

Changes to the American Community Survey Between 2007 and 2008 and Their Potential Effect on the Estimates of Hispanic Origin Type, Nativity, Race, and Language

Background

Changes or improvements from one year of a survey to the next are common in any ongoing survey operation. Some changes or improvements can result in apparent differences between two years that subject matter experts identify as potentially more influenced by the survey changes rather than by actual change in the item measured. The American Community Survey implemented a variety of changes in the 2008 questionnaire. These changes may have impacted the estimates of several variables, specifically the estimates of Hispanic origin type, nativity, race, and language spoken at home. This document is intended to provide data users with information on the changes observed between the 2007 and 2008 data for these selected variables, and to illustrate the impact on the observed differences between the annual results that may be attributable to the survey changes. As a result, we recommend that data users should treat the measured change between the 2007 and 2008 results with caution.

Selected Observed Differences Between 2007 and 2008

Hispanic Origin Type

One difference observed is between the number of Hispanics who provided a specific response to the question on Hispanic origin (such as Mexican, Guatemalan, or Bolivian) as compared with those who provided a general response (such as Hispanic or Latino). This general-to-specific shift in reporting between the two survey years is illustrated in Table 1 below. This can be considered an improvement in reporting because reporting specific Hispanic origin provides more information than the general response.

Table 1. Specific and General Responses to the Question on Hispanic Origin: 2007 and 2008
(Numbers in thousands)

Type of Hispanic origin response	2007	2008	Change	
			Number	Percent
Total Hispanic or Latino	45,427	46,892	1,464	3.2
Specific origin	42,318	45,064	2,746	6.5
Mexican	29,167	30,739	1,572	5.4
Other specific origin (e.g., Dominican)	13,151	14,326	1,175	8.9
General origin	3,109	1,827	-1,282	-41.2

Source: American Community Survey, 2007 and 2008.

Nativity

Nativity is another variable with notable differences between 2007 and 2008. The native population, particularly the Hispanic native population, shows an increase. This increase in native reporting between the two survey years is illustrated in Table 2 below.

Table 2. Nativity by Hispanic Origin: 2007 and 2008

(Numbers in thousands)

Hispanic or Latino origin and nativity status	2007	2008	Change	
			Number	Percent
Total population	301,621	304,060	2,439	0.8
Native	263,561	266,099	2,538	1.0
Foreign born	38,060	37,960	-99	-0.3
Not Hispanic or Latino	256,194	257,168	974	0.4
Native	236,201	237,018	817	0.4
Foreign born	19,993	20,150	157	0.8
Hispanic or Latino	45,427	46,892	1,464	3.2
Native	27,361	29,081	1,721	6.3
Foreign born	18,067	17,810	-256	-1.4

Source: American Community Survey, 2007 and 2008.

Race

Race is another variable with notable differences between 2007 and 2008. There was an increase in the White alone population and a decrease in the Some Other Race alone population. The increase in White alone and corresponding decrease in the Some Other Race alone population is particularly apparent for the Hispanic, Mexican population. A summary of the differences between the two survey years is illustrated in Table 3 below.

Table 3. Race, Hispanic Origin, and Type of Hispanic: 2007 and 2008

(Numbers in thousands)

Race, Hispanic origin, and type of Hispanic	2007	2008	Change	
			Number	Percent
Total population	301,621	304,060	2,439	0.8
White alone	223,005	228,183	5,178	2.3
Hispanic	24,452	29,239	4,787	19.6
Mexican	15,872	19,628	3,756	23.7
Not Mexican	8,580	9,611	1,031	12.0
Some Other Race alone	18,739	14,993	-3,746	-20.0
Hispanic	18,024	14,291	-3,733	-20.7
Mexican	11,904	9,541	-2,363	-19.9
Not Mexican	6,119	4,750	-1,369	-22.4
All other races	59,877	60,884	1,007	1.7
Hispanic	2,952	3,362	410	13.9

Source: American Community Survey, 2007 and 2008.

Language Spoken at Home

Language spoken at home is another variable with notable differences between 2007 and 2008. In particular, the observed increase in the native Hispanic population speaking only English at home is larger than anticipated. The changes between 2007 and 2008 in language spoken at home for the Hispanic and Non-Hispanic populations by nativity status are provided in Table 4 below.

Table 4. Language Spoken at Home by Hispanic Origin and Nativity: 2007 and 2008
(Population aged 5 and over. Numbers in thousands)

Hispanic origin, nativity, and language spoken at home	2007	2008	Change	
			Number	Percent
Total population aged 5 and over	280,950	283,148	2,198	0.8
Not Hispanic	240,423	241,511	1,088	0.5
Native	220,603	221,524	921	0.4
Language other than English	9,244	9,226	-17	-0.2
Only English	211,359	212,298	939	0.4
Foreign born	19,821	19,987	166	0.8
Language other than English	14,595	14,790	195	1.3
Only English	5,226	5,197	-29	-0.6
Hispanic	40,527	41,637	1,110	2.7
Native	22,587	23,944	1,356	6.0
Language other than English	14,331	14,742	410	2.9
Only English	8,256	9,202	946	11.5
Foreign born	17,940	17,694	-246	-1.4
Language other than English	17,275	17,024	-250	-1.4
Only English	665	669	4	0.6

Source: American Community Survey, 2007 and 2008.

Other Characteristics

The items described above are highlighted here because a variety of factors other than actual change may have contributed to the observed change. In addition, it is important for data users to bear in mind that the survey changes between 2007 and 2008 may have played a role in other social and economic characteristics, particularly those that are strongly influenced by the race, Hispanic origin, nativity, or language distribution of the characteristic.

Selected Survey Changes Between 2007 and 2008

Specific ACS Questionnaire Changes Between 2007 and 2008

For 2007 and 2008, the question on Hispanic origin in the mail questionnaire is presented as a single-banked item consisting of five check boxes and one write-in line. The write-in line is provided to capture other Hispanic origin groups not offered as check-box categories (such as “Dominican,” “Colombian,” “Venezuelan,” etc.). A maximum of two write-in entries are coded. One difference between 2007 and 2008 concerns the questionnaire layout of the demographic questions; the ACS 2007 used a grid format while the ACS 2008 used a sequence format. Higher reporting of Hispanics was observed for the sequence format compared to the grid format

(Chestnut, 2008). For more information, see the report “Effects of Using a Grid versus a Sequential Form on the ACS Basic Demographic Data” at http://www.census.gov/acs/www/Downloads/ACS-MP-09_Grid-Sequential_Test_Final_Report.pdf

In addition to the questionnaire layout change, there were four major changes to the question on Hispanic origin. First, the wording of the question changed. In 2007, the question asked if the person was “Spanish/Hispanic/Latino.” In 2008, the question asked if the person is “of Hispanic, Latino, or Spanish origin.” Second, the question in 2007 provided the instruction, “Mark (X) the “No” box if **not** Spanish/Hispanic/Latino,” which the 2008 question removed. Third, in 2007, no Hispanic origin examples were provided to the “Yes, another Hispanic, Latino, or Spanish origin” category while examples of six Hispanic origin groups (“Argentinean,” “Colombian,” “Dominican,” “Nicaraguan,” “Salvadoran,” “Spaniard,” and so on) were added in 2008. Finally, the fourth change was the addition of a new instruction in 2008 that was not used in 2007. The instruction is stated as follows: “NOTE: Please answer BOTH question 5 about Hispanic origin and question 6 about race. For this survey, Hispanic origins are not races.” These questionnaire changes were implemented in order to make the ACS questions consistent with Census 2010 question wording.

Any one of these questionnaire changes could have influenced reporting patterns. Empirical evidence of question-design effects on the question of Hispanic origin is well documented in several Census Bureau studies (Martin, 2002 and 2004). Results for the Census 2000 Alternative Questionnaire Experiment for example, showed changes in wording and omission of specific Hispanic origin examples contributed to a significant number of people reporting general Hispanic terms such as “Hispanic” and “Latino” instead of reporting a specific Hispanic origin group such as Colombian or Dominican (Martin, 2002).

Population Estimates Program (PEP) Changes

The ACS is weighted to account for the probability of selection and housing unit nonresponse. After the initial weighting, data from the ACS are controlled to independent estimates of the population by sex, age, race, and Hispanic origin and total housing units as of July 1 of the year of the survey. Because the Hispanic population is controlled to one total, if the Hispanic population reporting as native-born in the survey increases, then the Hispanic foreign-born population could decrease. The Population Estimates Program (PEP) at the U.S. Census Bureau produces these independent estimates on an annual basis. The estimates from the ACS for 2007 are based on the “Vintage 2007” PEP estimates, while those from the ACS for 2008 are based on the “Vintage 2008” PEP estimates. Each population estimates series (vintage) is revised annually with each vintage going back to the most recent decennial census. Year-to-year changes occur between any consecutive ACS survey years due to two factors related to the Population Estimates Program: 1) vintage and 2) methodological changes.

There were a few changes in the population estimates methodology for Vintage 2008 that may have had an impact on the observed changes in ACS survey estimates between 2007 and 2008. Two changes that may have an impact are listed below:

1) The methodology regarding net international migration in the population was changed. The effect of this change varied, falling more heavily on geographic and demographic categories most affected by net international migration. The change represented the completion of an adoption, over a two-year period, of the ACS question on residence one year ago as the basis for estimating immigration to the United States.

2) The race and Hispanic origin classification of infants was changed. Vital registration data to determine race of child is no longer used. Instead, the distribution of race and Hispanic origin of infants based on Census 2000 population (April 1, 2000) was adopted. This change had a major effect on the racial and ethnic composition of children under 10 years old born since Census 2000. No effect on either the total population of the nation, states, or counties, or the demographic composition of the large majority born before the census was observed.

Summary

The population estimates methodological changes, population controls, and questionnaire format and wording changes, along with other possible factors resulted in larger than anticipated changes in the native population as well as a larger number of more specific Hispanic origin responses over general Hispanic responses. In addition, the observed change in the racial composition of the U.S. population and the Hispanic origin population may have also been partly influenced by these same factors. Data users should bear in mind that the combined influence of these modifications between the 2007 and 2008 surveys also may have played a role in the observed changes in the estimates for other social and economic characteristics, particularly those that are strongly influenced by the race, Hispanic origin, nativity, or language distribution of the characteristic.

References

Chestnut, J. 2008. Effects of Using a Grid versus a Sequential Form on the ACS Basic Demographic Data. U.S. Census Bureau, Final Report. Washington, DC.

Martin, E. 2002. Questionnaire Effects on Reporting of Race and Hispanic Origin: Results of a Replication of the 1990 Mail Short Form in Census 2000. U.S. Census Bureau: Alternative Questionnaire Experiment, Washington, DC.

Martin, E., et al. 2004. Results of the 2003 National Census Test of Race and Hispanic Origin Questions. U.S. Census Bureau, Final Report. Washington, DC.

Appendix

Table 1. Margin of Errors for Specific and General Responses to the Question on Hispanic Origin: 2007 and 2008¹

(Numbers in thousands)

Type of Hispanic origin response	2007	2008	Change	
			Number	Percent
Total Hispanic or Latino	9	10	13	0.03
Specific origin	40	39	55	0.13
Mexican	81	94	124	0.43
Other specific origin (e.g., Dominican)	70	77	104	0.79
General origin	40	36	54	1.65

¹ This number added to or subtracted from the estimate yields the 90-percent confidence interval. For more information on ACS see <<http://www.census.gov/acs/www/>>

Source: American Community Survey, 2007 and 2008.

Table 2. Margin of Errors for Nativity by Hispanic Origin: 2007 and 2008¹

(Numbers in thousands)

Hispanic or Latino origin and nativity status	2007	2008	Change	
			Number	Percent
Total population	(X)	(X)	(X)	(X)
Native	119	123	171	0.07
Foreign born	119	123	171	0.45
Not Hispanic or Latino	9	10	13	0.01
Native	80	83	115	0.05
Foreign born	80	81	114	0.57
Hispanic or Latino	9	10	13	0.03
Native	80	79	112	0.41
Foreign born	81	80	114	0.63

X Not applicable.

¹ This number added to or subtracted from the estimate yields the 90-percent confidence interval. For more information on ACS see <<http://www.census.gov/acs/www/>>

Source: American Community Survey, 2007 and 2008.

Table 3. Margin of Errors for Race, Hispanic Origin, and Type of Hispanic: 2007 and 2008¹

(Numbers in thousands)

Race, Hispanic origin, and type of Hispanic	2007	2008	Change	
			Number	Percent
Total population	(X)	(X)	(X)	(X)
White alone	105	113	155	0.07
Hispanic	105	112	153	0.62
Mexican	95	109	145	0.90
Not Mexican	80	75	110	1.28
Some Other Race alone	115	111	160	0.84
Hispanic	116	112	161	0.88
Mexican	105	104	148	1.23
Not Mexican	73	58	93	1.50
All other races	46	61	77	0.13
Hispanic	45	57	73	2.46

X Not applicable.

¹ This number added to or subtracted from the estimate yields the 90-percent confidence interval. For more information on ACS see <<http://www.census.gov/acs/www/>>

Source: American Community Survey, 2007 and 2008.

Table 4. Margin of Errors for Language Spoken at Home by Hispanic Origin and Nativity: 2007 and 2008¹

(Population aged 5 and over. Numbers in thousands)

Hispanic origin, nativity, and language spoken at home	2007	2008	Change	
			Number	Percent
Total population aged 5 and over	18	18	25	0.01
Not Hispanic	15	17	23	0.01
Native	79	83	115	0.05
Language other than English	61	66	90	0.97
Only English	88	111	142	0.07
Foreign born	79	80	113	0.57
Language other than English	73	78	106	0.73
Only English	44	42	61	1.16
Hispanic	11	12	17	0.04
Native	81	80	114	0.50
Language other than English	62	74	97	0.68
Only English	72	74	104	1.25
Foreign born	79	80	112	0.62
Language other than English	78	79	111	0.64
Only English	16	17	23	3.52

¹ This number added to or subtracted from the estimate yields the 90-percent confidence interval. For more information on ACS see <<http://www.census.gov/acs/www/>>

Source: American Community Survey, 2007 and 2008.