



UNITED STATES DEPARTMENT OF COMMERCE
Bureau of the Census
Washington, DC 20233-0001

MEMORANDUM FOR Distribution

From: Cynthia Clark
 Associate Director for Methodology and Standards

Subject: Field Infrastructure: Pay Rates

I am pleased to present the executive summary of one of the evaluation studies for the Census 2000 Dress Rehearsal. The dress rehearsal was conducted in three sites — Columbia, South Carolina; Menominee County, Wisconsin; and Sacramento, California. The evaluation studies cover detailed aspects of eight broad areas related to the census dress rehearsal — census questionnaire, address list, coverage measurement, coverage improvement, promotion activities, procedures addressing multiple options for census reporting, field operations, and technology.

The executive summary for each evaluation study is also available on the Census Bureau Internet site (<http://www.census.gov/census2000> and click on the link to “Evaluation”). Copies of the complete report may be obtained by contacting Carnelle Sligh at (301) 457-3525 or by e-mail at carnelle.e.sligh@ccmail.census.gov. Please note that the complete copy of the following reports will not be publically released: reports regarding procedures addressing multiple options for census reporting and the Evaluation of Housing Unit Coverage on the Master Address File.

The evaluations are distributed broadly to promote the open and thorough review of census processes and procedures. The primary purpose of the dress rehearsal is to simulate portions of the environment we anticipate for Census 2000, so we can identify and correct potential problems in the processes. Thus, the purpose of the evaluation studies is to provide analysis to support time critical review and possible refinements of Census 2000 operations and procedures.

The analysis and recommendations in the evaluation study reports are those of staff working on specific evaluations and, thus, do not represent the official position of the Census Bureau. They represent the results of an evaluation of a component of the census plan. They will be used to analyze and improve processes and procedures for Census 2000. The individual evaluation recommendations have not all yet been reviewed for incorporation in the official plan for Census 2000. These evaluation study reports will be used as input to the decision making process to refine the plans for Census 2000.

The Census Bureau will issue a report that synthesizes the recommendations from all the evaluation studies and provides the Census Bureau review of the dress rehearsal operation. This report will also indicate the Census Bureau’s official position on the utilization of these results the Census in 2000 operation. This report will be available July 30th.

Field Infrastructure: Pay Rates

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WESTAT, Inc.

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Executive Summary

The Census Bureau contracted with Westat to answer the following four questions concerning the adequacy of pay for the Census 2000 Dress Rehearsal:

1. Was the Census Bureau able to hire and retain an adequate staff to execute Nonresponse Followup?
2. How was production (cases-completed) and turnover (quits and fires) affected by the new pay rates?
3. What was the effect of hourly pay on recruitment and how did potential recruits view various elements of the pay package?
4. How did supplemental pay affect performance and what was enumerators' perception of supplemental and other types of pay?

The following are key findings from this study:

- C The most basic finding is that the nonresponse followup was completed on time and within budget in both Sacramento and the South Carolina site. In both areas the nonresponse followup was completed in approximately six weeks. Wages were \$10.50 per hour in South Carolina and \$12.50 per hour in Sacramento. If the 1990 Census pay procedures were applied to the Census 2000 dress rehearsal, wages would have been about \$7.00 per hour in the South Carolina site and about \$9.00 per hour in Sacramento (more than \$3.00 lower).
- C The Westat regression model suggests that, other things equal, a one dollar decrease in Census wages would increase quits by 3.7 percentage points. Based upon variation between the Census wage and the prevailing wage rates in the 11 counties comprising the South Carolina site, the model predicts that a one dollar decrease in Census wages would have increased quits by 25 percent, given that a total of 14.7 percent of enumerators actually quit during nonresponse followup. Furthermore, the Westat model suggests that had pay been set at 1990 levels, quits would have been at the level observed during the 1990 Census.
- C Enumerators whose previous earnings were between \$4.51 and \$7.25 per hour were about eight percentage points more likely to quit or be fired than higher wage workers. This finding provides a powerful explanation for why attrition was so high during the 1990 nonresponse followup, and strongly reinforces the view that low Census wages can easily make it impossible to complete the nonresponse followup on time and within budget. Westat estimates that had Census wages been one dollar less, average wages at prior jobs would have been about \$1.50 less, and cases-completed per enumerator would have been reduced by 3.7 cases. Given that 87 cases were completed by each enumerator on average, this is roughly a five percent reduction in production.
- ! Analysis led Westat to the conclusions that: (a) part-time employees and individuals who are out

of the labor force (such as retirees) should be the primary targets for recruiting, and (b) high Census wages are crucial to getting these individuals to become enumerators. Regression analysis shows that enumerators who are unemployed and looking for work complete 15 fewer cases on average than other enumerators, making them much less desirable hires. In contrast, enumerators who are employed part-time or not in the labor force complete 20 more cases on average than other enumerators, making them highly desirable hires. Levels of unemployment were not a factor because: (a) even in high unemployment areas the unemployed comprise a small fraction of the labor pool, (b) unemployed workers are quick to leave census jobs to take other work, and (c) high census wages can attract sufficient numbers of individuals employed part-time or not in the labor force to fill census jobs.

- C To determine how various elements of the pay package affected recruitment, Westat conducted a series of focus groups with residents, enumerators, recruiters, and senior managers. Virtually everyone had very favorable views of (1) high hourly pay, (2) paying transportation costs, and (3) paying for time in training.
- C In contrast, there was equally wide agreement that supplemental pay could not materially affect the number and quality of the recruit pool. Focus group participants felt that hourly pay was the primary indicator of "job quality" for potential recruits because it was easy to compare pay at current jobs or at jobs likely to be found to census hourly pay. Similarly, the average person can easily recognize that paying for training and transportation for a temporary job that could require a great deal of travel further enhances the attractiveness of census work. However, it is very hard for the average person to judge the value of supplemental pay contingent on completing cases because the difficulty of the work is unknown. Moreover, "piece work" offers are often taken as indicators of inferior jobs.
- C Westat conducted a telephone survey following nonresponse followup with roughly half of all enumerators. The survey revealed that about 70 percent of all enumerators were very satisfied with hourly pay, but only 32 percent were very satisfied with supplemental pay tied to cases-completed each week, and less than 20 percent were very satisfied with completion bonuses. The dissatisfaction with supplemental pay stemmed from a system that was so complex enumerators could not figure out their entitlements and the Census Bureau could not make payments promptly. Overall, only 36 percent of the enumerators reported that they could easily compute completion bonus entitlements, while 79 percent could easily meet supervisor's production goals. Moreover, even 10 weeks after the nonresponse followup was completed, roughly half of the enumerators reported that they had not received supplemental pay to which they felt entitled, or had received payments which were entirely unexpected.

It was not possible to statistically relate supplemental pay entitlements to performance because: (a) there was no variation in the way supplemental pay was computed across areas, and (b) it proved difficult to make supplemental payments in a timely fashion. Even had we used information about enumerators' satisfaction with supplemental pay in our regression analysis, we would have obtained the paradoxical result that dissatisfaction with supplemental pay was strongly correlated with high levels of performance, and vice versa. Analysis of the survey results also indicates that 70 percent of all enumerators would recommend raising hourly pay, if only one type of pay was to be increased.

Recommendations for Census 2000

Based on the key findings outlined above, Westat made the following recommendations for Census 2000:

- C The Census 2000 pay rates should be at least 75 percent of the prevailing wage rates.
- C Although the results of the Census 2000 Dress Rehearsal cannot technically be generalized to the U.S. as a whole, the analyses strongly suggest that while the Census Bureau was able to hire and retain an adequate staff to execute the nonresponse followup in South Carolina site and Sacramento, the Census 2000 nonresponse followup could be improved by: (a) selecting enumerators willing to work at least 24 hours a week for about seven weeks, and (b) hiring all enumerators needed prior to the start of the nonresponse followup.
- C The Census Bureau should not implement a supplemental payment program for Census 2000. Strong incentives to work hard and effectively on the nonresponse followup were created by assigning the most work to enumerators who performed well. High standards also were maintained by firing enumerators who did not perform well, and by inducing other low performers to quit.
- C The two key factors crucial in getting individuals to become enumerators in Census 2000 include: (a) primarily recruiting part-time employees and individuals who are out of the labor force, and (b) paying high wages.