

# Comment

Eugene P. Ericksen

## 1. INTRODUCTION

In 1980, I testified in behalf of New York City and State in their lawsuit against the Census Bureau. In that trial, I presented a theory of the undercount which argued that blacks and Hispanics were harder to count than whites, especially in central cities where census-taking problems accumulate (Ericksen, 1980). The effect of this undercount was made worse by overcounts elsewhere, especially in rural areas where inexact addresses made duplications more likely.

New York won this lawsuit, but the judgment was later reversed for procedural reasons by an appeals court. A new trial was ordered, which took place in early 1984. By this time, the Census Bureau had developed data which permitted the testing of my theory of the undercount. Demographic results were consistent with prior expectations. The black undercount was 4.8%, and the nonblack rate was -1.1%, an overcount (U. S. Bureau of the Census, 1982). Adding reasonable estimates of the numbers of undocumented aliens to the demographically estimated national total increased both rates a point or two, and the differential was narrowed slightly.

The Post Enumeration Program (PEP) was designed to supplement demographic analysis by providing survey-based undercount estimates for blacks, nonblack Hispanics, and others, for the nation, states, large cities, and metropolitan areas. The PEP showed a pattern consistent with demographic results. Blacks and Hispanics were indeed harder to count than whites, especially in those central cities with concentrations of minorities. The same pattern was found for all 12 series of PEP estimates produced by the Census Bureau. This is illustrated here by Series 2/8 (Table 1). There were 11 areas, all central cities, where the percentage of black or Hispanic was over 40%, and for these the black and Hispanic undercount rates were more than double the corresponding rates observed elsewhere.

There was little disagreement at the second trial, and there appears to be little disagreement today, that New York City and similar places were differentially undercounted. The question is whether adjustments to the census counts improve the situation. Jay Kadane and I argue that they can, and we suggest that

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TABLE 1

*Estimated 1980 undercount rates by ethnicity and type of area*

Black or Hispanic in area	Group			
	Blacks	Hispanics	Others	Total
%	%			
40 or more	10.1	8.5	1.0	5.3
10-39.9	4.9	3.8	0.2	1.2
0-9.9	3.4	3.0	-0.1	0.1
Total	6.1	4.7	0.1	1.1

Note: Areas are 16 central cities, 12 remainders of states in which the central cities are located, and 38 other states. There are 11 areas, each a central city, where the percentage of black or Hispanic is 40% or more. The source of the sample estimates is PEP series 2/8 developed by the Census Bureau.

our regression procedure is the best way to do it. Freedman and Navidi have focused their critique on the regression method, but they have not addressed the broader question of whether our adjustments improve the census estimates of population distribution.

To illustrate the point, in Section 6, Freedman and Navidi assert that we underestimated the standard errors of our composite estimates by 40%, and thus exaggerated the improvement over the original PEP local area sample estimates. However, even the standard errors of the sample estimates averaged less than 2%. This contrasts sharply with estimated undercounts of 5 or 6% for many areas. For these, the sample and the composite estimates each improve upon the census, and the adjustments are considerably larger than their standard errors. We can improve upon the census. The remaining question is limited to which of several methods of adjustment is best. We have considered four alternatives.

## 2. FOUR ALTERNATIVE ADJUSTMENT METHODS

The first alternative is to base synthetic adjustments on demographic analysis. If the black undercount rate for the nation is 5% and the nonblack rate is 0%, then a city which is 100% white would get no adjustment, a city which is 20% black would have its population increased by 1%, and a city which is 40% black would increase by 2%. This method has the virtue of relying on demographic analysis which many observers consider to be the most reliable source of information on the undercount. It has drawbacks in that it has no information on Hispanics and does not account for place-to-place variations within the same group. As Table 1 indicates, these matter.

The second alternative is to apply the results of