

2007 PAA Abstract

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Assessing the Consistency of Age and Sex Distributions in the Census, the Population Estimates Program, and the American Community Survey

Current estimates of the single-year-of-age and sex distribution of the population are provided by the Census Bureau's population estimates program. The estimates start with the age and sex distribution as enumerated in the last census (Census 2000), and carry the population forward by subtracting deaths, making allowance for net international immigration, and accounting for births since the census.

A useful summary measure of age-sex distribution is the sex ratio, which represents the number of males per 100 females. In general, the sex ratios are quite consistent from one census to the next, once allowance is made for the effect of differential mortality and immigration by age and sex.

In this poster session, sex ratios are used to examine the consistency of the single-year-of-age and sex distribution of the population estimates in 2005 with those of the 1990 and 2000 censuses. In addition, the age profile of sex ratios from the 2005 American Community Survey (ACS) is compared to the distribution of the 2005 estimates. The sex ratios are compared for the total population, by Hispanic origin, and for selected race groups. Variations for broad geographic areas (e.g., regions) are also examined.

The sex ratios of the current population estimates and the census are very consistent with one conspicuous exception—the population in the age range from about 18 to 28 (see attached Excel figure for examples). Reasons for this inconsistency are explored graphically, including the effect of differential undercounts by sex in the census and possible mis-estimation of the age distribution of international migrants since 2000.

With the systematic identification of inconsistent sex ratios, steps to resolve these discrepancies will be noted. This includes research on ways to actively integrate the results of the American Community Survey as an estimation and evaluation tool.

Figure 1 – Consistency of Single-Year-of-Age Sex Ratios of 2005 Estimates with 1990-2000 Censuses and 2005 ACS

