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Background

Data Notices

The Longitudinal Employer-Household Dynamics (LEHD) program is continually working to improve and refine Post-Secondary Employment Outcomes (PSEO). This Data Notices document provides information to users on important updates to PSEO data and specific data issues that affect certain school and state partners. General data issues are posted at the top of the document; further below, partner- and state-specific notices highlight major data features or issues that affect individual school and state partners, respectively. These Data Notices are designed to inform users of large-scale updates and issues, and will be revised as processes are improved or new data quality issues are uncovered.

Post-Secondary Employment Outcomes (PSEO)

Post-Secondary Employment Outcomes (PSEO) are experimental tabulations developed by the Longitudinal Employer-Household Dynamics (LEHD) program at the U.S. Census Bureau. PSEO data provide earnings and employment outcomes for college and university graduates by degree level, degree major, and post-secondary institution. A second set of tabulations also provide industry and location of employment. These statistics are generated by matching university transcript data with a national database of jobs, using state-of-the-art confidentiality protection mechanisms to protect the underlying data.

PSEO are made possible through data sharing partnerships between universities, university systems, State Departments of Education, State Labor Market Information offices, and the U.S. Census Bureau. The source of jobs data is the LEHD linked employer-employee microdata, which comprise a longitudinal database covering over 95% of U.S. private sector jobs. Much of these data are collected via a unique federal-state data sharing collaboration, the Local Employment Dynamics (LED) partnership. LED is a cooperative venture between the LEHD program and state agencies, the District of Columbia, Puerto Rico, and the U.S. Virgin Islands. By integrating data used to administer public programs with existing records and surveys, a new national jobs database is generated at very low cost and with no additional respondent burden.

PSEO data are currently only available for post-graduate institutions whose transcript data has been made available to the Census Bureau through a data-sharing agreement.

General Notices

June 2025 (R2025Q2)

Release of new data partners graduate earnings and employment flows

The first official release of graduate earnings and employment flows for the below data partners has been included in this quarter's PSEO publications:

- University of the District of Columbia
- South Dakota Board of Regents

January 2025 (R2024Q4)

Release of new data partners graduate earnings and employment flows

The first official release of graduate earnings and employment flows for the below data partners has been included in this quarter's PSEO publications:

- Providence College
- University of Wyoming

Earnings adjusted to 2022 dollars

Graduate earnings in this release have been adjusted to 2022 dollars using CPI-U.

New graduate earnings outcomes available

Due to the inclusion of 2022 earnings data in this release, the following graduate earnings outcomes are now available in this quarter's PSEO publications:

Degree Type	Cohort	Newly Available Outcomes		
		1-year earnings	*5-year earnings*	*10-year earnings*
Bachelors	2010-2012			X
	2019-2021	X		

Institutions with incomplete data have their 2019-2021 cohorts suppressed until their full data series is available.

Data correction for Louisiana Board of Regents

Some cells created in the R2024Q2 release contain observations from incorrect years. Due to privacy concerns, previously released cells will not have their values modified. Cells erroneously created due to the misplaced observations have been deleted. Cells newly created due to the correction have been added.

New suppressions and exclusions

Gustavus Adolphus College, 2011-2016, was added to the suppression list due to a reporting error in graduation year. University of Michigan, 2019-2021, and Trine University, 2019-2021, were added to the suppression list due to the absence of Michigan earnings data beginning in 2021.

For more information about state data availability, see QWI data notices.

June 2024 (R2024Q2)

Release of new data partners graduate earnings and employment flows

The first official release of graduate earnings and employment flows for the below data partners has been included in this quarter's PSEO publications:

- Western Governors University

- Bryant University
- West Virginia Higher Education Policy Commission
- Illinois Board of Higher Education
- Illinois Community College Board

Earnings adjusted to 2021 dollars

Graduate earnings in this release have been adjusted to 2021 dollars using CPI-U.

New graduate earnings outcomes available

Due to the inclusion of 2021 earnings data in this release, the following graduate earnings outcomes are now available in this quarter's PSEO publications:

Degree Type	Cohort	Newly Available Outcomes		
		1-year earnings	*5-year earnings*	*10-year earnings*
Non-Baccaulareate	2016-2020	X		

January 2024 (R2023Q4)

Release of new aggregations

In this release, we include new aggregation levels. The table below summarizes the new aggregation levels included in this data release, and whether they are included in the PSEOE or PSEOF files.

Aggregation Levels	PSEOE	PSEOF
Degree Level * State of Institution	X	X
Degree Level * CIP 2-digit * State of Institution	X	X
Degree Level * CIP 4-digit * State of Institution	X	
Degree Level * Start Year for Graduation Cohort * State of Institution	X	X
Degree Level * CIP 2-digit * Start Year for Graduation Cohort * State of Institution	X	X
Degree Level * CIP 4-digit * Start Year for Graduation Cohort * State of Institution	X	

August 2023

Data correction in progress for Texarkana College and Texas A&M University - Texarkana

We recently discovered an error in the calculations generating statistics for the "All Cohorts" aggregation for Texarkana College and Texas A&M University - Texarkana. We are actively working on a fix. In the meantime, please disregard statistics for the "All Cohorts" aggregation for these two colleges. Results for the disaggregated cohorts (e.g., 2006-2010) are unaffected by this issue.

June 2023 (R2023Q1)

Release of new data partners graduate earnings and employment flows

The first official release of graduate earnings and employment flows for the below data partners has been included in this quarter's PSEO publications:

- Minnesota Office of Higher Education
- University of Wisconsin System
- Georgia Independent College Association
- South Carolina Commission on Higher Education
- Wyoming Community College Commission

Additionally, there are two new institutions from Connecticut Conference of Independent Colleges: Fairfield University and Bridgeport University.

Suppressions due to available state data

Fairfield University and University of Bridgeport were suppressed before 2010, because a large share of their graduates find employment in Massachusetts, which does not have earnings data until 2010.

For more information about state data availability, see QWI data notices.

Reporting of 4 Digit CIP codes for Master's and Doctoral – Research degree levels

Starting with the R2020Q3 release, we reported the 4 digit CIP codes for the master's and doctoral-research degree levels for which an institution had graduates. While we do not produce earnings estimates for these cells, we include them for consistency with the rest of the degree levels and for user information.

January 2023 (R2022Q4)

Release of new data partners graduate earnings and employment flows

The first official release of graduate earnings and employment flows for the below data partners has been included in this quarter's PSEO publications:

- Oklahoma State Regents for Higher Education

Suppressions due to unavailable state data

Employment outcomes have been suppressed for select institutions and cohorts because earnings data are not available from states representing a significant share of the employment destinations for graduates. In this release, Carl Albert State College (OK) has some observations suppressed because of the lack of Arkansas data beginning in 2018.

For more information about state data availability, see QWI data notices.

Earnings adjusted to 2020 dollars

Graduate earnings in this release have been adjusted to 2020 dollars using CPI-U.

New graduate earnings outcomes available

Due to the inclusion of 2020 earnings data in this release, the following graduate earnings outcomes are now available in this quarter's PSEO publications:

Degree Type	Cohort	Newly Available Outcomes		
		1-year earnings	*5-year earnings*	*10-year earnings*
Bachelors	2013-2015		X	
All others	2006-2010			X

June 2022 (R2022Q2)

Release of new data partners graduate earnings and employment flows

The first official release of graduate earnings and employment flows for the below data partners has been included in this quarter's PSEO publications:

- University of Hawaii System
- Iowa Department of Higher Education
- Massachusetts Department of Higher Education
- South Dakota Board of Technical Education
- Montana University System
- University System of Georgia
- Oregon Higher Education Coordinating Commission
- Connecticut Consortium of Independent Colleges
- University of Connecticut

Suppression of Partial Cohorts

To address the fact that some institutions have only some graduates in a cohort, (e.g. only 2006 graduates in the 2004-2006 graduation cohort) we have applied suppression rules to the data, such that data are suppressed if a partner is missing data in two or more of three years (for bachelors cohorts); or three or more years (for all other degrees).

Suppressions due to unavailable state data

Employment outcomes have been suppressed for select institutions and cohorts because earnings data are not available from states representing a significant share of the employment destinations for graduates. In this release, Massachusetts is particularly impacted, because their earnings data are not available until 2010.

For more information about state data availability, see QWI data notices.

September 2021 (R2021Q3)

Release of new data partner graduate earnings and employment flows

The first official release of graduate earnings and employment flows for the below data partners has been included in this quarter's PSEO publications:

- University of Alabama System
- Arizona Board of Regents
- Iowa Board of Regents
- University of Maine System
- Missouri Department of Higher Education and Workforce Development

- Utah System of Higher Education
- State Council of Higher Education for Virginia

New graduate earnings outcomes available

Due to the inclusion of 2019 earnings data in this release, the following graduate earnings outcomes are now available in this quarter's PSEO publications:

Degree Type	Cohort	Newly Available Outcomes		
		1-year earnings	*5-year earnings*	*10-year earnings*
Bachelors	2007-2009			✠
	2016-2018	✠		
All others	-			

Earnings adjusted to 2019 dollars

Graduate earnings in this release have been adjusted to 2019 dollars using CPI-U.

July 2021 (R2021Q2)

Re-release of data for Louisiana and Pennsylvania State University

Due to data input errors, Louisiana data from R2021Q1 had incorrect earnings and employment counts for Year 1 post-graduation. This release updates all data for institutions from Louisiana.

Additionally, earlier releases of data did not distinguish between Pennsylvania State University – Main Campus and Pennsylvania State University – World Campus, since they report the same OPEID. In this release, we report the institutions with separate OPEIDs:

- Pennsylvania State University – Main Campus: 00332900
- Pennsylvania State University – World Campus: 0033290W

These re-releases were done using additional privacy loss budget, with DRB Approval Number CBDRB-FY21-226.

April 2021 (R2021Q1)

Release of new data partner graduate earnings and employment flows

The first official release of graduate earnings and employment flows for the below data partners has been included in this quarter's PSEO publications:

- Connecticut State Colleges and Universities
- Indiana Commission for Higher Education
- Louisiana Board of Regents
- Maine Community College System
- Ohio Department of Higher Education

September 2020 (R2020Q3)

Release of new data partner graduate earnings and employment flows

The first official release of graduate earnings and employment flows for the below data partners has been included in this quarter's PSEO publications:

- The State University of New York
- The City University of New York
- The Pennsylvania State University
- Texas Higher Education Coordinating Board

New measures in employment flows file

The employment flows file now includes three new measures that count graduates who are jobless or marginally employed after graduation:

- Count of Graduates Jobless or Marginally Employed in Year 1 - y1_grads_nme
- Count of Graduates Jobless or Marginally Employed in Year 5 - y5_grads_nme
- Count of Graduates Jobless or Marginally Employed in Year 10 - y10_grads_nme

These measures are available when the destination is "National" and "All Industry" and are missing otherwise. These flows were previously reported as flows with unspecified destinations (i.e. 'ZZ').

Data released in 2020 CIP Vintage

This release updates the graduate earnings and employment flows files into 2020 CIP code vintages. In some cases, a 4- or 2-digit code was only partially reallocated to another 4 or 2-digit CIP code. In these cases, we probabilistically reallocate the histogram counts using IPEDS degree conferral data as probability weights. For more detail on this procedure, see the technical appendix on the PSEO webpage [https://lehd.ces.census.gov/data/pseo_experimental.html].

Earnings at 2-digit CIP level released

Earnings outcomes at the 2-digit CIP level are now released for all degree types. Previously, they were released for masters and doctoral-research degrees only. Counts and earnings at the 4-digit CIP level are suppressed for masters and doctoral-research degrees. The XX codes previously used to represent 2-digit CIPs have been eliminated.

Other changes

In addition to the changes described above, other notable changes in the graduate earnings and employment flows files include the following:

- The Institution ID variable now has a length of 8 (6 in the previous release).
- IPEDS status flags are now separated out by post-graduate year in earnings (single status flag for all post-graduate years in the previous release).
- Full data documentation in new schema version V4.7.0.

PSEO released in Census API

PSEO is now available through the Census API. The Earnings endpoint is available at https://api.census.gov/data/timeseries/pseo/earnings and the Flows endpoint is available at https://api.census.gov/data/timeseries/pseo/flows. Documentation and help can be found at https://www.census.gov/data/developers/data-sets/pseo.html.

Update for Pennsylvania

The initial release of R2020Q3 included records indicating graduates received Associates degrees (degree level 03) from *Penn State Great Valley: School of Graduate Professional Studies (Institution*

00332919). This institution does not confer associates degrees, so these records have been removed in the updated release files tagged as R2020Q3r2. No other states in the R2020Q3 release were affected.

Correction in version_pseo.txt

The release number (R2020Q3) was omitted from the original version_pseo.txt files. The files have been edited to include that information.

July 2019 (R2019Q3)

Employment flows released

This release provides insights into the destination job characteristics for college and university graduates. Counts of employment flows (i.e. pseof_[st].csv) are now available by degree level, degree major, and post-secondary institution. They are tabulated by the following destination job characteristics:

- Census Division
- NAICS sector

Higher levels of aggregations in graduate earnings files released

Graduate earnings and employment outcomes are now available for all degree majors and all degree levels within post-secondary institutions. These rows will have values of '00' for the Degree Field and Degree Level variables, respectively.

Changes for graduate earnings files

To be more consistent with employment flows files, graduate earnings files are now named pseoe_[st].csv. Changes for two variables have additionally been made since the initial release to better conform to data from the National Center for Education Statistics (NCES). The most noticeable changes include the following:

- The Institution ID variable now has a length of 6 (varied in the previous release), with leading zeros.
- The Degree Field variable now has a length of 5 (4 in the previous release), with values including a period after the first two digits (period not included in the previous release).
- Any aggregated values for the Degree Field variable end with 'XX' in the last two digits ('00' in the previous release).

IPEDS completion data appended

Completion data from the Integrated Postsecondary Education Data System (IPEDS) have been appended to the graduate earnings files. Note that IPEDS completions are reported for the academic year while PSEO counts are of graduates employed in a calendar year. As a result, numbers may not line up. Some IPEDS observations have also been expertly edited and are flagged accordingly.

Excel versions of PSEO files now available

Excel versions of PSEO public-use files are now available for select tabulations. To get tabulations not available in the Excel files, see the CSV files.

New official data schema (V4.5.0-Draft) and documentation

New official data schema (V4.5.0-Draft) and documentation outlining the program's schema versioning process have been released. The new process provides machine-readable features as well as user-

accessible documentation. See https://labordynamicsinstitute.github.io/qwi_schemas/formats/V4.5.0-draft/lehd_public_use_schema.html for more information.

March 2018 (R2018Q1)

First beta release

Post-Secondary Employment Outcomes (PSEO) are experimental tabulations providing earnings and employment outcomes for college and university graduates by degree level, degree major, and post-secondary institution. These statistics are generated by matching university transcript data with a national database of jobs, using state-of-the-art confidentiality protection mechanisms to protect the underlying data. Future releases will include higher levels of aggregations within post-secondary institutions as well as tabulations of flows to destination job characteristics of college and university graduates.

Partner-Specific Notices

University of Wisconsin System

For analytical purposes, all sub baccalaureate degrees within the University of Wisconsin System are reported under University of Wisconsin Colleges, including those conferred pre- and post-restructuring, which occurred in 2018.

Minnesota Office of Higher Education

Prior to 2016, MOHE did not collect records of short-certificate receipt, so earlier years of data are suppressed for degree level '01'.

University of Michigan, Ann Arbor

Data for the following degree fields were reported to IPEDS under different CIP codes. The CIP codes and affected graduation cohorts are listed below:

- CIP code 42.27 for the 2001 and 2004 graduation cohorts,
- CIP code 23.01 for the 2001, 2004, and 2007 graduation cohorts, and
- CIP code 14.18 for the 2001, 2004, and 2007 graduation cohorts.

IPEDS data in the PSEO public-use files have been edited and flagged accordingly.

Texas Higher Education Coordinating Board

In 2020, several community colleges were unified in North Texas: Cedar Valley (00356100), El Centro (00445300), Mountain View (00850300), Richland (00850400), Eastfield (00851000), North Lake (02077400), and Brookhaven (02100200). These institutions were all assigned the OPEID 00445300, and named "Dallas College." In the published data, for all years before 2020, the OPEID 00445300 refers to El Centro College.

State-Specific Notices

Hawaii

A large portion of public sector workers is not included in the data. This issue affects any data released before 2022Q2.

Mississippi

There is an unusually high mismatch rate between firm identifiers on UI wage records and corresponding employers in QCEW data. As a result, there are more imputations of industry and geography for jobs that cannot be matched to employer records. While the mismatch is not severe enough to preclude publication of data, users should be aware of the issue. Research staff is currently investigating edits to improve match rates across job and employer data.

Massachusetts

Unemployment insurance wage data in Massachusetts are only available starting in 2010. Some institutions have cohort suppressions due to this missing data, if they are located in Massachusetts or a substantial share of their graduates are employed in Massachusetts.