# Population Estimates of Nonimmigrants Residing in the United States: Fiscal Years 2017-2019 

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This report presents estimates of the size and characteristics of the population of nonimmigrants residing in the United States in fiscal years 2017 through 2019. ${ }^{1}$ Nonimmigrants are foreign nationals admitted into the United States for specific, temporary purposes. Examples of such temporary purposes include tourism, work, study, participation in an exchange program, representing a foreign government or international organization, and accompanying a principal nonimmigrant as an immediate family member or, in some cases, as a member of the principal nonimmigrant's staff. This report focuses exclusively on nonimmigrants admitted for purposes associated with residence, such as work and study, and excludes nonimmigrants admitted for non-residential purposes, such as tourism. ${ }^{2}$ Characteristics are broken out in finer detail for the population in 2019, and additional details on the 2017-2018 population are available in Appendix IV.

The estimates presented here are derived from U.S. Department of Homeland Security (DHS) administrative records of nonimmigrant arrivals and departures. Data are not available to measure the resident nonimmigrant population directly, so this report uses a statistical model of nonimmigrant visit lengths and applies the model to the population of nonimmigrants entering in the last 10 years to estimate the current population. Details about the data and a description of the estimation method are available in Appendix II.

## SUMMARY

About 3.2 million nonimmigrant workers, students, exchange visitors, and diplomats and other representatives were temporarily residing within the United States in 2019, up from about 2.8 million in 2018 and 2.6 million in 2017 (Table 1). ${ }^{3}$ These totals and data throughout this report include principal nonimmigrants and their dependent family members. ${ }^{4}$ Temporary workers comprised about 50 percent of the population each year, about 35 percent were students, about 10 percent were exchange visitors, and the remaining 4 percent were diplomats and other representatives.

## Region and Country of Citizenship

About 60 percent of the resident nonimmigrants in 2019 were citizens of Asian countries (Table 2; Figure 1), led by India with slightly more than 25 percent and the People's Republic of China (China) with nearly 15 percent. Another 17 percent came from North America, Mexico and Canada in particular, and Europe accounted for another 14 percent. ${ }^{5}$ Five percent were from South America, and 40 percent of those South Americans were from Brazil.

With workers and students accounting for a combined 86 percent of resident nonimmigrants, most countries' populations fall predominantly within these categories, but countries typically "specialized" in one or the other of these classes. Top-ten source countries whose nonimmigrants predominantly entered as temporary workers included India, Mexico, Canada, Japan, and the

[^0]Table 1.
Resident Nonimmigrant Population Size by Category of Admission, Region, and Country of Citizenship: Fiscal Years 2017-2019

| Category of Admission, Region, and Country of Citizenship | 2017 |  | 2018 |  | 2019 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number | Col. Pct. | Number | Col. Pct. | Number | Col. Pct. |
| Category of admission |  |  |  |  |  |  |
| Total. | 2,580,000 | 100\% | 2,790,000 | 100\% | 3,190,000 | 100\% |
| Temporary workers | 1,280,000 | 50\% | 1,400,000 | 50\% | 1,620,000 | 51\% |
| Students | 950,000 | 37\% | 1,010,000 | 36\% | 1,100,000 | 35\% |
| Exchange visitors | 260,000 | 10\% | 280,000 | 10\% | 350,000 | 11\% |
| Diplomats and other representatives | 100,000 | 4\% | 100,000 | 4\% | 130,000 | 4\% |
| Region |  |  |  |  |  |  |
| Total | 2,580,000 | 100\% | 2,790,000 | 100\% | 3,190,000 | 100\% |
| Asia | 1,570,000 | 61\% | 1,700,000 | 61\% | 1,900,000 | 60\% |
| Europe | 370,000 | 14\% | 380,000 | 14\% | 430,000 | 14\% |
| North America | 400,000 | 16\% | 440,000 | 16\% | 540,000 | 17\% |
| South America | 120,000 | 5\% | 140,000 | 5\% | 170,000 | 5\% |
| Other or unknown. | 110,000 | 4\% | 120,000 | 4\% | 150,000 | 5\% |
| Country |  |  |  |  |  |  |
| Total | 2,580,000 | 100\% | 2,790,000 | 100\% | 3,190,000 | 100\% |
| India | 690,000 | 27\% | 770,000 | 27\% | 870,000 | 27\% |
| China | 390,000 | 15\% | 420,000 | 15\% | 450,000 | 14\% |
| Mexico | 210,000 | 8\% | 230,000 | 8\% | 280,000 | 9\% |
| Canada | 150,000 | 6\% | 160,000 | 6\% | 200,000 | 6\% |
| Korea, South | 100,000 | 4\% | 100,000 | 4\% | 110,000 | 3\% |
| Japan | 90,000 | 4\% | 90,000 | 3\% | 100,000 | 3\% |
| United Kingdom | 70,000 | 3\% | 70,000 | 2\% | 80,000 | 2\% |
| Brazil. | 50,000 | 2\% | 60,000 | 2\% | 70,000 | 2\% |
| Saudi Arabia | 70,000 | 3\% | 60,000 | 2\% | 60,000 | 2\% |
| France. | 50,000 | 2\% | 50,000 | 2\% | 50,000 | 2\% |
| All others. | 730,000 | 28\% | 780,000 | 28\% | 920,000 | 29\% |

Notes: Detail may not sum to total due to rounding; percentages are column percentages and were calculated prior to rounding; data include dependent family
members
Source: U.S. Department of Homeland Security.

Table 2.
Resident Nonimmigrant Population Size by Category of Admission and Region and Top Ten Countries of Citizenship: Fiscal Year 2019

| Region and country of citizenship | Total |  | Temporary workers |  | Students |  | Exchange visitors |  | Diplomats and other representatives |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number | Col. Pct. | Number | Col. Pct. | Number | Col. Pct. | Number | Col. Pct. | Number | Col. Pct. |
| Region |  |  |  |  |  |  |  |  |  |  |
| Total | 3,190,000 | 100\% | 1,620,000 | 100\% | 1,100,000 | 100\% | 350,000 | 100\% | 130,000 | 100\% |
| Asia | 1,900,000 | 60\% | 880,000 | 54\% | 840,000 | 76\% | 150,000 | 43\% | 40,000 | 32\% |
| Europe | 430,000 | 14\% | 200,000 | 13\% | 80,000 | 7\% | 110,000 | 33\% | 40,000 | 31\% |
| North America | 540,000 | 17\% | 420,000 | 26\% | 70,000 | 7\% | 30,000 | 10\% | 10,000 | 12\% |
| South America | 170,000 | 5\% | 60,000 | 4\% | 60,000 | 6\% | 30,000 | 9\% | 10,000 | 10\% |
| Other. | 150,000 | 5\% | 50,000 | 3\% | 60,000 | 5\% | 20,000 | 6\% | 20,000 | 16\% |
| Country |  |  |  |  |  |  |  |  |  |  |
| Total | 3,190,000 | 100\% | 1,620,000 | 100\% | 1,100,000 | 100\% | 350,000 | 100\% | 130,000 | 100\% |
| India | 870,000 | 27\% | 650,000 | 40\% | 200,000 | 18\% | 10,000 | 4\% | - | 3\% |
| China | 450,000 | 14\% | 70,000 | 4\% | 330,000 | 30\% | 50,000 | 14\% | - | 3\% |
| Mexico | 280,000 | 9\% | 250,000 | 16\% | 20,000 | 1\% | 10,000 | 3\% | - | 4\% |
| Canada | 200,000 | 6\% | 140,000 | 9\% | 40,000 | 3\% | 10,000 | 3\% | 10,000 | 4\% |
| Korea, South | 110,000 | 3\% | 30,000 | 2\% | 60,000 | 6\% | 20,000 | 4\% | - | 2\% |
| Japan | 100,000 | 3\% | 70,000 | 4\% | 20,000 | 2\% | 10,000 | 3\% | - | 3\% |
| United Kingdom | 80,000 | 2\% | 50,000 | 3\% | 10,000 | 1\% | 10,000 | 3\% | 10,000 | 7\% |
| Brazil. | 70,000 | 2\% | 30,000 | 2\% | 30,000 | 3\% | 10,000 | 4\% | - | 3\% |
| Saudi Arabia | 60,000 | 2\% | - | 0\% | 50,000 | 5\% | - | 1\% | - | 3\% |
| France. | 50,000 | 2\% | 30,000 | 2\% | 10,000 | 1\% | 10,000 | 4\% | - | 3\% |
| All others. | 920,000 | 29\% | 310,000 | 19\% | 330,000 | 30\% | 200,000 | 57\% | 80,000 | 66\% |

- Base number rounds to zero.

Notes: Detail may not sum to total due to rounding; percentages are column percentages and were calculated prior to rounding; data include dependent family members. Source: U.S. Department of Homeland Security


United Kingdom, with temporary workers accounting for between 70 and 90 percent of each of these countries' nonimmigrant populations. Conversely, students accounted for 60 to 90 percent of nonimmigrants from China, South Korea, and Saudi Arabia. Brazil and France were exceptions to the worker/ student trends and were disproportionately large senders of exchange visitors.
State of Destination. California was home to the most nonimmigrants, accounting for 560,000 persons or 18 percent of the total (Table 3; Figure 2). The proportions of nonimmigrants in California who were temporary workers and students resembled the country as a whole; 53 percent were temporary workers and 37 percent were students. New York was second, with 390,000 persons or 12 percent of the total. In contrast with California, nonimmigrants living in New York were evenly split between temporary workers and students. Also, nearly 25 percent of all foreign diplomatic staff residing in the United States resided in New York.

The next three leading states were Texas (8 percent), Florida ( 6 percent), and Massachusetts (5 percent). Nonimmigrants residing in Texas, Florida, New Jersey, Michigan, andWashington were disproportionately temporary workers, and those in Massachusetts and Pennsylvania were disproportionately students. Altogether, the top five states accounted for nearly 50 percent of all nonimmigrants residing in the United States.

Age and Sex. About 80 percent of the nonimmigrant population in 2019 were 18 to 44 years old, 10 percent were minors, and 3 percent were over 55 (Table 4). Temporary workers (and their accompanying family members) tended to be 25 to 44 ( 70 percent) and only 6 percent were 18 to 24 (Figure 3). Students tended to be younger, with nearly 90 percent ages 18 to 35 . Similar to the student category, about 75 percent of exchange visitors were also 18 to 35 . Diplomats and other representatives tended to be older, with 75 percent ages 25 to 54 and 14 percent 55 or older. Thus, although diplomats account for only 4 percent of resident nonimmigrants, they account for 25 percent of the 55 and older subpopulation. Minors account for about 10 percent of nonimmigrants across all categories of admission.

Most of the resident nonimmigrant population were male ( 57 percent), but the proportion varied substantially between admission categories (Figure 4). The temporary worker and diplomatic categories were heavily male-dominated with 62 and 64 percent male, respectively. Students were more evenly distributed with 54 percent male. Most exchange visitors on the other hand were female ( 55 percent).

Table 3.
Resident Nonimmigrant Population by Category of Admission and State of Residence: Fiscal Year 2019

| State | Total |  | Temporary workers |  | Students |  | Exchange visitors |  | Diplomats and other representatives |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number | Col. Pct. | Number | Col. Pct. | Number | Col. Pct. | Number | Col. Pct. | Number | Col. Pct. |
| Total | 3,190,000 | 100\% | 1,620,000 | 100\% | 1,100,000 | 100\% | 350,000 | 100\% | 130,000 | 100\% |
| California | 560,000 | 18\% | 300,000 | 19\% | 210,000 | 19\% | 50,000 | 14\% | 10,000 | 7\% |
| New York | 390,000 | 12\% | 160,000 | 10\% | 160,000 | 14\% | 50,000 | 14\% | 30,000 | 23\% |
| Texas | 250,000 | 8\% | 160,000 | 10\% | 60,000 | 6\% | 20,000 | 5\% | 10,000 | 5\% |
| Florida | 190,000 | 6\% | 110,000 | 7\% | 60,000 | 6\% | 20,000 | 4\% | 10,000 | 5\% |
| Massachusetts | 160,000 | 5\% | 50,000 | 3\% | 80,000 | 8\% | 30,000 | 8\% | - | 1\% |
| New Jersey. | 140,000 | 4\% | 100,000 | 6\% | 30,000 | 3\% | 10,000 | 4\% | - | 2\% |
| Illinois | 140,000 | 4\% | 70,000 | 4\% | 50,000 | 5\% | 10,000 | 4\% | - | 1\% |
| Washington. | 130,000 | 4\% | 80,000 | 5\% | 40,000 | 3\% | 10,000 | 2\% | - | 3\% |
| Pennsylvania. | 100,000 | 3\% | 40,000 | 2\% | 50,000 | 4\% | 10,000 | 3\% | - | 1\% |
| Michigan | 100,000 | 3\% | 60,000 | 4\% | 30,000 | 3\% | 10,000 | 3\% | - | 0\% |

Base number rounds to zero.
Notes: Detail may not sum to total due to rounding; percentages are column percentages and were calculated prior to rounding; data include dependent family members. Source: U.S. Department of Homeland Security

Figure 2.
Resident Nonimmigrant Population Distribution by Category of Admission within Each of the Top States of Residence: Fiscal Year 2019


[^1]Table 4.
Resident Nonimmigrant Population by Category of Admission, Age, and Sex: Fiscal Year 2019

| Age group and sex | Total |  | Temporary workers |  | Students |  | Exchange visitors |  | Diplomats and other representatives |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number | Col. Pct. | Number | Col. Pct. | Number | Col. Pct. | Number | Col. Pct. | Number | Col. Pct. |
| Age group |  |  |  |  |  |  |  |  |  |  |
| Total | 3,190,000 | 100\% | 1,620,000 | 100\% | 1,100,000 | 100\% | 350,000 | 100\% | 130,000 | 100\% |
| 0-17 | 320,000 | 10\% | 190,000 | 12\% | 90,000 | 8\% | 40,000 | 10\% | 10,000 | 8\% |
| 18-24 | 860,000 | 27\% | 90,000 | 6\% | 620,000 | 56\% | 140,000 | 41\% | 10,000 | 4\% |
| 25-34 | 1,180,000 | 37\% | 690,000 | 43\% | 350,000 | 31\% | 110,000 | 33\% | 30,000 | 20\% |
| 35-44 | 550,000 | 17\% | 430,000 | 27\% | 40,000 | 4\% | 40,000 | 12\% | 40,000 | 29\% |
| 45-54 | 200,000 | 6\% | 150,000 | 9\% | 10,000 | 1\% | 10,000 | 3\% | 30,000 | 25\% |
| 55-109 | 80,000 | 3\% | 60,000 | 3\% | - | 0\% | - | 1\% | 20,000 | 14\% |
| Sex |  |  |  |  |  |  |  |  |  |  |
| Total | 3,190,000 | 100\% | 1,620,000 | 100\% | 1,100,000 | 100\% | 350,000 | 100\% | 130,000 | 100\% |
| Female | 1,360,000 | 43\% | 620,000 | 38\% | 500,000 | 46\% | 190,000 | 55\% | 50,000 | 36\% |
| Male | 1,830,000 | 57\% | 1,000,000 | 62\% | 600,000 | 54\% | 160,000 | 45\% | 80,000 | 64\% |

Base number rounds to zero.
Notes: Detail may not sum to total due to rounding; percentages are column percentages and were calculated prior to rounding; data include dependent family members.
Source: U.S. Department of Homeland Security

Figure 3.
Resident Nonimmigrant Population by Category of Admission and Age Group:
Fiscal Year 2019


Note: Data include dependent family members.
Source: U.S. Department of Homeland Security.

Figure 4.
Resident Nonimmigrant Population by Category of Admission and Sex:
Fiscal Year 2019


Note: Data include dependent family members.
Source: U.S. Department of Homeland Security.

## Appendix I

Table I-1.
Nonimmigrant Classes of Admission Associated with Residence

| Class | Description |
| :---: | :---: |
| Temporary workers and families |  |
| Temporary workers and trainees |  |
|  | Workers in specialty occupations <br> Workers in specialty occupations (Chile and Singapore Free Trade Agreement) <br> Registered nurses participating in the Nursing Relief for Disadvantaged Areas <br> Temporary agricultural workers <br> Temporary non-agricultural workers <br> Returning H2B workers <br> Trainees and participants in a special educational exchange program <br> Spouses and children of $\mathrm{H} 1, \mathrm{H} 2$, or H3 <br> Workers with extraordinary ability or achievement <br> Workers accompanying and assisting in performance of 01 workers <br> Spouses and children of 01 and 02 <br> Internationally recognized athletes or entertainers and their essential support personnel <br> Artists or entertainers in reciprocal exchange programs and their essential support personnel <br> Artists or entertainers in culturally unique programs and their essential support personnel <br> Spouses and children of P1, P2, or P3 <br> Participants in international cultural exchange programs <br> Workers in religious vocations or occupations <br> Spouses and children of R1 <br> North American Free Trade Agreement (NAFTA) professional workers <br> Spouses and children of TN |
| Intracompany transferees |  |
| $\begin{aligned} & \mathrm{L} 1 \\ & \mathrm{~L} 2 \end{aligned}$ | Intracompany transferees Spouses and children of L1 |
| Treaty traders and investors |  |
| $\begin{aligned} & \text { E1 } \\ & \text { E2 } \\ & \text { E3. } \end{aligned}$ | Treaty traders and their spouses and children <br> Treaty investors and their spouses and children <br> 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 $\ldots \ldots . . . .$. F2 $\ldots \ldots . .$. M1 . . . . . . . . . . . . . M2 . . . . . . . . . . | Academic students <br> Spouses and children of F1 <br> Vocational students <br> Spouses and children of M1 |
| Exchange visitors |  |
| $\begin{aligned} & \text { J1 } \\ & \text { J2 } \end{aligned}$ | Exchange visitors <br> Spouses and children of J1 |
| Diplomats and other representatives |  |
|  | Ambassadors, public ministers, career diplomatic or consular officers and their families Other foreign government officials or employees and immediate family Attendants, servants, or personal employees of A1 and A2 and immediate family Principals of recognized foreign governments and immediate family Other representatives of recognized foreign governments and immediate family Representatives of nonrecognized or nonmember foreign governments and immediate family International organization officers or employees and immediate family Attendants, servants, or personal employees of representatives and immediate family North Atlantic Treaty Organization (NATO) officials, immediate family, and dependents |

[^2]
## Appendix II

## DATA AND METHOD

Data are not available to measure the resident nonimmigrant population directly, so this report develops a statistical model of nonimmigrant visit lengths and applies the model to the population of nonimmigrants entering in the previous 10 years (including the year of the estimate) to estimate the current population.

## Data

Within DHS, nonimmigrant arrival and departure records are collected and maintained by U.S. Customs and Border Protection (CBP). CBP creates an electronic DHS Form I-94, Nonimmigrant Arrival/Departure Record for each admission of a resident nonimmigrant into the United States as part of the inspection process at a port of entry. ${ }^{6}$ Corresponding departure forms are created whenever CBP records the departure of a nonimmigrant, but departure records are somewhat incomplete because the United States does not systematically screen all travelers at the point of departure. Instead, the vast majority of departure records are derived from commercial air and sea carrier departure manifests. Other sources of nonimmigrant departure records include the submission of a paper version of the I-94 form by the nonimmigrant after departure, border crossing records collected by Canada on entries into Canada from the United States by third-country nationals, and CBP pulse and surge operations to collect information from certain travelers departing through Southwest Border ports of entry.

Although the vast majority of departures by resident nonimmigrants are recorded by the means described above, the absence of a departure record does not provide clear evidence that a nonimmigrant remains in the United States. In particular, an arrival record without a corresponding departure record also may reflect an unrecorded departure or a recorded departure that could not be matched to its corresponding arrival. ${ }^{7}$ The cumulative impact of unrecorded departures and unmatched records over a period of years is too large to allow for a direct measurement of the nonimmigrant population based solely on arrival and departure records.

In addition, no nationally representative surveys exist that are immediately useful for estimating or measuring the resident nonimmigrant population. Although several representative surveys distinguish between native- and foreign-born persons, no large, national surveys distinguish between (temporary) nonimmigrants and (permanent) immigrants.

Because these "first choice" possibilities (direct measurement and survey estimation) are not readily available, this report uses a three-step statistical model to estimate the resident nonimmigrant population. The first step is to construct visit length frequency tables by matching departures in in the most recent fiscal year back to their associated arrivals, incorporating
arrival records from the last 10 years. These frequency tables are constructed for each class of admission and country of citizenship. Second, these frequency tables were used to construct probability models describing the probability that a nonimmigrant would stay for at least a given number of days based on the person's nationality and visa class of admission. For example, based on historical patterns, what is the probability that a Mexican national with an $\mathrm{H}-2 \mathrm{~A}$ visa will depart the United States on or before the 100th day of his or her visit? Third, the probability model was deployed for each day of the year and for every nonimmigrant who arrived in the United States in the last 10 years, based on the nonimmigrant's nationality, visa class of admission, and date of admission into the United States. These estimates were added up to produce a total estimated number of days nonimmigrants were present during the last year, and the total was divided by 365 to yield the average population size for the year.

Equation 1.

$$
\sum_{x \in \chi} \sum_{d \in D(x)} \frac{P(l \geq d-A(x) \mid f(x), g(x))}{365}
$$

> Where X is the set of all admissions of resident immigrants in the last 10 years, $D(x)$ is the set of all dates in the last year that occurred on or after $A(x)$, the admission date for $x, L$ is a random variable representing the length of the nonimmigrant visit in days, and $f(x)$ and $g(x)$ are the country of citizenship and class of admission of $x$.

Analysis was restricted to resident nonimmigrant classes of admission, i.e., classes characterized by visits lasting two months or longer on average. ${ }^{8}$ The 2-month duration was chosen in order to be consistent with the residence definitions used in the U.S. Census Bureau's American Community Survey and DHS estimates of the size and characteristics of the unauthorized immigrant population (Baker, 2020). Because admission under a residence class does not always indicate residence in the United States, data were further restricted by omitting records for persons exhibiting likely commuter behavior (defined here as arriving in the United States seven or more times per year).

[^3]
## LIMITATIONS

The accuracy and precision of the population estimates depend on how well the visit-length probability models derived from departure cohorts in the most recent year represent the visitlength probabilities for all visits, the choice of classification variables, and the veracity of the assumptions. Some important limitations are covered below.

## Assumptions underlying the probability models

The use of visit length frequency tables to construct probability models requires the assumptions that no correlation exists between visit length and the failure to record a departure or the inability to match a departure to a prior arrival. The first assumption is likely unproblematic: an airline's failure to submit a departure manifest for a flight, for example, should not be related to the visit length of the people on board the flight. The second assumption is somewhat flawed, however, as relatively long visits are more likely to have an arrival that occurred prior to the advent of electronic I-94 forms, and matching to usersubmitted, handwritten forms is not as accurate as matching to electronic forms that were automatically generated based on travel documents (e.g., a machine-readable passport). Nonetheless, changes in the match rate over time should have a minimal impact on the model because about 96 percent of departure records used to build the frequency tables were successfully matched back to their prior arrivals.

## Adjustment to Lawful Permanent Resident status

Departure data were not available for persons who were admitted as nonimmigrants, but who subsequently adjusted to lawful permanent resident status. To the extent that people who adjust status tend to have shorter or longer stays than people who do not adjust status, the estimates may be biased downward or upward. The impact, if any, would likely be concentrated among visa classes and countries with higher adjustment rates. For example, the ratios of adjustments to admissions in FY 2010 were 1 to 5 for H4 dependents, 1 to 9 for H-1B workers, and only 1 to 60 for seasonal workers. Results are presented only for broad categories of admission classes, instead of for individual classes of admission, to smooth over or wash out the potential bias arising from status adjustments within any single class of admission.

## Increasing arrival volume

The observed visit-length distributions are based on completed visits with an arrival during the last 10 years and a departure recorded during the most recent of those years. Because arrival flow tends to increase slightly each year, departures in the most recent year disproportionately reflect more recent arrivals. Therefore, the visit-length distributions, and the resulting population estimates, are likely to be slightly biased downwards.

## Stability of visit length across time

The estimation methodology implicitly assumes that the visitlength distribution is constant across time. Although the visitlength distributions are not exactly the same each year, they have historically been reasonably stable for the classes of admission and countries of citizenship with the largest contributions to the total.

## Missing Characteristics

The age, sex, state, or country fields were missing ${ }^{9}$ from some records and were assumed to be missing completely at random. When missing, age, sex, and state were imputed based on the age, sex, and state distributions of nonimmigrants with the same class of admission and country of citizenship. Country was imputed based on the country of citizenship of persons with the same class of admission.

[^4]
## Appendix III

## OTHER SOURCES OF DATA ON STUDENTS AND EXCHANGE VISITORS

U.S. Immigration and Customs Enforcement (ICE) and the Institute of International Education (IIE) also count or estimate the number of foreign students studying in the United States, but with key differences. ICE counts F-1 (academic) and M-1 (vocational) students listed as "active" in the ICE Student and Exchange Visitor Information System (SEVIS) at any point during the given calendar year. IIE counts F-1 and J-1 (exchange visitor) enrollments at accredited institutions of higher education or in optional practical training after completing a degree program. These counts of active students or enrollments provide information on program participation, but do not measure or estimate the average number of foreign students living in the United States during the course of the year.

The Student and Exchange Visitor Program (SEVP), managed by ICE, reported that there were about 1.5 million nonimmigrant students ( $\mathrm{F}-1$ and $\mathrm{M}-1$ visas) and about 525,000 exchange visitors ( $\mathrm{J}-1$ visa) who were active at some point during calendar year 2019; the ICE report omits dependents (2019 SEVIS by the Numbers Report). As the student numbers reported by ICE are substantially larger than the population estimates reported here, it is important to note that the numbers reported by ICE are counts of all F-1 and M-1 nonimmigrants with "active" student status at any point during the year, which is different from counting the number of persons residing within the United States and different from an annual average. For example, students may retain active status while abroad between semesters, may be in the United States for a period of study lasting only a few weeks, or may travel abroad too often to be considered residents. Further, "active" status may not terminate until sometime after the nonimmigrant departs from the United States.

The numbers reported by $\mathrm{IIE}^{10}$ are survey estimates of academic enrollments at accredited institutions of higher learning by nonimmigrants with academic student ( F ) or exchange visitor (J) visas. ${ }^{11}$ The IIE enrollment counts are expected to exceed DHS student population estimates because an enrolled student may be outside the United States for most or part of the year and because DHS does not include exchange visitors in its student estimates. ${ }^{12}$ Further, not all exchange visitors are students, so a clear comparison is not possible. IIE reported about 1.09 million enrollments in the 2018/2019 academic year, ${ }^{13}$ compared to a DHS population estimate of 1.10 million students and about 1.45 million students and exchange visitors, combined. ${ }^{14}$ Of the 1.45 million students and exchange visitors, about 1.32 million were 18 and older, and some fraction of those were vocational students or dependents (other than minor children).
${ }^{10}$ See the IIE Open Doors web publication: https://www.iie.org/Research-and-Insights/ Open-Doors.
${ }^{11}$ The IIE estimates also include persons engaged in optional practical training (OPT).
${ }^{12}$ DHS student estimates include some types of students that IIE estimates do not (vocational students and secondary school students), but the numbers are very small in comparison.
${ }^{13}$ Including about150,000 former students engaged in OPT.
${ }^{14}$ Recall that the DHS estimates include dependents and are not limited to colleges and universities.

## Appendix IV

## SUPPLEMENTAL TABLES

Table IV-1.
Resident Nonimmigrant Population by State of Residence: Fiscal Years 2017 to 2019

| State | 2017 |  | 2018 |  | 2019 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number | Col. Pct. | Number | Col. Pct. | Number | Col. Pct. |
| Total | 2,580,000 | 100\% | 2,790,000 | 100\% | 3,190,000 | 100\% |
| California. | 450,000 | 18\% | 500,000 | 18\% | 560,000 | 18\% |
| New York | 310,000 | 12\% | 340,000 | 12\% | 390,000 | 12\% |
| Texas | 210,000 | 8\% | 220,000 | 8\% | 250,000 | 8\% |
| Florida. | 150,000 | 6\% | 160,000 | 6\% | 190,000 | 6\% |
| Massachusetts | 130,000 | 5\% | 140,000 | 5\% | 160,000 | 5\% |
| New Jersey | 110,000 | 4\% | 130,000 | 5\% | 140,000 | 4\% |
| Illinois | 110,000 | 4\% | 120,000 | 4\% | 140,000 | 4\% |
| Washington | 90,000 | 4\% | 110,000 | 4\% | 130,000 | 4\% |
| Pennsylvania | 80,000 | 3\% | 90,000 | 3\% | 100,000 | 3\% |
| Michigan | 80,000 | 3\% | 80,000 | 3\% | 100,000 | 3\% |
| All others. | 850,000 | 33\% | 910,000 | 33\% | 1,030,000 | 32\% |

Notes: Detail may not sum to total due to rounding; percentages are column percentages and were calculated prior to rounding; data include dependent family members.
Source: U.S. Department of Homeland Security.
Table IV-2.
Resident Nonimmigrant Population by Age and Sex: Fiscal Years 2017 to 2019

| Age Group and Sex | 2017 |  | 2018 |  | 2019 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number | Col. Pct. | Number | Col. Pct. | Number | Col. Pct. |
| Age Group |  |  |  |  |  |  |
| Total | 2,580,000 | 100\% | 2,790,000 | 100\% | 3,190,000 | 100\% |
| 0-17 | 290,000 | 11\% | 300,000 | 11\% | 320,000 | 10\% |
| 18-24 | 750,000 | 29\% | 780,000 | 28\% | 860,000 | 27\% |
| 25-34 | 940,000 | 36\% | 1,030,000 | 37\% | 1,180,000 | 37\% |
| 35-44 | 390,000 | 15\% | 450,000 | 16\% | 550,000 | 17\% |
| 45-54 | 150,000 | 6\% | 170,000 | 6\% | 200,000 | 6\% |
| 55-109 | 60,000 | 2\% | 60,000 | 2\% | 80,000 | 3\% |
| Sex |  |  |  |  |  |  |
| Total | 2,580,000 | 100\% | 2,790,000 | 100\% | 3,190,000 | 100\% |
| Female | 1,100,000 | 43\% | 1,190,000 | 43\% | 1,360,000 | 43\% |
| Male . | 1,480,000 | 57\% | 1,590,000 | 57\% | 1,830,000 | 57\% |

Notes: Detail may not sum to total due to rounding; percentages are column percentages and were calculated prior to rounding; data include dependent family members
Source: U.S. Department of Homeland Security.

## REFERENCES

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Institute of International Education, web publication. "2019 Fast Facts," retrieved from https://www.iie.org/opendoors.
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[^0]:    ${ }^{1}$ Hereafter, "year" will refer to the fiscal year unless otherwise specified. Fiscal year 2019 ran from Oct. 1, 2018 to September 30, 2019.
    ${ }^{2}$ A list of specific nonimmigrant classes of admission associated with residence and grouped by general visit purposes is provided in Appendix I.
    ${ }^{3}$ Reports for earlier years are available on the OIS website: https://www.dhs.gov/ immigration-statistics/population-estimates/NI.
    ${ }^{4}$ In addition to dependent family members, support personnel whose status is derived from a principal nonimmigrant such as an artist, entertainer, or foreign government official are counted as part of the principal nonimmigrant's category. ${ }^{5}$ In this report, North America includes the Caribbean and Central America.

[^1]:    Note: Data include dependent family members.
    Source: U.S. Department of Homeland Security.

[^2]:    Source: U.S. Department of Homeland Security

[^3]:    ${ }^{6}$ Certain nonimmigrants, including most Mexican and Canadian visitors for business or pleasure, arriving at land ports of entry are exempted from the I-94 form; but these B-1/B-2 visitors are not included in the resident nonimmigrant population and are outside the scope of this report.
    ${ }^{7}$ Prior analysis found corresponding departure records for approximately 85 percent of all resident nonimmigrant arrival records over a 4 -year period; the remaining 15 percent had not departed, departed without record, or departed without generating a matchable record. ${ }^{8}$ See Appendix I for a list of resident nonimmigrant classes of admission.

[^4]:    ${ }^{9}$ State was missing from about 6 percent of the records. Country, age, or sex was missing from less than 0.5 percent of records.

