

Improvements in the BLS Business Register:
Reducing Respondent Burden, Data Sharing, and Creating New Statistics Products

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Introduction

Substantial improvements to the BLS business register have been achieved in the areas of reducing respondent burden, increased data sharing, and the development of new statistical products. The development of Internet Web reporting and Touchtone Data Entry (TDE) data collection systems have reduced respondent burden, improved data quality, and reduced collection costs. These improved methods, along with the Bureau's Electronic Data Interchange (EDI) center, allow BLS to collect substantial company information from historically difficult respondents—Professional Employer organizations (PEOs)—and large companies that operate in the United States.

The BLS business register serves as the source for routine data sharing arrangements with the Census Bureau and the Bureau of Economic Analysis (BEA). On a quarterly basis, the Census Bureau receives millions of records with updated industry, geographic, and other information. BEA receives quarterly employment and wage data used for Personal Income estimates. Finally, a number of new statistical products have been recently developed or are under development using administrative data. New data on the U.S. labor market is available by linking individual establishment records to create Business Employment Dynamics (BED) data. A range of new products include: firm size data which provides insights into job creation and destruction at small, medium, and large firms; data on the age of business establishments examines the role of young and old businesses; and establishment birth and death estimates provide measures of entrepreneurial activity.

This paper describes the improvements to the QCEW Business Register in four main sections. Section one (1) details the inputs used to create the QCEW Business Register, the review process used to remove impurities from the input data, and describes the linkage process used to create a longitudinal database containing the employment histories of virtually every business in the United States. The second section (2) describes improvements to reduce respondent burden through the use of a touchtone data entry (TDE) system and through Internet web reporting. Section three (3) describes data sharing efforts with the Bureau of Economic Analysis (BEA), the Census Bureau, the National Oceanic and Atmospheric Administration (NOAA), and the Economic Research Service (ERS) with the Department of Agriculture. Finally, section four (4) describes new products that have been developed from the Business Register including new Business Employment Dynamics (BED) data and a new Green Goods and Services (GGS) survey that combines survey data and administrative data from the Business Register to create employment measures of the green economy.

1. Inputs of the QCEW Business Register

The QCEW Business Register is a relational database of 500 million records dating from 1990 through 2010 which are linked longitudinally to create a time-series of employment and wages for each establishment. The QCEW Business Register is based on the micro-data submitted

quarterly by the States from Unemployment Insurance (UI) tax files to BLS. Each firm is given a UI number which contains the data elements of monthly employment and quarterly wages, business name and addresses, industry classification, geocodes, and other administrative data. With these files, the QCEW Business Register provides reliable establishment and firm level data on a quarterly basis to its users.

Since QCEW data are based on administrative data, a significant investment is deployed to ensure that accurate employment, wages, industry, geography, and other information are accurately reported each quarter for every business establishment in the United States. This investment includes: (1) the development of two separate BLS data collection surveys to supplement the administrative data, (2) the development of advanced computer processing systems to review, edit, and publish accurate employment and wage data at the detailed national, state and county level data each quarter, and (3) the deployment of a federal/state management structure and staff at state, regional, and national offices to continuously improve the administrative data by setting quality goals and standards and identifying and correcting errors in the source data.

The QCEW Business Register is a list of active employer business establishments in the United States, Puerto Rico, and the Virgin Islands. Its principal sources of information are the State Employment Security Agencies (SESAs) of the fifty States and the District of Columbia (and Puerto Rico and the Virgin Islands). Employers report to the SESAs in compliance with State Unemployment Insurance (UI) laws, and for Federal civilian workers, in compliance with the Unemployment Compensation for Federal Employee (UCFE) program.

The QCEW Business Register contains data collected from four forms required to meet program needs. Two of these are state UI based forms: the first is the Status Determination Form (SDF) and the second is the Quarterly Contribution Report (QCR). The other two are BLS collections developed to enhance the administrative data. The first BLS form 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.

To gain some perspective of the size and workload associated with maintaining the QCEW Business Register, there are currently 9 million worksites representing 129 million employees reported by the fifty states, the District of Columbia, Puerto Rico, and the Virgin Islands as of the fourth quarter of 2010.

Approximately 7.8 million worksites are reported as being single establishment employers, whose employment and wages data are collected from the state QCRs. The employment and wages data and other business identification information for the remaining 1.2 million worksites are collected from the Multiple Worksite Report.

There are approximately 7 million legal entities with only about 120,000 providing the MWR report. 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. Thus, without the MWR, we could not accurately measure data about establishment births and deaths.

Status Determination Form (SDF)

All new employers which become subject to UI coverage are required to file a Status Determination Form with the UI unit in their State. This form is used to determine an employer's tax liability under the State's UI laws and to collect administrative information. The form includes basic identification information, including business name, mailing and physical location address, type of organization, Federal Employer Identification Number (EIN), and more. The Status Determination Form also requests information on industrial activity (NAICS code), county, and ownership (private sector, or Federal, State or local government). These codes are assigned by the SESA staff. If there is insufficient information on the Status Determination Form, the employer will either be contacted by telephone or mailed an Industry Verification Form to obtain the necessary information. In a sense, it is the State's equivalent of Social Security's Form SS-4, Application for a Federal EIN.

After employer liability is determined, the SESA UI unit assigns a UI account number. Most new employers are aware of their UI liability and request the SESA to supply a Status Determination Form when they begin their business operations. Some liable employers, usually small ones, fail to file a Status Determination Form. These employers may be discovered when the Internal Revenue Service (IRS) shares its list of new EINs with the SESA each quarter. Other means of discovering liable employers are through the UI claims process, the UI field auditor investigations, and an initial filing of the QCR without an UI account number.

Quarterly Contribution Report (QCR)

All liable employers are required to file a QCR with the SESAs for their UI accounts. These reports, like the Status Determination Forms, are administered by the UI program. All of the QCR forms request employment values for each month of the quarter and total wages, taxable wages, and UI taxes due for the quarter. This information and the taxes that are due are necessary for the operation of the UI tax system but they are also important for statistical purposes for the QCEW program. Employers are asked to report, among other items, the total number of covered workers (full and part-time) who earned wages (subject to UI taxes) during the pay period(s) which includes the 12th of each month in the quarter and the total payroll for the quarter. This report is mandatory for employers with a single location as well as employers with multiple locations in the State. The latter group of employers reports a summary of these data for all of their establishments covered under the same State UI account on the QCR. Therefore, establishment-level data for these employers do not exist in most State UI administrative files.

Multiple Worksite Report (MWR)

Business enterprises with more than one establishment in a State are requested to file a Multiple Worksite Report (MWR) for each establishment. The EIN provides linkages among establishments of the same business enterprise across States. The EIN for establishments on the QCEW Business Register is obtained from the initial Status Determination Form and updated, if necessary, based on the quarterly UI tax form. This more comprehensive disaggregation of multi-establishment accounts is available in the QCEW Business Register which is almost entirely at the establishment level and thus provides more accurate industrial and geographic information.

The MWR is collected each quarter to disaggregate the employment and wages of numerous establishments owned by an employer that are reporting under the same UI account number in a State. The summary information for this employer is reported on the State's QCR. Also collected are the physical location address of each worksite, a worksite description (normally a store or unit number or other information meaningful to the employer), and various other business identification information.

Most employers file paper MWRs either by inserting the monthly employment and wages in the appropriate boxes on the form next to the preprinted information (trade name, physical location address, and worksite description) for each of their worksites or they provide a computer printed facsimile of these MWR data.

Data collection procedures for multi-establishment employers differ from single establishment employers. For multi-establishment employers, the SESA unit is responsible for the mail-out, processing, and review of the MWR forms each quarter. Multi-establishment employers are asked to verify the business identifying information (trade name, worksite description, and physical location address) for each establishment (worksite) that is pre-printed on the MWR. The employer is also requested to provide the employment for each month and total quarterly wages for each worksite. New worksites are added to the MWR by employers. The SESA unit then adds these worksites to their database. Thus, new births and deaths and their associated employment are identified each quarter in a timely manner. This rapid identification of births and deaths improves the sample frame. When an employer receives the next quarter's MWR, these new worksites will be pre-printed on the MWR along with their other worksites. The situation for deaths or business transfers is handled in the same manner. The employer provides the information on the affected worksite and the SESA staff deletes the worksite from that employer's file. Thus, the MWR captures business births and deaths for these multi-establishment employers in a timely manner on a quarterly basis.

Report of Federal Employment and Wages (RFW)

Federal agencies, whose civilian employees are covered under the separate but comparable UCFE program, do not file QCR forms with State UI programs but instead report employment

and wages data directly to the SESA unit. Since 1993, all States have been using a standardized form (the RFEW) that was developed by BLS to collect these data each quarter. The RFEW was modeled after the MWR to facilitate its use in the State processing systems. The coverage for this area is thorough: 99.5 percent of federal employment is collected each month and used in both the QCEW program and the Current Employment Statistics (CES) program.

Annual Refiling Survey (ARS)

The purpose of the BLS Annual Refiling Survey is to review and update, if necessary, the classification codes (industrial, geographical, and ownership) currently assigned to an establishment stored on the QCEW Business Register. The survey is initiated in October of each year with approximately one-third of the establishments being reviewed annually. The establishments are selected on a random basis throughout the QCEW Business Register. This selection process ensures that the industrial distribution of the survey respondents is proportional to the establishments in the economy. In other words, no industrial sector is specifically targeted in any one year.

For an employer currently coded as a single establishment, the ARS questionnaire requests that the respondent review an industrial classification statement. This statement is a general description of the economic activities for that 6-digit NAICS code followed by some specific economic index items that comprise the industry. If the statement reflects the establishment's previous 12 month economic activity, then the respondent simply checks the "Yes" box and underlines the relevant wording that applies to their economic activity. If the employer thinks that the description is not correct or is unsure, then they are requested to check the "No" box and provide a description of the economic activities of their business along with an approximate percentage of the sales for each activity listed. The SESA staff then review this information and determine whether the NAICS code needs to be updated. The current NAICS code may have been assigned from the Status Determination Form or it may have been updated from a previous ARS questionnaire. In addition to the industrial classification review, the respondent is also requested to review and update the following, or provide the information if it is not preprinted: (1) physical location address; (2) mailing address; and, (3) county in which the establishment is located.

The ARS questionnaire also helps identify new multi-establishment employers. Employers are asked if the establishment whose listed physical location address is the only establishment in that State under that UI account number. If no, then the employer is requested to complete the back of the ARS form which provides space to list the physical location address, economic activity and employment for each of the previously unidentified establishments. This information is then reviewed by State staff to determine if the employer should file a MWR form each quarter.

The ARS procedures for employers with many locations are quite similar to that for single establishment employers. The main difference is that the former group will receive a separate 6-

digit industry description for each NAICS code currently assigned to that employer in that State under that UI account number. The questions on the survey form are identical to those for a single establishment employer described previously. The States are required to achieve an 80 percent usable response rate to the ARS. Most States conduct at least one, and sometimes two, follow-ups to achieve the required response rates.

Editing Procedures

Micro data collected on the QCR, MWR, and RFEW are edited by the SESA staff and corrected, as necessary. The micro data, including imputed values, are then aggregated to the appropriate macro-level cells. The SESA unit then edits and updates these macro records. There are 150 separate edits designed to detect a wide range of invalid values. These edits have been refined and enhanced over time reflecting the many years of data editing experience of state, regional and national office staff. Both the micro and macro edits include checks for invalid and inconsistent data as well as checks for large and unusual employment and wages fluctuations between and within quarters.

Every quarter, a relatively small number of employers fail to submit either a QCR, MWR, or RFEW. Others may submit incomplete reports, typically QCRs with missing employment data. Delinquent and missing data notices are sent to these employers, as appropriate. Usually the SESA unit which initially mailed the form is responsible for this follow-up. Therefore, the UI unit generally contacts employers who do not complete the QCR, while the SESA unit pursues delinquent MWRs and RFEWs. For those employers who fail to respond to follow-up requests, the data are imputed, generally by employing methods that use historical data for the establishment. This imputation procedure is automatic for one quarter. If the report remains delinquent for a second quarter, the record will be flagged for further review. A SESA analyst will determine the status of the establishment (i.e., active or inactive). If it is determined that the establishment is still active, the data will be imputed.

After making corrections and adding comments to the summarized file, States submit the micro data on a computer tape or cartridge to the BLS national office, where it is due approximately four months after the end of the reference quarter.

Construction of the QCEW Business Register

In order to assure accurate linkages between new and existing establishments, there are two components of QCEW Business Register matching process: automated matching and analyst matching. The computer automated matching links approximately 97 percent of all establishments each quarter through a process which links State Employment Security Agencies' identification numbers (SESA-ID). Less than one percent of records are linked by statistical weighted matching or analyst matching.

Identifying Births and Deaths

The QCEW Business Register classifies establishment relationships into births and deaths, breakouts and consolidations, and one-to-one matches. Births are new establishments that are units that came into existence after the creation of the QCEW Business Register universe, while deaths are establishments that have gone out of business, or have had four consecutive quarters of zero employment. Breakouts are records that spin-off employment to a new reporting unit. The original unit can do one of two things: transfer employment and close, or transfer employment and stay open. Consolidations are records that close establishments and merge employment from many units to one or more units. In this instance, like the breakout scenario, the original unit can do one of two things: transfer employment and close, or transfer employment and stay open. Many times, a transfer of employment may be directly from one establishment to another and that is called a one-to-one match.

The QCEW Business Register captures approximately 200,000 new establishment births and deaths every quarter. By collecting timely data on births and deaths, a number of BLS survey programs are able to include these establishments in their sample. Since these new births and deaths are available immediately, this reduces survey costs and leads to higher initial response rates.

SESA ID Matching

Ninety seven percent of all BLS establishment records are linked through a process by State Employment Security Agencies' identification numbers (SESA-ID). The SESA-ID is the establishment's unique identifier that the State Employment Security Agencies transmit to BLS, and the QCEW Business Register initially matches all units with identical SESA IDs; these matches are continuous establishments from the previous quarter. SESA ID matches take precedence over any other type of matching. After identifying continuous SESA IDs, the linkage system identifies four additional linkage steps: predecessor linkages, successor linkages, breakout identifications, and consolidation identifications. These linkages are made by matching previous quarter SESA IDs to the current quarter SESA ID. After the match is made the system flags both records and copies the QCEW Business Register number, date of first positive employment (DFPE), and date of last positive employment (DLPE) from the previous quarter to the current quarter record.

Probability Weighted Matching

Probability weighted matching is a process by which related units are linked based on the similarity of various characteristics between two records. Pairs of records having enough in common are scored to exceed a specific point value and are then identified as valid matches. This point value is called a cutoff weight, and do not vary upon State, industry, or other characteristics, and create a consistent measure across the nation.

Analyst Manual Matching

As a final quality control measure of QCEW Business Register data, each quarter an analyst reviews data that contain records that were not matched by the automated process. The reasons for this additional review are that data elements may be miscoded, whereby inaccurate information is placed in system identifiers that the automated processes targets and therefore the system cannot make a linkage. Another reason for the supplementary analyst review is that certain records should not be linked, even though the system identifies a weighted match, and should be added to the QCEW Business Register as an establishment birth or removed as an establishment death. The analyst manual review is essential to maintaining proper linkages and to preserve the high data quality produced by the QCEW Business Register.

2. Reducing Response Burden

Continual efforts to automate and reduce burden and decrease data collection and processing costs of the ARS and MWR have been achieved by using various paperless modes of data collection: the Electronic Data Interchange (EDI) Center, the Touch-tone Data Entry (TDE) system and Internet Web collection for MWR data.

Electronic Data Interchange (EDI)

On February 22, 1995, BLS opened an Electronic Data Interchange (EDI) Collection Center in Chicago, Illinois. The EDI center was initially created to collect data in a timely and cost-effective manner for the Current Employment Statistics (CES) survey. In 1996, the MWR was added to the EDI Center's list of data that could be collected from employers. EDI, as used in BLS, is the transmission of data electronically from a respondent to BLS. BLS provides the employer with a standard data transmission format that is used to process the data at the EDI center.

Once the standard format is created, the recurring data files can be provided to the EDI Center quickly, accurately and at less burden for the employer. Thus EDI can dramatically reduce ongoing respondent burden, particularly for the largest, multi-establishment firms, which are requested to participate in most surveys.

The EDI Collection Center opened two new doors of opportunity for firms. First, the EDI Collection Center offers large multi-State firms the option to transmit their paper data for all States to one facility rather than potentially fifty different sites. The EDI Collection Center edits and distributes these data to the respective States. The responses to this new reporting option were very enthusiastic. The second opportunity was the ability to transmit these data electronically, rather than using a magnetic medium-tapes, cartridges, or diskettes. Both of these opportunities demonstrate a reduction in the burden on the part of the employer. The employer would no longer have to receive the MWR forms each quarter, prepare the information that would be manually posted on the MWR forms, and then mail the appropriate information to the different States.

Firms obviously incur some start-up costs to develop the initial data file, but once that is developed the cost savings and reduction in respondent burden are substantial. This collection procedure also has enormous cost savings in the following areas:

- (1) Less postage required for mailing MWR forms to firms and its subsequent return
- (2) Less staff required to process the MWR forms (opening the mail, sorting the forms, etc.)
- (3) Less data entry of the MWRs
- (4) Reduction in the errors caused by posting errors on the employer end or data entry errors

During first quarter 2010, there were 12,838 employers who provided their data to the EDI center. Data collected from respondents accounted for 11 million employees (20 percent of total employment) representing 383,254 individual worksite locations (24 percent of total worksites).

Touchtone Data Entry (TDE)

Touchtone Data Entry or “TDE” refers to the system that provides users the convenience of picking up a touchtone phone and calling a toll-free number to access the system any time of the day or night, seven days a week. The call activates an interview session. The questionnaire resides on a computer in the form of pre-recorded questions that are read to the respondent. Once they identify themselves to the system by entering their appropriate “Respondent ID,” the system verifies their ID number against a database of valid IDs. The respondents enter numeric responses by pressing touchtone phone buttons. Each answer is then read back for respondent verification. Upon verification, the system asks the caller to respond to a number of questions. Upon answering all applicable questions, the respondent simply hangs up.

Advantages of Touchtone Data Entry (TDE)

TDE is intended to reduce data collection costs and is a cost-effective alternative to mail. Rising labor costs and postal rates, and declining telephone and technology costs offer incentives to redesign collection processes.

It is quite true that the start-up costs for implementing a TDE system are relatively high. The cost of hardware, software, communications infrastructure, reliable backups, and labor must be borne, but the operational cost over the life of the system is marginal. The savings realized by process automation alone may justify the adoption of a touchtone system. These savings are in terms of cost as well as efficiency and accuracy.

For the federal government, the savings are particularly high. With the U.S. Postal Service having to quarantine mail addressed to government facilities, touchtone reduced both the data collection time and the quantity of mail handled by government agencies. Waiting for re-delivery of quarantined mail created a dilemma for both the sender and recipient. Also, because the government pays postage for survey forms mailed back by respondents, the cost savings is substantial.

Touchtone Response System (TRS) for the Annual Refiling Survey (ARS)

In FY 2002 BLS returned to using a Touch-tone Data Entry system for the ARS. It had been tested in a few States in the late 1990s with mixed results. The TDE system was not suited to address the needs of the conversion from the Standard Classification System (SIC) to the North American Industry Classification System (NAICS) that began in October 1998. When reintroduced in October 2001 as a test in five States, the initial approach was modified so that only those employers meeting certain criteria were allowed to participate. The project's name was also changed to the "Touch-Tone Response System" (TRS). This selectivity feature raised the response rates and also reduced the number of phone calls requesting clarification updates. In 2003 the TRS system expanded to all states including the District of Columbia, Puerto Rico, and the Virgin Islands with cost savings of around \$200,000 per collection cycle. In 2010, of the nearly 950,000 respondents eligible to use the TRS system, around 280,000, or 29 percent of respondents used this system for the Annual Refile Survey.

Internet Web Reporting for the Multiple Worksite Report (MWR)

Many BLS statistical programs are introducing Internet-based data collection. Among the reasons for offering Internet collection is the availability of reporting choices for employers, the potential to reduce BLS costs associated with mailing or data entry, and the potential to reduce employer burden, or the perception of burden. Internet-based data collection also augments the palette of the questionnaire designer by adding it to Internet technologies such as hyperlinks, color manipulation, dynamic graphics, and multimedia players that can provide instructions visually and/or orally.

In an effort to make MWR reporting more efficient and cut down on cost, employers can report quarterly worksite data via the Internet rather than paper, using the Bureau of Labor Statistics' secure data collection website. The number of employers using the web-based system for filing the Multiple Worksite Report has increased tremendously since its development in 2007.

Employers can report all states' information for multiple worksites at one time, and BLS sends the information to the respective state agencies. Employers with multiple unemployment insurance (UI) accounts in one state, or multiple worksites in several states, can also use the web-based system.

Once an employer chooses the web-reporting option, they no longer receive paper forms to complete. Rather, BLS sends a reminder to them via e-mail stating that data collection for the next quarter has started. A few days before the official due date, employers who have not completed entering data for all of their worksites will receive an e-mail reminder that the due date is approaching.

The MWR web-based system has the capability to display previous quarter employment and wages data, performs edits of employment and wages, prompts the respondent for new worksites, and advises the respondent of missing or incomplete data for a particular worksite. In addition, the system can save partially completed reports. For example, if a respondent is interrupted by a telephone call or meeting while in the process of filing a report, even if the system closes down, the previously-entered data will be saved.

During first quarter 2010, there were 25,231 employers who provided their data via MWR Web. Data collected from respondents accounted for 5 million employees (13 percent of total employment) representing 210,569 individual worksite locations (10 percent of total worksites).

3. Data Sharing

The BLS business register serves as the source for routine data sharing arrangements with the Census Bureau and the Bureau of Economic Analysis (BEA).

Bureau of Economic Analysis

The Bureau of Economic Analysis routinely receives macro level QCEW data each quarter in the preparation of the Personal Income component of the National Income and Product Accounts at the national, state, and county level. In addition, QCEW data are used as input for the Gross Domestic Product. For example, in 2008, covered workers received \$6.142 trillion in pay, representing 93.8 percent of the wage and salary component of personal income and 42.5 percent of the gross domestic product.

Census Bureau

Over a million detailed 6-digit NAICS codes are routinely provided to the Census Bureau each quarter. Along with the NAICS codes, additional information is provided each quarter such as whether the unit is a single or part of a multi-establishment company, ownership code, county code, and detailed address information is also provided each quarter. For the recent reference quarter 2010Q4, the Census Bureau provided BLS with 1.4 million EINs and 1 million were matched to establishments with identical EINs on the QCEW Business Register (a 75 percent match rate). In FY2011, the Census Bureau provided BLS with 4.4 million EINs and BLS matched 3.3 million (74 percent) records. This work includes 14.0 million EINs provided by the Census Bureau over the past 3 years, of which BLS matched 9.9 million records, a 70 percent match rate. The Census Bureau uses these industry data in their Business Register that serves as a source of sampling frames for frequent business surveys (such as the Annual Survey of Manufacturers) and as a basis for statistical tabulations. The most important benefits of this project are relieving American businesses of unnecessary response burden, improving industry coding for the BOC, improving usability and promoting consistency between federal statistical products, and avoiding redundancy between agency statistical programs, to the exceptional benefit of the American taxpayer.

QCEW data are also used to calibrate the Current Population Survey after each decennial census. In addition, QCEW micro data serve as the backbone for the Longitudinal Employer-Household Dynamics (LEHD) program.

National Oceanic and Atmospheric Administration

The National Oceanic and Atmospheric Administration (NOAA) is using QCEW Business Register data to develop a set of statistics on employment, wages, and gross domestic product that provides insights into the contributions of coastal and ocean resources to the national economy.

QCEW micro-data was used in research led by the National Ocean Economics Program (NOEP) that reclassified economic data in a way that focuses on six ocean-linked sectors: ocean-linked construction, living resources, minerals, ship and boat building, ocean-linked tourism and recreation, and marine transportation. Under this new data sharing agreement, NOAA and BLS will collaborate to build on the successful proof-of-concept work of NOEP, updating the historical time series that currently ends at 2004 and updating the time series annually as new data become available.

Future Data Sharing Plans

BLS and the Economic Research Service (ERS) with the Department of Agriculture are working on a data sharing agreement that will use the QCEW Business Register as its sample frame. The

Rural Establishment Innovation Survey (REIS) will collect data over a 6-month period for

30,000 respondents. The sample will be largely from rural (nonmetropolitan) areas, but an urban (metropolitan) sample will also be surveyed for comparison purposes. This information will contribute to a better understanding of how increasing international competition and the increasing knowledge intensity of economic activity in the U.S. are affecting the economic vitality of rural areas—and the conditions associated with effective adjustment to these pressures.

BLS also plans on providing the Census Bureau with data for multi-establishment companies from the Multiple Worksite Report as well as detailed establishment-based data on Professional Employer Organizations (PEOs). The Census Bureau intends to use the BLS multi-establishment data to update the business records of multi-establishment companies, and to update the business records of companies that are classified as Professional Employer Organizations (PEOs). The BLS allocates the PEO data to the client business, where possible. PEO client-business data will benefit the Census Bureau's economic programs by providing a systematic method to identify these establishments on the business register.

4. New Statistics Products

Uses of the QCEW Business Register

Since coverage is so broad (approximately 98 percent of all non-farm wage and salary employment), the QCEW Business Register provides a virtual census of these employees and their wages. It is the most complete and timely source of monthly employment and quarterly wages information by detailed industry and county. Consequently, QCEW data are used extensively in many economic and statistical applications. These include UI program administration, macro-economic research, survey employment benchmarking, and micro-economic analysis. BLS programs and surveys use the micro data for sampling purposes.

Sampling Frame

The QCEW Business Register is used as a sampling frame for key economic surveys published by the BLS. One of the many programs that use the QCEW Business Register as a sampling frame is the Current Employment Survey (CES), which is a key survey utilized by the BLS for the publication of the monthly “Employment Situation Report.” Other BLS programs that use the QCEW Business Register for sampling purposes are the Job Openings and Labor Turnover Survey (JOLTS), Occupational Employment Statistics (OES), Producer Price Index (PPI), Occupational Safety and Health Surveys, Occupational Compensation Survey, Employer Benefits Survey, Employment Cost Index Survey, and, Productivity Surveys, and the new Green Goods and Services (GGS) Survey. The Local Area Unemployment Statistics (LAUS) program also uses the QCEW Business Register as its employment when CES estimates are not available.

Business Employment Dynamics

The longitudinally linked establishment records on the QCEW Business Register provide a rich resource of establishment and employment data used in publishing the Business Employment Dynamics (BED). Each quarter, the BED uses QCEW Business Register data to produce its quarterly publication that measures the net change in employment at the establishment level and at the firm level.

The BED statistics are calculated with 7.0 million establishments. These statistics are classified by industry under the North American Industry Classification System (NAICS) and published at the sector and sub-sector level for the nation. Since the initial publication of these data in 2003, new dimensions of data have been added over time. Firm size and state level data are available at the total private sector. And annual over-the-year estimates have been published to allow users to compare these data internationally. “Size of employment change” data show how many established gained (or lost) 1 job, 2 jobs, 3 jobs, etc. Data are also available at the 3-digit NAICS level for the nation.

In August 2010, BLS will publish BED data by establishment age. The long-standing debate about the role and impact of small versus large businesses has expanded in recent years to consider the contributions of younger versus older businesses. These new data from the Business Employment Dynamics (BED) program measure the age and establishment survival rates, which

can help shed light on to the behavior of and contributions by of new and young businesses compared with their older and more well-established counterparts.

Users have found great interest in the firm size data and continue to ask for more detailed information in this area. The output produced by BED is used by many in labor market research and economic calculations, such as State and local governments, the U.S. Federal Reserve Board, the Bureau of Economic Analysis, National Bureau of Economic Research and the academic community.

Green Goods and Services (GGS) Survey

BLS will collect data on jobs associated with producing green goods and services. Collection will begin with a mail survey of a sample of establishments identified as potentially producing such products and services based on their NAICS classification from the QCEW Business Register. The purpose of the Green Goods and Services (GGS) survey is to identify whether the establishment is producing any green goods and services and, if so, to measure the number of associated jobs in the establishment. The BLS methodology will estimate the number of green jobs for a NAICS industry based on the green jobs found at individual establishments classified within the industry. The methodology does not simply designate an industry as "green" and count all jobs in that industry as green jobs, since establishments in the industry may also produce goods and services that are not considered green.

The GGS data collection will be conducted using a mail survey in the initial year of collection along with Computer Assisted Telephone Interviews for non-response prompting. This will be an annual survey supplemented with a quarterly sample of new businesses (births).

The survey will collect data on employment, fiscal year, and, because establishments may produce both green and non-green products or services, BLS is asking for the revenue or employment share related to the production of any green goods and services at each establishment surveyed. The share of revenue will be used to estimate employment when employment share is not reported. BLS determined from prior research and from the forms development research that businesses have difficulty providing employment associated with the production of green goods and services since employees often work on multiple products or services and not all of the products and services meet the definition of green, while revenue is readily available by product and or service line and less burdensome to the respondent to report.

BLS will be surveying up to 120,000 establishments that are classified in the 333 detailed North American Industrial Classification System (NAICS) codes identified by BLS as having the potential to produce green goods or services. This will be an annual survey supplemented with a quarterly sample of new businesses (births) also classified in the 333 detailed NAICS codes.

Labor Market Research

The QCEW Business Register offers researchers a rich dataset of labor market data. Not only does the QCEW Business Register contain quarterly employment and wage data, but it also provides administrative data such as State, county, metropolitan statistical area (MSA) codes, physical location addresses, and North American Industry Classification System (NAICS) industry information.

One of the first uses of QCEW Business Register data by researchers external to BLS was undertaken by Card and Krueger (2000) in a study of the minimum wage and employment in fast-food restaurants in New Jersey and Pennsylvania. Using the QCEW Business Register data, the authors were able to select data by state, county, quarter, industry, trade name, and legal name. This rich dataset allowed Card and Krueger to reevaluate their previous study and eliminate common survey errors because the QCEW Business Register data is derived from UI tax records.

Significant labor market research has been done using the QCEW Business Register to show the importance of size class, firm survival, and industry specific analysis. The Monthly Labor Review (MLR) article on the importance of size class methodology by Okolie (2004) was conducted using data from the QCEW Business Register. The QCEW Business Register aided Knaup (2005) in researching establishments by industry classification for her MLR article on firm survival. Not only can one research national aggregate employment but it is also possible to research particular sectors of the economy as shown in the paper on the employment and wages in the U.S. costal economy by Colgan (2004) published in the MLR. In addition, important research was conducted by Salamon and Sokolowski (2005) on the non-profit sector in the U.S. economy using the QCEW Business Register.

Timeliness of QCEW Business Register Outputs

In 2010, the QCEW quarterly press release on state and county employment and wages was accelerated by one week. For example, the County Employment and Wages press release for first quarter 2011 will be released September 29, 2011 making these data available seven months after the end of the reference quarter. (See <http://www.bls.gov/news.release/pdf/cewqtr.pdf> for the most recent release) Also, the QCEW program released a new State and County Mapping application (<http://beta.bls.gov/maps>). This new feature of the BLS website provides users with super-sector industry employment and wages at the national, state, and county levels. Data are presented in map, tabular, and downloadable formats.

In 2011, the Business Employment Dynamics press release was accelerated by two weeks. (See <http://www.bls.gov/news.release/pdf/cewbd.pdf> for the most recent release). These data lag the county press release due to additional time needed to link and review the micro data.

There may be further acceleration of these outputs in the next few years as procedures are refined, systems streamlined, and continuous improvement in all data quality assurance methods are improved.

Conclusion

The QCEW Business Register continues to be the most complete and timely source of business establishment data in the United States. These quarterly data are supplemented with multiple worksite information and industry and geographic information is reviewed and updated, as necessary, every third year. Quality assurance programs are conducted to measure the accuracy of the State industrial coding and data and reviewed and edited every quarter to maintain a high level of data quality. In addition, new data collection methods such as the EDI center, TRS, and MWR Web have been introduced to save costs, increase response rates, and reduce respondent burden to the exceptional benefit of the American taxpayer.

The BLS continues to leverage its investment in its QCEW Business Register by expanding its array of new products, offering researchers free access to this rich set of micro-data, and increasing data sharing opportunities with other statistical agencies.

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