CIVIC REPORT
No. 53 May 2008

MEASURING IMMIGRANT ASSIMILATION IN THE UNITED STATES

Jacob L. Vigdor
Associate Professor of Public Policy Studies and Economics, Duke University
Faculty Research Fellow, National Bureau of Economic Research

Published by Manhattan Institute

CENTER FOR CIVIC INNOVATION
AT THE MANHATTAN INSTITUTE

This report introduces a quantitative index that measures the degree of similarity between native- and foreign-born adults in the United States. It is the ability to distinguish the latter group from the former that we mean when we use the term "assimilation." The Index of Immigrant Assimilation relies on Census Bureau data available in some form since 1900 and as current as the year before last. The index reveals great diversity in the experiences of individual immigrant groups, which differ from each other almost as much as they differ from the native-born. They vary significantly in the extent to which their earnings have increased, their rate of learning the English language, and progress toward citizenship. Mexican immigrants, the largest group and the focus of most current immigration policy debates, have assimilated slowly, but their experience is not representative of the entire immigrant population.

Collective assimilation rates are lower than they were a century ago, although no lower than they have been in recent decades. And this is true despite the fact that recent immigrants have arrived less assimilated than their predecessors and in very large numbers. In addition to country of origin, the Index categorizes groups on the basis of date of arrival, age, and place of residence. Some groups have done far better or worse than the Index as a whole; Assimilation also varies considerably across metropolitan areas.

Here are some of the Index's significant findings:

- ***The degree of similarity between the native- and foreign-born, although low by historical standards, has held steady since 1990.*** Assimilation declined during the 1980s, remained stable through the 1990s, and has actually increased slightly over the past few years.

Beyond presenting a snapshot of the degree of similarity between the native- and foreign-born, the assimilation index can be used to track the progress of immigrants who arrived in the United States at a common point in time. This simple extension shows that the relative stability of immigrant assimilation since 1990 masks two important and countervailing trends.

- ***Newly arrived immigrants of the early 21st century have assimilation index values lower than the newly arrived immigrants of the early 20th century.*** Growth in the immigrant population usually lowers the assimilation index because newly arrived immigrants drag down the average for the group as a whole. This phenomenon can be seen between 1900 and 1920 and again in the 1980s. The stability of the assimilation index since 1990 is therefore remarkable in light of the rapid growth of the immigrant population, which doubled between 1990 and 2006.

- ***Immigrants of the past quarter-century have assimilated more rapidly than their counterparts of a century ago, even though they are more distinct from the native population upon arrival.*** The increase in the rate of assimilation among recently arrived immigrants explains why the overall index has remained stable, even though the immigrant population has grown rapidly.

- ***Yet the current level of assimilation remains lower than it was at any point during the early 20th century wave of immigration.***

The assimilation index can be decomposed along several other dimensions. The overall, or composite, index is based on a series of economic, cultural, and civic factors. These sets of factors can be examined in isolation to produce three component indices. The economic index compares the labor force, educational attainment, and home ownership patterns of the foreign- and native-born. The cultural index focuses on English-speaking ability, marriage, and

childbearing patterns. The civic index examines naturalization rates and compares the military service patterns of the foreign- and native-born. Separate analysis of these three dimensions of assimilation reveals that they do not increase in lockstep as immigrants spend more time in the United States.

- ***Economic and civic assimilation often occurs without significant cultural assimilation.*** It is common for immigrant cohorts to naturalize and enjoy integration into the economic mainstream without posting many gains along cultural dimensions.

- ***Immigrants who arrived in the United States after 1995 are culturally assimilating more rapidly than their predecessors.*** The increased rate of overall assimilation shown by cohorts of recent arrivals can be traced in part to this pattern of relatively rapid cultural assimilation.

The assimilation index can be computed for individual country-of-origin groups, or for sets of immigrants who live in a particular city or region. Disaggregation by country of origin reveals important differences in the experiences of immigrants born in different parts of the world.

- ***Immigrants from developed countries are not necessarily more assimilated.*** Immigrants born in Korea, which the World Bank classifies as a high-income country, have a collective assimilation index value lower than that of immigrants from Cuba or the Philippines, which are classified as low-income countries. Several factors can explain this pattern, among them the fact that immigrants from developed countries do not necessarily become naturalized citizens more rapidly than those from the developing world. The United States often attracts immigrants who belonged to the economic elite of their origin country.

- ***Immigrants from Vietnam, Cuba, and the Philippines enjoy some of the highest rates of assimilation.*** However, these groups assimilate more rapidly in some respects than others. For example, they are far more assimilated economically than they are culturally. Curiously, all of the countries mentioned have experienced U.S. military occupation.

- ***Mexican immigrants experience very low rates of economic and civic assimilation.*** Immigrants born in Mexico, particularly those living and working in the United States illegally, lie at the heart of many current debates over immigration policy. The assimilation index shows that immigrants from Mexico are very distinct from the native-born upon arrival and assimilate slowly over time. The slow rates of economic and civic assimilation set Mexicans apart from other immigrants, and may reflect the fact that the large numbers of Mexican immigrants residing in the United States illegally have few opportunities to advance themselves along these dimensions.

- ***Mexican immigrants experience relatively normal rates of cultural assimilation.*** Recent cohorts of Mexican immigrants have increased their rate of cultural assimilation just as immigrants born in other nations have done.

A specialized version of the assimilation index can be computed for foreign-born adolescents and young adults who came to the United States as young children and received their formal education exclusively in this country. This version of the assimilation index also reveals interesting patterns.

- ***The foreign-born children of immigrants continue to bear a strong resemblance to their native-born counterparts.*** Although many members of this group are not naturalized citizens, they are difficult to distinguish from the native-born along other dimensions.

- ***Immigrant children born in Mexico are more distinct than immigrant children born in other foreign nations.*** This distinction is most obvious in terms of comparative naturalization rates, but extends to other dimensions as well. Mexican adolescents are imprisoned at rates approximately 80 percent greater than immigrant adolescents generally.

- ***Naturalization rates among the foreign-born children of immigrants have been increasing.*** In this respect, the behavior of foreign-born, domestically educated immigrants resembles that of their parents educated abroad.

Disaggregation by metropolitan area reveals widely varying rates of assimilation, due largely to the different combinations of immigrant groups that reside in each and the different characteristics of those groups.

- ***Polyethnic New York City, which still attracts large numbers of European immigrants, has the second-highest assimilation index value among the metropolitan areas defined.***

- ***San Diego, despite its proximity to the Mexican border, has the highest.***

The methodology used to compute the assimilation index is outlined in the report and reviewed extensively in a more technical appendix. The method has been designed to take advantage of more than a century's worth of historical data on the status of immigrants in the United States, made available to the public by the United States Census Bureau, and to provide the opportunity for annual updates.

The assimilation index points to marks of success, to encouraging recent trends, and also to areas of concern. Within these areas of concern, the index provides some insight into the nature of the problem and the universe of appropriate potential policy responses. It is important to note, however, that this report neither proposes nor endorses any policy responses. Its sole purpose is to present information in a manner useful to concerned citizens and policymakers who hope to make informed decisions regarding the proper course of action.

About the Author

JACOB VIGDOR is Associate Professor of Public Policy Studies and Economics at Duke University, where he has taught since 1999, and a Faculty Research Fellow at the National Bureau of Economic Research. He received a B.S. in Policy Analysis from Cornell University in 1994 and a Ph.D. in Economics from Harvard University in 1999.

His research interests are in the broad areas of education policy, housing policy, and political economy. Within those areas, he has published numerous scholarly articles on the topics of residential segregation, immigration, housing affordability, the consequences of gentrification, the determinants of student achievement in elementary school, the causes and consequences of delinquent behavior among adolescents, teacher turnover, civic participation and voting patterns, and racial inequality in the labor market. These articles have been published in outlets such as *The Journal of Political Economy, The Review of Economics and Statistics, The Journal of Public Economics, The Journal of Human Resources,* and *The Journal of Policy Analysis and Management*.

CONTENTS

Measuring Immigrant Assimilation in the United States

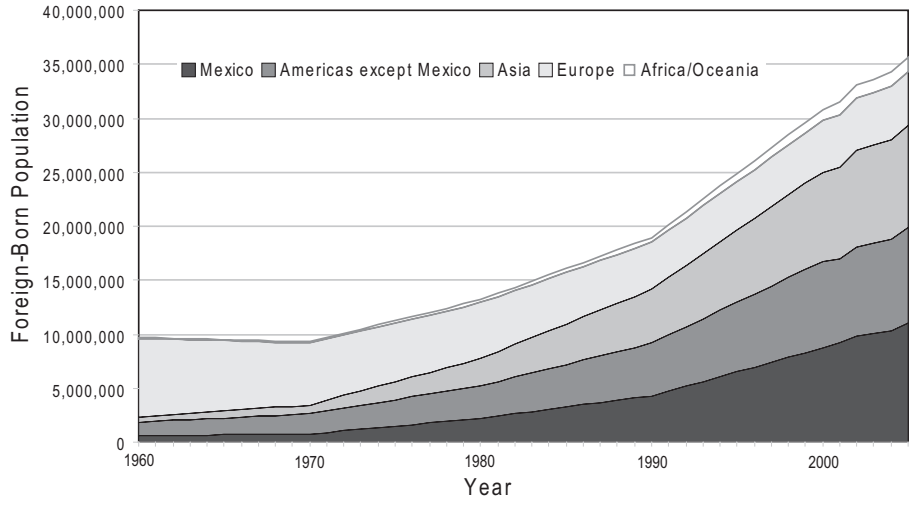
Jacob L. Vigdor

CHAPTER I. INTRODUCTION

The immigrant population of the United States has nearly quadrupled since 1970, and doubled since 1990. This remarkable growth, plotted in Figure 1, has been driven in large part by immigration from Latin America and Asia.[1] The immigrant population has grown at more than twice the rate of the population as a whole. Recent Census Bureau estimates indicate that there are more than 10 million Mexican-born individuals currently residing in the United States. The number of immigrants from this one country today exceeds the total number of immigrants from all nations little more than a generation ago. Moreover, a considerable portion of Mexican-born residents of the United States are undocumented, living and working in violation of the law. A study released by the Census Bureau in 2001 indicates that there were nearly 9 million immigrants from all countries who did not fall into an "officially estimated" legal category at that time. Nearly half of these immigrants of questionable legal status were from Mexico.[2]

This remarkable growth has been accompanied by continued and escalating calls to reform immigration policy not only at the national level but within large and small communities across the country. Immigration policy debates touch on a wide array of arguments: economic, political, ethical, legal, and emotional. In many cases, these debates are also influenced by incomplete or misleading information. All sides in the debate face a trade-off between conveying

Figure I. The Foreign-Born Population of the United States, by Region of Birth, 1960–2005



a concise message and oversimplifying an inherently complex issue.

The purpose of this report is to present information relevant to these ongoing debates by measuring the degree of distinction between the native- and foreign-born populations of the United States, or alternatively, their degree of assimilation.[3] The analysis introduces a numeric index of assimilation, which measures the extent to which the foreign-born and native-born can be distinguished from each other on the basis of commonly observed social and economic data. The index measures the ability of a statistical algorithm to predict which individuals in a random sample of United States residents were born abroad. An appendix to this report provides both a general and a more technical overview of the method used to compute the index. The index can be computed for individual country-of-origin groups, sets of immigrants residing in specific cities or regions, and for immigrants who have spent varying lengths of time in the United States. The index, which makes use of data provided by the Census Bureau, can be computed using data capturing conditions as recent as 2006, and as distant as 1900. The index can serve to answer two simple but important questions: Are the differences between immigrants and natives today larger than they were in the recent or distant past? And how rapidly do these differences shrink as immigrants spend more time in the United States?

The study of immigrant assimilation is not new, nor is it in a period of dormancy. Past studies of immigrant assimilation range from detailed observation of particular immigrant enclaves to broader statistical analyses of nationally representative samples.[4] The observational studies provide rich detail on the habits and interpersonal connections of actual people but can be criticized on the grounds that they don't permit generalization about an entire population of immigrants. The broader statistical analyses are easily generalized but often focus on a limited set of measures, the most prominent ones being earnings and other labor-force outcomes, English-speaking ability, naturalization, and intermarriage.

The assimilation index builds on this previous literature by using broad, nationally representative samples that include native-born Americans and by analyzing a wider array of measures. The index summarizes this large quantity of information in a form that can be applied to very broad and very narrow groups of

immigrants. The method requires no prior assumptions regarding which characteristics are most effective in distinguishing immigrants from natives. Moreover, the inclusion of irrelevant characteristics—that is, ones that do not actually help distinguish immigrants from natives—has no impact on the index.

The social and economic data used to compute the overall, or *composite*, assimilation index can be separated into three sets of factors, which in turn can be used in isolation to compute more narrowly focused *component* indexes:

Economic assimilation describes the extent to which immigrants, or groups of immigrants, make productive contributions to society indistinguishable in aggregate from the contributions of the native-born. Economic assimilation is low when immigrants cluster at certain points on the economic ladder—most notably, the low-skilled rungs—and high when their distribution on the economic ladder matches that of native-born Americans.

The economic assimilation index is particularly relevant to two major areas of policy debate: the impact of immigration on the labor market; and the fiscal impact of immigration. A simple calculation suggests that immigrant participation in the labor market generates net benefits, through lower consumer prices and higher shareholder returns, of $50 billion per year.[5] But such benefits are accompanied by reductions in wages for native workers competing in the same market.[6] It has also been argued that the immigration of highly skilled, entrepreneurial workers creates new jobs.[7] The economic assimilation index can help track whether the skills of immigrants are matched to or mismatched with those of native workers.

From a fiscal perspective,[8] the economic assimilation index reveals information that can potentially address concerns that immigrants take up welfare benefits at disproportionate rates[9] or rely on charitable provision of health care.[10] Economic assimilation also correlates with immigrants' contributions to the Social Security and Medicare trust funds[11] and may help determine the impact of immigrants' housing demand on property values and local property tax revenues.[12]

The following factors are used to measure economic assimilation:

- Earned income in the year prior to the survey (not available for 1900–1930)
- Labor-force participation
- Unemployment (not available for 1900–1930)
- A quantitative ranking of occupations by average income in that occupation in 1950.
- Educational attainment (not available for 1900–1930)
- Home ownership (not available for 1900–1930)

Since the labor-force participation and earnings patterns of males and females have historically been quite distinct, the index measures the immigrant-native differences in these factors separately by gender.

Cultural assimilation is the extent to which immigrants, or groups of immigrants, adopt customs and practices indistinguishable in aggregate from those of the native-born. Factors considered in the measurement of cultural assimilation include intermarriage and the ability to speak English, which have been the focus of many previous efforts to track immigrant assimilation in the United States. Cultural assimilation also incorporates information on marital status and childbearing. It is important to note that cultural assimilation is not a measure of a group's conformity with any preconceived ideal. Changes in the customs and practices of the native-born can promote cultural assimilation just as easily as changes among the foreign-born.

Some of the most spirited charges in immigration policy debates concern the cultural aspects of immigrants' integration into American society. While some aspects of this debate, such as the value of traditional American culture, are relatively abstract, other aspects are very concrete. State and local governments, for example, often face cost burdens associated with providing services—most notably, public education—to non-English-speaking immigrant groups.[13] Incorporating childbearing patterns into the index allows it to measure the potential impact of immigration on public schools in the near term, and on broader fiscal issues in the long term. Marital patterns, including the deci-

sion to marry a native-born spouse, or the decision to reside in the United States without one's spouse, provide clues as to immigrants' long-term intentions, which are critical to understanding the long-term fiscal impact of immigration.

The following factors are used to measure cultural assimilation:

- Ability to speak English
- Intermarriage (whether an individual's spouse is native-born)
- Number of children
- Marital status

Civic assimilation is a measure of immigrants' formal participation in American society, primarily through naturalization. Since native-born residents of the United States are citizens by default, civic assimilation increases as the proportion of immigrants who are naturalized citizens increases. The index of civic assimilation also incorporates information on past or present military service, except in the years from 1900 to 1930. Since military service is more common among males than females, the index measures the immigrant-native difference separately by gender. Both naturalization and military service are signals of a strong commitment to the United States—though the power of these signals is directly influenced by government policy. The government sets standards for naturalization and, to some extent, determines the benefits of naturalization, by setting differential policies for citizens and noncitizens; military recruitment needs determine the number of opportunities for service in the armed forces. Changes in civic assimilation could, in theory, reflect either changes in immigrant civic attitudes or changes—perhaps even anticipated changes—in policy. It is important to note that the Census Bureau collects no information on immigrants' legal status, which means that this study cannot use legal status as a factor in the computation of civic assimilation.

To some extent, civic assimilation is an even stronger indicator of immigrants' intentions than cultural assimilation. The choice to become a naturalized citizen, or to serve in the United States military, shows a tangible dedication to this country. Civic assimilation may thus forecast the long-run impact of immigration, both in a concrete fiscal sense and in a more abstract cultural sense.

The information in this report will not settle larger debates over immigration policy. Assimilation may not be necessary for immigrants to make net positive contributions to society. Assimilation may even be undesirable under certain circumstances. For example, immigration may have the most positive net impact on economic growth if immigrants are economically distinct from natives. Immigrants may choose to naturalize because they fear a change in immigration policy rather than because they wish to make a commitment to the United States. Detailed information on immigrant assimilation will help those wishing to make reasoned arguments in the immigration policy debate, but it will not resolve the controversies in and of itself.

The remainder of this report is structured as follows. Chapter 2 reports basic results for 2006. Chapter 3 places these results in context by reporting additional index calculations for the period between 1900 and 2005. Whereas the assimilation index itself provides only a snapshot of immigrants' status in the host society, analysis of data over time can actually illuminate the assimilation process itself and changes in that process over time. Chapter 4 augments the analysis by studying immigrants belonging to "Generation 1.5," those individuals born abroad but brought by their parents to the United States before they commenced their formal education. Chapter 5 presents an in-depth analysis of three immigrant groups: contemporary Mexican immigrants; contemporary Vietnamese immigrants; and the Italian immigrants of the early twentieth century. Chapter 6 summarizes the main conclusions of the study. The final chapter is a detailed methodological appendix.

CHAPTER 2. ASSIMILATION IN 2006

Taken out of context, it is impossible to pass judgment on whether a single number is high or low. With this fundamental caution in mind, this chapter briefly presents information on the state of assimilation in 2006, the most recent year for which relevant data are available. In addition to the overall index values for all foreign-born working-age adults in the United States, this chapter provides a few simple breakdowns by immigrants' country of origin and metropolitan area of residence. More complete tabulations along these lines are available in the Appendix.

The assimilation index ranges from zero to 100. An index close to the minimum value of zero implies that one who relies on only the information used to compute the index can almost perfectly distinguish the foreign-born from the native-born. An index close to the maximum value of 100 indicates that attributions of foreign birth are no more accurate than random guessing.

In 2006, the composite assimilation index, which reflects an attempt to predict individuals' nativity on the basis of economic, cultural, and civic indicators, took on a value of 28. The algorithm for predicting which individuals are foreign-born is not perfect (that is, the assimilation index is not zero), but it performs much better than random guessing. It correctly identifies foreign-born individuals as immigrants, in a sample consisting of equal numbers of foreign- and native-born adults, in nearly seven-eighths of all cases.

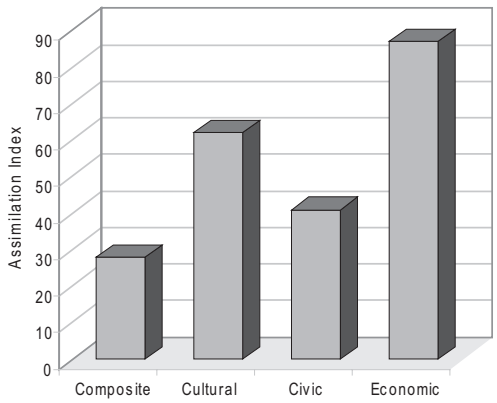
The algorithm used to predict whether an individual was born in the United States or abroad takes advantage of the following patterns in the American Community Survey for 2006:

- Foreign-born residents of the United States are:
  - Perfectly distinguishable from natives when they are not citizens of the United States.
  - Much more likely to be married to another foreign-born individual.
  - Much less likely to be able to speak English.
  - Less likely to own their residence.
  - More likely to have larger numbers of children living with them.
  - Overrepresented at the low and high ends of the educational distribution; and underrepresented in the group of individuals with no more than a high school diploma, or with some college education but no degree.
  - Less likely to be unemployed or absent from the labor force.
  - Less likely to be veterans.
  - More likely to be working in historically higher-paying occupations but earning less than natives working in those occupations.

Among these patterns, the first three are by far the strongest determinants of the assimilation index.

Figure 2 shows the relative magnitude of the composite assimilation index, as well as the three component indexes, which focus on cultural, civic, or economic indicators, respectively. Immigrants display the greatest degree of assimilation, according to these measures, along economic lines.[14] The 2006 index of economic assimilation is 87. Using only information on labor-force participation, income, occupation, home ownership, and educational attainment, the best model for distinguishing the native-born from the foreign-born performs only slightly better than random guessing—making the correct guess about 56% of the time instead of 50%.

Figure 2. The Assimilation Index: 2006



The distinction between immigrants and natives is stronger along cultural dimensions—marriage and childbearing patterns, along with English-speaking ability. The 2006 index of cultural assimilation is 62, indicating that the statistical model produces correct guesses just over two-thirds of the time.[15] Finally, the greatest degree of distinction is along civic lines—citizenship and military service. The 2006 civic assimilation index of 41 indicates that these two indicators by themselves can correctly predict nativity in nearly 80% of all cases. From another perspective, adding all the cultural and economic indicators to the civic indicators moves the index a relatively short distance, from 41 to 28.

The composite index is not a simple average of the three component indexes. Each index is a measure of the power of a statistical algorithm to distinguish the native-born from the foreign-born on the basis of a set of indicators. When the algorithm can distinguish more powerfully, the index is lower—that is, it is easier to tell the difference between the two groups. The algorithm used to compute the composite index combines the three distinct sets of information that produce the individual component indexes. By using the widest range of information, the composite index has a natural advantage in distinguishing the native-born from the foreign-born. This natural advantage implies that the composite index will almost always be lower than any of the three components for a given group of immigrants.

Both composite and component assimilation indexes can be computed for subgroups of the immigrant population. Figure 3 shows the degree of assimilation of a set of ten large country-of-origin groups in 2006.[16] Among these large groups, the assimilation index varies from a low of 13, for those born in Mexico, to a high of 53, for those born in Canada. The assimilation index is below the overall average of 28 for immigrants from Mexico, El Salvador, China, and India. Immigrants born in Canada, Cuba, the Dominican Republic, Korea, the Philippines, and Vietnam have assimilation-index values higher than the national average.

Figures 4, 5, and 6 plot the component assimilation indexes for the same ten large country-of-origin groups. Figure 4, covering economic assimilation, shows that four of these ten groups are economically indistinguishable from natives, and two more are close to indistinguishable. Immigrants from Mexico are the least economically assimilated of any group, with those from El Salvador a close second. Individuals born in the Dominican Republic and China also display economic assimilation levels at or below the national average.

Figure 3. Assimilation by Country of Origin: 2006

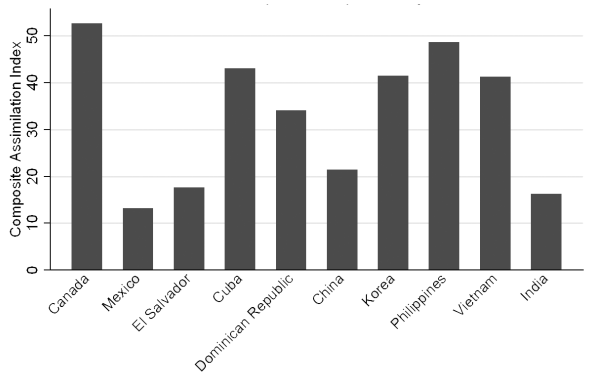


Figure 5 shows a country-of-origin group, Canadians, that can claim to be culturally indistinguishable from native-born Americans. Immigrants born in the Philippines and the Dominican Republic also show relatively high levels of cultural assimilation. At the other end of the spectrum, immigrants born in China and India show the greatest degree of cultural distinction from the native-born. It is interesting to note that both these groups show average or above-average levels of economic assimilation, a first clue that cultural assimilation is not a prerequisite for economic assimilation. The least economically assimilated large group, the Mexican-born, posts cultural assimilation levels nearly identical to those of Vietnamese immigrants, who are nearly indistinguishable from the native-born along economic lines.

Figure 6 rounds out the picture by displaying civic assimilation levels for the same set of countries of origin. Unsurprisingly, given illegal immigrants' ineligibility for citizenship or military service, Mexican and Sal-

Figure 4. Economic Assimilation by Country of Origin: 2006

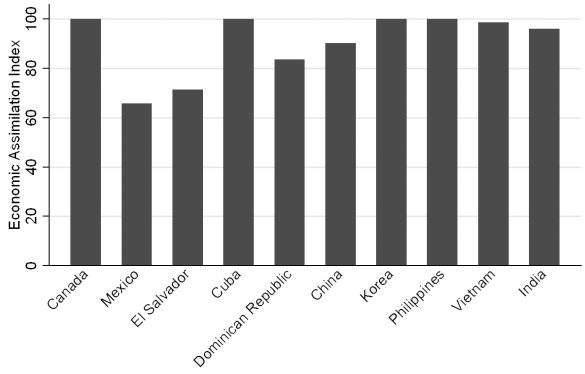


Figure 5. Cultural Assimilation by Country of Origin: 2006

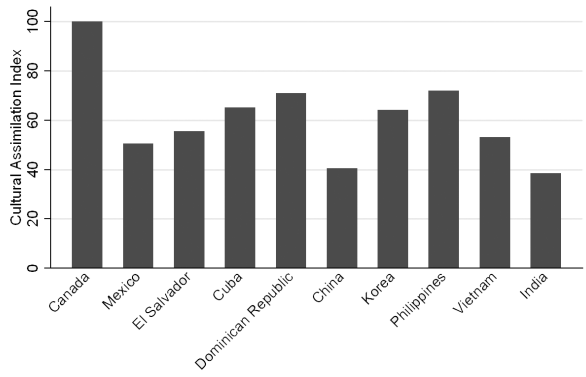


Figure 6. Civic Assimilation by Country of Origin: 2006

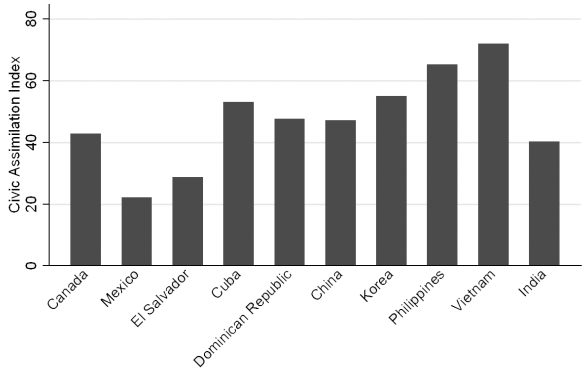
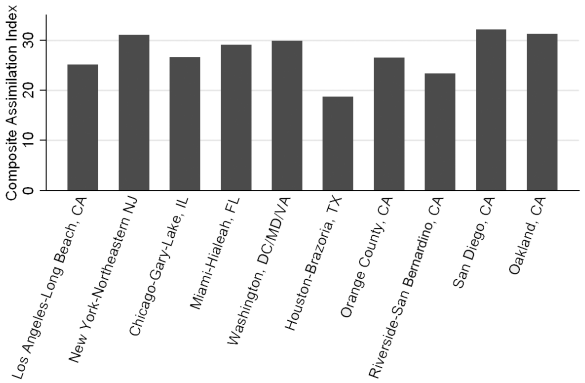


Figure 7. Assimilation by Metro Area: 2006

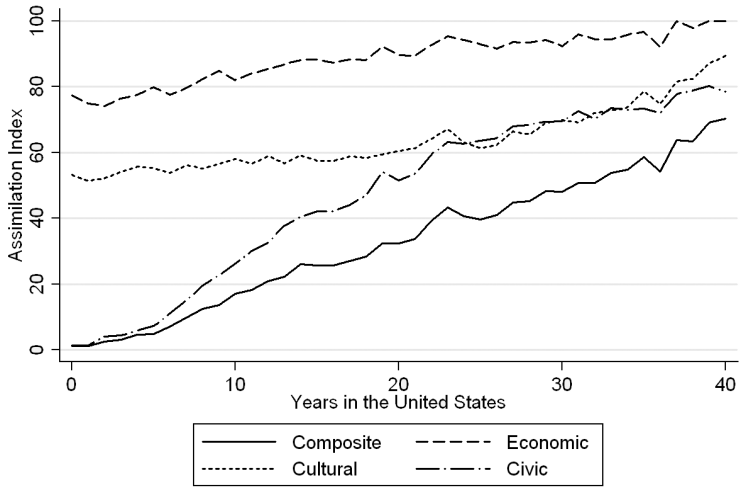


vadoran immigrants show the lowest degree of civic assimilation. More surprisingly, Canadians, despite their full economic and cultural integration with the native-born population, display only a modest degree of civic assimilation. Given the common border of Canada and the United States, Canadian immigrants may view their stay in this country as temporary and the naturalization process as unnecessary.

The country-of-origin groups with the highest degrees of civic assimilation have a common legacy of American military intervention at some point in the twentieth century. Foremost among them are immigrants born in Vietnam, who are more assimilated along civic dimensions than any other large group in 2006. This achievement is particularly noteworthy given Vietnamese immigrants' unremarkable degree of cultural assimilation, as well as their level of economic assimilation, which is slightly below that of natives of Canada, Cuba, Korea, and the Philippines.

In addition to computing degrees of assimilation of individual country-of-origin groups, the index can evaluate all immigrants residing in a particular metropolitan area. A complete set of index numbers for areas with significant immigrant populations can be found in the Appendix. Figure 7 shows the index values for the ten largest immigrant destinations in 2006.[17] To a large extent, variation across metropolitan areas can be explained by variation in the country-of-origin groups most strongly represented in the population.

Figure 8. Assimilation by Years in the U.S.: 2006



Houston, with its proximity to Mexico, has the lowest assimilation-index value in this set of metro areas. Los Angeles, which has a very large Mexican population along with considerable numbers of Asian immigrants, is above Houston but below most other metropolitan areas. The polyethnic New York City area, which attracts a number of European immigrants in addition to people from the developing world, has the second-highest index value among the metropolitan areas shown here. Washington, D.C., also claims a relatively high index value. Miami, with its large concentration of immigrants from Cuba and other Caribbean nations, posts an index value slightly higher than the national average. Somewhat surprisingly, San Diego, in spite of its close proximity to the Mexican border, registers as the destination with the highest assimilation index among those listed here.

To this point, reported index values have provided a simple snapshot of a dynamic process. Assimilation does not occur instantaneously but rather evolves as immigrants learn more about the host society and take steps, both formal and informal, toward more complete participation in it. Chapter 4, which expands the study of the assimilation index backward through time, will provide an opportunity to observe this process. Figure 8 presents a different type of opportunity by comparing the 2006 assimilation-index values of immigrants who report having arrived in the United States at varying points in time.

There are several reasons that immigrants who arrived at varying points in time might exhibit varying degrees of assimilation in 2006. As stated above, one reason is that the assimilation process takes time. A second reason is selective return migration. Immigrants who experience difficulty in their transition to the host society, and therefore look poorly assimilated when here, may be more likely to return to their origin country, or move on to a different host country.[18] The set of immigrants who remain in the United States for an extended period of time will then appear more assimilated, even if their rate of assimilation has been quite modest. Finally, changes in immigration policy or world economic, social, and political conditions may change the composition of the immigrant population over time. Immigrants who arrived prior to 1965, for example, faced a different immigration policy from ones confronting more recent arrivals, and may differ for that reason. The trends in Figure 8 may reflect any of these explanations. Longitudinal analysis in the next chapter will be able to rule out the third explanation but will not distinguish between the first two.

Consistent with both the view that immigrants assimilate over time and that immigrants who fare poorly are more likely to depart, there are several clear positive trends in Figure 8. In 2006, immigrants who arrived in the United States within the previous year or two are easily distinguished from the native-born, primarily because they are very unlikely to be citizens. The composite and civic assimilation indexes for this group are very close to zero. By comparison, immigrants who arrived ten years earlier, in the mid-1990s, post overall assimilation-index values of around 20 and civic assimilation-index values closer to 30. Immigrants who arrived in the mid-1980s had by 2006 attained a composite-index value of 30 or higher. The most assimilated immigrants shown here are those who arrived in the mid-to-late 1960s. This group posts composite-index values in the 60–70 range.

There are interesting contrasts among the component assimilation indexes in Figure 8. Civic assimilation, unsurprisingly, begins close to zero but increases steadily, reaching values near 80 among immigrants who arrived a generation ago. Economic assimilation also shows an unmistakable upward trend, beginning in the mid-70s for recent arrivals and nearing the maximum value of 100. Cultural assimilation shows a comparatively weak trend among more recent immigrants; as of 2006, immigrants who arrived in the mid-1980s posted assimilation-index values only a few points higher than the most recent arrivals. A more recognizable upward trend appears among immigrants arriving prior to the mid-1980s. Some portion of this trend may be attributable to the experience of immigrants who arrived as youths in the 1960s or 1970s, learned English in the public schools, and married here in the United States rather than abroad. Chapter 5 will consider this type of first-generation immigrant in greater detail. While caveats apply to this analysis, as it is based on cross-sectional rather than truly longitudinal information, this evidence points once again to the conclusion that the process of cultural assimilation is not a necessary precursor of either economic or civic assimilation.

CHAPTER 3. ASSIMILATION IN HISTORICAL CONTEXT

To study assimilation as a process and to determine whether that process has changed over time in the United States, it is necessary to move beyond a single year's snapshot and examine longitudinal information on the assimilation of immigrants in the United States. Figure 9 begins this study by presenting time-series information on the progression of the assimilation index over the past quarter-century, using data drawn from the Census enumerations of 1980 and 1990, as well as the annual American Community Survey conducted since 2000.

As shown in Figure 1, the period between 1980 and 2006 experienced tremendous growth in the immigrant population of the United States. Driven primarily by increased immigration from Latin America and Asia, the number of foreign-born residents of the United States nearly tripled in this time period. Figure 9 shows that this growth has had very little impact on the assimilation index. There has been some degree of decline in the composite index and each of its components since 1980; but in most cases, the decline is confined to the 1980s. Between 1990 and 2006, a period when the immigrant population doubled, the composite index and each of its components remained effectively unchanged. If there is any evidence of a trend in recent years, it is toward increased assimilation. The composite index shows a small uptick just after 2000; the civic assimilation index reached its low point in 1990; both cultural and economic assimilation are higher in 2006 than they were just four years earlier.[19] Thus, while it is true that each assimilation index is lower than it was in 1980, the lack of any noticeable trend in the past 16 years—and, in fact, the evidence of slight increases in assimilation in spite of continued growth in the immigrant population—is noteworthy.

The relative stability of the assimilation index since 1990 is even more striking when compared with the trend in the previous great wave of immigration to the United States, in the early twentieth century. Figure 10 provides some background information on this earlier wave of immigration. Between 1870 and 1920, the number of foreign-born residents of the United States

Figure 9. The Assimilation Index: 1980–2006

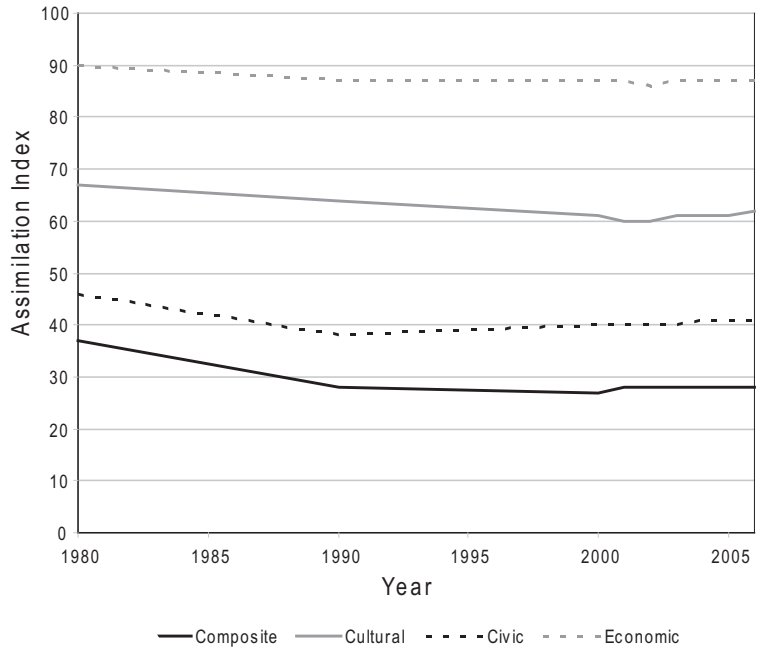


Figure 10. Foreign-Born Population of the United States, by Region of Birth, 1870–1920

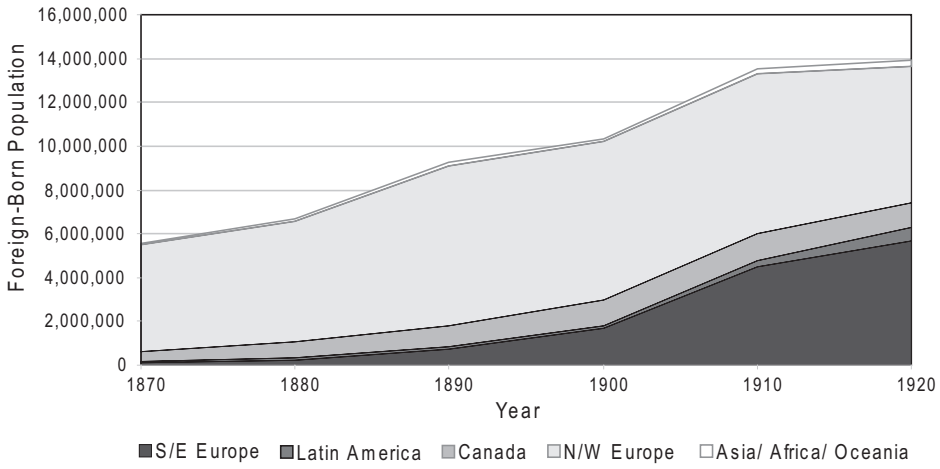


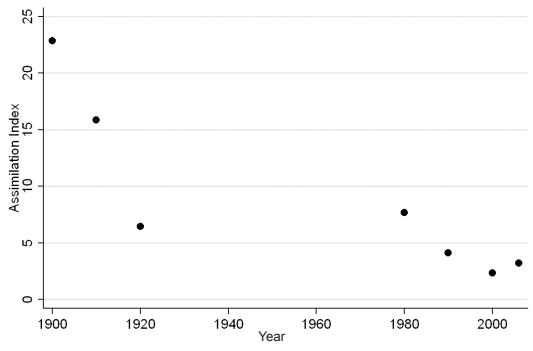
Figure 11. The Assimilation Index: 1900–2006

more than doubled, in large part as the result of the arrival of immigrants from Southern and Eastern Europe. Because the Census did not collect certain critical pieces of information—most notably, whether the immigrants in question could speak English—the earliest possible date for computing the assimilation index is 1900. Moreover, much of the data used to compute the assimilation index between 1980 and 2006 were not collected by the Census Bureau between 1900 and 1930. The following historical analysis is based on a consistently computed alternative version of the assimilation index, which considers the exact same set of factors for all the years between 1900 and 2006.

Figure 11 shows that between 1900 and 1920, a period when the immigrant population of the United States grew by roughly 40%, the assimilation index declined substantially, from an initial value of 55 to 42. After 1920, as more severe restrictions were placed on immigration, the index rebounded somewhat, to a level surprisingly similar to that observed in 1980, the beginning of the modern era of immigration. By this index measure, which is based for purposes of comparison on only the information available in early Census enumerations, the drop in the assimilation index between 1980 and 1990 was more precipitous than that depicted in Figure 9. The period between 1990 and 2006 continues to be marked by the lack of a net trend in assimilation.

In this century-long perspective, two noteworthy aspects of the current assimilation index emerge. First, the index since 1990 has taken on a value well below the lowest point observed in the previous wave of immigration to the United States, which occurred in 1920. Bear in mind that even in 1920, the majority of foreign-born residents of the United States were natives of Northern or Western European nations, or of

Figure 12. The Assimilation of Newly Arrived Immigrants: 1900–2006



Canada. By 1990, these countries of origin represented a much smaller proportion of all immigrants. Second, the rapid growth of the immigrant population since 1990 has not occasioned a decline in assimilation comparable in scale with that witnessed between 1900 and 1920, when the immigrant population grew at a much slower rate.

If the duration of immigrants' stays in the United States were the only determinant of their degree of assimilation, we would expect periods of more rapid growth in the immigrant population to be periods of declining assimilation-index values because the proportion of that population that was newly arrived would be relatively large. The assimilation index is clearly influenced by other factors, however. Federal policy influences rates of naturalization and induction into the military; moreover, certain immigrant groups, notably those from English-speaking nations, arrive in the United States with a head start. The impact of new immigrant arrivals on the assimilation index, then, can be either diminished or augmented by changes in policy or changes in the composition of the flow of immigrants.

Figure 12 shows how these factors can help explain both the low level of the assimilation index observed since 1990 and the stability of the index during this time period compared with earlier episodes of rapid growth in the immigrant population. It plots the assimilation-index value for immigrants who arrived in the United States within the past five years, for Census enumerations in 1900, 1910, 1920, 1980, 1990, and 2000, and for the American Community Survey for 2006. The shift in the composition of the immigrant population between 1900 and 1920, away from Northern and Western Europe and toward Southern and Eastern Europe, is evident in the first three points on the chart. In 1900, newly arrived immigrants posted an assimilation index of over 20; by 1920, this value had fallen by more than two-thirds, to 7. In more recent years, the assimilation of newly arrived immigrants has been consistently low, ranging from around 8 in 1980 to just over 2 in 2000, but has not displayed the strong downward trend evident in the first two decades of the twentieth century. There has been, in fact, an uptick in the assimilation of newly arrived immigrants since 2000.

Figure 13. Composite Assimilation by Years in the U.S.

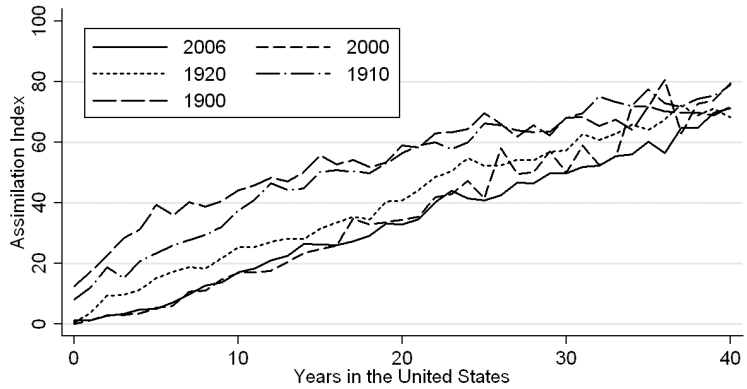
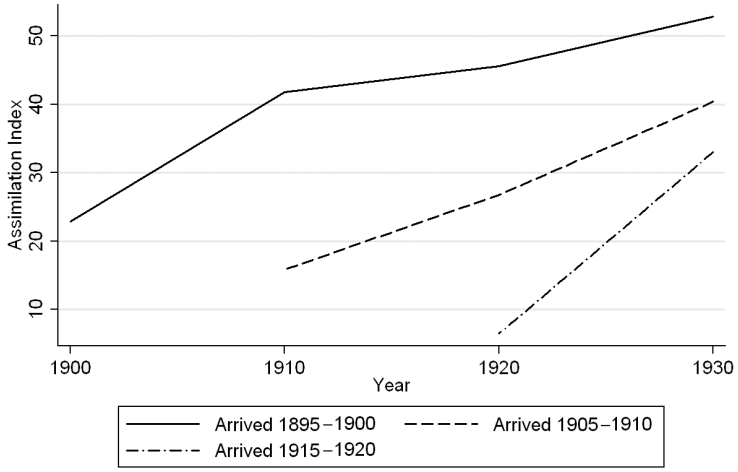


Figure 14. The Progress of Individual Cohorts 1900–1930



A more complete picture of the change in the assimilation process that took place between 1900 and 1920 appears in Figure 13. This figure mirrors Figure 8 above, plotting the assimilation index for immigrants according to the number of years since their arrival. In all years, immigrants with more experience of the United States tend to be more assimilated. Note, however, that the assimilation "hill" representing the year 1920 is at almost every point lower than the hills representing 1910 and 1900. The hill representing 1910 is likewise lower than the 1900 hill for the first 20 years or so. Thus, the tendency of newly arrived immigrants to be less assimilated in 1920 than they were in 1900 or 1910 applies at other points in the assimilation process as well. Immigrants arriving in 1900 were considerably less assimilated in 1920 than the immigrants of 1880 were in 1900. Between 1900 and 1920, growth in the immigrant population was accompanied by a slowdown in the assimilation process.

Figure 13 also includes assimilation hills for 2000 and 2006 (data from the 1980 and 1990 Census enumerations are not sufficiently rich to permit similar plots for those years). In contrast to the earlier period, when each decade's hill lay below the one immediately preceding it, there is a substantial degree of overlap between the 2000 and 2006 hills at virtually all points. These two hills are also lower than those of the early twentieth century, which explains why contemporary composite assimilation is lower than it was in that earlier period.

These "assimilation hills" show that at any given point in time, immigrants who have been in the United States for a longer period of time are more assimilated. One might also conclude from these graphs that the assimilation index tends to rise for individual cohorts as they spend more time in the United States. There is an alternative explanation, however, which graphs like Figure 13 and its earlier counterparts cannot rule out: that immigrants who entered long ago have always been more assimilated than those who arrived recently. There are a few clues in Figure 13 that this is not the case. The newly arrived immigrants of 2000, for example, are the immigrants who in 2006 had arrived six years earlier. It is difficult, however, to use a graph like Figure 13 to track one cohort's progress. Figures 14 through 18 make the job easier. Rather than compare the experience of many different cohorts at a single point in time, these graphs follow the progress of individual cohorts across multiple points in time.

Figure 14 presents true longitudinal information on the progress of immigrant cohorts between 1900 and 1930, focusing on three groups: those arriving

Figure 15. The Progress of Individual Cohorts: Composite

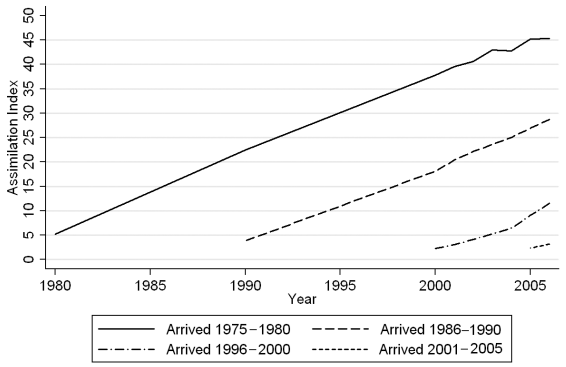


Figure 16. The Progress of Individual Cohorts: Economic

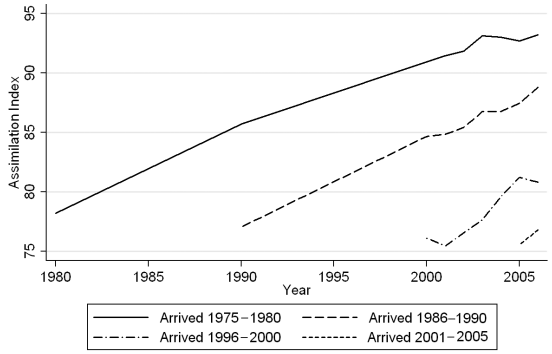


Figure 17. The Progress of Individual Cohorts: Civic

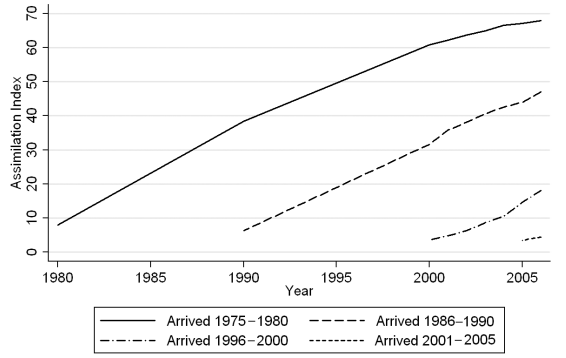
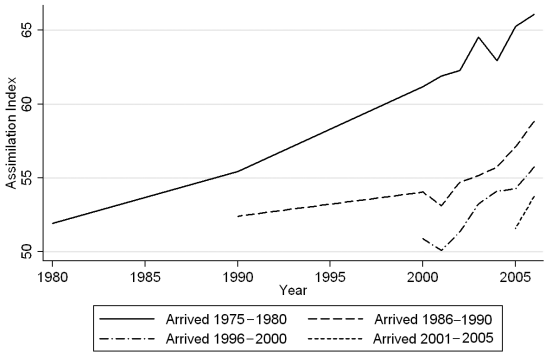


Figure 18. The Progress of Individual Cohorts: Cultural



between 1895 and 1900, between 1905 and 1910, and between 1915 and 1920. Consistent with Figure 12, each cohort begins at a lower level of assimilation than the one immediately preceding it. Moreover, the cohorts exhibit differing rates of progress over their first full decade in the United States. The earliest-arriving group posts a 20-point increase in the assimilation index between 1900 and 1910. This gain is followed by much weaker progress in the second decade. The second cohort shows a much smaller increase over its first decade. Between 1920 and 1930, assimilation accelerates for all three groups. The overall decline in assimilation between 1900 and 1920 reflects both the decline in initial position across cohorts and the tepid progress of all cohorts in the period 1910 to 1920.

Figure 15 presents a comparable picture for the period 1980 to 2006.[20] Consistent with the information in Figure 12, there is some evidence of a slight decline in the assimilation of newly arrived immigrants over this time period. Tracked over time, however, each cohort appears to show little slowdown in the rate of assimilation; each has either posted, or appears on track to post, an increase of 15 to 18 points over its first decade, followed by gains at the same rate or faster in the second decade. The newly arrived immigrants of 1975–80 appear much less assimilated than their

counterparts arriving in 1895–1900. The more rapid progress of the more recent cohort implies that this group, as of 2006, appears only slightly less assimilated than the earlier cohort did in 1930.

Although the immigrants of the late twentieth century were less assimilated at the time of their arrival than their counterparts in the opening decades of the century, their subsequent assimilation was more rapid. To what can we attribute this difference? Figures 16 through 18 help answer this question by tracking the economic, civic, and cultural assimilation of individual cohorts over time. Figure 16 shows that cohorts of modern immigrants have exhibited steady economic assimilation over time, posting strong gains in the economic assimilation index in the first decade in the United States and continued progress thereafter. As mentioned above, some portion of this progress may reflect the exit of unsuccessful immigrants rather than improvements in the status of remaining immigrants. Note that the rate of progress shown by these cohorts, between 7 and 10 points over the first decade, is greater than the difference in assimilation between cohorts, as shown in Figure 8. This contrast is explained by another pattern visible in Figure 16: the cohorts arriving between 1995 and 2005 exhibit lower initial levels of economic assimilation than the cohort arriving between 1985 and 1990.

Figure 17 shows that civic assimilation has also increased steadily for recent cohorts of immigrants, posting gains in the 20- to 30-point range over the first decade, with continued progress thereafter. This degree of progress is generally consistent with the across-cohort comparison in Figure 8. The steady assimilation of immigrants arriving after 1975 can thus be traced both to improved economic fortunes among those immigrants who remain in the country and to steady increases in the fraction of immigrants who are naturalized citizens and who have served in the U.S. military.

Figure 18 presents something of a contrast with the earlier plots but one consistent with the basic across-cohort evidence in Figure 8. The immigrants arriving in the late 1970s, as well as those arriving in the late 1980s, show very little increase in cultural assimilation over their first full decade in the United States. In both cases, this decade-long period of dormancy is followed by significant increases in the rate of cultural assimilation. More recent cohorts of immigrants appear to have bypassed the dormant period, posting more immediate increases in cultural assimilation. The delayed onset of cultural assimilation may reflect a tendency of immigrants to intermarry later in life (perhaps when entering into second or higher-order marriages), or the ascendance of younger members of the cohort who were brought to the United States as children.

Overall, then, the study of historical data is of great value in understanding the assimilation of immigrants to the United States in the twenty-first century. The assimilation index is low overall, and has been at a steady low level since 1990. This 16-year period is unique, however, in that it coupled a rapid increase in the immigrant population with virtually no change in the composite assimilation index or its components. Over the past few years, in fact, there has been some evidence of an upward trend in assimilation. Rapid growth of the immigrant population, which would tend to depress the assimilation index on its own, was offset by stronger upward trends in assimilation for immigrants remaining in the United States. These strong upward trends are most obvious along economic and civic dimensions. Cultural assimilation shows less evidence of increasing strongly as immigrants spend more time in this country, except among cohorts arriving within the past decade.

CHAPTER 4. CASE STUDIES: MEXICO, VIETNAM, AND ITALY

By a substantial margin, Mexico was the largest source of immigrants to the United States in 2006. Between 1980 and 2006, the number of Mexican-born residents of the United States more than sextupled, to nearly 11 million, representing an annual growth rate of over 6%, which was more than five times the growth rate of the U.S. population over the same time period. This growth rate accelerated after 1990. A large proportion of these immigrants live and work in the United States illegally. Finally, as shown in the basic summary in Chapter 3, Mexican immigrants attain the lowest assimilation-index value among large immigrant groups, both in the composite index and in the component indexes of economic and civic assimilation.

For these reasons, contemporary immigration policy debates center on the problem of immigration from Mexico. This chapter narrows the analysis of immigrant assimilation presented in previous chapters to focus on the experiences of Mexican immigrants. For purposes of comparison and contrast, two other country-of-origin groups are presented as case studies here. Vietnamese immigrants provide an interesting contrast. As shown in Chapter 3, this country-of-origin group shows some evidence of successful assimilation, particularly in the civic dimension. If the goal of immigration policy is to encourage newcomers to follow the path toward citizenship, the case of Vietnamese immigrants may represent a modern ideal. The population of immigrants from Vietnam has also grown at rates very close to those that the Mexican-born population exhibited between 1980 and 2006, although the growth of the Vietnamese immigrant population was concentrated in the early, rather than the late, part of the period.

The second comparison group is Italian immigrants arriving in the United States between 1895 and 1920. Like Mexicans today, Italian immigrants formed the largest single country-of-origin group in the early twentieth century.[21] Immigration from Italy and other poor nations in Southern and Eastern Europe inspired much of the policy debate that led up to the imposition of national origin quotas in the 1920s.

The strong contrast between Mexican and Vietnamese immigrants can be seen in Figure 19, which plots, in terms of the composite assimilation index, the progress made by four cohorts: those arriving in the late 1970s, late 1980s, late 1990s, and early 2000s. Newly arrived immigrants from both countries post very low,

Figure 19. Progress Among Mexican and Vietnamese Immigrants

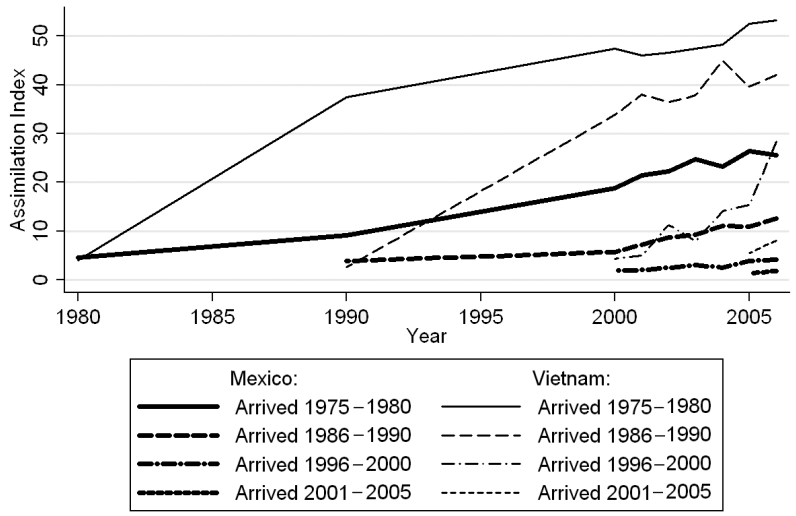
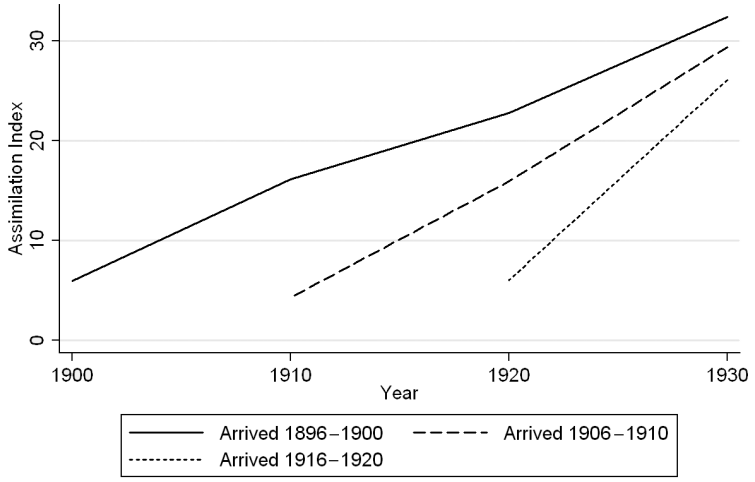


Figure 20. Assimilation of Italian Immigrants



and very similar, index values in the Census enumerations of 1980 and 1990. These cohorts' progress over the subsequent decade is far from uniform. The Vietnamese immigrants of the late 1970s attained a composite-index value of nearly 40 by 1990. Mexican immigrants of the same time period scarcely reached a value of 10 that same year, despite having started at a slightly higher level. An even stronger contrast can be seen among the arrivals of the late 1980s. By 2000, the Vietnamese immigrants in this cohort had once again neared an index value of 40, while their Mexican counterparts had posted very little improvement.

Cohorts arriving after 1995 have been more distinct upon arrival, with Vietnamese immigrants tending to appear more assimilated at the entry point. The pattern for Vietnamese immigrants of swifter assimilation continues, however.

It bears repeating at this point that the changes in the assimilation index viewed here could, in theory, reflect either of two mechanisms: Vietnamese immigrants may truly experience faster acclimation to American society over time; or they may be more likely to exit the country in the event that they assimilate poorly.[22]

How do these two polar cases compare with the experience of Italian immigrants of the early twentieth century? Figure 20 shows that Italians serve as something of an intermediate case. Italian immigrants of 1895–1900, and of 1905–10, are very poorly assimilated upon arrival, with index values quite similar to those of newly arrived Mexicans and Vietnamese in 1980 and 1990. Their progress in the subsequent decade is faster than that of recent Mexican immigrants but slower than that of recent Vietnamese, with index values rising to the upper teens for both cohorts. Italian immigrants arriving between 1916 and 1920, a period when the overall flow of immigrants to the United States had slackened considerably, show signs of rapid assimilation between 1920 and 1930, though still not as rapid as that exhibited by recent cohorts of Vietnamese immigrants.

If the long-run image of early-twentieth-century Italian immigrants is that they were successful in assimilating into American society, then a comparison of their early assimilation trajectory with the two recent cohorts now under analysis leads to some quick conclusions. Vietnamese immigrants, taken as a whole, are well on track to be considered successful. Mexican immigrants, by contrast, display much more worrisome patterns. If these two groups are indeed on different trajectories, is there any policy solution that might encourage stronger assimilation on the part of Mexicans? Put differently, if we could change one aspect of Mexican

Figure 21. Mexicans and Vietnamese: Economic Assimilation

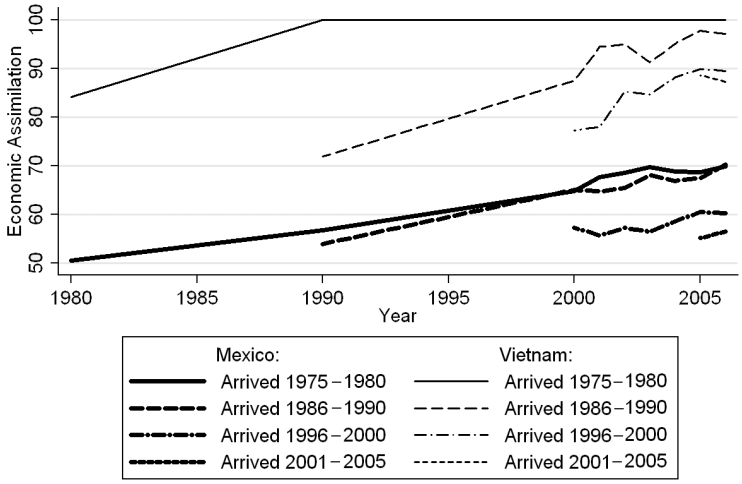
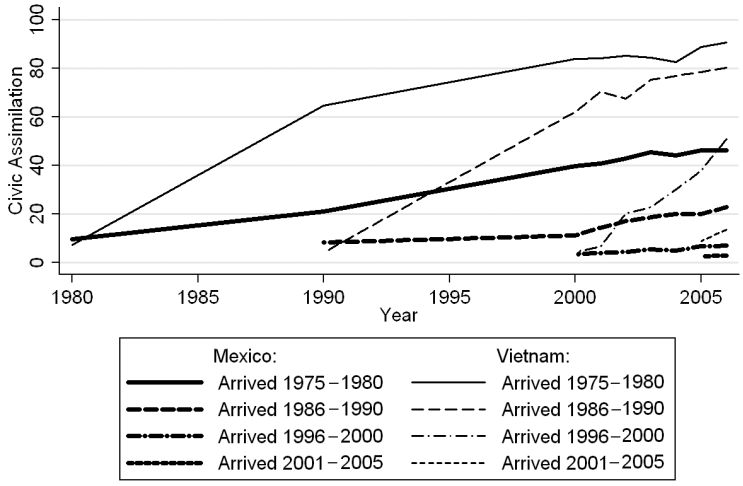


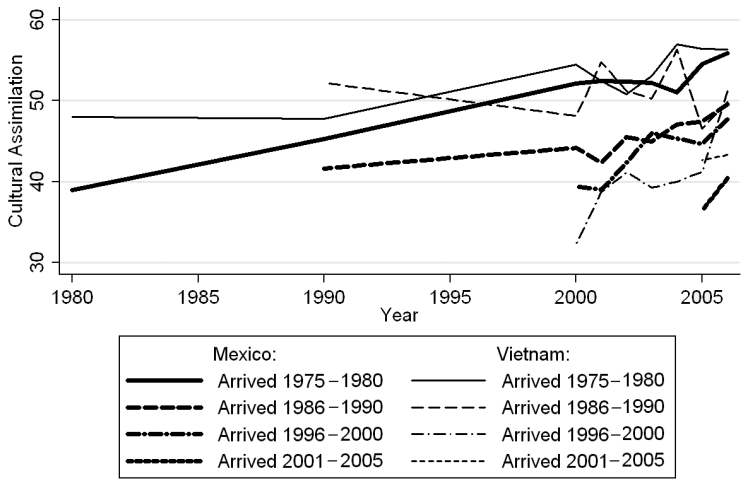
Figure 22. Mexicans and Vietnamese: Civic Assimilation



immigrants so as to make their experience more like that of the Vietnamese, what might that change be?

To think about these hypothetical questions, it is useful to examine the component assimilation indexes for the cohorts studied in Figure 19. Figure 21 begins the process by plotting the economic assimilation of members of the two groups, by arrival cohort, between 1980 and 2006. Here, a strong contrast between groups appears. Vietnamese immigrants, particularly those in the first arrival cohort, display a much greater degree of economic assimilation upon arrival. Economic assimilation for newly arrived Mexicans in 1980 is around 50, whereas for Vietnamese immigrants it is over 85. Not only do immigrants born in Vietnam begin at a higher economic level; they show stronger signs of economic assimilation over time. The sole exception to this pattern is among those arriving in the United States between 2001 and 2005; in this group, Vietnamese immigrants enjoy a clear starting advantage but appear to regress between 2005 and 2006, whereas there are signs of real progress among Mexican immigrants.

Figure 23. Mexicans and Vietnamese: Cultural Assimilation



This intriguing contrast will merit further observation as more data become available in future years.

Strong contrasts between groups appear once again in Figure 22, which examines trends in the civic assimilation index by country of origin and arrival cohort between 1980 and 2006. Immigrants from both nations start at low levels of assimilation in each cohort. Vietnamese immigrants arriving in the late 1970s, late 1980s, and late 1990s make considerable progress over their first full decade in the United States. Mexican-born immigrants make very little progress. This contrast does appear to extend to the cohorts arriving after 2000.

Why do Vietnamese immigrants start at a higher economic level, and make more rapid progress along both economic and civic dimensions? While a complete discussion of the differences could consume an entire monograph, several easy explanations bear brief discussion. Vietnam, at least in the early part of the time period under study, was a Communist country lacking normal diplomatic and trade relations with the United States. The set of individuals choosing to flee a Communist nation to settle in a nation with a free-market economy likely included a high proportion of entrepreneurs or skilled workers seeking better compensation. The costs of exiting Vietnam and making the trip to the United States were substantial, and the costs of returning to Vietnam after settling here would also have been great. Vietnamese immigrants had relatively strong incentives to achieve full membership in American society. As political refugees, many also benefited from favorable naturalization rules.

For Mexicans, the costs of moving to the United States from Mexico are not so substantial. While the United States is undoubtedly an attractive location for highly skilled and entrepreneurial Mexican-born workers, it also offers wages and living standards much higher than lower-skilled Mexican workers could expect in their own country. Those Mexicans who enter the country illegally stand no chance of progress along the lines of civic assimilation, and they surely face considerable barriers to significant economic advancement. Even if provided the opportunity to progress toward citizenship, Mexican immigrants' incentives to do so may be muted should they intend to return to their home country after a brief stay in the United States.

Do the contrasts in assimilation between Mexican and Vietnamese immigrants extend to the cultural dimension? Figure 23 shows that the answer, perhaps surprisingly, is no. Among cohorts arriving in the late 1970s or late 1980s, an immediate upward trend in cultural assimilation appears only for Mexican immigrants. A

possible explanation for this pattern concerns marriage patterns. Immigrants who are unmarried upon arrival, but marry a foreign-born spouse sometime over the next ten to 15 years, will witness a decline in cultural assimilation unless it is offset by a second factor, such as improvement in English-speaking skills. Mexican immigrants may be less likely to marry a foreign-born spouse simply because there exists a substantial population of native-born individuals of Mexican descent. A second possible explanation is language: Vietnamese is a tonal, Austro-Asiatic language; the differences between Vietnamese and English are much more profound than the differences between Spanish and English.

Note that for both cohorts and both groups, progress toward cultural assimilation appears after the first full decade, driven possibly by the aging of individuals brought to the United States as children.

As was found in previous analyses of cultural assimilation, patterns look very different for immigrants arriving after 1995. For both Mexican and Vietnamese immigrants of this vintage, there are signs of immediate progress toward cultural assimilation. Vietnamese immigrants in the 1995–2000 cohort begin at a lower level but make more rapid progress than Mexicans; Vietnamese immigrants in the 2001–05 cohort begin at a higher level but make less rapid progress than Mexicans in this cohort.

Why have the most recent cohorts experienced more immediate gains in cultural assimilation? Changes in marriage patterns may explain part of the phenomenon. By the late 1990s, both groups would have had access to a larger pool of potential spouses in the same ethnic group who were born in the United States. Attitudes toward intermarriage may have also changed within these groups, or among potential spouses for members of these groups. This promising sign of more rapid progress in the most recent cohorts of immigrants merits further study.

What have we learned from this analysis of individual groups? The greatest marks of distinction between immigrant groups that have assimilated rapidly and slowly, taking these groups as a guide, are along the economic and civic dimensions. As first intimated in Chapter 3, cultural assimilation does not appear to be a prerequisite for assimilation along the other two dimensions. This pattern implies that policies restricting bilingual education, or requiring that government business be conducted in English, will have little impact on economic or civic assimilation. Indeed, erecting linguistic barriers to civic participation might actually retard assimilation along noncultural lines. Some observers may believe that policies promoting cultural homogenization are desirable. What should be clear, however, is that such policies do not appear to promote civic or economic assimilation.

CHAPTER 5. THE NEXT GENERATION

Assimilation can be thought of as a process whereby foreign-born individuals come to resemble the native-born along cultural, civic, and economic lines. Assimilation can also be thought of as an intergenerational process, leading the children of immigrants to bear a stronger resemblance to the native-born population than their parents ever did. An evaluation of the assimilation process, then, should consider the progress made by immigrants' children as well as by first-generation immigrants themselves.

In principle, the same method used to evaluate the assimilation of first-generation immigrants could be applied to later-generation immigrants. The goal would be to measure the difficulty of distinguishing native-born citizens with foreign-born parents from those with native-born parents. In practice, this goal is difficult to attain using Census and American Community Survey data, since the Census has not collected information on parents' birthplace since the 1970 enumeration. Previous studies of second-generation immigrants have adopted two basic strategies for overcoming this data deficiency. The first is to switch to a different data source, the Current Population Survey (CPS), which has collected information on parental birthplace since the mid-1990s.[23] The second is to analyze Generation 1.5, the set of individuals born abroad but raised since childhood in the United States. This second strategy has the advantage that it can be pursued consistently from 1900 to 2006, while using the same data source as the preceding analysis of first-generation adults.

This section presents an alternative assimilation index for foreign-born adolescents and young adults who were brought to the United States as children. The subjects here are between the ages of 12 and 24 and arrived in the United States when they were at most five years old. Thus each individual analyzed here received formal education almost exclusively, if not exclusively, in this country. Individuals born abroad to American parents are excluded from the analysis. As in the standard assimilation index, the goal of this analysis is to determine how well a statistical model can distinguish the native-born from the foreign-born in a sample constructed to contain equal numbers of each.

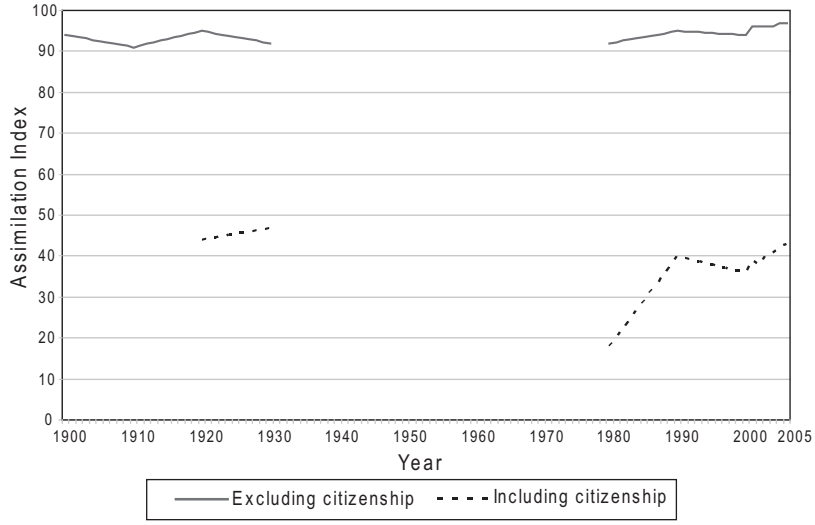
The decision to use a different set of factors to compute this alternative index reflects the fact that many factors considered in the study of adults, such as earnings and military service, are not appropriate for a study of adolescents and young adults. In this analysis, the following factors enter into the statistical algorithm used to predict nativity:

- Residence in group quarters. Group quarters are defined by the Census Bureau as any institutional dwelling, or a dwelling housing a large number (usually ten or more) of individuals unrelated to the household head. The Census distinguishes between those individuals residing in institutions and those residing in college dormitories or military housing. The primary purpose of including this variable is to discern whether there are differences in incarceration rates between native- and foreign-born adolescents and young adults. Group-quarters information is not available in the American Community Survey covering the years from 2000 to 2005.
- Ability to speak English
- School attendance
- Marital status (whether ever married)
- Childbearing (whether the individual is a parent)
- Labor-force participation
- Residence with own parents

The last five factors (school attendance, marital status, childbearing, labor-force participation, and residence with own parents) are permitted to influence the algorithm's computations in ways that vary by age. At age 15, for example, it is quite exceptional not to be enrolled in school. Among 24-year-olds, however, it is not at all uncommon. Similarly, the likelihood of being a parent, living with one's own parents, participating in the labor force, and having been married change as an individual ages from 12 to 24. The algorithm will use any differences in the patterns exhibited by native- and foreign-born adolescents to help distinguish between them.

Some calculations of the assimilation index for immigrants' offspring add citizenship as a factor; others do

Figure 24. The Assimilation of Generation 1.5



not. Rather than divide the distinguishing characteristics into economic, cultural, and civic subgroups, this analysis will effectively partition the factors into "naturalization," which basically mimics civic assimilation, and "all other," denoting a combination of economic and cultural factors. It should be noted that citizenship cannot be used as a distinguishing characteristic in 1900 and 1910 because the Census questionnaire did not collect information on the citizenship of individuals under the age of 21 in those years.

In 2006, the algorithm used to distinguish between adolescents and young adults born in this country or abroad takes advantage of the following patterns in the American Community Survey:

- Adolescents and young adults born abroad, but brought to the United States by age five, are:
    - Perfectly distinguishable from natives when they are not citizens of the United States.
    - Much less likely to speak English.
    - Less likely to reside in group quarters.
    - More likely to have been married at any particular age.
    - Less likely to be enrolled in school when between the ages of 17 and 22.
    - More likely to be enrolled in school at the ages of 23 or 24.
    - Less likely to be a parent.
    - More likely to live with their own parents between the ages of 18 and 24.
    - Less likely to participate in the labor force at ages 16 through 19, and at ages 22 through 24.

The distinctions between young immigrants and native-born adults are troubling in some respects but not others. The higher tendency to drop out of school is a frequently analyzed concern regarding children of immigrants from Mexico and its neighbors. The lack of English ability in a group of young immigrants who have spent a minimum of seven years in the United States also warrants concern. The lower rates of teen parenthood and higher rates of school enrollment at ages typically associated with postgraduate education are encouraging, but this latter pattern in particular may reflect the experiences of a very different subgroup of foreign-born but American-raised young adults.

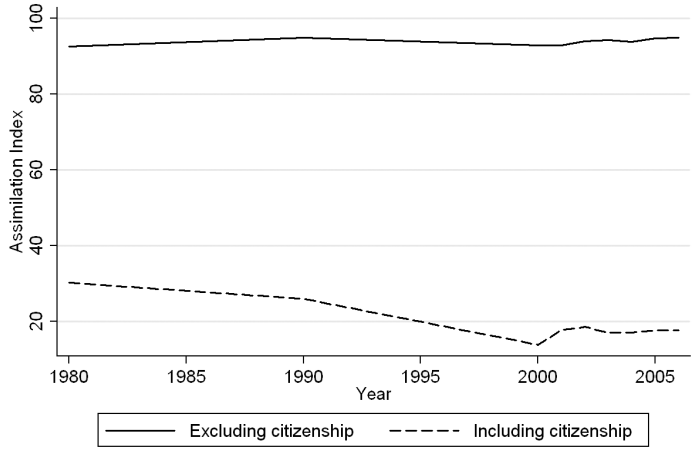
Perhaps the most important generalization to be made about the differences between native- and foreign-born adolescents and young adults is that they are relatively small. This conclusion is readily seen in Figure 24, which tracks the assimilation of Generation 1.5 using indexes that include and exclude citizenship as a distinguishing characteristic for the years 1900 through 2006. For this 106-year time period, the assimilation

index excluding citizenship is consistently high, never falling below a value of 90. Without incorporating information on citizenship, it remains difficult to distinguish individuals raised in the United States but born in different countries. When citizenship is used as a distinguishing variable, it becomes much easier to differentiate the two groups. Assimilation-index values including citizenship information range from the mid-40s in the early part of the twentieth century to a low of 18 in 1980, and have trended back upward into the 40s in recent years. While the assimilation index shows signs of increasing in recent years both among adult immigrants and their foreign-born children, the trend is more pronounced in Generation 1.5. This increase has been driven primarily by increased naturalization rates among individuals born abroad but raised in the United States.

Chapter 3 presented evidence that immigrants arriving between 1975 and 1990 showed few signs of cultural assimilation over their first decade or more of residence in the United States, followed by clear increases. One possible explanation for this pattern, offered above, is that the Generation 1.5 group caused the observed increase in cultural assimilation, as it aged into the analysis sample of individuals between the ages of 22 and 65. The evidence in Figure 24 supports this explanation. Individuals born abroad but raised in the United States have consistently high assimilation-index values in all dimensions except citizenship. Moreover, these individuals will age into the analysis sample of adult immigrants after a lag of one to two decades.

While assimilation is generally high in Generation 1.5, important variation exists within this group. Just as the analysis in Chapter 4 showed that first-generation Mexican immigrants display a rate of assimilation much slower than that of other current or historical groups, foreign-born children of Mexican immigrants are less assimilated than the foreign-born children of immigrants born in other countries.[25] In 2006, the Generation 1.5 assimilation index excluding the question of citizenship status was 95 for those born in Mexico and 99 for those born in other countries. The index including citizenship was 18 for those born in Mexico and 62 for those born in other countries. Figure 25 shows that the children of Mexican immigrants have had below-average assimilation-index values for the entire period since 1980. As is the case in the overall population, there is some evidence of modest increases in assimilation for Generation 1.5 Mexicans in recent years. As low as the Generation 1.5 indexes are for Mexican-born children of immigrants, they may be overstated to some extent. This is because certain characteristics that are less pronounced in the immigrant population at large are actually disproportionately common among young Mexican immigrants. Among girls aged 12–19 born in a country other than

Figure 25. The Assimilation of Generation 1.5: Mexico



the United States or Mexico but raised in the United States, roughly one in 100 lives with one or more of her biological children. This rate is lower than that found in the native-born population. Because of this pattern, the assimilation index treats this indicator of teen childbearing as a distinctively native-born characteristic. Mexican-born young immigrants, however, have a much higher rate of teen childbearing: nearly one in 20 Mexican-born girls aged 12–19 lives with one or more of her own children.

Similarly, young immigrants born outside of Mexico are less likely to be incarcerated or otherwise institutionalized than natives in the same age group. Among those aged 12–24, the rate in the immigrant population is 1.0%, while in the native-born population it is 1.4%. Thus, the assimilation index treats institutionalization as a distinctively native characteristic. Mexican immigrants, however, have an institutionalization rate of 1.8%.

These contrasts raise one potential concern with the method of computing the assimilation index: the index looks at average differences between immigrants and natives, which can be misleading when some immigrants are doing much better than, and others much worse than, natives. Fortunately, this type of concern is uncommon. Adjusting the assimilation index for Generation 1.5 Mexican immigrants to account for patterns that look not only different from those of natives but from those of other immigrants produces very little change. Because institutionalization and teenage childbearing are relatively uncommon, they contribute very little to the overall index.

Taken as a whole, immigrants to the United States show consistent evidence of acclimating to American society over time, and between generations. There is also some evidence to suggest that the assimilation process, particularly along cultural dimensions, has strengthened over the past few years. As seen in this brief analysis, immigrants born in Mexico and most immigrants groups born elsewhere prove to be on a separate trajectory.

CHAPTER 6. CONCLUSIONS

The goal of the assimilation-index project is to summarize quantitatively a wealth of information on the progress of immigrants in America. However, there is a danger associated with reducing the whole of immigrants' experiences to a single number. The composite assimilation index for 2006 is low by historical standards, but to conclude from this single number that American society has failed to integrate its newest members, or that these newest members show little interest in becoming full members of society, would be to ignore a great deal of additional information that points in the opposite direction.

Although the composite assimilation index is low, as are the component indexes of economic, civic, and cultural assimilation, they have remained more or less constant—with perhaps some signs of increasing—since 1990. Over this 16-year period, the immigrant population of the United States has doubled. Historical evidence shows such constancy to be a remarkable fact. In earlier periods of rapid immigration—the beginning of the twentieth century and the 1980s—the assimilation index declined. When the immigrant population contains a larger than usual proportion of recently arrived adults, assimilation tends to be low.

Two factors explain the stability of the index since 1990. First, in earlier periods, growth in the immigrant population was accompanied by a shift in the composition of the immigrant population toward immigrant groups more culturally and economically distinguishable from the native-born population. Since 1990, there has been no comparable shift in the composition of the immigrant population; natives of Asia and Latin America have dominated all recent immigration. Second, contemporary immigrants have made consistently more rapid progress after arriving. The immigrants of 1905–10 gained 10 points on the assimilation index between 1910 and 1920. By contrast, the immigrants of 1985–90 gained 15 points between 1990 and 2000, and the immigrants of 1995–2000 posted a 10-point gain in just six years. The nation's capacity to integrate new immigrants, by this measure, is as strong now as it ever has been.

In more than one respect, however, this progress has been uneven. Contemporary immigrants typically make strong economic progress and become naturalized citizens at steady rates. Their foreign-born children are close to indistinguishable from native-born children, except in the area of citizenship. At the same time, progress toward cultural assimilation is often slow. The notable exception to this pattern is immigrants arriving after 1995, who appear to make much more rapid cultural progress than their predecessors.

As the case studies of Chapter 4 make clear, immigrants originating in different nations have also had very different experiences. Mexican immigrants, who find themselves at the center of current policy debates, show evidence of assimilating very slowly in comparison with other contemporary immigrant groups as well as groups that found themselves at the crux of past immigration policy debates. Mexican immigrants are distinct in their relative lack of economic progress and in their low rates of naturalization and civic assimilation. These difficulties may reflect the tendency of Mexican immigrants to live and work in this country illegally; or the influx of large numbers of unskilled workers; or the decision of many of them to remain in the United States for a relatively short period of time. The young children of Mexican-born immigrants also appear more distinct not only from the native-born but from the children of other immigrant groups.

Mexican immigrants are less distinct from the remainder of the foreign-born population in terms of cultural assimilation. A relative lack of cultural progress is shared by many country-of-origin groups arriving more than a decade ago—even groups such as the Vietnamese that have made rapid progress along other dimensions. Moreover, the shift toward more rapid cultural assimilation seen in the broader immigrant population is also evident in recent cohorts of Mexican immigrants.

The assimilation index by itself cannot settle immigration policy debates. It does have the potential, however, to support certain arguments made in those

debates and undercut others. For all its potential to answer questions, the evidence in this report raises many questions as well, the answers to which will be revealed only by persistent study. Will the changes witnessed in the past few years—more rapid cultural assimilation, increases in naturalization rates for those born abroad but raised in the United States—persist? Will ongoing immigration policy debates themselves have an impact on immigrants' behavior? Will important economic events of the past year—the slowdown in the housing and construction markets, the continued decline of the dollar against other currencies—reduce the flow of migrants to the United States and alter their activities once here? The continued tracking of immigrant progress in the United States will thus have two sets of benefits as time goes on: making further contributions to policy debates that are sure to endure; and providing answers to new sets of questions that appear along the way.

Appendix

This section begins with an intuitive description of the procedure used to compute the assimilation index and is followed by a more technical discussion of the statistical model used to distinguish the native-born from the foreign-born. The process used to generate the assimilation index can be divided into four steps.

Step 1: Build a Model That Predicts Immigrant Status

Imagine having access to a wide array of information on the social and economic characteristics of a group of people but no information on their place of birth. On the basis of social and economic information, it might be possible for a well-informed person to guess which individuals in the group were born in the United States and which ones were born abroad. Knowing that an individual has difficulty speaking English, for example, or that he or she works as an unskilled laborer, may be sufficient to infer that a person was born abroad.

The assimilation index is a measure of how easy it is to infer an individual's place of birth, whether domestic or abroad, on the basis of common social and economic data. The more difficult it is to tell immigrants and natives apart, the higher the index is. Computation of the index begins with data on a representative sample of the American population, evenly split between native- and foreign-born individuals who are at least 25 but no more than 65 years of age. The data source and exact set of variables used are described below.

Intuitively, the index is computed by guessing which individuals in the data set are native-born and which ones are foreign-born and seeing what proportion of the guesses are correct. The first step in the process is coming up with a method for making guesses. One could imagine many possible rules for guessing whether an individual is an immigrant on the basis of social and economic information; in practice, the index begins by employing a statistical procedure guaranteed to arrive at the most accurate guesses possible. The procedure is known as a probit regression. This procedure automatically identifies the personal characteristics most strongly associated with immigrant status, as well as those with little relevance. With this statistical procedure at the heart of the index, there is no need to subjectively assign varying weights to particular characteristics, such as income or marital status. The use of this procedure distinguishes the index from many other popular measures, such as indexes used to rank colleges.

As discussed in Chapter 2, the statistical model underlying the assimilation index considers three sets of factors: economic, cultural, and civic. The model considering all three sets produces the composite assimilation index. In addition to the composite index, this report analyzes three component assimilation indexes, which are derived from statistical models that analyze only one of the three sets of factors.

Step 2: Use the Model to Make Educated Guesses

Once the model is constructed, information on actual immigrant status is temporarily eliminated from the data set. Having removed this information, the model is then used to make educated guesses, or predictions, regarding which individuals are, in fact, foreign-born. The predictions take the form of probabilities. A predicted value of zero indicates that there is virtually no chance that the individual in question is foreign-born. A predicted value close to 100% indicates that an individual is almost certainly foreign-born.[26]

Complete assimilation is defined as a scenario in which it is impossible to distinguish immigrants from natives; that is, when the two groups are on average identical along all the dimensions incorporated into the probit model. In such a scenario, the model will assign each individual in the sample a 50% chance of being an immigrant. The educated guess of which individuals are immigrants would be, in this case, no more accurate than a random coin flip. At the other extreme, when the model can predict perfectly which individuals are native- and foreign-born, immigrants will receive a predicted probability of 100% and natives a predicted probability of zero.

Table I. Probability Calculations Based on the Probit Regression Model			
	Case 1	Case 2	Case 3
Individual is a U.S. Citizen	No	Yes	Yes
Individual is married to a native-born American	No	No	Yes
Individual speaks English	No	Yes	Yes
Individual is a veteran of the U.S. military	No	No	Yes
Result: Probability that individual is foreign-born	100%	94%	8%

Table 1 presents educated guesses of immigrant status for three hypothetical individuals.[27] While the sets of characteristics of each individual are contrived, and the set of characteristics included in Table 1 is far smaller than the set of characteristics incorporated in the probit model, the predicted probabilities are authentic and computed using the same formula used to determine the assimilation index in 2006. Case 1 concerns an individual who is not a U.S. citizen, is not married to a native-born American, does not speak English, and has not served in the U.S. military. The algorithm derived from the probit regression is used to predict this individual's nativity.

In this case, the model is able to predict with 100% certainty that the individual is foreign-born. Residents of the United States who are not citizens, are married to foreigners, do not speak English, and are not veterans of the U.S. military are always foreign-born. The algorithm derived from the probit model makes this guess about every individual with this particular set of characteristics.

Case 2 is a more ambiguous scenario. The individual in question is a U.S. citizen and speaks English. However, this individual has not served in the military and is not married to a native-born American, which might indicate that the individual is married to a foreign-born spouse or that the individual is not married at all. While many foreign-born naturalized citizens undoubtedly fit this description, a number of native-born citizens would as well. The prediction offered by the model indicates that this scenario is less ambiguous than it might at first appear. Based on comparisons with the nativity of other individuals with similar characteristics, the model offers a 94% probability that the individual is foreign-born. In a sample evenly split between native- and foreign-born residents, nearly 19 of every 20 English-speaking citizens with neither veteran service nor a native-born spouse are, in fact, immigrants. The best guess for this particular individual, then, is that he or she is an immigrant.

Case 3 concerns a person who is a U.S. citizen, married to a native-born American, fluent in English, and with past or present service in the U.S. Armed Forces. While there are some foreign-born citizens who fit this description, the overwhelming majority of persons in this category are, in fact, native-born. The model thus indicates that the likelihood of such an individual being an immigrant is a relatively remote 8%. The best guess in this case is that the individual is native-born.

Step 3: Determine the Accuracy of the Guesses

Having built a model in Step 1, and having used that model to make educated guesses in Step 2, the next step is to determine just how accurate the guesses are. For this step, the actual information on birthplace is returned to the data set, and the actual information is compared with the educated guesses made using the algorithm derived from the probit regression model. If the guesses are right 100% of the time, the model can perfectly distinguish immigrants from natives, which will lead to an assimilation index of zero. If the guesses are right only half the time—that is, if the algorithm performed no better than random guessing—then it is impossible to distinguish immigrants from natives and the assimilation index will be 100%.

The composite assimilation index will always make more accurate guesses than any of the component indexes—statistically, guesses made on the basis of more information are always more accurate. Thus the

summary measure of accuracy for the composite index will always be superior to the measure of accuracy for the individual components.

One useful summary measure of the model's accuracy is the average predicted probability among all immigrants in the data set. For example, suppose that the sample contains 100 foreign-born individuals, each of whom has a predicted probability of 100%. In this case, the model is perfectly accurate, as reflected by the group's average predicted probability of 100%. The assimilation index will equal zero. As another example, suppose that there are 100 foreign-born individuals in the sample, and the model assigned a probability of 80% to half of them and 50% to the other. In this case, the model was not perfectly accurate, and the group's average predicted probability is 65%. The model still performed better than random guessing, however, so the assimilation index will be less than 100%.
The average predicted probability can be computed for all immigrants, or for subsets of the immigrant population divided along lines of country of birth, region of residence in the United States, number of years since immigration, or other factors. In theory, averages can also be computed for individual persons.

Step 4: Convert the Average Accuracy Measure into an Index

The final step in computing the assimilation index entails rescaling the average predictions so that high values indicate more assimilation and low values less. In the hypothetical example in which all foreign-born individuals are predicted to be immigrants with probability 100%, the assimilation index takes on a value of zero. Immigrants who can be perfectly identified as such are defined as completely unassimilated. Conversely, a group of immigrants who cannot be distinguished from natives is defined as completely assimilated. The point of no distinction occurs when the probability assigned by the model equals the probability obtained through a random coin flip, or 50%.

Data

For the years from 2000 to 2006, the composite assimilation index and its three components are computed using the Census Bureau's American Community Survey (ACS). The index is also computed for 1990, 1980, 1930, 1920, 1910, and 1900 using Public Use Microdata Samples of the decennial census. The index is computed by analyzing the characteristics of males and females between the ages of 22 and 65.[28] An alternative version of the index that analyzes males and females age 12 to 24 is discussed in Chapter 5.

A characteristic is incorporated into the predictive model according to the following guidelines: it must measure a factor that potentially distinguishes immigrants from natives; it is commonly observed in the ACS and Census data; and it has inspired at least some interest in previous studies of immigration or current policy debates. This last guideline excludes certain indicators, such as the age of children in an immigrant's household. While this indicator could distinguish immigrants from natives, previous literature has not focused on this factor as an indicator of assimilation, and no current policy debates hinge on it. The division of indicators into economic, cultural, and civic categories is largely intuitive; there are several examples of indicators, such as home ownership, that could fall into multiple categories.

As noted in Chapter 1, not all these characteristics are available in Census data from 1900, 1910, 1920, and 1930. As a consequence, the probit model's capacity to predict immigrant status is slightly lower in these earlier years. When comparing assimilation in the 1980–2006 period with that of the 1900–1930 period, the set of characteristics available in the later period but not the earlier period are excluded from the predictive model. This exclusion has only a modest impact on the assimilation-index computations for the most recent years.

The Predictive Regression Model

A probit regression model is based on the following conceptual model:

$$\Pr(Y=1) = \Pr(X_1\beta_1 + X_2\beta_2 + \ldots + X_n\beta_n > \varepsilon).$$

In this context, the variable Y is an indicator set equal to 1 if an individual is an immigrant, and 0 otherwise.

The variables X_1 through X_n are measures included in the predictive mode—intermarriage, ability to speak English, and so forth. The error term, ε, is presumed to be drawn from a standard normal distribution: mean zero, standard deviation one. The regression coefficients β_1 through β_n are chosen in a manner that leads the model to make the most plausible predictions possible. For individuals who are immigrants, the goal is to make the sum $X_1\beta_1 + X_2\beta_2 + ... + X_n\beta_n$ as large as possible. For individuals who are not immigrants, the goal is to make this sum as small as possible. Probit models are estimated using the maximum likelihood method.

Probit regression models are not the only statistical method appropriate for predicting a binary outcome such as whether an individual is an immigrant. The simplest technique is to use an ordinary least squares regression model, much like what one would use to analyze income or other continuous variables. This sort of model, often referred to as a linear probability model, is inappropriate for this exercise since it relies heavily on predicted probabilities from the model. A primary drawback of linear probability models is that they can produce predicted probabilities that are less than zero or greater than 100%. A second alternative technique, which lacks this unattractive feature, is the logit model. In practice, there is very little difference between assimilation indexes based on probit models and those based on logit models.

The sum $X_1\beta_1 + X_2\beta_2 + ... + X_n\beta_n$ can be translated into a probability by using the well-known properties of standard normal distributions:

if
$X_1\beta_1+X_2\beta_2+...+X_n\beta_n = 0$, then P(individual is immigrant) = 50%
if
$X_1\beta_1+X_2\beta_2+...+X_n\beta_n=1$, then P(individual is immigrant) = 84%
if
$X_1\beta_1+X_2\beta_2+...+X_n\beta_n=-1$, then P(individual is immigrant) = 16%
if
$X_1\beta_1+X_2\beta_2+...+X_n\beta_n=2$, then P(individual is immigrant) = 98%
and so forth.

The probit models are estimated using individual-level data from the U.S. Census enumerations of 1900, 1910, 1920, 1930, 1980, and 1990, as well as the American Community Survey samples of 2000 through 2006. Each data set is made available by the Integrated Public Use Microdata Sample (IPUMS) project at the University of Minnesota. The data sets are intended to be representative of the entire population of the United States, regardless of nativity or immigration status. It is relatively well-known that the Census suffers from an undercount problem, which is thought to be especially severe among minority populations and among illegal immigrants. To counteract this problem, the IPUMS project makes a series of sampling weights available. The sampling weights allow researchers to attach greater importance to individuals in the sample who are likely to share characteristics with individuals who are undercounted. These weights are employed when estimating the probit equations and when aggregating the predicted probabilities that they generate.

Table 2 presents the probit coefficients estimated in the predictive equations for 1910, 1980, and 2006. Separate probit models are estimated each year in order to capture the potentially changing predictive power of certain characteristics over time. For each year, separate coefficients are estimated for males and females in acknowledgment of the fact that female labor-force participation, military service, and marriage patterns may differ significantly from those of males. In each model, positive coefficients indicate variables positively associated with immigrant status and vice versa. Across years, the results are generally quite comparable. In each year, the impact of noncitizen status cannot be directly estimated, because knowledge that an individual is not a citizen automatically implies that the individual is foreign-born. The predicted likelihood of being an immigrant is set equal to 100% for those individuals who are not citizens.

Marriage to an immigrant spouse is highly indicative of immigrant status, with coefficients above 2 in all years. The inability to speak English is another strong predictor, with coefficients between 1.5 and 2. Home ownership is less common among immigrants, though the association has strengthened over time as the overall home-own-

Table 2. Probit Coefficients

Predictor variable	1910 coefficient	1980 coefficient	2006 coefficient
Not a US Citizen	*	*	*
Spouse is an immigrant	2.19	2.20	2.36
Owns residence	-0.087	-0.241	-0.278
Number of own children living in same household	0.026	-0.002ns	0.042
Does not speak English	1.77	1.51	1.94
Married, spouse absent male/female	1.19/0.784	1.12/0.944	1.51/1.23
Separated male/female	---	0.507/0.354	0.830/0.740
Divorced male/female	0.567/0.476	0.313/0.242	0.463/0.408
Widowed male/female	0.775/0.919	0.494/0.355	0.580/0.562
Never married male/female	0.819/0.738	0.441/0.300	0.683/0.523
Occupation score male/female	0.021/0.008	0.008/0.002	0.001ns/-0.003
Veteran male/female	---	-0.558/-0.175	-0.786/-0.537
Earned income (thousands) male/female	---	0.002/0.001	-0.002/-0.001
Unemployed male/female	---	-0.023ns/0.006ns	-0.394/-0.237
Out of labor force male/female	0.190/0.046ns	0.037ns/-0.015ns	-0.560/-0.315
1-4 years of education	---	**	0.452
5-8 years of education	---	**	0.201
9 years of education	---	-0.481	-0.248
10 years of education	---	-0.560	-0.712
11 years of education	---	-0.744	-0.844
12 years of education, but no HS diploma	---	-0.647	-0.333
HS graduate or GED	---	-0.640	-0.733
Some college, no degree	---	**	-0.789
Associate degree	---	**	-0.694
Bachelor's degree	---	**	-0.584
Master's degree	---	**	-0.517
Professional degree	---	**	-0.366
Doctorate	---	**	-0.163
Constant term male/female	-1.01/-0.979	0.139/0.306	0.135/0.136

Note: all reported coefficients are statistically significant at the 1% level except those marked ^{ns}.
*All native-born individuals are U.S. citizens. Thus, any non-U.S. citizens can be perfectly identified as immigrants and receive a predicted probability of 100%.
**The 1980 Census used a more exhaustive set of educational-attainment variables relative to 1990, 2000, and the ACS. Complete results are available upon request.

ership rate has increased. Immigrants are associated with larger numbers of children in a household in 1910 and 2006, and with marital statuses other than married with spouse present. With categorical variables such as marital status, there is always one category omitted from the regression: this becomes the baseline category with which all other categories are compared.

Surprisingly, immigrants are associated with higher-paying occupations in 1910 and 1980; the association is very weak for males in 2006 and negative for females. In 1910, a male physician otherwise identical to a male farm laborer with a predicted immigrant probability of 50% would have a predicted immigrant probability of 93%. The declining importance of occupation over

time is a testament to the changing economic position of immigrants in society.

While the probit coefficients suggest that immigrants on the whole have descended the economic ladder, there is also evidence that their attachment to the labor force has strengthened over time. Immigrants were more likely to be out of the labor force in 1910 than in 2006.

Among the characteristics not available in the 1910 Census is military service, which is negatively associated with being an immigrant. The association between educational attainment and the probability of being an immigrant is both positive and negative. When comparing two nearly identical individuals, one with an eighth-grade education and the other with a high school diploma, the more educated individual is more likely to be native-born. When comparing an individual with a high school diploma with an otherwise identical individual with a Ph.D., however, the less educated individual is more likely to be native-born. In other words, immigrants are most underrepresented at intermediate levels of education.

As a final note, observe that when male and female coefficients are allowed to differ from each other, the female coefficients are almost always closer to zero. Thus, in a sense, females are consistently more assimilated than males. It is more difficult to distinguish foreign- from native-born females than to distinguish foreign- from native-born males.

These coefficients can be used to illustrate the computation of predicted probabilities at the individual level. Suppose that in 2006, we observe a male high school graduate with no military service who works as a cashier earning $16,000 per year, and who speaks English, has never been married, has no children, is a U.S. citizen, and rents a unit in an apartment building. What is the likelihood that such an individual is foreign-born? First, we use the coefficients in Table 2 to compute an index number for this individual:

0.135 (constant term)
- 0.333 (HS graduate)
+ 0.683 (never married)
- 0.002*16 (coefficient on income in thousands*income in thousands)
+ 0.001*18 (coefficient on occupation score*occupation score for a cashier)
= 0.471

The probability that this individual is an immigrant is equal to the probability of observing a draw from a standard normal distribution that is below 0.471. This is equal to 68.1%. In a sample split evenly between immigrants and natives, about two of every three individuals matching these characteristics are foreign-born.

Suppose we take another individual identical to the first, except that he is married to and lives with a foreign-born wife. All other characteristics remain the same. The index number becomes:

0.135 (constant term)
- 0.333 (HS graduate)
+ 2.36 (spouse is foreign-born)
- 0.001*16 (coefficient on income in thousands*income in thousands)
- 0.002*18 (coefficient on occupation score* occupation score for a cashier)
= 2.148

The probability of observing a draw from a standard normal distribution below 2.148 is 98.4%. In a sample evenly divided between immigrants and natives, we expect about 49 of every 50 individuals meeting this description to be foreign-born.

Suppose we observe a similar individual in 1910 rather than 2006. The index number calculation uses the 1910 coefficients instead of the 2006 coefficients and omits those variables that are unobserved in the 1910 Census:

- 1.01 (constant term)
+ 2.19 (spouse is foreign-born)
+ 0.008*18 (coefficient on occupation score*occupation score for a cashier)
= 1.558

This index number translates into a 94% probability of being an immigrant. The lack of relevant data in 1910, coupled with altered patterns of differences between the native- and foreign-born in that earlier era, leads us to be a bit less certain that the individual we have observed is an immigrant.

From Predictions to Index

The probit regression models are used to compute predicted probabilities for every individual in the sample. Samples generally consist of hundreds of thousands of individual observations. Computing the assimilation index for immigrants as a whole or for specific groups of immigrants begins by finding the average, or mean, predicted probability for sample individuals who belong to the group in question. To compute an index for all immigrants, the predicted values of all immigrants in the sample are averaged. To compute an index for Mexican immigrants who arrived in the United States within the last five years, for example, the predicted values of individuals who meet that description are averaged. The averages are always weighted using sample weights made available by the IPUMS project.

The averages are then converted into an index value by placing them on a scale between (a) the value that would be expected if the model could not distinguish immigrants from natives; and (b) the value that would be expected if the model could perfectly distinguish immigrants from natives. The conversion uses the following formula:

Assimilation index = 2 × (100 – mean probability)

When the mean predicted probability is 100%, that is, when all immigrants are identified as such in the probit model with a probability of 100%, the assimilation index equals zero. A probit model that was completely ineffective in associating personal characteristics with immigrant status would assign all individuals a predicted probability of being an immigrant equal to 50%, the proportion of immigrants in the sample. In such a scenario, the index will equal 2 ×(100 – 50) = 100%.

There are occasions when the assimilation-index formula returns a value greater than 100%. This is most likely to occur when considering the economic assimilation of immigrant groups from developed nations. It occurs when individuals are overrepresented in the educational and occupational categories that are more commonly associated with natives rather than immigrants. In this type of scenario, the assimilation index is reset to its theoretical maximum of 100%.

Component Indexes

To compute the component indexes, probit regressions are recomputed, restricting the set of predictor variables to those associated with economic, civic, or cultural assimilation. Removing variables from the predictive model always has the impact of making the predictions less accurate. This is why the component assimilation indexes are always greater than the corresponding composite index. The civic assimilation index, which is based on only two variables, tends to come closest to the composite index because citizenship and military service are very strongly associated with native-born status. The cultural assimilation index includes a broader array of variables, but in many cases these variables are weaker predictors of immigrant status than citizenship and military service. Only groups with very low intermarriage rates, or low rates of speaking English, will have civic assimilation values higher than cultural assimilation values. Economic assimilation relies on educational attainment, occupation score, income, home ownership, and labor-force participation. As is shown above, the relationship between these factors and immigrant status is weak in recent data, and the association between educational attainment and immigrant status is complex. This explains the tendency of economic assimilation to approach 100% in many cases.

Caveats

The assimilation index and its components rely on publicly released data from the U.S. Census Bureau, both to build the probit model and to provide a set of individuals for whom predicted probabilities can be computed. While Census data sets provide clear advantages, including relatively large samples, relevant variables, and consistent measurement over a time span exceeding a century, there are important limita-

tions to the data. The Census Bureau intends each data set to be representative of the population of the United States, at least when proper statistical weighting techniques are employed, but there remain concerns that certain segments of the population are "undercounted" in each Census, primarily because they refuse to cooperate with survey enumerators. It is reasonable to believe that the undercounted population includes a disproportionate number of immigrants, particularly those who fear that their participation in the survey will lead to some form of government reprisal. In reality, the Census Bureau is statutorily prohibited from sharing information with any other government agency. Moreover, the Census does not inquire whether survey respondents are legal or illegal residents of the United States. However, it may be difficult to convince an illegal immigrant of these protections.

In part to address undercount concerns, the Census Bureau supplies "weights" with each survey. The weights attempt to correct any differences between the sample of individuals who complete the survey and the underlying population by attaching greater emphasis to groups with low response rates, and less emphasis to those with high response rates. If, for example, non-English-speaking Mexican natives living in Los Angeles were less likely to fill out a survey form, the Census Bureau will assign higher weights to those non-English-speaking Mexicans living in Los Angeles who did participate. In this analysis, Census Bureau weights are employed in the construction of the predictive probit model and the computation of average predicted probabilities for all immigrants and for groups of immigrants.

If undercounted immigrants are less assimilated than those who appear in Census enumerations, and if the Census Bureau's efforts to correct the undercount by supplying sample weights are insufficient, the "true" index of assimilation will be lower than the reported index. It is more difficult to assess the impact of undercounting on trends in assimilation. By some reports, the Census Bureau has reduced the magnitude of undercounting over time.[29] If so, the trend in reported assimilation may appear too negative. While it is ultimately difficult to make definitive judgments regarding the impact of undercounting on the assimilation index, the problem is probably not sufficiently large to produce a significant effect. For example, the Census Bureau estimated that 5% of the Hispanic population was undercounted in the 1990 Census.[30] The reported downward trend in undercounting implies that the problem was even less severe in 2000.

A second caveat relates to the statistical properties of the assimilation index. The index and its components are estimates based on a sample of the U.S. population and, as such, are subject to sampling error. This error will be relatively inconsequential when describing the entire population of foreign-born individuals in the United States but will be more important when describing smaller groups, such as the set of immigrants from a relatively small foreign country or from a small metropolitan area. Small fluctuations over time, or small differences between groups, should not be regarded as having much significance.

Finally, it should be noted that the index and its components are based on information that individuals themselves report to the Census Bureau. The Census Bureau makes few, if any, efforts to verify the accuracy of this information. Respondents may falsely state, for example, that they are U.S. citizens, or exaggerate their ability to speak English. The full extent of misreporting in the Census is not clear. The index and its components are computed under the assumption that all information reported to the Census Bureau is truthful.

Assimilation-Index Values by Birthplace, 2006

Birthplace	Composite	Economic	Cultural	Civic
Afghanistan	36	100	48	68
Albania	20	95	43	42
Antigua-Barbuda	60	100	94	70
Argentina	37	100	76	40
Armenia	31	100	47	60
Australia	33	100	100	27
Austria	74	100	100	59
Azerbaijan	31	100	61	57
Azores	54	90	82	63
Bahamas	47	100	100	48
Bangladesh	18	90	38	50
Barbados	55	98	84	67
Belgium	65	100	100	52
Belize	53	96	93	55
Bolivia	33	100	72	42
Bosnia	21	100	43	43
Brazil	21	95	70	24
Bulgaria	18	98	60	31
Burma (Myanmar)	33	100	56	56
Byelorussia	36	100	54	61
Cambodia (Kampuchea)	34	89	55	61
Cameroon	16	99	71	25
Canada	53	100	100	43
Cape Verde	35	87	68	55
Chile	42	100	79	48
China	21	90	40	47
Colombia	35	100	68	45
Costa Rica	36	93	86	37
Croatia	42	100	68	64
Cuba	43	100	65	53
Czech Republic	40	100	90	41
Czechoslovakia	75	100	100	69
Denmark	44	100	100	37
Dominica	30	83	65	46
Dominican Republic	34	84	71	48
Ecuador	28	88	63	38
Egypt	39	100	57	62
El Salvador	18	71	55	29
England	63	100	100	52
Eritrea	29	87	65	53
Ethiopia	30	98	70	42

Assimilation-Index Values by Birthplace, 2006 contintued

Birthplace	Composite	Economic	Cultural	Civic
Fiji	32	98	50	64
Finland	46	100	100	41
France	53	100	100	46
Germany	87	100	100	69
Ghana	27	95	76	40
Greece	60	96	79	76
Grenada	46	100	76	62
Guatemala	14	63	55	22
Guyana	44	100	65	66
Haiti	31	96	65	48
Honduras	15	70	61	22
Hong Kong	51	100	64	76
Hungary	63	100	93	69
India	16	96	39	40
Indonesia	24	100	73	34
Iran	49	100	66	69
Iraq	35	95	51	63
Ireland	60	100	100	58
Israel/Palestine	55	100	80	64
Italy	67	100	93	68
Jamaica	47	100	85	57
Japan	35	100	91	29
Jordan	45	100	66	63
Kenya	27	100	83	36
Korea	41	100	64	55
Kuwait	38	100	75	50
Laos	29	93	48	63
Latvia	50	100	80	58
Lebanon	46	100	63	68
Liberia	23	98	74	34
Lithuania	33	100	75	42
Macedonia	34	100	49	65
Malaysia	30	100	71	40
Mexico	13	66	51	22
Moldavia	24	99	41	46
Morocco	34	93	71	50
Nepal	8	88	57	14
Netherlands	58	100	100	46
New Zealand	29	100	100	25
Nicaragua	31	94	65	43

Assimilation-Index Values by Birthplace, 2006 contintued

Birthplace	Composite	Economic	Cultural	Civic
Nigeria	34	100	68	49
Norway	50	100	100	40
Other United Kingdom	37	100	100	34
Pakistan	28	97	46	56
Panama	80	100	100	76
Peru	35	100	74	43
Philippines	49	100	72	65
Poland	36	100	60	55
Portugal	44	88	67	63
Romania	39	100	63	63
Russia	33	100	63	54
Scotland	67	100	100	54
Sierra Leone	25	93	71	39
Singapore	41	100	82	43
Slovakia	40	100	81	49
Somalia	18	70	53	34
South Africa	44	100	83	47
Spain	50	100	100	44
Sri Lanka (Ceylon)	20	100	53	33
St. Lucia	37	93	88	50
St. Vincent	45	95	88	53
Sudan	20	93	70	26
Sweden	48	100	100	38
Switerland	51	100	100	42
Syria	38	90	56	62
Taiwan	41	100	60	68
Thailand	49	100	91	55
Tonga	21	100	56	35
Trinidad and Tobago	46	100	84	55
Turkey	39	95	78	46
Uganda	26	100	69	43
Ukraine	28	100	51	53
Uruguay	23	89	60	29
Uzbekistan	25	96	50	55
Venezuela	28	100	77	28
Vietnam	41	99	53	72
Yemen Arab Republic (North)	17	72	48	42
Yugoslavia	30	98	56	52

Note: Only birthplace groups with 100 or more representatives in the 2006 American Community Survey sample used to compute the assimilation index are included in this table.

Assimilation-Index Values by Metropolitan Area, 2006

Metropolitan Area	Composite	Economic	Cultural	Civic
Akron, OH	47	100	84	46
Albany-Schenectady-Troy, NY	34	94	68	44
Albuquerque, NM	28	79	68	30
Allentown-Bethlehem-Easton, PA/NJ	36	97	69	49
Amarillo, TX	14	81	69	22
Anchorage, AK	51	99	78	57
Ann Arbor, MI	26	97	73	31
Atlanta, GA	22	90	62	31
Atlantic City, NJ	36	96	78	47
Augusta-Aiken, GA-SC	50	95	89	52
Austin, TX	22	78	60	27
Bakersfield, CA	18	70	49	29
Baltimore, MD	36	97	72	47
Baton Rouge, LA	30	87	63	39
Beaumont-Port Arthur-Orange, TX	25	78	60	35
Bellingham, WA	54	99	88	59
Bergen-Passaic, NJ	32	97	58	51
Birmingham, AL	19	78	66	23
Boise City, ID	27	80	66	36
Boston, MA	30	91	67	43
Boulder-Longmont, CO	17	78	63	24
Brazoria, TX	23	85	55	38
Bridgeport, CT	29	95	62	42
Brockton, MA	43	100	70	57
Brownsville-Harlingen-San Benito, TX	21	73	56	28
Bryan-College Station, TX	24	74	73	30
Buffalo-Niagara Falls, NY	40	100	83	48
Champaign-Urbana-Rantoul, IL	17	87	71	22
Charleston-North Charleston, SC	35	87	90	40
Charlotte-Gastonia-Rock Hill, SC	19	82	55	29
Chicago-Lake County, IL	27	90	55	43
Chico, CA	32	81	73	44
Cincinnati, OH/KY/IN	33	95	72	43
Cleveland, OH	47	100	73	57
Colorado Springs, CO	59	96	100	51
Columbia, SC	43	93	79	46
Columbus, OH	21	91	62	33
Corpus Christi, TX	45	84	89	46
Dallas, TX	17	73	52	26
Danbury, CT	29	98	61	38
Dayton-Springfield, OH	52	100	84	56

Assimilation-Index Values by Metropolitan Area, 2006 contintued

Metropolitan Area	Composite	Economic	Cultural	Civic
Daytona Beach, FL	40	100	77	50
Denver, CO	24	84	63	30
Des Moines, IA	16	83	53	25
Detroit, MI	33	98	60	50
Dutchess County, NY	45	92	84	50
El Paso, TX	30	82	60	41
Eugene-Springfield, OR	32	84	78	34
Fayetteville-Springdale, AR	20	69	61	26
Fayetteville, NC	78	100	100	65
Fort Lauderdale-Hollywood-Pompano Beach, FL	36	100	71	46
Fort Myers-Cape Coral, FL	25	88	61	32
Fort Pierce, FL	26	94	66	36
Fort Wayne, IN	36	85	68	37
Fort Worth-Arlington, TX	20	81	52	33
Fresno, CA	21	68	53	32
Gainesville, FL	34	93	81	43
Galveston-Texas City, TX	33	90	69	43
Gary-Hammond-East Chicago, IN	32	93	62	48
Grand Rapids, MI	30	87	65	40
Greeley, CO	17	78	56	31
Greensboro-Winston Salem-High Point, NC	18	72	56	23
Greenville-Spartanburg-Anderson, SC	30	86	65	37
Harrisburg-Lebanon-Carlisle, PA	38	97	78	47
Hartford-Bristol-Middleton-New Britain, CT	32	100	65	46
Hickory-Morgantown, NC	13	81	65	18
Honolulu, HI	48	99	79	61
Houston, TX	19	80	53	32
Huntsville, AL	34	90	59	54
Indianapolis, IN	25	85	73	30
Jacksonville, FL	42	100	77	50
Jersey City, NJ	28	87	62	42
Kalamazoo-Portage, MI	24	100	75	27
Kansas City, MO-KS	24	82	59	32
Kileen-Temple, TX	48	90	96	45
Knoxville, TN	29	89	77	40
Lafayette-West Lafayette, IN	18	84	70	23
Lakeland-Winterhaven, FL	24	86	59	31
Lancaster, PA	52	97	85	54
Lansing-East Lansing, MI	25	91	62	37
Laredo, TX	22	71	67	27

Assimilation-Index Values by Metropolitan Area, 2006 contintued

Metropolitan Area	Composite	Economic	Cultural	Civic
Las Cruces, NM	22	71	62	31
Las Vegas, NV	27	87	66	36
Lawrence-Haverhill, MA/NH	31	93	76	42
Lexington-Fayette, KY	19	84	72	24
Little Rock-North Little Rock, AR	31	94	62	39
Los Angeles-Long Beach, CA	25	81	56	42
Louisville, KY/IN	33	93	65	41
Lowell, MA/NH	37	93	66	51
Madison, WI	30	93	80	28
McAllen-Edinburg-Pharr-Mission, TX	18	72	51	24
Melbourne-Titusville-Cocoa-Palm Bay, FL	55	100	93	58
Memphis, TN/AR/MS	21	82	59	35
Merced, CA	20	61	46	32
Miami-Hialeah, FL	29	97	59	43
Middlesex-Somerset-Hunterdon, NJ	28	98	54	48
Milwaukee, WI	28	85	64	42
Minneapolis-St. Paul, MN	32	95	69	44
Modesto, CA	22	74	52	37
Monmouth-Ocean, NJ	43	96	69	56
Myrtle Beach, SC	29	90	73	24
Naples, FL	22	82	65	28
Nashville, TN	20	86	63	28
Nassau-Suffolk, NY	38	100	64	55
New Bedford, MA	46	76	72	61
New Haven-Meriden, CT	27	92	63	37
New Orleans, LA	34	95	66	48
Newark, NJ	30	94	62	43
Newburgh-Middletown, NY	36	94	77	41
NewYork-Northeastern NJ	31	87	64	48
Norfolk-Virginia Beach-Newport News, VA	54	100	84	60
Oakland, CA	31	93	58	49
Ocala, FL	55	100	76	59
Odessa, TX	26	70	76	36
Oklahoma City, OK	24	80	63	30
Olympia, WA	57	100	92	63
Omaha, NE/IA	21	80	64	30
Orange County, CA	27	85	55	43
Orlando, FL	34	100	67	44
Pensacola, FL	65	100	100	60
Philadelphia, PA/NJ	34	96	64	47

Assimilation-Index Values by Metropolitan Area, 2006 contintued

Metropolitan Area	Composite	Economic	Cultural	Civic
Phoenix, AZ	20	78	56	26
Pittsburgh-Beaver Valley, PA	42	100	72	49
Portland-Vancouver, OR	30	88	65	37
Providence-Fall River-Pawtucket, MA/RI	30	84	70	42
Provo-Orem, UT	28	92	70	28
Raleigh-Durham, NC	20	82	64	26
Reading, PA	31	82	61	39
Reno, NV	26	86	65	37
Richland-Kennewick-Pasco, WA	22	66	63	25
Richmond-Petersburg, VA	28	94	67	35
Riverside-San Bernardino, CA	23	84	54	36
Rochester, NY	44	99	78	52
Rockford, IL	22	85	66	31
Sacramento, CA	30	92	58	43
Salem, OR	14	66	55	18
Salinas-Sea Side-Monterey, CA	18	67	51	29
Salt Lake City-Ogden, UT	26	85	64	32
San Antonio, TX	31	82	68	37
San Diego, CA	32	86	65	45
San Francisco, CA	37	92	67	56
San Jose, CA	27	93	53	45
San Luis Obispo-Atascadero-Paso Robles, CA	39	84	78	44
Santa Barbara-Santa Maria-Lompoc, CA	23	69	54	31
Santa Cruz, CA	24	72	55	35
Santa Fe, NM	16	70	65	24
Santa Rosa-Petaluma, CA	29	74	59	35
Sarasota, FL	29	93	63	36
Seattle-Everett, WA	34	96	66	46
Spokane, WA	49	100	97	52
Springfield-Holyoke-Chicopee, MA	46	98	82	51
St. Louis, MO-IL	37	98	66	49
Stamford, CT	33	96	64	41
Stockton, CA	22	85	50	37
Syracuse, NY	47	98	79	49
Tacoma, WA	50	97	87	53
Tallahassee, FL	34	93	76	38
Tampa-St. Petersburg-Clearwater, FL	36	98	72	44
Trenton, NJ	27	92	63	36
Tucson, AZ	31	91	78	32
Tulsa, OK	27	84	71	35

Assimilation-Index Values by Metropolitan Area, 2006 contintued

Metropolitan Area	Composite	Economic	Cultural	Civic
Tyler, TX	11	66	42	25
Utica-Rome, NY	34	96	73	42
Vallejo-Fairfield-Napa, CA	28	89	52	43
Ventura-Oxnard-Simi Valley, CA	25	80	55	38
Vineland-Milville-Bridgetown, NJ	25	71	62	34
Visalia-Tulare-Porterville, CA	15	61	43	26
Waco, TX	14	63	55	23
Washington, DC/MD/VA	30	95	64	41
West Palm Beach-Boca Raton-Delray Beach, FL	29	91	68	38
Wichita, KS	29	87	60	42
Wilmington, DE/NJ/MD	35	91	74	37
Worcester, MA	29	96	69	34
Yakima, WA	18	57	43	29
Yolo, CA	24	82	54	37
Yuba City, CA	20	75	44	38
Yuma, AZ	18	79	49	33

Note: Only metropolitan areas with 100 or more foreign-born representatives in the 2006 American Community Survey sample used to compute the assimilation index are included in this table.

Endnotes

1. Data underlying this graph are taken from various official U.S. Census publications for 1960, 1970, 1980, and 1990, and from the American Community Survey (ACS) for 2000–2005. Immigrant population statistics are interpolated for intercensal years before 2000.

2. Joe Costanzo, Cynthia Davis, Caribert Irazi, Daniel Goodkind, and Roberto Ramirez, "Evaluating Components of International Migration: The Residual Foreign Born," Population Division, U.S. Bureau of the Census, Working Paper Series no. 61 (2001).

3. The term "assimilation" carries negative connotations in certain circles, as it is often taken to imply the elevation of Anglo-Saxon, Protestant culture as an ideal and the judgment of individual groups by how well they conform to this ideal. The concept of assimilation employed in this report is quite distinct from this. The native-born population of the United States is now, and has always been, multicultural. Assimilation, in this context, refers to the degree of distinction between the foreign-born and native-born citizens regardless of race, religion, or ancestry. Immigrants are assimilated when it becomes impossible to distinguish them from the native-born population. This can occur either because immigrants become more like natives in certain respects, or because the native population itself changes.

4. For a conceptual discussion of assimilation and an overview of the ethnographic literature on immigrant assimilation in the first two-thirds of the twentieth century, see Milton Gordon, *Assimilation in American Life: The Role of Race, Religion, and National Origins* (New York: Oxford University Press, 1964). For more quantitatively oriented studies, see Stanley Lieberson, *A Piece of the Pie: Blacks and White Immigrants Since 1880* (Berkeley: University of California Press, 1980), covering early-twentieth-century immigrants; and Richard D. Alba and Victor Nee, *Remaking the American Mainstream: Assimilation and Contemporary Immigration* (Cambridge, Mass.: Harvard University Press, 2003), covering more recent immigrants. See also Alejandro Portes and Ruben G. Rumbaut, Immigrant America: A Portrait, 3rd ed. (Berkeley: University of California Press, 2006), which discusses various forms of assimilation among recent immigrants.

5. This figure is based on the simple methodology used in George J. Borjas, "The Economic Benefits from Immigration," *Journal of Economic Perspectives* 9, no. 2 (1995): 3–22. Immigrants currently form roughly 17% of the labor force; assuming that the elasticity of factor price for labor is -0.3 (a value widely supported in economic literature; see Daniel Hamermesh, *Labor Demand* [Princeton, N.J.: Princeton University Press, 1993]), immigrants reduce wages by about 5%. The economic benefit from immigration is the area of a triangle with height 5% and base 17%, 1/2*.17*.05 = 0.004, times GDP, which in 2006 was roughly $13 trillion. This is a larger estimate than that reported by Borjas because the share of immigrants in the labor market has increased over time and because nominal GDP has increased over time. Note that, as Borjas argues, this surplus may mark a much larger net transfer of wealth from labor to capital. This calculation also presumes that immigrants do not contribute to the nation's capital stock, only to the labor supply, and that the economy is not marked by increasing returns. Both these assumptions are debatable.

6. For a discussion of the theoretical impact of immigration on wages, see Borjas, "The Economic Benefits from Immigration." Empirical studies of the impact of immigration on wages arrive at varying conclusions. For example, George J. Borjas, "The Labor Demand Curve Is Downward Sloping: Reexamining the Impact of Immigration on the Labor Market," *Quarterly Journal of Economics* 118, no. 4 (2003): 1335–74, presents estimates suggesting that a 10% increase in the labor force through immigration depresses wages by roughly 3%—a figure also consistent with assumptions in the Borjas ("The Economic Benefits from Immigration") method of computing the benefits from immigration. David Card, "Is the New Immigration Really So Bad?," *The Economic Journal* 115 (2005): 300–323,

argues that evidence of a negative impact on wages is "slight." Some of the controversy reflects difficulties in measuring the impact of immigration on wages. In general, it is impossible to know what wage levels would prevail in the United States in the absence of immigration. Some studies use time-series data to study whether growth in the immigrant population is associated with declines in the earnings of natives with similar skill levels. Since 1980, for example, the immigrant population has grown and the earnings of the low-skilled have eroded relative to the earnings of the highly skilled. One might conclude from this that the former trend caused the latter. Other explanations have been proposed for the decline in relative earnings of the low-skilled, however. Another method of inferring the impact of immigration on wages is to compare the earnings of workers in local labor markets with higher and lower proportions of immigrant workers. These studies tend to show that earnings do not vary much across these types of labor markets. This method could be flawed, though, if immigrants tend to flock to cities with better labor-market opportunities or if natives depart cities that experience an inflow of immigrants.

7. See Gnanaraj Chellaraj, Keith E. Maskus, and Aaditya Mattoo, "The Contribution of Skilled Immigration and International Graduate Students to U.S. Innovation," World Bank Policy Research, Working Paper no. 3588 (2005).

8. As summarized in Borjas ("The Economic Benefits from Immigration"), the question of net fiscal impact of immigrants depends on assumptions regarding the marginal cost of providing services such as national defense and highways to immigrants. Passel and Clark, "How Much Do Immigrants Really Cost? A Reappraisal of Huddle's 'The Cost of Immigrants' " (Washington D.C.: Urban Institute, 1994), estimate a net gain; Donald Huddle, *The Net National Costs of Immigration* (Washington, D.C.: Carrying Capacity Network, 1993), estimates a net loss. Ronald Lee and Timothy Miller, "Immigration, Social Security, and Broader Fiscal Impacts," *American Economic Review* 90, no. 2 (2000): 350–54, estimate that the overall net impact of marginal increases in immigration is small and reflects a combination of net fiscal contributions to Social Security, little impact on the federal budget, and a net drain on state and local government.

9. See George J. Borjas and Lynette Hilton, "Immigration and the Welfare State: Immigrant Participation in Means-Tested Entitlement Programs," *Quarterly Journal of Economics* 111, no. 2 (1996): 575–604, which shows that immigrant participation in cash or noncash welfare programs was roughly 50% higher than among native households, in data from the 1980s and early 1990s. George J. Borjas, "Immigration and Welfare Magnets," *Journal of Labor Economics* 17, no. 4 (1999): 607–37, shows evidence that, prior to 1990, immigrants gravitated toward states with higher welfare benefits. See also George J. Borjas, "Welfare Reform, Labor Supply, and Health Insurance in the Immigrant Population," National Bureau of Economic Research, Working Paper no. 9781 (2003), for an estimate of the impact of the 1996 welfare reform on the immigrant population.

10. See T. C. Buchmueller, A. T. Lo Sasso, I. Lurie, and S. Dolfin, "Immigrants and Employer-Sponsored Health Insurance," *Health Services Research* 42, no. 1 (2007): 286–310; and O. Carrasquillo, A. I. Carrasquillo, and S. Shea, "Health Insurance Coverage of Immigrants Living in the United States: Differences by Citizenship Status and Country of Origin," *American Journal of Public Health* 90, no. 6 (2000): 917–23. These studies document that noncitizen immigrants who work full-time are much less likely to receive health insurance from their employer, primarily because they are less likely to work for a firm that offers insurance benefits. Naturalized immigrants have insurance coverage rates very similar to those of the native-born.

11. See, for example, Kjetil Storesletten, "Sustaining Fiscal Policy through Immigration," *Journal of Political Economy* 108, no. 2 (2000): 300–323; and Eduardo Porter, "Illegal Immigrants Are Bolstering Social Security With Billions," *New York Times*, April 5, 2005.

12. There is strong evidence that immigration raises rents, at least in the short term. See Albert Saiz, "Room in the Kitchen for the Melting Pot: Immigration and Rental Prices," *Review of Economics and Statistics* 85, no. 3 ([YEAR]): 502–21.

13. Numerous studies document achievement gaps between Hispanic and non-Hispanic white students. There is at least some evidence, from longitudinal studies, that schools manage to close this gap over time. Charles Clotfelter, Helen Ladd, and Jacob Vigdor, "The Academic Achievement Gap in Grades 3–8," National Bureau of Economic Research, Working Paper no. 12207 (2006), study the set of students who remain enrolled in North Carolina public schools continuously from third to eighth grade. Within this group, the Hispanic–white achievement gap narrows considerably. This narrowing is offset, however, by a relatively wide gap among those students who arrive in North Carolina public schools after their third-grade year.

14. The relatively high value for the economic assimilation index, relative to the civic and cultural indexes discussed later in the report, indicates that cultural and civic factors are more powerful predictors of which individuals are immigrants. It does not necessarily follow from this, however, that immigrants are well assimilated along economic dimensions but not along other dimensions. The strength of any one component index is limited by the data that are available in the ACS and Census samples. Information on trends in the component indexes, discussed later in the report, is arguably more informative than information on their levels at any one point in time.

15. Note that the apparent numerical discrepancy is explained by the fact that the assimilation index is not a simple tally of the proportion of correct guesses. As described in the Appendix, the index is actually derived from the following formula: assimilation index = 2*(100 - % correct). When the percent correct is 69 (just over two-thirds), the index is 2*(100-69) = 2*31 = 62.

16. The selected groups have the largest number of representatives in the 2006 American Community Survey. This measure is correlated with the size of the underlying group population but not perfectly so, owing to undercounting.

17. These primary metropolitan statistical areas (PMSAs) have the largest number of foreign-born representatives in the 2006 American Community Survey. This measure is correlated with the size of the underlying immigrant population in each metro area but imperfectly so, owing to undercounting.

18. For an analysis of the impact of return migration on simple measures of economic assimilation, see Darren Lubotsky, "Chutes or Ladders? A Longitudinal Analysis of Immigrant Earnings," *Journal of Political Economy* 115, no. 5 (2007): 820–67.

19. As described in Chapter 2, the civic assimilation index focuses on citizenship and military service. These indicators do not necessarily perfectly capture immigrant participation in civil society. While the Census and ACS do not collect detailed information on behavioral aspects of civic assimilation, the General Social Survey (GSS) does. Specifically, the GSS of 1996 and 2002 collected information on voting behavior, volunteering for charitable organizations, and donating money to charitable organizations. These three behaviors were used to form a behavioral index of civic assimilation. In both 1996 and 2002, voting and charitable behavior are relatively weak predictors of immigrant status, implying that the associated assimilation-index values are much larger than those computed using ACS or Census data. The 1996 behavioral civic assimilation index is 95, and the 2002 index is 97. The upward trend corroborates the pattern shown in the Census and ACS-based civic assimilation index, which suggests that civic assimilation increased between 1990 and 2005.

A number of caveats are associated with the GSS-based index. There are fewer guarantees that the GSS presents a representative sample of immigrants. It is primarily conducted via an in-person interview; interviewers are permitted to omit a household from the sample if they cannot find a respondent who speaks English. In 1996, 136 potential interviewees were omitted from the sample of potential respondents for this reason. Among those eligible to complete the interview, 24% in 1996 and 30% in 2002 failed to do so. These nonresponse rates are undoubtedly higher than corresponding rates for the decennial Census. For these reasons, along with the fact that the GSS is conducted only every other year and does not ask a consistent set of civic behavior–related questions with each enumeration, this report places more emphasis on the Census and ACS-based index of civic assimilation.

20. Tracking the 1975–80 arrival cohort is complicated slightly by the reporting categories for year of immigration in the 1990 Census. In 1990, the cohort being tracked actually consists of only those immigrants who arrived between 1975 and 1979.

21. For a further comparative analysis of immigrants from the two eras, with a particular focus on the second generation, see Joel Perlmann, *Italians Then, Mexicans Now: Immigrant Origins and Second-Generation Progress, 1890 to 2000* [CHANGE OK?] (New York: Russell Sage Foundation, 2005).

22. Given the persistence of a Communist regime in Vietnam and the fact that many Vietnamese immigrants were fleeing that regime, return migration to Vietnam is unlikely—especially compared with the rate of return migration among Mexican immigrants, for whom it is quite common and inexpensive. Unsuccessful Vietnamese immigrants could, however, move on to a different host country.

23. Using data on second-generation immigrants in the CPS to form an assimilation index, comparable with the one reported here for Generation 1.5, yields very similar conclusions: second-generation immigrants are consistently rated as highly assimilated. As the second generation is by definition native-born, incorporating information on citizenship for this group has no impact on measured assimilation.

24. See, for example, the discussion in Perlmann, *Italians Then, Mexicans Now*.

25. The sample size of Generation 1.5 members born in individual countries other than Mexico is too small to permit meaningful analysis. Thus the discussion here will focus on contrasts between Mexico and all other countries of origin.

26. In this report, probabilities will be expressed in percentile form, between 0 and 100%. It is also possible to express probabilities as decimals ranging between 0 and 1.

27. The predictions listed in Table 1 are actually averages over all individuals with the listed characteristics in the 2005 sample. There are 3,419 individuals with characteristics matching Case 1; 26,798 individuals with characteristics matching Case 2; and 29,143 individuals with characteristics matching Case 3. The model includes data on 245,480 individuals overall.

28. The index can also be constructed using a data set that is restricted to males only or females only. As discussed in Chapter 8 [? THERE IS NO CHAP. 8], females tend to have higher assimilation-index values than males. Beyond this difference, the substantive conclusions of this report are not affected if the analysis is restricted by gender.

29. See Paul M. Ong and Doug Houston, "The 2000 Census Undercount in Los Angeles County," Ralph and Goldy Lewis Center for Regional Policy Studies, Working Paper no. 42, University of California–Los Angeles (2002).

30. See http://www.census.gov/dmd/www/pdf/underus.pdf.

The Center for Civic Innovation's (CCI) mandate is to improve the quality of life in cities by shaping public policy and enriching public discourse on urban issues. The Center sponsors studies and conferences on issues including education reform, welfare reform, crime reduction, fiscal responsibility, counter-terrorism policy, housing and development, and prisoner reentry. CCI believes that good government alone cannot guarantee civic health, and that cities thrive only when power and responsibility devolve to the people closest to any problem, whether they are concerned parents, community leaders, or local police. The Center's advisory board is chaired by former Indianapolis mayor Stephen Goldsmith.

www.manhattan-institute.org/cci

The Manhattan Institute is a 501(C)(3) nonprofit organization. Contributions are tax-deductible to the fullest extent of the law. EIN #13-2912529