

Estimates by Migrant Status

NARRATIVE PROFILE WITH ADJOINING TABLES OF UNAUTHORIZED MIGRANTS AND OTHER IMMIGRANTS, BASED ON CENSUS 2000: CHARACTERISTICS AND METHODS

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INTRODUCTION

During the 1970s, unauthorized migration to the United States, especially such migration from Mexico, increased in volume as a result of a variety of conditions and developments in both countries (Bean, Edmonston, and Passel 1990; Bean and Stevens 2003). Such migration to the United States had occurred before, of course, but much of it had been circular and/or seasonal in nature, particularly in the Mexican case (Cornelius 1978), and thus the presence in official government statistics of unauthorized persons had been negligible (Fay et al. 1988). As a result, the numbers of unauthorized persons in official statistics had not been sizeable enough either to impair the results of demographically-based analyses of census coverage and undercount or to distort the findings of studies about the social and economic characteristics of legal immigrants in the country. The larger than expected numbers of persons enumerated in the 1980 Census, however, made clear for the first time that immigration to the country had been greater than many people had realized, and that most of this unexpectedly high immigration during the 1970s was unauthorized (Siegel, Passel and Robinson 1980). The presence of substantial numbers of such persons in official government surveys has persisted since that time.

As a result, analyses based on official government statistics of the numbers and characteristics of the legal foreign-born in the United States have, since 1980, been distorted to some unknown degree. For example, the question of immigrant wage and earnings assimilation has been one of the major issues, perhaps *the* major issue, driving the public policy debate about the need to reform U.S. immigration policy over the past thirty years (Bean and Stevens 2003). Census data has constituted one of the most important sources of information used to address this question, and significant research on the matter using census data has been conducted by numerous investigators, including Borjas (1990; 2003), Chiswick (1978), Trejo (1992), and Smith (2003), to mention only a few. Because unauthorized workers earn less than their legal counterparts, all of the research results in these studies overstate the wage and earnings gap between legal immigrants and natives in the country, a fact that the researchers have recognized (see especially Smith, 2003 and Bean and Stevens, 2003 in this regard). Similar problems may be said to plague other important policy relevant research comparisons involving the foreign-born, such as whether those entering the country as refugees and thus receiving some measure of government settlement support fare better economically than other kinds of legal entrants.

Public policy relevant analyses of immigrant social and economic characteristics based on census data remain of crucial significance nonetheless. The reason is that these data sources are often the only ones large enough to provide reliable information on the foreign-born populations in the United States from various countries of origin, something frequently critical

for policy discussions and formulation. Developing sound criteria for classifying the census foreign-born population into immigrant status categories thus represents a particularly important research objective, one that if accomplished holds the potential to improve substantially policy-relevant information about the foreign-born and immigration. This is the general objective of this report. Our specific purposes are two-fold. First, we aim to develop and explicate ways to classify the foreign-born population of the country in census and survey data into significant immigrant status categories (refugees, legal non-immigrants, lawful permanent residents, naturalized citizens, and unauthorized immigrants). Second, we report the relative sizes of these groups in the country based on these procedures of classification.

The work presented here expands on research conducted initially at the Urban Institute by Passel and Clark (e.g., 1998). Initially, the assignment of legal status to the foreign-born population was motivated by the implementation of status-specific eligibility rules for social service programs, such as food stamps, Medicaid, and Temporary Assistance for Needy Families (TANF). The Urban Institute modeled eligibility for these and other programs in the March Supplement to the Current Population Survey (CPS) as part of its TRIM (Transfer Income Model) project for the Department of Health and Human Services (HHS). With the advent of collection of nativity information in the March 1994 CPS, modeling participation and eligibility for immigrants became theoretically possible. Immigrant status assignments have been done as part of HHS' TRIM estimates since the March 1998 CPS; additionally, research on status assignments was done for the March 1995 and 1996 Supplements (Clark et al. 2000). Although Census 2000 does not contain the full range of variables used in the CPS implementation of status assignments, the Public-Use Microdata Sample (PUMS) offers a much, much larger sample and the attendant expansion of geographic and country-specific detail.

METHODOLOGICAL OVERVIEW

STATUS GROUPS: DEFINITIONS AND METHODS

The foreign-born population in the census and surveys is identified with a two-question sequence asking place of birth and citizenship to identify naturalized U.S. citizens and non-citizens (or aliens). This distinction is the extent to which the census and CPS identify legal status of the foreign-born. Unfortunately, even naturalized citizenship is misreported by a significant number of respondents (Passel and Clark 1997; Passel et al. 1997). Analyses of impacts of immigrants, especially those focused on policy issues, require more than just this distinction. Some members of the foreign-born population are U.S. citizens, as just noted. Among the majority who are not U.S. citizens, some are admitted as temporary residents of the U.S. to fulfill specific statutory purposes, others come under humanitarian criteria and are given special treatment by the government with regard to programs and benefits, others are admitted as permanent residents based on their skills or other characteristics or relationship to other U.S. residents, and finally others are not admitted at all by the federal government or have violated their terms of admission. Over the last decade, research has shown that it is possible to assign a variety of legal statuses with a series of edits and imputations so that the resulting populations agree with administrative-based estimates of size and origins, where available, and with general information on other characteristics (Passel and Clark 1998).

Definitions

In this section, we set forth the working definitions of the status groups to be defined in the census and CPS data together with brief justifications for choosing such distinctions.

Legal Temporary Migrants. The category we label as legal temporary migrants was discussed briefly in our previous report (Passel et al. 2004). These are individuals admitted on temporary visas who are allowed to live and, in some cases, work in the United States for specified periods and for specified purposes. The largest group of legal temporary migrants is persons with student visas. We identify individuals appearing in the Census with characteristics consistent with the nonimmigrant visa requirements. Our purpose is not so much to estimate the size of the legal temporary migrant population or to ascertain their characteristics. Rather, because legal temporary migrants have very different characteristics from other groups of immigrants and are admitted for different reasons, our goal is to identify the legal temporary migrants so as to improve measurement and estimation of the size and characteristics of the *other* immigrant status groups.

Refugee Admissions. Refugees are admitted to the United States for humanitarian reasons, e.g., they are fleeing persecution because of their religion, race, ethnicity, or political beliefs. Refugees are governed by different policies because they are admitted outside the regular immigration admission regime. For example, refugees are immediately eligible for various kinds of government assistance whereas “regular” immigrants are not.

We include in this category several groups who are subject to similar policies but are not strictly part of the refugee admissions system. Asylees are persons already in the United States who apply for and are granted legal status for the same type of humanitarian reasons as refugees. Others that we group with refugees accorded similar status as special admission categories are: Amerasians, Cuban/Haitian entrants, and several groups of parolees from Iraq, the former Soviet Union, Poland, and Southeast Asia.

Refugees and asylees generally do not remain in refugee/asylee status for more than one or two years. Rather, they generally “adjust their status” and become lawful permanent resident (LPR) aliens. This two-step process—involving first being admitted as refugee/asylee and second, adjusting their status—requires some additional care in defining the new immigrant stream. Since persons admitted as refugees generally retain their special status for a number of years regardless of whether they have changed their status to LPR, we carry the refugee identification regardless of adjustment status. We do, however, limit the identification of refugees to persons admitted to the United States since 1980.

Lawful Permanent Resident Aliens. Lawful permanent resident alien is the designation used for immigrants who are admitted as legal immigrants or “green card” holders to the United States. LPR aliens are the only immigrants who are eligible to become U.S. citizens. Beyond the differentiation of refugees, noted above, we do not differentiate among LPR aliens as to how they acquired their status or under what provisions of the law. Thus, the LPR group includes: former unauthorized migrants who gained LPR status through the legalization provisions of the Immigration Reform and Control Act of 1986 (IRCA); immigrants admitted under family unification provisions, under employment preferences, under diversity preferences, and other categories regardless of prior status as unauthorized or legal temporary migrants.

Naturalized Citizens. Naturalized citizens are persons who were born as citizens of other countries but acquired U.S. citizenship through administrative processes of the Immigration and Naturalization Service (INS) or, more recently, the Department of Homeland Security (DHS). Eligible adults can attain citizenship by taking a test, demonstrating competency in English, and swearing allegiance to the United States. Non-citizen children (under 16) can acquire “derivative citizenship” upon the naturalization of their parents. Finally, under recent legislation, orphans adopted by U.S. citizen parents acquire citizenship immediately upon arrival in the United States.

Unauthorized Migrants. In the context of these estimates, unauthorized migrants are those foreign-born residents who do not fall into any of the above categories; i.e., they do not have “green cards,” are not refugees or asylees, and are not legal temporary migrants. A large majority of unauthorized migrants are not entitled by law to live or work in the United States. They may have entered with valid temporary visas and stayed beyond the expiration date of the visa or otherwise violated the terms of their admission; this group is known as “visa overstayers.” A larger group, however, consists of migrants who snuck into the United States across unprotected borders; this group was designated as “entries without inspection” or EWIs by the former INS and is also known as clandestine entrants. Individuals entering the United States through ports of entry, but with fraudulent documents are customarily grouped with EWIs.

Finally, a significant number of unauthorized migrants appear to have legal statuses that entitle them to live, and sometimes work, in the United States. Some, such as those with Temporary Protected Status (TPS), have papers that allow them to be in the United States, but their status will expire or is expected to expire without the migrant attaining full legal status. Others, such as migrants who have been approved for asylum but have not been granted asylee status or persons approved for green cards or with K- or V-visas, are expected to acquire full LPR status once their cases have been processed. These migrants are often referred to as “quasi-legal” migrants. Whether they are included as legal migrants or in the unauthorized may depend on the availability of data and/or on the purpose of the estimates.

Description of Classification Methods

In this section, we give an overview of the classification methods used to sort the immigrants appearing in Census 2000 (or the March CPS) into the five broad categories defined above. For statuses other than unauthorized migrants, the estimates are described in the Appendix in some detail. The methods for assigning unauthorized migrants are described in the next section in even greater detail.

The general strategy is to use characteristics of the foreign-born population as identified in Census 2000 (or the CPS) to assign individuals as naturalized citizens, refugees, and legal temporary migrants. For these statuses, the characteristics, together with demographic estimates, provide a high degree of confidence in the resulting estimates and the degree to which the populations’ characteristics reflect those of the legal status groups. For the remaining two groups—LPRs and unauthorized migrants—current research provides fairly weak models for making the assignments. Accordingly, we use demographic estimates to provide targets for the population totals and historical information to estimate probabilities that individuals fall in one group or the other. A final set of edits ensures that the assignments agree with estimated population totals and that statuses within households and families are internally consistent.

Naturalized Citizens

Naturalized citizenship is the one legal status for which the Census and CPS actually collect data. However, comparison of the data collected with administrative information on naturalization suggests that a significant amount of misreporting of citizenship occurs on the part of foreign-born aliens. Passel and Clark (1997) identify two main sources of overreporting as naturalized citizens. Approximately three-quarters of persons reporting as naturalized citizens who entered within five years of the CPS survey date erroneously report as naturalized citizens. (See also Passel et al. 1997.) For longer-term foreign-born residents, approximately one-third of the naturalized citizens from Mexico and Central America are erroneously reported. The remainder of the population (i.e., longer-term immigrants from other countries) appears to report accurately in the aggregate.

To address this reporting problem, we apply an edit procedure to the reported naturalized citizenship responses. Most persons reporting as naturalized citizens who had lived in the United States for less than five years have their responses changed to non-citizen (alien). Their response remains unchanged (i.e., as naturalized citizen) only if they meet one of two conditions: (1) the person lived in the United States for at least three years and was married to a U.S. citizen; or (2) the person is the child of a U.S. citizen.

For the longer-term residents from Mexico and Central America who report as naturalized citizens, we do not directly edit the responses. However, unlike longer-term naturalized citizens from other areas, these individuals are placed in the pool of potential unauthorized residents. (See below.) Then, some are reassigned as unauthorized, thereby reducing the degree of over-reporting as naturalized citizens. At each stage, additional edits are applied to children to ensure that their statuses are consistent with those of their parents. Thus, any child reported or assigned as a naturalized citizen must have at least one parent who is a U.S. citizen.¹

Nationally, these procedures reduced the number of naturalized citizens by about 7 percent or 878,000 from 12.5 million to 11.6 million.² This figure agrees very closely with estimates generated by Rytina (2004) using administrative records from the former INS linking naturalization records with legal admission records. The initial edits of the shorter-term residents are used in the further steps described below.

Refugee Arrivals

The procedure for identifying refugee arrivals in Census 2000 and the CPS begins with the observation that refugee flows to the United States over the last two decades have been very concentrated, coming from a relatively small number of countries. For example, in the 1980s, over 90 percent of refugee arrivals came from only 11 countries.³ While this concentration is important, the converse is also true. That is, virtually all of the immigrants from “refugee”

¹ Foreign born children under 18 who are reported as naturalized but do not have a citizen parent are reclassified as aliens. In a similar edit, individuals who report as “born abroad of American parents,” but who do not have a citizen parent are also classified as aliens. This latter edit increases the foreign-born population slightly.

² The reported figures are from the full 1-percent Public-Use Microdata Sample (PUMS). For our 15 percent subsample of the 1-percent PUMS or the 5-percent PUMS, somewhat different figures result from the same set of edits and reassignments.

³ Afghanistan, Albania, Cambodia, Cuba, Ethiopia, Iraq, Laos, Poland, Romania, the Soviet Union, and Vietnam.

countries arrive as refugees; in the 1980s, over 80 percent of all legal immigrants from these 11 countries arrived as refugees.

Measurement of Refugee Inflows. The assignment process proceeds in several stages. The first is the measurement of refugee inflows as preparation for identifying “refugee sending countries” or countries of birth and periods of entry when the arrivals have been predominantly refugees, as opposed to LPRs or unauthorized migrants. We compile the number of refugees admitted by country for each fiscal year from 1980 through 2000. Data on refugees admitted are obtained from three sources (because of inconsistencies among them). The preferred source is the annual reports from the Office of Refugees Resettlement (ORR) in the Department of Health and Human Services (HHS). The ORR reports began in 1983 when the agency was founded; the data provide information on country of birth and state of settlement for 1983 through 2000.⁴ For 1980–1982, the refugee/parolee estimates are derived from INS data on adjustments over the 1980–1985 period. Data on asylees come from INS, the agency that grants asylum. Three other groups are included as part of the refugee population—Cuban-Haitian entrants, Amerasians, and parolees. ORR data are used for the entrants; INS data for Amerasians (although the two sources are virtually identical); and INS data for parolees. The final phase of this step is summing the various categories and converting the fiscal year totals into calendar year totals for refugees arriving in each year by country.⁵

A parallel set of computations is done to estimate legal arrivals other than refugees for each country by year. These are persons receiving green cards in the fiscal year who are classified by INS as “new arrivals;” that is, they are not adjusting their status from a temporary status. These data are obtained from the *Statistical Yearbooks of the INS* and are converted to calendar year totals in the same manner as refugees.

Estimating the Refugee Population. The next step is the development of approximate targets or demographic estimates of the number of residents who have arrived as refugees. We restrict the estimates to those refugees who arrived in the United States in 1980 or later and produce estimates for 35 countries or country groups. Admissions included in the refugee arrival category include: refugees, asylees, parolees, Amerasians, and Cuban-Haitian entrants. Data from INS systems on refugees and parolees differ in earlier years from the ORR data. Investigation of discrepancies between the two systems, adjudicated in part with data from the State Department supported the greater accuracy of the ORR data.

Unauthorized Migrants

Assignment as unauthorized is based on occupation, date of entry, state of residence, country of birth, and other characteristics as set forth below.

Lawful permanent Resident Aliens

Lawful permanent resident aliens are the so-called “green card” holders or “regular” legal immigrants. In the assignment methodology employed here, this group is the residual category.

⁴ Depending on when the data for these estimates are compiled, the various data sources may not be complete. When this occurs, short-term projections are used to fill out the necessary information. State Department information on refugee ceilings and projections are the principal source for these projections.

⁵ For CPS comparisons, the individual years are grouped into the intervals reported in the CPS.

That is, LPRs are the immigrants left after the refugees, naturalized citizens, legal temporary migrants, and unauthorized migrants have been identified and assigned.

CLASSIFICATION METHODS FOR UNAUTHORIZED MIGRANTS

DATASETS AND IMPACT ON METHODS

For this project, three different datasets were used. The programs were written and tested on a 0.15 percent sample of Census 2000 that was drawn from the 1% PUMS. This size file can be easily run with SAS on a desktop computer. Then, assignments were made for both the 1% and 5% PUMS. Because the country of birth codes available differ slightly across these two data sets and because of different population counts, each dataset required separate computations of the various parameters used to control the estimates.

PRE-PROCESSING

Before assigning unauthorized status, a number of “pre-processing” operations are performed. This includes the initial identification of potential unauthorized migrants which is pared further by assigning some of the universe to lawful permanent resident status (and a few to naturalized citizens). A set of edits is performed to ensure that parents and children have consistent statuses before the assignments.

Universe of Potential Unauthorized Migrants

The broad universe of immigrants who can potentially be assigned as unauthorized is limited to persons immigrating in 1980 or later. Persons assigned as legal temporary migrants or refugees *cannot* be reassigned as unauthorized. Individual from countries other than Mexico and Central America who have been assigned as naturalized citizens *cannot* be reassigned as unauthorized. The remaining foreign-born consisting of aliens entering in 1980 or later and naturalized citizens from Mexico or Central America entering during these same years form the broadest universe of the potential unauthorized population.

Parent-Child Consistency Checks

This set of consistency checks was described earlier. Children⁶ assigned as refugees must have a foreign-born parent who is a refugee or have only native parent(s). The latter group consists of adopted children. Children who fail either of these tests are reclassified as non-refugees. Similarly, naturalized citizen children must have at least one parent who is a U.S. citizen or not have any parents in their household; they are reassigned as noncitizens if they fail these tests.

Children designated as “born abroad of American parent(s)” must have at least one parent who is a U.S. citizen and should not have both older and younger siblings who are of different citizenships. Otherwise they are reassigned as foreign-born aliens. Finally, legal temporary migrant children must have at least one legal temporary migrant parent or only native-born parents. None of these conditions occurred in large enough numbers to affect the overall results.

⁶ For these edits, “children” consist of all individual aged 18 and under as well as older persons with parent(s) in their household.

Initial Identification of Legal Immigrants

Veterans

Immigrants who are either in the active duty military or who are veterans are assumed to be legally in the United States. Although it is possible for unauthorized migrants to join the U.S. military, it is a relatively rare occurrence. Thus, veteran or military status removes an immigrant from the pool of potentially unauthorized migrants.

TANF Recipients

Foreign-born children in families reporting public assistance income (almost always either TANF or SSI) are assumed to be legal because unauthorized children are not eligible for these programs. Note that no assumption is made about parents in these families; they could be unauthorized, even if they have eligible children. (Unlike the assignments made in the CPS, these data are used even if the values in the Census 2000 have been imputed.)

Food Stamp Recipients and Medicaid Participants

In assignments using the CPS, both receipt of food stamps and participation in Medicaid leads to assignment of some immigrants as definitely legal because of the eligibility for these programs. However, Census 2000 does not contain information on these two programs, so no attempt was made to reproduce the CPS-based methods.

Occupational Assignment as LPR Aliens

The next phase of the preprocessing involves reducing the pool of potential unauthorized migrants further by examining the occupations of the remaining individuals. Certain occupations and employers are assumed to account for only legal immigrants and individuals in Census 2000 are assigned accordingly. Government workers are assumed to be in the United States legally. Health diagnosing occupations such as physicians and dentists, and lawyers and judges are assumed to be authorized migrants (either temporary or permanent) only. Finally, public protective service occupations such as police, fire fighters, and crossing guards are assigned as definitely LPRs or refugees.

Derivation of Unauthorized “Target” Estimates

After these assignments are completed, a group of potentially unauthorized migrants remains; in the 5% PUMS, the number of potentially unauthorized migrants is 10,139,000. Further, based on the residual estimation methodology described by Passel et al. (2004), we have estimated the numbers of legal and unauthorized migrants counted in the census by age, sex, period of entry, and country of birth for 6 States and the balance of the country. The estimated number of unauthorized migrants *counted* in Census 2000, is 7,618,000.

To develop a set of targets for the estimated number of unauthorized migrants in the census, a series of estimates for children (ages 0–17), elderly (ages 65 and over), and working-age adults (ages 18–64) by sex are developed from the analytic and residual estimates. Because of the detail available from Census 2000, more detail is employed in the estimation methodology than has been used heretofore with the CPS. Specifically, the analytic and census-based estimates by age, sex, and state are further subdivided by country of birth, as follows:

California	New Jersey
Mexico	New York
Asia	Latin America
All Other countries	Not Latin America
Florida	Texas
Latin America (Other than Mexico)	Mexico
All Other countries	Not Mexico
Illinois	Other States
Mexico	Mexico
Not Mexico	Not Mexico

The potentially unauthorized migrants are tabulated in these same age-sex-country-state groups and compared with the target numbers for unauthorized migrants. Because the census data are a sample and the estimates of legally-resident aliens are a demographic estimate some characteristics of the unauthorized residual estimates may not make demographic sense. For example, the sex ratios of unauthorized children may be extraordinarily low or high because of sampling problems in the census (even though the overall number may be reasonable). Further, the numbers of potential unauthorized available to be assigned as unauthorized may not be consistent with the analytic estimates.

Thus, the next step in the assignment process is to develop targets for estimates of both legal and unauthorized migrants that are consistent with the initial assignments. For example, there must be “enough” cases of potential unauthorized in Census 2000 to provide enough cases to hit the target. A set of smoothing operations is performed to ensure that the targets can be hit in the next phase. As a result, the sex ratios of both legal and unauthorized children are consistent with the census, the assumed numbers of unauthorized elderly are kept within bounds, and the targets for child and working-age groups by sex are attainable from the potentially unauthorized migrants identified in the previous steps. (See attached table.)

FINAL CLASSIFICATION AS UNAUTHORIZED MIGRANTS

The overall probability that a potentially unauthorized migrant is assigned as unauthorized is a function of the target total for a state and the number for potentially unauthorized migrants. With the 5% PUMS for Census 2000, the initial probability is about 0.75 (10.139 million potentially unauthorized and a target of 7.618 million). The smoothing changes this probability to about 0.77 as the target increases to 7.692 million. Many of the states have even higher initial probabilities as the number of potentially unauthorized in a state is not much larger than the target. For example, the initial probabilities for Illinois, Florida, Texas, and the balance of the nation all exceed 0.8 with the balance reaching 0.89. The remaining states of New York, New Jersey, and California all have initial probabilities of being unauthorized of about 0.7.

The initial probabilities are based on the comparison of targets with potential unauthorized. In implementing the assignments, we could have based the probabilities solely on nationality within states, but we have used an alternative approach based on the work of Passel and Clark (1998). We incorporated information on the occupational distribution of the unauthorized population within each state into the initial assignment probabilities. For this process, potentially unauthorized working-age population of each state is tabulated by sex and by broad occupation group using the following occupation groups:

- Executive, Administrative, & Managerial Occupations
- Professional Specialty Occupations-Other
- Technicians & Related Support Occupations
- Sales Occupations-Other
- SO:Sales workers, retail
- Admin. Support Occupations, Incl. Clerical
- Private Household Occupations
- Protective services-private
- SO:Food service
- Service Occupations, Exc. Protective&Hhld-Oth
- Farming, Forestry & Fishing Occupations
- Precision Prod., Craft & Repair Occupations
- Machine Opers, Assemblers & Inspectors
- Transportation & Material Moving Occupations
- Handlers, Equipment Cleaners, Helpers, Laborers
- Armed Forces
- Not reported

For each state, the distribution of unauthorized migrants across the broad occupation groups is estimated from the distribution by occupation of those legalizing under IRCA as collected in the Legalized Population Survey (LPS). The LPS population estimate is updated to 2000 using information from the CPS on rates of change. In addition, a “not working” category is included for males. (See attached tables.) The result of these comparisons is a set of initial probabilities by sex, occupation, and state that a potentially unauthorized migrant is actually unauthorized.

Initial Probabilities

The result of the comparisons of the LPS-based population figures and the 5% PUMS tabulations of potentially unauthorized migrants is a set of initial probabilities by sex, occupation, and state that a potentially unauthorized migrant is actually unauthorized. As noted, the overall probabilities are quite high, ranging from 0.68 to 0.89. Thus, it requires some adjustment to maintain these overall totals while incorporating some variation due to occupation. Nonetheless, there is considerably more variation than in the initial input.

Initial Assignment of Legal Status and Household Consistency Edits

The initial assignments of legal status are based on the occupation-sex-specific probabilities for each state. Adult household members are assigned a legal status independently from other household members. At the end of the initial assignments, the statuses of spouses are reconciled. For example, if a working spouse is assigned as unauthorized, the nonworking

spouse cannot be legal. The edits also assign legal status to minor children (since the probabilistic assignment is only applied to adults 18-64).

The initial assignments provide a data set in which all potential unauthorized migrants have been assigned as either LPRs⁷ or unauthorized aliens. These data are tabulated and the numbers by age group, sex, state, and place of birth can be compared with the pre-specified targets. These comparisons provide indications of how much the initial probabilities need to be adjusted.

Revision of Probabilities

The initial probabilities are adjusted based on the output of the initial assignments. For subsequent iterations, the adjustments bring in information by place of birth (to better hit the separate census-based targets). Furthermore, because it is necessary to hit targets for legal and unauthorized *children*, there is a separate adjustment applied to potentially unauthorized migrants who are parents. With these adjusted probabilities, another round of assignments and consistency edits is done and checked against the targets for legal and unauthorized populations. Each state is done separately until the estimates converge on the independently derived targets.

Final Parent-Child Consistency Edits

One final step is done to ensure that the legal statuses assigned to children are consistent with those of their parents. For example, if both parents are unauthorized, then the children must be. Conversely, if both parents are legal, the children are assumed to be legal. Very few edits are required at this stage of the process.

CHARACTERISTICS OF UNAUTHORIZED MIGRANTS

The assignments for Census 2000 were done with both the 5% PUMS and the 1% PUMS. The analysis presented in this section of the report is based on the 1% PUMS and assignments. The results would be quite similar for the 5% PUMS.

Summary

The portrait we present of the unauthorized migrant population depicts a geographically concentrated population, 60% of whom were born in Mexico and an additional 22% in Latin America. Compared with the U.S. born and the legal foreign-born, unauthorized migrants tend to be young adults living with dependent children. One particularly interesting finding is that over 60% of children living in families headed by unauthorized migrants were born in the United States and so are U.S.-born citizens. Very few unauthorized migrants living in the United States are over the age of 65.

Population Size

Of the 31.1 million foreign-born enumerated in the 2000 Census, 7.6 million (3% of the total U.S. population and 24% of the foreign-born) were classified as “other than legal,” a status we refer to here as “unauthorized” (Table 1). Unauthorized migrants are no more geographically concentrated than the legal foreign-born, with 49% of unauthorized migrants

⁷ A few actually end up as naturalized because they started as naturalized Mexicans, for example, and were assigned as authorized.

living in California, New York, or Texas compared with 50% of legal migrants, although it is notable that only 23% of U.S.-born persons live in these states. Within these states, unauthorized migrants make up small proportions of the total state populations (6%, 3%, and 5% of California, New York, and Texas, respectively), and a minority of the foreign-born populations (24%, 16%, and 35% in CA, NY, and TX, respectively).

Country of Origin

Unauthorized migrants are more likely than legal foreign-born to have been born in Mexico (56% versus 22%) or Central America (10% versus 5%), and less likely to have been born in Asia (14% versus 31%), or Europe or Canada (6% versus 22%) (Table 2). In California and Texas, most unauthorized migrants were born in Mexico (69% and 77%). In contrast, the unauthorized population in New York comprises primarily of Caribbeans and South Americans (44%) and Asians (21%), with smaller percentages of Mexicans (14%) and Central Americans (9%).

Age and Sex Composition

Relatively low proportions of the foreign-born are children (Table 3). Of all children under age 18 in the United States, only 2% are unauthorized migrants and 2% are legal foreign-born. Only 8% of legal foreign-born are children compared with 29% of U.S. born. The share of children under 18 among unauthorized migrants is higher (18%) but nevertheless is only two-thirds that of the U.S. born.

Despite the relatively small numbers of unauthorized migrant children, much larger numbers of children—many of whom are U.S.-born natives—live in families headed by unauthorized migrants, which we refer to here as “unauthorized migrant families” (Table 4). Of all children in the U.S., 5% (3.8 million) live in families headed by unauthorized migrants; 61% of these children are U.S.-born. Eighty percent of all unauthorized migrant families have children under age 18 (Table 5), and of persons living in unauthorized migrant families, 36% are children under age 18, compared with 28% in legal foreign-born families and 25% of native families (Table 4).

Young adults age 18-29 comprise a relatively large share of the foreign-born, particularly unauthorized migrants (Table 3). Whereas 15% of U.S.-born persons are between the ages of 18 and 29, 18% of legal foreign-born persons and 34% of unauthorized migrants fall in this age category. Finally, very few unauthorized migrants are age 50 or older (7% of unauthorized migrants versus 33% of the legal foreign-born and 27% of the U.S. born), and virtually none are age 65 or older (less than 1% of unauthorized migrants versus 14% of legal foreign-born and 12% of the U.S. born).

The sex-ratio of the unauthorized migrant population is not as skewed as one might imagine given the common depiction of unauthorized migrants as primarily male sojourners seeking temporary work. Unauthorized migrants are slightly more likely to be male (54%) than the legal foreign-born (48%) or the U.S. born (49%), particularly in the young-adult ages (Table 3).

CONCLUSION

This report shows in detail how to incorporate demographic estimates of the foreign-born population by legal status into a detailed data set with only partial information about legal status.

The methods for developing the independent estimates have been studied in detail. Previous work by the same authors (Passel et al. 2004) has outlined a number of projects for incorporating more up-to-date data and methods into potentially enhanced estimates.

The methods discussed in this report have been used in a number of applications and have proved extremely valuable for estimating and describing the characteristics of various legal status groups, not just unauthorized migrants. However, the methods use somewhat dated data from the Legalized Population Survey and would benefit from updating and improving. Various datasets now available include the SIPP and the Los Angeles Immigrant Survey, which offer potentially very valuable data sets for incorporating more recent and direct data on legal status into our methodology for assigning unauthorized status, given an estimate of the number in the survey.

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TABLES

Table 1. Population by Nativity and Status for the United States, California, New York, and Texas: Census 2000 1% PUMS (15% subsample)

Area and Population	Population (in 000s)	Percent
United States	283,295	100%
Native	252,169	89%
Foreign-Born	31,126	11%
Legal	23,516	8%
Unauthorized	7,610	3%
California	34,087	100%
Native	25,291	74%
Foreign-Born	8,795	26%
Legal	6,719	20%
Unauthorized	2,076	6%
New York	19,057	100%
Native	15,196	80%
Foreign-Born	3,862	20%
Legal	3,238	17%
Unauthorized	624	3%
Texas	20,904	100%
Native	18,048	86%
Foreign-Born	2,855	14%
Legal	1,844	9%
Unauthorized	1,011	5%

Source: Tabulations from the Joint Project on the Size and Characteristics of the U.S. Immigrant Population.

Table 2. Foreign-Born Population by Area of Birth and Status for the United States, California, New York, and Texas: Census 2000 1% PUMS (15% subsample)

Area, Region of Birth, and Legal Status	Population (in 000s)				Percent of Area Foreign-Born				Percent of Area Legal Status Group				Percent Entering Since 1990			
	U.S.	CA	NY	TX	U.S.	CA	NY	TX	U.S.	CA	NY	TX	U.S.	CA	NY	TX
Foreign-Born	31,126	8,795	3,862	2,855	100%	100%	100%	100%	100%	100%	100%	100%	42%	37%	41%	46%
Mexico	9,338	3,952	173	1,856	30%	45%	4%	65%	30%	45%	4%	65%	48%	39%	61%	46%
Central America	1,931	726	184	222	6%	8%	5%	8%	6%	8%	5%	8%	42%	31%	41%	51%
Other Latin America	4,956	283	1,534	113	16%	3%	40%	4%	16%	3%	40%	4%	41%	32%	40%	46%
Asia	8,283	2,815	947	419	27%	32%	25%	15%	27%	32%	25%	15%	42%	37%	45%	45%
Europe/Canada	5,637	828	915	181	18%	9%	24%	6%	18%	9%	24%	6%	33%	29%	33%	41%
Other	981	191	109	64	3%	2%	3%	2%	3%	2%	3%	2%	53%	40%	53%	51%
Legal Foreign-Born	23,516	6,719	3,238	1,844	76%	76%	84%	65%	100%	100%	100%	100%	33%	29%	35%	33%
Mexico	5,109	2,516	88	1,080	16%	29%	2%	38%	22%	37%	3%	59%	32%	33%	53%	30%
Central America	1,167	475	127	113	4%	5%	3%	4%	5%	7%	4%	6%	30%	27%	30%	38%
Other Latin America	4,051	237	1,259	96	13%	3%	33%	3%	17%	4%	39%	5%	34%	33%	34%	40%
Asia	7,253	2,542	816	354	23%	29%	21%	12%	31%	38%	25%	19%	37%	28%	39%	36%
Europe/Canada	5,155	785	859	156	17%	9%	22%	5%	22%	12%	27%	8%	29%	22%	30%	33%
Other	781	164	90	46	3%	2%	2%	2%	3%	2%	3%	2%	46%	27%	43%	36%
Other Foreign Born	7,610	2,076	624	1,011	24%	24%	16%	35%	100%	100%	100%	100%	70%	61%	73%	71%
Mexico	4,229	1,436	85	777	14%	16%	2%	27%	56%	69%	14%	77%	68%	59%	70%	69%
Central America	764	251	58	109	2%	3%	1%	4%	10%	12%	9%	11%	60%	49%	64%	64%
Other Latin America	906	46	275	17	3%	1%	7%	1%	12%	2%	44%	2%	72%	57%	67%	86%
Asia	1,030	273	131	65	3%	3%	3%	2%	14%	13%	21%	6%	81%	77%	82%	96%
Europe/Canada	482	44	56	25	2%	0%	1%	1%	6%	2%	9%	3%	75%	69%	83%	86%
Other	200	27	19	18	1%	0%	0%	1%	3%	1%	3%	2%	82%	84%	96%	90%

Source: Tabulations from the Joint Project on the Size and Characteristics of the U.S. Immigrant Population.

Table 3. Non-Group Quarters Foreign-Born Population by Age, Sex, and Status for the United States, California, New York, and Texas: Census 2000 1% PUMS (15% subsample)

Age and Legal Status	Population (in 000s)				Age Distribution (Percent of Group)				Percent of Area Age Group				Percent Male			
	U.S.	CA	NY	TX	U.S.	CA	NY	TX	U.S.	CA	NY	TX	U.S.	CA	NY	TX
Total	275,414	33,271	18,452	20,340	100%	100%	100%	100%	100%	100%	100%	100%	49%	49%	48%	49%
Under 18	73,178	9,298	4,733	5,913	27%	28%	26%	29%	100%	100%	100%	100%	51%	51%	52%	51%
18-29	42,904	5,598	2,867	3,454	16%	17%	16%	17%	100%	100%	100%	100%	50%	51%	49%	50%
30-49	85,642	10,359	5,820	6,336	31%	31%	32%	31%	100%	100%	100%	100%	49%	50%	49%	49%
50-64	40,845	4,583	2,758	2,741	15%	14%	15%	13%	100%	100%	100%	100%	48%	48%	46%	49%
65 and over	32,845	3,433	2,273	1,896	12%	10%	12%	9%	100%	100%	100%	100%	42%	43%	41%	42%
Native	244,681	24,553	14,643	17,501	100%	100%	100%	100%	89%	74%	79%	86%	49%	49%	48%	49%
Under 18 yrs	69,973	8,427	4,401	5,537	29%	34%	30%	32%	96%	91%	93%	94%	51%	51%	52%	51%
18-29 yrs	36,158	3,649	2,151	2,737	15%	15%	15%	16%	84%	65%	75%	79%	49%	50%	48%	50%
30-49 yrs	72,989	6,626	4,244	5,123	30%	27%	29%	29%	85%	64%	73%	81%	49%	49%	48%	48%
50-64 yrs	35,993	3,266	2,077	2,371	15%	13%	14%	14%	88%	71%	75%	87%	48%	49%	46%	48%
65 yrs and over	29,568	2,585	1,770	1,733	12%	11%	12%	10%	90%	75%	78%	91%	42%	43%	41%	42%
Foreign-Born	30,733	8,717	3,808	2,839	100%	100%	100%	100%	11%	26%	21%	14%	50%	50%	47%	52%
Under 18 yrs	3,205	871	332	376	10%	10%	9%	13%	4%	9%	7%	6%	51%	53%	50%	54%
18-29 yrs	6,746	1,949	716	717	22%	22%	19%	25%	16%	35%	25%	21%	54%	53%	49%	54%
30-49 yrs	12,653	3,732	1,576	1,213	41%	43%	41%	43%	15%	36%	27%	19%	51%	50%	50%	53%
50-64 yrs	4,852	1,317	681	370	16%	15%	18%	13%	12%	29%	25%	13%	46%	46%	44%	50%
65 yrs and over	3,277	849	503	163	11%	10%	13%	6%	10%	25%	22%	9%	41%	41%	41%	41%
Legal Foreign-Born	23,190	6,656	3,191	1,831	100%	100%	100%	100%	8%	20%	17%	9%	48%	50%	46%	51%
Under 18 yrs	1,760	432	239	154	8%	6%	8%	8%	2%	5%	5%	3%	50%	50%	46%	52%
18-29 yrs	4,191	1,289	517	383	18%	19%	16%	21%	10%	23%	18%	11%	52%	55%	48%	52%
30-49 yrs	9,630	2,888	1,303	816	42%	43%	41%	45%	11%	28%	22%	13%	50%	51%	50%	53%
50-64 yrs	4,339	1,200	629	315	19%	18%	20%	17%	11%	26%	23%	12%	46%	46%	43%	50%
65 yrs and over	3,271	848	503	162	14%	13%	16%	9%	10%	25%	22%	9%	41%	41%	41%	40%
Other Foreign Born	7,543	2,061	617	1,008	100%	100%	100%	100%	3%	6%	3%	5%	54%	49%	52%	54%
Under 18 yrs	1,445	439	92	222	19%	21%	15%	22%	2%	5%	2%	4%	53%	56%	61%	54%
18-29 yrs	2,555	660	199	334	34%	32%	32%	33%	6%	12%	7%	10%	56%	49%	52%	56%
30-49 yrs	3,023	844	273	397	40%	41%	44%	39%	4%	8%	5%	6%	52%	48%	50%	52%
50-64 yrs	514	117	52	55	7%	6%	8%	5%	1%	3%	2%	2%	50%	41%	51%	51%
65 yrs and over	6	1	0	1	0%	0%	0%	0%	0%	0%	0%	0%	91%	100%	0%	100%

Source: Tabulations from the Joint Project on the Size and Characteristics of the U.S. Immigrant Population.

Table 4. Individuals in Families by Legal Status of Householder/Spouse and by Age Group and Status Composition for the United States, California, New York, and Texas: Census 2000 1% PUMS (15% subsample)

Age and Legal Status	Population (in 000s)				Age Distribution (Percent of Group)			
	U.S.	CA	NY	TX	U.S.	CA	NY	TX
Native Families	225,556	19,684	12,952	15,525	100%	100%	100%	100%
Under 18 years	55,352	4,618	3,136	4,017	25%	23%	24%	26%
Natives	55,154	4,600	3,121	4,012	24%	23%	24%	26%
Immigrants	198	18	15	5	0%	0%	0%	0%
18-64 years	141,138	12,578	8,090	9,809	63%	64%	62%	63%
Native Men	68,606	6,168	3,865	4,773	30%	31%	30%	31%
Native Women	72,495	6,403	4,223	5,034	32%	33%	33%	32%
Others (Foreign-Born Men & Women)	37	6	1	1	0%	0%	0%	0%
65 years and over	29,066	2,489	1,727	1,700	13%	13%	13%	11%
Legal Immigrant Families	35,096	10,073	4,443	3,047	100%	100%	100%	100%
Under 18 years	9,717	2,988	1,115	980	28%	30%	25%	32%
Natives	8,177	2,580	892	836	23%	26%	20%	27%
Immigrants	1,540	408	222	144	4%	4%	5%	5%
18-64 years	21,613	6,144	2,782	1,871	62%	61%	63%	61%
Legal Men	8,628	2,584	1,132	743	25%	26%	25%	24%
Legal Women	9,032	2,617	1,271	707	26%	26%	29%	23%
Others (Native or Unauthorized Migrant Men & Women)	3,953	943	380	421	11%	9%	9%	14%
65 years and over	3,765	941	546	195	11%	9%	12%	6%
Unauthorized Migrant Families	10,444	3,056	804	1,426	100%	100%	100%	100%
Under 18 years	3,791	1,234	230	573	36%	40%	29%	40%
Natives	2,324	789	135	347	22%	26%	17%	24%
Immigrants	1,467	445	95	227	14%	15%	12%	16%
18-64 years	6,640	1,818	574	851	64%	59%	71%	60%
Unauthorized Migrant Men	3,234	765	266	416	31%	25%	33%	29%
Unauthorized Migrant Women	2,800	841	256	359	27%	28%	32%	25%
Others (Legal Immigrant or Native Men & Women)	605	212	53	75	6%	7%	7%	5%
65 years and over	13	4	0	1	0%	0%	0%	0%

Source: Tabulations from the Joint Project on the Size and Characteristics of the U.S. Immigrant Population.

Table 5. Unauthorized Migrant Families by Type and Presence of Children for the United States, California, New York, and Texas: Census 2000 1% PUMS (15% subsample)

Child & Parental Composition and Legal Status	Number of Families (in 000s)				Distribution (Percent of Group)			
	U.S.	CA	NY	TX	U.S.	CA	NY	TX
Unauthorized Migrant Families	2,292	570	209	303	100%	100%	100%	100%
With Children	1,836	490	158	261	80%	86%	75%	86%
2-Parent	1,250	334	98	182	55%	59%	47%	60%
Others	586	156	60	79	26%	27%	29%	26%
Without Children	456	80	51	42	20%	14%	25%	14%

Source: Tabulations from the Joint Project on the Size and Characteristics of the U.S. Immigrant Population.

Note: Status of family based on householder and/or spouse. "Family" is defined as nuclear family units consisting of householder, spouse (if present), and children (if present).

APPENDIX

Outline of Assignment Algorithm:

- A. Estimate the refugee population
 1. Begin with arrivals in calendar year 1980;
 2. Survive & emigrate previous year's refugee population by country group and 5-year period of arrival using approximate rates;
 3. Add current year's refugees
- B. Identify "refugee" countries
 1. Census 2000
 - a. Compute ratio of refugee arrivals by calendar year and detailed country with census count;
 - b. Countries in years where ratios exceed 50% are "initial" refugee countries based on this "initial threshold";
 2. CPS
 - a. Compute ratio of refugee arrivals to "new arrivals" other than refugees for CPS entry *periods* and country *groups*;
 - b. Countries or groups in periods where ratios exceed 80% are "initial" refugee countries;
- C. Identify initial refugees based on the countries and periods of entry identified in Step B.
- D. Adjust refugee estimates based on comparison of initial refugee estimates with targets.
 1. Census 2000
 - a. For regions, adjust thresholds from 50% to provide agreement with refugee targets. Where estimates are too high, adjust threshold percentage above 50%; where estimates are too low, adjust threshold below 50%.
 - (1) Europe, 5% PUMS — 57%;
 - (2) Asia, 5% PUMS — 50%;
 - (3) Africa, 5% PUMS — 30%;
 - (4) North and Central America, 5% PUMS — 33%.
 - b. For specific large countries of origin for refugees with significant discrepancies, select only a random portion of census cases as refugees:
 - (1) Former Soviet Union, 1987–1994 (5% PUMS) — select 80%;
 - (2) Vietnam, 1980–1984 (5% PUMS) — select 65%;
 - (3) Vietnam, 1990–1994 (5% PUMS) — select 75%.

2. CPS — In most recent years, some adjustments are required for a few periods of entry for the former Soviet Union and Vietnam.

E. Refugee Countries: 5% PUMS

- ** Europe (57%);
 - * Albania — 1982–1984; 1990–1992
 - * Bulgaria — entry year=1983; 1985–1988
 - * Hungary — 1982–1988
 - * Poland — 1982–1983; 1987)
 - * Romania — 1981–1989
 - * Czechoslovakia — 1981–1986
 - * Yugoslavia (former) — 1993–2000
 - * Soviet Union ("Europe" excluding Baltics),
 - * Soviet Union (Caucasus)
 - * Soviet Union (Central Asia) — 1980–1982; 1995–1997; and 1987–1994 (80%)
- * Asia (50%);
 - * Afghanistan — 1980–1993; 2000
 - * Iran — 1984–1989; 2000
 - * Iraq — 1981; 1983; and 1991–2000
 - * Syria — 1993–1994
 - * Burma — 1999–2000
 - * Cambodia — 1980–1990
 - * Laos — 1980–1996
 - * Vietnam — 1980–1984 (65%); 1985–1989; 1990–1994 (75%); and 1995–1996
- * Africa (30%);
 - * Algeria — 1996; 2000
 - * Angola (Not Coded in 5%) — 1990
 - * Burundi (Not Coded in 5%) — 1998–1999
 - * Cameroon — 2000
 - * Congo, Democratic Republic (Not Coded in 5%) — 1991–2000
 - * Congo, Republic (Not Coded in 5%) — 1998–2000
 - * Gambia, The — 1996; 1998
 - * Liberia — 1992–2000
 - * Libya (Not Coded in 5%) — 1990
 - * Mauritania (Not Coded in 5%) — 1995–1996; 1998–1999
 - * Niger (Not Coded in 5%) — 1996; 1998–1999
 - * Rwanda (Not Coded in 5%) — 1994–1997; 1999–2000
 - * Sierra Leone — 1998–2000
 - * Somalia — 1988–2000
 - * Sudan — 1991–2000
 - * Togo (Not Coded in 5%) — 1994; 1999–2000
 - * Uganda — 1991
 - * Ethiopia and Eritrea — 1980–1994; 1999–2000
- * Americas (33%);
 - * Cuba — 1980–1981; 1988–1989; 1991–2000

- * Haiti — 1987–1988; 1992–1993
- * Nicaragua — 1987–1988
- * Stateless (Not Coded in 5%) —1995

F. Consistency edits and checks

1. Children

- a. Non-refugee children whose only foreign-born parent or parents are refugees become refugees;
- b. “Refugee” children whose foreign-born parent(s) are not refugees are re-classified as non-refugees.

- 2. Some foreign-born may be initially classified as both refugees and legal non-immigrants are classified as refugees only in the 5% PUMS.

G. Results — The result of these assignment procedures using the 5% PUMS yields 2.259 million refugees, a figure equal to the demographic estimate. Of these, 698,000 are from Europe (with 473,000 from the countries of the former Soviet Union); 126,000 from the “Middle East”; 884,000 from Asia (with 542,000 from Vietnam, 156,000 from Laos, and 101,000 from Cambodia); 426,000 from the Americas (with 339,000 from Cuba); and 123,000 from Africa.

Legal Temporary Migrants

- A. General Approach — Procedures for identifying legal temporary migrants in Census 2000 are based on the techniques developed initially by Word (1995) for the 1990 Census, further modified by Passel and Clark (1997) for use with the CPS, and then described by Passel et al. in research for the Census Bureau. The basic approach is to match the characteristics of the individuals in the census with the criteria for obtaining a visa. Individuals assigned as legal temporary migrants are more likely to hold temporary visas than other statuses (e.g., LPRs or unauthorized migrants).
- B. General criteria — These criteria apply broadly to all classes of legal temporary migrants because the characteristics either qualify the individuals for LPR status or indicate that the immigrants must have LPR status.
 - 1. Spouse not a U.S. citizen — U.S. citizens can petition immediately for their spouses to get a green card. Thus, while these individuals may not have green cards, they are likely to qualify for one within a very short time.
 - 2. Neither individual nor spouse receiving public assistance (i.e., “welfare”) — only legal immigrants or citizens qualify.⁸
 - 3. Neither individual nor spouse is a veteran or active-duty military.

⁸ In applying these methods to the CPS, only non-imputed values are used to disqualify individuals. The CPS legal status imputations are used for a different purpose, however. Further, additional imputation methods are applied to the CPS that are not used in our application. Thus, we use imputed values in Census 2000 for all status imputations.

4. No adult parents in household (except allowed for diplomats)
- C. Specific criteria for identifying temporary visa holders
1. Diplomats (A visas)
 - a. In U.S. less than 10 years
 - b. Occupation in (002,043) — Managers
 - c. Industry in (959) — International Affairs
 - d. In labor force
 2. Servants of diplomats (A visas)
 - a. In U.S. less than 10 years
 - b. Occupation in (461,465)
 - c. Industry in (959)
 - d. Non-relative of householder
 3. Students (F-1 and M-1 visas)
 - a. Entered U.S. at ages 17–64
 - b. At least a high school diploma
 - c. Enrolled in post-high school institution
 - d. Working status:
 - (1) Less than 25 hours per week if employed by a university (industry in 787, 746)
 - (2) 20 hours per week or less if employed elsewhere.
 4. Visiting professors (J-1 visa) or graduate assistants (J-1, F-1, M-1 visas)
 - a. In labor force
 - b. Industry in (787, 746) — university or research institution
 - c. Occupation — Post-secondary teacher (220); Engineer (130–153); Mathematical occupations (100, 102, 111–124); hard scientist (160–176); social scientist (180–186); physician (301,303,304,306,312,314,325)
 - d. In U.S. 5 years or less
 - e. If too young (age<35) or with low earnings (<\$15,000) or part-time work (<30 hours per week), then the migrant is classified as a graduate assistant (who can be in U.S. up to 7 years).
 5. Doctors or Medical students (J-1 visa)
 - a. In labor force
 - b. Occupation — Doctor or medical scientist (301,306,314,165,326) or therapist (315,316,320,322,323)
 - c. Not self-employed (class of worker not in 6, 7)
 - d. Not in private practice (industry not 797–808)
 - e. In U.S. 3 years or less
 - f. Industry — Hospital or similar institution (819,827,818,809)
 - g. If employed by a university (industry=787) with low earnings or part-time work, then the individual is a graduate assistant. (See above.)
 6. Registered Nurses (H1 visas)
 - a. In labor force
 - b. Occupation — Nurse (313, 350)

- c. Not self-employed (class of worker not in 6, 7)
 - d. Not in private practice (industry not 797–808)
 - e. In U.S. 3 years or less
 - f. Industry — Hospital or similar institution (819,827,818,809)
 - g. If employed by a university (industry=787) with low earnings or part-time work, then the individual is a graduate assistant. (See above.)
7. Agricultural workers (H2 visa)
- a. In labor force
 - b. Agricultural occupation (020,600,605)
 - c. In U.S. 3 years or less
 - d. Born in Jamaica (333)
8. “Hi-tech” guest workers (H1-B visas)
- a. In labor force
 - b. In U.S. 3 years or less
 - c. Income greater than \$30,000 if in U.S. more than 1 year
 - a. Not self-employed (class of worker not in 6, 7)
 - d. Private employer (class of worker in 1, 2)
 - e. Advanced degree
 - f. Occupation — Engineer (130–153); Computer occupations (100–124); scientist (160–186); Writer (281, 283, 284); Technician (154–156, 190–196); selected specialty occupations (903,290,790,813).
9. Intra-company transfer (L-1 visas)
- a. In labor force
 - b. In U.S. 3 years or less
 - c. Not self-employed (class of worker not in 6, 7)
 - d. Private employer (class of worker in 1, 2)
 - e. Occupation — Manager (001–020, 022, 030, 031, 033–043); Business of financial occupation (051–053, 060, 062, 070, 071, 073, 080, 082–084, 086, 095); selected Sales occupations (480, 484, 485, 493); selected Supervisory occupations (430, 432, 470, 471, 500, 600, 620, 700, 770); public relations specialist (282)
10. International Organization (G-1 visa)
- a. Industry — International affairs (959)
 - b. Private or government employer (class of worker in 1, 2, 5)
 - c. Occupations — same as H1-B or L-1; plus librarian or lawyer (243,210), office worker (570,582,583,590,593,501–503), computers (580), chauffer (914)
 - d. Meet other criteria for H1-B or L-1 visa. (See above.)
11. Religious workers (R-1 visa)
- a. In labor force
 - b. In U.S. 3 years or less
 - c. Occupation — Religious worker (204–206)
12. Athletes and Entertainers (O-1 and P-1 visas)
- a. In labor force

- b. In U.S. 3 years or less
- c. No parent in household
- d. Income exceeding \$30,000
- e. Industry — Publishing (647, 648, 199); Movies & Records (657,659); Arts, Entertainment, Sports (859,857,856)
- f. Private employer (class of worker in 1, 2)
- g. Occupation — Artists, Designers (260,263); Actors, Producers (270,271); Athletes (272); Musicians, Entertainers (274–276); Writers, Photographers (285,291).

13. High school exchange student (J-1 visa)

- a. Other non-relative of householder
- b. In U.S. less than 3 years
- c. Single with no parent in household
- d. Age 14–20
- e. Enrolled in high school
- f. Place of birth different from family reference person

14. Au Pair (J-1 visa)

- a. Other non-relative of householder
- b. In U.S. less than 4 years
- c. No spouse or parent in household
- d. Any children of visa holder must be born in U.S.
- e. Occupation in child care (460,461)
- f. There must be a child in the household

15. Spouses and dependent children

- a. Not a citizen
- b. Not working (unless spouse also qualifies as legal temporary migrant) except for spouses of diplomats (A), artists/entertainers (O, P), international organizations (G), intra-company transfers (L), and professors/physicians.

D. Results. These procedures assigned 1,146,000 foreign-born as legal temporary migrants in the 5% PUMS for Census 2000 (1,148,000 in the 1% PUMS). The largest single category is foreign students (351,000) followed by intra-company transfers (169,000) and dependents (162,000). Next in line are high-tech workers (145,000) and their dependents (108,000). It should be noted, however, that the choice between H1-B's and L-1's is rather arbitrary in the assignment but often interchangeable in practice.