The American Community Survey: Benefits and Challenges

By: Michele Hayslett, Lynda Kellam

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by Michele Hayslett and Lynda Kellam[1]

Abstract
In the United States' decennial census, all persons living in the US are asked to fill out a short form asking basic questions such as age, race, and number of people living in a housing unit. In addition to the short form, starting in 1960 a sample of housing units were asked to fill out a long form with both the basic demographic questions plus questions about socioeconomic topics, such as education, income, housing characteristics and more. In 2010 the United States will conduct its constitutionally mandated census of the population, but a major change will occur. The long form will no longer be distributed and in its place will be the American Community Survey (ACS). This article discusses the development of the survey and its benefits and challenges. The ACS will provide researchers and policymakers more timely information of the characteristics of areas.

Nevertheless, there are still some questions and concerns about how to use the data and challenges for the implementation of the survey.

Keywords: Population, Demographics, Census, Socioeconomics

Every ten years the United States is required by its Constitution to conduct a census of the population. Article 1, Section 2 of the Constitution of the United States maintains that:

> Representatives and direct taxes shall be apportioned among the several States which may be included within this Union, according to their respective Numbers...The actual Enumeration shall be made within three Years after the first Meeting of the Congress of the United States, and within every subsequent Term of ten Years, in such Manner as they shall by Law direct.[2]

In the United States' decennial census, all persons living in the US are asked to fill out a short form asking basic questions such as age, race, and number of people living in a housing unit. These demographic data are used for the apportionment of Congressional seats. In addition to the short form, starting in 1960 a sample of housing units were asked to fill out a long form with both the basic demographic questions plus questions about socioeconomic topics, such as education, income, housing characteristics and more. Although this sample survey is not constitutionally mandated, it serves an essential function for policy-makers and planners. In 2010 the United States will conduct its constitutionally mandated census of the population, but a major change will occur. The long form will no longer be distributed and in its place will be the American Community Survey (ACS).

This article will discuss the development of the survey and its benefits and challenges. The ACS will provide researchers and policymakers more timely information of the characteristics of areas. Nevertheless, there are still some questions and concerns about how to use the data and challenges for the implementation of the survey

Development and Design of the American Community Survey
Efforts to create the American Community Survey began in 1996 when the survey was launched at four test sites. With the 2000 Census, a test form of the ACS was conducted as the Census 2000 Supplement Survey (C2SS) and was launched in 1,200 counties. The purpose was to test "the feasibility of collecting ACS statistics in a decennial census year." (Herman, 2008) Full nationwide implementation of the ACS began in 2005 except for group quarters data which began in 2006.

The ACS is a self-enumeration survey with questionnaires sent by mail to chosen survey households. Enumerators conduct follow up telephone calls and visits to addresses that have not mailed in their questionnaires. Approximately 250,000 addresses receive a questionnaire each month totaling about 3 million households each year, resulting in a sample size of approximately one in eight households. The costs of conducting a monthly survey prevent an increase in the sample size to match the Census long form sample size. Because of the smaller sample size and because the sample is accumulated progressively over time, the release of the data is tiered based on the size of geographic areas (Mather, Rivers, Jacobsen, 2005). Hence estimates for geographies

with larger populations (more than 65,000 people) can be calculated on the sample accumulated within just one year, but estimates for geographies with smaller populations must wait to be calculated until three years or five years of data have been collected.

ACS data prior to 2005 are available for geographies with 250,000 people or more and are considered test data. In 2006, the Census Bureau published ACS data collected in 2005 for geographies with at least 65,000 people and data for these large geographies with over 65,000 people will be available on an annual basis. For a geographic area with between 20,000 and 65,000 people, three year estimates first became available in December 2008 using data collected from 2005 to 2007. In 2009, the three year estimates for 2007 through 2009 were released. For a geographic area with fewer than 20,000 people, a five year estimate will be required. The first five year estimates for the period 2005-2009 will begin to be released in late 2010

Data Product	Population Threshold	Year of Data Release					
		2006	2007	2008	2009	2010	2011
		Year(s) of Data Collection					
1-year Estimates	65,000 +	2005	2006	2007	2008	2009	2010
3-year Estimates	20,000 +			2005-2007	2006-2008	2007-2009	2008-2010
5-year Estimates	All Areas					2005-2009	2006-2010

Figure 1: ACS Release Dates

(See Figure 1).

As with the long-form sample in the decennial census, the ACS is sample survey data and will have margins of error and confidence intervals. The Census Bureau maintains that the estimates are within the range of a 90% confidence interval. For example, in the 2005-2007 three-year estimate the population of Greensboro, NC is 237,423 with the margin of error of +/-2,958. This statement tells us that the Census Bureau is 90% certain that the population of Greensboro is between 234,465 and 240,381.

Another defining characteristic of the ACS is the collection of data over a period of time. This is in direct contrast to the data collection for the decennial census. Whereas the decennial census has a reference point of April 1 for determining residency, the ACS's reference period for residency varies depending on the month in which the specific household receives the questionnaire. This has numerous effects on understanding data related to specific reference periods especially employment, income, and school enrollment. Although the ACS replaces the long form in the conduct of the Census, these differences related to reference periods affect the comparability of ACS data to decennial long-form data.

Benefits

The Census Bureau developed the ACS in response to users' demands for more timely data. Although the Supreme Court determined that only 100% data can be used for apportionment of Congressional seats, planners and policy makers needed more frequent data releases to make better decisions and determine whether programs were successful and working as intended. Thus, the immediate benefit of ACS data is that it is collected every year and released the following year. Businesses, government agencies at all levels and the public will no longer have to wait ten years to find out how the country and local communities have grown and whether planning and public policy is meeting people's needs. No longer will they have to wait two to three years after the decennial census is taken for data on income, education and housing characteristics to be released. Moreover, because the survey is run every year, the data provide a way to track rapidly changing community trends and the opportunity to change data collection to respond to current events, including natural disasters like hurricanes and forest fires, and economic crises.

The Census Bureau believes that, despite having a smaller sample size, the ACS will actually provide more accurate data than the decennial long form for two reasons. First, because the ACS is being run constantly, a professional staff has been hired on a permanent basis to work in local areas. Instead of having to hire a huge number of temporary, non-professional staff who have to be trained in a very short period of time, this permanent staff will gain deeper experience and local knowledge over time that will improve data collection. For instance, issues such as reaching non-English speaking groups will become easier to address since these long-term staff will either be members of those communities themselves or able to develop relationships with leaders in those communities. This is also the reason the Census Bureau cites for the ACS saving money over the decennial long form, that it is more cost effective to maintain a smaller collection and processing staff throughout the decade than to hire and train a much larger number of workers once a decade[3]. Second, the non-response follow-up procedures for ACS are more extensive than those of the decennial long form, including telephone contacts as well as in-person visits (U.S. Census Bureau 2008b, 82). As an example, "a comparison between ACS and Census 2000 data for the Bronx showed that while the Census 2000 had a higher initial mail response rate than the ACS, it was less effective than the ACS during

follow-up phases, when information is collected from nonrespondents" (U.S. Census Bureau 2008c, 8).

The ACS is also capable of producing some data that the decennial census was not. The decennial long form asked people to answer questions based on their "usual residence" defined as "the place where the person lives and sleeps most of the time" (U.S. Census Bureau 2007, C-1). If someone received a form at an address where they did not live most of the time, the form would indicate they should only fill out a form for their usual address. Consequently the decennial census had no mechanism for counting temporary populations like people who live in Florida in the winter months or people who live in the northern states in the summer. The ACS, however, counts people at their "current residence," defined as "everyone who is currently living or staying at a sample address…except for those staying there for…less than two consecutive months" (U.S. Census Bureau 2009a, 6-1). Moreover, the counting goes on year-round instead of on one day, so the ACS is able to account for temporary residents regardless of season. Areas that have significant seasonal migrant worker populations will also notice higher ACS counts versus the decennial long form figures since the year-round data collection will better account for such groups. Some researchers have stated concern about the comparability of school enrollment data since the ACS will collect data in the summer months when children are not in school (Gage 2006, 247). However, at least as far back as 2005, the questionnaires have been worded to ask whether children have been enrolled "in the last three months." Consequently, the time of year when a respondent receives the survey should not matter for this variable.

Overall, researchers are beginning to appreciate the advantages in the ACS data over the decennial long form data. In a 2006 study, Gage found, after graphing multiple variables for two California counties:

> In most cases, even when statistical tests identified differences [from decennial long form data] as significant, the ACS data generally appeared useful and usable. Simply observing a statistically significant difference provides no guidance as to which data are better….For practical purposes it appears that most of the ACS data could, on an annual basis, be used in place of the census data and should provide a more current measurement, especially as the census count ages and remains static throughout the decade (247).

However, challenges still abound, particularly for new users.

Challenges and How to Meet Them

The degree of difference between the methodology of the ACS and the decennial long form survey results in a number of notable challenges for data users who want to do time series analysis. Essentially, the two surveys are not comparable. The simple cost of running the survey every year results in a significant compromise: the sample size of the ACS is decidedly smaller than that of the decennial long form. Griffin and Waite from the Census Bureau argue that the "estimates of sampling error for the five-year ACS estimates will be about one-third higher than those from decennial census estimates" (2006, 216), but they maintain that "this is acceptable given the reduction of bias due to timeliness and the potential for reductions in nonsampling errors because of factors such as the use of automated instruments and experienced interviewers" (2006, 216).

It must be emphasized that the Census Bureau's goal with the ACS is not to produce a population *count* but rather to produce an estimate of the *characteristics* of the population. That is, this data will be less useful than the Census long form for noting the absolute numbers of the population but very useful for studying *trends over time*. This is an important distinction because, with its smaller

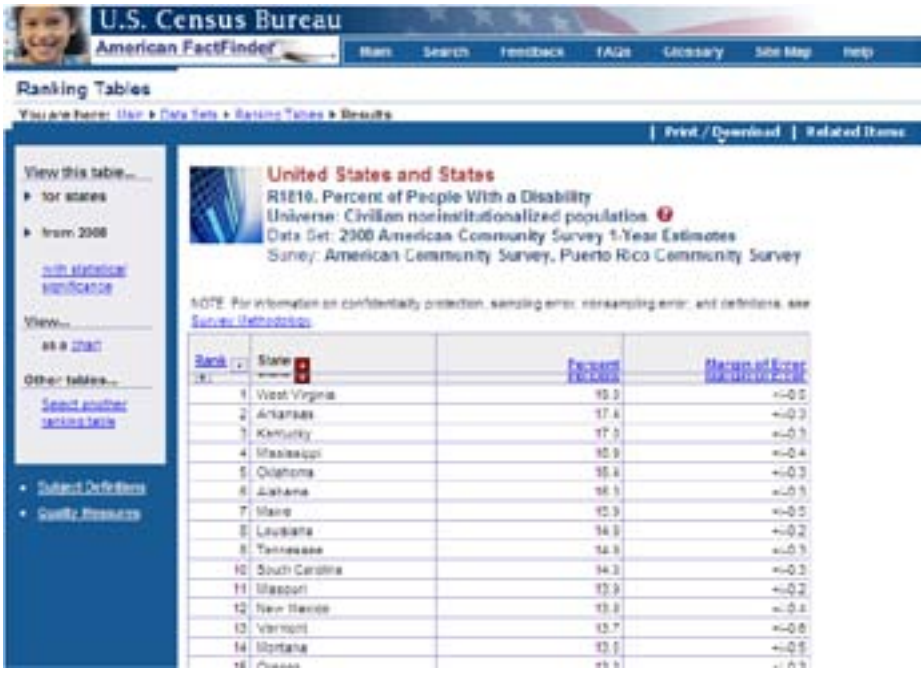

Figure 2: Ranking Table – Percent of People with a Disability (Note option on left to View as a Chart)

sample size, the ACS is not very useful for pin-pointing exact numbers.

The smaller sample size is also the reason the Census Bureau is publishing the confidence intervals (CIs) for each estimate with the ACS, to demonstrate the accuracy of each figure. While the numbers which appeared in the decennial long form were also estimates, the sample size was sufficient that the Bureau didn't feel the need to emphasize the CIs. Unfortunately one of the results of this was users came to see the long form numbers as actual counts rather than the calculated figures they really were. With the ACS, particularly for smaller geographies and smaller groups of population (by race or income, etc.), the CIs can be quite large despite targeted over-sampling to off-set this problem. Hence, it's more important for the Bureau to highlight them and explain what they mean. The state ranking tables offer a visual display of the CIs that is very helpful once one understands how to interpret them (See Figure 2).

FIGURE 3: Ranking Chart – Percent of People with a Disability (Note overlap of CIs)

Figure 2 shows a ranking table for percent of people in each state with a disability. You will see on the left side of the page there is an option to *View as a chart*.

Figure 3 shows the chart. The red dots represent the estimates while the blue lines bracketing each dot represent the CIs. While the estimate will always be shown in these charts as the center of the CI, technically the definition of a confidence interval is that the true value may be anywhere within the CI. So when a user looks at the chart, anywhere the estimates' CIs overlap, technically the actual values for those states might be the same. So the order of those rankings might be considered ties, or even be reversed. This illustrates why the data should be used for tracing trends, not as absolute numbers.

Another effect of the very different methodology is that many ACS variables are not comparable to decennial long-form ones, even when they have the same name. Novice users will almost certainly be tempted to make direct comparisons without realizing they are trying to compare apples and oranges instead of apples to apples. For example, while the decennial census is taken on a single date, the ACS is a rolling survey, with responses collected every month of the year. Consequently rather than try to ask about respondents' income "last year" as the decennial does, respondents will be asked to provide their income during the twelve months prior to the date they receive the survey. This is likely to be a challenge for respondents to even answer. On the decennial census date, April 1st, most U.S. respondents are working on or have finished their Federal income tax returns (due April 15th) and can easily cite their previous calendar year's income. Citing the previous twelve months' income for the ACS, however, will require some figuring, especially if the given twelve-month period encompasses a change in rate of pay, or commission income that varies from month to month. Users of the final estimates are likely to think "last year's income" is essentially the same as the "income of the last twelve months" without realizing the significance of the different reference periods involved. The ACS's reference period is also an example of why this data should be used for trend analysis rather than point-in-time exact figures.

Related to the rolling nature of the survey, another feature of the ACS methodology that will complicate use is that the survey draws on data from multiple years to accumulate a sample size large enough to create estimates for smaller geographies. Geographies with populations between 20,000 and 65,000 will have estimates based on the average of three years of data, while geographies with populations less than 20,000 will

have estimates based on the average of five years of data. Because the distinction is based on population totals, large cities will have single-year estimates while small towns will have three- or five-year estimates—and the three different levels are not comparable to each other. Instead, in addition to the one-year estimates, the Census Bureau is making available averaged-year estimates for larger geographies that should be used for comparisons to smaller geographies.

For example, to compare the state of North Carolina and the city of Charlotte, one can use one-year estimates for both since the population of each exceeds 65,000 people. However if one were researching the city of Kannapolis, its population was 36,699 in the 2000 decennial census. Because this falls between 65,000 and 20,000 people, the ACS will only provide estimates based on the average of three years of data in order to have enough respondents in the sample to create accurate estimates for the size place it is. In this case, to compare Kannapolis with the state, one would need to use North Carolina's three-year averaged data instead of its one-year estimate. Likewise to compare North Carolina and Mount Airy, a town of 8,460 in the decennial census, one would need to use the state's five-year averaged data since Mount Airy will only have ACS estimates based on the average of five years of data.

Data for the smallest geographies, all those with less than 20,000 people (including all Census tracts and block groups), have not yet been released. The American Community Survey began full-scale data production in 2005 (with the exception of Group Quarters data which was added in 2006[4]), so until it has had five full years of data collection, the pool of respondents will not be large enough to create the estimates for the smallest geographies. With an extra year for processing time, the Census Bureau will not release five-year averaged estimates until close to the end of the 2010 calendar year. Consequently for a while yet data users will be frustrated when trying to find data on small places or rural areas. However, this issue will disappear entirely once the first five-year estimates are released since five-year estimates will be available every year thereafter. Knowing which estimate to use for larger geographies and how to explain the use of different figures in context when writing a grant proposal, for instance, will be a particularly difficult issue for novice users.

Another issue related to sample size is the suppression of data. In the decennial census, the Census Bureau employs thresholds below which data for very specific occupations or population groups will not be published in order to protect confidentiality. Because of the Bureau's confidence in the sample size based on five years' worth of data, the ACS does not employ such thresholds. Instead, staff tests for the statistical reliability of the one- and three-year estimates and suppress tables when at least 50 percent of the included estimates (that is, cells within the table) fail the Coefficient of Variation test. The Bureau states that the five-year estimates will not be tested at all since the sample size based on five years of data will ensure viable estimates. An example of this might be detailed race breakdowns in a rural state, especially ones that tend to be more homogenous racially. For example, Montana might

	United States	
	Estimate	Margin of Error
Total	304,059,728	*****
Population of one race	287,045,856	+/-72,290
White alone	226,182,410	+/-113,470
Black or African American alone	37,586,050	+/-49,798
American Indian and Alaska Native alone	2,443,402	+/-30,862
Asian alone	13,413,976	+/-26,284
Native Hawaiian and Other Pacific Islander alone	427,810	+/-11,087
Some other race alone	14,992,188	+/-110,731
Population of two or more races	7,013,872	+/-72,283
Population of two races	6,482,296	+/-65,655
White; Black or African American	1,679,139	+/-30,182
White; American Indian and Alaska Native	1,648,023	+/-23,461
White; Asian	1,224,177	+/-21,196
White; Native Hawaiian and Other Pacific Islander	127,836	+/-8,171
White; Some other race	874,698	+/-27,154
Black or African American; American Indian and Alaska Native	271,163	+/-12,819
Black or African American; Asian	132,883	+/-7,369
Black or African American; Native Hawaiian and Other Pacific Islander	17,866	+/-3,312
Black or African American; Some other race	197,289	+/-11,046
American Indian and Alaska Native; Asian	31,596	+/-4,076
American Indian and Alaska Native; Native Hawaiian and Other Pacific Islander	5,161	+/-1,321
American Indian and Alaska Native; Some other race	47,989	+/-4,803
Asian; Native Hawaiian and Other Pacific Islander	99,853	+/-7,156
Asian; Some other race	117,639	+/-7,825
Native Hawaiian and Other Pacific Islander; Some other race	6,964	+/-1,830
Population of three races	492,269	+/-18,311
White; Black or African American; American Indian and Alaska Native	138,604	+/-12,822
White; Black or African American; Asian	44,641	+/-5,838
White; Black or African American; Native Hawaiian and Other Pacific Islander	8,507	+/-2,127
White; Black or African American; Some other race	37,353	+/-4,522
White; American Indian and Alaska Native; Asian	33,669	+/-3,974
White; American Indian and Alaska Native; Native Hawaiian and Other Pacific Islander	8,371	+/-1,648
White; American Indian and Alaska Native; Some other race	16,810	+/-3,218

FIGURE 4: Base table, B02003. RACE - Universe: TOTAL POPULATION

	United States		California		New York		Wyoming	
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
Total:	304,059,728	*****	36,756,666	*****	19,490,297	*****	532,668	*****
Population of one race:	297,045,856	+/-72,290	35,446,168	+/-26,071	19,101,381	+/-15,386	517,898	+/-2,193
White	228,182,410	+/-113,470	22,961,988	+/-65,263	13,092,844	+/-29,135	489,365	+/-2,050
Black or African American	37,688,650	+/-48,798	2,260,691	+/-14,654	3,101,231	+/-18,665	5,660	+/-1,134
American Indian and Alaska Native	2,443,422	+/-30,062	314,360	+/-14,041	72,575	+/-5,900	10,886	+/-1,500
Asian alone	13,413,976	+/-28,284	4,548,741	+/-13,354	1,361,955	+/-7,963	3,732	+/-1,166
Native Hawaiian and Other Pacific Islander	427,810	+/-11,087	132,160	+/-5,944	5,908	+/-2,271	180	+/-224
Some other race	14,992,188	+/-110,731	5,228,278	+/-64,372	1,466,668	+/-34,658	8,075	+/-1,809
Population of two or more races:	7,013,872	+/-72,283	1,310,498	+/-26,071	388,916	+/-15,386	14,770	+/-2,193
Two races including Some other race	1,244,579	+/-31,673	350,744	+/-15,458	111,756	+/-8,592	2,653	+/-961
Two races excluding Some other race, and three or more races	5,769,293	+/-58,297	959,754	+/-22,082	277,160	+/-12,086	12,117	+/-1,786
Population of two races:	6,483,296	+/-65,655	1,206,497	+/-25,109	360,050	+/-14,060	14,505	+/-2,163
White; Black or African American	1,679,139	+/-30,182	168,985	+/-8,691	103,591	+/-7,725	1,418	+/-796
White; American Indian and Alaska Native	1,648,023	+/-23,481	239,027	+/-10,233	47,243	+/-4,669	8,756	+/-1,180
White; Asian	1,224,177	+/-21,190	319,226	+/-11,071	62,457	+/-5,390	1,324	+/-540
Black or African American; American Indian and Alaska Native	271,183	+/-12,819	34,123	+/-6,156	18,455	+/-3,452	0	+/-261
All other two race combinations	1,659,774	+/-33,941	445,136	+/-16,573	128,394	+/-8,644	3,007	+/-1,101
Population of three races	492,269	+/-18,311	93,389	+/-6,724	27,099	+/-4,952	265	+/-235
Population of four or more races	39,307	+/-5,530	10,612	+/-3,413	1,767	+/-1,198	0	+/-261

Source: U.S. Census Bureau, 2008 American Community Survey

FIGURE 5: Compressed table, C02003. RACE - Universe: TOTAL POPULATION

be more likely to be suppressed for this variable than North Carolina. One way the Census Bureau handles this is by the production of Base versus Compressed tables. Base tables provide all the detail users are used to seeing in the decennial long form data. But for a table that is likely to be suppressed because more than half of its cells fail the statistical test, the Bureau may produce a Compressed, or C, table for the same subject. Figures 4 and 5 demonstrate the difference between the two.

Figure 4 is the Base (or B) table for Race from the 2008 1-Year Estimates. It was necessary to run this report for the country as a whole—even the most populous states were suppressed. This is understandable when one considers how detailed the categories are for "Population of two races," with fifteen different race combinations including, for instance, one for those respondents who indicated they were both American Indian/Alaska Native and Native Hawaiian/Other Pacific Islander. In Figure 5, the C table for the same variable, you can see that the Two or More Race categories have been severely compressed to the four most commonly chosen categories and one titled "All other two race combinations." Here it was possible to generate data for states at both ends of the population spectrum as well as for the nation. Users familiar with the P(opulation) and H(ousing) tables of the decennial data will easily translate to the ACS system of labeling tables B(ase) or C(ompressed) in the title, as noted in these Figures.

Another method the Bureau recommends[5] for ameliorating estimates with very large margins of error (MOEs) is to combine several geographies or several variable categories. The method is straightforward: one simply sums the geographies or categories to create a larger "sample." Of course, it can only be used for straight summed data like population, race, sex, etc.; it cannot be used with calculated values such as medians. Then to calculate the new MOE for this new "estimate," one squares each original MOE

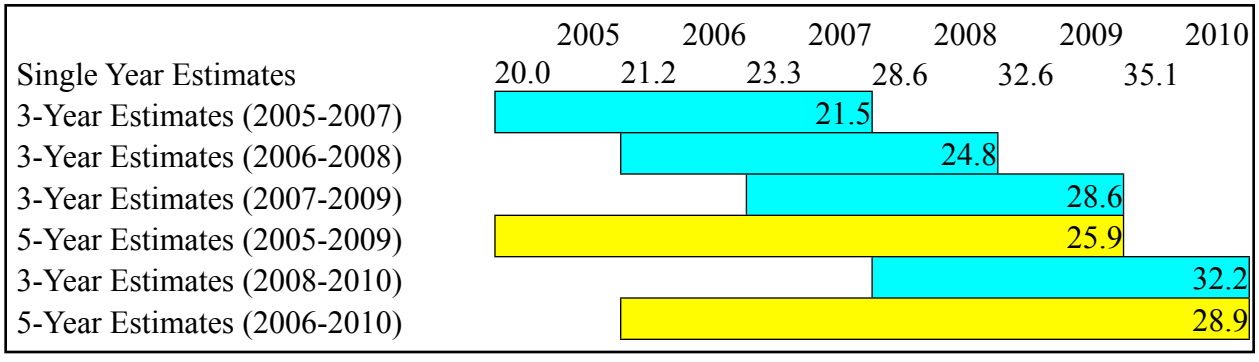

Table 1. Estimates for a Geography with More Than 65,000 People

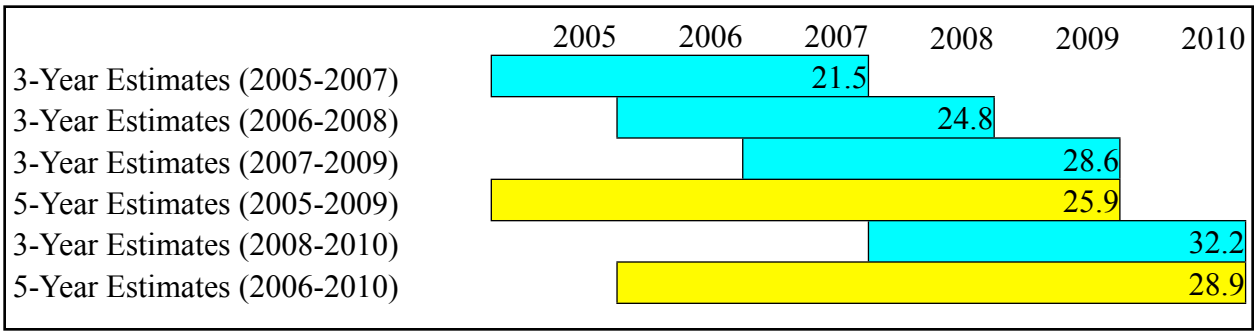

Table 2. Estimates for a Geography with More Than 20,000 and Less Than 65,000 People

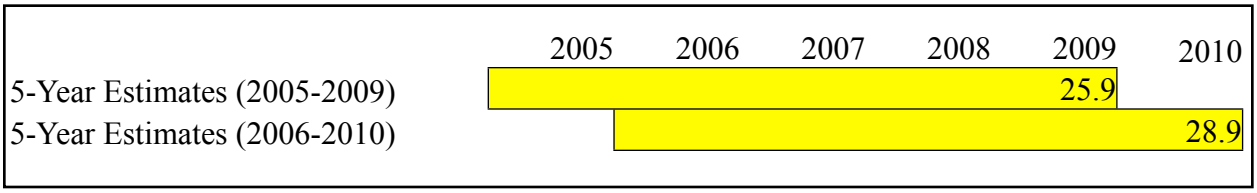

Table 3. Estimates for a Geography with Less Than 20,000 People

and adds them together, then takes the square root of that sum, or √ (MOE2 + MOE2 + MOE2). Of course, this method needs to be used with some care. Reliable data will not result from combining geographically distant geographies. Geographies at the same summary level (e.g., tracts combined with tracts or counties combined with counties) that border one another and have similar characteristics to the one under examination are to be strongly preferred.

To return to the issue of estimates based on the averaged data of several years, we can better understand the effect of averaging several years of data by considering two examples presented by Deborah Griffin and her colleagues at the State Data Center/Business and Industry Data Center Annual National Training Conference in 2004. In the first example, values are steadily increasing over time—the percentage of foreign-born population might be such a variable. Tables 1 through 3 show hypothetical values for such a variable. (For simplicity's sake in this example, the values across the geographies are the same, although this would probably seldom be true in actuality.)

Consider that an average is a measure of the middle. Consequently when one averages data to create an estimate, the estimate will tend more toward the middle of the figures averaged.

Figure 6 shows how the averaged estimates' values will follow the trend of the annual estimates in cases of steady

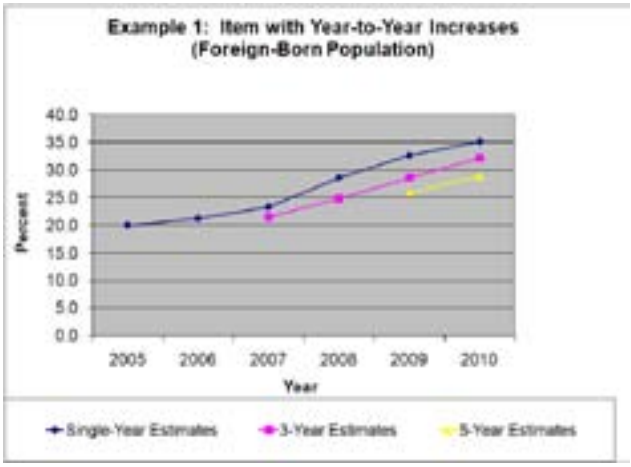

FIGURE 6: Example 1: Item with Year-to-Year Increases (Foreign-Born Population)

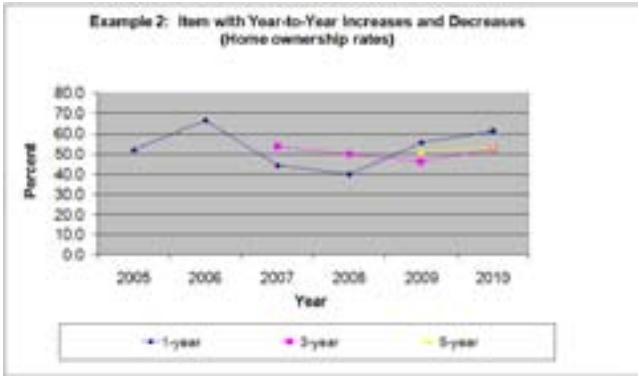

FIGURE 7: Example 2: Item with Year-to-Year Increases and Decreases (Home ownership rates)

increases but will tend to lag slightly behind it. This would also be the case with steady decreases in values. However, what happens when the trend fluctuates? Figure 7 shows such an example, a hypothetical view of home ownership rates.

Here you can see that the averaged estimates tend toward the middle of the varying values, describing a trend that smoothes the highs and lows to a flatter line. This is perhaps the biggest disadvantage of the ACS methodology and it is not so much an issue of accuracy as of precision. Researchers familiar with the decennial long-form data will miss that survey's ability to provide (essentially) one-year estimates for all geographies. Some users of the ACS data have even indicated that one should not use overlapping estimates; in other words if one uses a 2004-2006 three-year estimate, it would be better to wait for the 2007-2009 data with which to compare the same geography. However, the Census Bureau would again assert that the ACS data is best used to understand *trends*, and that the 2005-2007 three-year estimate will provide an update to the 2004-2006 one, even if much of the pool of respondents remains the same.

Geographic boundaries of the most recent year in multi-year averaged estimates apply. To do this, ACS staff re-create the earlier years' estimates with the current year's geographic boundaries in order to include respondents for the new geography for all years of the average. Also, dollar values for earlier years of an average are inflation-adjusted to the most recent year. (Griffin, et al., 2004) In a year that a small-sized geography crosses the threshold to the next size (i.e., from less than 20,000 to between 20,000 and 65,000) it will begin to have three-year averaged estimates produced as well as five-year estimates. Likewise, in a year when a medium-sized geography crosses the threshold to the large size (i.e., from between 20,000 and 65,000 to over 65,000) it will begin to have single-year estimates produced as well as three- and five-year. The reverse is also true. If a geography loses population and drops below the threshold, it will lose the estimates of the larger category—a place dropping below 65,000 would lose the single-year estimates and a place dropping below 20,000 would lose the three-year estimates.

The Future

How specifically the surveys are able to describe a community has always been at the forefront of the challenges the Census Bureau faces. Protecting confidentiality is of paramount importance, punishable by fines and imprisonment. Yet the American public demands the smallest level of geography possible for both political and economic planning reasons. Officials at the Bureau recognize that striving for this level of detail is costly. At a hearing of the Congressional Joint Economic Committee, former Census Bureau Directors Louis Kincannon and Kenneth Prewitt both testified that even for the decennial census, data at the block level is unnecessary for the purposes of redistricting and dropping the smaller geographic levels would significantly cut costs. (2009, timestamp 77:15) With follow-up questioning, Prewitt stated that data at the census tract level would provide sufficient detail (2009, timestamp 98:18).

Conclusions

The best preparation for understanding a community's ACS figures is to know the community very well. Local knowledge will help researchers identify when the ACS data are incorrect or insufficient. Where researchers are not familiar with local communities, they must carefully attend to the MOEs and decide when the data are sufficient to the research purpose at hand and when they are not. For novice users, guidance on using the ACS is critical. Librarians need to be on-hand in academic and public libraries to assist users with both navigating the American FactFinder interface and understanding the ACS data.

The Census Bureau is fully aware of how difficult the ACS is to use, particularly for novices, and it works constantly to make tools available to assist with it, including extensive technical documentation, guidance on making comparisons between different editions of ACS data, and Compass handbooks customized for different audiences. There is also an e-tutorial to assist novice ACS data users. This suite of tools is available on the ACS's How to Use the Data web site at http://www.census.gov/acs. While learning to use the ACS will take some effort, it is imperative to do so. The long form on the decennial census will not return and the ACS will remain the best data available.

References

Gage, L. (2006). Comparison of Census 2000 and American Community Survey 1999-2001 estimates: San Francisco and Tulare Counties, California. *Population Research and Policy Review,* 25(3), 243-256.

Griffin, D., Hubble, D., Love, S., & McGinn, L. (2004). *American Community Survey technical training*. Presented at the State Data Center/Business and Industry Data Center Annual National Training Conference, September 21, 2004.

Griffin, D. and Waite, P. (2006). American Community Survey overview and the role of external evaluations. *Population Research and Policy Review* 25(3), 201-223.

Herman, E. (2008). The American Community Survey: An introduction to the basics. *Government Information Quarterly* 25(3), 504-519.

Mather, M., Rivers, K. & Jacobsen, L. (2005) "The American Community Survey," *Population Bulletin* 60(3), 1

United States Census Bureau. (2006). *American Community Survey 2006 subject definitions*. Washington:

U.S. Census Bureau. http://www.census.gov/acs/www/Downloads/2006/usedata/2006%20ACS%20Subject%20Definitions.pdf

United States Census Bureau. (2007). *2000 Census of population and housing, summary file 3 technical documentation,* Appendix C. Data collection and processing procedures. Washington: U.S. Census Bureau. http://www.census.gov/prod/cen2000/doc/sf3.pdf.

United States Census Bureau. (2008a). *The American Community Survey (ACS) mail questionnaire from 2005 to 2009*. Washington: U.S. Census Bureau. http://www.census.gov/acs/www/Downloads/ACS%20Mail%20Questionnaire%20(2009).pdf.

United States Census Bureau. (2008b). *2007 American Community Survey technical documentation*, Appendix C. Data collection and processing procedures. Washington: U.S. Census Bureau. http://www2.census.gov/acs2007_1yr/summaryfile/ACS_2007_SF_Tech_Doc.pdf.

United States Census Bureau. (2008c). *A compass for understanding and using American Community Survey data: what general data users need to know*. Washington: U.S. Census Bureau. http://www.census.gov/acs/www/Downloads/ACSGeneralHandbook.pdf.

United States Census Bureau. (2009a). Chapter 6: Survey rules, concepts, and definitions. In *ACS design and methodology*. Washington: U.S. Census Bureau. http://www.census.gov/acs/www/SBasics/desgn_meth.htm.

United States Census Bureau. (2009b). *Toolkit for members of the House and Senate, sample news release*. Washington: U.S. Census Bureau. http://2010.census.gov/partners/pdf/CongressNewsRelease.doc.

United States Congress, Joint Economic Committee. (2009). *The Federal statistical system in the 21st century: the role of the Census Bureau*. [video of hearing] Washington: U.S. Congress, Joint Economic Committee. http://jec.senate.gov/index.cfm?FuseAction=Hearings.HearingsCalendar&ContentRecord_id=89ad0feb-5056-8059-7698-744705750411&Region_id=&Issue_id=.

Notes:

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2 National Archives and Records Administration. The Constitution of the United States. The Charters of Freedom: A new world is at hand. <http://www.archives.gov/exhibits/charters/constitution_transcript.html>. Accessed October 19, 2010.

3 Personal communication (by telephone and email) with Bob Coats, North Carolina's Liaison to the Governor for the Census on August 6, 2009. The Bureau has described decennial census-taking as the "largest peace-time mobilization of personnel in U.S. history" (U.S. Census Bureau 2009b, 2).

4 Users should be aware that ACS data prior to 2006 does not include the population in group quarters. From the ACS 2006 Subject Definitions: "This change in universe may affect the distribution of characteristics in areas where a significant proportion of the population lives in group quarters." (1) See United State Census Bureau. 2006. ACS 2006 Subject Definitions. <http://www.census.gov/acs/www/Downloads/data_documentation/SubjectDefinitions/2006_ACSSubjectDefinitions.pdf>. Accessed October 19, 2010.

5 Personal communication with Kelly Karres at the North Carolina State Data Center annual meeting, Raleigh, NC, August 23, 2010.

6 http://www.census.gov/acs/www/guidance_for_data_users/e_tutorial/