Management of Business Surveys and Production of Economic Statistics: Perspectives from the U.S. Bureau of Labor Statistics Current Employment Statistics Survey November, 2016

Kenneth W. Robertson

U.S. Bureau of Labor Statistics

2 Massachusetts Ave., N.E., Washington D.C., 20212

Abstract

The U.S. Bureau of Labor Statistics (BLS) is the principal federal agency responsible for measuring labor market activity, working conditions, and price changes in the U.S. economy. Its mission is to collect, analyze, and disseminate essential economic information to support public and private decision-making. BLS serves its user communities by providing data that are objective, relevant, and timely. This paper will provide a brief overview of the management and compilation of labor market statistics through a focus on the Current Employment Statistics survey. This will include a discussion of budget, staffing, data collection and data processing practices, and will include some best practices for publication and dissemination of these key economic data.

Key Words: Bureau of Labor Statistics, Current Employment Statistics, management

1. Background

The U.S. Bureau of Labor Statistics (BLS) is the principal federal agency responsible for measuring labor market activity, working conditions, and price changes in the U.S. economy. Its mission is to collect, analyze, and disseminate essential economic information to support public and private decision-making. BLS serves its user communities by providing data that are accurate, objective, relevant, timely, and accessible. This paper will provide a brief overview of the management and compilation of labor market statistics through a focus on the Current Employment Statistics survey. This will include a discussion of the management framework, budget, staffing, data collection and data processing practices, and will include some best practices for publication and dissemination of these key economic data.

In essence, this paper focuses on major areas that the author[1] feels are important for managing this large federal survey. Managing a survey is a bit of a juggling act. There are a number of activities that must be occurring simultaneously, especially for a repeated ongoing survey. Among these activities are ensuring adherence to policies set forth by the U.S. Office of Management and Budget and the Office of Personnel Management, developing, allocating, and monitoring a budget that fits within the available funding for the survey, managing staffing for the many survey activities, managing relationships within and outside the organization, and managing all of the various survey operations.

[1] The author is the BLS Assistant Commissioner for Industry Employment Statistics (June 2012 to current date), and is the senior manager for the Current Employment Statistics survey, the Quarterly Census of Employment and Wages, and the Job Openings and Labor Turnover Survey.

2. Management Backbone

2.1 U.S. Office of Management and Budget

Federal surveys and censuses in the United States operate under a number of different statutes and policy standards. These statutes and standards are summarized in the publication *Principles and Practices for a Federal Statistical Agency* [i] (National Research Council).

Detailed standards for operations are provided by the U.S. Office of Management and Budget[ii] (OMB). These include standards for operating statistical surveys[iii] (OMB, 2007); guidance on collecting information surveys[iv] (OMB, 2006); guidance on protecting the confidentiality of respondent data[v] (OMB, 2006); standards for the classification of industry[vi] (United States Census Bureau, 2012), occupation[vii] (United States Bureau of Labor Statistics, 2010), geographic area[viii] (OMB, 2013), and race and ethnicity[ix] (OMB, 1997); standards for the release and dissemination of statistical products[x] (OMB, 2008); and standards for the compilation, release, and evaluation of Principle Federal Economic Indicators[xi] (OMB, 1985).

The general application of these standards to key labor market indicators produced at BLS is discussed in *Compilation and Management of Labor Market Statistics for Macroeconomic Analysis at the U.S. Bureau of Labor Statistics* [xii].

2.2 U.S. Office of Personnel Management

Policies and practices for personnel management are developed and implemented by the U.S. Office of Personnel Management[xiii] (OPM). These policies define the framework within which federal employees are hired, and for which performance management is administered for those employees. They also define the various pay systems in place for federal employees at different agencies, as well as work schedules and leave practices.

2.3 U.S. Bureau of Labor Statistics

The BLS, in addition to operating under the policies and guidelines of OMB and OPM, also operates under the legislative umbrella of the Confidential Information Protection and Statistical Efficiency Act[xiv] (CIPSEA) of 2002. This Act provides BLS with legislated protections to the data collected by BLS under a pledge of confidentiality[xv].

The BLS is an agency of the U.S. Department of Labor[xvi] (DOL). The labor management policies of the DOL and BLS are enumerated in the agreements that DOL has with the American Federation of Government Employees, Local 12 (effective August 29, 2013) for employees in the Washington, D.C. area, and with the National Council of Field Labor Locals (effective October 1, 2012) for employees whose worksites are located elsewhere.

The Current Employment Statistics Survey, the focus of this paper, operates in accordance with the policies and guidelines of OMB, OPM, and BLS.

3. Current Employment Statistics Background

The BLS Current Employment Statistics (CES) survey is the world's largest monthly quick-response, multi-modal business survey. The CES survey provides the first measure of employment gain or loss in the U.S. economy each month for the nonfarm economy. The data from this survey have been designated as a Principle Federal Economic Indicator

(PFEI) by the Office of Management and Budget[2]. The data produced by the survey include employment, hours, and earnings, by industry, for the nation, states, and metropolitan statistical areas.

The 2014 first quarter business frame[xvii] included 9,300,000 establishments. The 2016 sample size for the CES survey, based on that business frame, is 146,000 businesses[3] (i.e., unemployment insurance accounts) and government agencies, which includes about 623,000 establishments across the United States. This very large sample includes about one third of all U.S. employment, and about 6.7% of all business establishments in the U.S.

The CES program produces employment, hours, and earnings for all employees and for production/nonsupervisory employees, employment for women employees, overtime hours for manufacturing industries, hourly and weekly earnings for all employees and for production/nonsupervisory employees, and also several employment-related indexes.

CES data are used by the U.S. Congress, the U.S. Federal Reserve Board, state and local government policymakers, Wall Street, economists, academics, and businesses to inform them of the most recent economic trends in the U.S. economy with respect to employment, hours, and earnings. Publication of these data can have a substantial and immediate effect on the U.S. financial markets[xviii]. In some instances, a report of employment change from the survey that was moderately above or below the value forecast by leading economists has affected the U.S. stock market by about a half percentage point within only a few minutes. If total market capitalization were $20 trillion, this amounts to an increase or decrease in value of $100 billion.

CES data are further used as input into other major economic indicators, such as personal income, industrial production, indexes of leading and coincident economic indicators, and productivity measures.

4. CES Budget

A foundational aspect of managing a survey is managing the survey budget. The survey process at the BLS does not allow for overspending, so program spending must be controlled within its allocated budget. The federal fiscal year (FY) for the United States runs from October 1 through September 30. The budget for CES in FY 2015 was $61 million.

The FY 2015 budget was apportioned to various budget categories as follows:

---

[2] This designation is described in Statistical Policy Directive #3 (see end note xi).

> 1. Designation of Principal Indicators. The Administrator for Information and Regulatory Affairs, Office of Management and Budget, will determine, after consultation with interested Federal agencies, the data series and estimates to be designated as principal Federal economic indicators and covered by this directive. The Administrator will review the designations annually.

[3] A business is typically represented on the sampling frame by a UI account. Therefore, a business may be a single establishment, or a multi-establishment company with the same UI account. The CES sample design is a stratified, simple random sample of worksites, clustered by UI account. The strata are State, industry super-sector, and employment size class.

Major Category	Funding	Percentage
Total	$61 M €54 M[4]	100%
Federal Staffing costs	$26 M €23 M	42%
State Partner funding	$ 8 M € 7 M	14%
CES Contractor funding	$25 M €22 M	41%
Other categories (Travel, Training, Equipment, Supplies, etc.)	$ 2 M € 2 M	3%

Another way to describe the FY 2015 budget apportionment is to do so by using the Generic Statistical Business Process Model[xix] (GSBPM) categories as follows:

GSBPM Category	Funding	Percentage
Total	$61 M €54 M	100%
Design	$ 2 M € 2 M	3%
Collect	$33 M €29 M	54%
Process	$14 M €12 M	23%
Analyze, Disseminate	$12 M €11 M	20%

The distribution of funding for a major survey such as CES must encompass the everyday needs such as ongoing data collection, production, estimation, and dissemination, and it must also include funding to enable research to take advantage of future opportunities. For example, the CES program has saved significant funding each year by moving from a mail shuttle form to predominantly electronic means of data collection. This change took an investment in significant research and investment in new information technology systems. The end result, however, is substantially cheaper and much faster data collection, providing higher data quality at lower cost.

The CES program has also invested considerable funding to research improved estimators for smaller domains. The statistical staff necessary to conduct this research is a valuable addition to the program staffing, as they have developed estimators that produce estimates with an appropriate balance between volatility and bias. This allows for more informed decision-making for data users in these smaller domains. Similarly, the program has periodically invested in significant cognitive research to investigate improvements to the survey forms, data collection processes, and data quality. These improvements have led to higher response rates and higher quality data.

5. CES Organizational Profile

[4] The dollar to euro conversion is as of June 8, 2016

The CES program operates within a broader BLS context. BLS is organized into Program Offices and Support Offices. Program Offices are responsible for managing the programs that produce the BLS' economic data. The Support Offices provide various types of support critical to the success and operations of these programs. Both Program and Support Offices operate under the direction of the BLS Commissioner's Office.

BLS Office of the Commissioner	Program Offices	Employment & Unemployment Statistics
		Compensation and Working Conditions
		Prices and Living Conditions
		Productivity and Technology
	Support Offices	Administration
		Technology & Survey Processing
		Field Operations
		Publications and Special Studies
		Survey Methods Research

There are four major program offices, each focusing on different product areas. The CES program is part of the Office of Employment and Unemployment Statistics (OEUS).

The CES program is organized in a manner consistent with many BLS programs.

CES Program Office	National Program	Data Collection
		Registry and Data Flows
		Estimation 1
		Estimation 2
		Benchmark and Research
		Estimation System Support
	State & Area Program	Estimation 1
		Estimation 2
		Estimation 3
		Estimation 4
		Estimation System Support

First, there is a program office which is composed of two large groups of staff – we call these organizational units, divisions. Each division is managed by a second-level supervisor (who supervises front-line supervisors). Within each division are subgroups (branches); each branch is managed by a front-line supervisor.

The CES-National Division is composed of five branches. Two of these are devoted to producing, analyzing, and publishing national estimates. Two others are devoted to different aspects of data collection. One of these is focused on developing and improving data collection procedures, monitoring and changing data collection among the different modes, and monitoring contract issues. The other is focused on managing the sample and monitoring the transport of sample panels out to the data collectors, and monitoring the

transport of collected data back to BLS central servers. The final branch is focused on research and on the annual benchmark – aligning national CES estimates to a population value once per year to ensure that the employment level remains accurate. The final group associated with the CES National Program is a division providing support for the national estimation system.

The CES-State & Area Division is composed of four branches. All four of these branches are devoted to producing, analyzing, and publishing state & area estimates. In addition to this, the four branches each have several special focus areas: (Estimation 1) microdata, training, and documentation; (Estimation 2) estimation, research, and systems; (Estimation 3) seasonal adjustment and data warehousing; and (Estimation 4) benchmarking and publications. The final group associated with the State & Area Division is an estimation system support team that is part of the Iowa (state government) Department of Workforce Development.

Within the Office of Employment and Unemployment Statistics, which includes the CES Program Office, there are also two support offices: the Statistical Methods Staff and the Employment Research and Program Development Staff. The first office is composed of Mathematical Statisticians who directly support specific programs in OEUS with statistical production and research. The second is composed of Ph.D. Research Economists tasked with developing and evaluating new economic data products. The support of these units is critical to CES improvement efforts.

A number of BLS organizations are involved in providing support for the program:

- The Office of Administration (OA) provides a wide range of support, including administrative services, financial management and budget services, human resources services, and management services.
- The Office of Technology and Survey Processing (OTSP) provides survey processing services, develops and maintains specialized survey and database software, and designs and maintains the BLS network and other technology infrastructures.
- The Office of Field Operations (OFO) is responsible for managing most data collection for the BLS. They manage the collection of data by BLS staff, and ensure data quality for surveys collected by contractors. The OFO staff are also responsible for managing the contracts, communications, and deliverables from our state partners.
- The Office of Publications and Special Studies (OPUBSS) provides publication services, marketing services, and researches new media opportunities.
- The Office of Survey Methods Research (OSMR) provides survey research support, including expertise in both statistical and cognitive procedures and methodologies.

Each of these support offices provides support critical to the ongoing operations of surveys at the BLS. As a manager at BLS, one of the key managerial issues I focus on is maintaining excellent communication and cooperation between my staff and these critical support personnel.

6. CES Staffing

The CES program is directed at the highest level by the Associate Commissioner for Employment and Unemployment Statistics, and by the Assistant Commissioner for Industry Employment Statistics. These two executives provide longer-term strategic direction and program oversight. Within the CES Program Office, federal staffing is as follows:

Total Program Office federal staff	94
Division Managers	3
Branch Chiefs	10
Non-supervisory Technical Experts	1
Senior Technical staff	25
Career Ladder staff	55

CES also has staff supporting its data collection systems in the Office of Technology and Survey Processing, as well as other staff in that office who support the infrastructure (e.g., network, network security, servers, and server security) required for these systems and staff to operate. There are also staff that support CES data collection systems, staff that support statistical production and research, staff that support economic product research, and staff that support various administrative requirements. In total, staff compensation in Fiscal Year 2015 was $59 million, about 97 percent of the total survey cost.

Employee type	Cost (FY2015)	Percent
All employees and contractors ~595 FTE[5]	$59M €52M	100
Federal, ~ 181 FTE	$26M €23M	44.0
State, ~ 84 FTE	$ 8M € 7M	13.6
Contract, ~330 FTE	$25M €22M	42.4

Staffing is, of course, a critical issue that every manager must pay attention to. The manager must ensure that vacancies are filled promptly with the highest qualified applicants. In addition, the manager must ensure that recruiting and hiring practices adhere to the applicable personnel and staffing rules set forth by OMB. At the BLS, we count on our partners in the BLS Human Resources office to assist us in ensuring that we comply with the appropriate OPM, DOL, and BLS guidelines for staffing, employee relations, and labor relations.

7. Managing Relationships with Support Organizations

No one operates in a vacuum. Part of managing risks in a survey organization is to identify key personnel who may be needed to assist the program in various scenarios. In order to be an effective survey manager, the manager must first identify the support offices that may conceivably have an impact on survey operations, and then identify and cultivate key contacts within those support organizations. For example, if key staff experience computer failure at a critical time during production – that is not the best time to start figuring out who to call. A more proactive plan is to identify this risk ahead of time, identify and cultivate the appropriate mitigation contacts, and work with them to develop and document an agreeable corrective strategy. These strategies and contacts should be shared with key personnel in your survey organization – enabling your staff to be more knowledgeable and capable of managing problems proactively rather than managing from crisis to crisis.

[5] FTE is Full Time Equivalents, or positions that add up to a full time position. Most positions working on CES are full time, except for a share of the data collection contractors that work part-time.

7.1 CES Federal/State Partnership

The CES program operates as a federal/state partnership. The BLS provides funding under a Cooperative Agreement legal framework for states to participate in specific program operations. For CES, the BLS is responsible for the technical aspects of the survey, e.g., sample design and estimation, and is also responsible for most data collection, IT systems, estimation of national, state, and metropolitan area estimates, and publication of estimates on the BLS website. States are responsible for a limited amount of data collection, mostly of state government data. In addition, states are responsible for providing information to BLS about local economic events important to small domain estimates that may not have been part of the sample. States are also responsible for publishing state estimates on their own websites and for serving as a local media contact and as a contact for local data users.

The BLS works with the states in multiple ways. First, we work with them directly through the Cooperative Agreement program, and the BLS Regional Office staff monitor the status of the agreement deliverables. Next, each program has a Policy Council that is composed of BLS and state staff. The purpose of the Policy Council is to work towards program improvements and to ensure that program issues are fully communicated both to BLS staff and to state staff. This important relationship has substantively improved, for example, the quality of smaller domain estimates by identifying areas where the original estimators were not performing well. This identification of problem domains has served as a motivation to research improved estimators. The Policy Council has been involved in many such improvements over the years. The Policy Councils operate under the authority of the BLS Labor Market Information (LMI) Oversight Committee (BLOC)[xx]. This is a BLS sponsored committee (composed of BLS and state members) responsible for developing strategic plans to govern broad program changes, and to ensure that changes are implemented in a cooperative and coordinated manner.

8. Statistical Foundations

The CES survey is based, as all modern surveys should be, on a probability design. The sample is allocated to efficiently utilize the available resources to ensure that the national estimates are of high quality, and to ensure that the standard error is minimized for the targeted sample size (i.e., the resource constraint) for each state's total private industry employment estimate. The sample overlap with the prior year is controlled as part of the sample selection process in order to utilize the data collection and initiation resources efficiently. The sample allocation, selection, and weighting procedures utilized for the CES survey provide a sound statistical foundation from which accurate estimates of employment change can be made. The probability sample allows for the production of standard errors, facilitates model-based composite estimates in smaller domains, and provides a firm basis for evaluating the quality of the estimates obtained versus those expected. An annual process, called benchmarking, is used to evaluate the overall effectiveness of the sample-based estimates. The CES survey, unlike most surveys, has a population value (available at a lag) that it can be compared against each year. The accumulated survey error for each year is typically less than 0.4 percent. This error may also be described as the joint error between two alternative data collections, one a survey and one a census.

Survey managers should be aware of the statistical foundations for their survey, and should ensure that the sample allocation, selection, weighting, imputation and non-response adjustment, estimation, and alignment with population values are all procedures developed

with ties to established statistical literature. Deviations from established statistical procedures should have well documented research that supports the use of non-standard procedures or procedures that have extended the boundaries of mainstream survey practices.

9. CES Data Collection

Data collection is another of the many important activities that a survey manager should be paying attention to. Because the CES survey is a repeated monthly survey, I pay attention to this activity most days of the month. For CES, the reference period is the pay period that includes the 12th day of the month. As a result, I pay attention every day to the initial response rates from the end of that week through the cutoff for data collection for the production of the initial estimates (typically Monday of the week that includes the first Friday of the following month). Data are collected in multiple modes in various Data Collection Centers around the nation. Data Collection Centers (DCC) are located in Atlanta, Georgia; Fort Walton Beach, Florida; Dallas, Texas; and Kansas City, Missouri. The BLS Electronic Data Interchange (EDI) Center is located in Chicago, Illinois. The Internet Data Collection Facility (IDCF), Touchtone Data Entry (TDE), and Broadcast Fax systems are located in the Washington, D.C. national office.

Funding for data collection is over half of the annual survey budget, at $33 million in FY 2016. Much of this funding supports contract staff who initiate businesses into the survey, follow up with them for ongoing collection for several months, and then roll them over to an electronic data collection method (usually Web collection at the IDCF).
CES data collection is multi-modal. Data collection methods include several modern methods:

Method	**Percentage of Collection**
Computer Assisted Telephone Interviewing (CATI)	28%
Web collection (IDCF)	17%
Electronic Data Interchange (EDI)	44%

EDI is a method used to collect data from very large multi-worksite employers, who have hundreds or thousands of worksites across the U.S. In this method we work with the employer to format the data and then each month get an electronic file from the employer in this agreed-upon format.

CES data collection also includes some legacy methods:

Method	**Percentage of Collection**
Fax	4%
Touchtone Data Entry (TDE)	3%
Other methods (special arrangements, state collection, mail)	4%

Collection rates for the CES survey are publicly posted on a monthly basis[xxi], and include the collection rates for the first, second, and third release of data. In 2015, these rates were 78.4%, 93.2%, and 96% respectively. Note that the collection rate is not strictly a response rate. A response rate includes in the denominator all in-scope sampled units – even if the unit has expressly indicated that they will not respond. The collection rate takes hard-core refusals – who may have responded for previous years – out of the denominator because

these are repeated collections from the same business. Therefore, the collection rate can be interpreted as the repeated collection of data from in-scope businesses who have not refused to participate. The initiation rates for the CES survey are more akin to a traditional response rate; these rates are around 73 percent (for 2015).
Collection rates are produced for each of the 3 national closings and 2 state closings, and are produced both by percent of worksites and by percent of employment collected.
CES data collection is discussed in more detail in a 2012 paper[xxii] by Robertson and Hatch-Maxfield.

Best practices for data collection fall into various categories, including:
- Consistency of collection procedures
- Paneling
- Initiation procedures
- Rollover procedures, e.g., how to roll a business from CATI to Web
- Monitoring of data collection at the data collection center
- Monitoring aggregate data collection
- Data quality procedures
- Microdata review and editing procedures

Because CES has several data collection centers, one issue of concern is consistency of data collection procedures across these DCCs. In order to ensure reasonable consistency, several meetings are held each year for the DCC managers to attend. At these meetings, the managers discuss issues with new procedures and share best practices. The forum allows some flexibility of approach for each DCC, while ensuring that core collection methodologies and scripts are adhered to.

Paneling, or subsetting a sample into various groups, must consider various aspects of quality, cost-effectiveness, randomness, and respondent burden. The CES program staff consolidate multiple worksite collections for a single business into a single panel directed towards a single DCC in order to minimize respondent burden. Outside this exception, panels are controlled to distribute units by industry and size across all DCCs, and to control the set of industries that are solicited each calendar quarter.

In addition to the paneling, many other quality measures are in place with respect to data collection. First, each DCC has in place a quality assurance program. Included in this program are periodic reviews of solicitation and data collection calls [the phone system allows supervisors to monitor calls in progress and to record calls for later review]. Each DCC monitors its own response rates against targets, including item response rates. In addition to this monitoring, the supervisors, managers, and executives at the BLS also monitor the aggregate response rate by DCC to be able to identify issues such as data file transmission problems as early as possible. The DCC data collection system (called TopCATI) runs internal and longitudinal edits to verify data quality. These edits are also run on all data that come in through electronic collection methods. A final microdata quality review occurs immediately preceding estimation, where economists review data that appear to be unusual. Finally, macrodata or estimates review can also raise questions about the accuracy of particular microdata responses. When the accuracy of a response is questioned the case is routed to the collecting interviewer for recontact if the data was collected via CATI, or it is sent to the CES Help Desk for a follow-up call if the data were collected electronically. These many quality assurance processes, among others, ensure that the CES microdata are of high quality, and that the estimates produced from them have a high level of reliability.

10. CES Data Processing Systems and Activities

Another set of issues I believe a survey manager must pay attention to is data processing systems. This includes sampling and sample-weighting software, paneling software, respondent call schedulers and data collection systems, microdata databases, microdata editing and review systems, macrodata review systems, seasonal adjustment software, and software to facilitate the analysis of estimates.

Systems must be designed according to appropriate architectural standards, and coded, tested, and deployed using defined development methodologies and utilizing modern software and security standards. Critical production systems must be managed under a change control procedure; only approved and tested changes should be deployed into the production environment. A critical quality control measure is to assure that each system has good software documentation (i.e., self-documenting code in addition to documents/artifacts describing the system and its purpose) and good user documentation.

Data processing activity best practices can be summed up in two words: documentation and redundancy. Data processing activities should be very well documented. The CES program does this by first drafting production documentation that tells a staff member what to do step by step to accomplish a task. The document is then handed to another staff member, who watches the experienced person complete the task and notes any deviation or omission from the documented processing steps. After updating the document, another staff member is asked to do the task, with the experienced person watching the work and noting any difficulties in interpreting the documentation. In this manner, clear and effective task-specific documentation is developed to ensure that production tasks are done the same way every time, and that others can follow the documentation to reproduce the same production task when needed. All critical tasks have at least two staff members who are trained to perform the task, to ensure that illness, accident, or vacation time does not impact required production processes.

For production tasks that fall into a data verification category, I can't emphasize enough the need for very strong verification procedures. It is critical that multiple staff members verify that the database loaded "behind the firewall pre-release" be verified to ensure that the newest data points are correctly included as part of that database. Similarly, all publication tables should be thoroughly verified to ensure that the newest data points are accurately portrayed. Extensive cell by cell verification is done when a new table is designed. Every month, when new data are produced, at least one row and one column of each table are fully verified by at least two people against the originating database to ensure that the data were correctly captured in the table. Similarly, every number referenced in a news release or in a supplemental table or document is verified by several people against the original source. Finally, every characterization in the news release package is carefully scrutinized to ensure that it is fully supported by the data, and that it conforms to the high standards BLS has for objective reporting of the data.

11. CES Best Practices for Publication and Dissemination

Best practices for publication are defined in part for Principle Federal Economic Indicators by the Office of Management and Budget. Key principles are to:

- Release the data promptly

- Announce the publication schedule well in advance
- Announce any changes to the data collection, analysis (or the structure of the news release), or estimation methodology changes as far in advance as possible
- Control prerelease access to prevent prerelease disclosure
- Evaluate indicators periodically
- Periodically evaluate release procedures, security procedures, and availability and accuracy of documentation.

Other best practices have been defined by the Bureau of Labor Statistics. These include:
- Procedures for verifying that the data in publication tables are accurate
- Procedures to verify that data values in news release text are accurate
- General guidelines for writing analyses of data in news releases
- A requirement to automate every possible part of the regular news release production and supplemental files production process

Additional best practices have been defined by the CES program:
- Be as transparent about survey processes as possible; in order to achieve this, extensive documentation about the program should be available to the public and accessible on the BLS website[xxiii, xxiv, xxv]
- Maintain a Frequently Asked Questions (FAQ) document and ensure that it is available and accessible on the BLS website[xxvi]
- Develop template answers for specific topical events and share them with those who answer questions from the public, e.g., how an employee should respond to questions about a recent labor strike
- Develop timely and helpful analyses about major sectors of the economy and ensure that the document is available to supplement the news release[xxvii]
- For state data, create data tables[xxviii] that can be sorted online by
    - state and employment levels
    - over-the-month and over-the-year level and percent of employment change
- Provide information on the reliability of the estimates[xxix]
- Provide detailed information on how data are seasonally adjusted[xxx]

12. Final Thoughts

Managing a survey is a bit of a juggling act, as many facets of survey management and operations must be occurring simultaneously. Given this, it is essential that a survey manager have a cadre of highly qualified and motivated supervisors and staff to assist in this complex endeavor. It is essential that managers and their key staff maintain effective relations and communications with the many organizations that support the survey and its operations. And, it is extremely important that the survey manager maintain a robust research program to improve various parts of the survey that contribute to its micro- and macro-data quality, timeliness, and cost-effectiveness.

Finally, it is important that the survey manager understand the larger framework within which the survey operates. This is needed to ensure that appropriate resources are available to each of the survey components when needed.

Any opinions expressed in this paper are those of the author and do not constitute policy of the U.S. Bureau of Labor Statistics.

References

[i] National Research Council (2013). *Principles and Practices for a Federal Statistical Agency*, Fifth Edition, http://www.nap.edu/catalog/18318/principles-and-practices-for-a-federal-statistical-agency-fifth-edition

[ii] U.S. Office of Management and Budget (OMB) https://www.whitehouse.gov/omb/

[iii] OMB Standards and Guidelines for Statistical Surveys https://www.whitehouse.gov/sites/default/files/omb/inforeg/statpolicy/standards_stat_surveys.pdf

[iv] OMB Guidance on Collecting Information Surveys https://www.whitehouse.gov/sites/default/files/omb/inforeg/pmc_survey_guidance_2006.pdf

[v] CIPSEA Implementation Guidance https://www.whitehouse.gov/sites/default/files/omb/assets/omb/inforeg/proposed_cispea_guidance.pdf

[vi] North American Industry Classification System (NAICS) http://www.census.gov/eos/www/naics/

[vii] Standard Occupational Classification System (SOC) http://www.bls.gov/soc/

[viii] OMB Delineations of Metropolitan Statistical Areas https://www.whitehouse.gov/sites/default/files/omb/bulletins/2013/b13-01.pdf

[ix] OMB Standards for the Classification of Federal Data on Race and Ethnicity https://www.whitehouse.gov/omb/fedreg_1997standards

[x] OMB Standards for the Release and Dissemination of Statistical Products https://www.whitehouse.gov/sites/default/files/omb/assets/omb/fedreg/2008/030708_directive-4.pdf

[xi] OMB Standards for the Compilation, Release, and Evaluation of Principle Federal Economic Indicators https://www.whitehouse.gov/sites/default/files/omb/assets/omb/inforeg/statpolicy/dir_3_fr_09251985.pdf

[xii] Robertson, Kenneth W., and Eltinge, John L. (2013). *Compilation and Management of Labor Market Statistics for Macroeconomic Analysis at the U.S. Bureau of Labor Statistics*. Second National Statistics Conference (MyStats 2013) in Kuala Lumpur, Malaysia, http://www.bnm.gov.my/documents/conference_vol/2013_MyStats/np/Paper_Session%202(A)_John%20Eltinge%20(BLS).pdf

[xiii] U.S. Office of Personnel Management (OPM) https://www.opm.gov/

[xiv] CIPSEA legislation https://www.whitehouse.gov/sites/default/files/omb/assets/omb/inforeg/cipsea/cipsea_statute.pdf

[xv] BLS confidentiality pledge http://www.bls.gov/bls/confidentiality.htm

[xvi] U.S. Department of Labor https://www.dol.gov/

[xvii] BLS' Quarterly Census of Employment and Wages (QCEW) http://www.bls.gov/cew/

[xviii] Dummies.com gives an overview of the impact of the jobs report on financial markets. http://www.dummies.com/personal-finance/investing/resources/how-the-employment-report-affects-financial-markets/

[xix] The Generic Statistical Business Process Model (GSBPM) is a Common Metadata Framework (CMF) prepared by the Joint UNECE / Eurostat / OECD Work Sessions on Statistical Metadata (METIS). Part C of this framework refers to the phases of the statistical business process. The model can be found at http://www1.unece.org/stat/platform/display/metis/The+Generic+Statistical+Business+Process+Model

[xx] The charter for the BLS Labor Market Information Oversight Committee (BLOC) can be found at http://www.bls.gov/advisory/bloc.htm

[xxi] CES employment revisions and sample collection rates can be found at http://www.bls.gov/ces/cesrevinfo.htm

[xxii] Robertson, Kenneth W., and Hatch-Maxfield, Julie (2012). *Data Collection in the U.S. Bureau of Labor Statistics' Current Employment Statistics Survey.* Conference on New Frontiers for Statistical Data Collection, United Nations Economic Commissioner for Europe. http://www.unece.org/fileadmin/DAM/stats/documents/ece/ces/ge.44/2012/mtg2/WP20.pdf

[xxiii] See the BLS *Handbook of Methods* (chapter 2) http://www.bls.gov/opub/hom/pdf/homch2.pdf

[xxiv] CES National website: http://www.bls.gov/ces/

[xxv] CES State and Area website: http://www.bls.gov/sae/

[xxvi] See CES FAQs at http://www.bls.gov/web/empsit/cesfaq.htm

[xxvii] See *CES Highlights* at http://www.bls.gov/web/empsit/ceshighlights.pdf

[xxviii] See CES state data table at http://www.bls.gov/web/laus/statewide_otm_oty_change.htm

[xxix] See CES reliability information at http://www.bls.gov/web/empsit/cestn.htm#section1c

[xxx] See CES seasonal adjustment files and documentation at http://www.bls.gov/web/empsit/cesseasadj.htm