
ESTIMATES, FISCAL YEAR 1999

This report will appear as a chapter in the forthcoming *1999 Statistical Yearbook of the Immigration and Naturalization Service*. All references to Appendixes, Charts, Tables, and other sections of the *Statistical Yearbook* appear as they will in the final *Yearbook* edition.

VII. ESTIMATES

This section presents estimates of the number of persons who leave the United States to take up residence elsewhere, as well as the number and characteristics of persons residing in this country illegally, and describes INS' efforts to develop reliable information on the total number of persons who enter the United States each year.

Although a considerable amount of detailed information is available about immigrants, temporary visitors, and other categories of international migrants to the United States, significant gaps remain in our knowledge about immigration to the United States. In some areas these deficiencies persist because of the inherent difficulty in estimating the numbers, as is the case for emigration and illegal immigration. As a result, no detailed tables on these two categories are included in the *Statistical Yearbook*.

Emigration

Accurate, detailed, and timely estimates of emigration are needed to develop and evaluate U.S. immigration policy, to derive accurate national and local population estimates (including estimates of unauthorized immigration), and to measure coverage of the decennial censuses. The sketchy data that are available indicate that emigration is a large and growing component of U.S. population change. However, partly because of inherent methodological difficulties, data on emigration from the United States are not being collected.

The collection of statistics on emigration from the United States was discontinued in 1957; no direct measure of emigration has been available since then. Estimates compiled in this country and statistics collected in other countries indicate that emigration from the United States has increased steadily since the 1950s, exceeding 100,000 per year since 1970. These figures are consistent with U.S. historical experience; between 1900 and 1990, approximately 38 million immigrants were admitted, and an estimated 12 million foreign-born persons emigrated.¹ That is, for every 100 immigrants admitted, approximately 30 returned home (see Table H).

During the 1995-97 period, the U.S. Bureau of the Census used an annual emigration figure of 220,000 foreign-born (and 48,000 native-born) for computing national population estimates. Statistics on U.S. residents migrating to other countries published by the United Nations and the Economic Commission for Europe show

¹ Warren, Robert and Ellen Percy Kraly, 1985, *The Elusive Exodus: Emigration from the United States*, Population Trends and Public Policy Occasional Paper No. 8, March, Population Reference Bureau: Washington, D.C.

Table H
Immigration and Emigration by Decade: 1901-90

Period	Immigrants to the U.S. (Thousands)	Emigrants from the U.S. (Thousands)	Net Immigration (Thousands)	Ratio: Emigration/ Immigration
Total, 1901-90	37,869	11,882	25,987	.31
1981-90	7,338	1,600	5,738	.22
1971-80	4,493	1,176	3,317	.26
1961-70	3,322	900	2,422	.27
1951-60	2,515	425	2,090	.17
1941-50	1,035	281	754	.27
1931-40	528	649	-121	1.23
1921-30	4,107	1,685	2,422	.41
1911-20	5,736	2,157	3,579	.38
1901-10	8,795	3,008	5,787	.34

Source: 1995 *Statistical Yearbook*, Table 1; Warren, Robert and Ellen Percy Kraly, 1985, *The Elusive Exodus: Emigration from the United States*, Population Trends and Public Policy Occasional Paper No. 8, March, Population Reference Bureau: Washington, D.C.

Emigration from the United States to Top Ten Countries of Destination: Selected Years, 1980s

All countries	241,000
1. Mexico	55,000
2. United Kingdom	31,000
3. Germany	29,000
4. Canada	20,000
5. Japan	19,000
6. Philippines	19,000
7. Guatemala	13,000
8. Indonesia	9,000
9. Australia	8,000
10. Italy	4,000

Source: 1989 U.N. *Demographic Yearbook*, Table 28; Economic Commission for Europe, CES/710/Corr.

that emigration from the United States is likely to be well above 200,000 annually.

The U.S. Census Bureau has produced the most recent estimates and projections of emigration from the United States. The following information is presented in detail in the Census Bureau's population projections for the 1999 to 2100 period.²

The population projections program of the Census Bureau produces projections of the United States resident population by age, sex, race, Hispanic origin and nativity. The projections are based on assumptions about future births, deaths, and international migration. Although alternative series are produced, the preferred, or middle series is most commonly used. The Census Bureau releases new national population projections periodically.

A major innovation in the current projections of international migration relates to the projection of the emigration of foreign-born residents. Because the Census Bureau projected the foreign-born population separately in the projections, they were able to model foreign-born emigration as a function of the population at risk, in much the same way that they projected mortality. Thus, foreign-

² Hollmann, Frederick W., Tammany J. Mulder, and Jeffrey E. Kallan, January 2000, *Methodology and Assumptions for the Population Projections of the United States: 1999 to 2100*, Population Division Working Paper No. 38, Bureau of the Census: Washington, D.C.

born emigration is projected, in all series, as rates by age and sex, rather than as a constant number of emigrants.

For the middle series, the foreign-born emigration *rates* were assumed to remain constant throughout the duration of the projections. That is, trends in emigration are driven mainly by the size of the foreign-born population and secondarily by its composition by age, sex, and country of birth. The age-sex-country-standardized rate (standardized on the 1990 base population) was set at 12.1 per thousand population.

The Census Bureau's assumptions yield an annual emigration trend from 252,000 in 1991 to 278,000 in 1998, the base year for the projections. Approximately 300,000 are projected to emigrate annually in the 2000-2005 period. In the longer run, emigration is projected to increase steadily with the growth of the foreign-born population, finally reaching a projected annual level of more than 500,000 in the year 2100. The juxtaposition of constant in-migration with increasing emigration throughout the last 70 years of the next century yields a decline in the numerical level of annual net migration to the United States, and an even greater decline in the impact of this component relative to overall population size.

Estimates and Projections of Emigration from the United States: 1991 to 2005

Year	Foreign-born emigration
1991	252,000
1992	254,000
1993	258,000
1994	260,000
1995	263,000
1996	267,000
1997	273,000
1998	278,000
1999	282,000
2000	287,000
2001	293,000
2002	298,000
2003	303,000
2004	308,000
2005	311,000

Source: U.S. Bureau of the Census, Internet release, January 13, 2000.

Illegal Immigrants

In 1994 the INS released detailed estimates of the undocumented immigrant population residing in the United States as of October 1992.³ Those estimates were useful for a variety of purposes, including planning and policy development at the national and state level, evaluating the effects of proposed legislation, and assessing the fiscal impacts of undocumented immigration.

The INS has revised those estimates and updated them to October 1996. The estimates presented here incorporate new data on the foreign-born population collected by the Census Bureau, improvements in the methodology

³ Warren, Robert, 1994, *Estimates of the Unauthorized Immigrant Population Residing in the United States, by Country of Origin and State of Residence: October 1992*, Unpublished paper, U.S. Immigration and Naturalization Service: Washington, D.C.

An estimated 5 million undocumented immigrants were residing in the United States in October 1996.

recommended by the General Accounting Office (GAO), suggestions provided by outside reviewers, and further analyses of INS' data sources and estimation procedures. Revised and updated estimates of the undocumented population have been computed for each state of residence and for nearly 100 countries of origin.

Data Overview

About 5.0 million undocumented immigrants were residing in the United States in October 1996, with a range of about 4.6 to 5.4 million (See Table I). The population was estimated to be growing by about 275,000 each year,

Table I
Estimated Illegal Immigrant Population for Top Twenty Countries of Origin and Top Twenty States of Residence: October 1996

Country of origin	Population	State of residence	Population
All countries	5,000,000	All states	5,000,000
1. Mexico	2,700,000	1. California	2,000,000
2. El Salvador	335,000	2. Texas	700,000
3. Guatemala	165,000	3. New York	540,000
4. Canada	120,000	4. Florida	350,000
5. Haiti	105,000	5. Illinois	290,000
6. Philippines	95,000	6. New Jersey	135,000
7. Honduras	90,000	7. Arizona	115,000
8. Dominican Republic ¹	75,000	8. Massachusetts	85,000
9. Nicaragua	70,000	9. Virginia	55,000
10. Poland	70,000	10. Washington	52,000
11. Colombia	65,000	11. Colorado	45,000
12. Ecuador	55,000	12. Maryland	44,000
13. Trinidad and Tobago	50,000	13. Michigan	37,000
14. Jamaica	50,000	14. Pennsylvania	37,000
15. Pakistan	41,000	15. New Mexico	37,000
16. India	33,000	16. Oregon	33,000
17. Ireland	30,000	17. Georgia	32,000
18. Korea	30,000	18. District of Columbia	30,000
19. Peru	30,000	19. Connecticut	29,000
20. Portugal	27,000	20. Nevada	24,000
Other	764,000	Other	330,000

¹ The estimated illegal immigrant population from the Dominican Republic was revised from 50,000 (shown in the 1995 *Yearbook*) to 75,000 following a review of the estimates for Dominica and the Dominican Republic.

which is about 25,000 lower than the annual level of growth estimated by the INS in 1994.

California is the leading state of residence, with 2.0 million, or 40 percent of the undocumented population. The 7 states with the largest estimated numbers of undocumented immigrants—California (2.0 million), Texas (700,000), New York (540,000), Florida (350,000), Illinois (290,000), New Jersey (135,000), and Arizona (115,000)—accounted for 83 percent of the total population in October 1996.

The 5.0 million undocumented immigrants made up about 1.9 percent of the total U.S. population, with the highest percentages in California, the District of Columbia, and Texas. In the majority of states, undocumented residents comprise less than 1 percent of the population.

Mexico is the leading country of origin, with 2.7 million, or 54 percent, of the population. The Mexican undocumented population has grown at an average annual level of just over 150,000 since 1988. The 14 countries with 50,000 or more undocumented immigrants in 1996 accounted for 81 percent of the total population. The large majority, over 80 percent, of all undocumented immigrants are from countries in the Western Hemisphere.

About 2.1 million, or 41 percent, of the total undocumented population in 1996 are nonimmigrant overstays. That is, they entered legally on a temporary basis and failed to depart. The proportion of the undocumented population who are overstays varies considerably by country of origin. About 16 percent of the Mexican undocumented population are nonimmigrant overstays, compared to 26 percent of those from Central America, and 91 percent from all other countries.

National estimates

The total number of undocumented immigrants residing in the United States in October 1996 is estimated to be 5.0 million (Table I), with a range of about 4.6 to 5.4 million. The estimate for October 1996 is about 1.1 million higher than the revised estimate of 3.9 million for October 1992; this implies that the population grew by about 275,000 annually during the 1992-96 period, about the same as the annual growth of 281,000 estimated for the previous period. The original INS estimates for October 1992 and October 1988, released in 1994, showed average annual growth of 300,000.

The undocumented population grows at varying levels from year to year, but the data available to make these estimates do not permit the derivation of annual figures to

measure year-to-year changes. However, the similar levels of growth for the 1988-92 and 1992-96 periods, 281,000 and 275,000, respectively, suggest that the overall level of growth has been fairly constant over the past decade. This also indicates that the rate of growth of the undocumented resident population has declined since 1988.

State of residence

The estimates for states reflect the well-established pattern of geographic concentration of undocumented immigrants in the United States. As expected, California was the leading state of residence, with 2.0 million, or 40 percent, of the total number of undocumented residents in October 1996. Seven states—California (2.0 million), Texas (700,000), New York (540,000), Florida (350,000), Illinois (290,000), New Jersey (135,000), and Arizona (115,000)—accounted for 83 percent of the population in October 1996 (Table I).

The estimated undocumented population of California has grown by an average of about 100,000 annually since the end of the IRCA legalization program in 1988. More than 83 percent of total growth of the undocumented population since 1988 has occurred in the top seven states. With the exception of Massachusetts (6,000), none of the remaining 43 states grew by more than 3,000 undocumented residents annually. In 27 states, the undocumented population grew by an average of 1,000 or less each year.

Country of origin

Mexico is the leading source country of undocumented immigration to the United States. In October 1996 an estimated 2.7 million undocumented immigrants from Mexico had established residence here (Table I). Mexican undocumented immigrants constituted about 54 percent of the total undocumented population. The estimated population from Mexico increased by just over 150,000 annually in both the 1988-92 and 1992-96 periods.

The estimated number of Mexican undocumented immigrants who arrived between 1990 and 1996 is based on data on country of birth and year of immigration collected by the Census Bureau in the March 1994, 1995, and 1996 Current Population Surveys (CPS). Demographic analysis of the CPS data indicates that approximately 230,000 undocumented Mexican immigrants established residence annually between 1990 and 1996. This is the net annual addition of undocumented Mexicans who arrived during the period. Note, however, that it does not reflect the average annual growth of the Mexican undocumented population. To compute average annual growth it is necessary to subtract the number of undocumented Mexicans who lived here in January 1990 and who emigrated, died, or adjusted to legal permanent

resident status during the 1990-96 period. This last step produces the estimate cited above of just over 150,000 annual growth of the Mexican undocumented population since 1988.

In October 1996, 15 countries were each the source of 40,000 or more undocumented immigrants (Table I). The top five countries are geographically close to the United States—Mexico, El Salvador, Guatemala, Canada, and Haiti. Of the top 15 countries, only the Philippines, Poland, and Pakistan are outside the Western Hemisphere. The estimated undocumented population from Poland has declined by more than 25 percent, from 95,000 to 70,000, since 1988, possibly reflecting changed conditions in that country over the last several years.

Although undocumented immigrants come to the United States from all countries of the world, relatively few countries add substantially to the population. The annual growth of the undocumented population can be grouped into four disparate categories: 1) Mexico, with more than half of the annual growth, adds just over 150,000 undocumented residents each year; 2) six countries—El Salvador, Guatemala, Canada, Haiti, Honduras, and the Dominican Republic—each add between 6,000 and 12,000 annually; 3) thirteen countries each add about 2,000 to 4,000 annually; and 4) the remaining approximately 200 other countries add a total of about 30,000 undocumented residents each year (Table I). A large majority of the additions each year, more than 80 percent, are from countries in the Western Hemisphere.

Estimation Procedure

Methodology

The estimates were constructed by combining detailed statistics, by year of entry, for each component of change that contributes to the undocumented immigrant population residing in the United States. For most countries of the world, the typical way of entering the undocumented population in the United States is to arrive as a nonimmigrant and stay beyond the specified period of admission. This segment of the population, referred to here as “nonimmigrant overstays”, constitutes roughly 40 percent of the undocumented immigrant population residing in the United States. The rest of the population, more widely publicized, enter surreptitiously across land borders, usually between official ports of entry. This part of the population, often referred to as EWIs (entry without inspection), includes persons from nearly every country, but a large majority of them are from Mexico; most of the rest are natives of Central American countries.

Primary sets of data

The figures presented here were constructed from five

primary sets of data. Each set of data was compiled separately for 99 countries and each continent of origin.

1) *Entered before 1982*—estimates (as of October 1988) of the undocumented immigrant population who established residence in the United States before 1982 and did not legalize under the Immigration Reform and Control Act (IRCA) of 1986. The assumption used to estimate this part of the population is based on estimates developed by the Census Bureau using data from the June 1988 Current Population Survey (CPS).

2) *Net overstays*—estimates for 1982 to 1996 of the net number of nonimmigrant overstays, for 99 countries of origin, derived from INS data bases. Estimates were derived by: a) matching INS I-94 arrival/departure records; b) adjusting for the incomplete collection of departure forms; and c) subtracting the number of nonimmigrant overstays who subsequently either departed or adjusted to legal resident status.

3) *Net EWIs*—estimates of the number from each country who entered without inspection (EWI) and established residence here between 1982 and 1996. A very large majority of all EWIs are from Mexico. Average annual estimates of Mexican EWIs were derived by: a) adjusting the CPS count of the Mexican-born population for underenumeration; b) subtracting the estimated legally resident population counted in the CPS; and c) subtracting the estimated number of net overstays.

4) *Mortality*—estimates of the annual number of deaths to the resident undocumented immigrant population. The estimates were derived using an annual crude death rate of 3.9 per 1,000, which was computed using a modified age distribution of IRCA applicants and age-specific death rates of the foreign-born population.

5) *Emigration*—estimates of the number of undocumented immigrants who resided here at the beginning of a period (either October 1988 or October 1992), and who emigrated from the United States in the following 4-year period. Estimates of emigration are based on statistics published by the Census Bureau in Technical Paper No. 9.⁴

Construction of the estimates

Estimates of the undocumented immigrant population were derived for October 1988, October 1992, and October 1996 for 99 individual countries and for each continent of origin. The calculations were carried out separately for overstays and EWIs.

⁴ Ahmed, Bashir and J. Gregory Robinson, December 1994, *Estimates of Emigration of the Foreign-born Population: 1980-1990*, Population Division Working Paper No. 9, U.S. Bureau of the Census: Washington, D.C.

Estimates by state of residence

In the earlier estimates for October 1992, the state distribution of the undocumented population was based on the U.S. residence pattern of each country's applicants for legalization under IRCA; the results were summed to obtain state totals. This assumed that, for each country of origin, undocumented immigrants who resided in the United States in October 1992 had the same U.S. residence pattern as IRCA applicants from that country. The revised and updated estimates presented here incorporate the same assumption for the October 1988 undocumented population. However, it was necessary to develop new methods of deriving state estimates for October 1992 and 1996 that would reflect more recent patterns of geographic settlement.

As noted, the estimates of the undocumented population were constructed separately for overstays and EWIs. This permitted the distribution of the overstay and EWI populations to states using data most appropriate for the type of population. For overstays, the cohorts that arrived in the 1988-92 and 1992-96 periods were distributed to state of residence based on annual estimates of overstays by state of destination for 1986 to 1989. For EWIs who entered during these periods, the totals were distributed to state of residence using INS statistics for the early 1990s on the destination of the beneficiaries of aliens who legalized under IRCA.

Limitations of Data

Estimating the size of a hidden population is inherently difficult. Overall, the figures presented here generally reflect the size, origin, and geographic distribution of the undocumented immigrant population residing in the United States during the mid-1990s. The estimates probably reduce the range of error for the total population to a few hundred thousand rather than a few million, which was the error range during the late 1970s and into the 1980s. The estimates for most countries should be fairly precise because they were constructed primarily from data on nonimmigrant arrivals, departures, and adjustments of status that have relatively small margins of error.

Although the estimates are based on the most reliable information available, they clearly have limitations. For example, the estimates make no allowance for students or other long-term nonimmigrants, and the estimates for some countries could be underestimated because of special circumstances (*e.g.*, Dominicans entering illegally via Puerto Rico; ships arriving undetected from China).

The figures for some countries overstate the actual undocumented population. In general, the net nonimmigrant overstay figures are more likely to be overestimates than underestimates because the collection of departure forms for long-term overstays who depart probably is less complete than for those who depart within the first year.

The estimates include a large number of persons who have not been admitted for lawful permanent residence but are permitted to remain in the United States pending the determination of their status or until conditions improve in their country of origin. This category includes many of the undocumented immigrants from El Salvador, aliens from other countries in a status referred to as "deferred enforced departure", and IRCA applicants whose cases have not been finally resolved.

The number of EWIs is the most difficult component to estimate with precision, and errors in this component have the largest effect on the estimated undocumented population from Mexico. In particular, the shortage of information about two components—emigration of legally resident immigrants and undercount in the CPS—makes it difficult to derive acceptable residual estimates of the number of undocumented immigrants counted in the CPS.

The estimates presented here are based on the most extensive array of figures ever compiled for the purpose; nevertheless, they should be used with caution because of the inherent limitations in the data available for estimating the undocumented immigrant population. This uncertainty was addressed by using alternative assumptions to produce "high" and "low" population estimates for October 1996. In the following discussion of the estimates, the mid-range population figures are used for simplicity of presentation.

Inspections

The text and table on the estimated number of aliens and citizens admitted by state and port of entry are omitted from this edition of the *Statistical Yearbook*. The largest component of the admissions is the number of persons who enter at land border ports. Information developed from survey data indicates that the estimation procedures used during the past few years at some land ports have resulted in an overstatement of the total number of entries into the United States. The methodology used to derive estimates of the number of passengers per vehicle and the proportion of aliens and U.S. citizens is being evaluated and revised. Publication of this data series is expected to resume in future years.