

# IMMIGRATION TRENDS IN THE NEW YORK METROPOLITAN AREA

## 1. INTRODUCTION

There has been a resurgence of large-scale immigration in the United States and in many other countries in recent decades. Not surprisingly, the impact of immigration on economic conditions in the receiving country is often a topic of contentious policy debate. In the U.S. context, this concern has motivated a great deal of research that attempts to document how the U.S. labor market has adjusted to the large-scale immigration in the past few decades. Much of this research has focused on analyzing the determinants of the skill composition of the foreign-born workforce (see the survey in Borjas [1994]). This analytical focus can be easily justified by the fact that the skill composition of the immigrant population is perhaps the key determinant of the social and economic consequences of immigration.

For example, the connection between the skill composition of the immigrant population and the fiscal impact of immigration is self-evident. The many programs that make up the welfare state tend to redistribute resources from high-income workers to persons with less economic potential. Skilled workers, regardless of where they were born, typically pay higher taxes and receive fewer social services.

Skilled immigrants may also assimilate quickly. They might be more adept at learning the tools and “tricks of the trade” that can increase the chances of economic success in the United States, such as the language and culture of the

American workplace. Moreover, the structure of the American economy changed drastically in the 1980s and 1990s, and now favors workers who have valuable skills to offer (Katz and Murphy 1992). It seems, therefore, as if high-skill immigrants would have a head start in the race for economic assimilation.

The skill mix of immigrants also determines which native workers are most affected by immigration. Low-skill immigrants will typically harm the economic opportunities of low-skill natives, while high-skill immigrants will typically have a similar effect on high-skill natives.

Finally, the skills of immigrants determine the economic benefits achieved from immigration. The United States benefits from international trade because it can import goods that are not available or are too expensive to produce in the domestic market. Similarly, a country can benefit from immigration because it can import workers with scarce qualifications and abilities.

In addition to measuring the relative skill endowment of immigrants, the existing literature also stresses the economic consequences that arise from the fact that immigrants cluster in a small number of geographic areas (Friedberg and Hunt 1995; Card 2001). It is well known that New York City and its environs have been an important immigrant gateway for more than a century. Although the geographic gravity of modern immigration has shifted to other parts of the United States, such as California, Texas, and Florida, the New York metropolitan area remains an important receiving site. In 2000,

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15.7 percent of all foreign-born workers resided in the New York metropolitan area—down from 24.5 percent in 1970, prior to the resurgence of immigration.

This paper documents the impact of recent changes in immigration settlement patterns on the skill endowment of immigrants in the New York metropolitan area. The empirical analysis uses the available U.S. census microdata between 1970 and 2000 to examine two related questions that inevitably lie at the core of any study of immigration’s economic impact in the New York area:

- Which types of immigrants choose to settle in New York?
- How do these immigrants compare with the native-born population of the New York region and with the immigrants who choose to settle elsewhere?

## 2. BASIC TRENDS

Our analysis uses data drawn from the 1970-2000 Integrated Public Use Microdata Series (IPUMS) of the U.S. census.<sup>1</sup> The data contain information on the skills and labor market outcomes of millions of workers in the United States. Throughout this study, persons who are not citizens or who are naturalized citizens are classified as immigrants; all other persons are classified as natives.<sup>2</sup> To examine the contribution of immigration to the workforces of particular geographic areas, we focus on the sample of workers aged twenty-five to sixty-four who are not in the military and who are not enrolled in school.

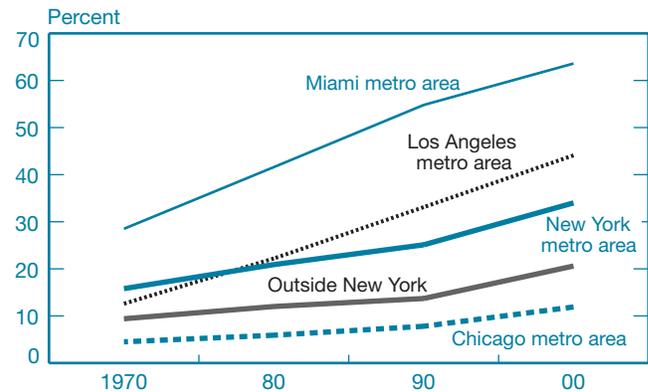
The growth of the foreign-born workforce in the New York metropolitan area in the past two decades has corresponded roughly with the growth of the foreign-born workforce in other parts of the country. Chart 1, for example, illustrates trends in the immigrant share—that is, the percentage of the workforce that is foreign born—in the New York metropolitan area and in the rest of the country (labeled “outside New York” in the chart). In 1970, 15.8 percent of the workforce in the New York metropolitan area was foreign born. The figure grew to 25.1 percent by 1990 and to 34.0 percent by 2000. This growth rate is significantly faster than the growth rate in the immigrant share outside the New York area, where the immigrant share grew from 4.5 percent in 1970 to 11.9 percent in 2000.

Chart 1 also shows, however, that the immigrant share grew even faster in some other metropolitan areas. In particular, the chart summarizes the experience of three other large

metropolitan areas that are important gateways for immigrants: Los Angeles, Miami, and Chicago. Both the Los Angeles and Miami metropolitan areas have a substantially larger immigrant share, and their immigrant share grew at a much faster rate during the 1970-2000 period. In 1970, for example, the New York metropolitan area had a slightly higher immigrant share than did the Los Angeles metropolitan area (15.8 percent and 12.6 percent, respectively). By 2000, however, the immigrant share in the Los Angeles metropolitan area had risen to 44.1 percent, a 10 percentage point difference over the share in the New York metropolitan area. In Miami, the immigrant share rose from 28.5 percent to 63.6 percent over the same period.

One important difference between immigration to the New York metropolitan area and to other parts of the country lies in the national origin mix of the immigrant population. It is well known that partly as a result of the policy changes introduced by the repeal of the national origins quota system in the 1965 Amendments to the Immigration and Nationality Act, the national origin mix of immigrants shifted from Europe and Canada to countries in Latin America and Asia beginning in the 1970s. Table 1 shows the difference in the national origin mix of immigrants in the various U.S. regions as of 2000. The data reveal that there is a great deal more diversity in the national origin mix of the immigrant population in the New York

CHART 1  
Trends in the Immigrant Share of the Workforce  
By Area



Source: Author’s calculations, based on U.S. Census Bureau’s 1970-2000 Integrated Public Use Microdata Series.

Notes: The workforce is defined as the group of persons aged twenty-five to sixty-four who are not enrolled in school and who worked in the civilian sector at least one week in the year prior to each decennial census. The immigrant share is the fraction of the workforce that is foreign born.

TABLE 1  
National Origin Mix of Immigrants, 2000  
Percentage of Immigrant Stock Originating  
in a Particular Country

Country	New York Metro Area	Outside New York	Los Angeles Metro Area	Miami Metro Area	Chicago Metro Area
All immigrants					
Canada	0.8	2.6	1.1	0.5	1.0
Mexico	4.2	35.0	45.0	1.9	42.4
Central America	6.3	7.4	13.1	15.4	3.0
Cuba	1.6	2.8	0.6	43.9	0.7
West Indies	22.9	3.9	0.4	14.2	1.3
Europe	19.7	13.3	6.1	3.5	23.8
China	7.2	4.4	4.9	0.5	3.1
Korea	2.7	2.5	4.1	0.1	2.3
Philippines	3.1	5.4	6.2	0.5	5.1
Vietnam	0.5	3.9	4.8	0.2	1.1
India	6.9	4.5	2.0	0.5	7.1

Source: Author's calculations, based on U.S. Census Bureau's 2000 Integrated Public Use Microdata Series.

Notes: Figures are calculated using the sample of persons aged twenty-five to sixty-four who are not enrolled in school and who worked in the civilian sector at least one week in the year prior to each decennial census. The "outside New York" region is composed of the sample of persons residing outside the New York metro area.

metropolitan area than there is outside the New York area or in other selected metropolitan areas.

Not surprisingly, outside the New York metropolitan area, immigration is dominated by the Mexican origin population: 35.0 percent of immigrants and 40.0 percent of newly arrived immigrants (that is, immigrants who have been in the United States fewer than five years) outside the New York area are of Mexican origin. In contrast, only about 4.2 percent and 8.9 percent of the immigrant and newly arrived immigrant workforces in New York, respectively, are of Mexican origin. In fact, the largest immigrant group in the New York metropolitan area comprises those who originate in the West Indies (which includes Jamaica and the Dominican Republic). In 2000, 22.9 percent of immigrants in New York originated in the West Indies. Outside the New York area, however, immigration from the West Indies accounted for only 3.9 percent of the immigrant workforce. Equally interesting, the second largest group of immigrants in the New York area is formed by European immigrants; they make up 19.7 percent of the immigrant workforce.

In contrast to the national origin mix of immigrants in New York, consider the composition of the immigrant workforce in the three other metropolitan areas (Table 1). Between 40 percent and 50 percent of the immigrants in each of these metropolitan areas belong to a *single* national origin mix. In Los Angeles, 45.0 percent are of Mexican origin; in Miami, 43.9 percent are of Cuban origin; and in Chicago, 42.4 percent are of Mexican origin.

It is well known that there are substantial differences in socioeconomic outcomes among the various national origin groups that make up the immigrant population and that Mexican immigrants, in particular, tend to have relatively low educational attainment and wages. As a result of these national origin differentials, Table 1 suggests that the economic impact of immigration on the New York area will likely differ substantially from the impact on other metropolitan areas—even if those other regions have roughly similar levels of immigration.

We conclude this section by describing the occupational distribution of immigrant men in New York and of immigrant men outside New York.<sup>3</sup> The first two columns of Table 2 present the basic distributions. The data indicate that a relatively large fraction of immigrant men in the New York area tend to be employed in management occupations and in sales. These two occupations alone, in fact, employ a quarter of immigrant men in the New York metropolitan area. The concentration of immigrants in these occupations, of course, could reflect the fact that the New York occupational structure may be heavily weighted toward those types of jobs. To adjust for the fact that the occupational distribution of immigrant men in a particular region is affected by the occupational structure of the local labor market, we report in the last two columns of Table 2 the statistic given by the *ratio* of the percentage of immigrants employed in a particular occupation to the percentage of natives employed in the same occupation in a particular region. A value of 1 for this statistic would imply that immigrant and native men have the same proportional representation in the particular occupation in the local labor market. In the New York metropolitan area, immigrant men tend to be underrepresented in such occupations as management, business operations, legal, and protective service, and are overrepresented in health care support, production, and transportation and material moving. Remarkably, a comparison of the last two columns of the table suggests that, with only a few exceptions, there is a great deal of similarity in the degree of immigrant penetration in particular occupations in New York and outside New York.

TABLE 2

## Occupational Distribution of Immigrant Men, 2000

Occupation	Percentage of Immigrants Employed in Occupation		Percentage of Immigrants Employed in Occupation Relative to Percentage of Natives Employed in Occupation	
	New York Metro Area	Outside New York	New York Metro Area	Outside New York
All immigrant men				
Management occupations	13.9	12.3	0.6	0.7
Business operations specialists	2.4	2.0	0.6	0.6
Financial specialists	3.6	2.0	0.6	0.6
Computer and mathematical occupations	3.8	3.0	1.2	1.4
Architecture and engineering	2.4	3.6	0.9	1.1
Life, physical, and social science	0.9	1.0	1.1	1.3
Community and social service	1.1	1.1	0.6	0.6
Legal	2.9	1.2	0.2	0.3
Education, training, and library	3.4	2.7	0.4	0.6
Arts, design, entertainment, sports	3.9	1.8	0.5	0.8
Health care practitioners and technical	2.7	2.3	1.1	1.2
Health care support	0.5	0.4	2.0	1.2
Protective service	5.4	3.2	0.4	0.3
Food preparation and serving	1.9	1.7	3.7	3.6
Building and grounds cleaning and maintenance	3.4	3.2	1.6	1.9
Personal care and service	1.1	0.9	1.4	1.2
Sales	11.7	10.3	0.8	0.7
Office and administrative support	8.5	6.4	0.8	0.8
Farming, fishing, and forestry	0.1	0.8	2.0	3.9
Construction trades	7.4	10.5	1.3	1.2
Extraction workers	0.0	0.2	0.3	0.4
Installation, maintenance, and repair workers	5.8	7.9	1.0	0.8
Production	5.2	11.5	2.1	1.3
Transportation and material moving	7.9	10.1	1.5	0.9

Source: Author's calculations, based on U.S. Census Bureau's 2000 Integrated Public Use Microdata Series.

Notes: Figures are calculated using the sample of persons aged twenty-five to sixty-four who are not enrolled in school and who worked in the civilian sector at least one week in the year prior to each decennial census. The "outside New York" region is composed of the sample of persons residing outside the New York metro area.

### 3. THE SKILLS AND EARNINGS OF IMMIGRANTS

The skill composition of the immigrant population is the key determinant of the economic impact of immigration. This section examines how the skills and economic performance of immigrants in the New York area compare with those of native workers in the region as well as with those of foreign-born workers in other regions of the country. In addition, we document the extent to which regional differentials in immigrant skills and economic performance have changed over time.

Table 3 presents the trend in the distribution of educational attainment for male native and immigrant workers. Because of the rising level of educational attainment among native

workers, the table shows a significant decline in the fraction of native working men who are high-school dropouts in all geographic areas between 1970 and 2000. Outside the New York metropolitan area, for example, the fraction of native workers who are high-school dropouts fell from 40.0 percent to 8.0 percent between 1970 and 2000. In New York, the decline was equally steep, from 37.2 percent to 5.7 percent.

The New York metropolitan area, however, witnessed a much more rapid increase in the fraction of natives who are college graduates. In the New York area, the fraction of male workers with at least sixteen years of schooling rose from 20.1 percent to 41.5 percent between 1970 and 2000, or an increase of 21.4 percentage points. Outside the New York area, the fraction rose from 15.2 percent to 28.8 percent, or an increase of 13.6 percentage points. This dramatic improvement

in the relative educational attainment of the native-born workforce in the New York area will play an important role in our discussion of regional differences in the relative economic performance of the foreign-born workforce.

As it did among the native-born workforce, the fraction of immigrants who are high-school dropouts fell between 1970 and 2000, with the decrease being steeper in the New York metropolitan area. In New York, the fraction of immigrants who are high-school dropouts fell from 52.3 percent to 21.5 percent, or a decrease of 30.8 percentage points. This decline contrasts strikingly with the much more modest 15.8 percentage point drop that occurred outside the New York metropolitan area, from 48.6 percent to 32.8 percent. Similarly,

TABLE 3  
Distribution of Educational Attainment for Male Workforce

	Natives		Immigrants	
	1970	2000	1970	2000
New York metro area				
High-school dropouts	37.2	5.7	52.3	21.5
High-school graduates	31.5	27.2	22.5	30.7
Some college	11.3	25.6	9.7	18.2
College graduates	20.1	41.5	15.5	29.7
Outside New York				
High-school dropouts	40.0	8.0	48.6	32.8
High-school graduates	33.2	33.1	21.8	23.5
Some college	11.6	30.2	11.1	17.2
College graduates	15.2	28.8	18.4	26.6
Los Angeles metro area				
High-school dropouts	27.4	4.7	45.0	39.4
High-school graduates	32.5	21.5	22.7	22.6
Some college	20.7	34.8	14.9	16.8
College graduates	19.5	39.0	17.3	21.2
Miami metro area				
High-school dropouts	36.2	8.2	51.7	22.2
High-school graduates	31.3	26.9	21.6	32.3
Some college	13.2	29.4	12.1	23.3
College graduates	19.4	35.6	14.6	22.2
Chicago metro area				
High-school dropouts	36.7	5.4	54.1	31.5
High-school graduates	32.7	26.9	18.5	26.4
Some college	13.7	30.2	11.2	15.7
College graduates	17.0	37.6	16.2	26.4

Source: Author's calculations, based on U.S. Census Bureau's 1970-2000 Integrated Public Use Microdata Series.

Notes: Figures are calculated using the sample of persons aged twenty-five to sixty-four who are not enrolled in school and who worked in the civilian sector at least one week in the year prior to each decennial census. The "outside New York" region is composed of the sample of persons residing outside the New York metro area.

there was a more rapid increase in the relative number of foreign-born workers who are college graduates in New York than there was elsewhere. In New York, the fraction of the foreign-born workforce with a college degree rose from 15.5 percent to 29.7 percent, or an increase of 14.2 percentage points. In contrast, the share of foreign-born college graduates outside the New York area rose only from 18.4 percent to 26.6 percent, or an increase of 8.2 percentage points.

In sum, relative to the rest of the country, the New York metropolitan area experienced a dramatic improvement in the educational attainment level of its workforce between 1970 and 2000—for both native-born and foreign-born workers. The New York area's advantage is even more dramatic when the trends in educational attainment are compared with the trends experienced by other immigrant-receiving metropolitan areas. In Los Angeles, for example, the share of immigrant men who are high-school dropouts fell by only 5.6 percentage points over the period, from 45.0 percent to 39.4 percent, while the share who are college graduates rose by only 3.9 percentage points, from 17.3 percent to 21.2 percent. Similarly in Miami, the fraction of immigrants who are college graduates rose from 14.6 percent to 22.2 percent, or a 7.6 percentage point increase.

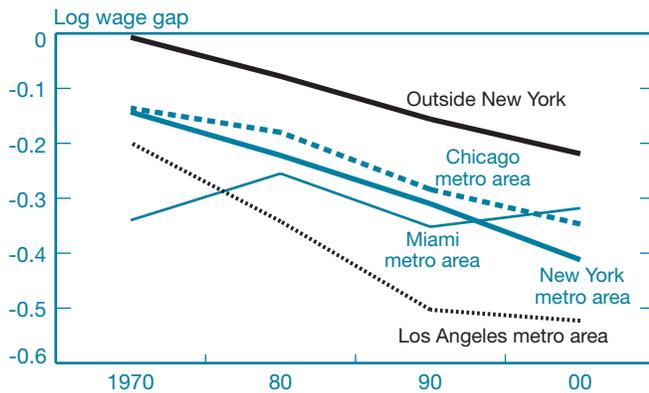
Note, however, that the improvement in the educational attainment of the immigrant workforce in the New York metropolitan area—although steep relative to that of the immigrant workforce elsewhere—occurred concurrently with an even faster improvement in the educational attainment of New York's native-born workforce. As a result, it will be instructive to determine the trends in economic performance of immigrants in New York not only relative to the native-born population in the New York area, but also relative to the foreign-born workforce that chooses to settle elsewhere.

Consider the trend in the wage differential between immigrant and native workers within a certain geographic region. Chart 2 summarizes the 1970-2000 trend in the log weekly wage differential between male immigrant and native workers in a particular region. Contrast initially the log wage gap between immigrants and natives in the New York metropolitan area with that found outside the New York area. The chart reveals two interesting facts. First, immigrants living outside the New York metropolitan area have a higher wage relative to natives than do immigrants living in the New York area. In other words, *relative to the native workforce in the specific region*, immigrants are somewhat more skilled outside the New York area. In 2000, for example, the log wage gap between immigrants and natives stood at -.41 in New York and -.22 outside New York, implying approximately a 34 percent wage gap between immigrants and natives in New York and a 20 percent wage gap outside New York.<sup>4</sup> Second, both in New York and outside New York, the wage disadvantage of

CHART 2

Trends in the Log Weekly Wage of Immigrant Men Relative to the Wage of Native Men

By Area



Source: Author's calculations, based on U.S. Census Bureau's 1970-2000 Integrated Public Use Microdata Series.

Note: Figures are calculated using the sample of persons aged twenty-five to sixty-four who are not enrolled in school and who worked in the civilian sector at least one week in the year prior to each decennial census.

immigrants relative to that of natives grew steadily between 1970 and 2000, and the rate of decline was approximately the same in both regions.

Chart 2 also shows how the relative wage disadvantage of immigrants differs across the main immigrant-receiving metropolitan areas. Most striking is the experience of Los Angeles, where the wage disadvantage grew dramatically between 1970 and 2000. By 2000, immigrants in Los Angeles earned approximately 41 percent less than native-born workers.

As noted above, the trend in the log wage gap between immigrants and natives in a particular geographic region does not provide a complete picture of what is happening to immigrant skills because native skills have been changing over time as well—and the dramatic improvement in native educational attainment in the New York area may account for a large part of the increasing relative disadvantage of immigrants in that area. In other words, the tracking provided in Chart 2 isolates the trend in the relative economic standing of immigrants in a particular geographic region—but it may provide a very misleading picture about whether a certain region is attracting a more skilled immigrant workforce than are other regions.

To isolate what is happening to immigrant skills in New York as compared with immigrant skills elsewhere, we contrast the wage of immigrants in New York with the wage of immigrants in other parts of the country. One important difficulty with this type of comparison is the presence of

differences in wage levels across metropolitan areas that reflect cost-of-living differences.<sup>5</sup> To adjust for these cost-of-living differentials, we use the respective Bureau of Labor Statistics cost-of-living index for each particular metropolitan area to deflate the wage data reported in the various censuses.

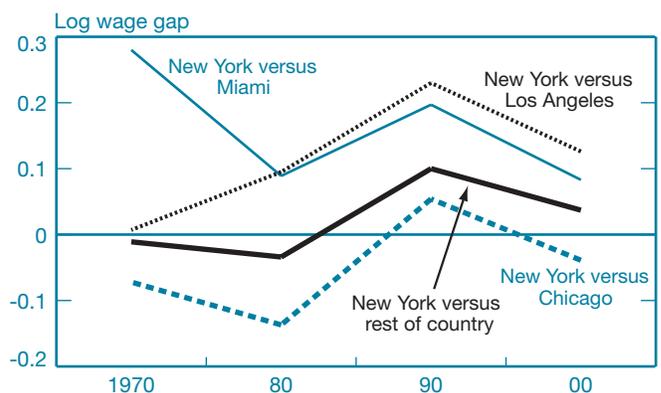
Chart 3 illustrates the change in the (deflated) log weekly wage of immigrants in the New York area relative to immigrants in other areas. Compare initially the trend in the real wage of immigrants in New York with that of immigrants in the rest of the country.<sup>6</sup> In 1970, the typical New York area immigrant earned slightly less than the typical immigrant residing outside New York (the log wage gap was -.01), and the immigrant position worsened slightly between 1970 and 1980 (the log wage gap in 1980 stood at -.03). Although the data are somewhat noisy, the chart reveals that there was a general improvement in the real wage of immigrants in New York relative to that of immigrants elsewhere between 1980 and 2000, so that by 2000 the log wage gap stood at .037. In short, at the same time that the wage of immigrants in New York was falling relative to that of natives in New York, it was improving relative to that of immigrants employed outside the New York area.

The comparison between immigrants employed in New York and in some of the other immigrant-receiving metropolitan areas indicates that immigrants in New York are substantially more skilled than the immigrants who settle in Los Angeles or Miami. The difference between Los Angeles and New York is particularly striking. In 2000, the log wage gap of .126 between the two groups of immigrants implied that

CHART 3

Log Weekly Wage of Immigrant Men in the New York Metro Area Relative to the Wage of Native Men

By Area



Source: Author's calculations, based on U.S. Census Bureau's 1970-2000 Integrated Public Use Microdata Series.

Note: Figures are calculated using the sample of persons aged twenty-five to sixty-four who are not enrolled in school and who worked in the civilian sector at least one week in the year prior to each decennial census.

New York immigrants earned about 14 percent more than their counterparts in Los Angeles.

The difference in the results between Charts 2 and 3 implies that a systematic evaluation of the economic impact of immigration in the New York area will inevitably have to confront the fact that, while New York immigrants are relatively more skilled than immigrants elsewhere, they are relatively less skilled than native workers in New York—and that while the skill advantage of New York’s immigrants relative to immigrants elsewhere is growing over time, the skill disadvantage of New York’s immigrants relative to New York’s natives is also growing. In an important sense, the New York area is doing quite well competing for skilled immigrants in the “immigration market,” but the skill level of the native New York workforce is increasing even more rapidly, so that even the relatively skilled immigrants attracted by New York’s labor market are at an increasing disadvantage in the local economy.

Many studies in the modern literature on the economics of immigration focus on analyzing how the earnings potential of immigrant workers adapts to the host country’s labor market.<sup>7</sup> In the past two decades, this literature has concentrated on measuring both the “assimilation” and “cohort” effects that jointly determine the evolution of the relative wage of immigrants over time (Chiswick 1978; Borjas 1985, 1995). The assimilation effect arises because immigrants acquire relatively more human capital than do native workers as they accumulate experience in the U.S. labor market. As a result, the human capital stock of immigrants grows relative to that of natives, and immigrants experience faster wage growth. Cohort effects arise because there may be permanent differences in skills among immigrant waves. For example, the immigrants who arrived in the late 1990s may be different (as reflected, for example, by the entry wage) than the immigrants who arrived in the late 1970s, who, in turn, might differ from those who arrived in the late 1950s.<sup>8</sup>

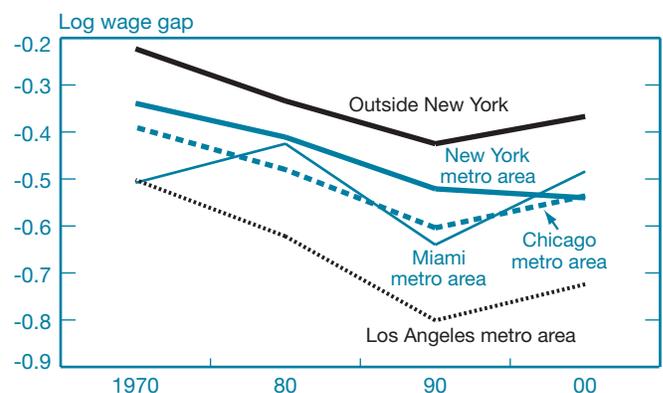
Chart 4 summarizes the evidence on interregional differences in cohort effects over the past thirty years by looking at the trend in the log wage gap between native workers and immigrants who belong to the cohort of newly arrived immigrants at each census date (that is, immigrants who have been in the United States fewer than five years as of the census date) in a particular geographic region. Consider initially the cohort effect for the immigrants who are residing outside the New York metropolitan area shortly after their arrival in the United States. The trend in their relative wage clearly indicates that the relative wage of consecutive immigrant cohorts declined between 1970 and 1990, from a 20 percent wage disadvantage in 1970 to 35 percent in 1990. Interestingly, this trend was reversed in the 1990s. By 2000, the wage disadvantage

of newly arrived immigrants living outside the New York metropolitan area rose to 31 percent.

The comparison of the trend for cohort effects among immigrants living outside the New York area with the cohort effects for immigrants residing in the New York area yields two interesting findings. First, newly arrived immigrants in the New York area tend to do systematically worse than newly arrived immigrants elsewhere in the country—relative, of course, to natives in each of the respective geographic regions. In 1990, for example, the relative wage disadvantage of newly arrived immigrants living in the New York area was 41 percent, as compared with a disadvantage of 35 percent for newly arrived immigrants living outside New York. Second, the “uptick” in the relative skills of new immigrants arriving between 1990 and 2000 is not found among newly arrived immigrants settling in the New York area.

Borjas and Friedberg (2004) have recently shown that the uptick in cohort quality for immigrants who arrived in the late 1990s (at the national level) can be explained in terms of a simple example that has significant policy relevance. In particular, the entire uptick disappears when the relatively small number of immigrants who are employed as computer scientists and engineers is excluded from the analysis. Although the census does not provide information on the type of visa that immigrants use to enter the country, it is probably not a

CHART 4  
Log Weekly Wage of Newly Arrived Immigrant Men  
Relative to the Wage of Native Men  
By Area



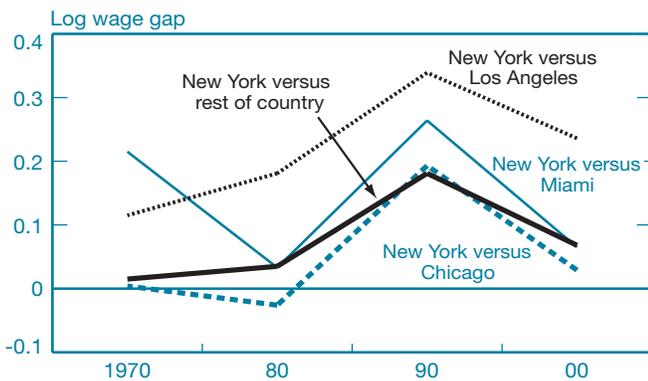
Source: Author’s calculations, based on U.S. Census Bureau’s 1970-2000 Integrated Public Use Microdata Series.

Notes: Figures are calculated using the sample of persons aged twenty-five to sixty-four who are not enrolled in school and who worked in the civilian sector at least one week in the year prior to each decennial census. The sample of newly arrived immigrants includes foreign-born persons who have been in the United States for fewer than five years as of the census date.

coincidence that the increase in the relative number of high-tech immigrants occurred at the same time that the size of the H-1B visa program grew substantially. This program allows employers to sponsor the entry of temporary workers in “specialty occupations.” Most of the workers entering the country with an H-1B visa are employed either in computer-related occupations or in engineering (70 percent in 2000).<sup>9</sup> Between 1990 and 1994, the number of H-1B visas hovered around 100,000 annually. This number increased to 144,548 in 1996, to 240,947 in 1998, and to 302,326 in 1999.<sup>10</sup>

It turns out that the growth in high-tech employment for native workers was roughly similar in New York and outside New York, but the growth in high-tech employment for newly arrived immigrants lagged slightly in the New York area. In 1990, for example, about 3.5 percent of native workers were employed in computer-related occupations or engineering. In 2000, the fraction of natives employed in these high-tech occupations stood at 5 percent both in New York and outside New York. Among immigrants, however, the fraction employed in high-tech occupations increased by 4.5 percentage points, from 3.0 percent to 7.5 percent, in New York, but by 5.3 percentage points, from 3.6 percent to 8.9 percent, outside New York. It would be of great interest to explore whether the relatively slow growth of foreign-born high-tech employment in the New York metropolitan area (due, perhaps, to the concentration of H-1B employment on the West Coast) could explain the differential cohort effects revealed by the data.

CHART 5  
Log Weekly Wage of Newly Arrived Immigrant Men in the New York Metro Area Relative to the Wage of Newly Arrived Immigrant Men in Other Areas



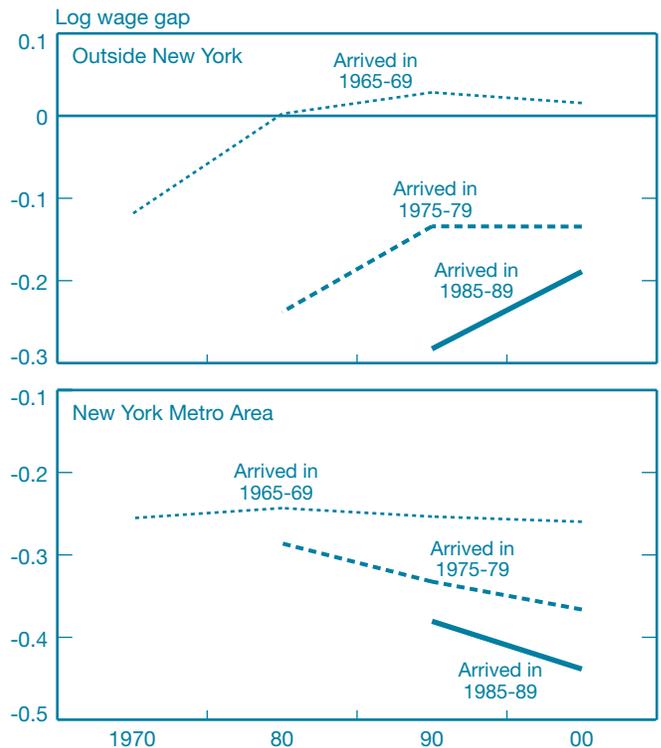
Source: Author’s calculations, based on U.S. Census Bureau’s 1970-2000 Integrated Public Use Microdata Series.

Notes: Figures are calculated using the sample of persons aged twenty-five to sixty-four who are not enrolled in school and who worked in the civilian sector at least one week in the year prior to each decennial census. The sample of newly arrived immigrants includes foreign-born persons who have been in the United States for fewer than five years as of the census date.

As noted earlier, the changing log wage gap between immigrant and native workers in each metropolitan area could also reflect a region-specific changing mix of skills in the native-born workforce. To isolate the status of the newly arrived immigrant population in New York relative to that of newly arrived immigrants residing elsewhere in the country, we calculate the (real) wage of immigrants in the New York metropolitan area relative to the real wage of immigrants in other parts of the country. Chart 5 summarizes the trends in this adjusted real wage. Although the trends are noisy, the data clearly indicate that newly arrived immigrants in the New York area typically earn substantially more than newly arrived immigrants in other parts of the country.

Finally, the 1970-2000 census data can also be used to measure the extent of “economic assimilation,” the improvement in the relative wage of a specific immigrant cohort over time. Chart 6 uses a simple methodology to

CHART 6  
Economic Assimilation of Immigrant Men (Relative Wage of Immigrants Who Entered the Country at Ages Twenty-Five to Thirty-Four)  
By Area



Source: Author’s calculations, based on U.S. Census Bureau’s 1970-2000 Integrated Public Use Microdata Series.

Note: Figures are calculated using the sample of persons aged twenty-five to sixty-four who are not enrolled in school and who worked in the civilian sector at least one week in the year prior to each decennial census.

calculate rates of economic assimilation within specific regions of the country. Consider first the group of immigrant men living outside the New York area who arrived in the late 1960s when they were twenty-five to thirty-four years old. The top panel of Chart 6 shows that these immigrants earned about 11 percent less than comparably aged native workers at the time of entry (as observed in the 1970 census). Move forward ten years to 1980, when both the immigrants and the natives were thirty-five to forty-four years old. The wage gap between the two groups has essentially disappeared. Move forward again ten years to 1990, when the workers are now forty-five to fifty-four years old. The data indicate that immigrants now earn about 2.8 percent more than native workers. Overall, the process of economic assimilation exhibited by this cohort reduced the initial wage disadvantage of these immigrants by about 14 percentage points over a thirty-year period—with most of the growth occurring in the first ten years after immigration.

Contrast this pattern with the rate of economic assimilation measured for immigrants who arrived when they were twenty-five to thirty-four years old in 1970 *and resided in the New York metropolitan area* at the time of each census observation (Chart 6, bottom panel). They entered the country with a 22.5 percent wage disadvantage. Unlike their counterparts who lived outside New York, the wage gap between these immigrants and native workers in New York remained relatively constant over the next thirty years. By 2000, the wage disadvantage between these workers still stood at 22.9 percent.

Although it may be tempting to conclude from these calculations that immigrants in the New York metropolitan area do not experience much economic assimilation, it is unlikely that this interpretation is correct. For example, there is a great deal of interregional internal migration between New York and other parts of the country in *both* the foreign-born and native-born workforces. Suppose, for instance, that these internal migration flows lead to a large number of low-

skill immigrants moving into the New York metropolitan area *after* their initial settlement elsewhere, or lead to the out-migration of high-skill immigrants who initially settled in the New York area. These internal migration flows could easily generate the perverse assimilation paths illustrated in the bottom panel of Chart 6. As a result, the intriguing differences in the synthetic assimilation profiles generated by the tracking of specific cohorts across various census data sets suggest that the differential internal migration decisions of immigrant and native workers in the New York metropolitan area remain an important topic for future research.

#### 4. SUMMARY

This paper uses data drawn from the 1970-2000 Integrated Public Use Microdata Samples of the U.S. census to analyze the trends in the educational attainment and earnings of immigrants in the New York metropolitan area. Although the growth of immigration in California, Texas, and Florida in recent decades has shifted the geographic gravity of immigration in the United States, the New York metropolitan area remains an important receiving site. In 2000, 15.7 percent of all foreign-born workers resided in the New York metropolitan area.

The empirical analysis presented here documents the observation that although the immigrants who settle in the New York area tend to be more skilled than the immigrants who settle elsewhere, they tend to be less skilled than native-born workers in the New York area. Moreover, because of the dramatic improvement in the educational attainment of native-born workers in New York in recent decades, the (relative) economic disadvantage experienced by immigrants in New York has widened.

## ENDNOTES

1. These data are available at the University of Minnesota's IPUMS website (<http://www.ipums.umn.edu/usa/index.html>). The data contain a 1 percent sample of the U.S. population in 1970 and a 5 percent sample in 1980-2000.
2. This definition implies that persons born abroad of American parents or persons born in American territories are classified as natives. Some of the variables reported in the census, such as annual earnings, refer to the year prior to the survey. We avoid confusion by always referring to the data in terms of the census year.
3. The remainder of the analysis focuses on the trends in skills and earnings of the male workforce. The trends in the relative wage of immigrant women (and interregional differences in those trends) are likely to be heavily influenced by the selection issues that characterize the huge differences in female labor force participation rates both across groups and across regions.
4. The percentage wage gap implied by a specific value of the log wage gap,  $x$ , is given by  $e^x - 1$ .
5. Note that these differences do not play a role in the data summarized in Chart 2 because these data difference the earnings of immigrants and natives within a metropolitan area at a particular point in time.
6. To deflate the wage for immigrant workers residing outside the New York metropolitan area, we simply use the national aggregate of the consumer price index.
7. Borjas (1994) and Smith and Edmonston (1997) survey this extensive literature.
8. The cross-section correlation may also be contaminated by cohort effects if there is selective out-migration of immigrants, so that the trend in the earnings of "survivors" over time will not measure the actual earnings growth experienced by a particular immigrant cohort.
9. U.S. Immigration and Naturalization Service (2002).
10. U.S. Immigration and Naturalization Service (various years).

## REFERENCES

- Borjas, G. J.* 1985. "Assimilation, Changes in Cohort Quality, and the Earnings of Immigrants." *JOURNAL OF LABOR ECONOMICS* 3, no. 4 (October): 463-89.
- . 1994. "The Economics of Immigration." *JOURNAL OF ECONOMIC LITERATURE* 32, no. 4 (December): 1667-1717.
- . 1995. "Assimilation and Changes in Cohort Quality Revisited: What Happened to Immigrant Earnings in the 1980s?" *JOURNAL OF LABOR ECONOMICS* 13, no. 2 (April): 201-45.
- Borjas, G. J., and R. M. Friedberg.* 2004. "What Happened to Immigrant Earnings in the 1990s?" Unpublished paper, Harvard University, March.
- Card, D.* 2001. "Immigrant Inflows, Native Outflows, and the Local Labor Market Impacts of Higher Immigration." *JOURNAL OF LABOR ECONOMICS* 19, no. 1 (January): 22-64.
- Chiswick, B. R.* 1978. "The Effect of Americanization on the Earnings of Foreign-Born Men." *JOURNAL OF POLITICAL ECONOMY* 86, no. 5 (October): 897-921.
- Friedberg, R. M., and J. Hunt.* 1995. "The Impact of Immigration on Host Country Wages, Employment, and Growth." *JOURNAL OF ECONOMIC PERSPECTIVES* 9, no. 2 (spring): 23-44.
- Katz, L. F., and K. M. Murphy.* 1992. "Changes in Relative Wages, 1963-87: Supply and Demand Factors." *QUARTERLY JOURNAL OF ECONOMICS* 107, no. 1 (February): 35-78.
- LaLonde, R. J., and R. H. Topel.* 1992. "The Assimilation of Immigrants in the U.S. Labor Market." In G. J. Borjas and R. B. Freeman, eds., *IMMIGRATION AND THE WORK FORCE: ECONOMIC CONSEQUENCES FOR THE UNITED STATES AND SOURCE AREAS*, 67-92. Chicago: University of Chicago Press.
- Ramos, F.* 1992. "Out-Migration and Return Migration of Puerto Ricans." In G. J. Borjas and R. B. Freeman, eds., *IMMIGRATION AND THE WORK FORCE: ECONOMIC CONSEQUENCES FOR THE UNITED STATES AND SOURCE AREAS*, 49-66. Chicago: University of Chicago Press.
- Smith, J. P., and B. Edmonston, eds.* 1997. *THE NEW AMERICANS: ECONOMIC, DEMOGRAPHIC, AND FISCAL EFFECTS OF IMMIGRATION*. Washington, D.C.: National Academy Press.
- U.S. Immigration and Naturalization Service.* 2002. "Report on Characteristics of Specialty Occupation Workers (H-1B): Fiscal Year 2000." April. Washington, D.C.
- . Various years. *STATISTICAL YEARBOOK OF THE IMMIGRATION AND NATURALIZATION SERVICE*. Washington, D.C.

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