



REPORT

How Researchers Use PSEO Data to Study Postsecondary Outcomes and Inform Policy

A report for the PSEO Coalition from Ithaka S+R

Elise Miller McNeely | elise.millermcneely@ithaka.org

Elizabeth Davidson Pisacreta | elizabeth.pisacreta@ithaka.org

June 2025



This literature review was commissioned by the PSEO Coalition from Ithaka S+R under a contract with the Texas Higher Education Foundation and funding from Strada Education Foundation.

Ithaka S+R's strategic advice and support services help institutions improve their performance and further their missions. We generate action-oriented research for institutional decision-making and act as a hub to promote and guide collaboration across the communities we serve. Working with a diverse group of organizations, colleges, and universities, we design and evaluate projects that make higher education, scholarly communication, and cultural collections more accessible to diverse populations.

The Postsecondary Employment Outcomes (PSEO) Coalition

The Longitudinal Employer-Household Dynamics (LEHD) Program, a part of the US Census Bureau's Center for Economic Studies, provides public information on employers and employees. As part of that program, the Postsecondary Employment Outcomes (PSEO) data provide earnings and employment outcomes for college graduates by degree level, major, and institution. As of May 2025, the PSEO Coalition included more than 35 states and 1,000 institutions nationwide

The PSEO Coalition collaborates with LEHD at the US Census to link postsecondary education data with national unemployment insurance wage data and supports its members and the larger postsecondary community in using these data for decision making.



Suggested citation

McNeely, E.M., & Pisacreta, E.D. (2025, June). "How Researchers Use the PSEO Data to Study Postsecondary Outcomes and Inform Policy." PSEO Coalition. Download at <http://www.pseocoalition.org/resources>.

PSEO Board Members

David Troutman, Board Chair
Deputy Commissioner for Academic Affairs, Texas Higher Education Coordinating Board

Rachel Boon, Board Vice Chair
Chief Academic Officer, Iowa Board of Regents

Angela Bell, Board Member
Associate Vice Chancellor for Research and Policy Analysis, University System of Georgia

Colin Chellman, Board Member
Senior University Dean for Institutional Policy and Research, City University of New York

Amy Cox, Board Member
Director, Office of Research and Data, Oregon Higher Education Coordinating Commission

Tod Massa, Board Member,
Director, Policy Research and Data, State Council of Higher Education for Virginia

Table of Contents

Introduction.....	2
Methodology.....	3
PSEO Background and Context.....	4
Early Uses of PSEO Data: Dashboards and Consumer Tools.....	6
Emerging Uses of PSEO Data for Postsecondary Education Policy Research.....	7
PSEO Research on Economic Outcomes and Impact.....	8
PSEO Research on Interstate Migration and Geographic Mobility.....	10
Complementary Efforts for Cross-State Data Sharing.....	12
Moving Towards a National Research Agenda.....	12
Conclusion.....	14
References.....	15

Introduction

The role of postsecondary education in shaping labor market outcomes has become an increasingly critical subject of inquiry for researchers, policymakers, and institutions. With the rising costs of higher education and growing public skepticism about its value, stakeholders require evidence on how specific programs and institutions influence graduate employment outcomes, earnings growth, and alignment with workforce and economic development objectives at state and regional levels (Harnisch et al., 2025). This call for evidence has resulted in the development and use of large-scale administrative data systems that link students' educational data to their post-graduation labor market outcomes. For over 50 years, states, through their state longitudinal data systems (SLDS), have worked to connect education data across sectors (K12 to postsecondary, for example), and more recently, to connect education data with workforce data to understand the linkages between education and workforce outcomes (Klein & Colorado, 2023). Because postsecondary students and college graduates are more likely to be mobile and cross state lines for their education and employment, there is a growing need to connect these state data systems across state lines, and several efforts to do so are already underway.

One such initiative to connect postsecondary education and workforce data has been the Post-secondary Employment Outcomes (PSEO) dataset, which links individual-level educational records to state workforce-related data systems nationwide. PSEO is an experimental dataset from the [Longitudinal Employer-Household Dynamics \(LEHD\)](#) research in the US Census Bureau and was developed through the establishment of data sharing agreements between Census and the individual system and institutional members of the [PSEO Coalition](#). The data provides insights into graduates' geographic and employment outcomes over several years post-completion. This visibility into post-graduation trajectories allows for policy research, examinations of the value of different credentials and programs, information to inform evaluations on program effectiveness, and insights into how postsecondary education offerings align with state and regional workforce needs.

This literature review summarizes key findings from research and practical applications related to PSEO data. It draws from research articles, policy

reports, case studies, technical documents, and general news articles to highlight the uses of PSEO data alongside other data, including analyzing its comparative strengths and limitations. By examining how PSEO data has been used in higher education research and policy, this review lays the groundwork for a national research agenda that strengthens understanding of the links between education and workforce connections, student success, and the economic value of postsecondary credentials.

Methodology

For this literature review, we conducted an environmental scan to identify how researchers and other users use PSEO data. The environmental scan included a review of PSEO Coalition's background materials and case studies in the [Resource Library](#) on the Coalition's website and in the PSEO section of the [LED In Action](#) area of the Census Bureau's website. In addition to reviewing resources available on both those pages, the scan covered scholarly articles, papers, and other reports. We searched for terms including: "Post-secondary Employment Outcomes," "PSEO data and Census," "Census PSEO and earnings outcomes," "Census PSEO and state migration," "Census PSEO and brain drain," "Census PSEO and workforce alignment," "policy uses of Census PSEO data," and variations thereof, using Education Resources Information Center (ERIC) and Google Scholar, which provided the foundation for the review. We supplemented academic database searches with general web searches (e.g., Google) and AI-based discovery tools (e.g., ChatGPT) to ensure comprehensive coverage. Works cited in the studies found through these searches aided in the identification of additional materials and verification of the completeness of the scan. We included peer-reviewed studies, reports, articles, blog posts, and data dashboards to show the breadth and depth of the uses of PSEO data in both traditional research studies and beyond.

PSEO Background and Context

The PSEO project emerged in response to the longstanding gap in linking educational attainment with post-completion labor market data in the United States at a national level. Traditionally, data on college enrollment and completion were largely disconnected from employment records, restricting policymakers' and researchers' abilities to assess higher education's economic value at detailed programmatic and institutional levels. However, in 2017, the University of Texas (UT) System and the US Census Bureau piloted an effort to provide data on the earnings outcomes of college graduates (Huie & Troutman, 2019). Additionally, select Colorado, Wisconsin, and Michigan institutions engaged with the Census in the early days of the PSEO initiative (Foote, 2020). These partnerships created a model for other states and higher education systems seeking to access national-level data about graduate employment and earnings. It is also an important example of how federal, state, and institutional partnerships can help improve the national data infrastructure (Huie & Troutman, 2019).

Since the initial pilot, the expansion of PSEO to other states and institutions has helped provide new opportunities for research on the economic value of higher education credentials and linkages between education and the workforce. While earlier national datasets such as Baccalaureate and Beyond (B&B) and the American Community Survey (ACS) provided some insights into labor market returns, PSEO linked graduates' records from participating colleges and state higher education systems to LEHD wage files, which made it possible to provide de-identified, program-level earnings tabulations at multiple timeframes plus information about the post-graduation migration patterns of college graduates into the workforce.

The data integration efforts behind PSEO involve combining student transcript data from institutions and systems of higher education, specifically for cohorts of graduates, and the LEHD quarterly workforce indicators data, which track employment and earnings histories across most industries and states. This creates a longitudinal picture for millions of graduates, capturing their geographic mobility, industry placement, and

wage progression at one, five-, and ten-years post-graduation. The scale of coverage is substantial—as of June 2024, PSEO includes data on 825 institutions, which cover approximately 29 percent of all college graduates nationwide (US Census, 2024). Data from partners in additional states and the District of Columbia are pending. Data in the dataset are available at the two-digit and four-digit Classification of Instructional Programs (CIP) levels.¹² PSEO data are publicly available and can be downloaded from the US website at https://lehd.ces.census.gov/data/pseo_experimental.html.

PSEO data is distinguished from other education-workforce linked data sources, such as the College Scorecard, which only provides earnings data drawn from IRS tax records for students who receive Title IV federal student aid, approximately 60 percent of students (Foote, 2022). College Scorecard data also does not provide information on the movement of graduates across state lines for employment or the industries in which they work.³

PSEO data complements existing states' SLDSs by integrating labor market outcomes beyond in-state employment, thus offering a more comprehensive accounting of students' transitions into the workforce (Blom et al., 2020; Hunkerstorm & Prescott, 2022). This broader perspective is important in an evolving educational and workforce landscape where students pursue credentials online and beyond state borders, graduates are more mobile and often migrate across state lines for employment, and labor market demands shift rapidly. In addition, relying solely on in-state data systems to examine student earnings can lead to a downward bias (US Census Bureau, n.d.). For example, Foote & Stange (2022) found that graduates of flagship institutions—and in certain majors—have higher earnings and are more likely to migrate out of state.

While PSEO data is extensive, limitations remain. As previously noted, as of June 2024, PSEO data includes approximately 29 percent of all college graduates nationwide, and varies across the more than 30 participating

¹ The Classification of Instructional Programs (CIP) provides a taxonomic scheme that supports the accurate tracking and reporting of fields of study and program completions activity.

² For detailed information about the PSEO data, see the U.S. Census Bureau's Post-Secondary Employment Outcomes (PSEO) Standard Operating Procedures" at https://lehd.ces.census.gov/data/pseo_sop/standard_operating_procedures.html.

³ For more information on the details of College Scorecard data, see [Technical Documentation: College Scorecard Institution-Level Data](#).

states, with six states (Indiana, Montana, North Carolina, Texas, Virginia, and Wyoming) including more than 75 percent of college graduates. Data are pending from institutional and state partners in Kansas, Maryland, North Carolina, Tennessee, and the District of Columbia, which will expand the coverage further (US Census Bureau, 2024). The PSEO Coalition aims to expand coverage to 45 states by 2030 and increase coverage in already represented states (Bell, Foote, Pontius, & Troutman, 2023).

Other current limitations of the PSEO data include the absence of demographic breakdowns (e.g., race, sex) in the publicly available data files and tools; however, Census plans to add disaggregate data by race/ethnicity in the PSEO Explorer beginning in 2026 (Bell et al., 2023; Johnson & Boon, 2025). Census also plans to link higher education data to IRS forms 1040 and 1099 in the future, which will address the additional limitations of state UI data systems, which exclude some workers like federal employers, independent contractors, and those who are self-employed (Bell et al., 2023).

Early Uses of PSEO Data: Dashboards and Consumer Tools

The development of tools and dashboards like the [PSEO Explorer](#) dashboard, offered by the US Census Bureau, and state- and system-specific dashboards like [SeekUT](#), developed by the University of Texas System, facilitated some of the earliest uses of PSEO data, allowing researchers, institutions, students, and policymakers to see the employment and earnings outcomes for graduates in different programs interactively. As higher education increasingly looks to adopt data-driven strategies to support student success, the PSEO initiative is an important example of how integrated administrative and other data can contribute to a complex understanding of the value of postsecondary education and improve institutional outcomes for students across programs, institutions, and states.

Emerging Uses of PSEO Data for Postsecondary Education Policy Research

The publication of the PSEO dataset has coincided with increasing scrutiny from policymakers and the public about the return on investment (ROI) and overall economic value of postsecondary credentials. As policymakers and the general public are increasingly asking these sorts of questions, PSEO has gained increasing traction among education researchers, economists, and policy analysts.

Much of the earliest research related to the PSEO data was methodological work from the Census (Foote, Machanavajjhala, & McKinney, 2019; Foote, 2020; Foote 2022) and details the PSEO data's strengths and limitations, including the effects of privacy protection rules on data availability, the differences between PSEO earnings outcomes and those in College Scorecard, and errors induced by privacy protections in PSEO data.

Other early data analysis and research using the data have explored several themes. For example, the Texas A&M System has been a prolific user of the dataset, producing a series of blog posts in 2021 examining earnings and employment trends by institution type and major. Other researchers, such as Biggs and Richwine (2021), have used PSEO to revisit debates about compensation and labor market efficiency in specific sectors, such as K12 education, by comparing teacher earnings to graduates from comparable majors. Similarly, scholars at the Urban Institute (Blom et al., 2020), after looking at earnings data from in-state data systems, have argued that federal-state partnerships like the PSEO that track graduates' earnings and employment outcomes across state borders are an important effort to supplement other measures of institutional performance, particularly for institutions that are located near state borders. Similarly, Meyer (2023) at the Brookings Institution adds to the discussion by evaluating a US Department of Education proposal to identify various postsecondary credentials using earnings data. Meyer underscores the importance of datasets like PSEO to provide transparent, reliable data to inform cost-benefit analyses and financial accountability

metrics, supporting evidence-based policy decisions that enhance institutional transparency and effectiveness.

PSEO Research on Economic Outcomes and Impact

Researchers have leveraged PSEO data to examine how graduate earnings vary by institution attended, degree level, and program of study. As previously mentioned, Biggs and Richwine (2021) used the data to attempt to analyze teacher salaries and investigate the factors driving the wage differences between education majors and other college graduates. Controlling for institution and credential level, they compare earnings across various fields of study and conclude that when accounting for the field of study, graduates in education have median earnings similar to those in non-STEM fields. However, it should be noted that because PSEO only includes information on the industry in which graduates work, not their specific occupation, the researchers make certain assumptions about who is a "teacher." To do a more detailed analysis about specific occupations, states would need to change the underlying data in their UI data systems from which the Census's LEHD data are drawn.

Similarly, in a master's thesis, Wei (2024) analyzed PSEO data to map how program choice and college attended relate to earnings. The paper focuses on CUNY colleges and specific majors like business administration management and operations. Wei found differences in graduate earnings across institutions and over time. For instance, Baruch College graduates consistently earned more than graduates at other CUNY schools at one- and five-years post-completion.

The comptroller of New York City (2024) also used the PSEO for CUNY institutions as part of report on the contribution CUNY makes to the city and state. Using mainly descriptive analysis, the report uses both PSEO earnings data and migration data to illustrate that the vast majority of CUNY graduates stay in state and across all credentials– certificates, associate's degrees, bachelor's degrees, or graduate degrees–earn significantly more than city residents with only a high school degree.

Building on these institution- and program-level analyses, the Texas A&M University System developed a series of blog posts using PSEO data to examine how graduate earnings vary by major, degree level, and

geography. Several posts analyze earnings outcomes at both master's and doctoral institutions, revealing that fields such as engineering, computer science, and health professions consistently yield higher early-career earnings than education, humanities, or social sciences, even when degree level is held constant (Texas A&M University System, 2021a, 2021b, 2021c, 2021d). These differences are evident across various institutions and suggest that the economic returns to specific credentials depend heavily on the program of study.

One post provides a multi-state comparison, showing that even graduates with the same degree and major experience divergent earnings outcomes depending on where they are employed (Texas A&M University System, 2021e). This geographic variation reinforces the importance of local and regional labor market conditions in shaping graduate earnings and cautions against interpreting national averages without appropriate context.

In addition to highlighting variation across fields and geography, two Texas A&M posts analyze earnings outcomes by program size. These analyses reveal that small programs in high-demand fields such as business, computer science, and health can produce earnings outcomes that rival or exceed those of larger programs in other areas (Texas A&M University System, 2021f, 2021g). This nuance complicates assumptions that large programs or institutions necessarily confer greater economic value and underscores the need to consider program-level detail in postsecondary return on investment evaluations.

Findings from the series of Texas A&M analyses reinforce the importance of analyzing graduate outcomes by field of study, a factor shown repeatedly as one of the strongest predictors of post-college earnings. However, the field of study is not the only important consideration for understanding graduates' earnings over time. There may be other student characteristics and factors that need to be studied as well. Foote (2021), for example, compared PSEO's all-graduate data to the federal College Scorecard's Title IV-only data and found that short-run earnings outcomes are very similar. However, long-run outcomes diverge, with PSEO (all graduates) typically showing higher 10-year medians than the Title IV recipients. This difference suggests that students who did not need federal aid tend to have stronger longer-term earnings, pulling the PSEO all-graduate averages up by year 10 (Foote, 2021). Findings such as these are important to consider, especially when policymakers use various data

sources to assess employment outcomes or include employment outcomes in developing accountability frameworks for institutions and programs, especially when tying performance-based funding to them.

PSEO Research on Interstate Migration and Geographic Mobility

A second area of PSEO use for research examines the geographic flows of graduates. Because PSEO tracks place of work rather than residence, it uniquely enables measurement of "brain drain," which is the net loss of postsecondary degree holders from a state's labor market. Hunkerstorm and Prescott (2023) detail several policy purposes for states to be interested in the geographic mobility of graduates. Specifically, they note that:

...in addition to offering better measures of employment outcomes, capturing the mobility of graduates is useful because it can help states and institutions understand the extent to which their existing academic programs are preparing students for the jobs needed by employers located within their own borders and across a multi-state metropolitan area. It can also help identify programs that are producing graduates bound for other states, as well as those that enroll out-of-state students who remain after graduation to contribute their talent to the state economy. Finally, capturing mobility can provide insight into the career paths of graduates through the lens of where they end up working at various time intervals post-graduation and, by extension, how durably those programs contribute to the state's workforce.

In their own analyses using PSEO data, Hunkerstorm and Prescott (2023) found that institutions that enroll larger proportions of out-of-state students, perhaps not surprisingly, tend to have more graduates leave the state for employment. A more surprising finding from their analysis was the variation in migration patterns for graduates with sub-baccalaureate awards versus bachelor's degrees. While in some states, graduates with sub-baccalaureate awards remained in state, this was not always the case, and there was much variation across different states and institutions. This is perhaps an area that has been understudied using the PSEO data thus far and warrants further examination.

Corn and Petro (2024) provide another example of how geographic migration data in PSEO can be used in combination with data from IPEDS to analyze “brain drain” at the state level. For their analysis in a short research article, they compared employment outcomes of Indiana graduates to employment outcomes of graduates in a selected group of 11 other states. They found that 61 percent of Indiana college graduates with a bachelor’s degree were still employed in Indiana one year after graduation, but that rate declined to 55 percent after five years. The results differed when examining the field of study. Indiana had a high number of graduates relative to the other states but a low in-state retention rate of graduates compared to the other states that they benchmarked against.

One additional use of PSEO data related to graduate migration patterns comes from the research of Conzelmann, Hemelt, Hershbein, Martin, Simon, and Stange (2023). In a study focusing on college-specific labor markets, the authors constructed a new dataset for a sample of 2,600 institutions (selected from the IPEDS universe) using LinkedIn (LI) data. To validate data coverage in the newly created LI data, the researchers used both IPEDS completions data, which look at degree production, and PSEO data to look at in-state employment of graduates five years post-graduation. There was a positive correlation between what they were able to learn from IPEDS and PSEO data and the LI data. They were then able to use the LI data for their study and found that about half of graduates work in the closest metropolitan area to the institution from which they graduated, and 67 percent work in-state (Conzelmann et al., 2023). Results varied across different institutional types. Conzelmann et al. (2023) then went on to look at issues of “brain drain” and how college-specific labor markets for their graduates can impact intergenerational economic mobility. This research study is a good example of how PSEO data can be used in sophisticated analyses to help validate findings and inform novel datasets.

Complementary Efforts for Cross-State Data Sharing

There are other efforts to provide states with the ability to track their graduates when they cross state lines, and these initiatives, in conjunction with PSEO data, provide opportunities for research from multiple perspectives and data sources. One example is the Coleridge Initiative, which helps facilitate cross-state data-sharing arrangements via the Administrative Data Research Facility (ADRF), a secure research platform for sharing data across state agencies within states and across state lines. For example, through the Coleridge Initiative, Kentucky's Center for Statistics, KY Stats, has been able to look at the employment outcomes of its graduates working in Ohio, Indiana, and Tennessee.⁴ Both the PSEO approach and the Coleridge approach to linking data sources between education workforce data systems allow for more detailed research on economic outcomes of postsecondary education and graduate migration patterns than ever before. These efforts are complementary, depending on research questions and the level of detail needed to answer them.

Moving Towards a National Research Agenda

This literature review serves as Ithaka S+R's first step in understanding the current utility of PSEO data and its potential to answer important policy questions through research in order to inform the development of a national research agenda by the PSEO Coalition. Based on this review, we have identified some initial gaps in its usage that may be explored in the agenda. These include:

- While PSEO provides median earnings and the 25th and 75th percentiles, most analyses focus exclusively on median figures.

⁴ [2] See the Multi-State Postsecondary Report for an example of a data dashboard created through this Coleridge collaboration at <https://kystats.ky.gov/Latest/MSPSR>.

Future research should leverage this additional percentile data better to inform policy discussions about the full range of outcomes for credentials of value and ROI.

- Similarly, while some analyses have been done to examine earnings trajectories over time for different fields of study, there is more room for research on how those earnings trajectories impact various approaches to measuring ROI and approaches that might be used to identify credentials of value.
- More research and analysis have been produced that focus on graduates' earnings outcomes rather than their migration. Further research questions should be developed to better leverage that data.
- Little research has been produced focusing on the industry in which graduates work across different programs and degrees. While knowing the occupation of graduates would provide even more insight, there is room for additional research to understand the connections between different programs and the labor market.
- Combining geographic flow data and industry data can provide powerful insights into labor markets and inform economic development. Little research has been done that fully leverages the data together. More research should be conducted to leverage the data together with other labor market and job data.
- While PSEO data are used to research the economic outcomes for students, more research should explore using PSEO in conjunction with other data to model the broader economic impact on state economies, including impact on tax revenues, employment rates, and return on investment for the state, not just the individual.
- Census plans to add additional disaggregation of the data by race/ethnicity and gender in 2026 will allow us to explore new and different research questions across student populations.

Ithaka S+R will continue to build upon these observations drawn from this early desk research to co-develop a short- and longer-term research agenda with the Board and Director of the PSEO Coalition for using PSEO data in important education, economics, and public policy research to build a robust evidence case for policymaking.

Conclusion

The PSEO initiative represents a significant advancement to support the empirical study of postsecondary education and its relationship to labor market outcomes. By linking education records to state and national employment data, PSEO enables researchers and policymakers to evaluate the economic returns of higher education with greater precision and geographic scope than was previously possible. This literature review has documented the breadth of current applications of PSEO data and identified emerging areas of inquiry that merit further exploration.⁵

Research and data analyses leveraging PSEO have already provided valuable insights into program- and institution-level variation in graduate earnings, interstate migration patterns, and labor market alignment. These contributions underscore the dataset's potential to inform public investment decisions, institutional accountability frameworks, and efforts to assess the long-term value of credentials. Moreover, the ability to analyze employment outcomes across state lines fills a critical gap in existing state longitudinal data systems, which often lack visibility into out-of-state employment.

Despite these advances, important areas remain underexamined. The current literature shows limited use of the complete earnings distribution data available through PSEO, and research has only begun to explore the interplay between graduates' geographic mobility and their industry of employment. Future research should aim to integrate these dimensions to support more nuanced analyses of program value, labor market fit, and regional workforce development. Additionally, the forthcoming inclusion of disaggregated demographic data will open new avenues for understanding variation in outcomes across student populations.

This literature review, developed by Ithaka S+R for the PSEO Coalition, aims to inform the PSEO Coalition's development of a national research agenda. Subsequent work by Ithaka S+R for the PSEO Coalition will build upon the findings of this review to recommend rigorous and policy-relevant uses of PSEO data in the future. As the dataset continues to expand in

⁵ Note: There are additional uses of PSEO data, especially in institutional and state dashboards, that may not have been identified through the methodology used in the process of this environmental scan. Ithaka S+R will continue to try to identify those applications of data use through consultation with the PSEO Coalition and its members.

coverage and granularity, it offers a foundational resource for the academic and policy communities committed to strengthening the alignment between postsecondary education and labor market outcomes, enhancing the transparency of institutional performance, and informing data-driven policymaking at the state and national levels.

References

Bell, A., Foote, A., Pontius, J., & Troutman, D. (2023, November). *State uses of Postsecondary Employment Outcomes (PSEO) data* [Presentation]. State Higher Education Executive Officers Association.

<https://postsecondarydata.sheeo.org/wp-content/uploads/2023/11/PSEO-SHEEO-troutman.pdf>.

Biggs, A. G., & Richwine, J. (2021, February 18). *Analyzing teacher salaries using the Post-Secondary Employment Outcomes dataset* (AEI Economics Working Paper 2021-02). American Enterprise Institute.

<https://ssrn.com/abstract=3792337>.

Blom, E., Blagg, K., Chingos, M. M., Monarrez, T., Rainer, M., & Washington, K. (2020). *Measuring college performance: Lessons for policymakers*. Urban Institute.

https://www.urban.org/sites/default/files/publication/101639/measuring_college_performance_lessons_for_policymakers_0_0.pdf.

Burns, R., Baser, S., Chawla, S., Colorado, J., Gluek, G., Heckert, K., Hunt-Khabir, K., Kunkle, K., Lane, J., & Weeden, D. (2024, Summer). *SHEEO Quarterly Policy Review*, available for download at <https://sheeo.org/wp-content/uploads/2024/09/Q3.24-Policy-Report.pdf>.

Conzelmann, J., Hemelt, S. W., Hershbein, B. J., Martin, S., Simon, A., & Stange, K. M. (2023, December 12). Grads on the go: Measuring college-specific labor markets for graduates. *Journal of Policy Analysis and Management*. <https://doi.org/10.1002/pam.22553>.

Corn, A., & Petro, M. (2024, April 25). Indiana college graduates and the question of brain drain. *Indiana Economic Digest*. <https://indianaeconomicdigest.net/Content/Default/Top-Story/Article/Indiana-college-graduates-and-the-question-of-brain-drain/-3/5309/117146>.

Foote, A. D., Machanavajjhala, A., & McKinney, K. (2019). Releasing earnings distributions using differential privacy: Disclosure avoidance system for Post-Secondary Employment Outcomes (PSEO). *Journal of Privacy and Confidentiality*, 9(2). <https://doi.org/10.29012/jpc.722>.

Foote, A. (2020). "Using National Jobs Data to Measure Graduate Impact: New Census Bureau statistical pilot measuring earnings and employment for college graduates." <https://www2.census.gov/about/training-workshops/2020/2020-03-18-lehd-presentation.pdf>.

Foote, A. (2022). "Measuring Protection-Induced Errors in Earnings Outcomes from PSEO," CES Technical Notes Series 22-01, Center for Economic Studies, U.S. Census Bureau. <https://ideas.repec.org/p/cen/tnotes/22-01.html>.

Foote, A. & Stange, K. (2022, July). "Attrition from Administrative Data: Problems and Solutions with an Application to Postsecondary Education." NBER Working Paper No. w30232. <https://ssrn.com/abstract=4159147>.

Foote, A. (2021). "Comparing Earnings Outcome Differences Between All Graduates and Title IV Graduates," CES Technical Notes Series 21-19. <https://www2.census.gov/ces/wp/2021/CES-WP-21-19.pdf>.

Harnisch, T., Baser, S., Burns, R., Heckert, K., Klein, C., Kunkle, K., & Weeden, D. (2025, January). *State priorities for higher education in 2025*. State Higher Education Executive Officers Association. <https://sheeo.org/wp-content/uploads/2025/01/Policy-Issue-Survey.2025.pdf>.

Huie, S. & Troutman, D. (2019, December). "A Roadmap to Better Data: Developing a Census Bureau Partnership to Measure National Postsecondary Earnings Outcomes." Washington, DC: Institute for Higher Education Policy. <https://eric.ed.gov/?id=ED605679>.

Hunkerstorm, L., & Prescott, B. (2022). "Where They Work: Tracking the Employment of College Graduates by Location." *Change: The Magazine of Higher Learning*, 54(5), 19–24. <https://doi.org/10.1080/00091383.2022.2101861>.

Klein, C. & Colorado, J. (2024). *Evolving Systems, Improving Insights, and Enduring Value: Strong Foundations 2023*. State Higher Education

Executive Officers. <https://postsecondarydata.sheeo.org/wp-content/uploads/2024/01/SF2023Report.pdf>.

Meyer, K. (2023). "Higher education accountability: Measuring costs, benefits, and financial value." Brookings Institution. <https://www.brookings.edu/articles/higher-education-accountability-measuring-costs-benefits-and-financial-value/>.

Office of the New York City Comptroller. (2024, April 9). CUNY and the New York City Economy. https://comptroller.nyc.gov/wp-content/uploads/documents/Spotlight_CUNY-and-the-New-York-Economy_0424.pdf.

Texas A&M University System. (2021a, June 15). Exploring employment trends in the PSEO data: Master's institutions. <https://www.tamus.edu/data-science/2021/06/15/exploring-employment-trends-pseo-data-masters-institutions/>.

Texas A&M University System. (2021b, June 1). Exploring employment trends in the PSEO data: Doctoral institutions. <https://www.tamus.edu/data-science/2021/06/01/exploring-employment-trends-pseo-data-doctoral-institutions/>.

Texas A&M University System. (2021c, August 1). Exploring earnings by major in the PSEO data: Master's institutions. <https://www.tamus.edu/data-science/2021/08/01/exploring-earnings-by-major-in-the-pseo-data-masters-institutions/>.

Texas A&M University System. (2021d, July 15). Exploring earnings by major in the PSEO data: Doctoral institutions. <https://www.tamus.edu/data-science/2021/07/15/exploring-earnings-by-major-in-the-pseo-data-doctoral-institutions/>.

Texas A&M University System. (2021e, July 1). Exploring earnings by major in the PSEO data: Multi-state trends. <https://www.tamus.edu/data-science/2021/07/01/exploring-earnings-by-major-in-the-pseo-data-multi-state-trends/>.

Texas A&M University System. (2021f, May 1). U.S. Census Bureau PSEO: Doctoral universities. <https://www.tamus.edu/data-science/2021/05/01/us-census-bureau-pseo-doctoral-universities/>.

Texas A&M University System. (2021g, May 15). U.S. Census Bureau

PSEO: Master's universities. <https://www.tamus.edu/data-science/2021/05/15/us-census-bureau-pseo-masters-universities/>.

U.S. Census Bureau. (2024, January 31). *Census Bureau releases state-level Post-Secondary Employment Outcomes (PSEO)* [Press release]. <https://www.census.gov/newsroom/press-releases/2024/state-level-post-secondary-employment-outcomes.html>.

U.S. Census Bureau. (n.d.). *Post-secondary employment outcomes (PSEO) documentation*. Longitudinal Employer-Household Dynamics (LEHD), Center for Economic Studies. https://lehd.ces.census.gov/data/pseo_documentation.html.

Wei, Y. (2024). *Earnings outcomes by major and institution: A study of CUNY colleges using the PSEO dataset* (Master's thesis). City University of New York. https://academicworks.cuny.edu/gc_etds/5636/.