

March 8, 2013

Memorandum for: Reviewer of 1220-0175

Cc: Dori Allard

From: Rachel Krantz-Kent

Subject: An analysis of the October 2011 incentive expansion in the American Time Use Survey

This memorandum describes the initial results of the American Time Use Survey's (ATUS) October 2011 incentive expansion in which cases with call outcome codes of *108 Number not in service* and *127 Number temporarily not in service* for the first week in sample were converted to incentive cases.

I. Use of incentives in the ATUS, from the survey's inception to current practice

Since the ATUS first began in 2003, BLS has provided incentives to no-telephone-number cases. These include households for which the U.S. Census Bureau does not have a telephone number and those for which the Census Bureau has a telephone number but does not have permission to use it. Because ATUS is a telephone-only survey, these cases would not be able to participate if they did not call an ATUS interviewer. No-telephone-number cases are sent pre-paid \$40 debit cards, information about the survey, and an appeal for the Designated Person (DP) to call the U.S. Census Bureau and complete an ATUS interview. Upon completion of the survey, the interviewer provides the DP with the PIN needed to cash the debit card.

As shown in table 1, the DPs associated with no-telephone-number cases are more likely to be black, Hispanic, less educated, and to have lower household incomes than cases that previously had provided the Census Bureau with telephone numbers and permission to use them. Because no-telephone-number cases may differ from telephone cases on unobservable characteristics, including the DPs' time-use patterns, and because providing incentives to no-telephone-number cases is not cost prohibitive, OMB had approved a BLS request to expend additional effort and expense to secure their responses. In 2009-11, there was an average of 1,590 no-telephone-number cases per year, accounting for 6.4 percent of the ATUS sample. They had a response rate of 35.3 percent, while the overall ATUS response rate for this period was 56.1 percent (these are pre-processing response rates).

In regular survey production, cases with the following call outcome codes are investigated: *108 Number not in service*; *109 Number changed, no new number given*; *124 Number could not be completed as dialed*; and *127 Temporarily not in service*. Often, Directory Assistance cannot confirm these numbers and additional research by Census call center staff does not result in new numbers. These cases have very low response rates and, like the no-telephone-number households, also are more likely to have DPs who are black, Hispanic, less educated, and to have lower household incomes than cases that had provided working telephone numbers to the Census Bureau. (See table 1.) In 2009-11, these call outcome codes were assigned to about 940 cases annually and accounted for 3.8 percent of the ATUS sample.

**Table 1. Descriptive information about telephone and no-telephone-number cases in the ATUS sample, averages for 2009-11**

	Total sample	Cases that provided telephone numbers	No-telephone-number cases	Cases with call outcome codes of 108, 109, 124, or 127 <sup>1</sup>
<b>Number of cases per year</b>	24,890	23,300	1,590	940
<b>Percent of ATUS sample</b>	100.0	93.6	6.4	3.8
<b>Percent distribution, total</b>	100.0	100.0	100.0	100.0
<b>Race</b>				
White only	76.9	77.5	67.7	65.8
Black or African American only	17.2	16.5	27.2	28.6
Other	5.9	6.0	5.2	5.6
<b>Hispanic or Latino ethnicity</b>				
Hispanic or Latino	16.3	16.0	20.3	23.2
Non-Hispanic	83.7	84.0	79.7	76.8
<b>Educational attainment</b>				
High school diploma or less	46.9	46.0	60.4	61.4
Some college or associate degree	26.9	27.1	22.9	25.1
Bachelor's degree or higher	26.2	26.8	16.6	13.4
<b>Annual household income <sup>2</sup></b>				
Less than \$25,000	29.2	28.1	46.2	49.1
\$25,000 to \$49,999	27.0	27.0	27.7	26.9
\$50,000 to \$74,999	17.9	18.2	12.3	11.9
\$75,000 or more	25.9	26.7	13.8	12.2

<sup>1</sup> Includes cases with one of these final call outcome codes assigned after the first of 8 weeks in sample.

<sup>2</sup> Household income data are for June 2010 through December 2011.

Midyear in 2008—after receiving OMB approval to do so—ATUS began sending incentives to cases assigned call outcome codes of 109 *Number changed, no new number given*, and 124 *Number could not be completed as dialed*, during the first of 8 weeks in sample. Cases assigned these outcome codes were sent a letter and debit card requesting they contact an ATUS interviewer to complete the survey. Although they were converted to incentive cases, Census Bureau interviewers continued to attempt to contact the DP by telephone.<sup>1</sup> Pre-processing completion rates for these cases increased from 6.7 percent in 2005-07 to 28.8 percent in 2009-11.

OMB approved a second incentive expansion in 2011. With the start of the October 2011 sample, cases assigned call outcome codes of 108 *Number not in service* and 127 *Temporarily not in service* during the

<sup>1</sup> When incentive materials were mailed, the interviewers ceased calling for 2 weeks so the letter and debit card had time to reach the DP; after this 2-week hold expired, they resumed their attempts to contact the DP via phone.

first week in sample were converted to incentives. As with the 2008 incentive expansion, Census Bureau interviewers continued to attempt to contact the DP by telephone. More information about the October 2011 incentive expansion follows.

II. Initial results of the October 2011 expansion

As initially implemented, the incentive expansion was more restrictive than the plan approved by OMB. OMB had approved a plan to convert all cases assigned final call outcome codes of *108 Number not in service* and *127 Temporarily not in service* for the first week in sample. In practice, new incentive cases were required to have nonworking call outcome codes of 108, 109, 124, or 127 for all call attempts made during their initial week in sample. Because of this, only 89 percent of the cases that had been approved for the incentive expansion actually were converted to incentive cases.

While narrower in scope than intended, the incentive expansion still helped boost response to the ATUS in the initial months after its implementation. Table 2 shows the results of the October 2011 incentive expansion for the first 9 monthly samples after its implementation, from October 2011 through June 2012. For comparison, the average results for the October 2009 to June 2010 and October 2010 to June 2011 samples also are included in the table. The percent of cases that was completed in the 9 monthly samples rose from an average of 9.7 percent in the 2 years prior to the incentive expansion to 35.8 percent after the incentive expansion.

**Table 2. Initial results of the October 2011 incentive expansion**

Call outcome code	Before incentive expansion			After incentive expansion		
	Average for Oct 2009 - June 2010 and Oct 2010 - June 2011 samples			Oct 2011 - June 2012 sample		
	Number of cases	Number of completes	Percent complete	Number of cases	Number of completes	Percent complete
108 - Number not in service	523	49	9.3	409	140	34.2
127 - Number temporarily not in service	68	9	13.3	60	28	46.7
Total	591	58	9.7	469	168	35.8

Table 3 shows the projected results for the first full year of the incentive expansion, from the October 2011 through September 2012 samples. It also shows the projected annual results after the expansion is fully implemented such that all cases with final call outcome codes of *108 Number not in service* and *127 Temporarily not in service* after the first week in sample are converted to incentive cases. Underlying these projections is the assumption that results from the October 2011 through June 2012 samples are representative of results for the full year and beyond. About 163 additional completed interviews, beyond the 61 completed interviews that were expected (calculated using a 9.5 percent completion rate) without the incentive expansion, are projected for the first full year of the incentive expansion.

This is equivalent to a 1.3 percent increase in the number of completed ATUS interviews when compared to the average for 2008-10. (On average there were about 13,000 ATUS interviews per year in 2008-10.) After the incentive expansion is fully implemented, an additional 183 completed interviews are projected annually; this is equivalent to a 1.4 percent increase in the number of completed interviews beyond what was achieved in 2008-10.

**Table 3. Initial results of the incentive expansion and projected results**

<b>Time period</b>	<b>Number of cases qualifying for the incentive expansion</b>	<b>Projected number of completed interviews, with no incentive expansion <sup>1</sup></b>	<b>Number of completed interviews, post-expansion <sup>2</sup></b>	<b>Number of completed interviews attributed to the incentive expansion</b>
Initial 9 monthly samples, October 2011 - June 2012	469	45	168	123
Projected results for first year of expansion, October 2011 – September 2012 samples <sup>3</sup>	625	61	224	163
Projected annual results after expansion is fully implemented <sup>3,4</sup>	702	68	251	183

<sup>1</sup> Calculations were made using a 9.7 percent pre-expansion completion rate.

<sup>2</sup> Calculations were made using a 35.8 percent post-expansion completion rate.

<sup>3</sup> Projected results were calculated based on the assumption that results from the October 2011 through June 2012 samples are representative of future results.

<sup>4</sup> As initially implemented, the expansion was narrower in scope than intended. Only 89 percent of the cases OMB had approved for the incentive expansion were actually converted.

### III. Financial impact

Each debit card issued by the ATUS program incurs a \$31.60 Census fee that covers the costs of tracking and managing the debit cards. Per requirements at Census' National Processing Center, the debit cards are stored in a secure area and two people must be present at all times when working with the debit cards. This is for the security of the debit cards and the employees involved. This two person requirement accounts for the majority of costs associated with managing the debit cards, by essentially doubling the staff time, salary, benefits, and overhead costs associated with them. Each debit card that is cashed costs the ATUS program an additional \$44.00, which includes the \$40.00 face value of the card and \$4.00 in ATM transaction fees. (In October 2011, a \$5.00 per debit card production fee was eliminated.)

Costs associated with each ATUS debit card:

- Face value of the debit card: \$40.00
- ATM transaction fee: \$ 4.00
- Census debit card management: \$31.60

In the first 9 monthly samples of the incentive expansion there were 469 cases that were converted to incentive cases. Of the 469 cases that were converted, 168 cases became completed interviews; this amounted to 123 additional completed interviews beyond what would have been expected had the incentive card expansion not been implemented. Thus, the first 9 monthly samples of the incentive card expansion cost the ATUS program about \$22,200 [(\$31.60)(469 cases)+(\$44.00)(168 cases)] to obtain an additional 123 interviews, or approximately \$180 per additional completed interview.

In the first year of the incentive expansion, 163 additional completed interviews are expected at a cost of approximately \$29,600. After the incentive expansion is fully implemented, an additional 183 interviews are projected annually, at a cost of approximately \$33,300 per year.

#### IV. Respondent burden

The increase in total respondent burden from the October 2011 incentive expansion is estimated to be small—only about \$700 to \$800 per year. Table 4 provides projected estimates of the respondent burden for the first full year of the incentive expansion. As implemented, the incentive expansion is associated with a \$700 increase in respondent burden per year; when fully implemented, the respondent burden is expected to increase to about \$800 per year. A wage rate of \$12.80 per hour was used to calculate the burden; this is an estimate of the median hourly earnings for all wage and salary workers paid hourly rates in 2012, as measured by the Current Population Survey.

**Table 4. Estimated ATUS annual respondent burden after the October 2011 incentive expansion**

	Total respondents	Frequency	Average time per response <sup>1</sup>	Estimated total burden, hours	Estimated total burden, dollars
Full ATUS production	13,000	one time	21 minutes	4,550	\$58,200
Projected results for first year of expansion	163	one time	21 minutes	57	\$700
Projected annual results after expansion is fully implemented <sup>2</sup>	183	one time	21 minutes	64	\$800

<sup>1</sup>Includes 16 minutes for the ATUS and 5 minutes for a module to the ATUS.

<sup>2</sup>As initially implemented, the expansion was narrower in scope than intended. Only 89 percent of the cases OMB had approved for the incentive expansion were converted to incentive cases.