

Estimates of the Resident Nonimmigrant Population in the United States: 2008

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INTRODUCTION

This report presents estimates on the size and characteristics of the resident nonimmigrant population in the United States in 2008.¹ The estimates were based on administrative records of the Department of Homeland Security using a modified version of the method employed in previous DHS estimates (Grieco, 2006). The term *resident nonimmigrant* as used in this report refers to foreign nationals who are legally admitted into the United States for specific, temporary purposes and whose classes of admission are associated with long stays. The estimates are shown by category of admission, country of citizenship, state of destination, age, and gender.

In summary, the average daily population of resident nonimmigrants in the United States in 2008 is estimated to have been 1.83 million. One-half were temporary workers and their families, and one-half were from Asian countries.

DATA AND METHOD

Data were obtained from U.S. Customs and Border Protection of DHS which compiles and maintains information collected from nonimmigrants on the I-94 Arrival/Departure Record. This information includes arrival and departure dates, port of entry, class of admission, country of citizenship, state of destination, age, and gender. A unique 11-digit admission number is preprinted on both the arrival and departure portion of the I-94 form. Classes of admission included in resident categories are shown in Appendix 1; this delineation of resident classes is also used in Office of Immigration Statistics (OIS) annual reports on nonimmigrant admissions (see Monger and Barr, 2010).

The estimates were calculated using arrival records for 2001–2008 and departure records for 2008. Arrivals for 2001–2008 are assumed to be complete because of the relatively controlled environment of the admission process. Departure data, however, are likely less complete: Processes and procedures for collecting departure forms are not consistently available for all modes of departure, and departure forms may be misplaced or lost by nonimmigrant travelers. Further, nonimmigrants may have transitioned to legal permanent resident (LPR) status, or visits may be ongoing.

Estimation Procedure

The method estimates the length of each resident nonimmigrant visit in order to calculate the departure date. The sum of the number of days present in 2008, divided by 366,² provides the resident nonimmigrant population estimate.

Step 1—Creating visit records for 2008 departures. Departures in 2008 were matched with I-94 arrivals from 2001–2008. Arrival and departure records were paired together whenever the 11-digit admission number, the first initial of the last name, and date of birth fields were identical on the two records. Approximately 97 percent of the 2.8 million departure records from 2008 were successfully matched with a prior arrival record from 2001–2008.

Step 2—Calculating the average visit length. The length of each visit for visits created in Step 1 was calculated by subtracting the arrival date from the departure date. For example, the length of a visit originating on October 1 and ending on October 30 of the same year would have been $30 - 1 = 29$ days. Visits starting and ending on the same day were assigned a duration of one day. Once visit lengths had been determined for each matched arrival and departure, average visit lengths were calculated by class of admission and country of origin.

Step 3—Estimating the departure date. Departure dates were estimated for all 2001–2008 arrivals by adding the average visit length to the arrival date at the class of admission and country of citizenship level.

¹In this report, year refers to fiscal year (October 1 to September 30).

²The number of days in Fiscal Year 2008.



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Step 4—Estimating presence in 2008. The estimated number of days of presence during 2008 was calculated for each visit record based on the actual arrival date and estimated departure date.

Step 5—Estimating the daily average. The estimated daily average population was calculated by dividing the estimated number of days of presence during the year by the number of days in the year.

Variable Selection in the Matching Process

The use of record matching error-control criteria (first initial of last name and date of birth) reduced the probability of false matches but did so at the expense of “possible matches,” i.e., records with matching admission numbers but with inconsistencies in the date of birth or first initial of last name. Because the number of possibly falsely rejected matches was very low (about 20,000 out of 2.8 million departure records), the error-control criteria were not modified to reduce the probability of false rejection.

Current versus Previous Method

Using the previous method, the daily average population for a given year was calculated by multiplying the visit length estimate by the number of arrivals recorded that same year and dividing by 365.25. This approach, while simpler computationally than the current method, implicitly assumed a balance between a) portions of visits extending beyond the given year (included in the population estimate) and b) portions of visits which ended during the given year but began in previous years (not included in the estimate). The assumption is violated if the number of arrivals changes substantially from one year to the next, due, for example, to changes in economic conditions in the U.S. or abroad. The current method avoids the need to make assumptions about earlier arrivals by using actual arrival records from prior years.

Limitations and Assumptions

Visit length. The average visit lengths by class of admission and country of citizenship were assumed to be the same across all years of departure.

Adequacy of visit time window. It is unlikely that nonimmigrants present in 2008 arrived prior to 2001. Of the total 2–4 million resident nonimmigrant arrivals per year in 2001–2008, departure rates for complete visit records followed an exponential decay model with rates falling below 1 percent by the 4th or 5th year.

Adjustment to LPR status. Some visits may be concluded by the adjustment from nonimmigrant to legal permanent resident (LPR) status and therefore may not have I-94 departure records. Those visits do not contribute to the average visit length estimates, but are assumed to have the same average lengths as visits that end with a departure.

Transition between nonimmigrant classes of admission. In the absence of information on changes, class of admission was assumed to remain constant throughout the course of the visit.

Estimation required for all departure dates. Estimating all departure dates avoids the selective underestimation of departure dates for

categories of nonimmigrants with longer visits, although at the expense of making direct use of all existing data. Using the alternative, estimating departure dates only when a departure record could not be found, means that average visit lengths would be used disproportionately for longer visits, since all else equal, such visits are more likely to continue through the end of 2008.

ESTIMATES

Category of Admission

The average daily population of resident nonimmigrants in the United States in 2008 is estimated to have been 1.83 million. Nonimmigrant categories of admission include temporary workers, students, exchange visitors, and diplomats and other representatives; each category includes both principal nonimmigrants and dependent (non-principal) family members. Slightly more than half (0.93 million) of the 1.83 million nonimmigrants were temporary workers and families, about one third (0.59 million) were students and families, 13 percent (0.24 million) were exchange visitors and families, and 4 percent (0.07 million) were diplomats, other representatives, and families (see Table 1). Estimates for students and exchange visitor principals are consistent with those from the Student and Exchange Visitor Information System (SEVIS) of U.S. Immigration and Customs Enforcement of DHS (see Appendix 2).

Region and Country of Citizenship

Slightly more than half (53 percent) of resident nonimmigrants were citizens of Asian countries, including India (22 percent), South Korea (8 percent), China (7 percent), Japan (6 percent), and Taiwan (2 percent) (see Table 2). Europe and North America comprised another 17 percent each, lead by Canada (8 percent) and Mexico (7 percent). The five leading countries accounted for over 50 percent of the total.

Estimates using Previous Method

Use of the current method provides a total resident nonimmigrant population estimate that is similar to the estimate provided by the previous method (see Table 3). Differences in estimates by category of admission and country of citizenship were generally small.

State of Destination

The leading states of destination were California (0.28 million), New York (0.21 million), Texas (0.14 million), Florida (0.11 million), and New Jersey (0.10 million) (see Table 4). Approximately one half (47 percent) of the population lived in the 5 leading states.

Age and Gender

Twenty-six percent of resident nonimmigrants were ages 18 to 24, and 55 percent were ages 25 to 44 (see Table 5). Slightly more than half (56 percent) were male.

NEXT STEPS

The estimates will be updated annually. Efforts will be made to develop estimates for selected subpopulations of interest.

Table 1.

**Nonimmigrant Population by Category of Admission:
Fiscal Year 2008**

Category of admission	Estimate	
	Number	Percent
Total	1,830,000	100
Temporary workers and families	930,000	51
Students and families.	590,000	32
Exchange visitors and families	240,000	13
Diplomats, other representatives, and families.	70,000	4

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

Table 2.

**Nonimmigrant Population by Region and Country of Citizenship:
Fiscal Year 2008**

Region/country of citizenship	Estimate	
	Number	Percent
Total	1,830,000	100
Region		
Africa	50,000	3
Asia	970,000	53
Europe	320,000	17
North America	310,000	17
South America	100,000	6
All others.	70,000	4
Country of citizenship		
India	400,000	22
Canada	150,000	8
Korea, South	140,000	8
China	120,000	7
Mexico	120,000	6
Japan	110,000	6
All others.	780,000	43

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

Table 3.

**Comparison of Current and Previous Nonimmigrant Population Estimates by Category of Admission and Country of Citizenship:
Fiscal Year 2008**

Category of admission/country of citizenship	Current	Previous*		
	Estimate	Estimate	Difference from current	
			Number	Percent
Total	1,830,000	1,830,000	0	0
Category of admission				
Temporary workers and families	930,000	900,000	-30,000	-3
Students and families.	590,000	620,000	30,000	5
Exchange visitors and families	240,000	240,000	0	0
Diplomats, other representatives, and families	70,000	70,000	0	0
Country of citizenship				
India	400,000	410,000	10,000	2
Canada	150,000	150,000	0	-3
Korea, South	140,000	140,000	0	3
China	120,000	140,000	20,000	13
Mexico	120,000	110,000	-10,000	-9
Japan	110,000	110,000	0	-4
All others.	780,000	780,000	0	0

*Using 8 years of arrival data.
Detail may not sum to totals because of rounding.
Source: U.S. Department of Homeland Security.

Table 4.

**Nonimmigrant Population by State of Destination:
Fiscal Year 2008**

State of destination	Estimate	
	Number	Percent
Total	1,830,000	100
California	280,000	15
New York	210,000	12
Texas	140,000	8
Florida	110,000	6
New Jersey	100,000	5
All others.	980,000	53

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

Table 5.

Nonimmigrant Population by Age and Gender: Fiscal Year 2008

Characteristic	Estimate	
	Number	Percent
Total	1,830,000	100
Age		
Under 18 years	190,000	10
18 to 24 years.	470,000	26
25 to 34 years.	710,000	39
35 to 44 years.	290,000	16
45 to 54 years.	120,000	6
55 years and over	50,000	3
Gender		
Male	1,020,000	56
Female	790,000	43
Unknown	20,000	1

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

APPENDIX 1

Resident Nonimmigrant Class of Admission Categories

Class	Description
Temporary Workers and Families	
Temporary workers and trainees	
H1B	Workers in specialty occupations
H1B1	Chile and Singapore Free Trade Agreement aliens
H1C	Registered nurses participating in the Nursing Relief for Disadvantaged Areas
H2A	Seasonal agricultural workers
H2B	Seasonal nonagricultural workers
H2R	Returning H2B workers
H3	Trainees
H4	Spouses and children of H1, H2, or H3
O1	Workers with extraordinary ability or achievement
O2	Workers accompanying and assisting in performance of O1 workers
O3	Spouses and children of O1 and O2
P1.	Internationally recognized athletes or entertainers
P2.	Artists or entertainers in reciprocal exchange programs
P3.	Artists or entertainers in culturally unique programs
P4.	Spouses and children of P1, P2, or P3
Q1	Workers in international cultural exchange programs
R1	Workers in religious occupations
R2	Spouses and children of R1
TN.	North American Free Trade Agreement (NAFTA) professional workers
TD.	Spouses and children of TN
Intracompany transferees	
L1.	Intracompany transferees
L2.	Spouses and children of L1
Treaty traders and investors	
E1.	Treaty traders and their spouses and children
E2.	Treaty investors and their spouses and children
E3.	Australian Free Trade Agreement principals, spouses and children
Representatives of foreign information media	
I1	Representatives of foreign information media and spouses and children
Students	
F1.	Academic students
F2.	Spouses and children of F1
M1	Vocational students
M2	Spouses and children of M1
Exchange visitors	
J1.	Exchange visitors
J2.	Spouses and children of J1
Diplomats and other representatives	
A1.	Ambassadors, public ministers, career diplomatic or consular officers and their families
A2.	Other foreign government officials or employees and their families
A3.	Attendants, servants, or personal employees of A1 and A2 and their families
G1	Principals of recognized foreign governments
G2	Other representatives of recognized foreign governments
G3	Representatives of nonrecognized or nonmember foreign governments
G4	International organization officers or employees
G5	Attendants, servants, or personal employees of representatives
N1 to N7	North Atlantic Treaty Organization (NATO) officials, spouses, and children
Other categories	
Q2	Irish Peace Process Cultural and Training Program aliens
Q3	Spouses and children of Q2

Source: U.S. Department of Homeland Security.

APPENDIX 2

Foreign Student and Exchange Visitor Estimates— OIS versus SEVIS

The daily average population estimates for students and exchange visitor principals were 550,000 and 200,000, respectively, compared to 700,000 and 200,000, respectively from SEVIS data. The larger SEVIS estimates reflect a count of “active” participants, which does not imply continuous presence in the United States throughout the year. For example, continuing students may retain active status while abroad for up to 90 days. Furthermore, the status of dependents is based on the status of the principal and does not imply presence in the United States at any point in time.

SEVIS Population Estimates: Fiscal Year 2008

Class of admission		Population estimate	
		SEVIS*	OIS
Student (F, M)	Principal	700,000	550,000
	Dependent.	80,000	40,000
Exchange visitor (J)	Principal	200,000	200,000
	Dependent.	50,000	40,000

*The SEVIS population estimate is an estimate of active participants and is calculated by taking the average of 4 quarterly point-in-time estimates (see SEVIS by the Numbers).

Source: U.S. Department of Homeland Security.

In addition, according to a survey by the Institute of International Education (IIE), there were approximately 624,000 international students enrolled in accredited colleges and universities in the U.S. during the 2007/2008 school year (Open Doors 2008). The universe for the IIE estimate, however, is similar but not identical to those for either the OIS or SEVIS estimates.

REFERENCES

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