

# **The Impact of 2010 Census Operations on Jobs and Economic Growth**

**Prepared by the  
Economics and Statistics Administration  
U.S. Department of Commerce**

**February 2010**



## **Acknowledgements**

I would like to acknowledge the contributions of those who assisted in the preparation of this report.

Chief Economist Mark Doms was centrally involved in producing this report. Mark was ably assisted by Carl Cox, John Tschetter and Jocelyn Burston. Staff from the Census Bureau, primarily Cheryl Landman, Janet Cummings, Sari Anderson, Edward Kobilarcik, James Dinwiddle, Miguel Perez, Sharon Burnette, and Sheryl Williams, were particularly helpful in providing the necessary data and their expertise. Comments on earlier drafts were provided by the Department of Labor, the Council of Economic Advisors, and the Office of the Vice President.

Rebecca M. Blank  
Under Secretary for Economics Affairs  
U.S. Department of Commerce

## Impact of 2010 Census Operations on Jobs and Economic Growth

### Summary

The ramp-up in the 2010 Census operations this spring will markedly affect several economic indicators. Most notably, the hiring of temporary 2010 Census workers will likely increase the Bureau of Labor Statistics' (BLS) nonfarm payroll employment estimate by over half a million in May. The 2010 Census hiring may also affect the path of the unemployment rate by several tenths of a percentage point. Finally, the spending associated with the 2010 Census will peak in the second quarter of 2010 and could boost GDP growth in that quarter by about a quarter of a percentage point at an annual rate. There are several reasons why more precise estimates of the effects of the 2010 Census operations cannot be made at this time. One significant reason is that the magnitude and duration of the operations will depend on several factors, including the mail-back response rate.

- According to Census Bureau operational plans, the number of hires for temporary 2010 Census jobs is estimated to be about 800,000 during April and May of this year. For several technical reasons, including the very short-term tenure of these jobs, the number of 2010 Census hires will not be fully reflected in either the monthly levels or changes in nonfarm employment reported by the BLS. Based on the experience with the 2000 Census, the BLS figures may show the number of temporary Census jobs peaking at a level closer to 635,000 in May.
- 2010 Census hiring may alter the path of the unemployment rate by several tenths of a percentage point, but quantifying this effect will be difficult, even after the data are released. This conclusion is derived from the observation that changes in temporary Census employment during the 1990 and 2000 Censuses showed little correlation with monthly changes in the BLS unemployment rates. However, with the unemployment rate expected to be well above those witnessed during previous Censuses, the effect of large changes in temporary 2010 Census employment on the unemployment rate may be more noticeable in 2010.
- Another way in which the 2010 Census will affect the economy and economic statistics is through high levels of spending. The Census Bureau is currently projecting that spending will spike in May 2010 before falling off sharply. Annualized nominal and real GDP growth could be boosted by 0.1 percentage point in 2010Q1 and by 0.2 percentage point in 2010Q2. The drop in 2010 Census spending would then reduce GDP growth by similar amounts in Q3 and Q4.

### **Hiring Projections for the 2010 Census**

- Much attention is already being paid to the massive hiring that will be required this spring to conduct the 2010 Census. The Census Bureau has estimated that the number of hires at the peak of operations during April and May will be around 800,000. This figure includes about 723,000 enumerators, of which there are about 635,000 enumerators for the non-response follow-up (NRFU) of the Census questionnaire; about 59,000 enumerators for service-based enumeration (SBE) of persons without conventional housing; and about 29,000 for the enumeration of persons in group quarters (GQs).
- According to the Census Bureau, if the response rate for the questionnaire meets Census Bureau expectations, the NRFU enumerators would work, on average, about 19 hours per week for about 6 weeks. Thus, if Census Bureau expectations are met, the average NRFU enumerator hired in late April would be laid off in early June. In areas with higher mail-back rates, the enumerator jobs will end earlier; in areas with lower mail-back rates, the enumerators will work for a longer period.
- The Census Bureau noted that one employee may simultaneously fill more than one position. That is to say, one person may fulfill the duties of both an NRFU and SBE enumerator, even though Census considers them to be two separate positions in their hiring count. When such a scenario occurs, the number of actual hires of enumerators falls short of Census projections for enumerators.

### **Projected 2010 Census Hiring and BLS Estimates of Census Employment**

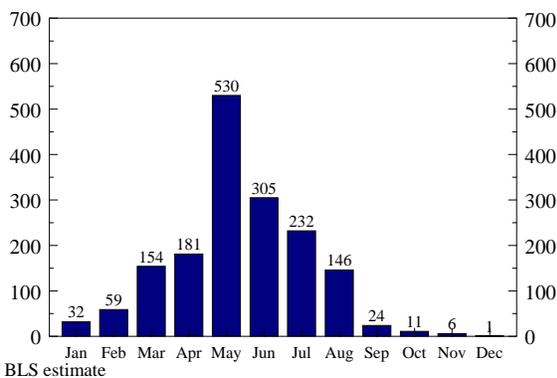
The monthly payroll statistics released by the BLS will be buffeted by Census hiring, first by showing large gains in government employment, followed by large losses. However, the magnitude and timing of these gains and losses as reported by the BLS are difficult to predict for a number of reasons: (1) actual 2010 Census hiring may differ from projections; (2) 2010 Census hiring will not take place all at once; and, (3) the BLS monthly employment is measured at a particular point in time and may not include all temporary 2010 Census workers.

- The numbers cited above for 2010 Census hiring are projections. A higher-than-expected mail-back response rate to the 2010 Census questionnaire would probably not reduce the number of hires, but cause the operation to finish sooner than planned. A lower-than-expected response rate would cause the operation to take longer than expected, not necessarily increase the number of hires.
- It is difficult to predict how many people will be employed for the 2010 Census for any point in time. This is due to the fact that 2010 Census workers will be hired in waves and the timing and duration of these jobs will vary greatly.

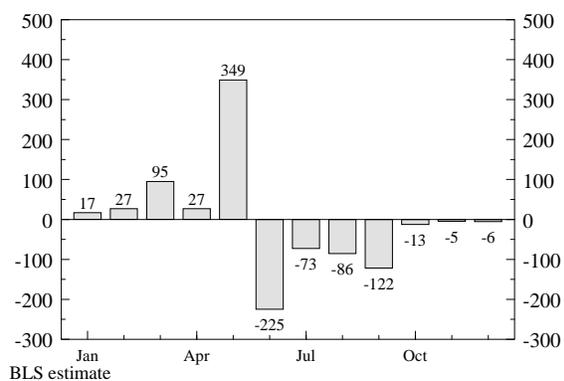
- For each month, the Census Bureau will provide a count of the number of temporary 2010 Census jobs to the BLS for the Current Employment Statistics (CES) survey, commonly referred to as the establishment payroll survey. The CES defines employment as the number of workers who receive pay for the pay period that includes the 12<sup>th</sup> of the month. However, the peak number of temporary 2010 Census jobs may not occur during the weekly pay period containing the 12<sup>th</sup> and would then not be captured in the BLS establishment payroll survey for the following reasons: (1) 2010 Census hiring occurs in waves; (2) the duration of some 2010 Census jobs can be as little as one day; and, (3) the Census Bureau pays its temporary workers weekly.<sup>1</sup>
- Since the basic method for conducting the Census in 2010 will be very similar to that used in 2000, it is likely that the pattern of Decennial Census jobs in the payroll survey will be similar to the pattern of BLS-reported Census hiring in 2000. Figures 1a and 1b show the BLS data on the level of temporary Census employment and changes in temporary Census employment for 2000. According to the CES, peak employment occurred in May 2000 and then fell rapidly.



**Figure 1a. Temporary Jobs During the 2000 Census -- Level**



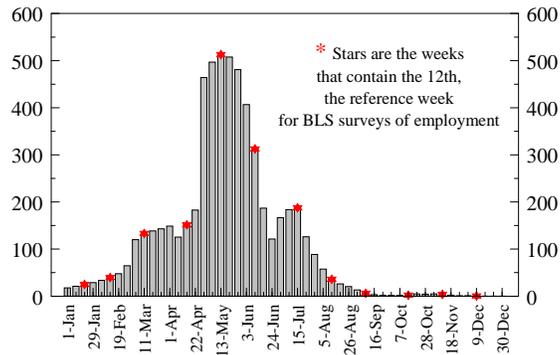
**Figure 1b. Temporary Jobs During the 2000 Census -- Change**



- The data in figures 1a and 1b are based on the pay period containing the 12<sup>th</sup> of the month, and the level of temporary Census employment can vary greatly within a month. Figure 2 shows the actual weekly payroll for the 2000 Census. This figure demonstrates that if Census hiring shifts by one or two weeks, the BLS numbers for temporary Census employment could change dramatically.

<sup>1</sup> The Census payroll includes a modest number of jobs in Puerto Rico. These jobs are excluded from CES employment.

 **Figure 2: Census 2000 -- Temporary Census Jobs During 2000**  
Weekly payroll, thousands



- One method for gauging how the payroll survey will be affected by temporary 2010 Census hiring is to examine the BLS estimates of hiring for the 2000 Census and then extrapolate to 2010.
  - Census Bureau planning documents for the 2000 Census called for 604,000 NRFU, SBE, and GQ enumerators during April-May 2000. As noted above, Census' expectations call for 723,000 enumerators in 2010, a 20-percent increase from their expectations for 2000.
  - The BLS payroll numbers for temporary Census employment are likely to be higher in 2010 than in 2000. If employment grows at the same pace as Census' expectations for hires, then employment for the 2010 Census will peak at about 635,000 total jobs in May, as reported by the BLS.

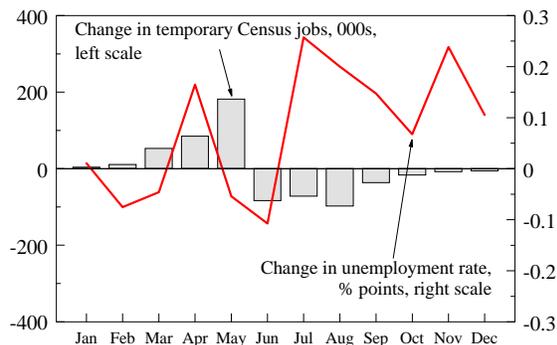
**The Effect of 2010 Census Temporary Hiring on the Unemployment Rate**

The effects of Census hiring (and layoffs) during the 1990 Census and 2000 Census on the unemployment rate are difficult to isolate, and it may be difficult to measure these effects during the 2010 Census as well.

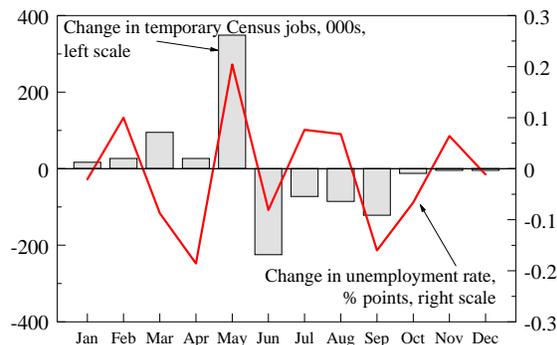
- Figures 3a and 3b show that the correlation between the monthly change in temporary Census jobs and the monthly change in the unemployment rate is weak. During 1990, the modest increase in Census jobs that occurred in April coincided with a sharp rise in the unemployment (figure 3a), although the unemployment rate fell in May when Census hiring peaked. During 2000, the surge in Census jobs that occurred in May coincided with a sharp rise in the unemployment rate, not the dip that would be expected (figure 3b).



**Figure 3a: Temporary Census Jobs and the Unemployment Rate During 1990**



**Figure 3b: Temporary Census Jobs and the Unemployment Rate During 2000**



- The unemployment rate is calculated as the share of persons who are unemployed (actively looking for work) divided by the number of persons in the labor force (both employed and unemployed). The effect of Census hiring on the unemployment rate will depend upon what the person hired was doing in the prior month. A person holding one of these Census jobs can come from the ranks of the (a) employed, (b) unemployed, or (c) not in the labor force. Hiring from the ranks of the employed (for a second job) would have no effect on the unemployment rate. Hiring unemployed persons would lower the unemployment rate since it shifts persons from the unemployed to the employed, but does not change the overall labor force. Hiring from the ranks of those not in the labor force would lower the unemployment rate only a little; it would not change the number of unemployed, but would increase the labor force.
- The 2000 Census occurred during a period of very low unemployment rates. In contrast, the 2010 Census is occurring during a period of very high unemployment. Consequently, the effect of the temporary Census hiring on the unemployment rate may be greater during 2010 than it was during 2000. A priori, one would expect that more of the temporary workers hired in 2010 will be hired from among the unemployed, since so many more people will be unemployed in the spring of 2010 than were unemployed in spring 2000.
- An important reason for the lack of correlation between unemployment and Census hiring is that the concepts and sample size of the Current Population Survey (CPS), the source of the unemployment rate, make it difficult to distinguish the effect of Census hiring.
  - The CPS consists of a small monthly sample of about 60,000 households. As a result, the size of the monthly change in the CPS employment required for a statistically significant movement is 436,000 (plus or minus).
  - The CPS estimates the number of persons holding two or more jobs. Hiring from the ranks of the employed would boost this number if an individual takes a Census job as a second job, but not if it is a third job; however, there was no perceptible Census effect on multiple jobholding in 2000.

- In fact, because of the difficulty in teasing out the effects of Census hiring, the Bureau of Labor Statistics has not attempted to estimate the effects of temporary Census employment on the unemployment rate in the past. The BLS has never provided information on these effects on household employment and unemployment and has never published research on the issue in the Monthly Labor Review. In contrast, the BLS does provide counts of temporary Census employment in the payroll data.
- If we assume that all temporary 2010 Census hires come from among the ranks of the unemployed, then the unemployment rate would drop by 0.5 percentage points at the April peak of the hiring. This is a maximal estimate, however. For example, if 75% of the hiring comes from among the unemployed, 10% comes from those taking second jobs and 15% comes from those who were out of the labor market to start with, then the effect of temporary 2010 Census hiring would be to drop the unemployment rate by 0.4 percentage points at the employment peak.

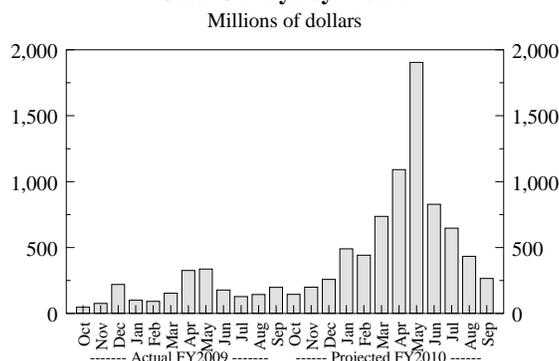
### **The Effect of Census Spending on GDP Growth**

The large spending increase associated with the 2010 Census will have potentially measurable effects on the overall growth rate of the economy.

- The cash outlays associated with the 2010 Census are expected to rise from an estimated \$259 million in December 2009 to a peak of \$1.90 billion dollars in May 2010 and then fall to \$266 million in September 2010 (final month of FY2010).



**Figure 4: 2010 Decennial Census Program  
Cash Outlays by Month**



- On a quarterly basis, the direct effect of the increased spending could boost annualized nominal and real GDP growth in 2010Q1 by 0.1 percentage point and 2010Q2 growth by 0.2 percentage point. The subsequent sharp reduction in 2010 Census spending would then act as a drag to GDP growth in Q3 and Q4 by similar magnitudes.<sup>2</sup>

<sup>2</sup> One way to estimate the indirect effects of the spending is to replicate the methodology described by the Council of Economic Advisors in their May 2009 report on the ARRA and job creation. Using that methodology, would amplify the direct effects marginally. For instance, in 2010Q2, the direct and indirect effects of 2010 Census spending would boost GDP growth by 0.3 percentage point instead of 0.2 percentage point.

- As with the employment estimates, these figures are also subject to great uncertainty and the final spending numbers will depend on a number of factors, including response rates.

END