

Naturalization Rate Estimates: Stock vs. Flow

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A commonly asked question about naturalization is whether immigrants from certain countries are more likely to become U.S. citizens than immigrants from other countries. Two primary data sources commonly used to calculate naturalization rates are the U.S. Census Bureau's decennial census and surveys, and the administrative records of the Department of Homeland Security (DHS). Naturalization rates computed from these two data sources, however, may be quite different. This Office of Immigration Statistics *Fact Sheet* explains why this happens and provides illustrative examples.

BACKGROUND

To understand why naturalization rates calculated from DHS and Census data differ, it is first important to understand the difference between a stock and a flow (see Box 1).

Census data provide a cross sectional snapshot of the foreign-born population or "stock" living in the United States at a given point in time by citizenship status and year of entry. These data measure the proportion of the foreign born population at a point in time that is naturalized. However, this does not provide an indication of the frequency with which immigrants are naturalizing. The numerator – namely, the naturalized citizen population – consists of the survivors of same-year entry cohorts of immigrants reduced by mortality and emigration. The denominator – namely, the total foreign-born population – includes many noncitizens, such as temporary workers, foreign students, and undocumented immigrants, who are not eligible to naturalize as of the survey date. Thus, the denominator does not exclusively capture the subset of the foreign-born population that is at risk to naturalize.

Since 1973, DHS has maintained data electronically from the applications of immigrants who are granted LPR status and naturalize. These data essentially capture the "flow" of LPRs and persons naturalizing. By matching LPR and naturalization records for the same individuals, naturalization rates may be calculated for persons who obtained LPR status at the same time (e.g. same-year). The DHS naturalization rates measure the number of immigrants who have naturalized as a proportion of all those who

Box 1.

Definitions of Stock vs. Flow

Stock: The population at a point in time. Example: the number of naturalized citizens residing in the United States on January 1, 2004.

Flow: Additions (or subtractions) to the existing stock during a specified period of time. Example: the number of persons who naturalized during each year 1975 through 2004.

obtained LPR status at the same time and are thus eligible to naturalize. In this respect, rates calculated from DHS data more accurately reflect the propensity of LPRs to naturalize than do the rates obtained from Census data (proportion naturalized). The DHS rates, however, are based on data from 1973 through 2004. Naturalization tends to be concentrated in the first few decades of eligibility although there is no age limit. While DHS rates calculated for LPRs in the 1970s cohorts are relatively complete, the rates for the 1990s cohorts are relatively incomplete and do not provide an accurate representation of lifetime likelihood of naturalization. In addition, DHS naturalization rates are based on all LPRs and do not include adjustments for subsequent emigration or mortality.

METHOD

Naturalization rates calculated from DHS and Census data were compared for two cohorts: 1975 and 1995. The 2004 American Community Survey (ACS) was the source for Census data. For the ACS, the cohorts were approximated by year of entry. This approximation is



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Table 1:

DHS and ACS Naturalization “Rates” of Immigrants Ages 16 and Over from Ten Largest Source Countries

Country of origin	Department of Homeland Security				American Community Survey			
	Year of LPR status				Year of entry			
	1975		1995		1975		1995	
	Total LPR flow	Percent naturalized through 2004	Total LPR flow	Percent naturalized through 2004	Total foreign-born population	Percent citizen in 2004	Total foreign-born population	Percent citizen in 2004
Total ¹	283,010	58	572,672	46	491,053	76	987,311	28
Mexico	41,045	47	71,800	18	127,598	54	314,682	11
Philippines	25,080	71	40,022	51	27,661	86	41,222	45
Vietnam	1,760	78	34,660	68	101,387	92	39,861	56
El Salvador	1,680	70	10,185	27	10,909	68	30,433	12
China	14,375	72	26,496	53	13,714	98	41,708	38
India	13,670	71	30,869	58	17,973	95	43,788	32
Korea	17,085	71	12,200	39	14,027	86	10,948	25
Dominican Republic	9,247	53	22,583	18	4,767	90	24,987	23
Jamaica	6,039	61	12,148	42	9,642	90	18,442	45
Haiti	3,845	64	10,773	37	6,495	84	12,553	40

¹Total includes all sending countries.

Note: Ten largest source countries are ranked based on each country’s contribution to the total foreign-born population residing in the United States according to the 2004 American Community Survey. Source: U.S. Department of Homeland Security and U.S. Census Bureau.

necessary because the ACS does not ask non-citizens about their legal status, which means the date LPR status was granted cannot be determined. For DHS data, the two cohorts were represented by persons who obtained LPR status in either 1975 or 1995 and who may have naturalized through 2004. Both the ACS and DHS data were restricted to persons ages 16 and over because the lower bound for DHS naturalization data is 18 years.

FINDINGS

The results reported in Table 1 demonstrate that estimates of cohort naturalization rates can vary widely depending on the data source used to estimate them. According to the ACS, for example, the “rate” of naturalization for the 1975 year of entry cohort was 76 percent as of 2004. By contrast, the DHS rate of naturalization for the 1975 LPR cohort was only 58 percent through fiscal year 2004. On the other hand, while the ACS reports a naturalization rate of 28 percent through 2004 for the 1995 cohort, the DHS rate for the 1995 LPR cohort is 46 percent. Relying on ACS data to calculate the naturalization rates can give estimates quite wide of the mark compared with estimates obtained from DHS data.

The naturalization rates calculated from the two data sources also differ by country of origin. For the 1975 cohort, the ACS indicates that, of the ten largest sending countries listed in Table 1, the three with the highest naturalization rates as of 2004 were China (98 percent), India (95 percent), and Vietnam (92 percent). The countries with the lowest naturalization rates were Mexico (54 percent), El Salvador (68 percent), and Haiti (84 percent). With the sole exception of Mexico, which retained the lowest naturalization rate across data sources, these rankings change when DHS data are used. For the 1975 LPR cohort, the sending countries with the highest naturalization rates are Vietnam (78 percent), China (72 percent), and the Philippines, India, and Korea (all at 71 percent). Naturalization rates were lowest for LPRs from Mexico (47 percent) and the Dominican Republic (53 percent). This general pattern also

holds for the more recent 1995 cohort. For this cohort, immigrants from Vietnam had the highest rate of naturalization through 2004 according to the ACS and DHS (56 and 68 percent, respectively). A similar result holds for the lowest end of the distribution as well, as the 1995 Mexican cohort again had the lowest rate of naturalization according to both data sources.

The potential for large disparities in naturalization rates is also demonstrated by examining the 1995 Haitian cohort in particular. As noted above, the ACS estimates suggest that Haitians who entered the United States in 1995 were in the upper half of the top ten source countries with respect to naturalization, which would make them among the most likely groups among the top sending countries to have naturalized as of 2004. The DHS estimates, on the other hand, suggest that the 1995 Haitian LPR cohort was in the bottom half of the ten-country naturalization distribution. Accordingly, the results indicate that, relative to the same cohort from the top ten sending countries, this group was actually among the least likely to naturalize through 2004. Again, this result underscores the idea that estimating and comparing naturalization rates based on ACS and DHS data will yield different results.

CONCLUSION

This analysis illustrated the differences that result when calculating and comparing naturalization rates for immigrants from different countries using ACS and DHS data. Because the rate of naturalization is conceptually more similar to a measure of flow than stock, and eligibility to naturalize is restricted to a certain subset of immigrants (LPRs), data sources that capture both these characteristics will produce more accurate naturalization estimates than data sources that do not. Consequently, DHS data, which covers the population at risk to naturalize as well as the naturalization flow over time, are better suited than aggregate cross-sectional data sources, such as the ACS, to gauge immigrants’ propensity to naturalize.