U.S. Census Monitoring Board
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Issue Brief

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Who Gets Missed in the Census?

Evaluating the Census Net and Differential Undercounts

By Eugene Ericksen, Temple University*

The goal of the census is to count each and every American once, at the correct residence. Since the time of Thomas Jefferson, the Census Bureau has been painfully aware that not all are counted. In recent censuses, it has also learned that many are counted twice, or at the wrong location.

The net undercount is the difference between the number of people missed and the number of people counted twice, counted in the wrong place or fabricated by an enumerator. Since 1940, the Census Bureau calculated the net undercount by comparing its counted population to a demographic estimate that is based on the Bureau's tabulations of birth, death, and migration statistics. In 1990, more specific information about the undercount came from the Bureau's follow-up survey to the Census.

Between 1940 and 1980 the net undercount declined substantially, from 5.4 to 1.2 percent, but rose in 1990 to 1.8 percent.

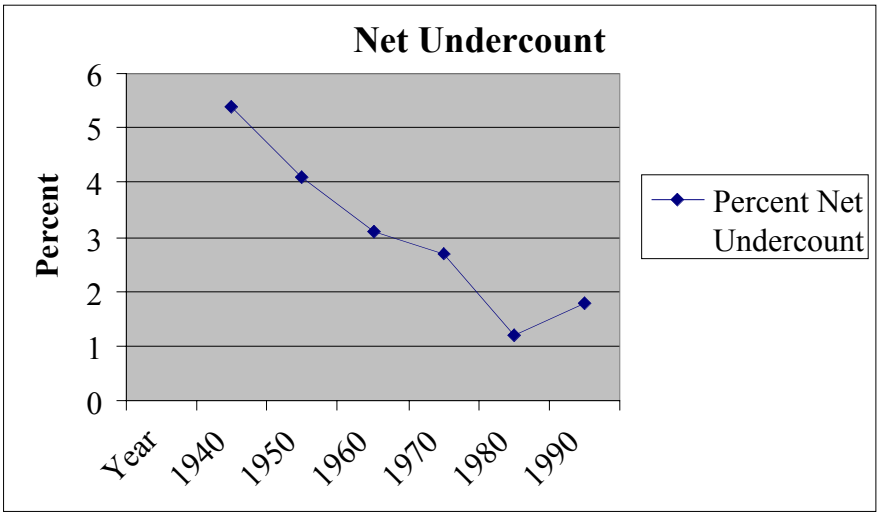

Figure 1.

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Figure 1 documents substantial improvement in the Bureau's ability to count the population over time. However, focusing on the net undercount is a deceptive measure of the census' accuracy and reliability in several ways.

If the number of people missed and the number of people counted twice were equally high, the errors could offset each other and the net undercount would be close to zero. If, for example, 10 percent of Americans were omitted but 9 percent were counted twice, the net undercount would be just 1 percent, even though the rate of overall error would be much higher. However, the rates of undercount differ among geographic areas and between whites and non-whites.

Figure 2 shows, the difference between undercount rates for African-Americans and non African-Americans.[1] While the undercount for both groups declined between 1940 and 1980, and rose slightly in 1990, the rates of undercount for African-Americans remained high. In 1980, when the net undercount was 1.2 percent, the Black undercount was 4.5 percent, and the non-Black undercount was only 0.8 percent. This racial bias in the census undercount is known as the differential undercount.

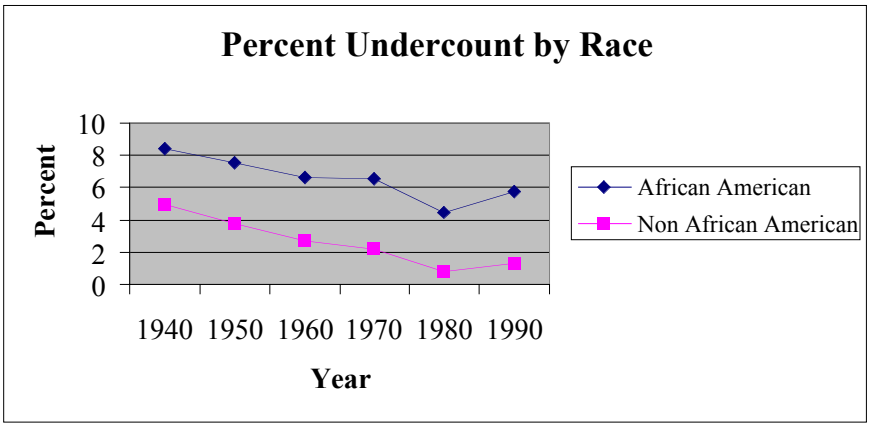

Figure 2.

Figure 3 maps the difference in undercount rates between African Americans and all others from 1940 to 1990. In 1980, the differential undercount was (4.5 - 0.8 =) 3.7 percent, and in 1990 it rose to 4.4 percent.

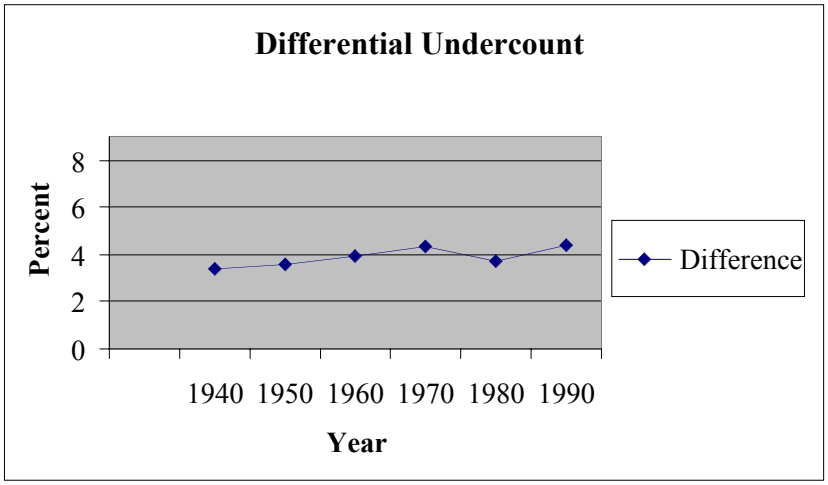

Figure 3.

[1] The Census Bureau's series of undercount estimates from 1940 to 1980 do not show the undercount for other ethnic or racial groups.

Although the overall rates of net undercount have declined consistently, the differential has not. It has varied within a narrow range, from a low of 3.4 percent in 1940 to a high of 4.4 percent in 1990. Based upon simple observation of the trend lines – net undercount decreasing and the differential undercount increasing – we expect that Census 2000 will have a differential undercount of about 4 percent.

As a theoretical matter, an overall net undercount of zero could mask a differential undercount. To see this, let us assume that African Americans were one-eighth of the population and that their net undercount was 3.5 percent.[2] If the net undercount of non-African Americans was -0.5 percent, a small overcount, then the net undercount for the nation would be:

3.5 percent * 1/8 - 0.5 percent * 7/8 = 0.

The differential undercount would be 4 percentage points (3.5 + .5). It would be consistent with the differential undercount obtained by the Census Bureau during the last six decennials.

Because Blacks and non-Blacks are still residentially segregated from each other, it is likely that some areas would have higher undercount rates than others. Reducing the net undercount to a figure near zero does not mean that we have improved the census. Reducing the differential undercount to a suitably lower figure is better evidence of improvement.

Undercount Rates 1940-1990

	1940	1950	1960	1970	1980	1990
Net Undercount	5.4	4.1	3.1	2.7	1.2	1.8
Black Undercount	8.4	7.5	6.6	6.5	4.5	5.7
Non-Black Undercount	5	3.8	2.7	2.2	0.8	1.3
Differential	3.4	3.7	3.9	4.3	3.7	4.4

[2] In 1990, Africans Americans comprised 12.0 percent of the population before adjustment and 12.5 percent after adjustment.