# Estimates of the Unauthorized Immigrant Population Residing in the United States: January 2011

MICHAEL HOEFER, NANCY RYTINA, AND BRYAN BAKER

This report provides estimates of the size of the unauthorized immigrant population residing in the United States as of January 2011 by period of entry, region and country of origin, state of residence, age, and sex. The estimates were obtained using the "residual" methodology employed for previous estimates of the unauthorized population (see Hoefer, Rytina, and Baker, 2011). The unauthorized immigrant population is the remainder or "residual" after the legally resident foreign-born population—legal permanent residents (LPRs), naturalized citizens, asylees, refugees, and nonimmigrants—is subtracted from the total foreign-born population. Data to estimate the legally resident population were obtained primarily from the Department of Homeland Security (DHS), whereas the American Community Survey (ACS) of the U.S. Census Bureau was the source for estimates of the total foreign-born population.

The 2011 unauthorized estimates should not be compared with DHS estimates previously released for 2005-2010. Updates to population estimates used to weight the ACS had a substantial impact on changes in estimates of the foreign-born population between 2010 and 2011. The 2011 unauthorized estimates are derived from the 2010 ACS, which uses population estimates based on the 2010 Census. The 2005-2010 unauthorized estimates, however, are derived from the 2004-2009 ACS population estimates which are based on the 2000 Census. The Census Bureau urges caution in comparing population estimates that use different Census base years (U.S. Census Bureau, 2011). According to the Pew Hispanic Center, the estimated 1.5 million person increase in the foreign-born population between the 2009 and 2010 ACS surveys would have been only 0.6 million if the 2009 ACS estimates had been based on the 2010 Census (Passel and Cohn, 2012). DHS has revised the 2010 unauthorized estimate using a foreign-born population estimate based on the most recent Census in order to provide an indication of the short term trend in the size of the unauthorized immigrant population (see METHODOLOGY AND DATA).

In general, caution is recommended in interpreting changes in the size of the unauthorized population presented in this report. Annual estimates of the unauthorized immigrant population are subject to sampling error in the ACS and considerable nonsampling error because of uncertainty in some of the assumptions required for estimation (see Limitations below). Changes in the ACS, including revisions in the wording of the question on Hispanic origin in the 2008 ACS and measurement of net international migration (see U.S. Census Bureau, 2009) may also have affected estimates of the unauthorized population.

In summary, an estimated 11.5 million unauthorized immigrants were living in the United States in January 2011 compared to a revised 2010 estimate of 11.6 million. These results suggest little to no change in the unauthorized immigrant population from 2010 to 2011. It is unlikely that the unauthorized immigrant population increased after 2007 given relatively high U.S. unemployment, improved economic conditions in Mexico, record low numbers of apprehensions of unauthorized immigrants at U.S. borders, and greater levels of border enforcement. Of all unauthorized immigrants living in the United States in 2011, 55 percent entered between 1995 and 2004. Entrants since 2005 accounted for only 14 percent of the total. Fifty-nine percent of unauthorized immigrants in 2011 were from Mexico.



#### **DEFINITIONS**

#### **Legal Residents**

The legally resident immigrant population as defined for these estimates includes all persons who were granted lawful permanent residence; granted asylum; admitted as refugees; or admitted as nonimmigrants for a temporary stay in the United States and not required to leave by January 1, 2011. Nonimmigrant residents refer to certain aliens who were legally admitted temporarily to the United States such as students and temporary workers.

#### **Unauthorized Residents**

The unauthorized resident immigrant population is defined as all foreign-born non-citizens who are not legal residents. Most unauthorized residents either entered the United States without inspection or were admitted temporarily and stayed past the date they were required to leave. Unauthorized immigrants applying for adjustment to lawful permanent resident status under the Immigration and Nationality Act (INA) are unauthorized until they have been granted LPR status, even though they may have been authorized to work. Persons who are beneficiaries of Temporary Protected Status (TPS)—an estimated several hundred thousand—are not technically unauthorized but were excluded from the legally resident immigrant population because data are unavailable in sufficient detail to estimate this population.

### **METHODOLOGY AND DATA**

Two populations are estimated in order to derive the unauthorized population estimates: 1) the total foreign-born population living in the United States on January 1, 2011 and 2) the legally resident population on the same date. The unauthorized population is equal to 1) minus 2). It was assumed that foreign-born residents who had entered the United States prior to 1980 were legally resident since most were eligible for legal permanent resident status.1 Therefore, the starting point for the estimates was January 1, 1980. The steps involved in estimating the components of each population are shown in the appendix. Data on the foreign-born population that entered during 1980-2010 by country of birth, state of residence, year of entry, age, and sex were obtained from the 2010 ACS. The ACS is a nationwide sample survey that collects information from U.S. households on social, demographic, and economic characteristics, including country of birth and year of entry of the foreign-born population. The ACS consists of nonoverlapping samples from which information is collected monthly over the course of a year. The ACS was selected for the estimates because of its large sample size, about 3 million households in 2010 compared to 100,000 for the March 2011 Current Population Survey, the primary alternative source of national data on the foreign-born population.

Data on persons who obtained LPR status by country of birth, state of residence, age, sex, category of admission, and year of entry were obtained from DHS administrative records maintained in an

<sup>1</sup> Under Section 249 of the INA, the registry provision, qualified persons who have resided continuously in the United States since prior to January 1, 1972 may apply for LPR status. Additionally, persons who had resided continuously in the United States since prior to January 1, 1982 as unauthorized residents were eligible to adjust for LPR status under the Immigration Reform and Control Act (IRCA) of 1986.

application case tracking system of U.S. Citizenship and Immigration Services (USCIS). Data on refugees arriving in the United States by country of origin were obtained from the Department of State. Data on persons granted asylum by country of origin were obtained from USCIS for those granted asylum affirmatively and from the Executive Office for Immigration Review of the Department of Justice for those granted asylum defensively in removal proceedings. Data on nonimmigrant admissions by country of citizenship, state of residence, age, sex, and class of admission were obtained from I-94 arrival-departure records in the TECS system of the U.S. Customs and Border Protection. Estimates of the unauthorized population were generated for the ten leading countries of birth and states of residence, age, and sex. The Cuban-born population living in the United States was excluded from the estimates since, according to immigration law, most Cubans are admitted or paroled into the United States and are eligible a year later to apply to adjust to LPR status.

### **Changes for the 2011 Estimates**

To address the issue posed by the updating of population estimates used to weight the ACS, DHS adjusted the 2010 unauthorized estimates using foreign-born estimates based on the 2010 Census; the previously reported 2010 unauthorized estimates were based on the 2009 ACS, which used Census 2000 population weights updated for births, deaths, and internal and international migration. The estimated number of 1980–2009 foreign-born entrants in the ACS on January 1, 2010 is calculated by taking the January 1, 2011 estimate and increasing it by the expected mortality and emigration estimated to have occurred during the previous 12 months. The revised 2010 estimates are only for the total unauthorized population.

Minor changes were also made to improve the 2011 estimates of the legally resident foreign-born population. An adjustment for internal migration of the legally resident population that subsequently naturalized was made by assuming their state of residence was distributed identically to the naturalized citizen population reported in the 2010 ACS. The current state of residence of the nonnaturalized legally resident population was assumed, as in previous reports, to be the state of residence on the date their most recent status (e.g. LPR, refugee, or asylee) was obtained. Mortality rates for the legally resident population were updated with 1999-2001 life tables from the National Center for Health Statistics to more closely reflect the median date of entry. In addition, approximately 100,000 LPRs, not originally included in DHS annual LPR flow data between 2001 and 2010 because of late or delayed record keying, were added to the legally resident population.

### **Limitations**

Assumptions about undercount of the foreign-born population in the ACS and rates of emigration. The estimates are sensitive to the assumptions that are made about these components (see **RESULTS**).

Accuracy of year of entry reporting. Concerns exist among immigration analysts regarding the validity and reliability of Census survey data on the year of entry question, "When did this person come to live in the United States?" Errors also occur in converting DHS

administrative dates for legally resident immigrants to year of entry dates.

Assumptions about the nonimmigrant population estimate. The estimates are based on admission dates and length of visit by class of admission and country of citizenship and not actual population counts.

Sampling error in the ACS. The 2010 ACS data are based on a sample of the U.S. population. Thus the estimates of the total foreign-born population that moved to the United States in the 1980–2010 period are subject to sampling variability. The estimated margin of error for the estimate of the foreign-born population in the 2010 ACS at the 90 percent confidence level is plus or minus approximately 149,000.

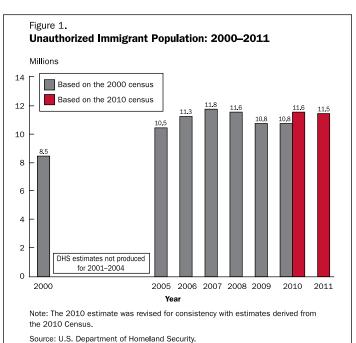
Accuracy of state of residence for the non-naturalized legally resident population. State of residence for the non-naturalized legally resident 1980–2010 entrants is assumed to be the state of residence on the date the most recent status (e.g., refugee, LPR, or naturalized citizen) was obtained; however, the accuracy of the estimates may be affected by state-to-state migration that occurred between the date of the status change and January 1, 2011.

#### **RESULTS**

The unauthorized immigrant population totaled 11.5 million in 2011 (see Figure 1). The DHS revised 2010 unauthorized estimate is 11.6 million, indicating little change in the size of the unauthorized population between 2010 and 2011.

# **Long Term Trend**

The unauthorized immigrant population increased from 2–4 million in 1980 (Warren and Passel, 1987) to 8.5 million by 2000 (see Figure 1). After 2000, the number of unauthorized immigrants continued to increase. Previous estimates suggest a peak in about 2007 of 11.8 million (Hoefer, Rytina, and Baker, 2011) or 12.0 million (Passel and Cohn 2011). Despite considerable



uncertainty in the estimates and changes in the Census base for ACS population estimates, it is unlikely that the unauthorized immigrant population increased thereafter given relatively high U.S. unemployment, improved economic conditions in Mexico, record low numbers of apprehensions of unauthorized immigrants at U.S. borders, and greater levels of border enforcement. Considering that the revised 2010 estimate—which is based on more recent data—is higher than the reported estimate, it is possible that the DHS unauthorized estimates for 2005-2009 also underestimate the unauthorized immigrant population.

The sensitivity of the estimates to assumptions about undercount and emigration is illustrated with several examples. Doubling the unauthorized immigrant undercount rate from 10 percent to 20 percent increases the estimated unauthorized population in 2011 from 11.5 million to 13.0 million. By lowering or raising emigration rates 20 percent and holding all other assumptions constant, the estimated unauthorized immigrant population would range from 10.7 million to 12.3 million. Doubling the unauthorized immigrant undercount rate and lowering or raising emigration rates by 20 percent would expand the range of the estimated unauthorized immigrant population from 12.0 to 13.9 million. A range for the revised 2010 estimate is 11.0 to 12.1 million (plus or minus 560,000) assuming that emigration and mortality of the foreign born population are between zero and twice the rate for the legally resident population.

#### **Period of Entry**

Of the 11.5 million unauthorized immigrants in 2011, 1.6 million (14 percent) entered the United States on January 1, 2005 or later (see Table 1). Larger numbers came during 2000-2004 (3.3 million or 29 percent) and 1995–1999 (3.0 million or 26 percent). Fewer came between 1990–1994 (1.6 million or 14 percent) or in the 1980s (1.9 million or 17 percent).

# **Components of the Unauthorized Immigrant Population** in **2011**

The size of each component of the unauthorized immigrant population estimates for 2011 is displayed in Table 2. See **APPENDIX** for a detailed explanation of each entry in Table 2. For the foreignborn population, the starting point was the estimated 31.3 million foreign-born residents in the 2010 ACS that entered the United

Table 1.

Period of Entry of the Unauthorized Immigrant Population:
January 2011

	Estimated population January 2011		
Period of entry	Number	Percent	
All years	11,510,000	100	
2005–2010	1,580,000	14	
2000–2004	3,330,000	29	
1995–1999	3,030,000	26	
1990–1994	1,650,000	14	
1985–1989	1,070,000	9	
1980–1984	850,000	7	

Detail may not sum to totals because of rounding. Source: U.S. Department of Homeland Security.

Table 2.

#### Components of the Unauthorized Immigrant Population: January 2011

	2011				
1) Foreign-born population					
a. Foreign-born population, entered 1980–2010, 2010 ACS	31,270,000				
b. Adjustment for shift in reference date from July 1, 2010 to January 1, 2011	480,000				
c. Undercount of nonimmigrants in ACS	190,000				
d. Undercount of other legally resident immigrants (LPRs, recent refugee/asylee arrivals) in ACS	500,000				
e. Undercount of unauthorized immigrant population in ACS	1,150,000				
f. Estimated foreign-born population, January 1, 2011 (a.+b.+c.+d.+e.)	33,600,000				
2) Legally resident population					
g. LPR, refugee, and asylee flow January 1, 1980–December 31, 2010	25,680,000				
h. Mortality 1980–2010	1,680,000				
i. Emigration 1980–2010	3,820,000				
j. LPR, refugee, and asylee resident population, January 1, 2011 (ghi.)	20,190,000				
k. Nonimmigrant population on January 1, 2011	1,900,000				
I. Estimated legally resident population, January 1, 2011 (j.+k.).	22,090,000				
3) Unauthorized immigrant population					
m. Estimated resident unauthorized immigrant population, January 1, 2011 (fl.).	11,510,000				

Detail may not sum to totals because of rounding. Source: U.S. Department of Homeland Security.

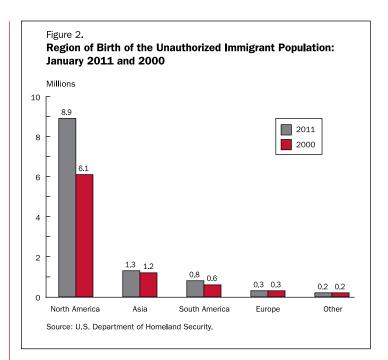
States during 1980–2010. This population was increased by 2.3 million, or 7 percent, by adjustments for the shift in the reference date from mid-year 2010 to January 1, 2011 and the addition of undercounts for the populations of nonimmigrants, legally resident immigrants, and unauthorized immigrants. The estimated undercount of the unauthorized immigrant population in the ACS was nearly 1.2 million and represents 49 percent of all adjustments to the foreign-born population.

For the legally resident population, the starting point was the flow of 25.7 million LPRs, refugees, and asylees during 1980–2010. By January 2011, the 25.7 million had been reduced by 5.5 million to 20.2 million due to mortality and emigration. Emigration accounted for 3.8 million, or 69 percent, of the 5.5 million. The addition of the nonimmigrant population, estimated at 1.9 million, resulted in a total estimated legally resident population of 22.1 million on January 1, 2011. Subtracting the 22.1 million legally resident immigrants from the total 33.6 million foreignborn population on January 1, 2011 that entered the United States during 1980–2010 yields the final estimated unauthorized population of 11.5 million.

#### **Estimates by Region and Country of Birth**

An estimated 8.9 million (77 percent) of the total 11.5 million unauthorized immigrants living in the United States in 2011 were from North America, including Canada, Mexico, the Caribbean, and Central America (see Figure 2). The next leading regions of origin were Asia (1.3 million) and South America (0.8 million). Between 2000 and 2011, the greatest increase in the unauthorized population occurred among natives of North America (2.8 million).

Mexico continued to be the leading source country of unauthorized immigration to the United States (see Table 3). There were 6.8 million unauthorized immigrants from Mexico in 2011, representing 59 percent of the unauthorized population. From 2000 to



2011, the Mexican-born unauthorized population increased by 2.1 million or an annual average of 190,000. The next leading source countries were El Salvador (660,000), Guatemala (520,000), Honduras (380,000), and China (280,000). The ten leading countries of origin represented 85 percent of the unauthorized immigrant population in 2011.

#### **Estimates by State of Residence**

California remained the leading state of residence of the unauthorized immigrant population in 2011, with 2.8 million (see Table 4). The next leading state was Texas with 1.8 million unauthorized residents, followed by Florida (740,000), New York (630,000), and Illinois (550,000). The ten leading states represented 73 percent of the unauthorized population in 2011.

Table 3.

Country of Birth of the Unauthorized Immigrant Population: January 2011 and 2000

	Estimated population in January		Percent of total		Percent change	Average annual change	
Country of birth	2011	2000	2011	2000	2000 to 2011	2000 to 2011	
All countries	11,510,000	8,460,000	100	100	36	280,000	
Mexico	6,800,000	4,680,000	59	55	45	190,000	
El Salvador	660,000	430,000	6	5	55	20,000	
Guatemala	520,000	290,000	5	3	82	20,000	
Honduras	380,000	160,000	3	2	132	20,000	
China	280,000	190,000	2	2	43	10,000	
Philippines	270,000	200,000	2	2	35	10,000	
India	240,000	120,000	2	1	94	10,000	
Korea	230,000	180,000	2	2	31	_	
Ecuador	210,000	110,000	2	1	83	10,000	
Vietnam	170,000	160,000	2	2	10	_	
Other countries	1,750,000	1,940,000	15	23	-10	(20,000)	

<sup>-</sup> Represents less than 5,000.

Detail may not sum to totals because of rounding.

Source: U.S. Department of Homeland Security.

Table 4.

State of Residence of the Unauthorized Immigrant Population: January 2011 and 2000

	Estimated population in January		Percent	of total	Percent change	Average annual change
State of residence	2011	2000	2011	2000	2000 to 2011	2000 to 2011
All states	11,510,000	8,460,000	100	100	36	280,000
California	2,830,000	2,510,000	25	30	12	30,000
Texas	1,790,000	1,090,000	16	13	64	60,000
Florida	740,000	800,000	6	9	-8	(10,000)
New York	630,000	540,000	6	6	18	10,000
Illinois	550,000	440,000	5	5	26	10,000
Georgia	440,000	220,000	4	3	95	20,000
New Jersey	420,000	350,000	4	4	19	10,000
North Carolina	400,000	260,000	3	3	53	10,000
Arizona	360,000	330,000	3	4	9	_
Washington	260,000	170,000	2	2	51	10,000
Other states	3,100,000	1,750,000	27	21	77	120,000

<sup>-</sup> Represents less than 5,000.

Detail may not sum to totals because of rounding.

Source: U.S. Department of Homeland Security.

#### **Estimates by Age and Sex**

In 2011, 59 percent of unauthorized immigrants were ages 25 to 44 years, and 53 percent were male (see Figure 3 and Table 5). Males accounted for 57 percent of the unauthorized population in the 18 to 34 age group in 2011 while females accounted for 57 percent of the 45 and older age groups.

#### **NEXT STEPS**

The estimates presented here will be updated periodically based on annual data of the foreign-born population collected in the ACS and on the estimated lawfully resident foreign-born population derived from various administrative data sources.

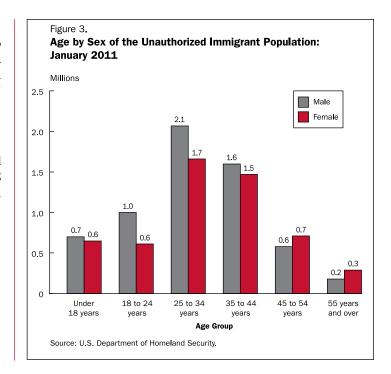


Table 5.

#### Age by Sex of the Unauthorized Immigrant Population: January 2011

	Total		Ma	ale	Female	
Age	Number	Percent	Number	Percent	Number	Percent
All ages	11,510,000	100	6,130,000	100	5,380,000	100
Under 18 years	1,350,000	12	700,000	11	650,000	12
18 to 24 years	1,610,000	14	1,000,000	16	610,000	11
25 to 34 years	3,730,000	32	2,070,000	34	1,660,000	31
35 to 44 years	3,070,000	27	1,600,000	26	1,470,000	27
45 to 54 years	1,290,000	11	580,000	9	710,000	13
55 years and over	470,000	4	180,000	3	290,000	5

Detail may not sum to totals because of rounding. Source: U.S. Department of Homeland Security.

#### **APPENDIX**

# **Components for Estimating the Unauthorized Resident Population**

The material below describes how each component was estimated. Note that the labels for each component correspond with the entries in Table 2.

### 1) Foreign-born population

## a. Foreign-born population, entered 1980-2010

The estimated total foreign-born population that entered between 1980–2010 was obtained from the ACS's FactFinder. FactFinder is the Census-maintained online data portal for obtaining ACS estimates from the full sample for a particular year. Data on the distribution of the foreign born by country of origin, state of residence, year of entry, age, and sex were obtained from the 2010 Public Use Microdata Sample (PUMS). The overall FactFinder estimate for the total foreign-born population entering in the post-1979 period was reduced to remove PUMS estimates of the post-1979 Cuban-born population. Further, a three-year moving average was applied to PUMS data for year of entry to reduce heaping effects.

#### b. Shift in reference date to January 1, 2011

The reference date for the 2010 ACS, the most recently available ACS data, was shifted from mid-year 2010 to January 1, 2011 by multiplying the population of 2010 entrants by 1.72, which is the average of three ratios: the ratio of the estimated population in the 2010 ACS that entered the United States during 2009 compared to the population in the 2009 ACS that entered in 2009 and the comparable ratios for the 2008 entrants in the 2008 and 2009 ACS surveys and the 2007 entrants in the 2007 and 2008 ACS surveys.

# c. Undercount of nonimmigrants in the ACS

Undercount refers to the number of persons who should have been counted in a survey or census, but were not. A rate of 10 percent was used to estimate the nonimmigrant undercount. This rate was used in DHS unauthorized population estimates for 2000 and 2005–2010 (U.S. Department of Homeland Security, 2003; Hoefer et al., 2011).

## d. Undercount of LPRs, refugees, and asylees in the ACS

The undercount rate for LPRs, refugees, and asylees in the ACS was assumed to be 2.5 percent. This was the same rate used in DHS estimates for 2000 and 2005–2010 (U.S. Department of Homeland Security, 2003; Hoefer et al., 2011).

#### e. Undercount of unauthorized immigrants in the ACS

The undercount rate for unauthorized immigrants in the ACS was assumed to be 10 percent. This was the same rate used in previous DHS estimates for 2000 and 2005–2010 (U.S. Department of Homeland Security, 2003; Hoefer et al., 2011).

#### f. Estimated foreign-born population, January 1, 2011

The sum of 1a. through 1e. (above) is the estimated foreign-born population on January 1, 2011 that entered the United States during the 1980–2010 period.

## 2) Legally resident population

# g. Legal permanent resident (LPR), refugee, and asylee flow, entered 1980–2010

The 1980–2010 flow was calculated separately for LPRs, refugees, and asylees. LPRs consist of two groups: new arrivals and those who have adjusted status. New arrivals include all persons with immigrant visas issued by the State Department who were admitted at a U.S. port of entry. For new arrival LPRs, the date of entry into the United States is the same as the date of approval for LPR status. For LPRs adjusting status, year of entry was assumed to be the year of last entry between 1980 and 2010 prior to adjustment. Year of entry was imputed when last entry date was missing (affecting approximately 40 percent of adjustment of status records during 1998-2005) using category of admission, year of LPR adjustment, and last entry date.

Refugees and asylees included in the legally resident flow had not adjusted to LPR status as of January 1, 2011. The refugee and asylee flow was estimated based on the average time spent in the status before adjustment to LPR status—2.3 years for refugees and 4.4 years for asylees adjusting in 2010. The refugee and asylee portion of the legally resident flow

therefore included refugees who arrived in the United States during the 2.3 years prior to 2011 and persons granted asylum during the 4.4 years preceding 2011.

## h. Mortality of legally resident flow 1980-2010

Data are not collected on the mortality of legally resident immigrants. LPRs in the 1980-2010 flow, who entered the U.S. on average in 2001, were survived to 2011 by sex and age (taking into account subsequent naturalization) using mortality rates by age and sex from 1999-2001 life tables (Arias et al., 2008).

## i. Emigration of legally resident flow 1980-2010

Emigration is a major component of immigrant population change. In the absence of data that directly measure emigration from the United States, researchers have developed indirect estimates based largely on Census data. For this report, annual emigration rates were calculated from estimates of emigration of the foreign-born population based on 1980 and 1990 Census data (Ahmed and Robinson, 1994). In addition, refugees and asylees, with little likelihood of returning to their country of origin, were assumed not to emigrate. The effective rate of emigration for legally resident immigrants granted LPR status in 1990-1991 was about 19 percent during the twenty year period through January 2011 (about 0.9 percent per year), after accounting for mortality (see **APPENDIX**, section h. above). For the entire LPR population that entered in 1980-2010, the average emigration rate was about 1.0 percent per year.

#### j. LPR, refugee, and asylee population on January 1, 2011

Subtracting mortality (2h.) and emigration (2i.) from the LPR, refugee, and asylee flow during 1980-2010 (2g.) results in the estimated LPR, refugee, and asylee resident population on January 1, 2011.

# k. Nonimmigrant population on January 1, 2011

The number of nonimmigrants living in the United States on January 1, 2011 was estimated by counting days of presence between July 1, 2010 and June 30, 2011 and dividing the result by 365. The estimate was restricted to classes of admission such as students, temporary workers, and exchange visitors where the length of stay typically exceeds two months. The estimate does not include border crossers or visitors for business or pleasure. Year of entry for the 2011 nonimmigrant population was based on the distribution of year of entry for nonimmigrants used in previous DHS unauthorized immigrant population estimates (U.S. Department of Homeland Security, 2003; Hoefer et al., 2011).

# l. Estimated legally resident immigrant population on January 1, 2011

Adding the population of LPRs, refugees, and asylees on January 1, 2011 (2j.) to the nonimmigrant population on the same date (2k.) results in the total estimated legally resident immigrant population in the United States on January 1, 2011.

#### 3) Unauthorized immigrant population

# m. Estimated unauthorized immigrant population on January 1, 2011

Subtracting the estimated legally resident immigrant population (2l.) from the total foreign-born population on January 1, 2011 (1f.) yields the estimate of the unauthorized immigrant population.

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