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GUIDE TO INTERNATIONAL MIGRATION STATISTICS: The Sources, Collection, and Processing of Foreign-Born Population Data at the U.S. Census Bureau

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Disclaimer

This paper reflects the results of research undertaken by Census Bureau staff. It has undergone a more limited review than official Census Bureau publications. This paper has been prepared to inform interested parties of on-going research and to encourage discussion.

Abstract

This report presents an overview of information available from the U.S. Census Bureau about the U.S. foreign-born population. Information about the foreign born is available from a variety of sources including: decennial censuses, current surveys, and demographic estimates based on administrative sources. Specifically, this report describes surveys fielded by the Bureau, the international migration-related items covered by the surveys, and the post-collection processing of these data.

Ta	ble of Con	tents	Page #
Inti	roduction		3
Da	DecenniAmericalCurrentSurvey oNationalNew Yor	Describing Survey Instruments)	4 5 6 7 8
Da	Editing Scenarios (Re Puerto R U.Sbori	Editing Survey Data)sponses)ican-Born & Naturalized U.S. Citizenn & No Citizenship Given & Year of Entry Givenorn & 1970 Year of Entry & 1975 Year of Birth (age equals 25)	11 11 11
Co	nclusion		15
Ap _l		of 1990 and 2000 Decennial Censuses and ACS 2000/C2SS: Related Items	16
В.	 Question and the and the Guestion Migratio Question Topical Management 2 Question to Internation Migratio Question Internation Internation To Question Internation Internation Internation Page 12 (Page 12 (onal Migration Items Covered by Surveys at the U.S. Census Bureau	23 24 story Vave
C.	References		30

International Migration Statistics Guide

This guide is an attempt to inform the user community of the variety of data sources on the foreign-born population and international migration available from the U.S. Census Bureau. It is also an attempt to provide a "behind the scenes" view of the processing that takes place, affecting the data released to the public.

Information about the foreign born is available from a variety of sources including: decennial censuses, current surveys, and demographic estimates based on administrative sources.

Introduction

In the United States, federal statistics on international migration are produced primarily by the U.S. Census Bureau, the Immigration and Naturalization Service (INS), and the U.S. Department of State.

The Census Bureau collects these data through its decennial censuses and numerous surveys of the U.S. population.¹ The INS collects international migration data from several administrative records such as the Immigrant Visa and Alien Registration (OF-155, U.S. State Department) for new arrivals, and the Memorandum of Creation of Record of Lawful Permanent Residence (I-181, INS) for persons adjusting immigrant status.²

The Census Bureau defines the foreign-born population as "people who are not U.S. citizens at birth." In contrast to the foreign born, the native population, as defined by the Census Bureau, refers to "people who were either born in the United States or a U.S. Island Area, such as Puerto Rico, or who were born abroad of a U.S. citizen parent." (Lollock, 2001)

Data Collection (Describing Survey Instruments)

Traditionally, users of Census Bureau data rely on decennial census and Current Population Survey (CPS) data for detailed information on the U.S. foreign-born population.

¹ U.S. decennial censuses are fielded in the year ending zero of each decade. The U.S. resident population has been enumerated through a census since 1790; the 1850 decennial census was the first census in which data were collected on the nativity (place of birth) of the population. Census 2000

marked the 22nd decennial enumeration of the United States. For more information on the history of the U.S. census, see Bohme, 1989 and Gauthier, 2002. For more information on historical census statistics of the foreign-born population of the United States, see Gibson & Lennon, 1999.

² For an evaluation of INS data, see M.J. Greenwood et al., 1991.

Less frequently used, but in many ways equally useful, are other Census Bureaumaintained surveys including: the American Community Survey (ACS), the Survey of Income and Program Participation (SIPP), the National Health Interview Survey (NHIS), the New York Housing Vacancy Survey (NYCHVS), and the American Housing Survey (AHS). (See <u>Table 1</u> for a detailed listing of all survey instruments discussed in this paper.)

In addition to the surveys detailed here, the Census Bureau currently provides national-level projections of the U.S. resident population by nativity through 2100. The Census Bureau has also provided national-level estimates by nativity for the 1990 to 1999 period.³ We are currently researching the feasibility of providing national-level annual estimates of the population by nativity for the post-2000 period.

Decennial Census (Census 1990 & Census 2000)

Using various methods, the Census Bureau maintains data on the foreign-born population. In both the 1990 and 2000 decennial censuses, international migration-related data have been collected for the entire U.S. resident population, including people in group quarters.⁴

Ouestions of place of birth, citizenship status, year of entry, ancestry, residence five years ago, and language spoken at home are included in both the 1990 and 2000 decennial censuses.⁵ <u>Table 2</u> illustrates the migration-related items found in the 2000 decennial census.⁶

A notable omission from the most recent censuses is parental nativity (birthplace of parents), asked each census year since 1870, but discontinued after the 1970 census. Starting in the 1980 census, a question on ancestry (based on self-identification) replaced the question on birthplace of parents. (Gibson and Lennon, 1999; Bohme, 1989)

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³ See U.S. Census Bureau (2001) for more information.

⁴ The U.S. Census Bureau classifies all people not living in households as living in group quarters. *Institutional* group quarters are formally authorized, supervised care or custody (e.g., nursing homes); *noninstitutional* group quarters are other forms of group quarter living arrangements (e.g., college dormitories).

⁵ These items are sample items. In other words, these questions are only asked of approximately one-sixth of the U.S. resident population, on the census "long form." (See U.S. Census Bureau, 1998 for additional information.

⁶ The Census Bureau alone does not select the items to be asked in the decennial census. Questions that appear in the decennial census require Congressional approval and balance the need for data against the response burden to the public. The Census Bureau recommends to Congress the subject items to be asked. Items are classified as either "mandatory," "required," or "programmatic." *Mandatory* items are subjects required (in the decennial census) by Federal law. *Required* items are subjects required by Federal law. *Programmatic* items are subjects used for Federal program planning, implementation, evaluation, or to provide legal evidence—not required by Federal law. (U.S. Census Bureau, 1998)

⁷ The 1870 census asked if the parents were foreign born. The 1880 census was the first to elicit a "place of birth," i.e., country of birth.

To date, the decennial census provides the sole means by which to study small groups of the foreign-born population at the national *and* detailed subnational levels (i.e., state, county, and subcounty).

The Census 2000 questionnaires were translated into five languages (Spanish, Chinese, Vietnamese, Korean, and Tagalog). To assist individuals who are more proficient in languages other than English, language guides were provided in 49 other languages.

American Community Survey (ACS)⁶

In 2003, the Census Bureau anticipates full implementation of the American Community Survey (ACS) in every county of the United States. The survey will eventually include an annual sample of three million housing units, including group quarters populations. Data (responses) are collected by mail and Census Bureau staff follow up with those who do not respond.

The ACS is intended to replace the census long form, providing timely demographic, housing, social, and economic data every year for all states, as well as for all cities, counties, metropolitan areas, and population groups of 65,000 people or more. Multi-year averages will be produced for geographic areas or population groups of fewer than 65,000. (U.S. Census Bureau, May 2002)

One important difference between the ACS and the decennial census involves the definition of residence. The ACS concept of residence ("current residence") differs from the decennial census concept of "usual residence" (place where a person lives and sleeps most of the time or the place they consider their usual residence). "Current residence" requires that a person only have one residence at any point in time; however, their residence does not have to be in the same place throughout the year for the ACS. A two-month same residence rule was established for the ACS. Given the seasonal movement of some migrant groups, such conceptual differences as "current" or "usual" residence may affect whether or not a person is counted in a particular location at a particular time.

The foreign-born related questions asked in Census 2000 are asked as well for the ACS. (See <u>Table 2</u>.) The annual release of data, available at detailed subnational levels of geography, provides a wealth of information never before available in an ongoing and timely manner from either decennial censuses or smaller sample surveys.

The ACS paper version of the questionnaire is currently only available in English; Computer Assisted Telephone Interviews (CATI) and Computer Assisted Personal Interviews (CAPI) are conducted both in English and Spanish, where needed.

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⁸ See <u>Appendix A</u> for a comparison of decennial censuses 1990 and 2000, and ACS 2000 foreign-born related items (Place of birth, Citizenship Status, and Year of entry).

⁹ The Census 2000 Supplementary Survey (C2SS) was fielded in 2000 to evaluate the anticipated implementation of a national ACS in 2003. The C2SS was an operational feasibility test to collect long form-type data at the same time but separate from the decennial census.

Current Population Survey (CPS)

In addition to the decennial census, national surveys such as the Current Population Survey (CPS) regularly ask questions useful to the analysis of international migration. The CPS is an interviewer-administered, monthly survey of approximately 50,000 households.¹⁰ The main purpose of the CPS is to collect information on the labor force characteristics of the U.S. population—specifically, to assess monthly unemployment changes.

Two sets of questions, the basic monthly questions and the supplements, are asked of respondents. The basic CPS collects labor force and demographic information about the civilian noninstitutional population.¹¹

Throughout the 1980s, the Census Bureau collected intercensal data on the foreign born by including supplements to the CPS. These supplements were fielded in April 1983, June 1986, June 1988, and November 1989.

Since 1994, the basic CPS also includes questions on nativity of respondent and parental nativity, citizenship status, and year of entry into the United States. The March (Annual Demographic) supplement includes questions about poverty status, money income received, health insurance, household and family characteristics, marital status, and geographic mobility in the previous 12 months (including moves from abroad).¹² Beginning in 1998, the March supplement has included a question identifying the main reason for moving.

For studying the foreign born, researchers rely primarily on the March CPS data due to the increased sample size of about 2,500 eligible housing units containing at least one individual of Hispanic origin. (Schmidley, 2001) Because the foreign-born related items are located on the basic (monthly) questionnaire, studies of the foreign born can also be conducted using averaged monthly files. **Table 3** features the international migration-related items regularly found in the CPS since 1994.

Important differences exist between estimates of the population from the decennial

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¹⁰ Congress has appropriated additional funds to the Census Bureau expanding the CPS sample size to yield more reliable state estimates of the number of low-income children without health insurance. The expansion, which became effective with the official release of July 2001 data, increased the monthly sample from 50,000 to 60,000 eligible households. (See Mills (2000) and U.S. Census Bureau (2002) for additional information on SCHIP (State Children's Health Insurance Program) and the CPS sample expansion.)

¹¹ The civilian noninstitutional population includes persons 16 years of age and older residing in the 50 States and the District of Columbia who are not inmates of institutions (e.g., penal and mental facilities, homes for the aged), and who are not on active duty in the Armed Forces. (U.S. Census Bureau, 1996) Other regular supplements include: Housing Vacancy, Contingent Workers, Veterans, Voting, Internet Computer Use, Child Support, Fertility, School Enrollment, and Food Security. Each supplement provides additional information about a subject matter of interest to the sponsoring agency (e.g., the Bureau of Labor Statistics or the National Center for Education Statistics).

census and those from the March CPS. While the universe for the census is the entire resident population of the U.S., the universe for the March CPS is the civilian noninstitutional population plus Armed Forces living off post or with their families on post. Foreign-born individuals in nursing homes or prisons will not be included in the CPS count as they are housed in facilities not covered by the CPS.

Also, whereas the CPS is an interviewer-administered survey (in-person or by telephone), the census is primarily a mail-out/mail-back format. In the interviewer-administered format, respondents may ask the interviewer for his/her opinion as to how they should reply to a given question. The interviewer has been trained to provide clarification where applicable.

Finally, CPS population estimates are adjusted for undercoverage using the most recent decennial census. Current CPS estimates of the foreign born (through 2001) are adjusted to the <u>1990</u> census, and are, therefore, not directly comparable to the foreign-born population estimates from Census 2000, ACS 2000, or the Census 2000 Supplementary Survey (C2SS)¹³—the latter two surveys having been controlled to Census 2000.¹⁴

The CPS instrument is currently available in both English and Spanish. When needed, Spanish speaking cases are send for CATI interviewing to a telephone facility in Tucson, Arizona.

¹³ The Census 2000 Supplementary Survey (C2SS) is a Decennial Census program designed to demonstrate the feasibility of collecting long form type information at the same time as, but separate from, the Decennial Census. (See U.S. Census Bureau, June 2001 for more information on the C2SS.) ¹⁴ Beginning with the release of 2002 data, population estimates from Census-sponsored supplements of the CPS will reflect survey controls adjusted for undercoverage based on Census 2000.

Survey of Income and Program Participation (SIPP)

The Survey of Income and Program Participation (SIPP) is a national longitudinal survey of the U.S. civilian noninstitutionalized population, primarily collecting data on the source and amount of income, labor force information, and program participation and eligibility.

The SIPP survey design is a continuous series of national panels, the duration of which has ranged from two-and-a-half to four years. Questions are asked in waves with each wave administered every four months. Each panel follows the same household across waves, as well as people who move out to form separate households after Wave 1. The sample size has ranged from approximately 14,000 to 36,700 households. (U.S. Census Bureau, December 2000)¹⁵

Since 1984, the SIPP has included a Migration History Topical Module asking respondents when they moved to their current residence, the location of any previous residence, and place of birth. For respondents born in a foreign country, questions are asked on citizenship status and year of entry. During earlier years, additional questions were asked including parents' place of birth and reasons for moving.

The migration history questions are asked once per panel of each respondent in the household ages 15 and older (during Wave 2, after four months). Beginning with the 1996 Panel (Wave 2) of the Migration History Topical Module, several new international migration-related questions such as immigration status, adjustment of status, and time of adjustment of status have been added. See **Table 4a**.)

These are the only sources of such detailed international migration-related questions available from the Census Bureau. However, the sample size, considerably smaller than that of the CPS, restricts the usefulness of detailed analyses of the foreign born beyond establishing nativity and citizenship status of the respondents.

In 2001, the Bureau tested a series of questions to identify citizenship status in the core questionnaire of SIPP. The purpose was to screen for individuals not born in the United States or U.S. Island Areas (e.g., Puerto Rico and Guam), and respondents were asked questions regarding their place of birth, citizenship status and how it was obtained (e.g., birth to U.S. citizen abroad or through naturalization), and whether or not their parents were U.S. citizens at the time of their (respondent's) birth. Many of the questions are comparable to those currently asked in the CPS. (See **Table 4b.**)

The SIPP instrument is currently available in both English and Spanish. 18

¹⁷ These changes were incorporated due to a request from the Congressional Budget Office.

¹⁵ The pre-1996 sample sizes were around 20,000 households or less, whereas the more recent panels maintained samples closer to 40,000 households.

¹⁶ Prior to 1986, the Topical Module was asked during Wave 7.

¹⁸ The core questionnaire was translated for the 1996 Panel, Wave 1; the topical modules were translated for the 1996 Panel, Wave 6.

National Health Interview Survey (NHIS)

The National Health Interview Survey (NHIS) collects data on amount and distribution of illness, its effects in terms of disability and chronic impairments, and the kind of health services people receive. The sample covers approximately 71,000 households per year, with an oversampling of households with Blacks or Hispanics.

The NHIS core questionnaire includes items on place of birth, citizenship status, year of entry, and length of U.S. residence. This is the only Census Bureau survey that asks a residence duration-type question in this form.¹⁹ (See <u>Table 5</u>.)

In 2000, the NHIS added a Cancer Supplement including a Hispanic Acculturation section. This section includes parental nativity questions as well as several English proficiency and foreign language-related items.

Spanish translated instruments have been provided since 1998.

New York City Housing Vacancy Survey (NYCHVS)

The New York City Housing Vacancy Survey (NYCHVS) is used to determine the vacancy rate for New York City's rental stock, and to measure the quality and quantity of housing and the demographic characteristics of the city's residents.

The sample includes approximately 18,000 units selected from the 1990 census address list for New York City. The survey is conducted every three years. (U.S. Census Bureau, February 2002)

As for international migration-related items, the NYCHVS questionnaire previously included only place of birth and parental nativity. The 1999 NYCHVS survey introduced additional questions including year of entry, "immigrant status²⁰," and year of move into New York City. These questions continue to be asked of each householder in the 2002 survey. (See <u>Table 6</u>.)

Currently, no Spanish translation is available for this Paper and Pencil Interview (PAPI) survey.

American Housing Survey (AHS)

The American Housing Survey (AHS) collects data on the nation's housing, including recent movers. The AHS consists of a national survey (AHS-N) and surveys of selected metropolitan areas (AHS-MS). The AHS is well-suited for analyzing the flow of

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¹⁹ In the other surveys, length of U.S. residence is ascertained from a year of entry question.

The question reads, "Did...move to the United States as an immigrant?"

households through housing.²¹ (U.S. Census Bureau, September 2001) The national sample covers approximately 55,000 homes and is conducted in odd-numbered years. The Metropolitan Survey (AHS-MS) is conducted in 41 metropolitan areas on a rotating basis in even-numbered years.

The AHS includes questions about reasons for moving and the location of previous residence. It should be noted, however, that the response option for foreign locations of previous residence is restricted to simply "different nation." The AHS collected place of birth, citizenship status, and year of entry information for the first time in 2001. The items (questions and response options) are similar to those found in the CPS. (See Table 7.)

Currently, no Spanish translation is available.

Data Processing (Editing Survey Data)

Once data are collected from the field, the various surveys undergo a series of data processing tasks. The objective of these data processing tasks is to generate accurate and organized microdata in preparation of their final release to the user community.

The key tasks of data processing are: data capture, reformatting, review, cleaning, editing, imputation, weighting, and generating work tables.²²

Most surveys at the Census Bureau follow a similar processing scheme:

- 1) The data are captured or received from either paper or computer-assisted instruments (CAI) and keyed and coded by both manual and automated operations;
- 2) The unedited data are reformatted into more usable formats, such as SAS data sets or Oracle databases;
- 3) The reformatted data are given a preliminary review (for data layout, reasonableness, outlying cases) by subject matter specialists;
- 4) The reviewed, reformatted data are cleaned and reviewed for consistency;
- 5) The cleaned, unedited data are edited; imputation takes place based on subject matter-specific edit specifications;
- 6) The imputed data set values are weighted based on sample structure creating a final microdata file;
- 7) The final microdata file serves as the source for generating working tables.

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²¹ The AHS returns to the same housing units year after year to gather data.

²² Although each of these steps will be mentioned in this guide, the focus here is on the editing task—how the Census Bureau treats responses that are either in conflict or are missing.

Although similar data processing steps are taken across surveys at the Bureau, important differences exist. Users of these data are advised to keep in mind differences in:

- Questionnaire design (question/response sequencing)
- Sample design (frames, size, changes)
- Format (self-enumerated/interviewer-administered; PAPI/CAPI/CATI)
- Universe (total U.S. resident population; civilian non-institutionalized population)
- Residence status (usual residence; current residence)²³

These differences help explain some of the variations in the output from these data sources.

Editing

Editing consists of modifying or adding information to cases for which either conflicting or no information was given.

The editing techniques used by the Bureau are generally consistent across instruments, however, important differences exist. For some surveys, such as the National Health Interview Survey (NHIS), the Census Bureau provides none of the data processing work. This work is performed by the survey's sponsor, the National Center for Health Statistics (NCHS).

In this section, each instrument's processing is described, particular attention being paid to editing data related to the foreign born. For each of the instruments discussed below, scenarios are provided that necessitate subject matter (i.e., nativity)-specific edits. Across surveys, in most instances responses to questions on place of birth determine edited values for other nativity-related items (e.g., citizenship status).

These scenarios are by no means exhaustive of all possible data issues addressed during editing. They are meant to provide users with an example of how conflicting and missing information are treated across surveys.

The scenarios shown here involve the following conflicting (or missing) responses:

- 1) Puerto Rican-born & naturalized U.S. citizen
- 2) U.S.-born & no citizenship given & year of entry given
- 3) China-born, 1970 year of entry, 1975 year of birth (age=25)

Puerto Rican-born & Naturalized U.S. citizen: Scenario 1

²³ Definitions of residence were previously discussed in the Data Collection (Describing Survey Instruments) section of this guide.

In this scenario when asked for their place of birth, the respondent indicates that they are born in Puerto Rico (a U.S. Island Area, USIA). In the same interview, the respondent indicates that they are a U.S. citizen through naturalization when asked about their citizenship status. These responses are not in agreement because any person born in Puerto Rico (or another U.S. Island Area) is a U.S. citizen at birth. Naturalization is any award of citizenship conferred on a person *after* birth.

- Decennial census (Census 2000) Place of birth determines citizenship status; Citizenship status becomes U.S. citizen, born in Puerto Rico.
- American Community Survey (ACS) Same editing procedure as Census 2000.²⁴
- Current Population Survey (CPS) Improbable scenario in CAI environment; citizenship status question is not asked of U.S. or USIA-born respondents. Place of birth determines citizenship status; citizenship status becomes U.S. citizen, born in Puerto Rico.
- Survey of Income and Program Participation (SIPP) Improbable scenario in CAI environment; citizenship status question is not asked of U.S. or USIA-born respondents. Place of birth determines citizenship status; citizenship status becomes U.S. citizen, born in Puerto Rico.
- National Health Interview Survey (NHIS) Place of birth determines citizenship status; Citizenship status becomes U.S. citizen, born in Puerto Rico. All persons born in Puerto Rico are coded as "2" on the "CITIZEN" variable, in order to indicate that they are U.S. citizens by virtue of their birth in a U.S. Island Area. On the public use CITIZENP variable, Puerto Ricans are coded as "1", which is equivalent to "Yes, citizen of the United States". (Note: Information provided by NCHS.)
- New York City Housing Vacancy Survey (NYCHVS) Impossible scenario in NYCHVS; citizenship status question is not asked of respondents.
- American Housing Survey (AHS) Same editing procedure as CPS.²⁵

U.S.-born & No Citizenship Given & Year of Entry Given: Scenario 2

In this scenario when asked for their place of birth, the respondent indicates that they are born in the United States. They also indicate a year of entry into the United States, and do not provide information on their citizenship status. For this scenario, the edits must address both the missing citizenship status information and the conflicting place of birth and year of entry responses. A person born in the United States should not provide a year of entry into the U.S. Year of entry implies that a person has come to

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²⁴ In most cases, ACS editing procedures use Census 2000 specifications.

²⁵ AHS editing procedures use CPS specifications.

the U.S. at some point after their birth. This question is usually asked of people born outside the United States regardless of their citizenship status at the time of birth.

- Decennial census (Census 2000) Place of birth determines citizenship status; citizenship status becomes U.S. citizen, born in the United States. Place of birth determines validity of year of entry; year of entry is "not in universe" and, therefore, blanked.
- American Community Survey (ACS) Same editing procedure as Census 2000.
- Current Population Survey (CPS) Improbable scenario in CAI environment; citizenship status and year of entry questions are not asked of U.S.-born respondents; Place of birth determines citizenship status; citizenship status becomes U.S. citizen, born in the United States. Place of birth determines validity of year of entry; year of entry is "not in universe."
- Survey of Income and Program Participation (SIPP) Place of birth determines citizenship status; citizenship status becomes U.S. citizen, born in the United States. Place of birth determines validity of Year of entry; year of entry is "not in universe".
- National Health Interview Survey (NHIS) As of the 2000 NHIS, respondents are either born in a U.S. state or the District of Columbia, or they are born elsewhere (they may select from among 500+ possible places). Only those people born "elsewhere" are in the universe (both in CAPI and in subsequent edits) for USYR, the variable indicating year of entry into the United States; people born in the United States or D.C. are blanked, the NHIS version of "out of universe". (Note: Information provided by NCHS.)
- New York City Housing Vacancy Survey (NYCHVS) Citizenship status question is not asked of respondent. Year of entry is not verified by place of birth. Year of entry is not edited, and, therefore, remains on the file.
- American Housing Survey (AHS) Same editing procedure as CPS.

China-born & 1970 Year of Entry & 1975 Year of Birth (age = 25): Scenario 3

In this scenario when asked for their place of birth, the respondent indicates that they were born in China. In the same interview, the respondent indicates that they entered the United States in 1970 (assume current year is 2000), and that they stated their year of birth to be 1975. These time-related responses are not in agreement. They conflict, not surprisingly, because a person cannot enter the U.S. prior to their birth.

• Decennial census (Census 2000) - Edits are categorized by both place of birth and citizenship status. If citizenship status is missing, year of entry along with

citizenship status are allocated from a matrix.²⁶ If citizenship status is present, year of entry alone is allocated from a matrix.

- American Community Survey (ACS) Same editing procedure as Census 2000.
- Current Population Survey (CPS) Place of birth determines validity of year of entry. If year of birth is greater than year of entry, then year of entry becomes birth year plus one.
- Survey of Income and Program Participation (SIPP) Improbable scenario in CAI environment, where instrument prompts date inconsistencies; year of entry matched to year of birth. Place of birth determines validity of year of entry. Inconsistency reconciled on "date check" screen.
- National Health Interview Survey (NHIS) Improbable scenario in CAI environment, where instrument prompts date inconsistencies; year of entry matched to year of birth. Place of birth determines validity of year of entry. Inconsistency reconciled on "date check" screen. Handling of date inconsistencies are expected to be changed for the processing of 2000. (Note: Information provided by NCHS.)
- New York City Housing Vacancy Survey (NYCHVS) Place of birth determines validity of year of entry. Year of entry is not verified by age. Year of entry is not edited, and, therefore, remains on the file unchanged.
- American Housing Survey (AHS) Same editing procedure as CPS.

As revealed by these scenarios, the place of birth item had a significant impact on the citizenship status and year of entry responses where no or conflicting information was provided. Place of birth is assumed to be more accurate than either citizenship status or year of entry. Generally, people know where (at least in what country) they were born. Less clear is public understanding and interpretation of terms such as citizen and naturalization, especially for populations born in U.S. Island Areas, as well as of the foreign born currently holding some form of U.S. residency document (but are not naturalized) or those who have applied for, but have not yet been granted naturalization.

In some situations, differing edit specifications for the treatment of conflicting responses yield differing outcomes. An example is the case where a person responds that they were born outside the United States (or a U.S. Island Area), were a U.S. citizen at birth, but their parents were not U.S. citizens.

responses provided.

²⁶ The allocation matrices vary in format and content depending on the survey and the item being allocated. For the decennial census (and ACS 2000), allocation matrices include starting (or "cold deck") values of age, race, and Hispanic Origin. These values are assigned to cases with missing citizenship or year of entry information. The matrix is subsequently updated with new information from actual

This conflict is handled differently depending on the survey format (paper or computer-assisted), and how the edit specifications were written for a particular survey. Whereas in Census 2000 this issue would be resolved by the citizenship status being blanked and imputed based on a conflict with place of birth—yielding a "non-citizen," the CPS editing procedure would permit the conflict to remain, yielding a "U.S. citizen."

Also, for computer-assisted instruments, enumerators are unable to enter invalid years of entry. In other words, the computer program does not allow the respondent to give (or the enumerator to record) logically incorrect responses to the year of entry item. In certain cases (such as CPS), "DK" (Don't' Know) and "R" (Refused) responses are permitted in the CAI environment even if not listed on screen.

Conclusion

The management of migration data by the U.S. Census Bureau continues to evolve. Items such as parental nativity have been dropped indefinitely from the census long form while other items have been included regularly as part of the basic CPS instrument; and, beginning in 1999, both national estimates and projections *by nativity* have been produced. Furthermore, recent SIPP panels include migration-related items. Other surveys, seldom used for studying the foreign born, such as the NHIS, NYCHVS, and the AHS potentially serve as sources of additional information on the foreign born.

New surveys (ACS), supplements (NHIS), and questions (SIPP) contribute to the ongoing development of foreign-born data.

Discussions continue within federal agencies of the U.S. government and across international borders to improve the collection, processing, analysis, and release of international migration data.

Appendix A.

Comparison of 1990 and 2000 Decennial Censuses and ACS 2000²⁷

A comparison of foreign-born related questions included in Census 1990, Census 2000 and the American Community Survey (ACS) 2000 questionnaires reveal some basic differences. These differences, specific to the questions themselves and not to the overall layout and design of the census instruments, can be categorized into three general areas: (1) differences in question sequence (or position) within the overall questionnaire; (2) differences in the actual phrasing of the questions; and (3) differences in the manner in which responses are recorded.

Overview

The decennial censuses from 1990 and 2000, as well as ACS 2000, contain three foreign-born related questions, which can broadly referred to as Place-of-birth, Citizenship status, and Year-of-entry.

The Place-of-birth questions note where each respondent was born: state name for those born within the United States; or country name for those born elsewhere. The Citizenship status questions separate respondents into various citizenship categories, which depend on the manner in which citizenship was obtained, or into a residual non-citizen group. The Year-of-entry questions situate the years during which respondents came to the United States.

With the exception of "previous residence," these three data products contained no other direct measures of international migration.

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²⁷ The Census 2000 Supplementary Survey (C2SS) used the questionnaire and methods developed for the American Community Survey (ACS) to collect demographic, social, economic, and housing data from a national sample of 700,000 households. Group quarters were not included in the sample. (See U.S. Census Bureau, June 2001 for more information on the C2SS.)

Position in questionnaire/question sequence

The sequence of the foreign-born related questions (i.e., the order and position of the questions within each questionnaire) may influence certain response outcomes. As shown in Table 1, the order of these questions never change in sequence relative to each other, however, they do shift location within the overall questionnaire across all three instruments. Whereas the three foreign-born items appeared prior to questions related to education, ancestry and language spoken at home in Census 1990, they follow these questions in Census 2000. However, the ACS 2000 more closely mirrors Census 1990 with placement earlier in the sequence.

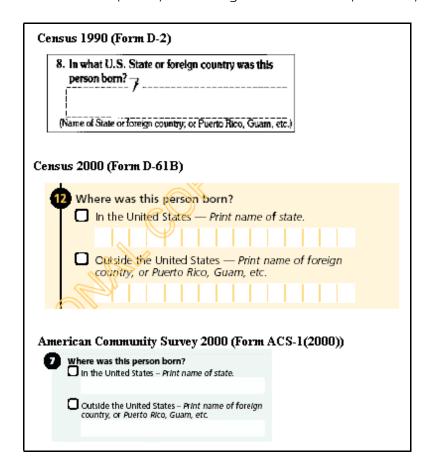
Table 1.

1990 Census	2000 Census	2000 ACS
Name and address	Name	Sex
Relationships	Phone number	Age
Sex	Sex	Relationship
Race	Age	Marital status
Age	Hispanic origin	Hispanic origin
Marital status	Race	Race
Hispanic origin	Marital status	Place of birth
Place of birth	School enrollment	Citizenship status
Citizenship status	Educational attainment	Year of entry
Year of entry	Ancestry/ethnic origin	School enrollment
School enrollment	Language at home	Educational attainment
Educational attainment	Place of birth	Ancestry/ethnic origin
Ancestry/ethnic origin	Citizenship status	Residence 1 yr. ago
Residence 5 yrs. ago	Year of entry	Language at home
Language at home	Residence 5 yrs. ago	2 3

Questions and responses

Place of birth

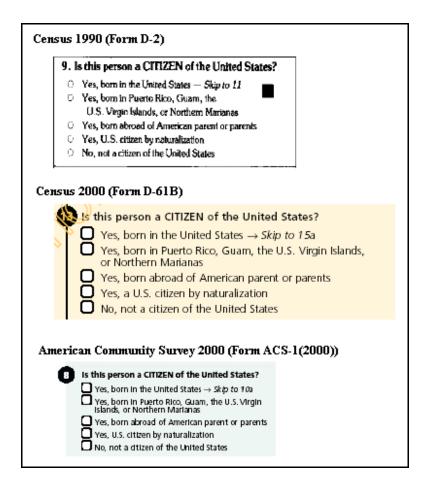
The Place-of-birth question was shortened between the 1990 and 2000 decennial censuses. As shown in Figure 1, the 1990 phrase, "In what U.S. State or foreign country..." was replaced with the much more succinct, "Where" for Census 2000. This wording is also used in ACS 2000. Both Census 2000 and ACS 2000 provide two check boxes and response fields to differentiate U.S.-born locations (states) with foreign-born locations (countries).



The response options also differ across these instruments. The 1990 Census provided an open field for written responses, regardless of location. The response was constrained only by the space available. The 2000 Census, on the other hand, offered two check boxes to distinguish between places of birth "in the United States" and those "outside the United States." For each options, 15 spaces were allotted for the write-in response. Finally, ACS 2000 offered a format similar to Census 2000, but with an open field in lieu of 15 delimited spaces for write-in responses.

Citizenship status

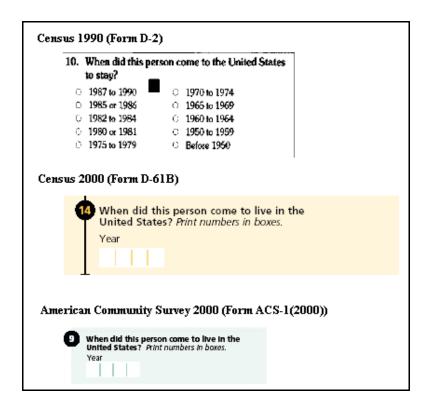
The Citizenship status question remained unchanged between the two census questionnaires and ACS 2000. As shown in Figure 2, there is no difference in the wording of the actual question on citizenship status, including the capitalization of the word "citizen."



Furthermore, the sequence and phrasing of the response options is nearly identical across each instrument. With the exception of the added determiner "a" in the fourth option of the 2000 questionnaire – "Yes, a U.S. citizen by naturalization" – each option is the same.

Year of entry

Like the Place-of-birth question, the Year-of-entry question changed slighted between 1990 and 2000. As shown in Figure 3, the verb "live" was substituted for the verb "stay" in the wording of the question, the result of research suggesting that the term "stay" caused confusion among some foreign-born residents. The ACS 2000 matches the Census 2000 question verbatim.



Response options vary tremendously for the Year-of-entry question. The 1990 Census used a multiple-choice format that offered 10 pre-determined entry periods of various durations from which to choose. Census 2000 and ACS 2000, however, provided a write-in field limited to four spaces to represent the actual year of arrival.

Conclusion

There is very little variation in both questions and responses for foreign-born related items when comparing ACS 2000 to Census 2000, save for sequence in the overall questionnaire and one response format. However, some substantial differences appear when comparing the same items for ACS 2000 and Census 1990. Most notably, the Year-of-entry item is asked and coded differently across these two instruments.

Appendix B. Tables

Table 1. International Migration Items Covered by Surveys at the U.S. Census Bureau

International Migration Items	Census & ACS	CPS	SIPP	NHIS	NYCHVS	AHS
Nativity	X	X	X	X	X	X
Parental Nativity		X		X	X	
Citizenship Status	X	Х	Х	Х		X
Legal Status			X		X	
Class of Admission			X			
Year of Entry	Х	X	Х	X	Х	Х
Length of U.S. Residence				X		
Migration History	Х	X	Х	Х	Х	Х
Internal U.S. Migration	X	X	Χ	Х	X	X
Reason for Move		Х				Х
Foreign Language Instrument Available	Х	Х	Х	Х		

x =Item is included in the instrument.

^{--- =} Item is not included in the instrument.

^{*} Table notes are shown on the next page.

Table 1 Notes:

Decennial census

• "Parental Nativity" (Parents' Place of Birth) was no longer asked in the census after 1970.

ACS (American Community Survey)

- The ACS paper version of the questionnaire is currently only available in English.
- CATI and CAPI instruments are available both in English and Spanish.

CPS (Current Population Survey)

- "Reason for Move" and "Residence One Year Ago" are not included in the Basic CPS Questionnaire, but as part of the March Supplement.
- "Residence Five Years Ago" has been included as part of the March Supplement for intercensal years 1985 and 1995.
- Only the main reason for move is recorded.

SIPP (Survey of Income & Program Participation)

- "Legal Status," "Class of Admission," and "Year of Entry" are included as part of the 1996 Panel (Wave 2), and refer to immigration status, adjustment of status, time of adjustment of status, and year of move to the U.S.
- New citizenship and nativity questions have been proposed for inclusion in the core questionnaire starting 2001, including: "Citizenship Status of Parents at Time of Respondent's Birth," "Place of Birth Inside/Outside the U.S.," and "Means of Obtaining Citizenship."
- Comparison of household address IDs from wave to wave enables an approximation of internal migration.

NHIS (National Health Interview Survey)

- "Parental Nativity" was included in the 2000 Cancer Supplement (Hispanic Acculturation section).
- "Length of U.S. Residence" is asked in addition to "Year of Entry."

NYCHVS (New York City Housing Vacancy Survey)

- Both "Year of Move to U.S." and "Year of Move to NYC" are asked.
- The survey includes a "Move to U.S. as Immigrant" question.

AHS (American Housing Survey)

- Nativity, Citizenship Status, and Year of Entry items were added in 2001.
- Previous residence is asked only if respondent moved into current residence within the past two years.
- Respondents moving into sampled housing unit from outside the U.S. are coded as "Different Nation."
- Survey includes both why respondent left previous residence and why current location was selected. Multiple responses are recorded.

Table 2. Questions Asked in the 2000 Decennial Census and in the American Community Survey (ACS) Related to International Migration and the Foreign Born

Items	Survey Questions and Response Options
Place of Birth ^a	Where was this person born?
	- In the United States
	- Outside the United States
Citizenship Status	Is this person a CITIZEN of the United States?
	- Yes, born in the United States
	- Yes, born in Puerto Rico, Guam, the U.S. Virgin Islands, or
	Northern Marianas
	- Yes, born abroad of American parent or parents
	- Yes, a U.S. citizen by naturalization
	- No, not a citizen of the United States
Year of Entry	When did this person come to live in the United States?
	- Year
Ancestry	What is this person's ancestry or ethnic origin?
	(open-ended question)
Residence One	a. Did this person live in this house or apartment 1 year ago (on
Year Ago ^b	April 1, 1999)?
	- Person is under 5 years old
	- Yes, this house
	- No, outside the United States
	- No, different house in the United States
	b. Where did this person live 1 year ago?
	- Name of city, town, or post office (plus follow-up)
Language Spoken	a. Does this person speak a language other than English at
at Home	home?
	- Yes, - No
	b. What is this language?
	(print language)
	c. How well does this person speak English?
	- Very well, - Well, - Not well, Not at all

a Parental nativity (parents place of birth) was asked in the census until 1970, inclusive.

b The 1996 through 1998 ACS asked for "residence five years ago", similar to the 1990 Census. Beginning with the 1999 ACS, "residence one year ago" was obtained.

Table 3. Questions Asked in the Current Population Survey (CPS) Related to International Migration and the Foreign Born

Items	Survey Questions and Response Options
Place of Birth &	a. In what country (were/was) (name/you) born?
Parental Nativity	b. In what country was (your/his/her) mother born?c. In what country was (your/his/her) father born?
	For each nativity item: (Interviewer Instruction: SELECT COUNTRY FROM SCREEN)
Citizenship Status	a. (Are/Is) (name/you) a CITIZEN of the United States?Yes, - No, not a citizen
	b. (Were/Was) (you/name) born a citizen of the United States?
	 Yes, - No Did (you/name) become a citizen of the United
	States through naturalization? - Yes, - No
Year of Entry	When did (you/name) come to live in the United States? (Interviewer Instruction: ENTER YEAR)
Residence One Year	(Were/Was) (you/name) living in this house (or
Ago ^a	apartment) one year ago; that is, on March 1, 19xx?
	- Yes, this house (apt)
	- No, different house in U.S.
Descenter Mousi	- No, outside the U.S.
Reason for Move ^a	What was (your/name) main reason for moving? (Interviewer Instruction: SELECT RESPONSE FROM SCREEN)

a Item not included in the Basic Questionnaire of the CPS, but as part of the March Supplement.

"Residence <u>Five Years</u> Ago" was included as part of the March Supplement for intercensal years 1985 and 1995.

Table 4a. Questions Asked in the Survey of Income and Program Participation (SIPP) Migration History Topical Module Related to International Migration and the Foreign Born, 2000 Panel, Wave 2

Items	Survey Questions and Response Options
Previous Residence	 a. When did you move into this house/apartment/mobile home? - Always lived here – or – - Month: - Year: b. What state was your previous residence in? - (99) Not in the U.S. c. What country did you live in before moving here? (Interviewer instruction: SHOW FLASH CARD)
Place of Birth	 a. Where were (you) born? - (99) Not in the U.S. b. What country were you born in? (Interviewer instruction: SHOW FLASH CARD)
Citizenship Status	 a. Are you a U.S. citizen? Yes, - No b. Are you a citizen through naturalization or were you born abroad of American parents? Naturalized citizen Born abroad of American parents
Year of Entry	When did you move to the United States? Year:
Immigration Status at Year of Entry	 When you moved to the United States to live, what was your immigration status? (Interviewer instruction: SHOW FLASH CARD) Immediate relative or family sponsored permanent resident Employment-based permanent resident Other permanent resident Granted refugee status or granted asylum Non-immigrant (e.g., diplomatic, student, business, or tourist visa) Other
Adjustment of	Has your status been changed to permanent resident?
Status Year of Status Change	- Yes, - No What year was your status changed to permanent resident? Year:

Table 4b. Questions in the Survey of Income and Program Participation (SIPP) Related to International Migration and the Foreign Born, 2001 Methods Panel, Wave 1

Items	Survey Questions and Response Options
Place of Birth	a. [Were you [/both]/Was everyone in this household born
	in the United States?
	- Yes, - No, - DK, - Ref
	b. Who was born outside of the United States? Anyone else?
Citizenship Status	a. Are you/ls [NAME] a citizen of the United States?
	- Yes, - No, - DK, - Refused
	b. How did you/[NAME] become a U.S. citizen?
	- Through naturalization (the way immigrants become
	citizens)
	- Born in the U.S. or in a U.S. outlying area
	- Born to U.S. citizen parents
	 Adopted by U.S. citizen parent(s)
	- Other – Specify
	- DK
	- Refused
Citizenship Status of	At the time of your/[NAME]'s birth, was either of your/hisher
Parents at Time of	parents a U.S. citizen?
Respondent's Birth	- Yes, - No, - DK, - Refused

Table 5. Questions Asked in the National Health Interview Survey (NHIS) Related to International Migration and the Foreign Born

Items	Survey Questions and Response Options
Place of Birth	Where [fill F_WASWERE] [fill F_TEMPNAME] born?
-	(Interviewer Instructions: SELECT RESPONSE FROM SCREEN)
Year of Entry	In what year did [fill F_TEMPNAME] come to the United States to
	stay?
	Year:
Length of U.S.	About how long [fill HAVHAS] [fill F_TEMPNAME] been in the
Residence	United States?
	Years:
Citizenship Status	(Interviewer instruction: SHOW FLASH CARD)
	[fill C_AREIS] [fill F_TEMPNAME] a CITIZEN of the United States?
	- Yes, born in the United States
	- Yes, born in Puerto Rico, Guam, American Virgin Islands, or
	other U.S. territory
	 Yes, born abroad to American parent(s)
	- Yes, U.S. citizen by naturalization
	- No, not a citizen of the United States
Parental Nativity ^a	a. In what state or country was your father born?
	b. In what state or country was your mother born?

a Item not included in the Basic Questionnaire of the NHIS, but as part of the 2000 NHIS Cancer Topical Module, Hispanic Acculturation Section.

Table 6. Questions Asked in the 2002 New York City Housing Vacancy Survey (NYCHVS) Related to International Migration and the Foreign Born

Items	Survey Questions and Response Options
Place of Birth	Where was
	a. reference person born?
	b. reference person's father born?
	c. (reference person's) mother born?
	A flashcard is shown including a list of places (e.g., New York City, U.SOutside New York City, Puerto Rico)
"Immigrant	Did(reference person) move to the United States as an
Status"	immigrant?
	- Yes, - No
Year of Entry	<i>In what year did(reference person) move to the United States?</i> 2 0 0
Year of Entry	In what year did(reference person) move to New York City? (most
into New York	recent move if more than one)
City	2 0 0

Table 7. Questions Asked in the 2001 American Housing Survey (AHS) Related to International Migration and the Foreign Born

Items	Survey Questions and Response Options
Place of Birth ^a	a. In what country (were/was) (name/you) born?
	(Interviewer Instruction: SELECT COUNTRY FROM SCREEN)
Citizenship Status ^a	a. (Are/ls) (name/you) a CITIZEN of the United States?
·	- Yes, - No, not a citizen
	b. (Were/Was) (you/name) born a citizen of the United States?
	- Yes, - No
	c. Did (you/name) become a citizen of the United States
	through naturalization?
	- Yes, - No
Year of Entry ^a	When did (you/name) come to live in the United States?
	(Interviewer Instruction: ENTER YEAR)
Reasons for Move	a. What are the reasons you moved from your last residence?
	(Interviewer Instruction: MARK (X) ALL THAT APPLY)
	b. Which reason was the MAIN reason? (For 1 + responses
	given)
Previous Residence	What city, county, and State did you live in just before moving
	here?
	(Interviewer Instruction: ENTER (X) IF OUTSIDE U.S.)

a Place of Birth (Nativity), Citizenship Status, and Year of Entry items were added in 2001.

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