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# U.S. Foreign-Born Population: How Much Change from 2009 to 2010?

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#### **About this Report**

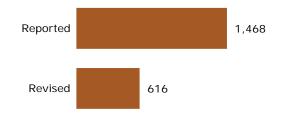
This report was written by Jeffrey S. Passel, senior demographer at the Pew Hispanic Center, and D'Vera Cohn, senior writer at the Pew Research Center. Seth Motel made the charts; Eileen Patten number checked the text and charts. Marcia Kramer was the copy editor. The authors thank Paul Taylor, Rakesh Kochhar and Scott Keeter for editorial guidance, as well as Jeanne Batalova of the Migration Policy Institute and Audrey Singer of the Brookings Institution for additional comments.

## U.S. Foreign-Born Population: How Much Change from 2009 to 2010?

According to the Census Bureau's American Community Survey (ACS), the U.S. population in 2010 included 39.9 million foreign-born residents. This estimate, the latest available for the foreign-born population, is 1.5 million, or 4%, higher than the survey's 38.5 million estimate in 2009. A variety of additional data, however, suggest that both the absolute increase and the percentage increase in the foreign-born population were substantially smaller. An analysis by the Pew Hispanic Center, a project of the Pew Research Center, concludes that the growth in the foreign-born population from 2009 to 2010 is a markedly lower 616,000, or 1.6% (see Table 1).

Figure 1
Change in Foreign-Born Population in the U.S., 2009-2010, Reported and Revised

(thousands)



Source: Pew Hispanic Center tabulations of 2009 and 2010 American Community Survey Integrated Public Use Microdata Series (IPUMS) and Census Bureau population estimates datasets

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The Pew Hispanic Center revision to the estimated growth in the foreign-born population was undertaken to account for changes between 2009 and 2010 in the Census Bureau's assumptions about population composition that underlie the reported ACS estimates. This type of discontinuity in assumptions is not uncommon in government datasets, and government agencies often supply guidance to users on dealing with the issue. Pew Hispanic's revised estimate

Table 1

Foreign-born Population in the U.S., 2009 and 2010, Reported and Revised Totals

(thousands)

			2009-2010 change		
	Foreign born				
		2009	2009		
	2010	reported	revised	Reported	Revised
Total	39,929	38,462	39,313	1,468	616
Mexico Central America Caribbean South America	11,747 2,989 3,749 2,740	11,478 2,903 3,457 2,601	11,707 3,015 3,529 2,675	268 86 291 139	39 -26 220 65
South & East Asia Middle East Europe & Canada Africa & Oceania Other	9,985 1,384 5,798 1,501 37	9,340 1,366 5,888 1,401 28	9,743 1,353 5,847 1,414 30	645 19 -90 100 9	241 31 -49 87 7

Note: See Appendix B for definitions of regions of birth.

Source: Pew Hispanic Center tabulations of 2009 and 2010 American Community Survey Integrated Public Use Microdata Series (IPUMS) and Census Bureau population estimates datasets

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<sup>&</sup>lt;sup>1</sup> Analyses of ACS data in this report use Integrated Public-Use Microdata Series (IPUMS) files that represent a 1% sample of the U.S. population for each year (Ruggles et al., 2010). IPUMS totals differ slightly from published estimates based on the full ACS.

smoothes out these discontinuities by employing the Census Bureau's own revised and consistent set of underlying population estimates.

When the ACS data for 2009 are revised for consistency with the assumptions that underlie the 2010 ACS, the foreign-born population in 2009 is estimated to have been 39.3 million, 850,000 higher than the original ACS estimate. As a result, the growth in the foreign-born population from 2009 to 2010 is estimated to be less than originally reported (Table 1).

To appreciate the reasons for the gap between the estimates reported by the Census Bureau and the revisions produced by

## **Terminology**

**Postcensal population estimates**: Annual estimates as of July 1 that take into account the results of a previous census (and components of population change, chiefly births, deaths and net immigration, since that census). Estimates are designated by the year produced—for example, "Vintage 2009."

**Error of closure**: The difference between population count of a new census and the postcensal population estimate for that census date. The error of closure is positive if the census count exceeds the population estimate; negative if the count is lower than the estimate.

Intercensal population estimates: Estimates as of July 1 for years between two censuses that take into account the results of both censuses (and components of population change). Intercensal estimates use various methods to distribute the error of closure across the intercensal period.

**Survey weights or sample weights**: Values assigned to survey cases to ensure the cases are representative of the total population being sampled and its characteristics. For surveys such as the ACS, the weights are chosen so that the sum of the weights equals the estimated population total (for a group or area).

**Control totals**: Population estimates for demographic subgroups (e.g., an age-sex-race group) or an area (e.g., state) used as targets for the weighting process in a survey. The sum of the weights for all survey cases in a controlled group or area will be equal to the control total for that population.

the Pew Hispanic Center, it helps to understand how the government agency collects and processes statistics. The 2010 ACS is based on the latest information from the 2010 Decennial Census; the 2009 ACS is based on the latest information available for that survey—updates of the 2000 Decennial Census. This report discusses how the difference in underlying data can affect estimates of the change in population from 2009 to 2010. A methodological section explains how the ACS estimates for 2009 are revised to make them consistent with the 2010 data. The analysis in this report is intended to clarify the extent to which the apparent change in the foreign-born population from 2009 to 2010 stems from inconsistencies in the underlying population estimates.<sup>2</sup>

<sup>&</sup>lt;sup>2</sup> The Census Bureau has provided guidance to users on comparing data from the 2010 ACS with earlier years of the ACS and with census data. It tells users that 2009 and 2010 data on the foreign-born population should be "compare[d] with caution" but does not provide information on the size of the impact from survey changes. The Census Bureau is currently conducting research to measure these impacts (U.S. Census Bureau, 2011).

#### Additional Data Show Similar Pattern

Additional data from other sources indicate that the Pew Hispanic revised estimate of the growth of the foreign-born population is more accurate than implied by the reported ACS data. For example, similar data from the Current Population Survey (CPS), a monthly household survey conducted by the Census Bureau, show a drop in average annual change in the foreign-born population over the decade—from 880,000 per year for 2000-2006 to 510,000 per year for 2006-2010.<sup>3</sup> These CPS data have been reweighted by the Pew Hispanic Center to produce a consistent dataset and adjusted to correct for undercount.

Unpublished analysis by the Pew Hispanic Center of ACS data on respondents' year of immigration and residence one year ago show a decrease in arrivals of immigrants in 2009 compared with earlier in the decade. Additionally, other sources (e.g., National Research Council, 2011; U.S. Customs and Border Protection, 2011) also point to a slowdown of immigration flows, especially those of unauthorized migrants, associated with the onset of the Great Recession in late 2007.

#### Survey Changes Throughout the Decade

The need for revision of the 2009 ACS estimates stems from the fact that the ACS samples the U.S. population; unlike the decennial census, it does not count the entire population. Therefore, its basic population totals—for the country, states and smaller geographic areas, subdivided by age, gender, race and other characteristics—are imposed from other sources. ACS respondents are assigned sample weights that total to these pre-specified population numbers.

However, population estimates from the 2009 ACS and the 2010 ACS are "mismatched." Sample weights in the 2009 ACS are based on a postcensal population estimate for 2009 that the Census Bureau derived by updating the 2000 Census using government records for births, deaths, immigration and migration (see Terminology). Sample weights in the 2010 ACS are based on an estimate for July 1, 2010, that is derived from the 2010 Census population count.

In other words, the 2009 ACS estimates are based on data tied to the 2000 Census and do not reflect the latest information on the size and the characteristics of the U.S. population as determined by the 2010 Census, a more relevant year.

Inconsistencies between the decennial census population counts and the population estimates during the previous decade are nothing new. However, until this decade, this discontinuity did

<sup>&</sup>lt;sup>3</sup> Reported ACS data for 2000-2009 show a similar pattern of higher growth early in the decade and slower growth later in the decade.

not affect detailed data about the characteristics of the U.S. population, such as the number who are foreign born, because such data at the state and local level came only once a decade from the decennial census itself, via the long form that was mailed to a sample of the nation's population. But the long form was last used in the 2000 Census. Since 2005, such data now come every year from the ACS, a long-form survey that includes data from more than 2 million households per year.

#### **Discrepancies in Data for Some Groups**

Although the 2010 Census national and state counts agreed very closely with <u>the expected total</u> <u>based on the Bureau's postcensal population estimates</u> for 2010 (Cohn, 2011), there were notable discrepancies for some subgroups—especially those that are prominent in the foreign-born population. This suggests there are similar issues with the 2009 postcensal population estimates that were the basis for the 2009 ACS.

According to an earlier Pew Hispanic analysis, the 2010 Census counted <u>nearly 1 million more</u> <u>Hispanics than would be expected</u> (Passel and Cohn, 2011), or 1.9% more than expected, based on the postcensal population estimates for 2010. The count of non-Hispanic single-race Asians also was higher than would be expected—by about 700,000, or 5%. These groups account for almost three-quarters of immigrants. Thus, because the 2009 ACS total for the foreign-born population is derived from the same series of postcensal population estimates, it also can be considered to be an underestimate.

To account for differences between the postcensal estimates used to weight the 2009 ACS and the 2010 Census-based data used to weight the 2010 ACS, the Pew Hispanic Center adjusted the 2009 ACS to agree with the Census Bureau's recently published new intercensal estimates for 2000 to 2010 (see Terminology and the methodological appendix). These estimates "smooth the transition from one decennial census count to the next" (U.S. Census Bureau, 2011a) by adjusting the published postcensal estimates for each year so the trend is in line with the 2010 Census results. The Census Bureau does this by distributing throughout the decade any discontinuities between those estimates and population counts in the 2010 Census (i.e., the error of closure, see Terminology). The biggest differences between the reported and revised ACS estimates for 2009 are for young adult Asians and Hispanics.<sup>5</sup>

It is not unusual to see discontinuities attributable to changes in weighting or population counts in government data series. Every January, for example, new population estimates are introduced into the Current Population Survey, leading to discontinuities in estimates of the

<sup>&</sup>lt;sup>4</sup> The comparison of Hispanics and Asians with census figures encompasses both immigrants and U.S. natives.

<sup>&</sup>lt;sup>5</sup> Revisions also were somewhat larger for women than for men, for reasons that are unclear.

labor force and the number of employed and unemployed workers. The government agencies involved typically provide users with guidance on the impact of the changes (e.g., Bureau of Labor Statistics, 2011), but they often do not revise previously released data. Only rarely does the Census Bureau issue a new set of survey weights that would enable data users to re-estimate time series and detailed measures.<sup>6</sup>

#### **Revisions to ACS Weights**

The adjustments to the 2009 ACS data are based on sample weights revised by the Pew Hispanic Center that are derived from intercensal population estimates for 2009. The originally reported 2009 ACS data are based on sample weights derived from the postcensal estimates for 2009. The revised weights are derived using a simplified version of the final stages of the ACS weighting procedure. (See the methodological appendix for more details of the revised weighting procedures.) As such, they should be considered approximations to full revisions that would incorporate new information from the 2010 Census into the full ACS weighting methods for 2009.

The estimate of the size of the foreign-born population is created by summing the revised survey weights of ACS respondents who say they are foreign born. This method is similar to that used by the Census Bureau to arrive at its estimate, except for the difference in the survey weights.

Analysis of changes in the foreign-born population throughout the 2000-2010 decade will require consistent data for years other than 2010, 2009 and 2000. These 2009 revisions are a first step in producing a consistent time series of ACS data for the decade. The Pew Hispanic Center plans to produce revised weights for ACS public use files for 2005 through 2008. These data will enable users to compare actual and apparent change for those years.<sup>7</sup>

<sup>&</sup>lt;sup>6</sup> When the Census Bureau altered its population estimates methods for 2008, a full set of revised weights for the December 2007 CPS was released to permit users to assess the implications of the change for a variety of measures (U.S. Census Bureau, 2008). The 2000 Census results caused even greater discontinuities in CPS data between data for 1990-2002 and 2003 onward. (Weights based on the 2000 Census were introduced into the monthly CPS beginning with January 2003 and the March CPS supplement with March 2002.) The Census Bureau released alternative weights for the 36 monthly CPS datasets covering January 2000 through December 2002 (U.S. Census Bureau, 2004).

<sup>&</sup>lt;sup>7</sup> The Pew Hispanic Center has produced and used similar revised weights for the CPS. Revisions to annual Census Bureau postcensal population estimates after 2000 led to notable discontinuities in key measures for immigrant populations and other groups, especially for 2007-2009. Using a consistent set of population estimates for the decade, the Pew Hispanic Center produced revised CPS weights for monthly CPS data and the March CPS supplements through 2008. These revised survey weights provided the basis for a number of analyses (e.g., Passel and Cohn, 2010 and Kochhar et al., 2010). Further CPS revisions are planned to incorporate the intercensal population estimates for 2000-2010.

## Appendix A: Additional Table

#### Appendix Table 1

## Alternative Population Estimates for Selected Race/Hispanic and Age Groups, July 1, 2009

(thousands)

	Vintage 2009	Intercensal		Percent
	population estimate	population estimate	Difference	difference
Total	307,007	306,772	-235	-0.1%
Hispanic	48,419	49,327	908	1.8%
Male	25,057	25,064	7	0.0%
Younger than 18	8,572	8,601	29	0.3%
18-29	5,195	5,456	261	4.8%
30-49	7,503	7,258	-245	-3.4%
50-64	2,602	2,615	14	0.5%
65 and older	1,185	1,134	-51	-4.5%
Female	23,362	24,263	901	3.7%
Younger than 18	8,178	8,226	48	0.6%
18-29	4,457	4,825	368	7.6%
30-49	6,485	6,891	406	5.9%
50-64	2,666	2,779	113	4.1%
65 and older	1,576	1,542	-34	-2.2%
Asian only, non-Hispanic	13,686	14,361	675	4.7%
Male	6,605	6,835	230	3.4%
Younger than 18	1,615	1,609	-6	-0.4%
18-29	1,158	1,337	179	13.4%
30-49	2,202	2,208	6	0.3%
50-64	1,059	1,104	45	4.1%
65 and older	571	577	6	1.0%
Female	7,081	7,526	445	5.9%
Younger than 18	1,563	1,573	10	0.6%
18-29	1,164	1,377	213	15.5%
30-49	2,366	2,491	124	5.0%
50-64	1,233	1,327	94	7.1%
65 and older	755	759	4	0.5%

Source: Pew Hispanic Center tabulations of population estimates datasets (U.S. Census Bureau, 2011a, 2010)

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## Appendix B: Methodology

Population data from the American Community Survey (ACS) are tied to the Census Bureau's official population estimates through a weighting process that is designed so the ACS figures agree with pre-specified population totals by age, sex, race and Hispanic origin for the nation and smaller geographic areas (Census Bureau, 2009). The ACS data also agree with control totals for group quarters populations. Each year, the Census Bureau produces new population estimates, not only for the most recent year but also for every year since the most recent census; these estimates are designated by the year produced as, for example, "Vintage 2009." Each new ACS is weighted to that year's vintage of population estimates, but earlier ACS datasets are not reweighted to reflect the newest vintage of estimates.

Comparisons of ACS estimates from one year to another encompass both real underlying population changes and changes in the population estimates used to weight the ACS. For most years, changes in the series of population estimates from one vintage to the next tend to be small—reflecting mainly the incorporation of final data on births, deaths and immigration to replace the preliminary data used the year before. However, the changeover to population data from the 2010 Census from estimates based on the 2000 Census (including Vintage 2009 estimates in the 2009 ACS) has significant effects on measures of change in the foreign-born population (as documented in this report).

Similar issues of inconsistent population weights across time arose with the Census Bureau's Current Population Survey (CPS) during the 2000-2010 decade. To develop consistent measures of the unauthorized immigrant population across the decade and consistent measures of annual change, the Pew Hispanic Center produced alternative population weights for the CPS and used the reweighted data as a basis for measuring change over time. (See Passel and Cohn, 2010 as well as Kochhar et al., 2010.) The Pew Hispanic revised estimates reported here for the 2009 ACS represent the first step in applying a consistent weighting methodology to ACS data for 2005-2010.

#### **Differences Between Intercensal and Postcensal Population Estimates**

The Census Bureau's Population Estimates Program produces *postcensal* estimates of the total population for the nation, states, counties and places as well as estimates for age, sex, race/Hispanic groups for the nation, states, and counties. For the 2000-2009 decade, the postcensal estimates represent updates of the 2000 Census. After the results of the 2010 Census became available, the Census Bureau produced an alternative set of *intercensal* population estimates for the nation, states and counties that are consistent with both the 2000 and 2010 censuses. These intercensal estimates provide a basis for developing consistent population

weights for the ACS that can be used to assess year-to-year changes in various population groups, including the foreign-born.

Differences between the intercensal estimates and postcensal estimates (for the 2010 Census) are not large in the context of a total population of 309 million or a foreign-born population of 40 million. However, for year-to-year comparisons as measures of population change, incompatibilities attributable to weighting changes or other methodological changes can be as large as the actual change and can severely distort measures of change over time. For 2009, the intercensal population estimate for the total population is only 235,000, or 0.1% below the vintage 2009 estimate. (See Appendix Table 1.) However, the Hispanic intercensal population estimate *exceeds* the postcensal population estimate by 908,000, or 1.8%, and the Asian (alone, not Hispanic) intercensal estimate exceeds the postcensal estimate by 675,000, or 4.7%. Almost all of these differences occur among adults. The majority of adults in these two groups are foreign-born, and together account for about two-thirds of all immigrants. Thus, these differences between the population estimates used to weight race groups can lead to notable differences in survey-based estimates of the foreign-born population for 2009.

#### **ACS Weighting**

Development of ACS population weights is a complex process that involves postcensal estimates for age-sex-race/Hispanic populations for counties or groups of counties as well as estimates of married couples and group quarters populations (U.S. Census Bureau, 2009). The weighting process uses six race/Hispanic groups—white, black, American Indian and Alaska Native, Asian, Native Hawaiian, and Hispanic.<sup>8</sup>

For each race/Hispanic group, the population is further divided by sex and into 13 age groups—younger than 5, 5-14, 15-17, 18-19, 20-24, 25-29, 30-34, 35-44, 45-49, 50-54, 55-64, 65-74, 75 and older. If the number of cases in a subgroup within a weighting area is "too small" (fewer than 10) or the adjustment factor for a group (the amount by which its weight is enlarged or reduced) is "extreme" (below 1/3.5 or greater than 3.5), the category is "collapsed" with other groups until the weighting criteria are met. In the collapsing process, race/Hispanic groups are first merged. Then, the age-sex cells are tested within the merged race/Hispanic group. The goals of the collapsing scheme are "to keep children [under 18] together whenever possible by collapsing across sex within the first three age categories. In addition, the collapsing rules keep men age 18-54, women age 18-54, and seniors 55+ together in separate groups by collapsing across age" (U.S. Census Bureau, 2009: pp. 11-13).

<sup>&</sup>lt;sup>8</sup> The race totals include non-Hispanic persons only. For weighting purposes, persons reporting multiple races and persons reporting "some other race" are assigned to one of the five specified groups. The ACS documentation does not describe the race assignment process.

ACS weighting is done separately for persons in households, institutional group quarters by type (correctional institutions, juvenile detention facilities, nursing homes, other long-term care facilities), and noninstitutional group quarters (college dormitories, military facilities, other noninstitutional facilities). The weighting for group quarters is done at the state level by type of facility with no demographic controls imposed. The household weighting uses the demographic groups described above subdivided into four groups: householders in married couple or unmarried partner households; spouses or unmarried partners of persons in the first group; householders of other types of households; and the balance of the household population.

Unlike its disclosure practice in weighting the CPS, the Census Bureau does not publish detailed population estimates used in ACS weighting or specify the weighting areas; moreover, in the publicly available ACS microdata, the geographic areas used in weighting do not seem to be identifiable. Thus, it is not possible for data users outside the Census Bureau to replicate the full ACS weighting process. However, in order to produce estimates that can be compared across different years of the ACS, the Pew Hispanic Center has developed revised weights by following the general concepts employed by the Census Bureau in weighting the ACS.

#### **Implementing Revised ACS Weighting**

The Pew Hispanic analysis uses a modified weighting process that adjusts the existing ACS weights to produce a consistent set of data that approximates the weights that would have been obtained from a full ACS weighting based on the intercensal population estimates. Integrated Public-Use Microdata Series (IPUMS) datasets are used in this process (Ruggles et al., 2010). The reweighting uses population estimates at the state level and is a greatly simplified version of the full ACS weighting. Iterative proportional fitting is used to match control totals based on the intercensal population estimates for three sets of marginal totals:

- 1. State-level population totals by age, sex, and race/Hispanic origin using the same breakdowns in the Census Bureau's weighting process. More stringent cell-size requirements are imposed to minimize changes from the initial ACS weights. Collapsing rules follow the concepts in the Census Bureau weighting.
- 2. State-level totals for household, institutional group quarters and noninstitutional group quarters. The broad grouping of group quarters populations is used because more detailed information on group quarters type is not available in the ACS public datasets. No demographic breakdowns are used.
- 3. National totals for age, sex, and race/Hispanic origin groups with no collapsing.

<sup>&</sup>lt;sup>9</sup> Estimates from IPUMS differ slightly from the Census Bureau's published estimates that are based on the full ACS sample. For example, the published ACS foreign-born population in 2010 is 39.956 million and the IPUMS figure is 39.929 million. The comparable figures for 2009 are 38.517 million and 38.462 million.

Ten iterations are performed to ensure convergence on all dimensions of the fitting process. The final adjustment to detailed national totals for age-sex-race groups is not part of the Census Bureau's procedures but is included to maintain strict consistency of the reweighted data with the intercensal population estimates.

**Race Groups**. The race groups used in weighting assign all non-Hispanic individuals to one of five specific race groups and require population totals for the same groups. Accordingly, the intercensal population estimates used in the PHC reweighting are "bridged race" estimates released by the CDC (U.S. Centers for Disease Control and Prevention, 2011). These estimates are consistent with the Census Bureau's intercensal estimates (U.S. Census Bureau, 2011a) but have reassigned estimates of "some other race" and multiple race populations to four specific race groups (white, black, American Indian and Alaska Native, and Asian and Pacific Islander). The Asian and Pacific Islander group in the bridged race estimates is subdivided into Asian and Native Hawaiian using proportions from the intercensal population estimates for the U.S. and for California (the only state with enough sample cases to require a separate control total for Native Hawaiians).

For weighting purposes, individual respondents in the ACS who give multiple responses to the race item or who are classified as some other race are assigned a single race group in accordance with the methods used to develop the bridged race estimates. <sup>10</sup> The assignments use the IPUMS probabilities with thresholds selected to bring state totals for individual race groups in line with the bridged race aggregate estimates published by NCHS (Ingram et al., 2003). <sup>11</sup> These assigned races are used in reweighting, but the original ACS race item is retained for all other analyses.

Collapsing Rules. To minimize adjustments to the published ACS weights, the collapsing rules for race groups and age-sex groups are much more stringent than the Census Bureau employs in its weighting. If the number of ACS respondents in a state within a race group is less than 100 or the required adjustment factor is less than 0.67 or greater than 1.5, the race group is collapsed with the next smallest non-Hispanic race group. 12 For age-sex groups within a race group, the same minimum number of respondents and ranges for the adjustment factor determine whether the group is collapsed. Collapsing rules first attempt to keep children (younger than 18) and adults separate. For children, age groups are first collapsed by combining males and females and then by collapsing age groups. For persons ages 18-54, collapsing is first

<sup>&</sup>lt;sup>10</sup> The assignments use the IPUMS variables RACESINGD (a version of bridged race) and PROBWHT, PROBBLK, PROBAL, PROBAPI and PROBOTH which provide bridged race probabilities that a person of some other race or multiple races would provide a single race response of, respectively, white, black, American Indian and Alaska Native, Asian and Pacific Islander, and Some Other Race.

<sup>&</sup>lt;sup>11</sup> The population estimates used in this assignment process are not the intercensal bridged race estimates but those of the "proper" vintage (e.g., vintage 2009 for the 2009 ACS).

<sup>&</sup>lt;sup>12</sup> An exception is made for the American Indian and Alaska Native (AIAN) group. Because of the difficulty of assigning mixed AIAN-white responses, the AIAN group is first collapsed, if necessary, with the white population in most instances.

done for age groups to maintain separate totals for men and women. For ages 55 and older, the rules are the same as for children.

**Regions.** The estimates of the foreign-born population shown in this report divide the world into regions. "Europe" includes Russia and all the newly independent countries that were part of the former Soviet Union, even though some of the countries are geographically in Asia. This grouping is designed to maintain maximum consistency over time. "Canada" also includes parts of North America not classified, such as Bermuda and St. Pierre and Miquelon. "Middle East" as defined here includes countries of southwest Asia from Turkey and Cyprus in the north and west to Iran in the east to the Arabian Peninsula in the south; it also includes countries of North Africa (Egypt, Sudan, Libya, Tunisia, Algeria, Morocco and Western Sahara). Note that the Middle East does not include Afghanistan or Pakistan. "South and East Asia" includes the rest of Asia from Afghanistan and Pakistan eastward. "Africa" consists of sub-Saharan Africa.

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