

SUPPORTING STATEMENT

AMERICAN TIME USE SURVEY

A. JUSTIFICATION

1. Necessity for the Data Collection

The purpose of this request is for the Bureau of Labor Statistics (BLS) to extend clearance for the collection of time-use data by the American Time Use Survey (ATUS) through the end of 2016. BLS is requesting changes to the advance materials sent to potential respondents, but no changes to the ATUS interview.

The ATUS, which began full production in January 2003, is the Nation's first federally-administered, continuous survey on time use in the United States. A nationally representative sample of persons from households completing their final month of interviews for the Current Population Survey (CPS) is drawn for ATUS. BLS contracts with the Census Bureau to conduct one interview with one person age 15 or over from each selected household. The primary focus of the interview is on activities done "yesterday" (from 4 a.m. on the day before the interview to 4 a.m. on the day of the interview), though additional questions are asked about work during the prior week.

Collection of time-use data fits well within the BLS mission, as outlined in Title 29, United States Code, Section 1:

“The general design and duties of the Bureau of Labor Statistics shall be to acquire and diffuse among the people of the United States useful information on subjects connected with labor, in the most general and comprehensive sense of that word, and especially upon its relation to capital, the hours of labor, the earnings of laboring men and women, and the means of promoting their material, social, intellectual, and moral prosperity.”

According to economist William Nordhaus, “Inadequate data on time use is the single most important gap in Federal statistics,” (Nordhaus, 1997). Approximately 50 other countries collect, or soon will collect, time-use data. Such data are considered important indicators of both quality of life and the contribution of non-market work to national economies. They measure, for example, time spent caring for children, volunteering, working, sleeping, or doing leisure activities. Using time-use data in conjunction with wage data allows analysts to better compare production between nations that have different mixes of market and non-market activities. In the United States, several existing Federal surveys collect income and wage data for individuals and families, and analysts

often use such measures of material prosperity as proxies for quality of life. Time-use data substantially augment these quality-of-life measures.

2. Purpose of the Survey

The major purpose of the ATUS is to develop nationally representative estimates of how people spend their time. Many ATUS users are interested in the amount of time Americans spend doing non-market work activities. These include unpaid childcare and eldercare, housework, and volunteering. The survey also provides information on the amount of time people spend in many other activities, such as commuting, religious activities, socializing, exercising, and relaxing. To produce these estimates, data are collected not only about what people did, but also about where and with whom each activity occurred, and whether the activities were paid work or work-related. This additional contextual information enables coders to assign codes that describe each activity with consistency.

Because the ATUS sample is drawn from a subset of households that completed interviews for the CPS, the same demographic information collected from that survey is available for the ATUS respondents. Comparisons of activity patterns across characteristics such as sex, race, age, disability status, and educational attainment of the respondent, as well as the presence of children and the number of adults living in the respondent's household, are possible. The data are collected on an ongoing basis and nine years of time series data are available, enabling analysts to identify changes in how people spend their time. Also, the ATUS activity coding lexicon was designed to ensure that time-use information in the United States can be compared, at broad levels, with information from other countries.

To ensure the widest distribution of information, BLS releases annual and quarterly data to the public once a year in the form of published tables. Microdata sets are also available, and special analyses by BLS and outside analysts appear in the *Monthly Labor Review* (published by BLS) and in other publications. As of June 2012, nine years of ATUS data have been published (2003-2011), and the data have received wide interest from a variety of users, including economists, sociologists, health researchers, journalists, and businesspersons. ATUS information has also been of interest to government policymakers, educators, lawyers, and others, as the survey information has numerous applications. In addition to appearing in many national newspapers, magazines, and television programs, ATUS data have been used in articles appearing in many academic journals. Lists of publications, both BLS and non-BLS, using ATUS data are available on the ATUS Web site (<http://www.bls.gov/tus/papersandpubs.htm> and <http://www.bls.gov/tus/research.htm>).

The survey captures not only hours worked on a typical weekday or weekend day, but also shows the distribution of where work is being done—at home, at a workplace, or somewhere else¹—and whether, over time, these distributions are

¹ Interviewers for the ATUS assign one of 24 location codes to each activity reported by respondents.

changing. In addition to providing information about time spent in work activities, ATUS data have been analyzed to gain insight into commuting patterns and other behaviors associated with work.

Unpaid productive activities, such as raising children, providing informal eldercare, volunteering, and doing housework, are critical to society and to national well-being. ATUS data provide more comprehensive information about these activities on a continuous basis. Analysts have used ATUS measures of time spent doing such activities to estimate the contribution they make to overall economic activity.

For decades, economists have acknowledged that changes in GDP may reflect changes in institutional arrangements rather than actual changes in economic activity (Landefeld and McCulla, 2000). For example, under traditional methods used to value the Nation's output, the worker who decides he will wash and iron his own dress shirts rather than send them to the cleaners as he has previously done contributes to a decline in GDP, because the washing and ironing activity is no longer captured as a market transaction. However, ATUS respondents report on the ways they use their own time. The availability of this detailed information allows economists to more accurately value household production by estimating the value of the time (labor services) used to produce goods and services. Childcare and eldercare, meal preparation, and home repair projects are just a few of the non-market activities that ATUS data can be used to evaluate. Bureau of Economic Analysis researchers have used these data as a critical input into prototype estimates of satellite accounts that measure the value of unpaid work, including volunteering, childcare, and household activities (Landefeld, Fraumeni, and Vojtech, 2005).

International organizations and researchers have used the ATUS data to compare the United States to other countries. Both the UN and the OECD have published ATUS estimates in order to compare time use of Americans to those living in other countries.

Sociologists have used the data to examine social contact, such as how much time people spend with their children, colleagues, or family members. They also have examined the degree to which people are trading off time spent with family or in leisure activities to do market or non-market work.

The ATUS data may help Federal, State, and local government policy makers more fully understand noneconomic, as well as economic, effects of policy decisions, and to better determine when to develop new or change existing policies to address the needs of our society. For example, in 2009, ATUS data were utilized in a USDA-authored Congressional report on access to healthy food.

Health researchers have used ATUS data to explore the amount of time spent in activities that impact Americans' health, such as sleep, eating, meal preparation,

and physical exercise. The data have also been used to analyze Americans' exposure to traffic accident risk.

The 2011 introduction of questions on eldercare aligns closely with the ATUS goal of collecting information about time spent in unpaid, productive activities. Eldercare is a topic of interest to many researchers, particularly because the U.S. population is aging, and it has drawn a number of new data users to work with ATUS and BLS data.

3. Use of Information Technology

The Census Bureau, which collects and processes the data for BLS, uses state-of-the-art methods to conduct interviews and record respondent information. Census Bureau interviewers conduct all interviews over the telephone, completing the respondent's time-use diary using Computer Assisted Telephone Interviewing (CATI). Using an automated call scheduler and hourly reports from the system, cases are presented to interviewers in order depending on respondents' designated interview days, pre-set appointment times, CPS information on the best time to call respondents, and other information.

The ATUS questionnaire is built in Blaise, a windows-based software package developed by Statistics Netherlands and adopted as the Census Bureau standard. The software's graphical user interface (GUI) enables the usage of data entry grids that accept many entries on one screen. ATUS respondents verbally report to the interviewer about the activities of the previous day—what they did, who was with them, where they were, and how long the activity lasted. The instrument enables interviewers to enter the information for each activity into the diary grid in any order, and it automatically computes the duration of an activity after each entry. This feature enables the interview to be flexible, making reporting easier for respondents. (See Attachment A for the main ATUS instrument.)

The ATUS activity coding system is also built in Blaise. Diary entries are imported into the Blaise coding instrument. Coders view on the screen three horizontal windows that display the activity to be coded, coding categories, and the respondent's diary and codes assigned. The software includes a "trigram search" feature that enables coders to type in an activity verbatim (e.g., "washed the car"), which generates a list of codes that contain 3-letter combinations in the search string. This feature helps coders find the correct code for ambiguous activities.

A debit card tracking system is in place to manage incentive payments to "no-telephone-number" households in the sample. (See Part A, section 9.)

4. Efforts to Identify Duplication

No private or public institutions conduct time-use surveys at regular intervals. Two academic institutions, the Universities of Maryland and Michigan, have collected time-use data periodically since 1965, but their data collection methodologies changed across years, and no continuous survey was ever conducted in the United States prior to the ATUS. As a result, analysts must infer (or ignore) patterns that occurred between survey periods, making reliable trend analyses very difficult. Continuous data collection through the ATUS will allow analysts to determine if, and by how much, time-use patterns are changing over time.

Additionally, the ATUS sample size is large enough to enable demographic comparisons of time use not possible in earlier studies. Demographic analyses of previous time-use surveys conducted by academic institutions have been limited because sample sizes have only been large enough to yield valid statistical results at aggregate levels. The 1985 time-use survey conducted by the University of Maryland was the largest of the previous U.S. time-use surveys completed, yet it only had 5,300 respondents—about 40 percent of the approximate 13,200 annual ATUS respondents (Robinson and Godbey, 1997). The ATUS sample is also more demographically controlled than those in previous surveys. Because the sample is drawn from the CPS, households are stratified by demographic characteristics. Black and Hispanic households and households with children are oversampled to ensure they are adequately represented in the ATUS data. (See Part B, section 1.)

5. Involvement of Small Establishments

The ATUS is a survey of individuals in households and does not involve small businesses or other small entities.

6. Consequences of Less Frequent Data Collection

The 13,200 ATUS interviews are spread across 12 months so that a large annual sample size can be achieved at the same time that the ability to examine seasonal patterns across years can be maintained. Less frequent collection would reduce the analytical value of trend analyses and would eliminate analyses of seasonal patterns in time use.

In addition, monthly data collection operations are more efficient to manage than larger-scale, less frequent operations. A stable, well-trained staff has been developed and cases are spread evenly across the work weeks and months. Each month's ATUS sample is introduced over 4 weeks (1/4 sample each week). Each case has up to an 8-week field period. Interviewing respondents about their time use for a 24-hour period in such a way that reports can be consistently and accurately coded requires significant training and practice. Likewise, experience and familiarity with the coding rules and coding lexicon are extremely important

to coders for producing accurate results. Less frequent data collection could seriously impact training costs and impede performance.

7. Special Circumstances

The ATUS requires the use of an activity coding classification system not in use in any other Federal survey. A coding lexicon was developed to classify reported activities into 17 major categories, with two additional levels of detail. (ATUS coding lexicons can be found on the Internet at <http://www.bls.gov/tus/lexicons.htm>). BLS designed the ATUS lexicon by studying classification systems used for time-use surveys in other countries, drawing most heavily on the Australian time-use survey lexicon, and then determining the best way to produce analytically relevant data for the United States. The coding lexicon developed for the ATUS was extensively tested by Census Bureau coders and by coders at Westat (Westat, 2001) prior to the start of full production in 2003. Development of the ATUS lexicon is described in Shelley (2005).

No other special circumstances apply.

8. Federal Register Notice and Consultations Outside the Agency

Federal Register Notice

No comments were received as a result of the Federal Register notice published in 78 FR 43227 on July 19, 2013.

Survey Methods Research Community

ATUS sponsored a brainstorming session with survey methodologists in June 2001. ATUS research was presented for comment at the American Association for Public Opinion Research (AAPOR) conferences in 2000, 2001, and 2012 and at the International Field Directors conference in 2001. Research was also presented at the 2005 and 2008 FedCASIC; the 2005 International Field Directors conference; the 2005 American Statistical Association meetings; the 2005 ATUS Early Results Conference; the 2006 Panel of Income Dynamics Conference; the International Association for Time Use Research Conferences in 2006 and 2010; the 2009 American Time Use Research Conference; and, at the 2011 International Perspectives on Time Use Conference. Additionally, 2003-11 ATUS survey methodology data files have been made publicly available to enable outside survey methodologists to perform analyses.

Federal Economic Statistical Advisory Council (FESAC)

Plans for ATUS were

discussed at the June 2001, December 2001, and June 2006 FESAC meetings. As needed, ATUS staff members solicit feedback and consultation from members of this group.

National Academy of Sciences (NAS)

Plans for ATUS were presented and reviewed at a NAS-sponsored conference on time use held in 1999 (NAS, 2000).

MacArthur Foundation

BLS and the MacArthur foundation jointly sponsored a conference in 1997 to discuss research applications of time-use data.

Westat

BLS consulted with Westat on methods for programming the time-use data collection instrument, the usability of the coding lexicon and the coding software, and possible ways to augment the survey design to boost response. Westat reviewed the literature, analyzed time-use data, and designed an experiment to test the feasibility and impact of substituting diary days and extending the diary recall period.

Business Research Advisory Council (BRAC) to the BLS

BLS has consulted periodically with the BRAC on the ATUS.

Labor Research Advisory Council (LRAC) to the BLS

BLS has consulted periodically with the LRAC on the ATUS.

See Attachment B for names and contact information of people in the above organizations who have been in consultation with BLS on the ATUS.

Council of Professional Associations on Federal Statistics (COPAFS)

BLS consulted with COPAFS on the ATUS at the June 2004 quarterly meeting.

9. Payment to Respondents

A 2001 ATUS field test evaluated, among other operational design strategies, the effect of monetary incentives (debit cards) on response rates. Results of the evaluation showed that incentive payments significantly increased response, as well as encouraged faster response. For households for which the Census Bureau had a telephone number, a \$20 incentive payment increased response significantly, from 69 percent to 77 percent, and a \$40 incentive payment further increased response to 83 percent. (See Attachment C.) However, BLS determined that providing incentives to all respondents or only to refusals and noncontacts (after 4 weeks) would be cost prohibitive. Therefore, payments are not used as incentives to respondents in households for which the Census Bureau has a recent telephone number.

BLS offers incentives to respondents from “no-telephone-number” households. Persons in these households do not own a phone, have not provided a phone number to the Census Bureau as of CPS month-in-sample 8, or are among a small number of households that provided Census with nonworking phone numbers. Two OMB-approved incentive expansions were implemented in recent years and, as of 2013, incentives are now sent to individuals for whom the Census Bureau assigned call outcome codes of: *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* after the first week of collection. (See Attachment D.) Individuals who are sent incentives account for about 10 percent of the CPS sample, and are more likely to be black, of Hispanic or Latino ethnicity, to have less education, and to have lower household incomes than members of households that provide phone numbers. The number of such cases is relatively small—approximately 2,500 potential cases each year. Because these households may differ from phone households on unobservable characteristics, including their time-use patterns, and because providing incentives to this small group is not cost prohibitive, BLS believes it is beneficial to expend additional effort and expense to secure their responses.

In the 2001 field test, designated persons in no-telephone-number households (n=165), defined as those with no telephone or no telephone number, were sent a \$60 debit card with other ATUS advance materials, including a letter with an appeal to participate in the survey. The letter encouraged them to call a toll-free number to complete an interview. After 4 weeks, 41 percent had called in and completed the interview. To contain costs in production, BLS uses a \$40 debit card as an incentive rather than the \$60 used in the field test. The \$40 amount was chosen for two reasons. In a field test debriefing, respondents most frequently selected \$20 as the lowest amount respondents should be paid to participate in the full survey. They chose \$50 as the highest amount. In addition, most ATMs disburse money in \$20 bills, so BLS only considered incentive payments in \$20 increments. The debit card is sent with the advance materials. However, the PIN number to activate the card is only given to the designated person upon completion of the interview. (See Attachment E.)

As mentioned above, the \$60 incentive given to no-telephone-number households in the 2001 field test yielded a 41 percent response rate in 4 weeks. Assuming response rates are positively correlated with incentive amounts, as evidenced by the incentive test for telephone households, BLS projected that a \$40 incentive to no-telephone-number households would yield a response rate lower than the 41 percent after 4 weeks. This has proven to be the case, as unweighted response rates for no-telephone-number households averaged about 35.3 percent in 2011, and weighted response rates averaged 33.4 percent in 2011.²

In 2011, the survey's overall unweighted response rate by sample month was 54.7 percent, and the weighted response rate was 55.3 percent. During 2011 data processing, a small percentage of completed cases were eliminated for data quality reasons. As a result, the final unweighted response rate was 53.1 percent after processing, and the weighted response rate was 53.8 percent after processing. Response rates decreased in 2012 to an unweighted preprocessing rate of 53.2 percent. Because response rates have been lower than the 69-percent rate achieved (using no incentives) during the 2001 field test, the BLS and the Census Bureau continue to conduct a number of analyses of non-response in ATUS. In particular, BLS and Census have done or are doing the following to test and address response rate issues:

- Conducted in-depth critiques and revisions of advance materials
- Translated advance materials and refusal conversion materials to Spanish in order to better target Spanish speaking households
- Developed a refusal conversion letter
- Revised evening call operations at the Census interviewing center

² All response rates given are calculated using the American Association for Public Opinion Research's (AAPOR's) response rate 2 formula. For more information, see AAPOR's *Standard Definitions—Final Dispositions of Case Codes and Outcome Rates for Surveys*, 2008.

- Implemented policy of conducting more research into phone numbers (when invalid) and trained interviewers to conduct this research on a more-timely, interactive basis
- Increased interviewer motivation by setting weekly goals
- Conducted comprehensive analyses of non-response bias (see Part B, section 4)
- Developed a Web site containing information for ATUS respondents (<http://www.bls.gov/respondents/tus/home.htm>)
- Evaluated returned mail (such as advance letters) to see if cases were movers and to better investigate wrong or incomplete addresses (see Attachment N)
- Developed an ATUS-specific “gaining cooperation” workshop to teach interviewers techniques to increase respondent cooperation, and incorporated this material into other periodic training courses
- Implemented a periodic newsletter to inform interviewers and improve interviewer morale
- Investigated incomplete cases to identify possible causes of noncontact or refusal (such as non-viable telephone numbers) and converted some cases to incentive cases
- Researching the feasibility of assigning cases that are likely refusals to refusal conversion specialists as soon as the case enters the field
- Scrutinized and revised interviewer operations in several ways in order to increase the probability of completed interviews, such as redesigning the call blocks to add more call attempts during evening hours
- Investigating the incidence and impact of cell phones on ATUS response rates and data quality (see Attachment F)
- Contracted with Westat to provide guidance on whether and how to implement a substitution-of-day mechanism in the ATUS as well as to investigate how allowing substitution of the designated respondent within a household might affect the ATUS data (see Attachment G)
- Implemented a "We've been trying to reach you letter" that is sent via FAX when ATUS calls go to FAX machines
- Added FAQs to the collection instrument that ATUS interviewers can easily reference to respond to respondents' concerns

10. Confidentiality of Data

The Census Bureau employees hold all information that respondents provide in strict confidence in accordance with Title 13, United States Code, Section 9. (See Attachment H.) Each interviewer has taken an oath to this effect, and if convicted of disclosing any information given by the respondent may be fined up to \$250,000 and/or imprisoned up to 5 years. In addition, Title 13 prohibits Census Bureau employees from disclosing information identifying any individual(s) in the ATUS to anyone other than sworn Census employees.

ATUS data are collected by the Census Bureau under the authority of Title 13, United States Code, Section 8. Section 9 of the law requires that all information

about respondents be kept strictly confidential, and that the information be used only for statistical purposes. Respondents are informed of their right to confidentiality under Title 13 in the ATUS advance letter and brochure, mailed approximately 10 days before the interview date. (See Attachments I and J.) The ATUS advance letter also advises respondents that this is a voluntary survey.

All Census Bureau security safeguards regarding the protection of data files containing confidential information against unauthorized use, including data collected through Computer Assisted Telephone Interviewing (CATI), apply to ATUS data collection.

The BLS Processing System design requires that ATUS data be securely transferred from the Census Bureau to the BLS via a shared server. This process mirrors the process used to transfer Current Population Survey data.

11. Sensitive Questions

During the course of a 24-hour day, many people engage in activities—such as alcohol or drug use or sexual activities—that they may consider too personal or sensitive to report. To examine respondent concerns about the sensitivity of the diary and other survey questions, respondents were asked in the field test if they thought any of the questions were too sensitive. Ninety-two percent of respondents did not think that questions about their time use were too personal or sensitive. During full production, Census Bureau ATUS interviewers advise respondents before beginning the interview that they need not report anything they think is too personal. This instruction does not appear to lead to nonresponse. In 2011, only 0.02 percent of the total number of activities captured was reported by respondents as “none of your business.” A potentially sensitive question is included before the diary, as part of the household roster update, about whether the respondent has any children who do not live with him or her (so that analysts may examine noncustodial parents’ time with their children.)

12. Estimate of Information Collection Hour Burden

Starting with the sample introduced in December 2003, the ATUS sample was reduced by 35 percent. ATUS interviewers began attempting to contact one designated person in each of approximately 2,190 sample households per month, down from about 3,380 sampled households per month during the first year of production. Of the 2,190 households sampled each month, about 2,000 will actually be eligible for the ATUS at the time of contact. Since the sample reduction in December 2003, on average 1,100 interviews were completed each month, or about 13,200 per year. A similar number is expected in future years. Each respondent is interviewed in depth about only one day's activities and is not contacted for repeat interviews. A complete interview consists of:

- a brief introduction
- a household roster and employment status update
- collection of time diary information
- four summary question series (on paid work, childcare, volunteering, and eldercare)
- an update of additional information—on earnings, occupation and industry, layoff/job search, and school enrollment—collected in the CPS

The average length of time to complete the main ATUS interview, including the updates of demographic and labor force information as well as the time diary, is approximately 16 minutes.

For calendar years 2014-16, the estimated total number of burden hours is 10,560 or 3,520 annually. This accounts for an average length of 16 minutes for the core ATUS interview.

Based on this estimate of annual burden, the overall annualized dollar cost to the respondents for collection of ATUS data in 2014-16 is expected to be about \$45,000. This estimate assumes a wage rate for all respondents of \$12.80 an hour, which equals the median hourly earnings for all wage and salary workers (paid hourly rates) in 2012.

Table 1 provides details on the estimated annual respondent burden for the ATUS collection for 2014-16.

Table 1. Estimated Annual Respondent Burden for 2014-16 (Hours and Dollars)

Form	Total Respondents	Frequency	Average Time per Response	Estimated Total Burden (Hours)	Estimated Total Burden (Dollars)
Full production	13,200	One Time	16 minutes	3,520	\$45,000

13. Cost Burden to Respondents or Recordkeepers

- a. Capital start-up costs: \$0
- b. Total operation and maintenance and purchase of services: \$0

Respondents to this survey are individuals and will not incur any capital start-up costs or costs related to total operation and maintenance and purchase of services agreements.

14. Cost to Federal Government

The total estimated cost to the Federal Government for the ATUS base program in each fiscal year will be about \$5 million annually. Due to sequestration, the FY 2013 expenses outlined above do not reflect the long-term annual costs of the program. Specifically, FY 2013 expenses reflect curtailed spending as well as a hiring freeze, both of which may impact the quality and quantity of some BLS data.

The costs associated with the ATUS cover survey management, questionnaire design, instrument development, training, data collection, incentive payments, data editing, preparation of the files for data users, and support for users of the data files.

15. Changes in Burden

The estimated burden is 3,520 hours annually for 2014, 2015, and 2016. This is lower than the previous ATUS clearance package because OMB approval to run 5-minute modules to the ATUS is now sought separately from the full ATUS clearance package.

16. Time Schedule for Information Collection and Publication

The following is the schedule for ATUS data collection:

Full production and data collection	Starting in January 2014, continuing monthly through December 2016
Release of the ATUS estimates	Mid-2015 Mid-2016 Mid-2017

Cross tabulation and time-series analyses will be used to analyze the data.

The ATUS news releases will be published in electronic and paper formats. The electronic news release will be posted on the BLS Web site at www.bls.gov/tus. Paper copies will be mailed upon request. Additionally, public use data sets will be posted to the BLS Web site at www.bls.gov/tus after publication of the news release.

17. Request to Not Display OMB Expiration Date

The Census Bureau does not wish to display the assigned expiration date of the information collection because the instrument is automated and the respondent, therefore, would never see the date. The advance letter sent to households by the Census Bureau contains the OMB survey control number for the ATUS.

18. Exceptions to “Certification for Paperwork Reduction Act Submissions”

There are no exceptions to the “Certificate for Paperwork Reduction Act Submissions.”