

EVALUATING 2000 HISPANIC DATA

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This paper reports the results of research and analysis undertaken by Census Bureau staff. It has undergone a more limited review than official Census Bureau publications. This report is released to inform interested parties of research and to encourage discussion. The views expressed in this paper are those of the author(s) and do not necessarily represent the views of the U.S. Census Bureau. An earlier version of this paper was presented at the 2002 annual meetings of the Population Association of America. The authors gratefully acknowledge the assistance of Kevin Deardorff, Roberto Ramirez, and other Census Bureau personnel and the comments of Jeffrey Passel on earlier versions of the paper.

The U.S. Census Bureau uses several surveys to collect information about individuals living in the United States, including Hispanics.¹ For example, the decennial census and the Current Population Survey (CPS) are commonly used to estimate the size of the Hispanic population in the United States, to document the characteristics of this population, and to analyze the components of change over time in this group. The American Community Survey (ACS) is a new source of data about U.S. Latino populations.

Data collected by the Census Bureau tend to be the key sources used by politicians and researchers when discussing the Hispanic population residing in the United States. The decennial census is among the most commonly used data. For example, Census 2000 data has been used to discuss the rapid growth of the Hispanic population over the past decade. Indeed, Census 2000 indicates that the Latino population had grown by 57.9 percent since 1990, and comprises 12.5 percent of the population of the United States in 2000 (U.S. Census Bureau 2001). Census Bureau working papers have examined the data coverage and quality of data collected about the foreign born (Schmidley and Robinson 1998), migrant populations (Duany n.d., Salo 1996), and Latinos (Fernandez 1995), as well as the U.S. population generally (Ferrari 1998, Hainer *et al.*, 1990, Hogan 1990, Symens Smith 1998).

However, no study has extensively compared decennial census data with other data sources specifically about the Hispanic population in the United States. Yet, assessing the quality of decennial census data about the total Hispanic population and

¹ We employ the Office of Management and Budget's (OMB) definition of Hispanic, "a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture regardless of race" (OMB 1997). The terms Hispanic and Latino are used interchangeably in this paper.

Hispanic groups is valuable, especially because decennial census data is employed to allocate districts, distribute federal funding and to develop the basis for intercensal estimates used to update socioeconomic indicators. Thus, decennial census data is to establish policies that affect the Latino population. In addition, it is one of the most used data sources on Latinos. Consequently, it is essential to identify the extent to which Census 2000 and other Census Bureau data sources that provide similar portraits of the growth and change of Hispanic groups.

This paper compares demographic information for the Latino population and specific Latino groups from Census 2000 with two other Census Bureau data sources: the Census 2000 Supplementary Survey (C2SS), based on the American Community Survey (ACS), and the March 2000 CPS. We approached the analyses with two hypotheses. First, we expect that the Hispanic population estimates from the C2SS and the March 2000 CPS are similar to Census 2000 counts of the household population of Hispanics. This consistency is expected for the size of the total Hispanic population and Hispanic groups, regional distribution and household type of Hispanics. C2SS and March 2000 CPS Hispanic data are expected to be similar to Census 2000 data, accounting for sampling variability, because both surveys should be capturing accurate Hispanic population data. For example, the C2SS was designed to “provide accurate estimates for the housing units and population for the 50 states and the District of Columbia” (*Accuracy of the Data* n.d.) and to “demonstrate the feasibility of collecting long form type information at the same time as, but separate from, the Decennial Census” (U.S. Census Bureau 2001). The focus of the CPS is to collect labor force data; however, it too has been implemented to represent the civilian noninstitutional

population; and, therefore, should provide accurate data about the Hispanic population within those parameters.

However, the C2SS and CPS are based on sample data; consequently, estimates of the Hispanic population are likely to suffer from sampling error. Moreover, the March 2000 CPS data can be calculated using population counts from either the 1990 Census or Census 2000.² Consequently, if there are differences between C2SS and CPS data and Census 2000 data, it is expected that the most inaccurate data would be that data using weights from the 1990 census. Thus, our second hypothesis is that the 1990-based March 2000 CPS data differ most from Census 2000 data, because they use the 1990 census population counts carried forward to March 2000.

Census Bureau Data Sources

The decennial census has collected information about the United States population since 1790 and is required by the Constitution to apportion House of Representative seats so that districts are equitable with regard to population size.³ The decennial census compiles information on racial, ethnic, linguistic and economic characteristics of the population, which can be aggregated to the metropolitan level, county, state, regional and national level. The Census 2000 Supplementary Survey (C2SS) is an operational sample of the ACS, a new data source about the U.S. population excluding group quarters. The purpose of this survey is to provide social, economic, and

² Two weighting strategies for the March 2000 CPS are employed. The first uses the population counts of the 1990 census carried forward (1990-based March 2000 CPS) and the second uses Census 2000 counts of the total Hispanic population (2000-based March 2000 CPS). The latter file was created for internal Census Bureau purposes. See CPS (2000) for a discussion of the CPS methodology and Malone (2002) for a discussion of the 2000-based March 2000 CPS.

³ One data file, PL 94-171, is required no later than April 1, 2001.

housing information every year, which will be useful for identifying annual trends and changes at the community level. The CPS collects labor force information about the civilian non-institutional population in the United States. The March CPS is the annual demographic supplement that collects a variety of demographic information including income from all sources and occupation and industry classification for the longest-held job of the past year.

Data and Methods

The analyses conducted in this study rely on Census 2000 100-percent data, C2SS data, and March 2000 CPS data limited to those who reported that they were Spanish/Hispanic/Latino. Census 2000 data are restricted to household data only in order to be comparable with C2SS and CPS data. Two kinds of analyses are conducted. First, general comparisons between Census 2000, C2SS and CPS identify the level of consistency in the estimated size and characteristics of the Hispanic population. In addition, comparisons of two weighting strategies for the March 2000 CPS data (Census 1990- and Census 2000-based population controls) with Census 2000 are used to identify the influence of weighting strategy on CPS estimates and to verify that the 2000 weights provide CPS estimates that closely match Census 2000 counts.⁴ The size of the total Hispanic population and Hispanic groups and regional distributions of the Hispanic population are compared. The second analyses compares Census 2000, CPS and C2SS data for the different Hispanic groups to assess whether the quality of Hispanic data

⁴ The 2000-based weights for the March 2000 CPS were created for internal research purposes and do not use a full household re-weighting, like that of the 1990-based weights of the CPS. The 2000 based weights employ those related to individuals and families only, while the 1990 based weights utilize individual, family and household weights (See Malone 2002.)

varies by Hispanic groups. Standard errors, 95 percent confidence intervals, and z scores are calculated to identify whether Hispanic data in C2SS and CPS are statistically significantly different from Census 2000.⁵

Results

Table 1 About Here

Table 1 compares the size, regional distributions, and household type and characteristics of the total Hispanic population. The analyses presented in Table 1 document that, contrary to our first hypothesis, there are numerous inconsistencies between the Hispanic data in Census 2000 and C2SS and the 2000-based March 2000 CPS. For example, Census 2000 counted a total Hispanic population of approximately 34.6 million Hispanics compared with 34.5 million in the C2SS and 34.9 million Hispanics in the 2000-based March 2000 CPS. Z scores, not shown, indicate that both the C2SS and the 2000-based CPS data differ significantly from the Census 2000 counts at the .05 level (z scores= 9.75 and -3.52).

Table 1 also shows that the differences between C2SS and CPS data and Census 2000 counts by Hispanic group are even larger. For instance, Census 2000 counted approximately 20.3 million individuals of Mexican descent compared with 21.6 million in C2SS and 23.0 million in the March 2000 CPS using 2000-based weights. Not only are these differences statistically significant at the .05 level, but the difference between Census 2000 and the CPS is substantively large at approximately 2.8 million individuals

⁵ While many of the standard errors for the C2SS data were already calculated and publicly available, others were calculated using the formulas for the standard error of sums. See *Accuracy of the Data* (n.d.) for more information. Standard errors in CPS data were calculated using information from the *Source and Accuracy of the Data...* (n.d.) and discussions with Census Bureau personnel.

or 13.6 percent. The Census 2000 count of the “Other Hispanic” population (9.8 million) is also significantly different than the C2SS estimate of 8.2 million and the March 2000 CPS estimate of 7.3 million. Variation in the “Other Hispanic” population is also the largest, numerically, of all Hispanic group differences between Census 2000 and the other data sources. Moreover, statistically significant differences are also present between Census 2000 counts of the Puerto Rican population and C2SS estimates, and between Census 2000 counts of the Cuban population and the CPS data.

Evaluations of the regional distributions and household types of Latinos also show statistically significant inconsistencies between Census 2000, C2SS and the CPS. For example, C2SS estimates of the Hispanic population living in all four regions are significantly different than Census 2000 numbers, though the numeric variation is not large. In contrast, the 2000-based CPS estimates of the size of the Hispanic population living in each of the four regions are not statistically different from the Census figures.

Analyses of the Hispanic data by household type document statistically significant differences between Census 2000 and the other data sources, as well. For instance, Census 2000 reported approximately 9.2 million Hispanic households compared with approximately 9.3 million in the C2SS data (z score= -2.98) and 9.6 million in the 2000-based CPS data (z score= -3.89). The number of married-couple households, female householders and male householders were also significantly different in the C2SS and 2000 CPS compared with Census 2000. Thus, Table 1 suggests that there are substantial differences in the Hispanic data, in contrast to the hypothesis that the data sets would be very similar.

However, other comparisons in Table 1 suggest that the initial conclusion that significant inconsistencies exist should be tempered by the presence of similar patterns between Census 2000 data and the other data sources. For example, Census 2000 data indicates that 58.6 percent of all Hispanics are of Mexican origin, compared with 62.6 percent in the C2SS and 66.0 percent in the 2000-based CPS data. Though these differences are statistically significant, each dataset demonstrates that individuals of Mexican origin were the largest Hispanic group. Comparisons of the proportions of Latinos living in each region also show overlap. For example, differences between C2SS and Census 2000 numbers of the size of the Latinos population residing in each region, though statistically significant, are not large. For example, Census 2000 data show that 32.8 percent of Latinos lived in the South and 43.5 percent lived in the West, compared to C2SS estimates of 32.8 percent and 43.7 percent, respectively

In sum, a comparison of numeric differences between Census 2000 and the other data sets does not provide support for the hypothesis that the Hispanic data in Census 2000, C2SS, and March 2000 CPS are consistent. Indeed, the analyses suggest that there were substantial variations across the data sources with respect to the size of the Hispanic population, Hispanic groups, regional distributions and types of households. However, a careful examination of the patterns, especially the proportions of Latinos by national origin, region and household type, suggest that there is substantial overlap between data sets. Thus, while it can be concluded that Hispanic data in Census 2000 differ significantly from C2SS and 2000-based CPS data, in many cases the differences do not appear to be overwhelming. Therefore, while there is some variation, the data sets are consistent in important ways, as well.

Table 2 About Here

Table 2 presents the comparison between Census 2000 and the 1990-based March 2000 CPS in order to test the hypothesis that the CPS data employing 1990 population controls will be the most dissimilar from Census 2000. Table 2 supports this hypothesis. For example, Census 2000 counts a total Hispanic population of 34.6 million compared with 32.8 million in the 1990-based CPS, a difference of approximately 1.8 million (z score=-117.93), about six times larger than the difference between Census 2000 and 2000-based CPS. The data also diverged for the Puerto Rican population and the “Other Hispanic” population. The number of Latinos in the Midwest (z score=-3.36) and the Northeast (z score=-2.81) are also significantly different in Census 2000 and the 2000 CPS using 1990-based weights. Household data also show discrepancies, particularly, the number of female householders and male householders (z scores of 2.23 and -3.03, respectively). Moreover, the comparisons presented in Table 1 and Table 2 indicate that the 1990-based CPS data are often more dissimilar from Census 2000 in terms of numeric difference than either the C2SS and/or the 2000-based CPS. Therefore, the analyses of the Hispanic population support the hypothesis that 1990-based March 2000 CPS data diverge the most from Census 2000.

Table 3 About Here

The remaining tables compare data for the four largest groups: Mexicans, Puerto Ricans, Cubans and “Other Hispanics.” Table 3 presents the comparisons of Census 2000 and the other data sources for the Mexican origin population specifically.

As mentioned earlier, Census 2000 counts 20.3 million individuals of Mexican descent in the United States in 2000, significantly smaller numbers than the 21.6 million

individuals reported in the C2SS (z score= -14.84) and the 23.0 estimated by the 2000-based March 2000 CPS (z score= -18.55). The largest gap, between Census 2000 and the 2000-based CPS for the total Mexican population, was more than 2.7 million individuals, a difference of approximately 13.6 percent. Substantial differences also exist for Mexican-origin individuals in particular regions. For example, Census 2000 reported approximately 11.2 million Hispanics in the West compared with approximately 11.9 million in C2SS (z score= -12.27) and nearly 13.0 million estimated by the 2000-based CPS (z score=-18.55). Differences between C2SS and Census 2000 for the Mexican origin population in the Northeast and South are not statistically significant. Discrepancies in the South and West are of most concern because people of Mexican origin historically have been concentrated in both regions.

Examining the data further provides additional insights. For instance, though the percent of Mexican origin individuals in the West varies significantly between the data sets, Census 2000 counted that 55.3 percent of all Mexicans-origin individuals lived in the West in 2000, compared with 55.2 percent in C2SS and 56.3 percent in the 2000-based CPS. This difference, while significant, is not large. Thus, Table 3 indicates mixed support for the first hypothesis: while there are substantial numeric discrepancies between Census 2000 and the C2SS and 2000-based CPS, the proportions of Latinos by region and the distribution by household type were similar.

Table 4 About Here

Table 4 presents the comparisons of Census 2000 data and the March 2000 CPS data using the 1990 Census population controls. The patterns are similar to those in Table 3: statistically significant differences for the total size of the Mexican population

(z score= 9.36) and the number of Mexican-origin individuals living in the South (z score =3.20) and West (z score= 4.51). The size of the Mexican population in the Northeast is also significantly different between the two data sources (z score= -2.06). However, unlike the pattern for the total Hispanic population, the analyses presented in Table 3 and Table 4 do not support the hypothesis that the 1990-based March 2000 CPS data were the most different from Census 2000. In fact, 1990-based 2000 CPS data about the Mexican population is more similar to Census 2000 numbers than the 2000-based CPS estimates. For example, the numeric difference between Census 2000 and the 1990-based CPS is approximately 1.4 million, compared with 2.7 million between the Census 2000 and 2000-based CPS numbers. Discrepancies between Census 2000 and the 2000-based CPS data are also larger for the number of Mexican people living in the West (1.7 million, 15.5 percent) than for the 1990-based CPS data (1.1 million, 9.8 percent). In sum, Table 4 does not support the hypothesis that the 1990-based CPS data were the most divergent from Census 2000 for the Mexican population. Instead, the analyses indicate that the 2000-based March 2000 CPS data have the least similarities with Census 2000 for the Mexican origin population.

Table 5 About Here

Comparisons of the estimates of the size and the regional distribution of the Puerto Rican population for Census 2000, C2SS, and 2000-based March 2000 CPS data are presented in Table 5. The table shows that the datasets vary in the counts and estimates of the number of Puerto Ricans in the United States in 2000, with a significant difference between Census 2000 and the C2SS data of approximately 153,000 individuals, or 4.6 percent (z score= -3.72). Statistically significant differences between

Census 2000 and C2SS for the Puerto Rican population in the Midwest and West are also present (z scores of -2.01 and -3.76, respectively). Differences between Census 2000 data for the Puerto Rican population and March 2000 CPS data using 2000-based weights are not statistically significant.

The differences that exist between Census 2000 and C2SS data are tempered by the contrasts of the regional composition of Puerto Ricans. For example, the number of Puerto Ricans in the region where they are most concentrated, the Northeast, Census 2000 and the other data sources were comparable. Indeed, C2SS reported only about 59,000 more Puerto Ricans in the Northeast than Census 2000, a non-significant difference of 2.9 percent (z score= -1.84). Thus, while Table 5 suggests that there are some discrepancies between Census 2000 and C2SS data for Puerto Ricans, the results support the hypothesis that C2SS and 2000-based CPS are relatively close to the Census 2000 results.

Table 6 About Here

Table 6 presents the comparisons of the Census 2000 and 1990-based March CPS data for the Puerto Rican population. The results provide some, albeit limited, support for our second hypothesis: the size of the Puerto Rican population estimated by the 1990-based CPS data was significantly different from Census 2000 data (z score= -3.82). The difference was also larger than the Census 2000-C2SS comparison, a 10.7 percent difference. However, as was true for the 2000-based CPS data, differences in the regional distribution of Puerto Ricans are not statistically significant.

Table 7 About Here

Table 8 About Here

Table 7 and Table 8 focus on the Cuban population. Table 7 confirms the pattern noted for the Puerto Rican population: the numeric differences across estimates for the Cuban population tend to be much smaller and are less likely to be statistically significant than for the Mexican origin population. In spite of this, the comparisons provide evidence that there were inconsistencies between Census 2000 and the other data sets. For example, the 2000-based March 2000 CPS estimated 158,000 more Cubans in the United States than Census 2000, a difference of 13.0 percent (z score= -2.44). C2SS and Census 2000 do not provide numbers of the total Cuban population that are statistically different (z score= -0.93).

Regional differences are even more limited. For example, the only region with statistically significant differences between Census 2000 and the C2SS is the Midwest, with the C2SS counting approximately 10,000 fewer Cubans than Census 2000 (z score= 2.78). Census 2000-CPS regional comparisons for Cubans are only significantly different in the South: the 2000-based CPS estimated approximately 202,000 more Cubans, 22.4 percent more, than Census 2000. This difference is problematic given that Cubans are the most concentrated in this region in the United States. Census 2000 figures and 1990-based CPS estimates for the Cuban population presented in Table 8 contradict the hypothesis that the 1990-based CPS would be the most divergent from Census 2000 data. There were no statistically significant differences between the two data sources. In fact, the general trends indicated that the 2000-based CPS estimates of the Cuban population were most different from Census 2000 numbers. Thus, Table 7 indicates relatively little variation between C2SS estimates of the Cuban population and

Census 2000 numbers, but identifies that March 2000 CPS estimates indicate a large Cuban population in the United States, especially in the South, than Census 2000 data.

Table 9 About Here

Table 9 presents the comparisons of Census 2000, C2SS, and the 2000-based CPS data for the “Other Hispanic” population, the portion of the Hispanic population that did not identify as Mexican, Puerto Rican, or Cuban origin.⁶ It is especially important to study the consistency across data sources for this population, because Census 2000 found that the group increased by 96.9 percent between 1990 and 2000.

In general, most comparisons of Census 2000 with the other data sources indicated that there was extensive variation. For example, Census 2000 reported that about 9.8 million people indicated that they were not of Mexican, Puerto Rican or Cuban origin. In contrast, the C2SS and the CPS reported much fewer individuals of “Other Hispanic” descent in the United States: approximately 8.2 million (lower by 1.6 million or 16.7 percent, z score= 18.43) and approximately 7.3 million (lower by 2.5 million or 25.3 percent, z score= -22.49). The regional distributions of this group also differed dramatically. For instance, Census 2000 indicated that approximately 3.5 million other Hispanics were living in the West in 2000, compared with 2.7 million estimated by C2SS (z score= 13.28) and 2.2 million estimated by the 2000-based CPS (z score= 10.47). Indeed, Table 9 documents some of the largest numeric differences between Census 2000 numbers and the other sources.

However, other comparisons indicate that the general patterns are more consistent than tests of statistical significance would indicate. For instance, the regional distribution

from all of the data sets indicated that between 29.8 percent (March 2000 CPS) and 35.7 percent (Census 2000) of “Other Hispanics” lived in the West in 2000. Roughly equal proportions of this group lived in the Northeast and South, with no statistically significant variation about their numbers in the Northeast.

Table 10 About Here

The final table compares Census 2000 and 1990-based March CPS data for the “Other Hispanic” population. The results clearly support the hypothesis that the 1990-based CPS is the most divergent from Census 2000 data. For both the size of the population and regional distributions, the numerical discrepancies are the largest for the CPS data with 1990-based weights compared with C2SS or the 2000-based CPS. For instance, the largest difference occurred for the total population size: approximately 6.8 million compared with 9.8 million for the decennial census, a difference of about 3.0 million individuals or 30.2 percent (z score = -22.49). As is the case for the other Hispanic groups, there are both differences and similarities between Census 2000, C2SS, and the 2000-based CPS. However, as is true for the Mexican population, the significant variation between Census 2000 and the other data sources for this group suggests that caution is warranted when studying this population.

Discussion

Three results are most notable. The first concern our first hypothesis: we expected to find that the data from C2SS and 2000-based March 2000 CPS were

⁶ Census 2000 and the C2SS can identify other specific national origin groups, but the CPS does not collect this information. Comparing more detailed “other” Hispanic groups is important, but cannot be discussed here.

comparable with Census 2000 data for the size of the total Hispanic and Hispanic group populations, regional distributions and household types. However, this hypothesis is supported for some groups and almost completely contradicted for others. For instance, comparisons of the data for the total Hispanic population and the Mexican and “Other Hispanic” groups clearly are at odds with the hypothesis: there are numerous statistically significant discrepancies between Census 2000 and the C2SS, the 2000-based March 2000 CPS and the 1990-based CPS data in the size and regional distribution of the data. However, there IS far more consistency between Census 2000 data and the other data sources for the Puerto Rican population. Only C2SS estimates seem to vary consistently with Census 2000 counts, with no statistically significant variation for the 2000-based CPS data and one difference for the 1990-based CPS data. Analyses of the Cuban data also demonstrates mixed results, this time with the 2000-based CPS data showing the least overlap (total size of the population and number in the South) and the 1990-based CPS data showing the most overlap. Potential explanations include differing purposes, population universes, sampling designs, Hispanic origin wording and ordering and language issues. Each of these issues will be explored in a later section.

At the same time, the results also document similar patterns across the data sources with respect to the national origin composition of all Latinos and the most popular regions of residence for the total Hispanic population and the Puerto Rican and Cuban groups. For instance, while the C2SS and CPS data vary from Census 2000 in terms of the numbers of “Other Hispanics” in the United States in 2000, the percent of all Latinos were not of Mexican, Puerto Rican or Cuban origins vary from 20.9 percent in the 1990-based CPS data to 28.3 percent in Census 2000. Thus, in some cases the

analyses provided less clear support for the hypothesis: while there are large numeric differences between Census 2000 and the other data sources, similar patterns in the data also are present.

Second, the results support *and* contradict our second hypothesis that the 1990-based March 2000 CPS data diverge the most from Census 2000 data. More specifically, the 1990-based CPS data clearly vary the most dramatically (both in terms of numeric and percent differences) from Census 2000 for the sizes and regional distributions for the total Hispanic population and “Other Hispanic” population.⁷ For example, the 1990-based CPS data estimates an “Other Hispanic” population of 6.8 million compared to 9.8 million counted in Census 2000. For the Mexican and Cuban populations, however, the 1990-based CPS data are actually more comparable to Census 2000 than the 2000-based CPS data, though the differences are statistically significant for both weighting schemes. Thus, the analyses indicate mixed support for this hypothesis.

A third notable result is the similarity between Census 2000 counts and C2SS estimates of the sizes of the aggregated Latino population and Latino groups. Indeed, the C2SS tends to have the most overlap with Census 2000, often with estimates between Census 2000 and 2000-based CPS figures. For instance, C2SS estimates of the total Mexican population (21.6 million) are the most similar to Census 2000 numbers (20.3 million) than CPS data of either weighting scheme. This finding, while unexpected, is a positive development, given that the purpose of the C2SS was to demonstrate the feasibility of collecting long-form data on an annual basis. Potential explanations of the similarities in the C2SS estimates with Census 2000 include the use of similar address

⁷ The CPS estimate of the Puerto Rican population using 1990-based weights was significantly different from Census 2000. There was no difference between the 2000-based estimates and Census 2000 data.

files, similarity in the modes used to collect data, and identical wording and ordering of the Hispanic origin item. These issues are discussed in more detail below.

Explanation of Differences

Population Universe

The population universes of the data sources may explain some of the numeric variation between the data sets, especially between Census 2000 and the 2000-based March 2000 CPS data. The C2SS data was collected from approximately 700,000 addresses surveyed in 1,203 counties, about 58,000 household units a month (U.S. Census Bureau June 2001).⁸ Group quarters were not included in the C2SS. The March CPS is the annual demographic supplement that collects a variety of demographic information including income from all sources and occupation and industry classification for the longest-held job of the past year. As such, the CPS uses a household sampling design of approximately 50,000 households in 792 sample areas annually (CPS 2000).⁹ The population universe of the CPS is the U.S. civilian population who are not in institutions or living in group quarters.¹⁰ Because both the C2SS and the CPS use probability sampling, they produce estimates that include sampling error, which may help explain the variation between both data sources and decennial census data.

One likely explanation of why C2SS estimates are the most like Census 2000 counts involves the purposes of the C2SS, which in turn are associated with the

⁸ The 2000 ACS sample was increased by 700,000 housing units through a redirection of funding from the decennial census, called the Census 2000 Supplemental Survey.

⁹ The research design of the CPS was changed in 1996 due to funding issues. The new design decreased the housing units to 50,000 from 56,000 and from 792 metropolitan areas to 754 metropolitan areas (CPS 2000).

¹⁰ See Therrien and Ramirez (2001, footnote 2) for a more detailed explanation of the population universe of the March 2000 CPS.

population universes used in each source. For example, Census 2000 was required by the Constitution to apportion House of Representative seats so that districts are equitable with regard to population size, so its operations were the most focused on a complete enumeration of the population of the United States. C2SS was an operational sample of the American Community Survey (ACS), a new data source that may eventually replace the long form of the decennial census in 2010, so it was constructed to resemble the decennial census as much as possible. However, the purpose of the CPS is to collect labor force information from the U.S. population and is not intended to be identical to Census 2000 data.

Research Design

Issues related to research design may also explain the findings. For example, the months of data collection differ. Census 2000 defined the population in the United States on Census Day, April 1, 2000. C2SS data was collected monthly between January and December, as the ACS defines the population as the annual average population for larger areas. The CPS is administered to households for 4 months consecutively, excluded for 8 months, then included for 4 more months before being permanently removed from the sample (CPS 2000). The March 2000 CPS was administered around the 19th of March, but asks about the activity or status of the previous calendar week which includes the 12th day of the month (CPS 2000). The modes of collection for the data sets also differ: Census 2000 and the C2SS were primarily mail-back surveys, though both surveys use phone and personal contact to increase response rates. The 2000 March CPS employed both in-person and telephone interviewing.

Residence rules are different in the data sources. Census 2000 defined the residence of a person as their “usual residence” on Census Day. The ACS limits the residence to those who have lived in a location for more than 2 months (“Differences Between...”). Others suggest that disparities in the rules of residence in the Census and ACS eliminate the mobile elderly population “snowbirds” and those who are temporarily living elsewhere from the Census, which may lead to differences in coverage (Symens Smith 1998). Indeed, one of the advantages noted about the ACS is that the residence rules include students home for the summer or the populations of resort towns (Census 2000, December 2000). The CPS considers a household to include all individuals who occupy a housing unit and have no other usual address (CPS March 2000).

Methods to Reduce Non-response

The data sets differ in the procedures employed to reduce coverage error, which may also explain variation between Census 2000 and the other data sets. Coverage error is typically due to mobility, language barriers, concealment, irregular housing and housing arrangements (Brownrigg and Martin 1989; de la Puente n.d.). All of these issues are relevant to the Hispanic population. Census 2000 has the most extensive plan to deal with this problem. For example, a special address file was employed to identify all of the residences in the United States and outside areas in 2000. The Decennial Master Address File (DMAF) employed in Census 2000 was constructed very carefully and cross-checked and updated on several occasions. In addition, Census 2000 used a new strategy of mail, phone and personal contacts to encourage households to return the census forms

(U. S. Department of Commerce 1997).¹¹ Further, Census 2000 included many opportunities for individuals and households to be counted (e.g., Internet, Be Counted forms, etc). Census 2000 also focused on developing partnerships with community organizations, local governments, other agencies, and private companies (Census 2000 Operational plan December 2000) Census 2000 marked the first time a marketing campaign had been used to promote the decennial census (U.S. Census 2000 Ad Campaign n.d.). A private advertising agency created a marketing campaign that focused on Latinos including informational posters featuring the artwork by a noted Latina artist and radio advertisements in Spanish. Finally, advertising targeted to the Hispanic population emphasized the confidentiality of responses on Census forms, in order to encourage participation (U.S. Census 2000 Ad Campaign n.d.).

C2SS operations also include strategies to reduce non-response. The C2SS used the Master Address File (MAF) from the 1990 Census updated with input from the U.S. Postal Service, and the addresses listed in Census 2000 (Accuracy of the Data (2000)). The American Community Survey - Coverage Program is planned to provide a continuously updated address file that accounts for new housing construction and updates of existing addresses. C2SS was primarily administered as a mail-back survey. Pre-notices and reminder notices were mailed. For those households who did not return the survey within three months, special follow-up techniques were employed. These techniques included a second mailing of the survey and an attempt to administer the survey by phone. One-third of the remaining households who did not respond to the mailed survey or to telephone interview attempts, were visited for personal interviews.

¹¹ It was not possible to mail replacement forms to households (*Meeting 21st Century...* 2001).

The CPS employs several procedures to reduce non-response, such as personal interviews on the 1st month and the 12th month (the 5th month in sample) to motivate respondents to submit to telephone interviewing for the remaining months. Depending on the month of entry into the study, the March questionnaire was administered to some households via in-person interview while others were administered by computer assisted telephone interviews. If the household could not be reached by telephone, field representatives attempt to follow up on the case. In the March CPS, all households with at least one member of Hispanic origin were also included in the CPS sample for the March administration of the survey, which increases the size of the Hispanic sample and improves the reliability of the estimates for the Hispanic population (CPS 2000).

Issues of Latino under-coverage are problematic in all three data sets. For example, Hispanics of all races were estimated to be undercounted by 4.9 percent in the 1990 census (U.S. Department of Commerce 1997), initially estimated as undercounted by 2.9 percent in Census 2000 (Executive Steering Committee for Accuracy and Coverage Evaluation Policy (ESCAP) 2001), but eventually estimated at 1.25 percent (Thompson and colleagues 2001).¹² The Final Response Rate for the U.S. was 67 percent in 2000, up 2 points from the 1990 response rate of 65 percent (Census 2000 Final Response rates n.d.).¹³ Particular states with traditionally high Latino populations, such as

¹² A re-evaluation of the Accuracy and Coverage Evaluation (ACE) described by the second Executive Steering Committee for Accuracy and Coverage Evaluation Policy (ESCAP) report (ESCAP II 2001) demonstrates that the undercount of the population dropped from 1.15 percent estimated by ACE to .12 percent. Additional demographic analyses undertaken by the Census Bureau indicate that the “revised early approximation” is that Hispanics were undercounted by 1.25 percent (Thompson *et al.*, 2001).

¹³ The final response rate include questionnaires mailed back, Be Counted forms, telephone and Internet responses received after April 18, when the Census Bureau determined the non-response universe, those households that would require a visit by a census taker.

California (70 percent) and Illinois (69 percent), exceeded the national response rate (Census 2000 Final Response rates n.d.). C2SS data are likely to be similarly limited due to the undercount of Hispanics; however, no formal evaluations of the undercoverage have been calculated by the Census Bureau.¹⁴ The initial mail response rate for C2SS and Census 2000 comparison counties was 51.9 percent (*Meeting 21st Century...* 2001), though the final response was 97 percent (Gordon 2001). The CPS undercounted the total population by about 7 percent throughout the 1990s (CPS 2000), but had substantially higher undercounts for Latinos. In April 2000, the coverage ratio for the total Hispanic population was estimated to be approximately 90 percent (“Coverage Ratios” n.d.). The non-response rate to the March 2000 CPS was approximately 8 percent (“Nonresponse Rates” n.d.). In sum, Census 2000, C2SS, and the March 2000 CPS employed procedures to decrease the undercount; however, the decennial census has the most funding to achieve this end. Such differences might help account for variation, such as the higher total Hispanic and Mexican populations reported by Census 2000 than in the other data sets.

Differences in Question Wording

The manner in which the Latino population has been identified by the federal government has changed significantly over time.¹⁵ Important changes were made in

¹⁴ Though the undercount of Latinos has not been published, a comparison of C2SS data with 1999 and 2000 ACS data for 36 counties suggested that they were representing the same population (*Meeting the 21st Century...*).

¹⁵ See Rodriguez (2000) and Chapa (2000) for more information about changes in the collection of Hispanic data by the Census Bureau.

Census 2000 in terms of question wording and ordering of the Hispanic and race questions compared with the 1990 census. The Hispanic origin question was placed before the race question, in order to decrease non-response to the Hispanic origin question and reduce the number of Latinos who were choosing the “some other race” response in the race question (Davis *et al.*, 1998).¹⁶ The Hispanic origin question in Census 2000 allowed people to check a box for not Hispanic, Mexican, Puerto Rican, or Cuban. In addition, respondents could choose some other origin. However, unlike the 1990 census, Census 2000 forms did not provide examples for the “Other Hispanic” populations. The C2SS questionnaire used the exact same ordering and wording as Census 2000.¹⁷ In contrast, the March 2000 CPS instrument asked the race question before Hispanic origin. Respondents chose their Hispanic origin from a “flash card,” rather than checking a box for Mexican, Puerto Rican, Cuban or some other origin (and printing their group).

The combination of mode and wording of the Hispanic origin item likely influenced the variation found between Census 2000 and the surveys, especially the 2000-based March 2000 CPS. For example, this could be a potential explanation for the wide variation for the “Other Hispanic” population between the two data sets. For instance, perhaps not including specific examples in the Census 2000 Hispanic origin item may explain why approximately 5.3 million Latinos either checked the “Other Hispanic” box and did not write in a specific group, or wrote in terms such as “Spanish,”

¹⁶ Despite this change, approximately 40 percent of Hispanics still identified as “some other race” (Passel n.d.).

¹⁷ Although C2SS used the same wording in the mail-back questionnaires, the CATI/CAPI had prompts for specific responses.

“Hispanic” and “Latino.”¹⁸ Because the majority of respondents to Census 2000 filled out forms mailed to their homes, they were not prompted to identify a more specific Hispanic origin in the space for the “other” category. In contrast, because the CPS is administered in-person and the Hispanic origin question is accompanied by a flash card, perhaps Hispanic CPS respondents were more likely to choose one of the three largest Hispanic population groups. Perhaps the fact that Census 2000 and the C2SS employed the same wording and order may account for fewer overall discrepancies between these two data sets.

Language Issues

Census 2000, C2SS, and the March 2000 CPS also differed with respect to language, which may explain variation across the data sources. For example, the Census Bureau produced many language guides for completing the short and long-form versions of the Census 2000 questionnaire, including Spanish. The CPS CAPI (computer assisted personal interview) instruments were also available in Spanish. For the remaining months in sample, when respondents are interviewed by computer assisted telephone interviews (CATI), Spanish-speaking respondents are routed to the Tucson, Arizona CATI facility so that interviews can be conducted in Spanish. The CPS makes special attempts to hire Spanish-speaking personnel in that office (CPS March 2000). The C2SS questionnaire was not available in languages other than English; however, assistance by Spanish-speaking employees was provided via a toll-free number.

¹⁸ Martin (2002) reports that it is likely that the dropping of additional examples from the Hispanic origin question resulted in lower reporting of specific national origins in Census 2000.

In sum, all of the issues above point to potential explanations for variation between the data sources, especially between Census 2000 and CPS data. However, given all of these differences, it's actually surprising that the data sources are as similar as they are. More specifically, though many of the estimates provided by C2SS and CPS data are significantly different from Census 2000 data, it seems that the differences in terms of absolute numbers for some of the Hispanic groups, such as Puerto Ricans and Cubans, are not all that large. Of course, in other cases, the variation between the data sources is disturbing, especially with respect to the size and regional distribution of the total Hispanic population, Mexicans and "Other Hispanics." Thus, while the analyses do answer some questions about the quality of Hispanic data, more systematic analyses of data quality is needed-especially with respect to Mexicans and Other Hispanics.

Conclusion

The analyses and discussion point to at least two conclusions that can be drawn from this study of Hispanic data in Census Bureau data sources. First, Hispanic data in C2SS and the March 2000 CPS clearly differ from Census 2000 in important ways. However, our analyses confirm that the data sources do appear to provide roughly similar Hispanic data with respect to the proportion of Latinos and Latino groups by national origin and region. The similarities are notable, especially in light of the numerous differences in the operational procedures, data collection modes, follow up procedures, and instruments highlights. The differences between Census 2000 and the other data sources were not as dramatic as might have been observed. Thus, we conclude that while there is ample evidence indicating substantial variation across the data sets, especially for

the Mexican and “Other Hispanic” population, this conclusion should be tempered by pointing to similarities in the proportions within the data. Nevertheless, the important discrepancies found for two groups with the largest numbers suggest that the datasets should be used with caution. Further, the finding that using 1990-based population controls sometimes provides estimates of the Mexican and Cuban populations that were more in line with Census 2000 than the 2000-based weights suggests that data users may want to be aware of the importance of weights when employing CPS data.

Second, the similarities between Census 2000 numbers and C2SS estimates of the Hispanic population and Hispanic groups is positive, as it suggests that the use of the ACS may be a reasonable substitute for the long form of the decennial census. In any event, the study conducted here points to the need for more systematic, regular, and detailed comparisons between Census Bureau data sources for the Hispanic population and detailed Hispanic groups. In addition, data source comparisons of characteristics such as the nativity, race, English fluency, and education levels would also be useful.

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Table 1. Hispanic Population by Type, Region, and Household Type: 2000

	Census 2000		C2SS					March 2000 CPS 2000-based weights				
	Number	Percent	Number	Percent	Standard Error	Lower Bound	Upper Bound	Number	Percent	Standard Error	Lower Bound	Upper Bound
Total Population	34,593,000	100.0	34,474,000	100.0	12,000	34,451,000	34,498,000	34,883,000	100.0	82,000	34,721,000	35,045,000
Mexican	20,266,000	58.6	21,608,000	62.7	90,000	21,430,000	21,785,000	23,018,000	66.0	148,000	22,727,000	23,309,000
Puerto Rican	3,313,000	9.6	3,466,000	10.1	41,000	3,385,000	3,546,000	3,173,000	9.1	96,000	2,986,000	3,360,000
Cuban	1,214,000	3.5	1,237,000	3.6	24,000	1,189,000	1,284,000	1,372,000	3.9	65,000	1,245,000	1,499,000
Other Hispanic	9,800,000	28.3	8,165,000	23.7	86,000	7,996,000	8,334,000	7,318,000	21.0	135,000	7,054,000	7,582,000
Regional Distribution												
Midwest	3,065,000	8.9	3,009,000	8.7	10,000	2,989,000	3,030,000	2,819,000	8.1	142,000	2,541,000	3,097,000
Northeast	5,113,000	14.8	5,091,000	14.8	4,000	5,084,000	5,098,000	4,968,000	14.2	181,000	4,613,000	5,323,000
South	11,353,000	32.8	11,317,000	32.8	7,000	11,303,000	11,332,000	11,687,000	33.5	242,000	11,288,000	12,161,000
West	15,062,000	43.5	15,057,000	43.7	1,000	15,056,000	15,058,000	15,409,000	44.2	252,000	14,915,000	15,903,000
Total Households	9,222,000	100.0	9,320,000	100.0	32,000	9,256,000	9,384,000	9,619,000	100.0	102,000	9,419,000	9,819,000
Family Households	7,382,000	80.4	7,372,000	79.1	34,000	7,309,000	7,434,000	7,818,000	81.3	98,000	7,626,000	8,010,000
Married-Couple	4,973,000		4,740,000		20,000	4,673,000	4,808,000	5,294,000		87,000	5,123,000	5,465,000
Female Householder	1,646,000		1,783,000		17,000	1,744,000	1,822,000	1,834,000		56,000	1,724,000	1,944,000
Male Householder	763,000		848,000		32,000	815,000	881,000	691,000		35,000	622,000	760,000
Non-family Households	1,840,000	20.0	1,948,000	20.9	24,000	1,902,000	1,995,000	1,801,000	18.7	56,000	1,692,000	1,910,000

Source: Census 2000: U.S. Census Bureau, Census 2000 Summary File 1, limited to household population only. C2SS data: U.S. Census Bureau, Demographic Surveys Division. November 6, 2002. CPS 2000 based weights: U.S. Census Bureau, Current Population Survey, March 2000, Ethnic and Hispanic Statistics Branch, Population Division. Internet Release Date: March 6, 2001. Note: All figures are rounded to the nearest 1,000 to be more comparable; however, percents, standard errors, and confidence intervals were calculated using raw numbers.

Table 2. Hispanic Population by Type, Region, and Household Type: 2000

	Census 2000		March 2000 CPS				
	Number	Percent	1990-based weights				
Number			Percent	Standard Error	Lower Bound	Upper Bound	
Hispanic Population	34,593,000	100.0	32,804,000	100.0	15,000	32,774,000	32,834,000
Mexican	20,266,000	58.6	21,701,000	66.2	153,000	21,400,000	22,002,000
Puerto Rican	3,313,000	9.6	2,959,000	9.0	93,000	2,777,000	3,141,000
Cuban	1,214,000	3.5	1,300,000	4.0	63,000	1,176,000	1,424,000
Other Hispanic	9,800,000	28.3	6,844,000	20.9	131,000	6,586,000	7,102,000
Regional Distribution							
Midwest	3,065,000	8.9	2,605,000	7.9	137,000	2,337,000	2,257,326
Northeast	5,113,000	14.8	4,618,000	14.1	176,000	4,273,000	4,963,000
South	11,353,000	32.8	10,904,000	33.2	238,000	10,437,000	11,371,000
West	15,062,000	43.5	14,677,000	44.7	251,000	14,185,000	15,169,000
Total Hispanic Households	9,222,000	100.0	9,319,000	100.0	102,000	9,120,000	9,518,000
Family Households	7,382,000	80.4	7,561,000	81.1	97,000	7,370,000	7,752,000
Married-Couple	4,973,000		5,133,000		86,000	4,964,000	5,302,000
Female Householder	1,646,000		1,769,000		55,000	1,661,000	1,877,000
Male Householder	763,000		658,000		35,000	590,000	726,000
Non-family Households	1,840,000	20.0	1,758,000	18.9	55,000	1,650,000	1,866,000

Source: Census 2000: U.S. Census Bureau, Census 2000 Summary File 1 limited to household population only. CPS 1990-based weights: U.S. Census Bureau, Current Population Survey, March 2000, Ethnic and Hispanic Statistics Branch, Population Division.

Note: All figures are rounded to the nearest 1,000 to be more comparable; however, percents, standard errors, and confidence intervals were calculated using raw numbers.

Table 3. Mexican Population by Region: 2000

	Census 2000		C2SS					March 2000 CPS 2000-based weights				
	Number	Percent	Number	Percent	Standard Error	Lower Bound	Upper Bound	Number	Percent	Standard Error	Lower Bound	Upper Bound
Mexican Population	20,266,000	100.0	21,608,000	100.0	90,000	21,430,000	21,785,000	23,018,000	100.0	148,000	22,727,000	23,309,000
Regional Distribution												
Midwest	2,167,000	10.7	2,172,000	10.1	26,000	2,122,000	2,223,000	2,108,000	9.2	124,000	1,865,000	2,351,000
Northeast	467,000	2.3	440,000	2.0	21,000	401,000	481,000	406,000	1.8	56,000	296,000	516,000
South	6,471,000	31.7	7,071,000	32.7	40,000	6,993,000	7,149,000	7,556,000	32.8	213,000	7,139,000	7,973,000
West	11,241,000	55.3	11,924,000	55.2	58,000	11,811,000	12,037,000	12,949,000	56.3	247,000	12,465,000	13,433,000

Source: Census 2000: U.S. Census Bureau, Census 2000 Summary File 1, limited to household population only. C2SS data: U.S. Census Bureau, Demographic Surveys Division. November 6, 2002. CPS 2000 based weights: U.S. Census Bureau, Current Population Survey, March 2000, Ethnic and Hispanic Statistics Branch, Population Division. Internet Release Date: March 6, 2001. Note: All figures are rounded to the nearest 1,000 to be more comparable; however, percents, standard errors, and confidence intervals were calculated using raw numbers.

Table 4. Mexican Population by Region: 2000

	Census 2000		March 2000 CPS				
	Number	Percent	1990-based weights				
Number			Percent	Standard Error	Lower Bound	Upper Bound	
Mexican Population	20,266,000	100.0	21,701,000	100.0	153,000	21,400,000	22,002,000
Regional Distribution							
Midwest	2,167,000	10.7	1,942,000	8.9	119,000	1,708,000	2,176,000
Northeast	467,000	2.3	359,000	1.7	53,000	256,200	462,000
South	6,417,000	31.7	7,083,000	32.6	208,000	6,675,000	7,491,000
West	11,214,000	55.3	12,317,000	56.8	245,000	11,837,000	12,797,000

Source: Census 2000: U.S. Census Bureau, Census 2000 Summary File 1. CPS 1990-based weights: U.S. Census Bureau, Current Population Survey, March 2000, Ethnic and Hispanic Statistics Branch, Population Division. Internet Release Date: March 6, 2001.

Note: All figures are rounded to the nearest 1,000 to be more comparable; however, percents, standard errors, and confidence intervals were calculated using raw numbers.

Table 5. Puerto Rican Population by Region: 2000

	Census 2000		C2SS					March 2000 CPS				
	Number	Percent	Number	Percent	Standard Error	Lower Bound	Upper Bound	Number	Percent	Standard Error	Lower Bound	Upper Bound
Puerto Rican Population	3,313,000	100.0	3,466,000	100.0	41,000	3,385,000	3,546,000	3,173,000	100.0	96,000	2,986,000	3,360,000
Regional Distribution												
Midwest	320,000	9.6	352,000	10.2	16,000	320,000	385,000	303,000	9.5	48,000	208,000	398,000
Northeast	2,012,000	60.7	2,071,000	59.8	32,000	2,008,000	2,134,000	2,023,000	63.8	122,000	1,785,000	2,261,000
South	741,000	22.4	750,000	21.7	22,000	707,000	793,000	664,000	20.9	71,000	524,000	804,000
West	241,000	7.3	292,000	8.4	14,000	265,000	318,000	183,000	5.8	38,000	109,000	257,000

Source: Census 2000: U.S. Census Bureau, Census 2000 Summary File 1, limited to household population only. C2SS data: U.S. Census Bureau, Demographic Surveys Division. November 6, 2002. CPS 2000 based weights: U.S. Census Bureau, Current Population Survey, March 2000, Ethnic and Hispanic Statistics Branch, Population Division. Internet Release Date: March 6, 2001. Note: All figures are rounded to the nearest 1,000 to be more comparable; however, percents, standard errors, and confidence intervals were calculated using raw numbers.

Table 6. Puerto Rican Population by Region: 2000

	Census 2000		March 2000 CPS				
	Number	Percent	1990-based weights				
	Number	Percent	Number	Percent	Standard Error	Lower Bound	Upper Bound
Puerto Rican Population	3,313,000	100.0	2,959,000	100.0	93,000	2,777,000	3,141,000
Regional Distribution							
Midwest	320,000	9.6	283,000	9.6	47,000	191,000	375,000
Northeast	2,012,000	60.7	1,892,000	63.9	118,000	1,661,000	2,123,000
South	741,000	22.4	610,000	20.6	68,000	476,000	744,000
West	241,000	7.3	175,000	5.9	37,000	103,000	247,000

Source: Census 2000: U.S. Census Bureau, Census 2000 Summary File 1. CPS 1990-based weights: U.S. Census Bureau, Current Population Survey, March 2000, Ethnic and Hispanic Statistics Branch, Population Division. Internet Release Date: March 6, 2001.

Note: All figures are rounded to the nearest 1,000 to be more comparable; however, percents, standard errors, and confidence intervals were calculated using raw numbers.

Table 7. Cuban Population by Region: 2000

	Census 2000		C2SS					March 2000 CPS				
	Number	Percent	Number	Percent	Standard Error	Lower Bound	Upper Bound	2000-based weights				
	Number	Percent	Number	Percent	Standard Error	Lower Bound	Upper Bound	Number	Percent	Standard Error	Lower Bound	Upper Bound
Cuban Population	1,214,000	100.0	1,237,000	100.0	24,000	1,189,000	1,284,000	1,372,000	100.0	65,000	1,245,000	1,499,000
Regional Distribution												
Midwest	44,000	3.6	33,000	2.7	4,000	26,000	40,000	42,000	3.1	18,000	7,000	77,000
Northeast	164,000	13.5	166,000	13.4	9,000	147,000	184,000	131,000	9.6	32,000	69,000	193,000
South	904,000	74.4	941,000	76.1	21,000	901,000	982,000	1,106,000	80.6	91,000	927,000	1,285,000
West	103,000	8.5	96,000	7.8	8,000	82,000	111,000	93,000	6.8	27,000	40,000	146,000

Source: Census 2000: U.S. Census Bureau, Census 2000 Summary File 1, limited to household population only. C2SS data: U.S. Census Bureau, Demographic Surveys Division. November 6, 2002. CPS 2000 based weights: U.S. Census Bureau, Current Population Survey, March 2000, Ethnic and Hispanic Statistics Branch, Population Division. Internet Release Date: March 6, 2001. Note: All figures are rounded to the nearest 1,000 to be more comparable; however, percents, standard errors, and confidence intervals were calculated using raw numbers.

Table 8. Cuban Population by Region: 2000

	Census 2000		March 2000 CPS				
	Number	Percent	1990-based weights				
	Number	Percent	Number	Percent	Standard Error	Lower Bound	Upper Bound
Cuban Population Size	1,214,000	100.0	1,300,000	100.0	63,000	1,176,000	1,424,000
Regional Distribution							
Midwest	44,000	3.6	40,000	3.1	18,000	5,000	75,000
Northeast	164,000	13.5	127,000	9.8	31,000	65,000	189,000
South	904,000	74.4	1,041,000	80.1	89,000	867,000	1,215,000
West	103,000	8.5	91,000	7.0	27,000	39,000	143,000

Source: Census 2000: U.S. Census Bureau, Census 2000 Summary File 1. CPS 1990-based weights: U.S. Census Bureau, Current Population Survey, March 2000, Ethnic and Hispanic Statistics Branch, Population Division. Internet Release Date: March 6, 2001.

Note: All figures are rounded to the nearest 1,000 to be more comparable; however, percents, standard errors, and confidence intervals were calculated using raw numbers.

Table 9. Other Hispanic Population by Region: 2000

	Census 2000		C2SS					March 2000 CPS				
	Number	Percent	Number	Percent	Standard Error	Lower Bound	Upper Bound	Number	Percent	Standard Error	Lower Bound	Upper Bound
Other Hispanic Population	9,800,000	100.0	8,165,000	100.0	86,000	7,996,000	8,334,000	7,318,000	100.0	135,000	7,054,000	7,582,000
Regional Distribution												
Midwest	534,000	5.5	452,000	5.5	18,000	416,000	487,000	366,000	5.0	53,000	262,000	470,000
Northeast	2,470,000	25.2	2,414,000	29.6	35,000	2,346,000	2,482,000	2,408,000	32.9	132,000	2,150,000	2,666,000
South	3,293,000	33.6	2,554,000	31.3	37,000	2,482,000	2,627,000	2,361,000	32.3	131,000	2,105,000	2,617,000
West	3,503,000	35.7	2,745,000	33.6	57,000	2,633,000	2,857,000	2,184,000	29.8	126,000	1,937,000	2,431,000

Source: Census 2000: U.S. Census Bureau, Census 2000 Summary File 1, limited to household population only. C2SS data: U.S. Census Bureau, Demographic Surveys Division. November 6, 2002. CPS 2000 based weights: U.S. Census Bureau, Current Population Survey, March 2000, Ethnic and Hispanic Statistics Branch, Population Division. Internet Release Date: March 6, 2001. Note: All figures are rounded to the nearest 1,000 to be more comparable; however, percents, standard errors, and confidence intervals were calculated using raw numbers.

Table 10. Other Hispanic Population by Region: 2000

	Census 2000		March 2000 CPS				
	Number	Percent	Number	Percent	Standard Error	Lower Bound	Upper Bound
Other Hispanic Population	9,800,000	100.0	6,844,000	100.0	131,000	6,587,000	7,102,000
Regional Distribution							
Midwest	534,000	5.5	341,000	5.0	51,000	241,000	441,000
Northeast	2,470,000	25.2	2,239,000	32.7	127,000	1,989,000	2,489,000
South	3,293,000	33.6	2,169,000	31.7	126,000	1,923,000	2,415,000
West	3,503,000	35.7	2,093,000	30.6	124,000	1,851,000	2,335,000

Source: Census 2000: U.S. Census Bureau, Census 2000 Summary File 1. CPS 1990-based weights: U.S. Census Bureau, Current Population Survey, March 2000, Ethnic and Hispanic Statistics Branch, Population Division. Internet Release Date: March 6, 2001.

Note: All figures are rounded to the nearest 1,000 to be more comparable; however, percents, standard errors, and confidence intervals were calculated using raw numbers.