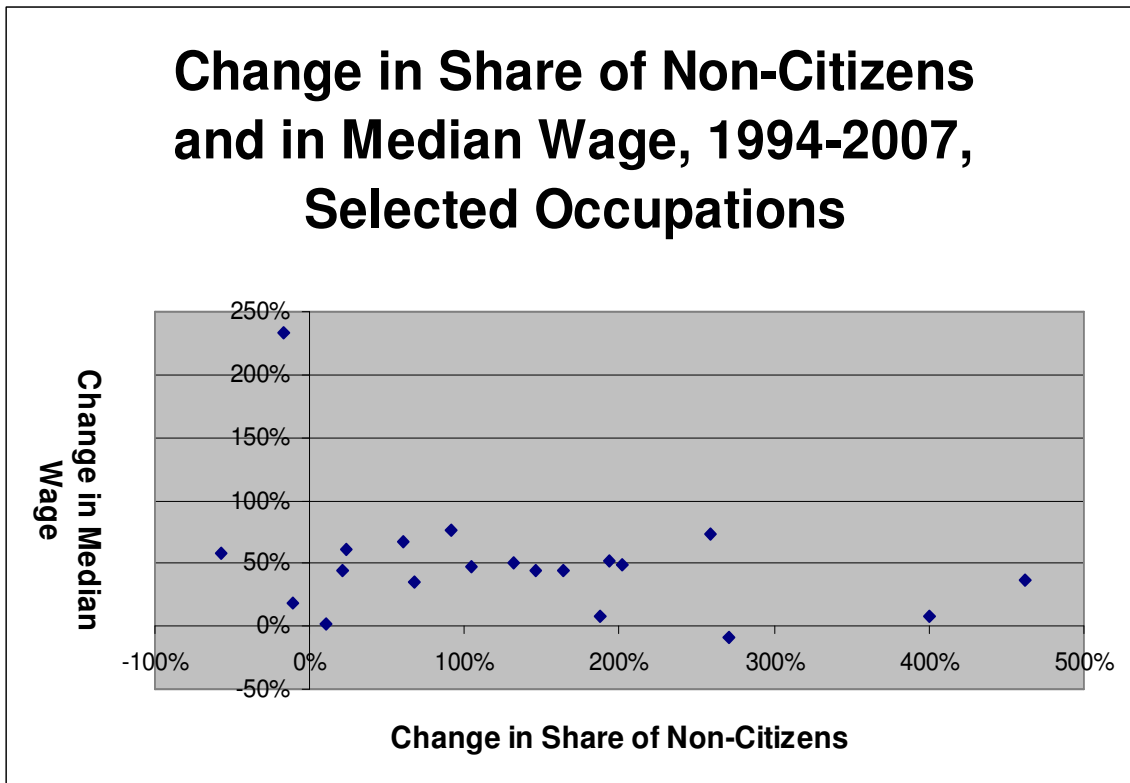
	<u>% Increase in Share of Non-Citizen</u>	<u>% Increase in Median Wage</u>
Painters, construction and maintenance	462%	36%
Packers and packagers, hand	454%	43%
Butchers and other meat, poultry, and fish processing workers	400%	7%
Roofers	271%	-9%
Construction laborers	259%	73%
Waiters and waitresses	201%	48%
Maids and housekeeping cleaners	193%	52%
Electrical, electronics, and electromechanical assemblers	187%	8%
Grounds maintenance workers	164%	44%
Nursing, psychiatric, and home health aides	146%	45%
Driver/sales workers and truck drivers	131%	50%
Carpenters	104%	48%
Sewing machine operators	92%	77%
Janitors and building cleaners	68%	36%
Laborers and freight, stock, and material movers, hand	64%	15%
Cooks	60%	67%
Shipping, receiving, and traffic clerks	24%	61%
Food preparation workers	21%	45%
Stock clerks and order fillers	11%	2%
Industrial truck and tractor operators	-11%	18%
Brickmasons, blockmasons, and stonemasons	-17%	233%
Cashiers	-57%	58%

Workers with wage>\$.75/hour  
Source: CPS March Suppt. 1994, 2007

As is evident from Figure 6, the correlation between the change in the share of non-citizens and the change in median wages is very weak. A regression analysis yields a correlation coefficient of only -0.08; and if the one outlying observation, for brickmasons, which showed a 17 percent decrease in the share of immigrants and a 233 percent increase in wage, is removed from the data, the correlation coefficient falls to 0.04.<sup>2</sup>

What does this mean? If an increasing share of non-citizens in an occupation were strongly correlated with declining relative wages, then the correlation coefficient would have a value close to negative one. Instead the correlation is within four- to eight-hundredths of zero, which signifies basically no correlation at all.

**Figure 6: Share of Non-Citizens and Wages**



<sup>2</sup> The data were weighted by the average number of workers in an occupation in the years 1994 and 2007.

The results do not change when workers are separated according to their union membership. The wages of native workers are not affected by the changes in the shares of non-citizens within occupations, even when rates of unionization are controlled for—that is, whether they are union members or not.

Do these results mean that the presence of non-citizens has no effect on wages? No, they do not. Occupations in which wages rise at a fast pace attract immigrants as well as native workers and it is precisely in such occupations that employers will be hiring. The net effect of these influences may be to keep wages from rising as fast as they might otherwise have done. In the case we are examining, the wages in a majority of the occupations rose; but it is impossible to say for certain whether the wages would have risen faster in the absence of immigrants.

What we can say is that between 1994 and 2007 relative wages neither lagged behind nor fell in those low wage occupations where the share of non-citizens increased the most rapidly; and they did not rise more rapidly or to unusual heights in those occupations where the share fell or increased not at all. The presence or absence of non-citizens in the low wage occupations we examined did not have a significant effect on relative wages.

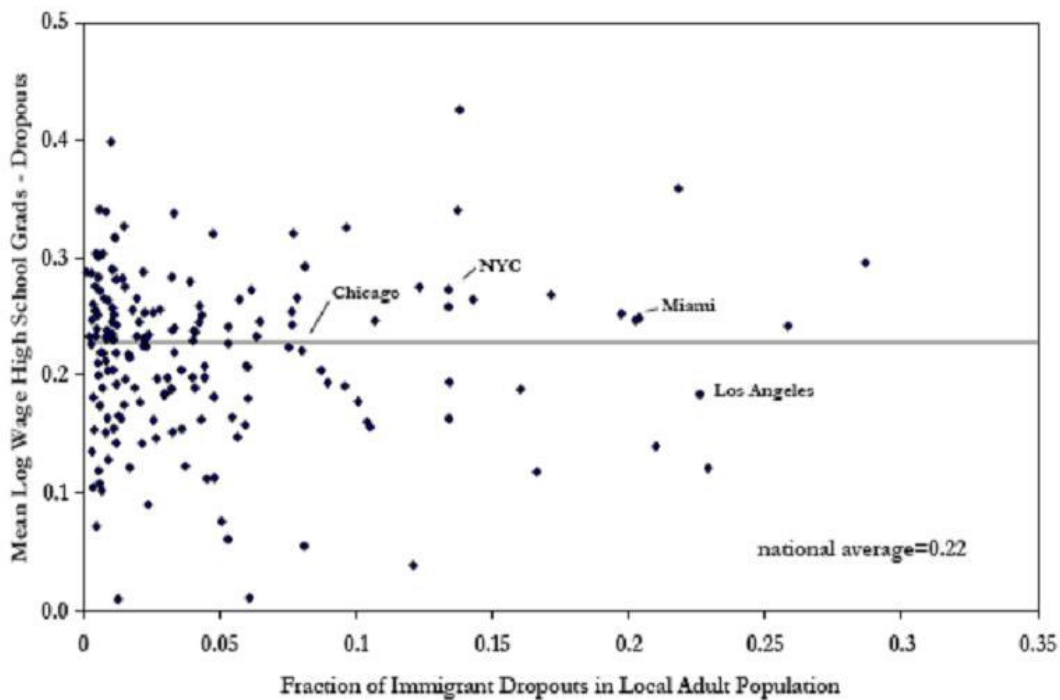
How unusual are our findings? The rest of this report will examine other studies of the effect of immigration on wages.

### ***Immigration and the Wages of High School Dropouts***

David Card (2005) has also examined the effect of immigration on wages. His method was to compare relative wage rates in different cities rather than in different occupations. Many immigrants did not have the educational opportunities of native

workers and therefore a disproportionate number have not completed high school. Immigration thus increases the ratio of high school dropouts to high school graduates in the population. If immigration does depress wages, Card concluded, increased immigration should lead to an increase in the wage of high school graduates (since there would be relatively fewer of them in the immigrant population) relative to the wage of high school dropouts (since there would relatively more of them).

**Figure 7: High School/Dropout Wage Ratio and Immigration**



Card's findings from 175 cities in the year 2000 are shown in Figure 7. It is clear from the figure that a larger proportion of immigrant workers who have not finished high school does not lead to an increase in the wages of high school graduates relative to those who have not finished high school. Based on these findings Card concludes that immigration does not hurt workers with low levels of education

Unfortunately, Card's conclusion is not fully supported by the evidence he provides. The comparison of wages across locations suffers from the same problem as

does the comparison of wages across occupations. It is likely that immigrants (as well as natives) move to locations where wages are high and move away from locations where they are low. It is therefore not surprising to find a high concentration of immigrants in locations where we also find relatively higher wages. The real issue is thus not whether immigrants lower wages, but whether they prevent them from rising as much as they might have if the immigration had not occurred.

There may be another problem with Card's analysis. He assumes that immigrant dropouts do not compete for jobs with native high school graduates. Is this so? Oren Levin-Waldman (n.d.) interviewed employers and discovered that they simply do not care whether a worker has a high school diploma or not. What they care about is whether prospective employees have the attributes that enable them to be productive workers: in particular, the ability to take orders and to be persistent. These same attributes also help in school. Students who have them are more likely to graduate than those who do not. A high school diploma is also therefore a good predictor of these attributes. But it is the attributes themselves and not the diploma that interests employers; and if a worker can demonstrate them another way—for example, by traveling hundreds if not thousands of miles from home, perhaps even by crossing a well-patrolled border without proper documents—then they are likely to find an employer wanting to hire them.

Thus, while high school diplomas may matter to employers when they look to hire native workers, they may not matter when employers hire immigrants, especially since for immigrants the lack of high school education is more likely the result of circumstance and opportunity rather than of character. Table 7 shows that employers know this. It lists the education attainment of employees in the occupations that we examined earlier (Table



6 and Figure 6). The overwhelming majority (79 percent) of native workers in these jobs are high school graduates. For them, the overall ratio of graduates to dropouts is never less than 2 to 1, and in every occupation the proportion of graduates is significantly higher than the proportion of dropouts.

**Table 7: High school Dropouts by Immigration Status**

	<u>Citizen</u>	<u>Naturalized Citizen</u>	<u>Non- Citizen</u>
Nursing, psychiatric, and home health aides	12%	36%	20%
Cooks	26%	39%	45%
Food preparation workers	36%	31%	51%
Waiters and waitresses	13%	0%	20%
Janitors and building cleaners	23%	43%	39%
Maids and housekeeping cleaners	25%	58%	53%
Grounds maintenance workers	16%	90%	77%
Cashiers	34%	26%	38%
Shipping, receiving, and traffic clerks	16%	35%	0%
Stock clerks and order fillers	22%	16%	53%
Brickmasons, block masons, and stonemasons	12%	0%	40%
Carpenters	23%	24%	49%
Construction laborers	29%	20%	61%
Drywall installers, ceiling tile installers, and tapers	6%	0%	49%
Painters, construction and maintenance	19%	48%	51%
Roofers	10%	0%	57%
Electrical, electronics, and electromechanical assemblers	5%	0%	48%
Butchers and other meat, poultry, and fish processing workers	14%	0%	75%
Sewing machine operators	11%	100%	76%
Driver/sales workers and truck drivers	16%	32%	42%
Industrial truck and tractor operators	10%	73%	28%
Laborers and freight, stock, and material movers, hand	19%	33%	63%
Packers and packagers, hand	17%	79%	68%
Total	21%	37%	50%

Source: March Suppt. 2007

Among non-citizens, in these jobs, however, there are as many individuals who did not finish high school as there are those who did; and for some jobs (ground maintenance, butchers and other meat processors, and sewing machine operators) those who did not graduate high school outnumber those who did by 3 to 1. In other words, immigrants who did not finish high school compete with native workers who did finish high school

as well as with those who did not. Whatever the effect of immigrant competition on wages, therefore, is likely to be felt equally by both groups and would not be registered as a change in the wages of one relative to the other. Card's results, in this regard, are consistent with any effect immigration might have on wages and can't be used to say that it had no effect at all.

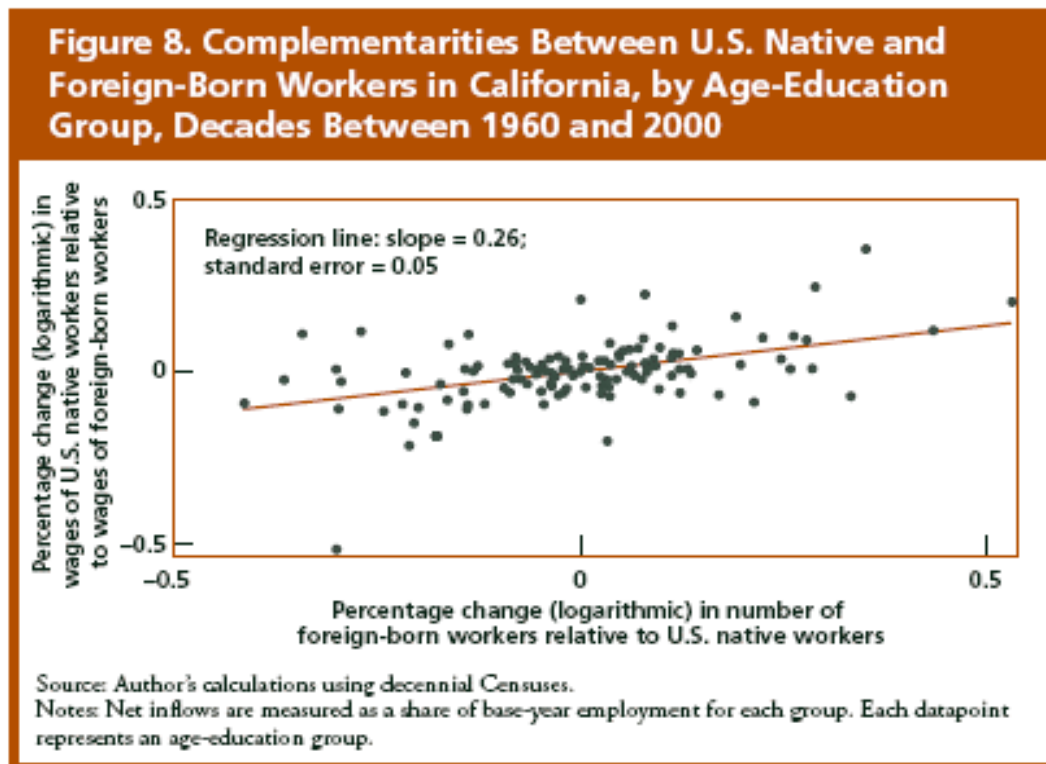
### ***Immigration and Immigrant Jobs***

Giovanni Peri (2007) has recently argued that in California at least immigration has actually helped to raise the wages of native workers of all education levels except those who have not finished high school. Those most hurt by immigration in his model are other immigrants, for whom the most recent arrivals are the most perfect substitutes.

Peri bases his conclusion on two apparent facts: 1) that native-born workers in California are consistently paid more than foreign-born workers; and, 2) that there has been no measurable out-migration of native workers from California despite the large influx of immigrants. (Between 1980 and 2000, the percentage of foreign-born workers in California doubled from 16 percent to 32 percent. The state currently employs 30 percent of all foreign-born workers in the United States.) For these two facts to be true, he contends, native workers displaced by recent immigrants must have found other jobs at higher wages; or, they must have left the state (or at least the labor market) and been replaced by other native workers who were able to find a job at a higher wage.

Figure 8 is a graphical representation of these relationships. According to Peri, the positively sloped regression line captures the complementary relationship between increases in the proportion of foreign-born in California and percentage increases in the wages of native workers relative to those of the foreign born.

**Figure 8:  
Immigrant and Native Wages and Immigrants' Share**



However, the fact that the wages of immigrants are lower than that of natives does not prove that immigrants do not compete with natives. First, the wages of immigrants and natives could not be the same because hiring unauthorized immigrants is illegal. Under the circumstances, employers would not hire immigrants if they had to pay them the same.

Second, on some projects hiring illegal immigrants is simply not possible. The presence of non-citizens is particularly large in construction, and in construction about one-fourth of all spending is financed by governments of all levels. Because these projects are monitored by the government entities that pay for them, the probability of getting caught when hiring illegal immigrants is high. Nevertheless, construction

workers know from their daily experience that many of their employers replace them with low wage immigrants on private projects in which the government is not involved.

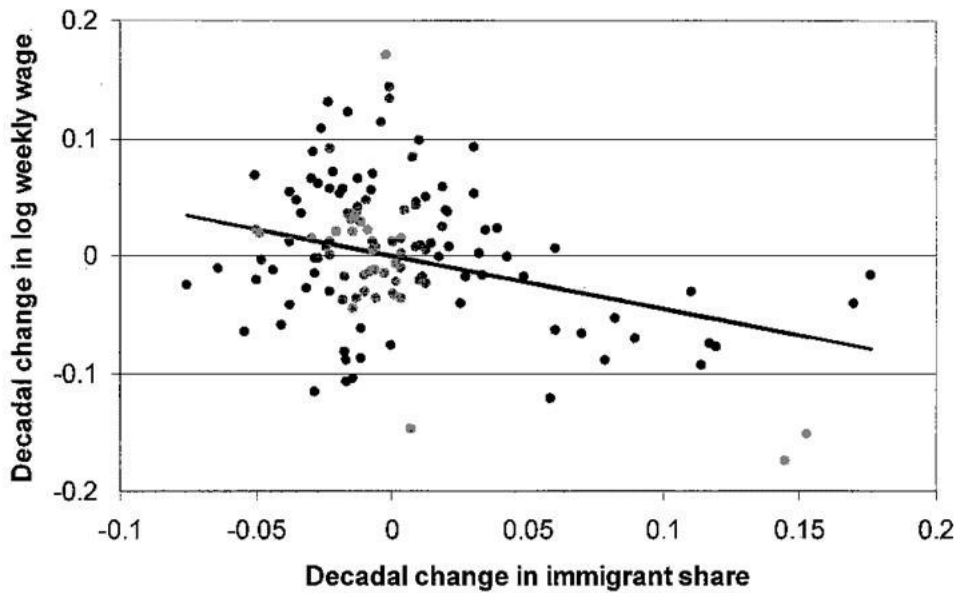
Also, the fact that higher fractions of immigrants in a particular age-education group is associated with higher wages of natives relative to those of immigrants does not prove that natives are made better off by immigration. When the wages of immigrants are lower, employers hire more of them. In other words, when their wages are lower they take away more jobs. Some of those displaced may well find other, better paying jobs. But it is unlikely that all of them did and they had to go somewhere. Where did they go? Surely some of the high rates of unemployment and incarceration for young African-American males is explained by the increase in immigration over the last 30 years.

#### ***Immigration and wages by work experience***

Workers are free to choose occupations or locations that have high wages, but they are not free to choose their age and work experience and they cannot change their level of education fast and easily either. George Borjas (2003) classified workers therefore into education and work experience categories, and investigated how immigration changed the wages of workers in each of these categories over the period 1960-2000. His findings are shown in Figure 9. Borjas found that 10 percent increase in the supply of labor of a particular education-experience group decreases the wage of workers in that group by about 3.5 percent.

It should be noted that in reality the change in wages in one market brings about changes in wages in all the other labor markets and these must be accounted for as well. After accounting for all these interactions, Borjas found that immigration in the years 1980- 2000 caused the wages of high school dropouts and graduates to be 8.9 percent and 4.9 percent lower than they would have otherwise been, and that immigration did not affect the wages of college graduates at all. What effect immigration in the years 2000-2007 had is not known.

**Figure 9:  
Immigration and Wages across Education-Work Experience Groups**



## **Conclusion**

This report illuminates several aspects of immigration. First, contrary to the popular myth, the jobs that immigrants do take are jobs that native born workers are willing to do. The majority of workers in the occupations that attract the largest numbers of immigrants are natives.

Second, immigrants do not stay within particular occupations; as the data presented in Table 6 and Figure 6 show, shares within occupations can change dramatically in a short period of time.

Third, when wages in a particular occupation are high, a gap opens between the wages of natives and the wages of non-citizens. It seems reasonable to assume that if immigrants are not restricted to particular “immigrant occupations” and if their number within an occupation can easily change, then when immigrants become much cheaper than natives, employers hire more of them. But the reasonable is not necessarily the real.

We have reviewed four empirical studies of the effect of immigration on wages. Three of the four reports did not find such effect, but a fourth did. The fourth report by George Borjas is more theoretically sound than the other three. Nevertheless, the effect of wages that Borjas’ report found is small. Currently the median wage of native workers who do not have a high school degree is \$8.55 per hour while for natives who are high school graduates it is \$14 per hour. Even if Borjas is right, and even if it were possible to eliminate all immigration costlessly, the median wages of neither high school dropouts nor high school graduates would rise enough in the absence of immigration to pay either group a living wage.

The report also explains why measuring the effect of immigration on wages is difficult, and why it is biased toward finding that immigration does not lower wages. None of the studies that were covered here is immune to this problem, and it is therefore possible that even Borjas’ estimate of the effect of immigration on wages is lower than what the actual effect is.

## *Policy Responses*

The anti-immigration camp proposes a two-pronged policy for dealing with the harm caused by immigration: Close the borders in order to prevent immigrants from coming in; and make the life of those who are already here so miserable that they will leave and warn others against coming. However, neither of these solutions promises to improve the economic prospects of US workers as much as other alternatives.

The problem with illegal immigration is not that it is illegal but that it creates an imbalance in the educational makeup of the workforce. A simple and more practical solution to the problem of illegal immigration would therefore be to increase the level of education of workers in this country. If there were significantly more doctors and dentists, a doctor's or a dentist's visit would cost less. And in general if there were significantly more workers with advanced degrees the distribution of income would be more even, solving the real problem that afflicts low wage workers.

Instead of closing the borders, which is probably not possible either for political or for practical reasons, the same result could be achieved by opening them wider in order to increase the share of workers with advanced degrees. The same result could also be achieved expanding the capacity of existing universities and building new ones.

Just as the proposal to close the border is impractical, the proposal to deprive immigrants of governmental services is self-defeating. Workers who are ineligible for welfare, housing subsidies or school lunches for children are destitute, and they have no choice but to accept whatever wage is offered to them. An egregious example of an anti-immigrant action that harms native workers has been the sabotage of the 2007 attempt by Governor Elliott Spitzer of New York to permit illegal immigrants to get driver's

licenses. Workers who are unable to drive must rely on employers for transportation, and this make them dependent and deprives them of the ability to negotiate a fair wage.

When the wages of immigrants are low, employers hire fewer citizens. It is not possible to harm immigrants without simultaneously harming workers who are citizens.

The most important truth that comes from the research about immigration is that immigration is really a distraction from the main problems that low paid workers face. Even if the wages of workers with no high school education were raised by 27 percent and the wages of workers with high school education were raised by 15 percent (Borjas' estimates were increased by 50 percent in order to take account of the years 2000-2007), twice the highest estimates of the harm done by immigration, these workers would still be poor.



## Appendix A

### Occupations by Number of Non-Citizens and Citizenship Status March 2007

	<u>% Citizen</u>	<u>% Naturaliz- -ed Citizen</u>	<u>% Non- Citizen</u>	<u>Factor of Over Representa- -tion</u>	<u>Number of Non- Citizens</u>
<b>All Occupations</b>	<b>85%</b>	<b>6%</b>	<b>9%</b>	<b>1.0</b>	<b>11,400,012</b>
Construction laborers	49%	8%	43%	4.7	654,913
Maids and housekeeping cleaners	51%	12%	36%	4.0	480,415
Carpenters	64%	6%	31%	3.4	430,163
Cooks	72%	7%	21%	2.3	396,995
Painters, construction and maintenance	38%	6%	56%	6.1	329,321
Janitors and building cleaners	70%	12%	18%	2.0	314,909
Driver/sales workers and truck drivers	86%	4%	10%	1.1	299,537
Grounds maintenance workers	61%	2%	37%	4.0	296,225
Laborers and freight, stock, and material movers, hand	83%	3%	14%	1.5	260,678
Miscellaneous agricultural workers	60%	4%	36%	3.9	237,815
Waiters and waitresses	84%	3%	12%	1.4	233,902
Nursing, psychiatric, and home health aides	74%	11%	14%	1.6	217,113
Production workers, all other	73%	6%	21%	2.3	197,549
Packers and packagers, hand	58%	6%	36%	3.9	175,964
Computer software engineers	72%	11%	17%	1.9	159,653
First-line supervisors/managers of retail sales workers	89%	5%	6%	0.7	158,323
Postsecondary teachers	82%	6%	11%	1.2	152,673
Roofers	37%	1%	62%	6.8	151,225
Sewing machine operators	38%	9%	53%	5.8	150,290
Retail salespersons	90%	6%	4%	0.4	123,930
Miscellaneous assemblers and fabricators	82%	7%	12%	1.3	117,515
Registered nurses	90%	6%	4%	0.5	116,866
Automotive service technicians and mechanics	75%	8%	16%	1.8	116,603

## Occupations by Number of Non-Citizens and Citizenship Status (cont.)

	<u>% Citizen</u>	<u>% Naturaliz- ed Citizen</u>	<u>% Non- Citizen</u>	<u>Factor of Over Representa- -tion</u>	<u>Number of Non- Citizens</u>
Food preparation workers	75%	9%	17%	1.8	114,455
Dining room and cafeteria attendants and bartender helpers	62%	13%	25%	2.8	111,322
Customer service representatives	92%	2%	6%	0.6	107,587
Marketing and sales managers	87%	0%	13%	1.5	106,739
Accountants and auditors	82%	12%	6%	0.7	102,241
Cashiers	93%	3%	4%	0.4	100,841
First-line supervisors/managers of non- retail sales workers	84%	5%	12%	1.3	98,683
Managers, all other	92%	4%	4%	0.4	96,769
Packaging and filling machine operators and tenders	61%	11%	28%	3.0	96,366
Drywall installers, ceiling tile installers, and tapers	55%	6%	38%	4.2	93,088
Industrial truck and tractor operators (53- 7051)	79%	6%	15%	1.6	91,733
Stock clerks and order fillers (43-5081)	91%	3%	6%	0.7	84,350
Electrical, electronics, and electromechanical assemblers (51-2020)	66%	4%	30%	3.3	83,563
Child care workers (39-9011)	84%	6%	10%	1.1	83,007
Sales representatives, wholesale and manufacturing (41-4010)	89%	5%	7%	0.7	79,808
Secretaries and administrative assistants (43-6010)	95%	3%	2%	0.3	76,466
Computer scientists and systems analysts (15-10XX)	81%	9%	10%	1.1	73,607
Shipping, receiving, and traffic clerks (43-5071)	79%	9%	12%	1.3	73,566
Chefs and head cooks (35-1011)	76%	2%	22%	2.4	73,165
Brickmasons, blockmasons, and stonemasons (47-2020)	62%	0%	38%	4.2	71,205
Physicians and surgeons (29-1060)	75%	14%	11%	1.2	68,097
Designers (27-1020)	88%	2%	9%	1.0	67,663
Food service managers (11-9051)	87%	6%	8%	0.8	66,827
Butchers and other meat, poultry, and fish processing workers (51-3020)	66%	6%	28%	3.1	64,997
Personal and home care aides (39-9021)	82%	10%	9%	1.0	59,441
<b>Subtotal</b>					<b>7,918,163</b>

Source: CPS March Suppt., 2007

## References

Ashenfelter, Orley, and Stěpán Jurajda, “Cross-country Comparisons of Wage Rates: The Big Mac Index,” Princeton University and CERGE-EI/Charles University October 2001, unpublished (<http://economics.uchicago.edu/download/b>) downloaded 4/23/08.

Borjas, George, “The Labor Demand Curve Is Downward Sloping: Reexamining the Impact of Immigration on the Labor Market,” *Quarterly Journal of Economics* CXVIII:4 (November 2003), pp. 1335-1374.

Card, David, “Is The New Immigration Really So Bad?” Working Paper 11547, National Bureau of Economic Research, August 2005.

Levin-Waldman, Oren, “Small Business and Welfare Reform, Levy Institute Survey of Hiring and Employment Practices,” Economics Public Policy Brief Archive 51, The Levy Economics Institute, n.d.

Peri, Giovanni, “How Immigrants Affect California Employment and Wages,” *California Counts: Population and Trends* 8:3 (February 2007) Public Institute Policy of California.