

## WEB COLLECTION FOR THE COVERED EMPLOYMENT AND WAGES (CEW) PROGRAM

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### ABSTRACT

The Bureau of Labor Statistics Covered Employment and Wages Program is developing a web-based collection program to address the data collection needs of its Annual Refiling Survey (ARS) and Multiple Worksite Report (MWR). The purpose of the ARS is to review and update the classification codes assigned to the 8 million worksites on this database. Approximately 1/3 of these worksites are reviewed each year. The purpose of the MWR is to disaggregate the employment and wages collected from tax reports (statewide) to the worksite level to meet the industrial and geographical needs of the program. Approximately 120,000 legal entities provide these data for 1.2 million worksites each quarter.

This paper focuses on the different approaches that will be used to design and implement these web based collection systems. Differences in the collection periodicity, employer contacts, survey content, employer size (number of worksites), solicitation procedures, testing environment, and other relevant issues will be used to determine the best approach for both surveys. This cost/benefit analysis will help determine which employers within each survey are best suited for web-based collection.

### Introduction

The Bureau of Labor Statistics' (BLS) Covered Employment and Wages (CEW) program is a Federal/State Cooperative statistical program. BLS provides the funding, procedures, operating manual instructions, and guidelines for the states to collect, edit, review, and publish information on various data elements of businesses that are subject to the Unemployment Insurance (UI) laws of each state. Each year, the states sign a contract with BLS, called the Cooperative Agreement, that lists the various program deliverables and due dates and specifies that the states adhere to the statistical methodology provided by BLS.

Since state UI laws require coverage of almost all non-farm employers in the United States, the CEW data represent a virtual census of non-farm workers (approximately 97 percent) and their wages. The CEW program also collects information on the number of employers and other business identification information used by BLS and the states for statistical purposes. Included in this business identification information are the trade name and the physical location address for each employer. For employers that have more than one

worksite within a state, similar information is collected for each worksite (establishment). In addition, the employer is asked to provide a description for each worksite (meaningful to the business, e.g. a store number) that can be used to distinguish each of their worksites.

Using the administrative records of the state UI system as a base, the CEW program builds a cost-effective, dynamic database of employers and information on their workers, wages, and business characteristics. For the vast majority of data, the CEW program utilizes these administrative records and the state's own data collection forms, supplementing them with BLS forms where additional information is needed for statistical purposes.

The CEW program uses four forms to collect the data required to meet program needs. Two of these are state forms and thus, BLS staff has no control over the content or placement of questions on the forms. The first is the Status Determination Form (SDF) and the second is the Quarterly Contribution Report (QCR). The BLS forms were developed to supplement the administrative data to meet the needs of the CEW program. The first of the BLS forms is the Annual Refiling Survey (ARS) and the second is the Multiple Worksite Report (MWR). The purposes of these forms will be explained in more detail later in this paper.

To gain some perspective of the CEW program workload, there were approximately 8 million worksites reported by the fifty states, the District of Columbia, Puerto Rico, and the Virgin Islands for the third quarter of 2002. Approximately 6.8 million worksites were reported as being single establishment employers, whose employment and wages data were collected from the state QCRs. The employment and wages data and other business identification information for the remaining 1.2 million worksites were collected from the MWRs. There are approximately 6.9 million legal entities with only about 120,000 providing the MWR data. The term legal entity is used here since many large employers have accounts in more than one state and are thus counted more than once. The MWR employers only represent about 2% of total employers, but they constitute 15% of the total number of worksites and a stunning 38% of the Nations' employment. This last statistic alone shows the critical role of the MWR in the CEW program.

The main purpose of ARS and MWR web collection is to reduce the costs of data collection (printing forms, postage-out and return, and staff handling—opening, sorting, editing, data entry and filing). It may also reduce staff time in editing these data as some collection and review issues (requiring employer contact to resolve) may be

addressed prior to the employer completing the submittal of these data. BLS does not envision that this system will reduce the employer respondent burden or affect employer response rates. Based on anecdotal evidence, some employers may have the perception that web collection is actually less time consuming than manually completion of the form. At various payroll conferences attended by BLS staff, employers have asked when this option will be available and stated their preference for this submittal method.

Several studies conducted by the US Census Bureau (CB) have revealed that response rates overall were not affected by using web collection. Their studies focused on which initial solicitation procedures were the most effective in obtaining a web response. Again, cost factors were the primary motive for their using the web. CB staff did not want the use of web collection for these surveys to increase their overall survey costs by raising the number of initial non-respondents. See Nichols, Marquis, and Hoffmann, "The Effect of Motivational Messaging on Mode Choice and Response rates in the Library Media Survey".

## **Background**

As noted earlier, almost all employers are required to cover their workers for UI purposes. The purpose of this coverage is to provide funds for a temporary period to eligible workers who are laid off through no fault of their own. The dollars paid in benefits to these workers are collected from employers each quarter and stored in a trust fund until needed. The CEW program was initially created to measure the number of workers eligible for benefits. For more detailed information on UI coverage provisions as well as selected exclusions, see Farmer and Searson, "Use of Administrative Records in the BLS CEW Program".

The initial step in the new employer registration process is the completion of a SDF. This form is used to determine whether the employer is subject to UI coverage. Each state has its own SDF, and consequently, these forms vary in style, content and format. The SDF requests employers to provide information on the number of their employees, number of weeks employed, and, their payroll for a certain period of time. They are also asked to provide information on the legal type of their business (corporation, partnership, etc.); expected economic activities; physical location address (es) and names of the counties in which their businesses are situated; and whether the businesses are in the private sector, a governmental entity, or nonprofit organization.

The state CEW staff then review the information provided and assign an initial industrial, county, and ownership code to each worksite of the new employer. These codes are an integral component of the CEW program as they determine the industrial and geographical cell to which this employer's data is summarized. It is important that these codes are accurate as the CEW's micro data (worksite level) are used as the sampling frame for most BLS

business surveys; generally the sampling frame is about 7 months old. Likewise, the updated employment and wages macro level data (summarized by industry, geography, and ownership) are used by these same surveys as population controls for reference period employment. The macro level data are also used by the Bureau of Economic Analysis in the preparation of the Personal Income component of GDP.

## **Annual Refiling Survey (ARS)**

These extensive uses require that these codes be periodically reviewed to determine whether a business has changed its economic activity or relocated and/or expanded to additional locations. To conduct the statistical review of these data elements, BLS authorized and developed the Annual Refiling Survey (ARS). Each year states mail an ARS form to approximately one-third of all employers, who are asked to review their currently assigned industrial and geographical classification codes. The selection is based on an employer's federal Employment Identification Number (EIN). By using the EIN as the selection factor, all locations of the same enterprise (those using the same EIN) will be contacted the same year, even if they have employees in different states. To facilitate the collection of this information, BLS developed separate survey forms for employers with only one worksite (the 3023-NVS) and those with multiple worksites within the same state (the 3023-NVM).

Employers sent the NVS form are asked to review an industry description that lists economic activities corresponding to the industry code to which they are currently assigned. If the description is correct, the employer simply checks the 'yes' box on the form. If the employer thinks the description is not correct, they check the 'no' box and is then asked to provide a description of their economic activities. In addition, the employer is also requested to review and update, if necessary, its physical location address and the address to which BLS survey forms should be mailed for completion. Finally, on the NVS form, single worksite employers are also asked if they still have only one worksite. If the answer is no, then the employer is requested to provide the physical location address, economic activities, and county of each of the worksites. This information is used to determine whether this employer needs to be sent the other CEW program statistical form, the MWR.

The 3023-NVM is used to verify and update, if necessary, the same data elements for all of the worksites of the employer. Each worksite has a trade name, physical location address, current assigned county, and worksite description printed on the form. If the employer has different industrial codes assigned to their worksites, then an industry description for each set of worksites with a specific industry code is printed. This process is repeated until all appropriate industry codes and their applicable worksites have been listed. For example, if one employer with 50 worksites has 10 worksites in five different

industry codes, then the 3023-NVM form will display the first 10 worksites with the appropriate industry code and a check box for each worksite. This process will be repeated until all of the worksites appear with their appropriate industry description.

It is important to note that employers who have multiple worksites within a state usually perform the same industrial activity at each worksite. This is a critical factor when evaluating which employers would make good candidates for ARS web collection. Another critical factor in the web collection analysis process is the availability of employer contact information. Although the ARS forms request the name, title, and phone number of the person completing the form, this information is not always entered into the state's CEW database. (For more detailed information on the ARS process, see Searson "Automated Data Collection Strategies for the Covered Employment and Wages Program".)

Approximately 2.6 million employers were selected for the FY 2003 ARS and mailed a 3023-NVS form (single worksite employers). Approximately 36,000 employers were mailed the 3023-NVM forms (multiple worksites).

### Multiple Worksite Report (MWR)

As noted earlier, the UI program requires employers to file a QCR. The QCR collects information on the number of employees working in each month, their wages, their taxable wages, and the contributions due from the employer based on their current tax rate and their taxable wages.

Since employers provide these data for UI tax purposes, they are reported for all employees that the employer has in that state. This information suffices for employers with only one worksite, but it is insufficient for employers with multiple business locations. Since the single worksite employer only has one industrial, county, and ownership code assigned, all of its employment and wages will be assigned to those codes. This single code assignment is inadequate for employers with numerous locations (possibly in different counties) and/or business activities (possibly in different industrial codes). These codes are critical to the extensive usage of these CEW data as a sampling frame and/or population controls for most establishment-based BLS surveys.

To deal with this situation and to insure that the employment and wages of each worksite of an employer were properly assigned to the correct industry and county, BLS developed the Multiple Worksite Report (MWR) in 1991. In a sense, the MWR is a supplement to the QCR since it is a dis-aggregation of the employment and wages that were reported on the QCR. Thus, the MWR collects employment and wages data at the worksite level and each of these worksites is assigned a specific industry and geographical code. The employer is also requested to provide the trade name for each worksite, its physical

location address, and a worksite description uniquely identifying it in their payroll system.

Every quarter each State mails the MWR form to all employers meeting the CEW program criteria. The MWR lists all of the worksites identified by the employer on the prior quarter's MWR form. Any updates to the worksites' addresses, trade names, and/or worksite descriptions are noted on the next quarter's MWR form. The employer is requested to post the employment for each month of the quarter and the quarterly wages for each worksite. The employer is also requested to add new worksites and note those that are closed or sold to another employer. Any further updates to the business identification information for each worksite are also requested on the MWR form. The MWR forms also request the name, title, and phone number of the person completing the form in the event that the state needs to contact this individual concerning their responses to the survey questions. Most states enter this information into their CEW database since this information is used on a frequent basis. If the state did not enter this information, it is not difficult to retrieve from the latest available MWR form.

A quick review of the factors presented for the ARS and MWR forms are noted below in Table 1. This information will be important in determining the most cost-effective approach to implementing web collection in these surveys.

**Table 1**

Factor	ARS	MWR
Collection mode	paper-decentralized (States)	Paper-decentralized (states) Electronic-centralized-EDI Center
Collection Frequency	annually- once every 3 years	quarterly
Employer Familiar With Form	No	Yes
Contact Info. Name, Phone #, Title,	generally not available	on state database
Fax #	generally not available	on form
Type of Employer	most small, some medium, very few large	medium to large to very large

### Factors Impacting MWR Web Collection Strategy

In addition to exploring web collection, BLS has also implemented other data collection methods to reduce survey costs. Some methods have also resulted in a reduction of the employer respondent burden. In 1995, BLS opened the Electronic Data Interchange (EDI) Collection Center in Chicago to expedite the collection of MWR and other statistical data from large employers.

These employers were defined as those having hundreds or thousands of worksites located across the country. One principal advantage to this system is that the employer sends one file to BLS, which then edits the data and forwards the MWR data electronically to the appropriate states. During discussions with employers on this proposal, BLS staff became cognizant of the use of specific employer payroll/tax software used by these large employers. In addition, BLS became cognizant of the use of payroll/tax provider firms (also known as service bureaus) by employers of all sizes.

BLS staff then initiated efforts to have these payroll/tax software developers and payroll/tax preparer service firms include the electronic transmittal of the MWR data to BLS as a product of their software for the former group or a service that they would provide for their clients for the latter group. The latter group is important to MWR web collection as some of these firms with numerous locations in a state may already use one of these payroll firms to provide their MWR data to BLS. Employers are not required under federal law to file the MWR; however, slightly more than half the states do require its completion under various state laws or regulations.

### **Factors Impacting ARS Web Collection Strategy**

The same legal requirements cited above for the MWR also apply to the ARS, except that less than half the states mandate it be completed. Neither the software developers nor the payroll/tax filing service firms have shown any interest in providing ARS type information for their clients. This response is not surprising given the fact that the ARS is only completed once every 3 years and the payroll staff is not likely to be responsible for its submittal.

Beginning in FY 2002, BLS initiated a Touchtone Data Entry response system for the ARS in five test states. The results were so impressive and the costs were so low relative to the savings that the project was expanded to forty states in FY 2003. In FY 2004, all states will be required to use the system. The BLS system, known as the Touchtone Response System (TRS), is limited to those single worksite firms that have valid industrial and geographical codes and a physical location address. The employer is only eligible to use the TRS if the information pre-printed on the paper supplied 3023-NVS form is correct. In lieu of using the postage-paid envelope that is provided, the eligible employers are invited to call the toll free number and answer a few questions regarding their ARS form. Of the employers that were eligible, approximately 28.2 % responded using TRS during FY 2003.

BLS is also examining the potential use of a fax-out and fax-back system for ARS. This system would yield more cost savings than the TRS, as it would also eliminate the cost of printing the ARS forms and outgoing postage. In addition, the fax ARS system would allow those employers

with updates to the data collected on the 3023 form to fax the form to BLS.

One main issue with the fax-out/fax-back ARS proposal is the current lack of employer fax numbers on the quarterly employer data files that states send to BLS. A cursory review of state SDFs reveals that only half the states collect the fax number during the registration process. BLS is currently pursuing the potential acquisition of these fax numbers from private firms that specialize in employer related databases for marketing purposes. A costly alternative to this approach is to have the state staff enter the fax numbers from the returned paper ARS forms. One other alternative to this approach is to mail the ARS from to the employer and request the employer to fax the ARS form back to BLS. This step would cut costs and also capture the employer's fax number for use in future years.

As noted earlier, the fax-out/fax-back system saves more money than TRS, assuming that BLS can obtain the fax number of the employer. That system could also be used for both single and multiple worksite employers. The TRS targets only single worksite employers with no missing data and valid industrial and geographical codes. Thus, BLS staff is exploring numerous ARS options at the same time that the web-based collection is being developed.

Another potential factor is employer size. One could assume that the small employer (1-10 employees) might not have access to a personal computer or to the Internet. Thus, this employer may not be a viable candidate for web collection. That certainly is one factor that will be studied during the test phase of this project. On the other hand, the employer with more than one worksite would seem more likely to have a personal computer. That hypothesis will be studied, too. Simply stated, the size of the employer-number of employees and worksites will be examined to determine the optimum size criteria for ARS web collection.

### **MWR Approach**

To begin the MWR web collection project, BLS identified 12 functions for the MWR. BLS then asked 12 states to review the proposed web collection functionality and determine if normal MWR data collection issues/problems were being addressed. The state staff did so during the collection and review of the paper MWR forms for one quarter and submitted their findings and recommendations to BLS. A review of these reports resulted in some modifications to the original functionality statements. The amended statements were sent to the states for a second round of review and appraisal. Following this second round of comments, further modifications were made to the proposed functionality.

Shortly thereafter, BLS staff met with the states to determine the final specifications. At these meetings, the state staff initially indicated that they wanted the system to deal with numerous reporting issues and to prompt the

employer to explain any data inconsistencies. After extensive discussion, the states concluded that the system should initially stress the data collection functions and pay less attention to resolving data reporting problems and data questions. In other words, the primary focus should be to collect the data. BLS plans to analyze the data reporting issues being experienced once the system is operational. The second version of the system will be designed to resolve these employer-reporting problems.

For the past 6 months, BLS staff has been using these functionality statements to develop the appropriate web screens. These screens will be reviewed by the BLS Cognitive Research staff and modified, as necessary, to insure that the final screens and procedures are understandable by the respondents. Upon completion of this step, BLS plans to conduct usability tests using our own staff to “fine tune” the collection instrument. This procedure was used quite effectively prior to the implementation of the TRS for the ARS. Prior to the initial testing of our web screens with employers, BLS will provide the initial “test” states with a final review opportunity.

Four common employer-reporting problems are addressed in this system. The first is the employer forgetting to list new worksites in the quarter that they open. This situation creates the second problem---the employment and wages for the worksites on the MWR, when summarized, do not match the data reported by the employer on its QCR because of the missing employment and wages of the new worksite. The MWR web system asks the employer if it has any new worksites to report for that quarter. After the employer indicates that the form is complete, the system summarizes the employment and wages for all worksites and asks the employer to match these totals with those reported on the QCR. If differences exist, the employer is asked to review the data provided and resolve the differences or provide an explanation, if possible.

The third problem encountered on the paper MWR form is the failure to provide employment and wages data for existing worksites. This occurs because some employers fail to complete the last page of the MWR. This situation will be addressed, as the employer will be prompted to provide data for all worksites. The fourth problem is created when the employer lists the employment and wages for “Worksite A” on the wrong line, e.g., Worksite B. The paper version of the MWR form does not print the employment and wages for the prior quarter. The MWR web version will provide this information, hopefully reducing the frequency of this problem. In addition, simple over the month and quarter comparisons will be used to note the larger mismatches of this type. It is hoped that these features will significantly reduce the staff time required to resolve these problems with employers.

#### **ARS Approach**

As stated earlier, the main goal for the MWR and ARS web collection is to reduce the costs of collecting and

reviewing these survey data. Although web screens for both the single and multi-worksites employers have been developed, BLS has determined that the ARS web collection for single worksite employers may not be as cost effective as the other data collection strategies (TRS and Fax) mentioned in this paper.

If other factors are used, the ARS web collection for single unit employers may have a special role e.g., the development of a “customized ARS” for employers in selected industries to resolve unique reporting problems. Assuming the Office of Management and Budget would approve modifications to the ARS forms, a tailored set of screens and questions could be developed to meet the additional needs of each industry. Thus, the goal for the web collection in these situations would be to improve data quality rather than reducing data collection costs. One could argue that to obtain the correct information on the paper ARS form, additional staff time would be required to contact the employer to clarify selected issues. This extra effort would offset the potential extra costs of web versus the TRS or fax methods.

For employers with multiple locations, the ARS web collection may have an added benefit of reducing the employer respondent burden. These web screens allow the worksite data and industry descriptions to be displayed in a more effective manner than the comparable 3023-NVM paper form. Consequently, the amount of time required for an employer to complete the survey would be reduced. A further reduction in the reporting burden for an employer and BLS costs can easily be achieved by using a “piggy-back” approach. When employers use the web to provide MWR data for the third quarter (collected in October), the system will ask them to review a few additional questions related to the ARS and BLS will not mail the survey forms to the employer. Since the MWR system asks the employer to review the trade name, physical location address, and worksite description for each worksite, there is no need to repeat this same process for the ARS. The only additional question to be answered is whether the industry description is correct.

#### **Solicitation Procedures and Research**

Determining the most cost-effective approach to contact employers to request their participation in web collection is not an easy task. The first step in this process was the need to become thoroughly knowledgeable of the required security procedures. BLS requires the use of a solicitation identification number (account number) and a password or a digital certificate for an employer to enter the BLS website and register for web collection for a specific survey. This information has to be provided in a letter explaining the purpose of the survey and noting web collection as an option.

Neither of the surveys collects an e-mail address for their contacts. Even if this information were available, the solicitation identification number and password could not be sent to an employer together in an unsecured e-mail

message. The only possible use of the e-mail method would be to ask the contact if they wanted information on web reporting as an alternative option to paper reporting. At this time, BLS survey staff is unsure if the security requirements allow this procedure. Assuming that it was approved, a letter with the appropriate information would be sent to the employer. Their registering at the BLS website would indicate their interest.

BLS plans to conduct some solicitation /research tests in two to three states. For the MWR web project, BLS needs to determine the maximum number of worksites that an employer would be willing to provide. Some employers obtain their employment and wages data for their worksites from screens accessing their payroll database. These employers then enter the appropriate data to the worksites listed on the pre-printed MWR form. These employers would probably be willing to provide their MWR data using web collection. BLS needs to determine how many worksites are too many before the employer feels that the process takes too much time.

Some employers do not manually complete the MWR form but send a computer generated listing of their data to the state, attached to the provided MWR form. In one test, the states will be asked to note those employers that provide a computer listing of their data rather than manually completing the MWR forms. These employers will be noted and tests conducted to determine if their response rates for switching to web collection differ from those manually completing the MWR forms. BLS also plans to test employers with a range of worksites to determine the maximum number of worksites before reaching the employer saturation point. Possible ranges to test may be those employers with 2-6, 7-12, 13-19, 20-25, and 25-50 worksites. During the employer selection process, BLS will also study whether employers that provide MWR data each quarter in a timely manner are more likely to respond to web collection than those that are routinely delinquent.

One other possible test would be to include a simple one question flyer in MWRs for selected employers. The flyer would ask the employer to check a “yes” or “no” box as to their interest in providing these data via the web. The employer would be instructed to return the completed flyer with the MWR for that quarter. The positive responses would be sent a letter explaining the program and their solicitation identification number and password. The yes/no responses would be evaluated in terms of the other factors mentioned earlier.

BLS’ initial plans are to mail the letter requesting participation in a separate mailing (without the MWR). The reason for this action is the timing of the collection of the MWR data and the state’s ultimate transmittal to BLS of these data. An employer’s MWR data for the first quarter is due to the state by April 30. Those same data are not provided by the state to BLS until July 26—close to the due date for the second quarter MWR. Thus, there is almost a one quarter lag between the time that the state

receives the data and it is sent to BLS. Thus, BLS does not have the most recent MWR data in their possession. When an employer wants to report using the web, BLS wants the most recent MWR data provided to the state to be on that database. This is to prevent the employer from having to provide updates (a second time) to the prior quarter’s worksites (e.g. new worksites, change in locations, etc.).

BLS will assess whether the cold letter solicitation or the MWR/Flyer approach is the most effective. The factors mentioned earlier will also be used to determine the best approach to study in the second phase of testing. After this initial research is completed, the results will be provided to additional test states (three to five) to further refine the best solicitation approach.

## Conclusion

The main challenge facing the CEW program is to find the most effective data collection strategies for a particular type of employer. Determining the most cost-effective solicitation approach for the MWR web collection is a critical issue since lowering data collection costs, without sacrificing data quality, is the ultimate goal. Another challenge is to determine which employers, based on various demographics, are good candidates for web collection of ARS or MWR data and thus more likely to respond using that method.

## REFERENCES

Farmer, T. and Searson, M. (1995), “Use of Administrative Records in the Bureau of Labor Statistics’ Covered Employment and Wages (ES-202) Program,” 1995 Bureau of the Census Annual Research Conference, Washington, D.C., March 1995.

Searson, M (2002), “Automated Data Collection Strategies for the Covered Employment and Wages Program”, American Statistical Association, New York, NY, August 2002.

Nichols, E., Marquis, K., Hoffman III, R. (2001), “The Effect of Motivational Messaging on Mode Choice and Response Rates in the Library Media Center Survey”, 2001 Proceedings of the American Statistical Association, Survey research Methods Section, Alexandria, VA.

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