

# COMPARING IMMIGRANT ASSIMILATION IN NORTH AMERICA AND EUROPE

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This is the third in a series of Center for State and Local Leadership reports on the state of immigrant assimilation—the degree of similarity between the native- and foreign-born populations—in the United States. This report provides new information on the characteristics of newly arrived immigrants and the pace of their integration into society, as measured by a series of summary indices through 2009. It also introduces a series of comparisons among countries, using data from the United States and ten other countries drawn from the period 1999-2001. Although these international data are slightly dated, they are the most recent comparative data available, and few major changes are likely to have taken place since. The study's focus is the comparative progress individual ethnic groups, particularly immigrants from nations with predominantly Muslim populations, have made in the destination countries where they have chosen to reside.

The study of assimilation in recent years has led to a number of key findings, particularly regarding the impact of the recession of December 2007-June 2009.

- The recession affected immigrants more strongly than natives. Some responded to economic difficulty by leaving the country where they had settled, while others almost certainly decided not to leave their native land in the first place.
- These discouraged immigrants tended to be among the least assimilated. Thus, although immigrants' economic progress has stalled, the departure of less assimilated migrants has produced statistical gains in average levels of cultural and civic assimilation.

Patterns unrelated to the economic cycle appear in the analysis of assimilation trajectories over the past decade.

- Most of the United States' major immigrant groups were more assimilated in 2009 than they were in 2000.
- Some groups progressed more than others. Immigrants from Mexico, Guatemala, and El Salvador experienced at most little improvement, while progress for those from Asia and more-developed nations was unmistakable.
- Assimilation improved rapidly in the nation's two most common destination cities – Los Angeles and New York—while showing at most slow progress in Chicago, Houston, and Dallas-Fort Worth, which are also recipients of large numbers of immigrants.

Tracking the progress of immigrant cohorts over periods of up to three decades reveals other important trends:

- Upon arrival, the most recent immigrants are significantly more assimilated along cultural and civic lines than their counterparts of a decade ago.
- The halt in economic progress has affected recent and long-term immigrants alike.
- Recent immigrants with strong cultural differences from the mainstream are the ones most likely to have responded to the recession by leaving the country.

International comparisons make use of data on rates of assimilation of immigrants to the following countries: Austria, Canada, France, Greece, Italy, the Netherlands, Portugal, Spain, Switzerland, the United Kingdom, and the United States. Comparison of nine of these countries (excluding the Netherlands and the U.K., which lack critical data elements) in an international version of the assimilation index reveals a number of important findings:

- On the whole, immigrants in the United States are more assimilated than those in most European countries, except Portugal, where a large proportion of immigrants originated in former Portuguese-speaking colonies.
- Immigrants from Canada rank first in terms of overall assimilation, largely as a consequence of their high rate of naturalization.
- Easing the path to naturalization does not guarantee full integration into society. Immigrants in the Netherlands naturalize much more often than those in the United States but have significantly lower employment rates.

Breaking assimilation down still further, by both origin and destination, shows the United States to be ahead of most of Europe but behind Canada in a wide variety of categories.

- Muslim immigrants, identified by data on religion in some nations and by country of birth in others, are most integrated in Canada, followed closely by the United States.
- Muslim immigrants in Italy and Switzerland are much less assimilated than Mexican and Central American immigrants are in the United States. Muslim immigrants' standing in Spain is roughly equal to the standing of Mexicans and Central Americans in the United States.
- The United States' ranking behind Canada but ahead of European nations also holds for immigrants from China and Southeast Asia. Assimilation in the United States is ahead of all but one European country for immigrants from India and Eastern Europe.

Two facets of Canadian immigration policy may help explain the rapid integration of foreigners into Canadian society. First, the path to citizenship in Canada is short and easily traveled. Foreigners face a three-year residency requirement (it is five for legal permanent residents in the United States and as many as twelve in some European countries), and the nation has taken a liberal stance toward dual citizenship since 1977. Second, Canadian immigration policy places a distinct emphasis on attracting skilled migrants. Thirty percent of foreign-born adults in Canada have college degrees, while the rate is 23 percent in the United States and 10 percent in Spain and Italy. Educational attainment is not a factor in the international version of the assimilation index, but the link between immigrants' level of education and their degree of assimilation is strong.

While these comparisons certainly raise the question of whether this country should start moving toward a more Canadian form of immigration policy, it is clear that the United States, compared to the other countries studied, is doing a good job of absorbing newcomers. Immigration is a global phenomenon, provoked largely by persistent gaps in living standards between rich and poor countries and facilitated by improvements in transportation and communication. The strains felt in European nations, which report their own problems with illegal immigration (Italy and Spain) and cultural integration (Switzerland and France), appear upon close inspection to be more severe than those the United States has experienced.

## ABOUT THE AUTHOR

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JACOB L. VIGDOR is an adjunct fellow at the Manhattan Institute, a professor of public policy and economics at Duke University, a Faculty Research Fellow at the National Bureau of Economic Research, and an external fellow at the Centre for Research and Analysis of Migration at University College London. His academic research interests are in the broad areas of education policy, immigration policy, housing policy, and political economy. Within those areas, he has published numerous scholarly articles on the topics of residential segregation, immigrant assimilation, housing affordability, the consequences of gentrification, the determinants of student achievement in elementary and secondary 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*. His book on assimilation and immigration policy, *From Immigrants to Americans: The Rise and Fall of Fitting In*, published by Rowman and Littlefield in the fall of 2009, received the 2009 IPUMS research award for the best analysis of historical Census data. In addition to this scholarly work, Vigdor has written several evidence-based policy briefs and reports for a broader audience. These include civic reports on immigrant assimilation published by the Manhattan Institute, as well as articles espousing fundamental changes to teacher compensation and illuminating the pitfalls of rebuilding disaster-struck cities.

Vigdor has taught at Duke since 1999. He received a B.S. in policy analysis from Cornell University in 1994 and a Ph.D. in economics from Harvard University in 1999.



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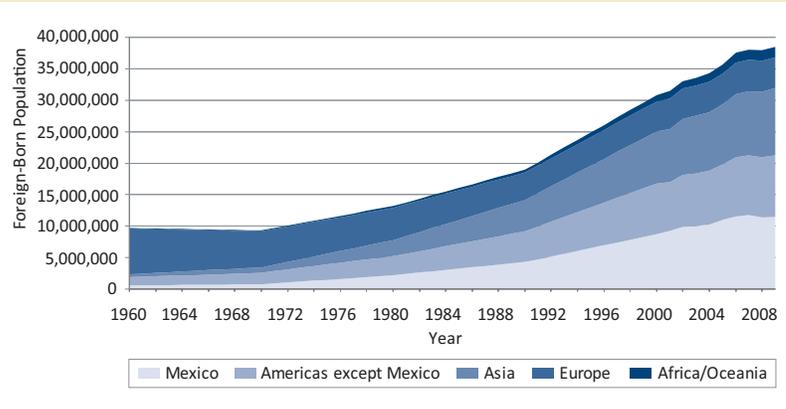
# COMPARING IMMIGRANT ASSIMILATION IN NORTH AMERICA AND EUROPE

Jacob L. Vigdor

## I. MEASURING ASSIMILATION

The worldwide economic downturn has slowed the rate of immigration to the United States but has not quieted debates over American immigration policy. Figure 1 shows that 2008 marked the first point in nearly four decades when the foreign-born population was smaller than it had been the year before. Although growth in the foreign-born population resumed in 2009, the economic downturn has clearly interrupted the trend of rapid growth that unfolded between 1990 and 2006. The continuing furor over immigration policy despite the reversal of net flows across the border reflects a simple fact: it is not only the number of migrants arriving that concerns many Americans, but the demeanor, values, and behavior that immigrants adopt after arrival.

Figure I. Foreign-Born Population of the United States, 1960–2009



Over centuries of American history, as succeeding waves of immigrants have arrived from nearly every corner of the globe, concerns about the integration of migrants into society have figured prominently in policy debates. Benjamin Franklin and other Founding Fathers worried openly about German immigrants in the colonial era. In the 1850s, the Know-Nothing Party raised concerns about massive inflows of German and Irish Catholics. Thirty years later, the nation adopted its first truly restrictive immigration law, the Chinese Exclusion Act. In the 1920s, concerns that an “Italian dusk” would create permanent divisions in American society prompted even more restrictive laws, which ushered in a forty-five-year period of minimal immigration. Current reservations about immigrants from Mexico and Central America echo many of these earlier debates. Many Americans fear that these immigrants are forming into a persistent economic underclass and a permanent linguistic minority group. In view of the fact that many of these migrants entered the country without legal authorization, their respect for civic institutions and the rule of law has been, perhaps justifiably, called into doubt as well.

Are these contemporary concerns justified by the available evidence? Or will time prove them to be as misplaced as older worries about Germans or Italians seem to us now? The assimilation index that I have formulated seeks to answer this fundamental question by presenting and summarizing basic objective information about the economic, civic, and cultural progress of immigrants in the United States drawn from data sources that span more than a century of American history, from 1900 to 2009.

The rate at which immigrants assimilate deeply influences how natives perceive them, as well as the effects of immigration on labor markets, government budgets, and society. Immigrants who assimilate rapidly produce benefits that they share with their hosts. By learning English, for example, they expand the range of opportunities that the marketplace can offer, and they make it easier for others to benefit from their skills and labor. By becoming citizens, they affirm a commitment to core civic values and the obligations of true membership in society. In essence, assimilation takes people who, though living among us, are

often viewed as alien, hostile, or indifferent to the values of their new homeland, as well as a drain on its resources, and turns them into productive citizens of diminishing distinguishability.

## The Index: Components and Methodology

The assimilation index transforms a wealth of information on the economic, cultural, and civic progress of adult immigrants between the ages of twenty-two and sixty-five into a single summary measure. Although assimilation is a complicated and controversial subject, the index is based on a simple, immediately plausible idea: immigrants become assimilated as it becomes more difficult to distinguish them from the native-born. The index is thus a measure of the degree of distinction between the native- and foreign-born populations of the United States at a single point in time. This section will provide a general overview of how the index is constructed; a more detailed account may be found in the appendix.

Assimilation, or the integration of immigrants into society along various dimensions, is a lengthy process. The assimilation index, however, is only a “snapshot” of immigrants’ progress at a moment in time. A low reading could reflect a lack of progress in the immigrant population, or the predominance of very recently arrived migrants among the foreign-born. Likewise, a high reading could reflect immigrants’ strong progress or the predominance of those who have been long-settled. To infer the proper interpretation in particular cases, this report will provide evidence on changes in the index over time, both for the foreign-born population as a whole and for immigrants who entered the United States during a specific time frame.

The index makes distinctions along three dimensions—economic, civic, and cultural—each of which subsumes a small number of indicators.

**Economic indicators** used in the computation of the index consist of educational attainment, earnings, occupational prestige, employment status, and labor-force participation rate. In the case of the last four indicators, the index performs separate comparisons of males and females, since differences between them

in labor-market participation have been meaningful historically and remain so.

**Civic indicators** consist of citizenship and veteran status. In the case of the latter, males and females are considered separately, since military service is more common among males.

**Cultural indicators** consist of ability to speak English, marital status, number of children in an adult's household, and whether a spouse is native- or foreign-born.

There are important omissions from the set of factors considered. The reason for omissions of some factors is the unavailability of adequate data: to make historical comparisons, it is necessary to restrict attention to those factors that have been reliably measured over time. In the case of other factors—those pertaining to race and religion, for example—omissions reflect the widespread social acceptance of differences among groups.

I computed the assimilation index using a statistical algorithm that begins with data on a random sample of foreign-born residents of the United States, matched to a random sample of native-born citizens that is of equal size. The algorithm attempts to find the best possible formula for discerning which individuals in this combined sample were born in the United States and which were born abroad. The assimilation index is based on the success rate of this formula. If the best possible formula is very good at distinguishing immigrants from natives, assimilation is low and the index approaches zero. If the best possible formula is no better than random guessing—that is, produces results no more revealing than a flip of the coin—then assimilation is complete and the index equals 100.

The assimilation index can be computed through the use of all three sets of factors, or one set exclusively. Since using more information can only make it easier to discern native-born from foreign-born, as the extra information can always be discarded if it is not helpful, the “composite” index, which uses all three sets of indicators, cannot be higher than any of the three “component” indexes. In most cases, it is considerably lower.

When reported for the United States as a whole, the assimilation index represents an overall assessment of the ease with which the native-born can be distinguished from the foreign-born on the basis of the information used. A composite or a component index can be computed for immigrants belonging to a specific group defined by, for example, national origin, residence in a particular American state or city, or year. In such cases, the index reflects an assessment of immigrants in that particular group exclusively.

Most important, both current and historical data can be used to compute the indexes. While the assimilation index in any one year provides a “snapshot” of the state of division between immigrants and natives, comparisons over time provide a “moving picture” of the assimilation process that is more informative. Sound policymaking depends on having such a picture, as it reveals whether the process of assimilation operates now as it did a decade or a century ago.

The index's clearest limitation is a function of the quality of the data used to compute it. Data compiled by the Census Bureau provide an unparalleled opportunity to measure assimilation over time, but data items not recorded in census enumerations cannot be used as indicators in this study. Most important, although the census has recorded information on citizenship for more than a century, it does not ask noncitizens about their legal status.<sup>1</sup> Moreover, the census does not ask respondents about civic activities such as voting, membership in community organizations, or paying taxes. A further complication is that the Census Bureau has altered its questionnaire in various ways over time. It didn't collect income information until 1940. It inquired into English-speaking ability with a simple yes/no question through 1930; in more recent years, respondents have been asked to rate their ability on a five-point scale. In some cases, indicators have had to be removed from the index in order to render data samples from different periods truly comparable. In other cases, the index has dealt with this problem by redefining factors—for example, by recoding the modern English-ability question as a simple yes/no once again.

An additional concern is the possible “undercounting” of certain segments of the immigrant population, par-

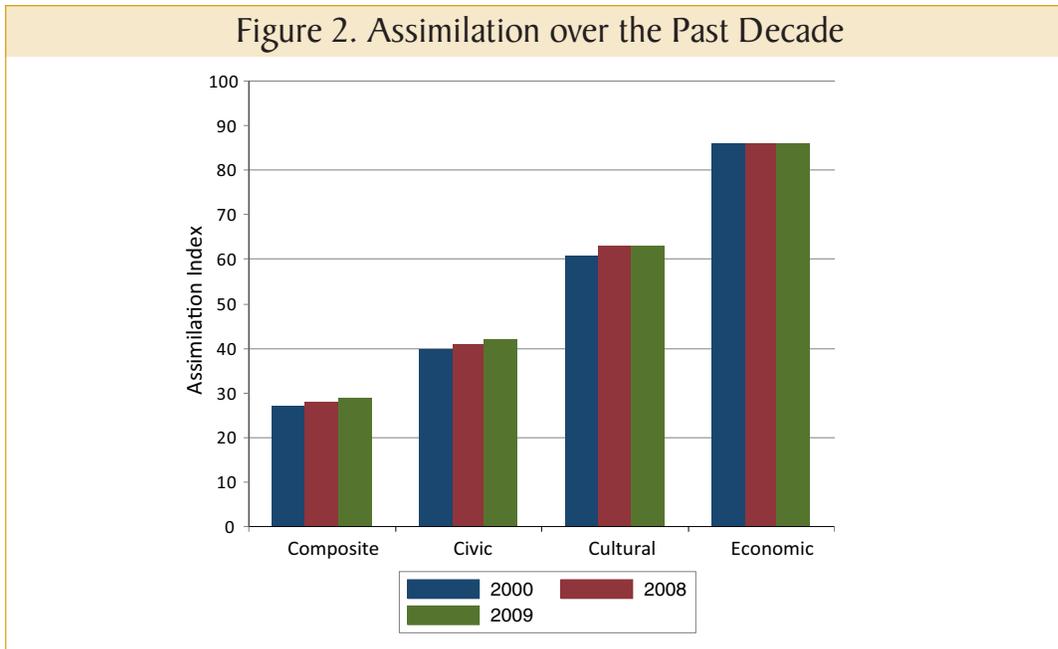
ticularly undocumented workers. The Census Bureau cannot record information on individuals who refuse to cooperate with survey enumerators. For purposes of research, the bureau supplies statistical tools known as sampling weights to correct for omissions of this type. This report relies on the assumption that the census sampling weights adequately correct for the undercount problem.

This report incorporates an analysis of immigrant assimilation in a number of developed countries, including Canada, France, Spain, and Switzerland. I have computed assimilation indexes for each of them using data compiled by statistical agencies that are the respective national equivalents of the U.S. Census Bureau. These agencies conduct their business independently of one another. This independence leads to some inconsistencies. Unlike most countries, for example, the Netherlands asks no questions about homeownership in its population surveys. Similarly, unlike most nations, the United Kingdom does not record citizenship information in its surveys. In light of these differences, the international version of the assimilation index must use only those indicators that every nation studied collects. International comparisons are also complicated by the fact that many nations have not released comprehensive population data in a decade or longer. The international assimila-

tion evidence presented here makes use of national statistics covering the period from 1999 to 2001. The assimilation index changes slowly over time, so it is quite likely that the across-country comparisons made with this older data provide a reasonable portrait of current differences.

## 2. ASSIMILATION IN THE UNITED STATES THROUGH 2009

According to the National Bureau of Economic Research's Business Cycle Dating Committee, the U.S. economy entered a recession in December 2007 and began expanding again, albeit slowly, in June 2009. As Figure 1 shows, this economic slowdown is clearly associated with a slowing in the growth of the immigrant population. Newly arrived immigrants are typically the least assimilated: they ordinarily must wait several years before becoming eligible for citizenship, are the least likely to speak English fluently, and often take time to realize their full earnings potential in the labor market. The slowing growth of the immigrant population implies that the proportion of new immigrants in the group has been declining. Because an increasing proportion of the cohort is immigrants who are not newly arrived and are therefore better assimilated, it is not surpris-



ing to learn that immigrant assimilation has increased, according to the most recent data.

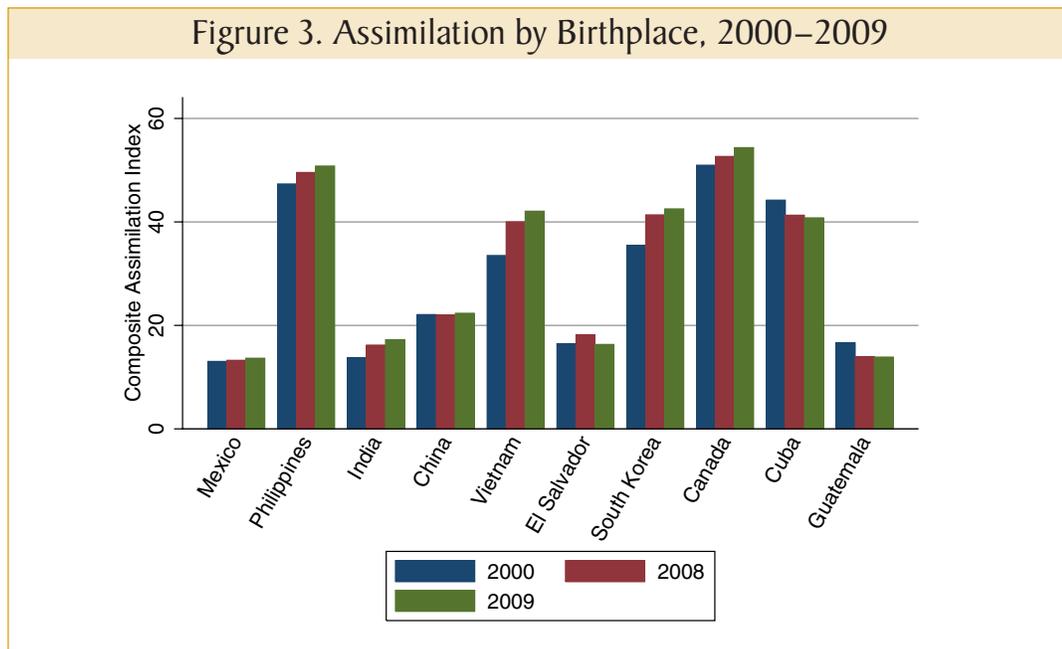
Figure 2 shows that the composite assimilation index reached a value of 28 in 2008 and 29 in 2009, up from a level of 27 at the beginning of the decade. This trend toward greater overall assimilation masks some variability among the different dimensions of integration. The civic assimilation index increased from 40 to 42 between 2000 and 2009, with half of the two-point increase occurring in 2008 and 2009. Cultural assimilation increased from 61 to 63 between 2000 and 2008, holding steady for 2009. For both these dimensions, the increase in assimilation clearly reflects a reduction in the number of newly arrived immigrants.

Economic assimilation remained unchanged between 2000 and 2009. While newly arrived immigrants tend to show low levels of economic assimilation, and their absence during the recent recession might be expected to lead to an increase in the associated index, this effect was offset in practice by an opposite effect. The recession has very clearly had a more negative impact on immigrants than on natives. This trend is apparent in our discussion below of the progress of immigrant cohorts over time.

## Assimilation by Immigrant Group

Figure 3 illustrates trends in assimilation for the ten largest immigrant groups in the United States as of 2009. Groups differ dramatically not only in their overall level of assimilation but also in their pace of assimilation over the past decade. Immigrants from Mexico and two nearby Central American countries, El Salvador and Guatemala, are both poorly assimilated in an absolute sense and show few signs of progress over time. The two most assimilated groups, immigrants from Canada and the Philippines, show more positive trends, as do migrants born in India, Vietnam, and South Korea. Immigrants from Cuba are the only large group showing high assimilation levels in 2000 but little further assimilation since then. Immigrants from China constitute the fifth-most-assimilated group among the top ten and show little progress over time.

Overall, Figure 3 paints a picture of divergence over time. Immigrants from Asia and developed countries such as Canada appear to be integrating more rapidly than those from Mexico and Central America. It should be noted that Figure 3 does not present a truly longitudinal analysis, which would have followed consistent sets of immigrants over time. Rather, it provides a series of snapshots of each group in each year, notwithstand-



ing turnover within the group. In this simple analysis, rapidly growing groups will appear to assimilate more slowly over time because they count a greater proportion of new arrivals within their group at the end of the time period. More longitudinally oriented analyses, such as those reported in earlier index reports, have documented important differences in assimilation rates for immigrants of different nationalities. Many of the differences can be attributed to legal status: undocumented immigrants are precluded from taking some steps toward integration and have weak incentives to take others.

The divergence in degrees of assimilation by immigrant group is most starkly apparent in the case of economic assimilation. Figure 4 shows that the nation's most prominent immigrant groups can be divided into three categories. One, consisting of immigrants from Canada, South Korea, the Philippines, and Cuba, has been fully integrated into the U.S. economy for at least a decade. These immigrants' experiences during the recent recession cannot be meaningfully distinguished from those of natives. A second group, including immigrants from India, China, and Vietnam, is clearly on the path to full economic integration and managed to stay on it even during the recession years of 2008 and 2009. Immigrants from Mexico and Central

America, who constitute the third category, arrived in the weakest economic position and experienced economic backsliding over the past decade. This decline is most pronounced among immigrants from Guatemala. Guatemalans are one of the fastest-growing immigrant groups of the past decade; in fact, their strong rate of growth may be the primary explanation for their lack of apparent progress over time.

Trends in civic assimilation show some signs of similarity to its economic counterpart but also important differences. As shown in Figure 5, civic assimilation remained stable or declined between 2000 and 2009 for immigrants from Mexico, the Philippines, El Salvador, Cuba, and Guatemala. For the remaining five countries, increases in civic assimilation ranged from fairly modest among Canadians to quite vigorous among Vietnamese. This pattern of divergence is mostly intact, with some exceptions. Cuban immigrants began the decade at a high level of civic assimilation, which declined; three less assimilated groups (China, India, and Canada) gained ground on them over time.

In the cultural dimension, shown in Figure 6, higher index values over time appear to be shared quite broadly. Canadians residing in the United States have long been culturally indistinguishable from native-

Figure 4. Economic Assimilation by Birthplace, 2000–2009

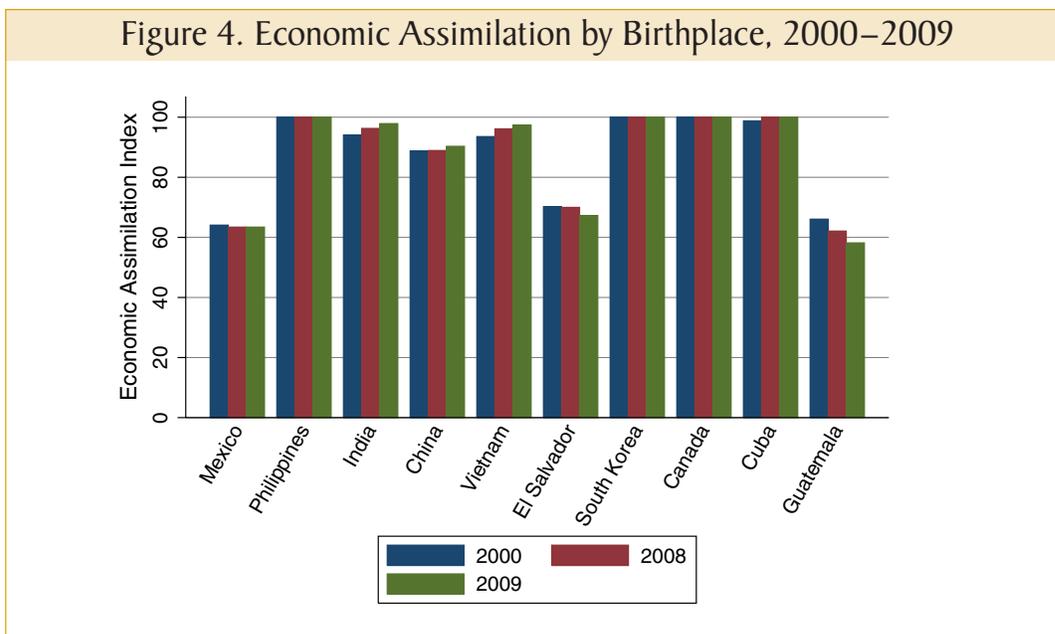


Figure 5. Civic Assimilation by Birthplace, 2000–2009

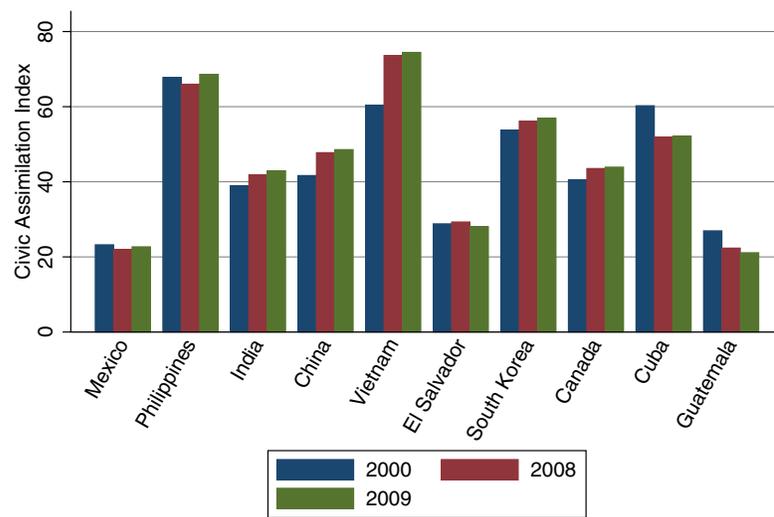
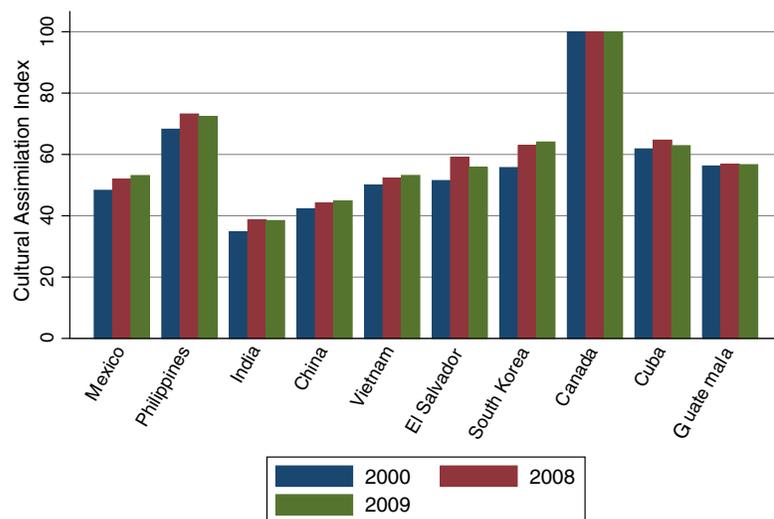


Figure 6. Cultural Assimilation by Birthplace, 2000–2009



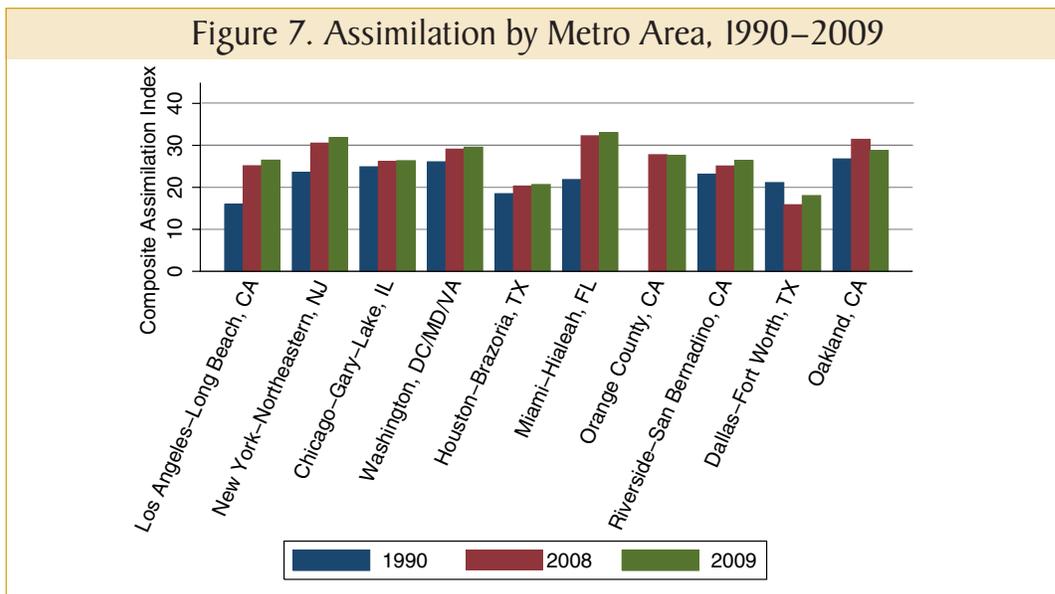
born Americans; somewhat higher scores in cultural assimilation have accrued since 2000 to each of the nine other groups studied.

### Assimilation by Metropolitan Area

With few exceptions, immigrants in the nation’s largest cities tend to be less assimilated than immigrants across the nation. Figure 7 plots index values in 1990, 2008,

and 2009 for the ten U.S. metropolitan areas that had the largest foreign-born populations in 2009.<sup>2</sup> Immigrants in only two of these metropolitan areas—New York and Miami—met or exceeded the national index value of 30 in 2009. Cities with the least-assimilated immigrant populations tend to have large numbers of Mexican and Central American immigrants, along with a dearth of migrants from other countries: tellingly, the southwestern cities of Dallas and Houston

Figure 7. Assimilation by Metro Area, 1990–2009



are the large cities showing the lowest assimilation levels in 2009.

Note that U.S. cities have experienced varying trends over time. Over the past twenty years, New York and Miami have progressed from having low-to-average assimilation levels to being the two large urban destinations showing the highest assimilation levels. Los Angeles has experienced a similarly large gain. In only one of the nation’s top-ten immigrant destinations—Dallas–Fort Worth—is the assimilation index lower in 2009 than it was in 1990.

### Tracking Assimilation over Time

As noted above, the least assimilated immigrants tend to be the newly arrived, and the deceleration of growth in the immigrant population implies a reduction in their number. Is that the complete story behind the increase in assimilation in recent years? If so, we would discover that the degree of assimilation of immigrants with a certain number of years in the United States had not changed over time—only the proportion of immigrants who had been here that long would have changed.

Figure 8 permits us to study exactly this question by charting the assimilation index for immigrants with a particular number of years in the United States at

two points in time: 2000 and 2009. The most obvious pattern in this chart is the steady upward slope of the plotted lines: the longer immigrants have been in the United States, the more assimilated they are. The steepest line describes civic assimilation; as newly arrived immigrants are ineligible for naturalization, the civic index, which relies heavily upon citizenship as an indicator, begins very close to zero. Economic and cultural assimilation are not as strongly associated with length of residency in the United States.

To answer the basic question of whether the assimilation of immigrants with a certain number of years in the United States has gone up or down, we must compare the thick and thin versions of each line. A comparison reveals that newly arrived immigrants in 2009 were significantly more assimilated than those arriving in 2000 were, particularly along the cultural and economic dimensions. The new arrivals of 2009 were relatively small in number and economically and culturally advanced compared with their predecessors.

It is also worth noting that higher degrees of cultural assimilation in 2009 are not confined to new arrivals. They are visible even among immigrants with two decades in the United States. The gain in cultural assimilation depicted in Figure 2 thus reflects a broad improvement shown by many immigrants, rather than the effects of a very recent decline in the arrival rate.

Figure 8. Assimilation by Years Since Immigration, 2000 and 2009

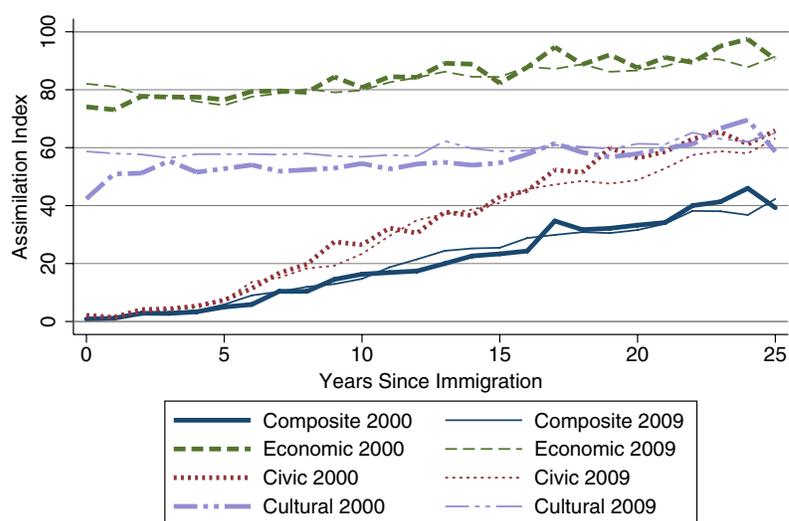
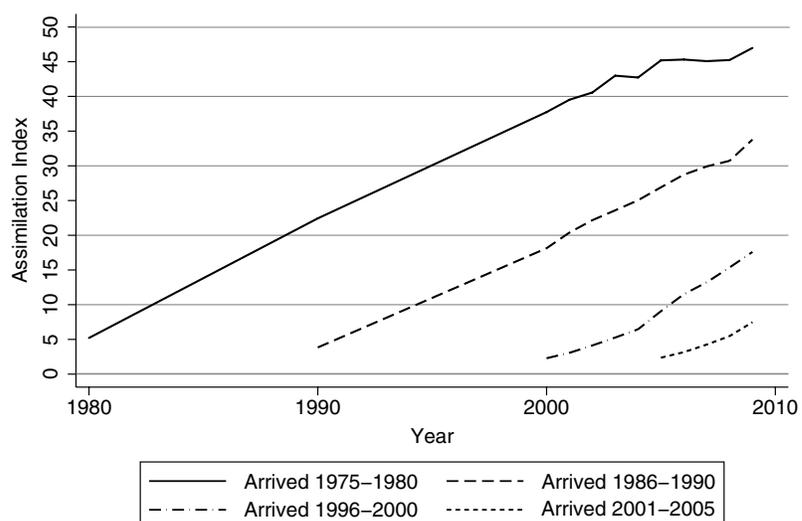


Figure 9. Progress of Individual Cohorts: Composite

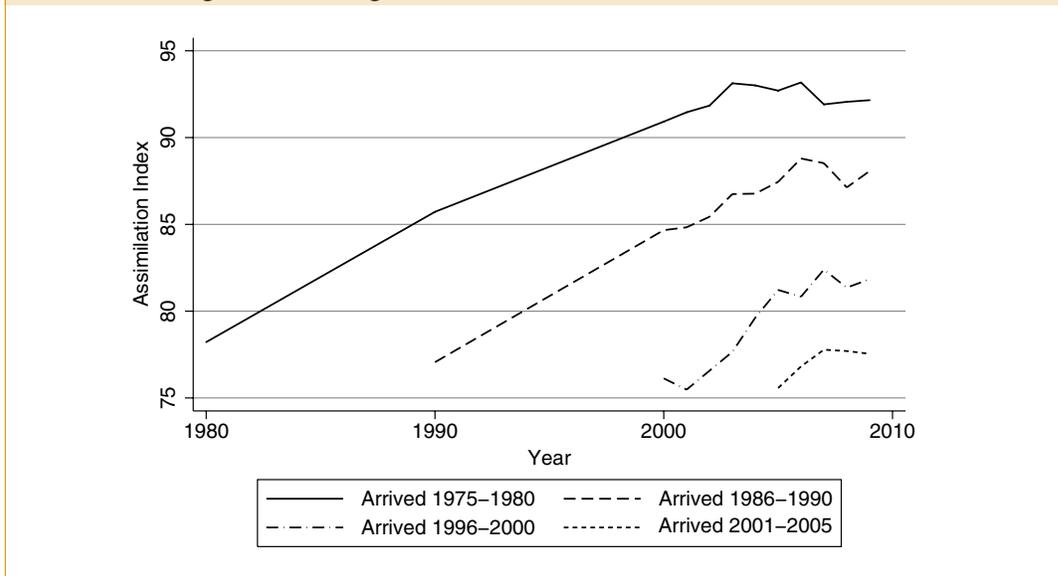


Civic assimilation shows no signs of improvement and, in fact, appears to have declined among immigrants with more than sixteen years' residence in the United States. The gain in civic assimilation seen in Figure 2 thus appears to be more purely a function of new immigrants' decreasing arrival rate.

At any single point in time, differences between recent arrivals and long-term residents might reflect either

the efficiency of the assimilation process itself or differences in the characteristics of the two cohorts at the time of arrival in the United States. Comparing a series of snapshots provided by census and American Community Survey (ACS) enumerations of the same group of immigrants, from their time of arrival forward, should be more revealing. Figure 9 shows the results of such an analysis for four groups of immigrants: those arriving, respectively, in the late 1970s, late 1980s, late

Figure 10. Progress of Individual Cohorts: Economic



1990s, and between 2001 and 2005. The upward tilt of each plotted line represents progress in assimilation over time. The four lines shown are close to parallel to one another, indicating that the rate of assimilation for recently arrived immigrants is comparable with that of their predecessors a generation ago. There is some evidence that the assimilation process for immigrants who arrived in the late 1970s has slowed recently, but for more recent arrivals, the dominant trend has been a modest acceleration.

Figure 10 illustrates the impact of the 2007–09 recession on economic assimilation. After more than two decades of steady progress, the cohort of immigrants arriving in the late 1970s experienced in 2007 a shock that had repercussions lasting two years. This shock was severe enough to erase what modest gains this group had posted over the preceding four years. Similar breaks in what had been trends of steady progress for more recent cohorts appear as well. Immigrants arriving in the late 1990s underwent an unmistakable shock during the recession of 2001, progressed fairly steadily from its conclusion until 2007, and now find themselves in roughly the same position relative to natives that they occupied in 2005. Immigrants arriving between 2001 and 2005 show progress up until 2007 and stagnate thereafter. But that cohort doesn't appear to have lost ground, perhaps because the events

of 2007 drove many of its members to return to their home countries.

The economic assimilation index understates the absolute degree of hardship experienced by immigrant families because it is a representation of the differences between the foreign-born and the native-born. As difficult as the recession has been for native-born workers, this evidence shows that it has been worse still for the foreign-born.

Figures 11 and 12 demonstrate that the recession has had no comparably negative impact on the cultural and civic assimilation of immigrants, respectively. Cultural assimilation has, if anything, accelerated during the downturn. This acceleration most likely reflects return migration: in the face of a weak job market, the first immigrants to leave are those who lack the linguistic and other cultural skills needed for searching actively for new opportunities. The phenomenon is most apparent among recent arrivals: those arriving in the early 2000s now appear to be more culturally integrated than their predecessors of the late 1990s, despite the fact that the former group has spent at least five more years in the United States. While return migration, particularly by the most recent arrivals, seems to be the most plausible explanation for this trend, it is also possible that the recession led some immigrants to

Figure II. Progress of Individual Cohorts: Cultural

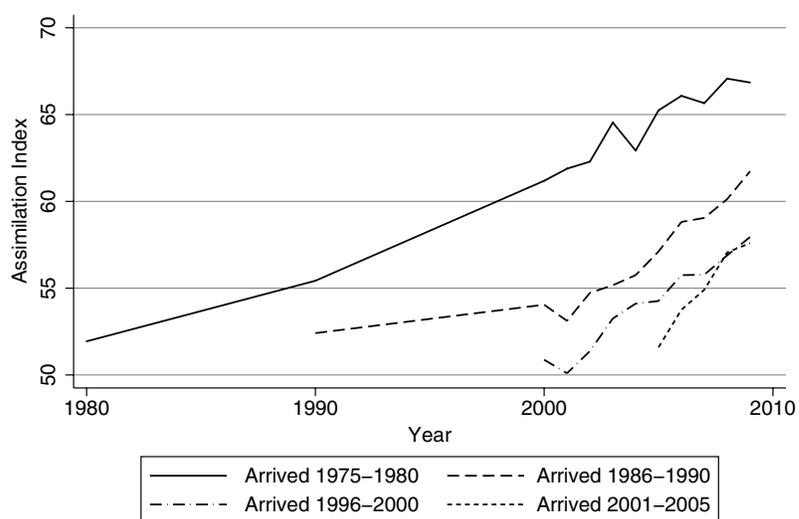
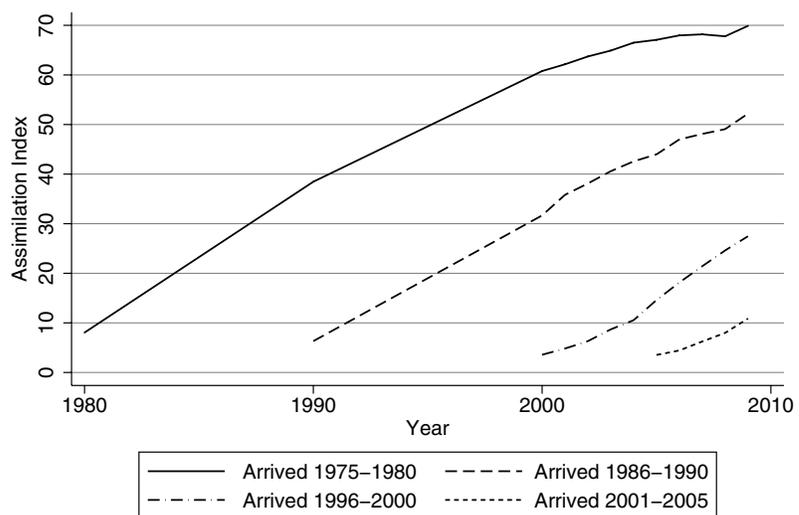


Figure I2. Progress of Individual Cohorts: Civic



improve their employment prospects by developing their English-language skills.

Civic assimilation displays very little sensitivity to macroeconomic conditions. Given the lengthy waiting periods that obtaining legal permanent residence and citizenship requires, it is unlikely that many immigrants' decision to become naturalized is sensitive to short-run fluctuations in economic circumstances.

The overall trend toward higher civic assimilation in the foreign-born population reflects the scarcity of recently arrived immigrants, not any change in behavior by immigrants already in the country.

In all, the evidence presented here shows that the "Great Recession" of 2007-09 resulted in a narrowing of cultural and civic differences between immigrants and natives, in large part because the weak job mar-

ket reduced the inflow of newly arrived migrants and increased the outflow of individuals who had not yet established themselves culturally or economically. The immigrant population is now more assimilated than it was a decade ago, despite the fact that the foreign-born population increased by about 25 percent over the same time period. Gains in cultural and civic assimilation have not been accompanied by economic improvements. The scarcity of newly arrived immigrants has tended to boost economic assimilation of the immigrant population, but their relatively precarious position in a weak job market has offset this effect.

### 3. ASSIMILATION ACROSS DEVELOPED COUNTRIES: 1999–2001

The United States is not the only developed nation that has experienced sharp increases in legal and illegal immigration and been forced to deal with its disruptive effects. A notorious episode of civil unrest began within North African immigrant communities outside Paris in 2005 and spread quickly to other urban areas across France. Immigrant riots occurred in Brussels the following year. Germany has been home to more than a million Turks since the mid-1970s; restrictive citizenship laws have prevented many of these migrants and their children from participating in civil society. Illegal immigration from North Africa is a significant concern in Spain and Italy. The Australian navy routinely intercepts boatloads of refugees in the Indian Ocean, and has recently toughened its asylum policy to exclude larger numbers of applicants and deter others from applying.

These immigration-related frictions in every corner of the developed world have common origins and elicit common responses. Immigrants relocate to take advantage of superior economic opportunities and, in many cases, to escape brutal regimes or violent conflict. For Guatemalans, Sri Lankans, and Moroccans alike, the developed world offers sanctuary. In the developed world, immigration itself can be a source of conflict and controversy. Do immigrants take jobs away from natives? Do they place undue burdens on the welfare state? Do they threaten to create permanent cultural minority groups that weaken the social ties of every-

one else? These are common refrains in debates over American immigration policy, and they are echoed throughout the developed world.

In many respects, the debates are more heated abroad. The link between ethnicity and national identity in the United States has been weakened by centuries of multiethnic migration. Descendants of southern European, Asian, Latin American, and African immigrants enjoy an undisputed claim to American national identity. In Europe, by contrast, national identity and ethnicity are inextricably intertwined. The child of a Chinese immigrant in the United States enjoys a path to American national identity that is not shared by his cousins in Italy, Germany, or France.

Does the United States deserve its reputation as a more culturally fluid society? Are the Mexicans residing here more or less integrated than the North Africans of Spain and Italy? What can the experiences of these other nations tell us about the likely impact of immigration policy reforms here? This report examines these questions by applying the methodology of the assimilation index to a set of nine nations. As noted in section 1 above, the international comparisons make use of data collected by independent statistical agencies within the nine nations from 1999 to 2001. These data are harmonized and released by the Integrated Public Use Microdata Series (IPUMS) project, the same organization that provides U.S. data for the study of American assimilation over time.<sup>3</sup> As in the domestic version, I computed assimilation using data on males and females between the ages of twenty-two and sixty-five.

Inclusion in the analysis is determined primarily by data availability. Immigration is a major concern in nations such as Australia, where a quarter of the population was born abroad, as well as in almost every nation in Europe. Exclusion of nations such as Germany, Sweden, or even the labor-importing nations of the Arabian peninsula does not imply that the challenges that these nations face are uninteresting. Although limited to a small set of countries, the international study of assimilation does promise to reveal important lessons for the crafting of rational immigration policy in the United States and abroad.

To precisely compare the assimilation of immigrants in all these countries, a common set of factors had to be used. The set of factors available in each of the nine nations consists of:

- Marital status
- Employment status (the effect of which is permitted to vary by gender)
- Homeownership
- Citizenship

This set is smaller than the one used to compute the index for the United States alone. Since the assimilation index is based on an algorithm measuring the ability to differentiate immigrants and natives, and this ability improves as more factors are incorporated, the international version of the U.S. assimilation index will be higher than the version used for domestic comparisons. Importantly, the international assimilation index must omit information on earnings, educational attainment, and linguistic ability because this information is not recorded equivalently by all nine nations in the study. Indeed, several of the comparison nations—Canada and Switzerland, most prominently—have more than one official language.

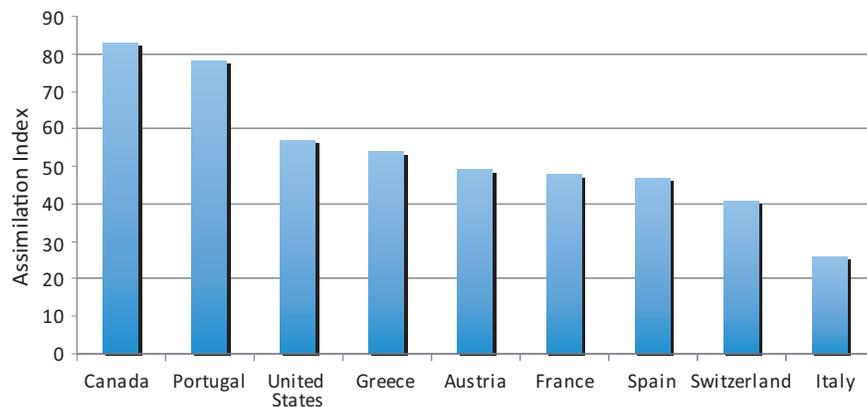
The study's basic results appear in Figure 13. Of the nine nations in the study, immigrants in the United States have the third-highest level of assimilation. The highest assimilation levels overall are found in Canada, where, as in the United States, the tie between ethnicity

and national identity has been weakened by broad-based immigration dating back a century or longer. As will be seen below, the high rates of assimilation in Canada also reflect elements of Canadian immigration policy, including an emphasis on recruiting relatively affluent and skilled emigrants and relatively rapid and easy naturalization.

Of the seven European nations included in the survey, assimilation is highest in Portugal—the only European country with assimilation levels above the United States—and lowest in Italy. Portuguese immigrants hail predominantly from the nation's former colonies in Latin America, Africa, and Asia, and nationals of these colonies were, in many cases, offered Portuguese citizenship at the time of independence. Naturalization for everyone else can take place after six years in residence, a shorter amount of time than many other European nations require. Colonial ties quicken assimilation because they effectively start the process in the origin country, through adoption of the host country's language and customs and, in some cases, by offering citizenship in it. In the United States, many of the most assimilated large immigrant groups hail from countries with a legacy of American intervention: the Philippines, Cuba, South Korea, and Vietnam.

Assimilation levels in Greece, Austria, France, and Spain are roughly the same and only slightly below those in the United States. After Italy, assimilation is lowest in Switzerland. Again, naturalization law may

Figure 13. International Assimilation Index, 1999–2001



be at least partly responsible: the standard waiting period for naturalization is ten years in Italy and twelve in Switzerland.

Although the foreign data are not rich enough to permit computation of economic, cultural, and civic assimilation indexes, examination of specific indicators permits some insight into the variation in immigrant experiences according to destination. Figure 14 shows the difference in employment rates between native- and foreign-born males in the nine nations plus two more, the Netherlands and the United Kingdom, which collect information on employment status but lack other data items used to create the index. Here, positive numbers indicate that natives have higher employment rates, while negative numbers indicate that immigrants do. In most countries, native-born males are more likely to be employed than male immigrants. The most striking gaps occur in the Netherlands, where natives are more than 20 percentage points more likely to be employed than immigrants, and in France, where the gap stands at 10 percentage points. In the United States, native-born males are 5 percentage points more likely to be employed—a gap similar to those observed in the U.K. and Switzerland. Native-foreign employment gaps are fairly small in Canada, Austria, and Spain. In three southern European countries—Portugal, Greece, and Italy—immigrants actually boast higher employment rates than natives. To some extent, this tells us something about the employment patterns of natives;

among native-born males in the countries studied, Italy's have the lowest employment rate. Economically speaking, American immigrants do not suffer the difficulties of migrants in the Netherlands or France, nor do American natives' work patterns exhibit the symptoms of endemic underemployment evident in certain southern European countries.

Homeownership is considered an indicator of economic assimilation in domestic analyses; it is not difficult to argue that the decision to purchase a home carries cultural and civic implications as well. Figure 15 shows the gap in homeownership rates between the native- and foreign-born in the nine countries included in the international index comparison, plus the United Kingdom, which collects homeownership information but not other kinds of information used to compute the index. Four European nations—Greece, Italy, Austria, and Spain—exhibit profound differences in homeownership rates between immigrants and natives. In each of these countries, the gap exceeds 35 percentage points. The 20-percentage-point gap in the United States is close to the levels in Switzerland, France, and the United Kingdom. Immigrants and natives are most similar in this respect in the two countries with the highest levels of assimilation overall, Portugal and Canada. It is important to recall that the data used here were collected between 1999 and 2001, well before the widespread run-up in housing values, which was accompanied, in many countries, by a temporary rise in the homeownership rate.

Figure 14. Immigrant/Native Employment Rate Gap

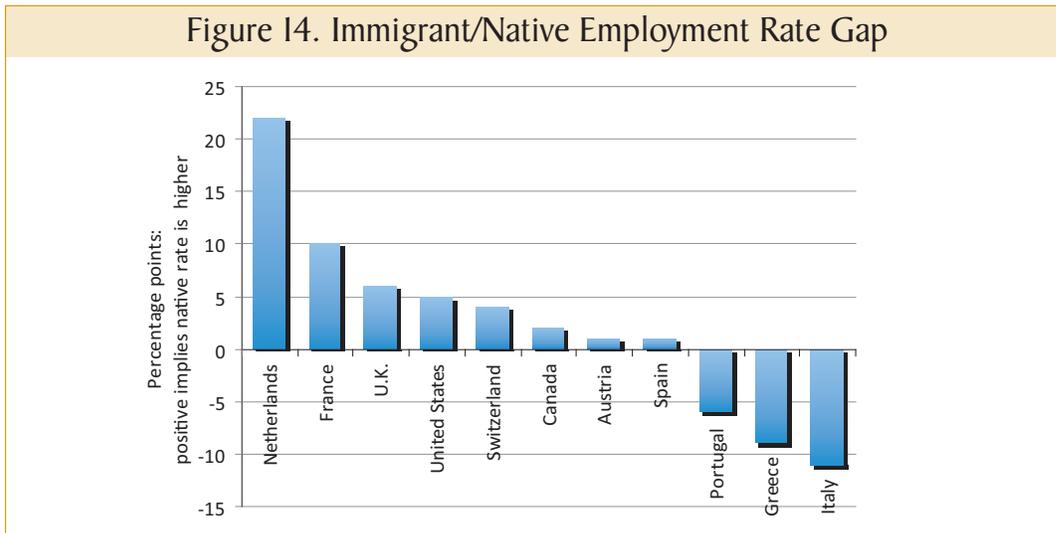


Figure 15. Homeownership Gap

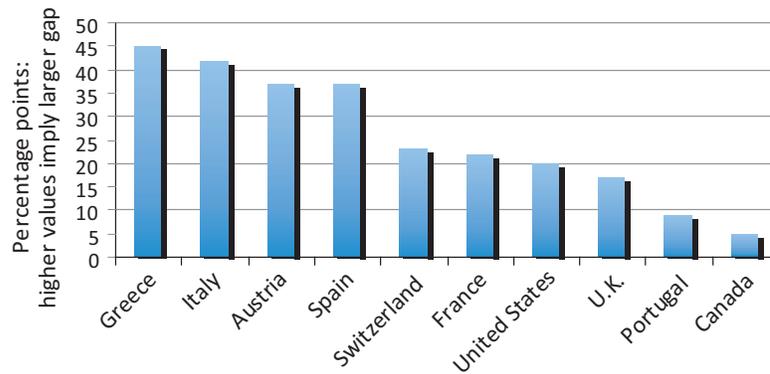
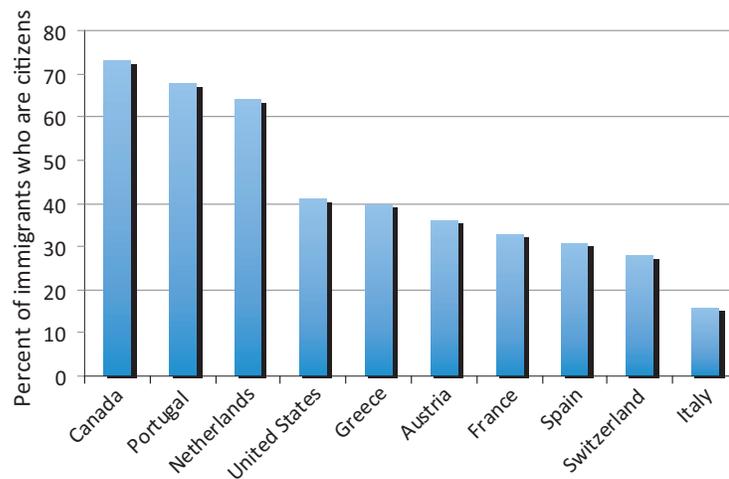


Figure 16. Naturalization Rates



The strong link between naturalization patterns and assimilation is confirmed in Figure 16, which shows citizenship rates for the nine assimilation index nations plus the Netherlands, which collects information on citizenship but lacks the full set of data required for computing the index. The nations' rank in terms of naturalization is identical to the index rank, with the sole exception of the Netherlands, which has the third-highest naturalization rate, far surpassing the nations below it.

With one exception, the higher a nation's rank in terms of naturalization, the shorter the amount of time an applicant must be in residence before he can obtain citizenship. In Canada, where more than 70 percent of immigrants have been naturalized, the waiting period

is only three years. The standard waiting period is six years in Portugal and five in the Netherlands. In four of the five nations at the bottom of the list, the standard residency period is at least ten years. The sole exception is France, where naturalization rates are relatively low despite the fact that the typical residency requirement is just five years.

In the United States, the standard residency requirement for naturalization is five years upon acquisition of legal permanent residency (a "green card"). Queues for permanent residency can add more than a decade to this wait. It is fair to conclude that naturalization rates in the United States would increase if the residency requirement were relaxed. The goal of naturalization policy is not necessarily to maximize the naturaliza-

tion rate, however. A longer waiting period, coupled with proof of “moral character” and English-language mastery, could have the desirable effect of altering the behavior and decisions of immigrants in ways that might well be favorable to the health of the nation.

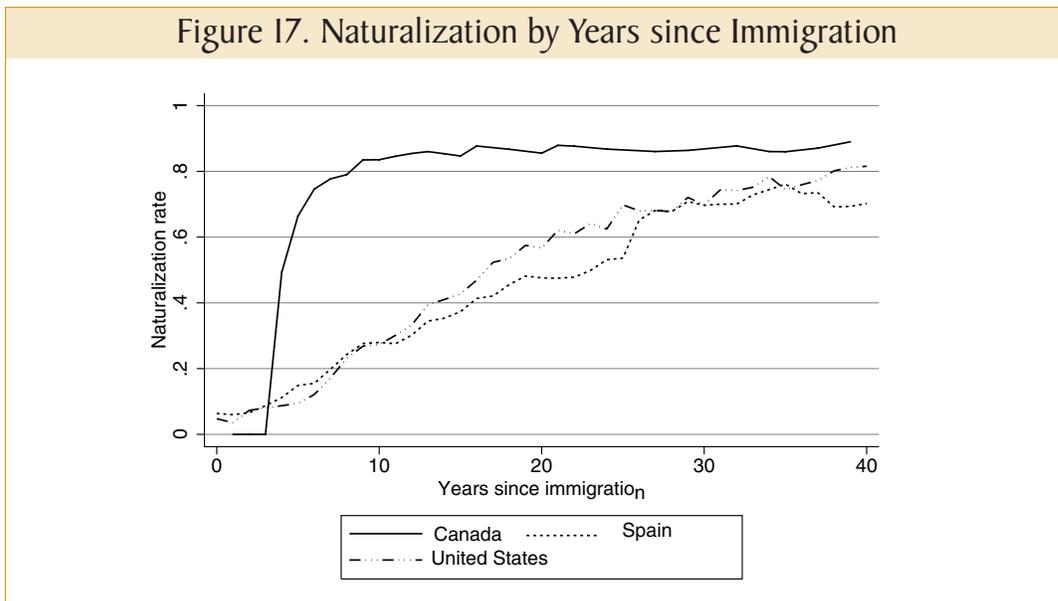
The relationship between naturalization policy and citizenship becomes abundantly clear in Figure 17, which shows the link between years since immigration and assimilation for immigrants in the three countries that report year of arrival: the United States, Canada, and Spain. In Canada, half of all immigrants are naturalized within five years. It takes an extra decade for immigrants in the United States to reach that level. Progress toward citizenship in the United States is quite similar to that in Spain, which has a ten-year standard residency requirement. The U.S. naturalization rate is undoubtedly depressed by the presence of illegal immigrants, who are accounted for in the American Community Survey but become eligible for naturalization only if amnesty legislation, such as the Immigration Control and Reform Act of 1986, is enacted. It happens that Spain has also experienced significant illegal immigration in recent decades.<sup>4</sup>

Overall, the international assimilation index and other methods of comparison suggest that the United States is by no means unique in facing challenges posed by immigration. By several measures, the gap between

natives and the foreign-born is more severe in many European countries. Canada, known for giving priority to highly skilled migrants in its immigrant admission policy, and perhaps less known for its relatively permissive naturalization policy, offers the most instructive example of a nation whose immigrants integrate more rapidly than those in the United States.

#### 4. SAME ORIGIN, DIFFERENT DESTINATION: TRACKING THE RELATIVE PERFORMANCE OF SPECIFIC GROUPS

Comparing the assimilation of immigrants by country provides a basic sense of the differences in the depth of divisions between the native- and foreign-born. Such a comparison does not necessarily shed light, though, on the differences in experiences of similar immigrants in different host countries. Some nations may improve their assimilation index value by excluding certain types of migrants; conversely, nations that are very good at actively assimilating immigrants may have low index values because they attract immigrants who have further to go on the path toward integration. This section attempts to address this attribution problem. Do Canada and the United States have more assimilated immigrants because the path to integration is more rapid in those two countries, or because they attract a different type



**Table I. Country Averages for the Native-Born (1999–2001)**

Destination Country	Male Employment Rate	Female Employment Rate	Homeownership Rate
Austria	78	63	62
Canada	80	73	72
Greece	75	40	80
Italy	71	44	73
Portugal	78	60	77
Spain	72	42	85
Switzerland	89	70	43
United Kingdom	78	65	74
United States	79	68	71

of immigrant? To explore this question, this section will focus on the experiences of immigrants hailing from regions of common origin who elect to settle in different countries.

In the course of this discussion, reference will be made to statistics, including the employment and homeownership rates of immigrants from particular places of origin who chose particular countries as their destination and are residing there. For purposes of comparison, Table 1 provides some basic information on the variability in these indicators among native-born residents of each destination country. As the table shows, there are meaningful differences among these countries in male and female employment and homeownership rates.

### Immigrants from the Muslim World

Across the developed world, much antipathy is directed at migrants born in predominantly Muslim countries. Turks in Germany, North Africans in Spain, France, and Germany, and Pakistanis in the United Kingdom are prime examples. A majority of Swiss voters supported a 2009 referendum banning the construction of any new minarets. In the United States, concern regarding Muslim immigrants has lingered since the terrorist attacks of September 11, 2001. Is there a danger in any developed nation of a persistent Muslim underclass? In which countries are immigrants from countries with predominantly Muslim populations proceeding fastest on the path to the economic and civic mainstream?

There are about fifty majority-Muslim countries worldwide.<sup>5</sup> Perhaps the steadiest source of Muslim migrants is the continuous swath of territory from Morocco in the west to Pakistan in the east, incorporating the northern tier of African nations, the Middle East from Turkey to the Arabian peninsula, and portions of south and central Asia. The largest single majority-Muslim country is Indonesia. Predominantly Muslim nations are also found in Southeast Asia, the former Soviet Union, West Africa, East Africa, and the Balkans. This comparative analysis will aggregate immigrants from all these countries, reserving some attention at the end to more regionally precise comparisons.

The nation-of-origin strategy does lead to some erroneous categorization, to be sure. There are more Muslims in India than Pakistan, for example, but they form only a small proportion of the population. Many majority-Muslim countries have significant Christian minorities, and these groups may be disproportionately likely to emigrate. Few countries collect official data on religion. Among the nations represented in Figure 13, Canada and Portugal collect information on both country of birth and religion. As noted above, Portugal is an unusual case because many of its immigrants were born in former colonies. In Canada, the assimilation index can be computed for all immigrants born in majority-Muslim countries as well as Muslim immigrants born in majority-Muslim countries. The first computation method produces a higher index number (85 versus 79). Although there is no guarantee that the same pattern holds in all countries, this evidence does suggest that the use of country of birth as a proxy for religion

Figure 18. Assimilation of Muslim Immigrants

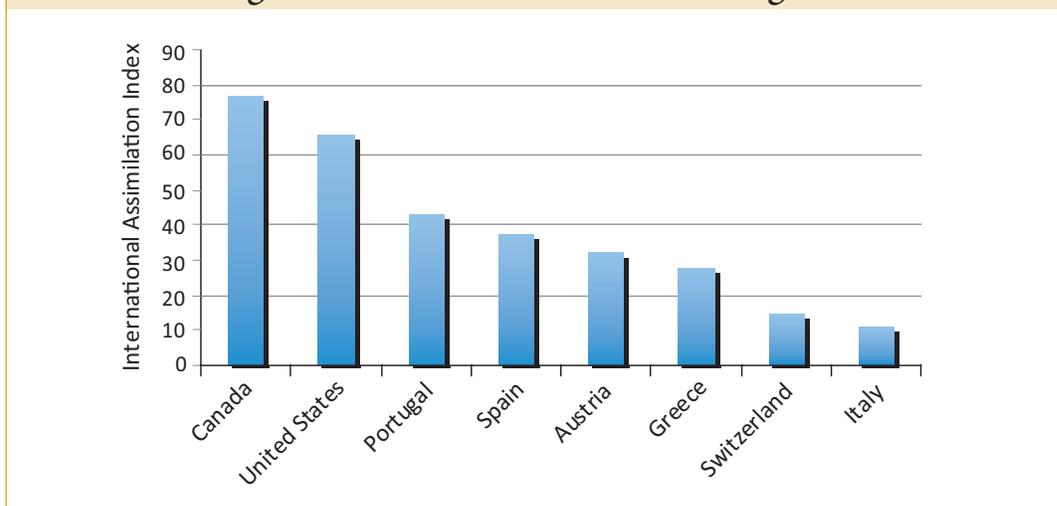


Table 2. Indicators of Muslim Immigrant Assimilation in Nine Countries

Destination Country	Male Employment Rate	Female Employment Rate	Homeownership Rate	Naturalization Rate
Austria	79	50	12	25
Canada	73	49	45	67
Greece	87	44	22	20
Italy	82	26	19	7
Portugal	82	53	47	36
Spain	74	38	38	25
Switzerland	80	49	6	10
United Kingdom	60	23	53	n/a
United States	78	50	48	48

Note: Muslim immigrants are identified by country-of-birth in all nations except Switzerland. Swiss data do not include country-of-birth but do include religion.

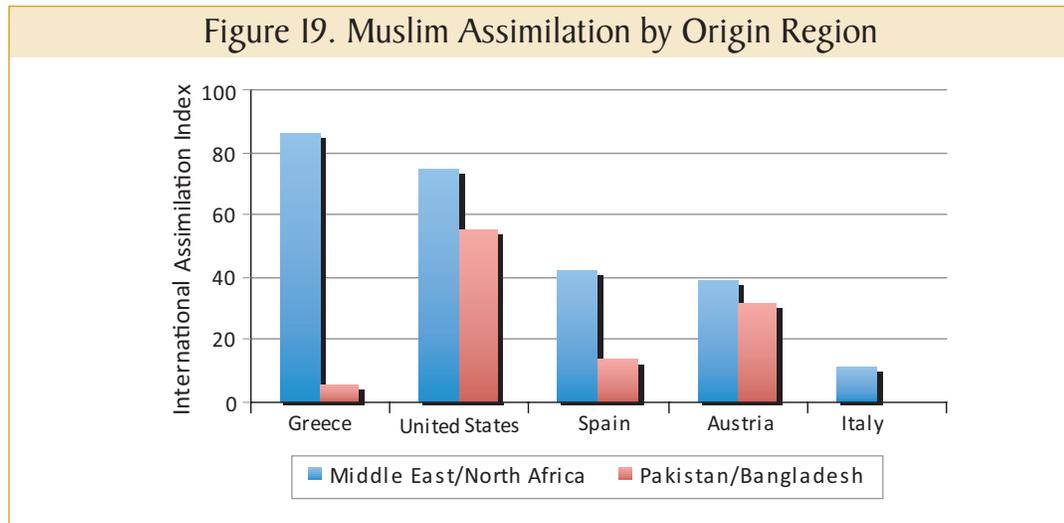
leads to a slight overstatement of Muslim assimilation. For brevity's sake, the remainder of this report will use the term Muslim immigrant to refer to either immigrants born in predominantly Muslim nations or to those who are explicitly identified as adherents of Islam by a host country that collects that information.

The assimilation index can be computed for Muslim immigrants, or immigrants born in predominantly Muslim countries, for eight destination countries that record information on either country of birth or religion.<sup>6</sup> Figure 18 shows the results. The index, which results from the use of the same methodology in all eight nations, varies widely, from a high value of 77 in Canada to a low of 11 in Italy. The Canadian index

value is lower than either of the statistics mentioned in the preceding paragraph because it is this paper's practice to code immigrants as Muslim if they report it as their religious affiliation or they report birth in a predominantly Muslim country. In the United States, immigrants born in predominantly Muslim nations are more assimilated than the rest of the foreign-born population, and this is true in the United States alone. Moreover, its Muslim-nation immigrants' index value of 66 is second only to that of their peers in Canada and is significantly higher than that of their peers in every European country included in the analysis.

Table 2 compares particular characteristics of Muslim immigrants in nine host countries. Employment rates

Figure 19. Muslim Assimilation by Origin Region



for male adults range from 60 percent in the United Kingdom to 87 percent in Greece. The employment rates of male Muslim immigrants in the United States are actually higher than those in Canada but lag behind those in four other nations. Employment rates among female Muslim immigrants are relatively low—only 23 percent in the United Kingdom and around 50 percent in five of the nine nations, including the United States. As we will see below, low employment rates among adult women immigrants are common among many ethnicities and destinations, but the rates for Muslim women are particularly low.

The homeownership rate of Muslim immigrants in the United States is second only to that found in the United Kingdom, and their naturalization rate is second only to that found in Canada. The latter rate is much higher than that of the next-ranked country, Portugal, but much lower than Canada's. The rate in the United States in both categories is identical—not quite half of all Muslim immigrants reside in owner-occupied homes and have become citizens.

These statistics place many European worries regarding the integration of Muslim immigrants into stark perspective. In Switzerland, where identification of Muslim immigrants is based solely on data on religion, as there is no information on country of birth, only 10 percent of Muslim immigrants are naturalized citizens, and only 6 percent of the Muslim immigrant population reside in an owner-occupied dwelling. In Spain,

where 85 percent of native-born residents owned their home at the time of the most recent census, in 2001, the homeownership rate among Muslim immigrants was only 38 percent. Only 25 percent of Muslim immigrants in Spain are naturalized citizens. In Austria, where 62 percent of native-born adults owned their home in 2001, the ownership rate for Muslim immigrants was only 12 percent. The naturalization rate in Austria is also only 25 percent.

The nations in this analysis do not necessarily attract immigrants from the same parts of the Muslim world. In southern Europe, North Africans predominate; in the United Kingdom, Pakistan and Bangladesh are the most common countries of origin. Figure 19 shows the results of stratifying the analysis by region of origin. Five nations in the sample have significant numbers of immigrants from the Middle East and North Africa. Within this set, the assimilation index ranges from 11 in Italy to 86 in Greece. The elevated Greek index reflects the high concentration of Turkish-born residents, many of whom are of Greek ethnicity. Though lower than it is in Greece, the assimilation of Middle Eastern and North African immigrants in the United States is far higher than it is in Italy, Austria, or Spain. Much of the difference likely reflects the self-selection caused by the greater difficulty of migrating across the Atlantic Ocean than the Mediterranean Sea. Only relatively wealthy and inordinately motivated migrants are likely to make the lengthier and costlier journey.

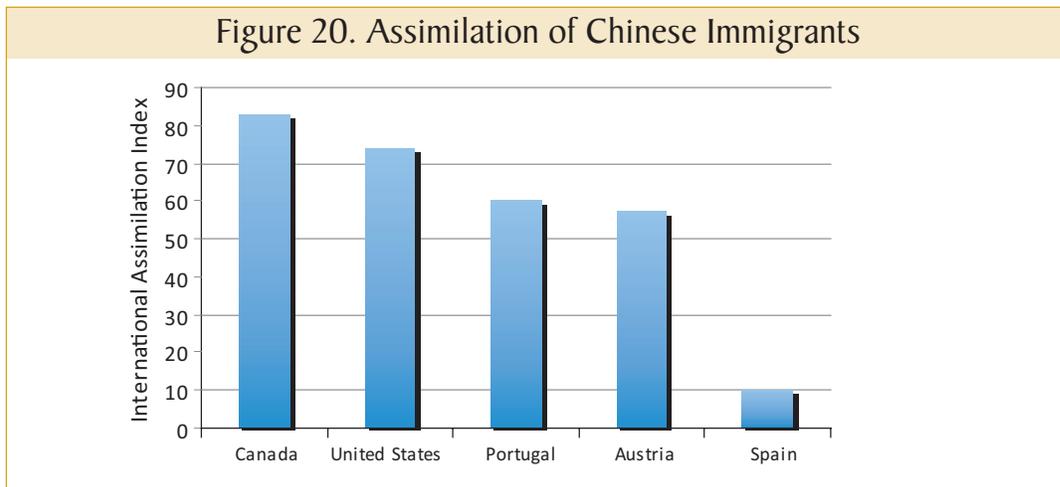
Four nations have Pakistani or Bangladeshi populations large enough to warrant comparison. These South Asian Muslim groups tend to be less assimilated than immigrants from North Africa and the Middle East in any destination country. Once again, the United States stands far above European nations, where these groups show an index value of 55, significantly higher than the values of 32 in Austria, 14 in Spain, and 6 in Greece.

Another method of placing integration of Muslim immigrants in European countries in perspective is to compare the index values for these groups with those for the United States' least assimilated major group: immigrants from Mexico and Central America. According to the international version of the assimilation index, the U.S. value for this group is 36. Thus, particularly in light of the possible overstatement of Muslim assimilation, a result of the use of country of birth as a proxy for religion, it is reasonable to infer that the Muslim assimilation problem in Austria, Greece, Italy, and Switzerland (and presumably other nearby countries without the data required to be included in this study) is actually worse than the Mexican assimilation problem in the United

States. In Spain and Portugal, assimilation among Muslim immigrants is roughly equivalent to that observed among Mexicans and Central Americans in the United States. Interestingly, the assimilation of Mexicans and Central Americans living in Spain is quite high, showing an index value of 81. Mexicans and Central Americans do not belong to a linguistic minority in Spain, of course, and the financial prerequisites for transoceanic migration are greater than those attending a trip across a land border. In short, the evidence consistently shows that geographical proximity of origin and destination is associated with low levels of assimilation.

### Other Comparisons

Several other nations or regions of the world have seen outflows to developed countries in recent decades. China, the world's most populous nation, has large expatriate communities in several nations included in this study. Figure 20 shows the international assimilation index for Chinese immigrants residing in five nations: Austria, Canada, Portugal, Spain, and the United States. Mirroring the results for immigrants more



**Table 3. Indicators of Chinese Immigrant Assimilation in Five Countries**

Destination Country	Male Employment Rate	Female Employment Rate	Homeownership Rate	Naturalization Rate
Austria	80	60	29	41
Canada	72	58	76	73
Portugal	85	77	59	51
Spain	76	58	39	7
United States	77	60	62	53

Figure 21. Assimilation of Indian Immigrants

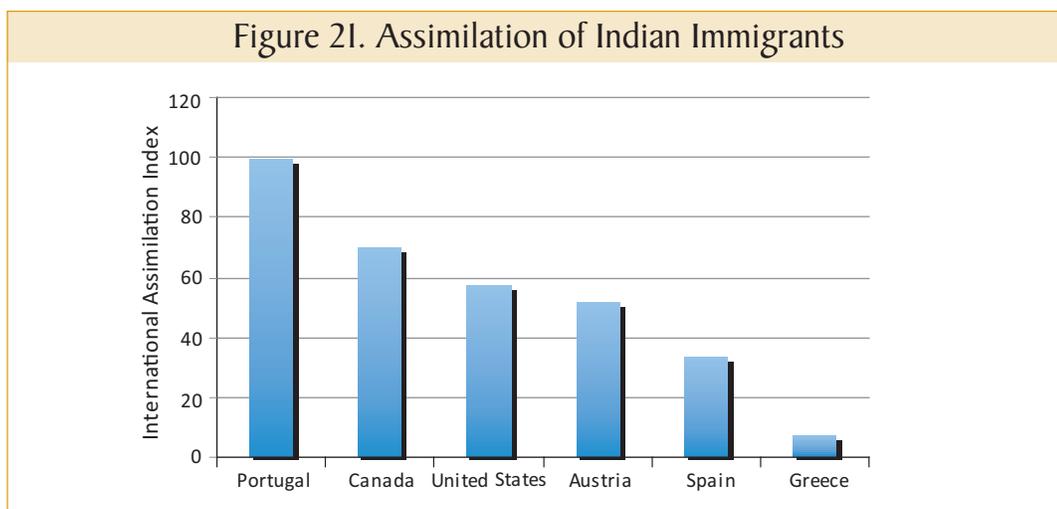


Table 4. Indicators of Indian Immigrant Assimilation in Seven Countries

Destination Country	Male Employment Rate	Female Employment Rate	Homeownership Rate	Naturalization Rate
Austria	81	63	14	42
Canada	82	61	72	62
Greece	91	53	13	6
Portugal	81	37	63	78
Spain	79	29	51	21
United Kingdom	75	51	78	n/a
United States	86	54	52	41

generally, assimilation levels are higher in Canada and the United States than in Europe. Within Europe, Portugal, which has long-standing colonial ties to China, has the most assimilated Chinese population, followed closely by Austria.

Table 3 compares the Chinese expatriate communities in five nations on the basis of a set of summary statistics that are the same as those in Table 2. Male employment rates cluster between 72 and 85 percent; female employment rates are higher across the board for Chinese-born immigrants than for those born in Muslim nations. Their homeownership rates are quite high in Canada (higher than those for the native-born population, in fact), somewhat lower in the United States and Portugal, and well below national averages in Spain and Austria. Chinese-born Canadians also have high naturalization rates; the low rate of citizenship among Chinese immigrants in Spain largely explains their low assimilation index value.

India, the world's second-most-populous nation, has large expatriate communities in six sample host nations. Figure 21 shows that the assimilation index for Indian-born immigrants ranges from a low of 7 in Greece, to a high of 99 in Portugal. Presumably, many Portuguese residents reporting Indian nativity were born in the state of Goa, which remained under Portuguese control more than a decade after partition.<sup>7</sup> Aside from Portugal, the most assimilated Indian immigrants are found in Canada and the United States, followed by Austria, Spain, and Greece.

Table 4 compares specific assimilation indicators in seven nations: the six represented in Figure 21 plus the United Kingdom, which does not supply all the information necessary for computing the assimilation index. Employment rates for adult Indian males tend to be high across the board, with the lowest rate (75 percent) found in the United Kingdom. At 86 percent, the male employment rate for Indian im-

Figure 22. Assimilation of Southeast Asian Immigrants

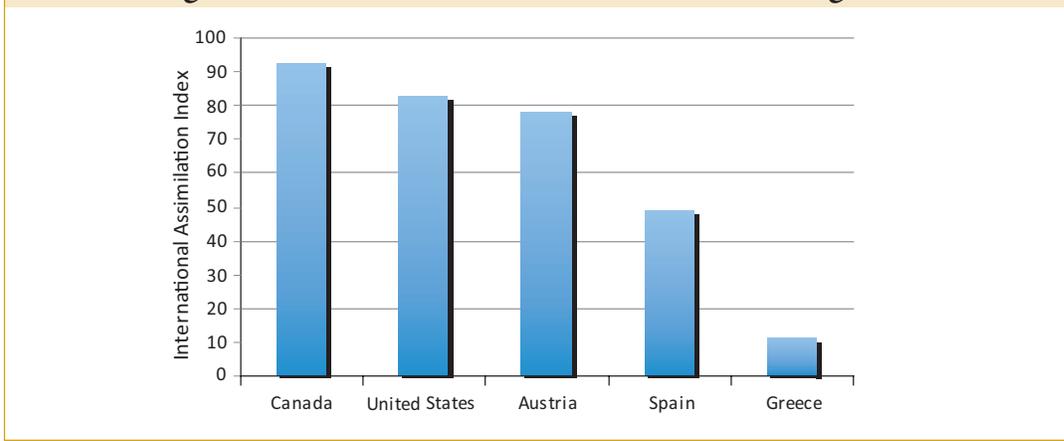


Table 5. Indicators of Southeast Asian Immigrant Assimilation in Five Countries

Destination Country	Male Employment Rate	Female Employment Rate	Homeownership Rate	Naturalization Rate
Austria	80	70	21	60
Canada	81	74	63	80
Greece	95	82	24	9
Spain	75	62	45	34
United States	73	63	61	59

migrants in the United States is second only to their rate in Greece. Female employment rates among adult Indian immigrants are generally moderate, with a high rate of 63 percent in Austria and a low rate of 29 percent in Spain. Just over half of Indian-born female adults in the United States are employed. Homeownership rates vary widely, from lows of 13 percent in Greece and 14 percent in Austria to 78 percent in the United Kingdom and 72 percent in Canada, with the United States falling in the middle of the range, at 52 percent. Finally, citizenship rates among Indian-born immigrants are quite high in Portugal, for reasons explained above, but otherwise follow a familiar pattern: elevated in Canada, a bit lower in the United States and Austria, and fairly low in Spain and Greece.

In the United States, immigrants from Southeast Asia—most prominently represented by natives of the Philippines and Vietnam—stand out as quite highly assimilated. Is this a uniquely American pattern, or do migrants from the same region tend to be well integrated no matter where they reside? Figure 22 shows that

Southeast Asians are not always strongly assimilated but do tend to be more integrated than other groups regardless of where they reside. The assimilation index for Southeast Asians reaches a value of 93 in Canada and 83 in the United States. The group’s experience in Europe has been quite varied, with index values ranging from only 11 in Greece to 78 in Austria. In each of the five countries reported, the assimilation index for Southeast Asians exceeds that of either Indian or Chinese immigrants. Further investigation will reveal that one factor, female labor-force participation, explains much of the difference.

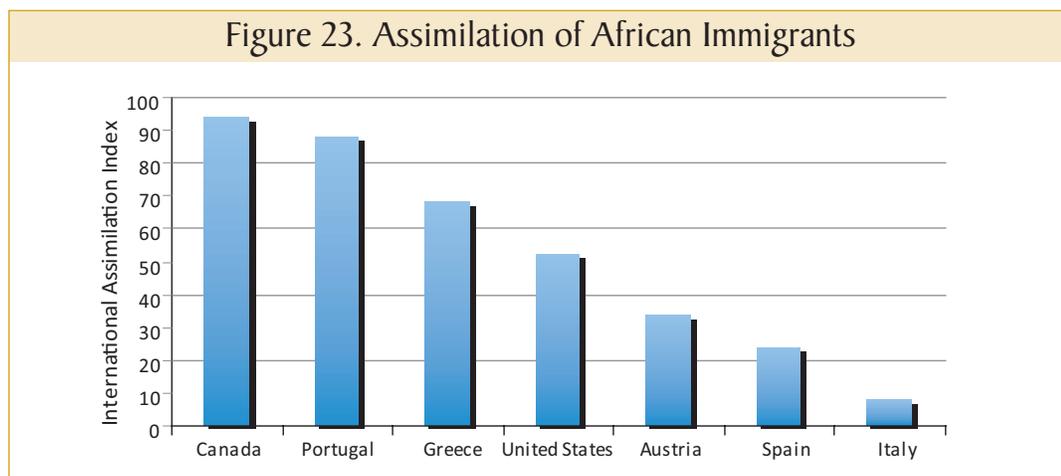
Table 5 reveals much of the recipe for high assimilation levels among Southeast Asian immigrants worldwide. Employment rates for male adults born in this region tend to be similar to those of other groups reviewed to this point, but not in the United States, where the employment rate, which is 73 percent, is low compared with that of other groups. Female employment rates, however, are high relative to other groups. More than 80 percent of adult female Southeast Asians in Greece work outside the home, as do nearly 75 percent resid-

ing in Canada. The lowest rates of female employment for Southeast Asians—those found in the United States and Spain—are greater than the highest rates observed for female immigrants from Muslim countries or India anywhere in the sample. Rates of homeownership and naturalization vary widely across destinations. Both are quite high in Canada and the United States; both are very low in Greece.

The importance of female employment patterns in explaining the assimilation of Southeast Asians reflects, to some extent, the degree of gender equality in the region. The Organisation for Economic Co-operation and Development (OECD) released a ranking of gender equality in 102 developing countries in 2009.<sup>8</sup> China appeared in eighty-third place on this list, and India placed ninety-sixth. The nations of Southeast Asia did much better. The Philippines and Vietnam, the two most significant Southeast Asian origin countries represented in the United States, placed seventh and thirty-first, respectively. Indonesia, the most populous

nation in the region, placed fifty-fifth. The evidence suggests that immigrants bring along with them the gender norms of their home countries, which are often at odds with those of the developed world.

Between 1990 and 2009, as the foreign-born population of the United States doubled, the population of African-born immigrants more than quadrupled, to roughly 1.5 million. While some of these immigrants hail from the Muslim nations of North Africa discussed earlier, a large number originate in sub-Saharan Africa. Figure 23 shows dramatic variation in assimilation of these southern African immigrants by destination country, from a high of 94 in Canada to a low of 8 in Italy. Africans in the United States lag behind those residing in several other countries. The high rate of assimilation in Canada is not surprising, but the African assimilation index of 52 in the United States falls below the index values of Africans in Portugal and Greece. Most African immigrants in Portugal were born in the former Portuguese colonies of Angola and Mozambique and



**Table 6. Indicators of Sub-Saharan African Immigrant Assimilation in Seven Countries**

Destination Country	Male Employment Rate	Female Employment Rate	Homeownership Rate	Naturalization Rate
Austria	64	54	11	26
Canada	80	64	53	80
Greece	83	57	36	50
Italy	84	54	17	5
Portugal	84	73	69	76
Spain	73	47	31	16
United States	80	69	38	37

Figure 24. Assimilation of Eastern European Immigrants

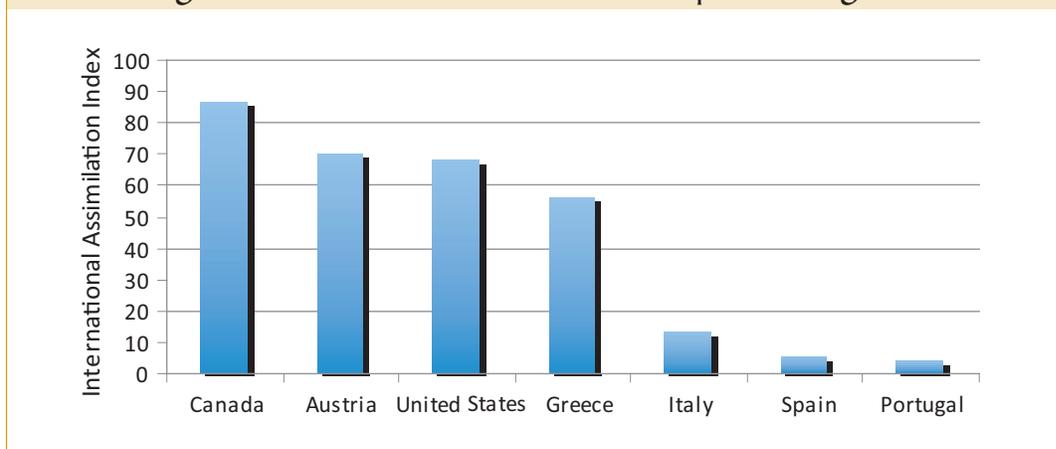


Table 7. Indicators of Eastern European Immigrant Assimilation in Eight Countries

Destination Country	Male Employment Rate	Female Employment Rate	Homeownership Rate	Naturalization Rate
Austria	75	54	31	52
Canada	82	66	63	76
Greece	85	55	38	41
Italy	84	40	21	8
Portugal	97	79	23	3
Spain	76	55	26	3
United Kingdom	57	46	44	n/a
United States	78	59	53	48

enjoy advantages in that society similar to Goans'. The high degree of assimilation among Africans in Greece reflects the relatively high rate of naturalization noted below. Africans are relatively poorly assimilated in Austria, Spain, and Italy.

Table 6 shows the basic data underlying the assimilation index for sub-Saharan Africans. As in other cases, variation in naturalization rates is responsible for most of the differences in assimilation among destination countries. Only 5 percent of Africans in Italy possess Italian citizenship, while in Canada, 80 percent of Africans are naturalized. Employment rates for African males are similarly high in all countries except Austria and Spain. Female employment rates are highest in Portugal and the United States and lowest in Spain. Homeownership rates tend to be low among African immigrants—below 40 percent, except in Canada and Portugal.

In Europe, immigration from the less developed East to the more developed West is a frequent subject of discussion, with many commentators expressing concern that too many entrepreneurs and highly skilled workers are part of it. Eastern European immigrants are also numerous in the United States and Canada. Figure 24 shows dramatic differences in assimilation rates among destination countries. Eastern Europeans are well assimilated in Canada, Austria, and the United States but quite poorly integrated in Italy, Portugal, and Spain.

Once again, variation in naturalization rates among destination countries appears to explain these differences. Table 7 shows that 76 percent of Eastern Europeans in Canada are citizens, while 48 percent in the United States are and a scant 3 percent in Spain and Portugal. Employment rates of male and female Eastern Europeans are similar in the United States and several

other countries. Homeownership rates track citizenship closely: the highest rates are in Canada and the United States; the lowest in Italy, Portugal, and Spain.

## What We Learn from International Comparison

In this analysis of immigrant assimilation in a set of nine to eleven nations, the United States consistently ranks close to the top, whether in terms of the overall summary index or the individual indicators. Only Canada, which follows a very distinct immigration policy defined by a strong emphasis on workplace skills, a short waiting period for citizenship, and a liberal attitude toward dual citizenship, consistently outranks the United States. Portugal appears more assimilated according to the summary measure, but largely as the result of the high rate of assimilation among former Portuguese colonial subjects now residing in that country.

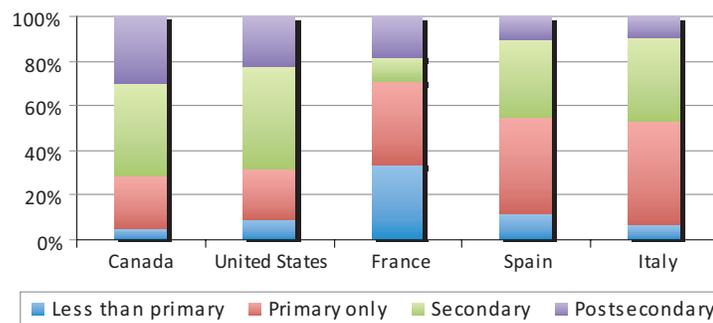
International comparisons also place the United States' experience with immigrants from Mexico and Central America in perspective. These immigrants are the least assimilated of any major group in the United States, yet they lie closer to the American mainstream than many immigrant groups in other countries. The international assimilation index of 36 for Mexicans and Central Americans in the United States is considerably higher than the index for Muslim immigrants in Italy or Switzerland, or than that of Eastern European immigrants in Italy, Portugal, or Spain. Immigrants from predominantly Muslim countries, as well as from

China, India, Southeast Asia, and Eastern Europe, are more assimilated in the United States than they are in almost any other country in the sample—save the consistent example of Canada, and sporadic cases where colonial ties have established a strong relationship between origin and destination country.

Should the United States, with a 41 percent naturalization rate, do what Canada has done to reach its impressive rate of 73 percent? Not necessarily. Easier naturalization requirements are no guarantee of broader success in society. Immigrants in the Netherlands, for example, have naturalization rates that approach Canada's, but foreign-born males have a lower employment rate there than they do in any country covered by this analysis. Thus, Canada's permissive attitude toward citizenship, though helpful in pushing its immigrants toward the mainstream, alone cannot explain their success.

Emphasis on labor-market skills undoubtedly plays an additional role. Figure 25 shows the educational attainment of foreign-born residents of five nations: Canada, the United States, France, Spain, and Italy. Educational attainment is not included in the computation of the international assimilation index because it is not consistently recorded in a sufficient number of countries. For these five nations, though, the link between immigrant educational attainment and assimilation appears strong. In Canada, nearly 33 percent of foreign-born adults have completed some form of postsecondary education. By comparison, only 23 percent of foreign-born adults in the United States can boast

Figure 25. Educational Attainment of Foreign-Born Adults



of the same distinction. The share of immigrants who have not completed primary education is also higher in the United States than it is in Canada—9 percent against 5 percent.

While immigrants in the United States fall short of those in Canada, they compare favorably with those in the three European countries portrayed. In France, nearly 20 percent of foreign-born residents have a postsecondary degree, but 33 percent have not completed primary education. Immigrants residing in Spain and Italy are less likely to fall on the extreme low end of the educational scale, but only 10 percent possess a college degree.

In these five countries, at least, ranking by proportion of immigrants with a college degree is exactly the same as ranking by assimilation—even though the former piece of information was not considered in creating the latter. Education can provide many of the tools that immigrants need to blend in to their adopted societies—from basic linguistic ability to skills required in the labor market.

Were assimilation the only goal of immigration policy, a move toward Canadian-style naturalization and admission rules would appear quite beneficial. Assimilation is not, however, the only—or even the primary—purpose of immigration policy. Nonetheless, evidence that immigrants in the United States fare much better than those in other countries along a number of key dimensions underscores the need to recognize and preserve the successful components of the present immigration policy as we work to correct its flaws.

## 5. CONCLUSIONS

The information contained in this report places the contemporary debate about American immigration policy in perspective. The urgency of the immigration problem has subsided to some extent over the past two years, as the recession has reduced the flow of migrants to the United States and altered the composition of the immigrant population by deterring those who are less likely to fit into the mainstream. As bad as the situation might have appeared in the

United States, European nations generally face more severe challenges in integrating this population. The position of Mexican immigrants in American society, for example, is not a good one, yet it is clearly superior to the position of, say, North African immigrants in Italy, or of Muslim immigrants in Switzerland. Because the United States is a nation where civic identity has been, for some time, wholly separated from ethnicity, it is easier to imagine the complete integration of newcomers here than in almost any other country.

The United States is not unique in having crafted a successful multiethnic society, however. Among the nations studied here, Canada bears mention as another multiethnic society, which, through a combination of immigration and naturalization policy, places immigrants on an even more rapid path to the mainstream. Canada's immigration policy shares important elements with other multiethnic developed nations that could not feasibly be included in this study, including the U.K., Australia, and New Zealand.

Developed nations that successfully integrate newcomers will enjoy distinct advantages as the twenty-first century wears on. Immigration can protect against the fiscal and demographic catastrophe portended by declining fertility and mortality rates. More significantly, any nation that establishes itself as the destination of choice for highly skilled and entrepreneurial migrants from around the world will reap benefits in the form of economic growth.

For most of its history, the United States has enjoyed this status. Immigration fueled the major public works projects of the nineteenth century and its urban industrialization during the early twentieth century. Between 1700 and 1920, while maintaining an open-borders immigration policy, the nation transformed itself from an agrarian economy poorer than any country in Europe into the world's wealthiest.<sup>9</sup> In the succeeding era of restricted immigration, the United States has managed to sustain its relative position in the world economy, but that status will be threatened on many fronts in the years to come. Immigration policy, perhaps more than any other factor under the nation's control, will determine whether the nation's preeminence will be maintained.

## 6. METHODOLOGICAL APPENDIX

This section begins with a layperson's 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, might alone 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 population of foreign-born individuals between the ages of twenty-two and sixty-five, which is then merged into an equal-size random sample of native-born citizens. The data source and exact set of variables used are described below.

In straightforward terms, 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 is 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 section 1, 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 percent indicates that an individual is almost certainly foreign-born.<sup>10</sup>

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 percent 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-born and which are foreign-born, immigrants will receive a predicted probability of 100 percent and natives a predicted probability of zero.

**Table 8. 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 8 presents educated guesses about the immigrant status of three hypothetical individuals.<sup>11</sup> While the sets of characteristics of each individual are contrived and the set of characteristics included in Table 8 is far smaller than the set of characteristics incorporated into the probit model, the predicted probabilities are authentic, and their computation relies on 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 percent 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 percent probability that the individual is foreign-born. In a sample evenly split between native- and foreign-born

residents, nearly nineteen of every twenty English-speaking citizens with neither military experience 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 native-born. The model thus indicates that the likelihood of such an individual being an immigrant is a relatively remote 8 percent. 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, a researcher would next try 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 in reliance on the algorithm derived from the probit regression model. If the guesses are right 100 percent of the time, the model can perfectly distinguish immigrants from natives and the assimilation index is 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 percent. In this case, the model is perfectly accurate, as reflected by the group's average predicted probability of 100 percent, and 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 percent to half of them and 50 percent to the other. In this case, the model was not perfectly accurate, and the group's average predicted probability is 65 percent. The model still performed better than random guessing, however, so the assimilation index will be less than 100. The actual formula for converting average predicted probabilities into the assimilation index appears below.

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, even a single individual has a predicted probability, which could be converted into an individual-specific assimilation index. In practice, this project reports assimilation index information only on groups represented by at least 100 individuals in the American Community Survey.

#### ***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 a probability of 100 percent, 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 that cannot be distinguished from natives is defined as completely assimilated. In such a case, the probability assigned

by the model equals the probability obtained through a random coin flip, or 50 percent. Technically speaking, the formula used to convert the average accuracy measure into the index is:

$$\text{Assimilation index} = 2 \times (100 - \text{average predicted probability})$$

#### ***Data***

The Census Bureau's American Community Survey (ACS) for 2000–2009 is used to compute the composite assimilation index and its three components. Public Use Microdata Samples of the decennial census for 1980 and 1990 as well are used to compute the index. The index is computed by analyzing the characteristics of males and females between the ages of twenty-two and sixty-five.<sup>12</sup>

Characteristics are incorporated into the predictive model according to the following guidelines. They must measure a characteristic that potentially distinguishes immigrants from natives; that is observed in both the ACS and census data; and that has inspired at least some interest in those who study immigration or participate in current policy debates. This last criterion excludes certain indicators, such as the age of children in an immigrant's household. While this indicator could distinguish immigrants from natives, the existing literature has not treated 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 logical and informal; several examples of indicators, such as homeownership, could fall into more than one category.

#### ***The Predictive Regression Model***

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

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

In this context, the variable  $Y$  is an indicator set equal to one if an individual is an immigrant, and 0 otherwise. The variables  $X_1$  through  $X_n$  are measures included in the predictive model—intermarriage,

ability to speak English, and so forth. The error term,  $\epsilon$ , is presumed to be drawn from a standard normal distribution: mean zero, standard deviation one. The regression coefficients  $\beta_1$  through  $\beta_n$  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  $X_1\beta_1 + X_2\beta_2 + \dots + X_n\beta_n$  as large as possible. For individuals who are not immigrants, the goal is to make this sum as small as possible. The maximum-likelihood method is used to estimate the probit models.

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

- if  $X_1\beta_1 + X_2\beta_2 + \dots + X_n\beta_n = 0$ , then  $P(\text{individual is immigrant}) = 50\%$
- if  $X_1\beta_1 + X_2\beta_2 + \dots + X_n\beta_n = 1$ , then  $P(\text{individual is immigrant}) = 84\%$
- if  $X_1\beta_1 + X_2\beta_2 + \dots + X_n\beta_n = -1$ , then  $P(\text{individual is immigrant}) = 16\%$
- if  $X_1\beta_1 + X_2\beta_2 + \dots + X_n\beta_n = 2$ , then  $P(\text{individual is immigrant}) = 98\%$

and so forth.

Individual-level data from the U.S. Census enumerations of 1900, 1910, 1920, 1930, 1980, and 1990, as well as the ACS samples of 2000 through 2009, are

used to estimate the probit models. 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 researchers are estimating the probit equations and aggregating the predicted probabilities that they generate.

Table 9 presents the probit coefficients estimated in the predictive equations for 1910, 1980, and 2009. Separate probit models are estimated for 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. For this reason, there is no probit coefficient reported for the variable "citizen." To reintroduce citizenship as a factor in the assimilation index, the predicted likelihood of immigrant status is reset to 100 percent for those individuals who are not citizens.

Marriage to an immigrant spouse is highly predictive 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. Homeownership is less common among immigrants, though the association strengthened over time as the

**Table 9. Probit Coefficients**

Predictor variable	1910 Coefficient	1980 Coefficient	2009 Coefficient
Not a U.S. citizen	*	*	*
Spouse is an immigrant	2.19	2.2	2.34
Owens residence	-0.087	-0.241	-0.260
Number of own children living in same household	0.026	-0.002ns	0.047
Does not speak English	1.77	1.51	1.87
Married, spouse absent male/female	1.19//0.784	1.12//0.944	1.47//1.18
Separated male/female	—	0.507//0.354	0.858//0.707
Divorced male/female	0.567//0.476	0.313//0.242	0.460//0.439
Widowed male/female	0.775//0.919	0.494//0.355	0.632//0.588
Never-married male/female	0.819//0.738	0.441//0.300	0.617//0.478
Occupation score male/female	0.021//0.008	0.008//0.002	-0.002// -0.004
Veteran male/female	—	-0.558// -0.175	-0.732// -0.470
Earned income (thousands) male/female	—	0.002//0.001	-0.002// -0.001
Unemployed male/female	—	-0.023ns//0.006ns	-0.367// -0.186
Out of labor force male/female	0.190//0.046ns	0.037ns// -0.015ns	-0.696// -0.410
1–4 years of education	—	**	**
5–8 years of education	—	**	**
9 years of education	—	-0.481	-0.207
10 years of education	—	-0.56	-0.667
11 years of education	—	-0.744	-0.817
12 years of education, but no HS diploma	—	-0.647	-0.292
GED or other alternative to HS diploma	—	—	-0.980
HS diploma	—	-0.64	-0.726
Less than one year of college	—	—	-0.928
At least one year of college, no degree	—	**	-0.793
Associate degree	—	**	-0.740
Bachelor's degree	—	**	-0.622
Master's degree	—	**	-0.534
Professional degree	—	**	-0.386
Doctorate	—	**	-0.189
Constant term male/female	-1.01// -0.979	0.139//0.306	0.232//0.188

Note: all reported coefficients are statistically significant at the 1 percent 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 percent.  
 \*\*The 1980 census and 2009 ACS use a more exhaustive set of educational-attainment variables than were used in other years. Complete results are available upon request.

overall homeownership rate increased. Immigrants are associated with larger numbers of children in a household in 1910 and 2009, 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 negative in 2009 for males as well as females. For 1910, a male physician otherwise identical to a male farm laborer with a predicted immigrant probability of 50 percent would have a predicted immigrant probability of 93 percent. The declining predictive power of occupation over time is evidence of the declining 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. Individuals not currently in the labor force were more likely to be immigrants in 1910 but more likely to be natives in 2009.

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. In comparisons of 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. In comparisons of an individual with a high school diploma and 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. In 2009, the most native-dominated educational-attainment category was GED recipients—very few foreign-born residents obtain that credential in the United States.

Finally, observe that when male and female coefficients are allowed to differ from each other, the female coef-

ficients 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 2009, we observe a male high school graduate working as a cashier and earning \$16,000 per year. He did not serve in the military, he 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 9 to compute an index number for this individual:

$$\begin{aligned}
 & 0.232 \text{ (constant term)} \\
 & - 0.726 \text{ (HS graduate)} \\
 & + 0.617 \text{ (never married)} \\
 & - 0.002*16 \text{ (coefficient on income in thousands *} \\
 & \quad \text{income in thousands)} \\
 & - 0.002*18 \text{ (coefficient on occupation score *} \\
 & \quad \text{occupation score for a cashier)} \\
 & = -0.055
 \end{aligned}$$

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 -0.055. This is equal to 47.8 percent. In a sample split evenly between immigrants and natives, about half of all individuals matching these characteristics are foreign-born.

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

$$\begin{aligned}
 & 0.232 \text{ (constant term)} \\
 & - 0.726 \text{ (HS graduate)} \\
 & + 2.34 \text{ (spouse is foreign-born)} \\
 & - 0.002*16 \text{ (coefficient on income in thousands *} \\
 & \quad \text{income in thousands)} \\
 & - 0.002*18 \text{ (coefficient on occupation score *} \\
 & \quad \text{occupation score for a cashier)} \\
 & = 1.78
 \end{aligned}$$

The probability of observing a draw from a standard normal distribution below 1.78 is 96.2 percent. In a sample evenly divided between immigrants and natives, we expect about twenty-four of every twenty-five individuals meeting this description to be foreign-born.

Suppose we observe a similar individual in 1910 rather than 2009. The index number calculation uses the 1910 coefficients instead of the 2009 coefficients and omits those variables that are unobserved in the 1910 census:

$$\begin{aligned}
 & - 1.01 \text{ (constant term)} \\
 & + 2.19 \text{ (spouse is foreign-born)} \\
 & + 0.008 * 18 \text{ (coefficient on occupation score *} \\
 & \quad \text{occupation score for a cashier)} \\
 & = 1.558
 \end{aligned}$$

This index number translates into a 94 percent 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 with 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:

$$\text{Assimilation index} = 2 \times (100 - \text{mean probability})$$

When the mean predicted probability is 100 percent, that is, when all immigrants are identified as such in the probit model with a probability of 100 percent, 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 percent, the proportion of immigrants in the sample. In such a scenario, the index will equal  $2 \times (100 - 50) = 100\%$ .

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

### ***Component Indexes***

To compute the component indexes, probit regressions are recomputed to restrict 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 several of them 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, homeownership, and labor-force participation. As 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.

### ***The International Assimilation Index***

A procedure identical to that described above, which used data for 1999–2001 collected from the national statistical agencies in nine countries, computed the international version of the assimilation index. The specific data sources are:

- Austria: 2001 Population Census
- Canada: 2001 Census
- France: General Population Census of 1999
- Greece: National Population Housing Census 2001
- Italy: 14th General Population Census and General Housing Census (2001)
- Portugal: 14th General Population Census and 4th General Housing Census (2001)
- Spain: Census of Population and Housing 2001
- Switzerland: Federal Population Census 2000
- United States: 2000 Census of Population and Housing.

For certain supplemental analyses, data from the United Kingdom’s 2001 census and the Dutch Virtual Census of 2001 are incorporated as well. Each data series is made available for this project by IPUMS, which also supplies data for the domestic version of the assimilation index. IPUMS also makes sample weights available for the conduct of research. For this analysis, these weights were used as appropriate.

The eleven countries considered here do not collect data in a uniform manner. Data limitations preclude the computation of the assimilation index in the United Kingdom and the Netherlands. In the remaining nations, a restricted set of four factors, described in

section 3 above, forms the basis of the probit model used to predict nativity. The value for the United States in the international version of the assimilation index for 2000 is higher than the value for the United States in the domestic index for the same year. This is attributable entirely to the international index’s use of a smaller set of predictive factors.

### ***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 limitations 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 ask survey respondents whether they are legal or illegal residents of the United States. It may be difficult to convince an illegal immigrant of these protections, however.

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 population they represent by attaching heavier weights to groups with low response rates; and lighter weights 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 assigned 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.<sup>13</sup> 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 percent of the Hispanic population was undercounted in the 1990 census.<sup>14</sup> 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 the entire population of foreign-born individuals in the United States is being described but will be more important when smaller groups, such as a set of immigrants from a relatively small foreign country or from a small metropolitan area, are described. Small fluctuations over time, or small differences among 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 they may 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.

## APPENDIX

Table I. Assimilation by Country of Birth, 2008–09

Country of Birth	Assimilation Index							
	Composite		Cultural		Civic		Economic	
	2008	2009	2008	2009	2008	2009	2008	2009
Afghanistan	35	38	52	47	67	74	98	100
Albania	29	27	53	43	51	58	99	100
Antigua-Barbuda	59	62	86	96	73	66	100	100
Argentina	40	41	79	81	43	43	100	100
Armenia	33	31	49	47	64	59	99	100
Australia	30	29	100	100	24	23	100	100
Austria	81	77	100	100	65	66	100	100
Azerbaijan	30	23	55	46	64	56	96	94
Azores	53	38	69	68	62	58	90	78
Bahamas	50	47	100	100	50	48	100	100
Bangladesh	19	16	37	33	54	54	94	91
Barbados	57	65	95	89	63	72	100	100
Belgium	48	54	99	100	42	48	100	100
Belize/British Honduras	49	62	87	93	60	64	100	100
Bolivia	36	41	72	75	46	47	100	100
Bosnia	27	29	44	49	55	56	100	100
Brazil	25	24	75	75	27	26	95	95
Bulgaria	31	30	75	68	39	43	100	100
Burma (Myanmar)	22	20	43	42	46	41	90	85
Byelorussia	29	32	55	50	53	61	100	100
Cambodia (Kampuchea)	32	38	54	57	63	70	86	90
Cameroon	12	15	78	67	23	25	99	98
Canada	53	54	100	100	44	44	100	100
Cape Verde	49	36	79	74	61	52	89	85
Chile	40	50	82	81	42	54	100	100
China	22	22	44	45	48	49	89	90
Colombia	39	38	72	73	48	47	100	100
Costa Rica	38	44	81	86	41	46	89	98
Croatia	48	53	66	66	68	74	100	100
Cuba	41	41	65	63	52	52	100	100
Czech Republic	43	48	81	96	45	48	100	100
Denmark	30	39	100	88	25	34	100	100
Dominica	34	39	66	80	51	48	88	92
Dominican Republic	35	36	68	70	49	49	84	84
Ecuador	27	30	65	70	36	38	85	83
Egypt/United Arab Republic	38	35	56	55	61	59	100	100
El Salvador	18	16	59	56	29	28	70	67
England	58	62	100	100	48	51	100	100

Country of Birth	Assimilation Index							
	Composite		Cultural		Civic		Economic	
	2008	2009	2008	2009	2008	2009	2008	2009
Eritrea	33	29	62	61	61	53	90	86
Ethiopia	35	29	70	66	47	46	98	98
Fiji	36	34	57	56	64	61	100	100
Finland	54	56	100	100	43	47	100	100
France	52	54	100	100	46	47	100	100
Germany	85	88	100	100	66	69	100	100
Ghana	30	33	79	73	41	47	100	99
Greece	61	60	81	79	72	76	99	99
Grenada	53	55	91	84	62	66	100	100
Guatemala	14	14	57	57	22	21	62	58
Guyana/British Guiana	46	42	66	66	68	66	100	100
Haiti	35	36	68	68	51	53	98	97
Honduras	17	16	62	61	23	21	65	64
Hong Kong	55	56	66	66	80	80	100	100
Hungary	59	60	92	86	62	67	100	100
India	16	17	39	38	42	43	97	98
Indonesia	37	34	76	69	42	45	100	100
Iran	46	50	63	66	69	71	100	100
Iraq	33	33	57	54	59	54	93	92
Ireland	55	55	100	100	54	55	100	100
Israel/Palestine	49	61	75	83	58	66	100	100
Italy	69	71	96	100	70	69	100	100
Jamaica	48	54	83	87	60	63	100	100
Japan	39	38	94	92	33	32	100	100
Jordan	38	39	56	60	65	64	99	100
Kazakhstan	26	28	69	66	47	41	100	100
Kenya	26	26	80	75	33	37	100	100
Korea	41	43	63	64	56	57	100	100
Kuwait	43	49	78	68	50	64	100	100
Laos	32	35	49	51	65	68	92	88
Lebanon	53	49	68	66	74	71	100	100
Liberia	31	32	81	81	38	42	100	100
Lithuania	23	28	63	73	42	43	100	100
Macedonia	40	26	56	45	66	60	100	100
Malaysia	25	35	74	73	35	45	98	100
Mexico	13	14	52	53	22	23	63	63
Moldova	27	23	50	53	53	41	100	100
Morocco	40	38	79	78	50	52	98	95
Nepal	10	8	58	53	14	15	93	90
Netherlands	66	63	100	100	51	48	100	100
New Zealand	27	31	100	100	25	26	100	100
Nicaragua	34	39	66	71	46	49	94	97

Country of Birth	Assimilation Index							
	Composite		Cultural		Civic		Economic	
	2008	2009	2008	2009	2008	2009	2008	2009
Nigeria	31	34	66	69	51	51	100	100
Northern Ireland	52	63	100	100	50	53	100	100
Norway	43	43	100	100	34	32	100	100
Pakistan	27	26	45	41	58	59	98	97
Panama	74	79	100	100	68	71	100	100
Peru	36	37	73	74	44	44	100	100
Philippines	50	51	73	72	66	69	100	100
Poland	36	40	60	64	54	59	100	100
Portugal	44	40	68	66	64	61	88	89
Romania	44	41	68	64	63	63	100	100
Russia/USSR	34	41	62	68	57	61	100	100
Saudi Arabia	29	25	78	75	28	27	100	100
Scotland	64	60	100	100	50	47	100	100
Sierra Leone	31	35	74	72	44	55	100	97
Singapore	43	32	87	84	41	36	100	100
Slovakia	38	32	83	85	43	37	100	100
Somalia	20	23	55	54	43	40	71	77
South Africa (Union of)	43	49	86	91	48	50	100	100
Spain	51	51	100	100	45	46	100	100
Sri Lanka (Ceylon)	33	20	60	43	50	40	100	100
St. Lucia	28	38	78	93	41	46	94	97
St. Vincent	50	50	90	92	55	58	98	100
Sudan	31	29	66	69	42	47	93	91
Sweden	41	47	100	100	37	37	100	100
Switzerland	51	55	94	100	52	45	100	100
Syria	38	46	55	59	65	75	97	100
Taiwan	44	45	62	63	71	71	100	100
Tanzania	29	23	68	79	50	40	100	100
Thailand	44	48	93	92	49	53	98	100
Tonga	23	29	70	71	40	39	100	96
Trinidad and Tobago	45	52	83	87	55	58	100	100
Turkey	33	36	75	72	44	46	97	95
Uganda	21	23	82	73	34	36	100	100
Ukraine	33	34	52	56	59	59	100	100
Uruguay	22	30	68	69	30	34	92	94
Uzbekistan	26	26	54	52	44	46	96	98
Venezuela	34	37	78	79	34	38	100	100
Vietnam	40	42	52	53	74	74	96	97
Wales/Other UK	39	40	98	100	36	35	100	100
Yemen Arab Republic (North)	18	19	38	48	47	50	80	71
Yugoslavia	36	40	59	64	62	61	100	100
Zimbabwe	30	37	77	85	32	40	100	100

Table 2. Assimilation by Metropolitan Area, 2008–09

Metropolitan Area	Assimilation Index							
	Composite		Cultural		Civic		Economic	
	2008	2009	2008	2009	2008	2009	2008	2009
Akron, OH	30	54	67	81	42	59	98	100
Albany-Schenectady-Troy, NY	42	44	78	79	50	51	95	98
Albuquerque, NM	27	25	68	66	28	31	79	80
Allentown-Bethlehem-Easton, PA/NJ	30	42	61	69	48	57	100	100
Amarillo, TX	19	14	70	53	32	23	76	69
Anchorage, AK	56	43	88	73	61	63	100	100
Ann Arbor, MI	39	32	79	76	45	43	97	100
Athens, GA	20	16	65	55	25	23	75	75
Atlanta, GA	24	26	62	62	35	36	90	89
Atlantic City, NJ	27	30	60	62	49	44	90	91
Augusta-Aiken, GA/SC	39	26	85	84	38	34	98	97
Austin, TX	23	21	57	58	30	27	79	75
Bakersfield, CA	20	20	48	52	30	29	68	67
Baltimore, MD	38	36	74	69	49	48	97	96
Baton Rouge, LA	45	33	80	69	47	42	98	92
Beaumont-Port Arthur-Orange, TX	19	21	57	58	32	36	81	79
Bellingham, WA	23	42	92	85	28	49	95	100
Bergen-Passaic, NJ	32	34	56	60	52	53	97	97
Birmingham, AL	24	22	83	72	30	27	92	83
Boise City, ID	24	28	67	67	31	34	84	86
Boston, MA	32	32	68	70	44	45	91	92
Boulder-Longmont, CO	29	22	68	65	30	30	80	84
Brazoria, TX	28	32	59	64	39	42	86	93
Bridgeport, CT	33	31	63	63	48	42	99	91
Brockton, MA	42	36	81	71	52	46	100	94
Brownsville-Harlingen-San Benito, TX	26	22	58	61	34	28	73	70
Bryan-College Station, TX	11	12	56	60	15	21	72	70
Buffalo-Niagara Falls, NY	40	46	82	76	50	57	94	100
Champaign-Urbana-Rantoul, IL	21	29	77	67	23	34	87	91
Charleston-N. Charleston, SC	44	30	87	79	40	36	99	87
Charlotte-Gastonia-Rock Hill, SC	21	23	58	60	29	31	84	86
Chattanooga, TN/GA	33	32	69	65	40	36	92	89
Chicago-Gary-Lake, IL	26	26	56	57	43	42	89	88
Chico, CA	40	22	79	50	47	40	84	85
Cincinnati, OH/KY/IN	33	30	69	74	42	39	91	96
Cleveland, OH	41	40	69	73	52	54	100	100
Colorado Springs, CO	46	53	82	87	49	57	95	97
Columbia, SC	33	36	72	76	38	39	94	92
Columbus, OH	27	25	70	66	37	36	93	93

Metropolitan Area	Assimilation Index							
	Composite		Cultural		Civic		Economic	
	2008	2009	2008	2009	2008	2009	2008	2009
Corpus Christi, TX	45	31	80	86	42	41	93	83
Dallas-Fort Worth, TX	16	18	51	55	28	28	73	74
Danbury, CT	26	32	62	66	33	36	91	92
Dayton-Springfield, OH	51	57	77	81	57	57	100	99
Daytona Beach, FL	45	49	79	91	55	51	100	97
Denver-Boulder-Longmont, CO	24	25	65	68	31	31	79	78
Des Moines, IA	30	24	52	54	47	39	82	86
Detroit, MI	33	31	62	61	52	50	97	96
Dutchess Co., NY	36	35	74	72	43	44	97	97
El Paso, TX	32	33	67	64	41	40	84	82
Eugene-Springfield, OR	36	30	89	83	36	32	84	97
Fayetteville-Springdale, AR	27	11	54	58	40	19	76	64
Fayetteville, NC	55	63	96	96	59	66	100	100
Fort Collins-Loveland, CO	36	21	78	66	36	24	79	81
Fort Lauderdale-Hollywood-Pompano Beach, FL	36	40	69	69	46	52	100	100
Fort Myers-Cape Coral, FL	27	24	64	63	35	33	97	91
Fort Pierce, FL	29	34	78	69	35	40	88	90
Fort Wayne, IN	34	30	73	72	38	43	80	88
Fort Worth-Arlington, TX	21	21	52	55	31	32	76	75
Fresno, CA	18	19	51	50	28	29	62	62
Gainesville, FL	25	32	80	80	31	38	87	95
Galveston-Texas City, TX	35	24	68	62	39	29	87	81
Gary-Hammond-East Chicago, IN	46	43	73	76	60	55	94	94
Grand Rapids, MI	31	30	64	67	38	38	86	79
Greeley, CO	17	14	68	67	21	20	68	63
Greensboro-Winston Salem-High Point, NC	18	20	56	55	27	27	74	80
Greenville-Spartanburg-Anderson, SC	20	22	69	63	24	31	78	81
Harrisburg-Lebanon-Carlisle, PA	31	34	69	66	45	49	100	92
Hartford-Bristol-Middleton-New Britain, CT	35	37	70	69	44	50	99	97
Hickory-Morgantown, NC	31	24	69	71	35	34	75	76
Honolulu, HI	48	45	79	77	59	61	100	100
Houston, TX	20	21	54	55	32	33	78	78
Huntsville, AL	42	62	82	93	42	56	95	92
Indianapolis, IN	24	20	69	68	30	31	85	80
Jacksonville, FL	37	43	70	75	53	54	100	100
Jersey City, NJ	27	28	66	65	43	43	87	86
Kalamazoo-Portage, MI	32	31	75	64	38	35	94	94
Kansas City, MO/KS	28	26	66	66	36	34	83	85
Killeen-Temple, TX	57	51	93	92	60	54	98	92
Knoxville, TN	25	38	81	88	34	35	83	91

Metropolitan Area	Assimilation Index							
	Composite		Cultural		Civic		Economic	
	2008	2009	2008	2009	2008	2009	2008	2009
Lafayette-W. Lafayette, IN	17	26	68	78	21	30	79	84
Lakeland-Winterhaven, FL	30	29	71	72	36	34	88	81
Lancaster, PA	44	30	82	84	54	38	99	98
Lansing-East Lansing, MI	25	24	70	75	40	29	94	91
Laredo, TX	22	19	62	57	31	29	83	78
Las Cruces, NM	27	18	73	64	30	27	76	64
Las Vegas, NV	27	28	64	63	36	38	84	82
Lawrence-Haverhill, MA/NH	32	42	64	70	45	52	94	93
Lexington-Fayette, KY	17	16	67	62	24	20	85	79
Little Rock-North Little Rock, AR	25	29	80	67	35	36	87	83
Los Angeles-Long Beach, CA	25	26	57	58	42	43	79	79
Louisville, KY/IN	30	25	74	59	37	33	92	91
Lowell, MA/NH	38	31	71	57	57	48	98	97
Madison, WI	32	24	81	68	40	34	87	92
McAllen-Edinburg-Pharr-Mission, TX	13	15	47	48	20	23	66	68
Melbourne-Titusville-Cocoa-Palm Bay, FL	53	50	89	87	55	56	100	100
Memphis, TN/AR/MS	20	22	57	65	28	34	79	82
Merced, CA	16	24	54	53	26	39	59	61
Miami-Hialeah, FL	32	33	60	61	46	45	97	97
Middlesex-Somerset-Hunterdon, NJ	26	29	48	53	48	49	97	97
Milwaukee, WI	26	32	68	70	35	38	85	85
Minneapolis-St. Paul, MN	28	34	63	70	44	45	89	91
Modesto, CA	24	18	53	50	38	32	74	72
Monmouth-Ocean, NJ	39	39	69	67	48	51	93	95
Myrtle Beach, SC	27	32	77	74	28	42	87	93
Naples, FL	22	27	68	65	28	31	77	85
Nashville, TN	20	23	61	64	31	34	86	84
Nassau Co., NY	36	36	63	63	54	54	99	99
New Bedford, MA	41	40	66	68	61	62	80	78
New Haven-Meriden, CT	20	28	77	70	27	36	88	89
New Orleans, LA	33	30	72	71	48	42	87	91
New York, NY	31	32	64	66	48	48	87	86
Newark, NJ	33	33	63	64	47	47	94	94
Newburgh-Middletown, NY	40	38	67	72	54	51	96	91
Norfolk-VA Beach-Newport News, VA	52	48	87	83	61	57	100	100
Oakland, CA	31	29	59	58	51	49	92	90
Ocala, FL	52	43	82	77	58	55	100	90
Odessa, TX	30	23	65	66	41	43	70	72
Oklahoma City, OK	20	27	59	63	32	37	77	77
Olympia, WA	43	49	93	100	49	62	100	99

Metropolitan Area	Assimilation Index							
	Composite		Cultural		Civic		Economic	
	2008	2009	2008	2009	2008	2009	2008	2009
Omaha, NE/IA	28	23	67	66	39	28	84	72
Orange County, CA	28	28	57	55	44	46	83	85
Orlando, FL	33	35	71	71	44	46	100	99
Pensacola, FL	43	57	82	100	58	52	100	99
Philadelphia, PA/NJ	33	36	66	65	47	49	96	97
Phoenix, AZ	20	21	57	60	26	29	77	80
Pittsburgh-Beaver Valley, PA	39	38	78	80	48	43	100	99
Portland-Vancouver, OR	30	29	64	63	37	38	91	89
Providence-Fall River-Pawtucket, MA/RI	37	32	69	65	49	46	87	88
Provo-Orem, UT	29	37	75	78	28	40	95	98
Raleigh-Durham, NC	18	22	61	65	27	31	83	81
Reading, PA	32	23	68	69	39	34	85	100
Reno, NV	25	29	64	64	36	41	79	81
Richland-Kennewick-Pasco, WA	15	20	41	65	26	31	64	70
Richmond-Petersburg, VA	33	30	74	68	40	39	91	89
Riverside-San Bernardino, CA	25	26	57	56	38	43	82	83
Rochester, NY	44	39	83	76	51	53	100	97
Rockford, IL	22	29	60	67	32	43	77	89
Sacramento, CA	32	32	61	61	47	48	89	89
Salem, OR	17	16	56	52	26	23	63	64
Salinas-Sea Side-Monterey, CA	19	22	55	55	27	31	63	64
Salt Lake City-Ogden, UT	27	27	65	67	30	34	88	85
San Antonio, TX	35	35	73	73	41	42	85	83
San Diego, CA	34	33	65	65	48	47	85	86
San Francisco-Oakland-Vallejo, CA	34	37	66	65	52	55	91	91
San Jose, CA	29	30	55	55	48	50	92	92
San Luis Obispo-Atascadero-Paso Robles, CA	31	32	71	71	37	40	78	86
Santa Barbara-Santa Maria-Lompoc, CA	19	23	51	52	30	34	69	67
Santa Cruz, CA	22	22	56	59	29	31	74	73
Santa Fe, NM	24	21	80	71	23	24	75	67
Santa Rosa-Petaluma, CA	24	30	64	65	33	41	77	74
Sarasota, FL	35	35	79	76	36	42	96	96
Scranton-Wilkes Barre, PA	18	30	63	78	31	38	87	88
Seattle-Everett, WA	32	32	65	66	46	46	97	96
Spokane, WA	39	39	83	76	43	45	100	100
Springfield-Holyoke-Chicopee, MA	35	43	67	76	52	52	94	98
St. Louis, MO/IL	35	35	73	70	42	44	96	98
Stamford, CT	28	26	65	68	38	32	91	94
Stockton, CA	27	25	54	50	42	42	79	79
Syracuse, NY	43	44	90	80	43	53	100	100

Metropolitan Area	Assimilation Index							
	Composite		Cultural		Civic		Economic	
	2008	2009	2008	2009	2008	2009	2008	2009
Tacoma, WA	40	45	81	77	50	52	94	95
Tallahassee, FL	35	24	80	80	38	38	100	92
Tampa-St. Petersburg-Clearwater, FL	37	40	73	74	45	47	98	99
Trenton, NJ	22	29	58	64	38	44	90	94
Tucson, AZ	32	32	76	70	37	37	88	89
Tulsa, OK	20	27	60	64	30	34	75	78
Tyler, TX	20	19	61	59	25	24	61	76
Utica-Rome, NY	34	52	60	72	54	59	97	100
Vallejo-Fairfield-Napa, CA	27	34	56	61	43	53	85	89
Ventura-Oxnard-Simi Valley, CA	27	29	54	55	41	45	78	78
Visalia-Tulare-Porterville, CA	16	18	41	49	28	26	58	58
Waco, TX	27	18	59	60	33	25	71	71
Washington, DC/MD/VA	29	30	65	64	43	44	93	93
West Palm Beach-Boca Raton-Delray Beach, FL	30	32	68	68	40	41	93	92
Wichita, KS	31	36	64	80	39	40	84	91
Wilmington, DE/NJ/MD	25	28	73	64	33	39	87	93
Worcester, MA	31	27	61	67	41	42	92	96
Yakima, WA	13	17	55	51	22	30	53	62
Yolo, CA	26	31	59	63	45	44	80	80
Yuba City, CA	26	29	51	64	40	37	68	73
Yuma, AZ	23	21	60	53	31	36	72	76

## ENDNOTES

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1. In the early part of the twentieth century, the Census inquired as to whether noncitizen immigrants had filed intentions to naturalize. The concept of an “illegal” immigrant did not exist at that time. The process of filing intentions to naturalize no longer exists.
2. Note that this chart uses 1990, rather than 2000, data because the American Community Survey in 2000 did not identify metropolitan areas.
3. The “harmonization” process involves taking survey questions that are asked differently by different countries and making them comparable across nations. For example, some surveys code educational attainment as the highest year of school completed, while others use broad categories such as primary, secondary, and so on. The IPUMS data set uses a uniform set of codes for data from all nations.
4. See, e.g., Jason deParle, “Spain, Like U.S., Grapples with Immigration,” *New York Times*, June 10, 2008.
5. What follows is a complete list of countries considered Muslim for the purposes of this report. In Southeast Asia: Indonesia, Pakistan, Bangladesh, Malaysia, Brunei, and Maldives; in sub-Saharan Africa: Nigeria, Niger, Burkina Faso, Mali, Senegal, Guinea, Sierra Leone, Chad, Mauritania, and Gambia; in central Asia: Uzbekistan, Kazakhstan, Azerbaijan, Tajikistan, Kyrgyzstan, and Turkmenistan; in northern Africa: Egypt, Sudan, Algeria, Morocco, Tunisia, Libya, Somalia, Djibouti, and Comoros; in the Balkans: Albania and Kosovo; and in the Middle East: Turkey, Iran, Afghanistan, Iraq, Saudi Arabia, Yemen, Syria, Jordan, the United Arab Emirates, Lebanon, Kuwait, Oman, Bahrain, and Qatar. In some cases, sample nations report regions rather than countries of birth (e.g., “East Africa”). Individuals coded with such a birthplace are generally omitted from the set of Muslim countries, even though they may have been born in a nation listed above.
6. Switzerland reports only religion, not country of birth. Canada reports religion and, in some cases, country of birth (in other cases, region of birth is substituted). Canadian sample members are considered Muslim if they report affiliation with Islam or birth in a putatively Muslim country.
7. It is unclear whether Portuguese residents who report birth in India are ethnic Goans or ethnic Portuguese. The Portuguese data do not collect information on race or ethnicity. Likewise, it is not possible to distinguish whether Portuguese residents born in Angola or Mozambique are ethnic Portuguese or Africans.
8. See <http://genderindex.org>.
9. There are some exceptions to the open-borders policy during this period—most notably, the Chinese Exclusion Act of 1882. It is most accurate to state that the nation’s borders were consistently open to Europeans for these two centuries.
10. In this report, probabilities will be expressed in percentile form, between 0 and 100 percent. It is also possible to express probabilities as decimals ranging between 0 and 1.

11. The predictions listed in Table 8 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.

12. The index can also be constructed using a data set that is restricted to males only or females only. As discussed in the original assimilation index report, females tend to have higher assimilation index values than males. Beyond this difference, the substantive conclusions of the original report and this update would not be affected if the analysis were restricted by gender.

13. 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).

14. See <http://www.census.gov/dmd/www/pdf/underus.pdf>.





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