Profiles of U.S. Education and Workforce Data Sources

Prepared by the LMI Institute for GWIPP

October 2014 (with updates)

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Integrated Postsecondary Education Data System

Organization: National Center on Education Statistics, US Department of Education. “The National Center for Education Statistics (NCES) is the primary federal entity for collecting and analyzing data related to education.”

Purpose and Uses: The Integrated Postsecondary Education Data System (IPEDS) provides data profiles of individual U.S. postsecondary institutions for use by the Department of Education, Congress, other federal agencies, state governments, education providers, professional associations, private businesses, media, students, and parents. IPEDS data are made available to students and parents through the College Navigator web site and to researchers and others through the IPEDS Data Center. IPEDS also provides the institutional sampling frame used in other postsecondary surveys.

Data Elements Relevant to Postsecondary Education and Workforce Development:

Available categories and types of IPEDS data available on each of 7,500 postsecondary institutions include:

- Institutional Characteristics (such as tuition and fees, room and board charges, control or affiliation, type of calendar system, levels of awards offered, types of programs, and admissions requirements)
- Institutional Prices for first-time, full-time, degree- or certificate-seeking undergraduate students (including tuition and fee data and estimated student budgets)
- Enrollment (including fall enrollment, residence of first-time students, age, unduplicated 12-month head count, instructional activity, total entering class)
- Student Financial Aid (including the number of full-time, first-time degree/certificate-seeking undergraduate students who receive student financial aid, by type and source of aid, and the average dollar amount of aid received by these students)
- Degrees and Certificates Conferred (Completions) by type of program and level of award
- Student Persistence and Success (first-year retention and graduation rates)
- Institutional Resources
  - Human Resources
    - Employees by assigned position (number of employees by full- or part-time status, faculty status, and occupational activity)
    - Salaries (including the number of full-time instructional faculty by rank, gender, and length of contract/teaching period, and salary outlays for full-time staff)
    - Staff (demographic and occupational characteristics)
  - Finances (institutional revenues by source, expenditures by category, and assets and liabilities)

History and Status: According to NCES:

The IPEDS web-based data collection system was implemented in 2000-01 . . . . All Title IV institutions are required to respond to IPEDS (Section 490 of the Higher Education Amendments of 1992 (P.L. 102-325)). IPEDS allows other (non-title IV) institutions to participate on a voluntary basis. About 200 elect to respond. . . . IPEDS was developed to address technical problems with previous postsecondary education statistical programs, including the Higher Education General Information Survey (HEGIS) and the Vocational Education Data System (VEDS).²

IPEDS has clearance from OMB to operate through December 2016.

Methodology: IPEDS collects information by academic year from approximately 7,300 institutions eligible to participate in Title IV student financial aid programs (and so required by law to respond to IPEDS). IPEDS allows other (non-title IV) institutions to participate on a voluntary basis—each year, about 200 choose to respond. The following table shows the expected distribution of the universe of institutions participating by legal status and program length.

**Title IV Institutions in the IPEDS Universe: Estimated Counts for 2014-15 Collection**

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Public</th>
<th>Private not-for-profit</th>
<th>Private for-profit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>7,500</td>
<td>2,000</td>
<td>1,900</td>
<td>3,600</td>
</tr>
<tr>
<td>4-year</td>
<td>3,100</td>
<td>700</td>
<td>1,600</td>
<td>800</td>
</tr>
<tr>
<td>2-year</td>
<td>2,300</td>
<td>1,050</td>
<td>200</td>
<td>1,050</td>
</tr>
<tr>
<td>Less than 2-yr</td>
<td>2,100</td>
<td>250</td>
<td>100</td>
<td>1,750</td>
</tr>
</tbody>
</table>

IPEDS system components include Institutional Characteristics; Completions; Fall Enrollment; 12-month Enrollment; Student Financial Aid; Graduation Rates; 200% Graduation Rates: Human Resources; and Finance.

IPEDS data collection is administered online. All IPEDS survey components are completed by all participating institutions—there is no sampling. NCES says that IPEDS response rates for institutions receiving federal financial aid are consistently 99.8% and higher.

Data Products and Services: IPEDS data are accessible on the NCES website. Online tools include College Navigator and the IPEDS Data Center. NCES regularly produces reports on the basis of IPEDS data.

Annual Costs: The approximate annual cost to the Federal Government for years 2013-16 is $9.6 million ($8.0 for contractor and $1.6 million for federal salaries and expenses).³

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³ NCES, op.cit., p. 29.
**National Student Clearinghouse® Research Center™**

**Organization:** National Student Clearinghouse® Research Center™ is the research arm of the National Student Clearinghouse. More than 3,600 colleges and universities (enrolling 98.5% of students in public and private U.S. institutions) regularly submit enrollment and graduation records to the Clearinghouse, which then uses these records to provide a variety of administrative services to colleges and universities, such as academic verification, student record exchange, and compliance reporting for federal and state financial aid programs.

**Purpose and Uses:**

“The Research Center works with higher education institutions, states, school districts, high schools, and educational organizations to better inform practitioners and policymakers about student educational pathways. Through accurate longitudinal data outcomes reporting, the Research Center enables better educational policy decisions leading to improved student outcomes.”

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**Data Elements Relevant to Postsecondary Education and Workforce Development:**

- Enrollment status (start, continue, transfer, withdraw)
- Classification of Instructional Program (CIP) code
- Degree-seeking status
- Current major
- First-time/full-time status
- Demographic characteristics (gender, race, ethnicity)
- Transcript information
- Gainful employment status

**History and Status:** The National Student Clearinghouse was founded as a 501(c)(6) corporation in 1993 to serve student record management and reporting needs of the nation’s colleges and universities. Current services provided to colleges and universities, or on their behalf, include:

- Transcript ordering and exchange
- Enrollment reporting to financial aid organizations
- Gainful employment reporting
- Loan tracking
- Degree verification
- Enrollment verification
- Ability to query student records for FERPA-permissible research purposes through **StudentTracker℠**

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1 National Student Clearinghouse Research Center, “About Us,” website.
The National Student Clearinghouse Research Center was founded as a legally separate 501(c)(3) entity in 2010 to support the education and research programs of the National Student Clearinghouse.

**Methodology:** More than 3,600 colleges and universities report enrollment and degree information to the Clearinghouse. Lenders and guarantors also report student information. Institutions report enrollment information several times each term and degree information after each conferral period. The Clearinghouse thoroughly reviews record submissions for accuracy and completeness before entering them into its system.

**Data Products and Tools:** Regular Research Center reports include:

- **Signature Reports:** Lengthy, in-depth national studies on that reveal patterns and valuable insights on students’ postsecondary, persistence, transfer and completions, such as postsecondary enrollment trends, transfer and mobility, reverse transfer, baccalaureate attainment, and college completion
- **Snapshot Reports:** Short graph-driven reports released throughout the year that provide timely examinations of national enrollment trends, such as changes in enrollment, changes in popularity of degree programs, and transfers from two-year schools to four-year schools.
- **Current Term Enrollment Estimates:** Enrollment estimates for the current semester (released every fall and spring)

External researchers’ project reports are available [here](#). External researchers can send proposals to the Research Center to analyze Clearinghouse records using StudentTracker.

**Program Cost:** The fee schedule for Clearinghouse services can be found at [www.studentclearinghouse.org](http://www.studentclearinghouse.org).
Statewide Longitudinal Database System Grant Program

Organization: National Center for Education Statistics, U.S. Department of Education. The National Center for Education Statistics (NCES) is the primary federal entity for collecting and analyzing data related to education.¹

Purpose and Uses: The Statewide Longitudinal Database System (SLDS) Grant Program aims to:

propel the successful design, development, implementation, and expansion of K-12 and P-20W (early learning through the workforce) longitudinal data systems. These systems are intended to enhance the ability of States to efficiently and accurately manage, analyze, and use education data, including individual student records. The SLDSs should help states, districts, schools, educators, and other stakeholders to make data-informed decisions to improve student learning and outcomes; as well as to facilitate research to increase student achievement and close achievement gaps.²

Data Elements Relevant to Postsecondary Education and Workforce Development:

States receiving SLDS grant funds must build systems that contain data elements specified in the America COMPETES Act. For P-20 students, required elements include (but are not limited to):

- A unique statewide student identifier that does not permit a student to be individually identified by users of the system (except as allowed by federal and state law).
- Student-level enrollment, demographic, and program participation information.
- Student-level information about the points at which students exit, transfer in, transfer out, drop out, or complete P-16 education programs.
- The capacity to communicate with higher education data systems.
- A State data audit system assessing data quality, validity, and reliability.
- Student-level college readiness test scores.

For postsecondary students, required data elements are:

- Data that provide information regarding the extent to which students transition successfully from secondary school to postsecondary education, including whether students enroll in remedial coursework.
- Data that provide other information determined necessary to address alignment and adequate preparation for success in postsecondary education.³

Some states are funded specifically to link P-20 data with workforce outcomes data, particularly with regard to post-school job placement and earnings.

² National Center for Education Statistics, “About the SLDS Grant Program.”
**History and Status:** The Educational Technical Assistance Act of 2002 (Title II of P.L. 107-279) authorized awarding competitive, cooperative agreement grants to states for up to twenty million dollars per grantee. While the authorization expired in FY2008, funding for the SLDS grant program has continued through annual appropriations legislation. The House is currently considering the Strengthening Education through Research Act (H.R. 4366), which would reauthorize the Education Technical Assistance Act.

Five rounds of funding have awarded a total of $611 million in grants. According to NCES:

SLDS grants were awarded to 14 states in November 2005 (FY 2006 Grantees), 12 additional states and the District of Columbia in June 2007 (FY 2007 Grantees), 27 states in March 2009 (FY 2009 Grantees), 20 states in May 2010 (FY 2009 ARRA Grantees), and 21 states, the District of Columbia, Puerto Rico, and the Virgin Islands in May 2012 (FY 2012 Grantees). Based on the five rounds of funding, 47 states, the District of Columbia, Puerto Rico, and the Virgin Islands have received at least one SLDS grant.⁴

The focus of the grant program has evolved, with the early emphasis on K-12 systems expanding to a broader P-20W systems. Frequency of collection and publication, as well as timeliness and format of data vary by state.

The President’s 2015 Budget requested an increase in spending on the SLDS grants to support $57 million in new grants.⁵

**Methodology:** The SLDS grant solicitation identifies a series of governance, policy, technical, and data use requirements. At the same time, each state has considerable leeway in the nature and design of its system. NCES provides assistance to grantee states in the form of publications, webinars, consultants, conferences, and a listserv. The Data Quality Campaign and the Workforce Data Quality Campaign are nonprofit organizations that provide assistance to SLDS grants as well.

**Data Products and Tools:** SLDS data are housed on individual state websites. NCES hosts a webpage that links to grantees’ SLDS websites and provides information on each grant.

**Annual Cost:** The appropriation for SLDS for FY2014 was $34.5 million. The House is considering a proposal that would authorize $83 million for fiscal year 2015 and $518 million over five years.⁶

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⁴ NCES, “SLDS Grant Program: Grantee States,” webpage.
⁵ Budget 2015. [http://www2.ed.gov/about/overview/budget/budget15/summary/15summary.pdf](http://www2.ed.gov/about/overview/budget/budget15/summary/15summary.pdf) (pg. 67)
American Community Survey

**Organization:** Census Bureau, U.S. Department of Commerce. “The U.S. Census Bureau provides data for the federal, tribal, state and local governments as well as voting, redistricting, apportionment and congressional affairs.”

**Purpose and Uses:** The American Community Survey (ACS) is a continuous survey of households that provides detailed annual data describing demographic and socioeconomic characteristics at all levels of geography, from the neighborhood to the nation. Federal, tribal, state, and local entities, businesses, research organizations, media and other groups use ACS information for research, government service provision, emergency response, journalism, and more.

**Data Elements Relevant to Postsecondary Education and Workforce Development:**

- Labor force status
- Income and earnings
- Occupation
- Industry
- Place of work
- Education attainment
- School enrollment
- Food stamps benefit
- Residence a year ago
- Demographic – race, Hispanic origin, gender, age

ACS data are tabulated for a variety of geographic areas, including the nation, regions (Northeast, Midwest, South, and West), states, metropolitan areas, micropolitan areas, counties, cities, places, census tracts, and block groups.

**History and Status:** The ACS is the most recent iteration of a long-standing federal tradition of using the decennial census to collect demographic and socioeconomic data beyond that needed for congressional apportionment and redistricting (that is, data other than a count of individuals) to inform public policy. From 1790 to 1930, such data were collected from every household; in 1940 and 1950, all households answered most questions and a small sample were given extra ones; between 1960 and 2000, such data were primarily collected from a sample of households (one in six in 2000) through the decennial census “long form.” Estimates based on long-form data collection were produced at every level of geography, down to small neighborhoods.

Such data proved enormously helpful for a variety of public, private sector, and household decision-makers. However, as they were provided only once a decade, they were usually out of date.

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1 Bureau of the Census website, www.census.gov/
Consequently, with guidance from Congress, the Census Bureau replaced the long form with the “American Community Survey” and in 2005, after a decade-long test period, began collecting the data monthly and publishing it annually.³ No household receives the survey more often than once every five years. Households are required by law to fill out the survey. The 2010 Census was the first decennial census in memory that all households received only a short-form census.

The Census Bureau is authorized to conduct the ACS under Title 13 of the United States Code (USC) 141 and 193, sections specifying the details of the Constitutional requirement to enumerate the population (Article 1, Section 2). The ACS has Office of Management and Budget clearance through June 2016.

**Methodology:** The ACS is a monthly survey. One in 38 households per year is invited to participate in the ACS, a sample size of 3.54 million addresses (295,000 households per month). In addition, a sample of group quarters, such as nursing homes, college dormitories, and correctional facilities is contacted as well.

The ACS selects sample housing units from each of the 3,143 counties and county equivalents in the US, including the District of Columbia and the 78 municipalities in Puerto Rico.⁴ Responses can be submitted online or with a paper questionnaire.⁵ In some instances, sampled addresses may be contacted by telephone or personal visit.

ACS data are released annually, in the fall after the end of the calendar reference year. Five-year estimates are available for all geographies; three-year estimates for areas of 20,000 or more; and one-year estimates for geographies of 65,000 or more.

**Data Products and Tools:** ACS data are available online through a variety of Census Bureau data tools, described here.

**Annual Cost:** For FY2014, the cost of the ACS is $231 million.⁶ For FY2015, the President has requested $246 million.

For more information about the American Community Survey, please visit:
http://www.census.gov/acs/www/

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³ Complaints about out-of-date data from the decennial census were voiced as early as 1873 by President Grant, who proposed a mid-decade census to address the problem. Under President Ford, Congress finally approved a mid-decade census, but never funded it.

⁴ US Census Bureau. American Community Survey Design and Methodology (January 2014): Chapter 4: Sample Design and Selection. (pg. 5)

⁵ Reference: Survey Methodology Main, ACS website.

Local Area Unemployment Statistics (LAUS)


Purpose and Uses: The Local Area Unemployment Statistics (LAUS) program is a federal-state cooperative effort that produces monthly and annual estimates of labor force size and status—key indicators of local economic conditions—for nearly 7,500 geographic areas nationwide. According to BLS:

Federal programs use the data for allocations to States and areas, as well as eligibility determinations for assistance. State and local governments use the estimates for planning and budgetary purposes and to determine the need for local employment and training services. Private industry, researchers, the media, and other individuals use the data to assess localized labor market developments and make comparisons across areas.²

BLS has compiled a description of the various federal administrative uses of LAUS data.³

Data Elements Relevant to Postsecondary Education and Workforce Development:

- Labor force (number)
- Employment (number)
- Unemployment (number and rate)

LAUS data are available for census regions and divisions, states, metropolitan and micropolitan areas, counties, cities and towns, and small labor market areas.

History and Status: Federal efforts to estimate local unemployment began in 1940, and a regular program was instituted soon after. For many decades, the LAUS program has been a cooperative effort between BLS and State Workforce Agencies (SWAs).

Methods for estimating local labor market conditions have been improved on a regular basis over the decades, the last effort taking place in 2011.⁴ The LAUS program’s next redesign is expected to take place in 2015. Planned changes include modeling improvements, use of American Community Survey (ACS) data as inputs to LAUS estimation, and implementation of statistical area delineations based on the 2010 Census.⁵

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² “Overview, Local Area Unemployment Statistics,” LAUS website.
³ BLS, “Administrative Uses Of Local Area Unemployment Statistics.”
LAUS operates under two legal directives from Congress. First, Congress has instructed BLS to produce monthly labor force statistics for the nation, states, and “such smaller geographical subdivisions as the . . . Secretary may from time to time prescribe.”

Second, through the not-yet-in-effect (it will be effective July 1, 2015) Workforce Innovation and Opportunity Act of 2014 (P.L. 113-128), Congress has told the Secretary of Labor to maintain a national workforce and labor market statistics system that includes data that “enumerate, estimate, and project employment opportunities and conditions at national, State, and local levels in a timely manner, including statistics on . . . employment and unemployment status of national, State, and local populations, including self-employed, part-time, and seasonal workers . . .”

LAUS data collection has OMB clearance through March 2015.

**Methodology:** Models that produce LAUS estimates for states rely on data from sources including the Current Population Survey (CPS), the Current Employment Statistics (CES) program, and state unemployment insurance (UI) programs. Estimates for substate areas are produced through either the “Handbook method,” a building-block approach incorporating inputs from the CPS, CES, UI programs, the Quarterly Census of Employment and Wages, and the Census Bureau, or a disaggregation technique.

The SWAs prepare the monthly labor force, employment, and unemployment estimates in cooperation with BLS. The LAUS program is responsible for the concepts, definitions, and technical procedures that states use in the preparation of labor force and unemployment estimates. Both the SWAs and the BLS analyze and publish the LAUS estimates each month.

**Data Products and Services:** LAUS data are available in tables and a database on the BLS website.

**Annual Costs:** For FY2011, the annual Federal cost associated with the LAUS program was $18.8 million ($10.6 million from BLS directly and $8.3 million from SWAs). For FY2015, the President requested $20.3 million for LAUS.

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6 29 USC Section 2.
7 29 USC Section 49l-2(a)(1).
9 Ibid., p. 22.
National Household Education Surveys Program: 
Credentials for Work Survey and Training for Work Survey

Organization: National Center for Education Statistics (NCES), U.S. Department of Education. “The National Center for Education Statistics is the primary federal entity for collecting and analyzing data related to education.”

Purpose and Uses: The National Household Education Surveys Program (NHES), housed within NCES and conducted approximately every other year since 1991, provides descriptive data on the educational activities of the U.S. population and offers researchers, educators, and policymakers a variety of statistics on the condition of education in the United States.

In the coming years, NHES plans to carry out two new quadrennial surveys of adults. The Credentials for Work Survey (CWS) and the Training for Work Survey (TWS) will collect information on the prevalence and characteristics of certifications, licenses, certificates, and apprenticeships and other forms of non-degree work credentials.

Data Elements Relevant to Postsecondary Education and Workforce Development: The CWS and TWS will provide information regarding:

- Industry-recognized certifications
- State and local government-issued licenses
- Sub-baccalaureate educational certificates
- Noncredit instruction
- Apprenticeships
- Internships
- Other non-degree work credentials

History and Status: The CWS and TWS were developed through the NCES-led Interagency Working Group on Expanded Measures of Enrollment and Attainment (GEMEnA). The concepts and instruments were refined through a series of pilot tests.

GEMEnA works to develop and validate national measures of the participation in and credentialing of education and training for work, and to build government-wide consensus for the adoption of these measures in key federal data collections. More specifically, GEMEnA is engaged in a rigorous process of survey item development to validate core items on 1) the attainment of non-degree credentials, including industry-recognized certifications, occupational licenses, and educational certificates, and 2) enrollment in education and training, outside of traditional credit-bearing college coursework, that prepares people for work.

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1 National Center for Education Statistics, [website](http://nces.ed.gov).
NCES proposes to conduct the CWS in 2015 and every four years thereafter; a pilot TWS in 2015; and the TWS in 2017 and every four years thereafter. The OMB decision on the 2015 NHES is pending.

**Methodology:** The target population for the CWS and TWS is adults ages 16-65 not enrolled in grade 12 or below. In 2015, 200,000 households in the U.S. will be contacted to determine eligibility to participate in the CWS or the TWS. A total of about 78,000 households will be invited to participate in the CWS or TWS. NCES expects a 70 percent response rate, which would give it 46,100 completed CWS interviews and 11,200 completed TWS interviews.³

**Data Products and Tools:** Once the new CWS and TWS are completed, data products will be available on the NCES website.

**Annual Cost:** The estimated cost of the 2015 NHES is $7.2 million over 20 months.⁴ This includes, but is not limited to, the CWS and TWS.

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Current Employment Statistics


Purpose and Uses: The Current Employment Statistics (CES) program provides monthly statistics on employment, hours, and earnings, by industry and geography, based on payroll records of business establishments. CES data are used in economic policy, other federal statistical products, wage negotiations, and academic and industry research.

Data Elements Relevant to Postsecondary Education and Workforce Development:

- All employees
- Production or nonsupervisory employees (depending on industry)
- Women employees
- Average weekly hours
- Average hourly earnings (constant dollar and current dollar)
- Average weekly earnings
- Average overtime hours in manufacturing
- Indexes of aggregate hours and payrolls

Data are available for all 50 states, the District of Columbia, Puerto Rico, the Virgin Islands, and over 400 metropolitan areas and divisions. There are over 200 special derivative series, such as indices of aggregate hours and constant dollar earnings.

History and Status: The CES program is a Federal-State cooperative program. During the Great Depression, Congress gave the BLS the duty to collect and publish annual and monthly information on employment, average wages, and hours worked by area and industry. By 1939, 17 States were cooperating in obtaining employment and payroll data in manufacturing establishments. With budget cuts in 1947, the BLS shifted data compilation to State employment agencies under cooperative agreements. According to BLS:

By 1940, estimates of total nonfarm employment for all 48 States and the District of Columbia were available. Since 1949, the CES program has been a Federal-State program that provides employment, hours, and earnings information by industry on a national, State, and metropolitan area basis. By 1980, cooperative arrangements were in effect with all 50 States, the District of Columbia, Puerto Rico, and the U.S. Virgin Islands.

The CES program is authorized by 29 USC 2 and has OMB clearance through October 2014.

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2 For list of uses, see [http://www.bls.gov/sae/790over.htm#datauses](http://www.bls.gov/sae/790over.htm#datauses).
3 [BLS Handbook of Methods, Chapter 2: Employment, Hours, and Earnings from the Establishment Survey](http://www.bls.gov).
Methodology: According to BLS, “The [CES] sample includes about 140,000 businesses and government agencies, which cover approximately 440,000 individual worksites drawn from a sampling frame of roughly 9.0 million Unemployment Insurance tax accounts. The active CES sample includes approximately one-third of all nonfarm payroll employees.” The CES probability sample is a stratified, simple random sample, where the strata are defined by state, industry (NAICS) major industry division, and employment size. Data on employment, hours, and earnings from employer payroll records are collected monthly for the pay period that includes the 12th of each month.

The CES program is voluntary under federal statute. Reporting to the state agencies is voluntary in all but four states (Oregon, Washington, North Carolina, and South Carolina), Puerto Rico, and the Virgin Islands. Automated data collection methods are used for most of the CES sample.

Monthly CES data are among the timeliest of the principal federal economic indicators, released three weeks after the reference week and typically on the first Friday of each month.

Data Products and Tools: The BLS website provides access to CES data through online databases.

Annual Cost: The FY 2012 total cost of the CES program was $59.1 million, of which BLS awarded $7.9 million as grants to SWAs. For FY 2015, the President has requested $61.3 million for CES.

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4 Ibid. The FY2015 BLS budget request indicates that, if fully funded, the CES program “will survey a sample of about 145,000 businesses (composed of approximately 577,000 individual worksites) nationwide.”


6 Reference: BLS Handbook of Methods, Chapter 2: Employment, Hours, and Earnings from the Establishment Survey.
National Employment Projections


Purpose and Uses: The BLS Employment Projections (EP) program provides estimates of nationwide employment by occupation and industry ten years in the future. According to BLS:

Data users include individuals seeking career guidance and organizations and individuals offering career guidance resources. In addition, policymakers, community planners, and educational authorities, who need information for long-term policy planning purposes, make use of BLS employment projections, as do states in preparing state and local area projections.²

Data Elements Relevant to Postsecondary Education and Workforce Development:
Every two years, BLS publishes 10-year projections for variables such as the following:

- Occupation
  - Employment (total, by industry)
  - Projected replacement needs
  - Required education, work experience, and training
- Industry
  - Employment (total, by occupation)
  - Output
- Education and Training
  - Employment and job openings by summary education and training assignment
  - Employment and job openings by educational attainment by on-the-job training category

For context, EP also supplies 10-year projections for the aggregate economy and the labor force. The latest projections, published in late 2013, cover 2012-2022 and include 818 occupations in 329 detailed industries. Data are for the nation as a whole.

Soon after the release of the 10-year projections, EP publishes the Occupational Outlook Handbook (OOH), which is BLS’s most popular publication. The 2014–15 OOH includes 334 profiles covering 580 detailed occupations, about 84 percent of all employment in 2012.

Each occupational profile describes the duties required by the occupation, the work environment of that occupation, the typical education and training needed to enter the occupation, the median pay for workers in the occupation, and the job outlook into the next few years.

10 years for that occupation. Each profile is in a standard format that makes it easy to compare occupations.³

**History and Status:** The BLS assessed the employment outlook after World War II to offer career information to veterans reentering the civilian workforce. BLS published the first formal numerical projections in 1960 and since has provided long-term employment projections on a regular basis.

Beginning with the 1996-2006 projections, BLS has released 10-year projections every two years. Projections are typically available approximately 9-15 months after the end of the reference year.

**Methodology:** Regarding EP program methods:

Procedures have centered on projections of an interindustry, or input–output, model that determines job requirements associated with production needs, and the National Employment Matrix, which depicts the distribution of employment by industry and occupation. Projecting employment in industry and occupational detail requires projections of the total economy and its sectors. BLS develops its projections in a series of six steps that examine

- the size and demographic composition of the labor force
- aggregate economic growth
- commodity final demand
- input–output
- industry output and employment
- occupational employment and openings

Each step, based on separate procedures and models and on related assumptions, goes through several iterations to ensure internal consistency as assumptions and results are reviewed and revised. Together, the six components provide the analytical framework needed to develop detailed employment projections. BLS analysts solve each component sequentially.⁴

**Data Products and Tools:** EP databases and tables are found [here](#) and the current OOH [here](#).

**Annual Cost:** The President requested $7.5 million for the EP program in FY2015 (including funding for the *Occupational Outlook Handbook*).  

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³ BLS, “Occupational Information Included in the OOH,” webpage.
Occupational Employment Statistics


**Purpose and Uses:** The Occupational Employment Statistics (OES) program annually produces employment and wage estimates for over 800 occupations in over 450 industry classifications for the nation, states, and metro areas. Data is also available by ownership. In addition OES had state industry data on its website for research purposes.

OES data are used in labor market analysis, employment needs projections, vocational planning and counseling, state employment services, and industry skill and technology studies. OES data are used in prevailing wage determinations for Foreign Labor Certification. They are used by O*NET, America’s Career Information Network and special tabulation of STEM occupations are provided to the National Science Foundation. OES data also are used as inputs to the BLS Employment Cost Index, calculating injury and illness rates, Medicare and Medicaid hospital reimbursement rates, and special OES tabulations are supplied to the Bureau of Economic Analysis for estimating Social Security payments from employers.

**Data Elements Relevant to Postsecondary Education and Workforce Development:** OES publishes the following elements for the nation, states, and metro areas:

- Number of employed by occupation
- Employment per thousand jobs by occupation
- Hourly and annual and median wage by occupation
- Percentile wages --10th, 25th, 50th (median) 75th and 90th -- by occupation

The OES data are not designed to produce a time series.

**History and Status:** The origin of the OES program can be traced to a small federal-state cooperative survey of manufacturing occupations in 1971.

The OES program has OMB clearance to operate through October 2016.

**Methodology:** The OES program is a cooperative effort between BLS and state labor market information agencies. BLS provides the procedures and technical support, draws the sample, and produces the survey materials, and estimates. States collect the data from the sample selected by BLS. The sample frame is the establishments covered by unemployment insurance. All fifty states, plus the District of Columbia, Puerto Rico, Guam, and the Virgin Islands participate in the survey.

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The OES sample size is 1.2 million establishments over three years. The sample is divided into six panels (one every six months) of about 200,000 establishments. The sample is stratified by geography and industry. Data are collected for the payroll period including the 12th day of May or November. The survey does not cover the self-employed, owners and partners in unincorporated firms, household workers, or unpaid family workers. Establishments are included in the sample at most once every three years.

The OES program’s goal is for each state to achieve an 80 percent response rate. In 2011, the overall response rate was about 77 percent.3

BLS produces annual estimates of occupational employment and wage rates by combining data from the most recent May panel with data from the five prior semiannual panels.

**Data Products and Tools:** OES data from 1988-2013 are available [here](#) in table, chart, map, and spreadsheet formats.

**Program Cost:** The federal cost of the OES program in FY2013 was $36.0 million, including that part contributed by State Workforce Agencies from their BLS grants. For FY2015, the President requested $36.6 million.

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Occupational Information Network

Organization: Employment and Training Administration, U.S. Department of Labor. “The Employment and Training Administration (ETA) administers federal government job training and worker dislocation programs, federal grants to states for public employment service programs, and unemployment insurance benefits. These services are primarily provided through state and local workforce development systems.”

The Occupational Information Network (O*NET) is operated on behalf of ETA under a grant to the National Center for O*NET Development, North Carolina Department of Commerce. The Center in turn collaborates in O*NET operations with several public and private-sector organizations, including the Research Triangle Institute, the Human Resources Research Organization, North Carolina State University, MCNC, and Maher & Maher.

Purpose and Uses: The O*NET program provides comprehensive occupational descriptions and characteristics for use by job seekers, workforce development offices, human resources professionals, students, researchers, and others. O*NET aims to be a resource that helps individuals explore career options, provides a foundation of information on occupational characteristics and requirements, and tracks emerging occupational titles, tasks, and tools and technology used in performing work.

Data Elements Relevant to Postsecondary Education and Workforce Development: For each of almost 1,000 occupations (organized by an O*NET-SOC taxonomy), O*NET provides 277 descriptors, organized into six groups:

- Worker characteristics (abilities, occupational interests, work values, and work styles)
- Worker requirements (skills, knowledge, and education)
- Experience requirements (entry-level skills and licensing requirements)
- Occupational requirements (work activities and context)
- Occupation-specific information (tasks and tools)
- Workforce characteristics (current and projected occupational workforce)—this is provided through links to other data sources

History and Status: O*NET’s predecessor was the Dictionary of Occupational Titles (DOT), which first appeared in 1939. The DOT’s purpose was to help state employment offices classify and match job seekers with jobs. The 1939 volume provided concise definitions of about 17,500 jobs, organized into 550 occupational clusters and classified as skilled, semiskilled, or unskilled.

With the publication of the fourth edition of the DOT in 1977, the U.S. Employment Service commissioned a review of the DOT by the National Research Council. Published in 1980, the Council’s report found numerous problems regarding coverage and accuracy. In 1990, following the report

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2 More information about O*NET partners can be found at [http://www.onetcenter.org/about.html](http://www.onetcenter.org/about.html).
3 For a full description of the O*NET Content Model, see [http://www.onetcenter.org/content.html](http://www.onetcenter.org/content.html).
recommendations, ETA created an advisory panel on the revision of the DOT. The final version of the DOT, with over 12,000 occupations, was published in 1991; much of its information was collected in the 1970s. The panel’s report, issued in 1993, recommended developing a database of occupational information. ETA then sponsored a research project that led to the development of the first operational version of O*NET in 1998. “O*NET 98” covered 1,122 occupations. The O*NET classification system is based on the Standard Occupational Classification (SOC) system, with authorization from OMB to add additional detail (an 8-digit O*NET code embedded within the 6-digit SOC schema).

O*NET provides occupation and skills information mandated by the Workforce Investment Act and its successor Workforce Innovation and Opportunities Act. Most broadly, the law requires the Secretary of Labor to oversee the “development, maintenance, and continuous improvement of a workforce and labor market information system,” including “Skill trends by occupation and industry.”

The O*NET Data Collection Program has clearance from OMB through May 2015.

**Methodology:** According to ETA:

The O*NET Program sampling approaches are designed to create and update the O*NET database in a highly cost-efficient and timely manner while maximizing the reliability of the information in it. . . . Approximately 75% of occupations are completed by the Establishment Method. The method uses a stratified two-stage design. At the first stage, a sample of businesses is selected from a national database of more than 15 million establishments provided by Dun & Bradstreet (D&B) . . . . The sample is selected with probability proportional to the expected number of employed workers in the specific occupations being surveyed. Distribution of occupations by industry is based on data from the most current Occupational Employment Statistics survey for the 6 national Census regions of the US. At the second stage, a sample of workers is selected in the occupations within the sampled businesses. . . .

The OE [Occupation Expert] Method is considered for use when the Establishment Method would likely be problematic because of occupations with very low rates of employment, new and emerging occupations lacking industry employment data, or occupations whose incumbents are in remote locations that are difficult to access. The OE Method can be used only if the occupation is well represented by one or more professional or trade associations that are willing and able to identify experts in the target occupation. For this method, stratified samples of experts are selected from lists of potential respondents. These potential experts are questioned to determine whether they meet the specified criteria to serve as an occupation expert for their respective occupation. Approximately 25% of the occupations are completed by the OE Method.

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5 ETA, op. cit., p. 16-23.

6 Ibid., p. 9.
**Data Products and Services:** Access to the O*NET database is free to the public through O*NET OnLine, a web-based application. The database and other files may also be downloaded in several formats. There also is a full suite of O*NET web services and application programming interfaces. The O*NET program also hosts several other online tools, including O*NET Career Exploration Tools, My Next Move, and Mi Proximo Paso. O*NET information is also integrated into other Federal online tools, including CareerOneStop, Occupational Information on CareerInfoNet, and mySkills myFuture. Many state and local workforce entities, educational institutions, and private sector sites link directly to an O*NET online tool or utilize O*NET web services

**Annual Cost:** The estimated annual cost to the government for the O*NET Data Collection Program from 2012 to 2015 is approximately $6.0 million.\(^7\)

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\(^7\) *Ibid.*, p. 68.
Quarterly Census of Employment and Wages


**Purpose and Uses:** The Quarterly Census of Employment and Wages (QCEW) program provides a quarterly tabulation of employment and wage information from workers covered by state unemployment insurance (UI) laws and federal workers covered by the Unemployment Compensation for Federal Employees (UCFE) program. It houses the most comprehensive employment database in the nation. QCEW users include businesses, public and nonprofit researchers, transportation agencies, educational organizations, workforce development planners, and local economic development agencies.

The QCEW also serves as the BLS business register, the basis for the BLS longitudinal establishment data base (producing Business Employment Dynamics statistics), and the sampling frame for BLS’s Current Employment Statistics and Occupational Employment Statistics surveys. QCEW data are used by the Bureau of Economic Analysis to estimate the wage and salary portion of Gross Domestic Product and by the Census Bureau to improve the accuracy of its business register.²

**Data Elements Relevant to Postsecondary Education and Workforce Development:**

- Employment (monthly)
- Number of establishments (quarterly)
- Total wages (quarterly)
- Average weekly wage (quarterly)
- Average annual pay (annual)

QCEW data are provided by NAICS industry, geography (down to the county level), establishment size, and ownership sector (private, government).

**History and Status:** The QCEW is a BLS-state cooperative statistics program. The State Workforce Agencies (SWAs), with federal funding, are responsible for data collection and initial quality review. BLS establishes and enforces uniform methods and processes to yield a consistent level of data quality.

Historically, the QCEW program was known as the ES-202 program. From the start of the national unemployment insurance (UI) system in 1938 (when the Federal Unemployment Tax Act became effective) until 1972, the Department of Labor’s Manpower Administration or its predecessor agencies were responsible for ES-202 data collection and publication. BLS assumed responsibility in 1972. For decades, BLS published an annual edition of Employment and Wages that laid out detailed ES-202 data tables. With the Internet’s advent, BLS updates QCEW data quarterly on its website.

¹ [http://www.bls.gov/bls/infohome.htm](http://www.bls.gov/bls/infohome.htm)
The collection of QCEW data is authorized by 29 USC 1, 2 and Section 15 of the Wagner-Peyser Act. QCEW data collection has clearance from OMB through October 2014.

**Methodology:** QCEW data are drawn from the Quarterly Contribution Reports filed with SWAs by every employer subject to state unemployment law in the U.S., Puerto Rico and the U.S. Virgin Islands, as well as federal employers. These organizations represent 99.7% of all wage and salary civilian employment in the country. In June 2010, the total number of covered establishments was 9.01 million and total covered employment was 129.4 million.

Each quarter, each SWA codes and summarizes the raw data, checks for missing information and errors, prepares imputations of data for delinquent reports, processes the data, then sends the data to BLS, which does several additional data edits and, as necessary, requests the SWA to review questionable entries and provide explanations. BLS publishes the QCEW data seven to nine months after the reference quarter.

**Data Products and Tools:** QCEW databases are available from BLS online [here](#) in multiple formats (tables, ftp download, .csv, maps, and charts).

**Annual Cost:** In FY2011, the QCEW cost $58 million, of which $35 million was in the form of grants to SWAs. For FY2015, the President has requested $60 million.

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3 Ibid.
Real-Time Labor Market Information

Organization: Multiple primary data collectors, including Burning Glass, Economic Modeling Specialists International (EMSI)/Career Builder, Geographic Solutions, Monster, and WANTED Analytics. The Conference Board is a significant secondary data user.

Purpose and Uses: Real-time labor market information (LMI) is a loosely defined set of data generated by using web technologies to capture and analyze job postings and resumes available on public websites. The data from this collection method are used to provide insights about national, state, and regional labor market supply and demand trends, emerging occupations, current and emerging skill requirements, and the market-based demand for education and certifications. It is described as “real time” because the data are collected daily over the Web and made available to users soon after. Users of real-time LMI include state workforce agencies, regional workforce development agencies, community colleges, trade associations, and individual businesses.

Data Elements Relevant to Postsecondary Education and Workforce Development:

- Job supply and demand, by occupation, industry, and geography
- Occupation skill requirements
- Occupation education and training requirements

History and Status: Real-time LMI companies began analyzing online job postings and resumes as the job market shifted to the Internet and web-based information search algorithms became more sophisticated. These companies often produce products or services under contracts with government agencies or community college districts to inform programmatic decisions. A majority of state LMI agencies subscribe to real-time LMI services. The breadth, depth, and reliability of real-time LMI data services increases with time. That said, reliability issues have not been fully solved. Further, certain types of jobs, such as in construction, are less frequently posted on the Internet and so tend to not be well covered.

Methodology: The following methodologies were reported in a survey of real-time LMI companies:

- Vendors scan up to 20,000 sites and parse up to 4 million job postings daily.
- Several firms are providing “supply side” analyses of available worker resumes and job-board worker profiles.
- Firms use both automated and manual procedures to scrape and spider job boards, to code various data elements, and for parsing and job matching.
- Automated procedures are used to de-duplicate 60 to 90 percent of job ads collected. The rate of de-duplication varies by company.
- Firms employ complex algorithms to increase integrity and reliability of data provided for analysis and decision making.1

**Data Products and Tools**: The following companies (in alphabetical order) are leading producers of real-time LMI data:

- **WANTED Analytics**, Quebec City, Canada, (1999).

The Conference Board (New York City, 1916) produces a monthly [Help Wanted Online](#) real-time LMI data release, with access to individual records available for a fee. Many state agency subscribers, such as in [Florida](#), provides public access to state-specific real-time LMI figures.

**Annual Cost**: Real-time LMI vendor services are available for a fee, typically between $5,000 and $10,000 for a single-user, one-year license.
State Employment Projections Program

Organizations: The Employment and Training Administration, U.S. Department of Labor, in collaboration with the Bureau of Labor Statistics (BLS) and State Projections Consortium through the Projections Managing Partnership (PMP).

- “The Employment and Training Administration (ETA) administers federal government job training and worker dislocation programs, federal grants to states for public employment service programs, and unemployment insurance benefits. These services are primarily provided through state and local workforce development systems.”
- The State Projections Consortium is the network of projection analysts of all the State Workforce Agencies (SWAs).
- The Projections Managing Partnership (PMP) serves as a voluntary governing board, re-organized in 2012 to provide leadership and vision for the Projections Consortium. The PMP includes nine state LMI directors serving rotating three-year terms. The PMP also includes ex officio state analysts providing technical expertise.

Purpose and Uses: According to ETA, state and local:

- Employment projections are the most frequently-requested type of workforce statistic other than the unemployment rate. Projections are used for career counseling; to plan employment, education and training programs; for economic development and other state or regional planning; and as supporting documentation to apply for Federal grants, among many other purposes.²

Data Elements Relevant to Postsecondary Education and Workforce Development:

According to ETA:

ETA requires the states to produce both long-term and short-term projections, but the states are not required to publish the short-term projections (which may be available upon request from the state). The states vary in the level of industry or occupational detail provided, how localities are defined, and the electronic formats used to present projections (e.g., Web view, pdf, MS Excel, etc.).

All states publish statewide long-term (usually 10 year) industry and occupational projections, and the vast majority of these also publish local projections. More than three-fifths of the states publish short-term (usually 2 year) industry and occupational projections, but no more than a fourth publish local short-term projections.³

Many states provide projections with information on education and training.

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² ETA, “Internet Links for State and Local Employment Projections,” webpage.
³ Ibid.
States that publish projections*  
<table>
<thead>
<tr>
<th>Industry Type</th>
<th>Number of States</th>
<th>Percentage of All States</th>
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<tbody>
<tr>
<td>Long-term Industry</td>
<td>State</td>
<td>Local</td>
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<tr>
<td>Short-term Industry</td>
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<td>38</td>
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<tr>
<td>Long-term Occupational</td>
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<td>13</td>
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<tr>
<td>Short-term Occupational</td>
<td>65%</td>
<td>25%</td>
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</tbody>
</table>

**"States" as defined here include the District of Columbia and Puerto Rico, and thus total 52.**

**History and Status:** BLS began producing national employment projections in 1960 and has continued on a 2-year cycle since the early 1970s. With support from BLS, SWAs started producing state and local projections in the mid-1970s. While both national and state long-term projections are created every two years and cover a ten year time-span, only the states produce short-term projections, generally covering a two-year period.

ETA’s State Employment Projections Program evolved from an informal process in the 1970s to a more formal effort today. ETA provides each state with a Workforce Information Grant to States (WIGS) that, among other requirements, mandates the production of long- and short-term projections.5

<table>
<thead>
<tr>
<th>Type of industry and occupational projection</th>
<th>Required, encouraged and other allowable activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statewide long-term</td>
<td>10-year projections required in odd-numbered calendar years</td>
</tr>
</tbody>
</table>
| Statewide short-term | - 2-year projections submission required each year; ETA also encourages states to disseminate their short-term projections  
   - State may also produce longer projections (e.g., 3, 4 or 5 years). ETA discourages 1-year projections, which date quickly. ETA also encourages states to disseminate these projections. |
| Sub-state long-term | 10-year projections required in even-numbered calendar years |
| Sub-state short-term | Optional: an allowable and encouraged, but not required, activity |

The PMP manage an annual ETA consortium grant designed to provide shared information technologies as well as ensure consistent production of state and local employment projections. The PMP has also been charged with standardizing methodologies, offering technical assistance, and

determining the timetable for preparing deliverables. The PMP Board oversees and manages the state and local projections process through four committees: (1) training, (2) product and process innovation, (3) information technology, (4) communications.

**Methodology:** Both national and state projections follow the same methodology, except the factors included in the state projections are weighted to reflect the industry and employment conditions in a given state.

**Data Products and Tools:** Short- and long-term projections for each state are available through Projections Central, hosted by the State Projections Consortium, and ETA’s Internet Links for State and Local Employment Projections.

**Annual Cost:** ETA’s 2014 budget for WIGS is $32,000,000. ETA also contributes between $500,000 and $1 million annually to support the work of the PMP.

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7 For details on the national projections methodology, see BLS, *Handbook of Methods, “Chapter 13: Employment Projections.”*
8 In addition to the employment projections, each WIGS funds an annual statewide economic analysis and the maintenance of the state workforce information database.
Workforce Data Quality Initiative

**Organization:** Employment and Training Administration, U.S. Department of Labor. The Employment and Training Administration (ETA) administers federal government job training and worker dislocation programs, federal grants to states for public employment service programs, and unemployment insurance benefits.¹

**Purpose and Uses:** The Workforce Data Quality Initiative (WDQI) aims to:

[support] the development of, or enhancements to, longitudinal administrative databases that will integrate workforce data and create linkages to education data. States will incorporate workforce information into longitudinal data systems to expand the scope and depth of data from programs, such as the Workforce Investment Act programs, Wagner-Peyser, Trade Adjustment Assistance, and Unemployment Insurance. The long-term WDQI and SLDS goal for States is to use their longitudinal data systems to follow individuals through school and into and through their work life. The WDQI also emphasizes promoting improvements and the level of quality of these systems, in addition to increasing the accessibility of performance data, including data reported by employment services and training providers.

**Data Elements Relevant to Postsecondary Education and Workforce Development:**

Each **WDQI grantee** is expected to develop or expand state workforce longitudinal administrative data systems that integrates education data. The state-level workforce data sources include (but are not limited to):

- Wage record data from employers reporting through the Unemployment Insurance (UI) payroll tax system.
- Benefit and demographic data from claims processed through UI.
- Data from the employment and training services authorized under the Workforce Investment Act and the Wagner-Peyser Act employment services.
- Trade Adjustment Assistance.
- Federal employment data from the Federal Employment Data Exchange System.²

History and Status: The WDQI was introduced in the Obama Administration’s Fiscal Year 2010 budget proposal. The program was intended to supplement the Statewide Longitudinal Data System (SLDS) in the Department of Education, providing workforce data to go along with the SLDS’s education data. The Educational Technical Assistance Act of 2002 (Title II of P.L. 107-279) authorized awarding competitive, cooperative agreement grants to states for up to $20 million per grantee for the SLDS program. Currently in its fourth round of funding, 33 states have received WDQI grants.

Methodology: WDQI grants give considerable leeway in the construction of state systems, with certain guidelines. The grant solicitation mandates that state longitudinal systems must, “at a minimum, include information on programs that provide training, employment services, and unemployment insurance; connect with education data contained in Statewide Longitudinal Data Systems (SLDS) databases; be linked longitudinally at the individual level to allow for enhanced opportunity for evaluation of federally and State-supported education and workforce programs; be capable of generating workforce training provider performance information and outcomes in a standardized, easy to understand format (e.g. scorecards), consistent with all applicable Federal and State privacy laws; and, lead to better information for customers and stakeholders of the workforce system.” The Department of Labor provides technical assistance to grantees in the form of events, webinars, publications, and a collaborative workspace. In addition, the Data Quality Campaign and the Workforce Data Quality Campaign are nonprofit organizations that provide assistance to WDQI grants.

Data Products and Tools: WDQI grants are used for a variety of purposes with the ultimate goal of developing or enhancing the state’s workforce longitudinal databases and linking to education data. Information about grantee projects can be found on the WDQI’s Grantee Information page on the Department of Labor website.

Annual Cost: The Department of Labor authorized nearly $6 million in funding for Round 4 of WDQI grants. As of 2014, roughly $36 million in grant funding has been awarded to 34 states.

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<thead>
<tr>
<th>Organization</th>
<th>Method</th>
<th>Survey</th>
<th>Sample Size</th>
<th>Admin Records</th>
<th>Modeled</th>
<th>Frequency</th>
<th>Timeframe</th>
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<th>City</th>
<th>Neighborhood</th>
<th>Labor Force Status</th>
<th>Educational Attainment</th>
<th>Work Experience</th>
<th>Occupation</th>
<th>Industry</th>
<th>Work earnings</th>
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<td>October 8, 2014</td>
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