

Methods Document – Economic Indicators Tool

Data Methods

For Phase I of this project, we combined several key federal data sources to create a comprehensive dataset describing the economic and workforce footprint of U.S. colleges and universities. Our goal was to integrate various institutional and labor market data into a unified framework that supports descriptive analyses of higher education’s economic role.

Integrated Postsecondary Education Data System (IPEDS), 2022–23 Academic Year

The foundation of this analysis is administrative data from the Integrated Postsecondary Education Data System (IPEDS), collected by the U.S. Department of Education’s National Center for Education Statistics. We used 2022–23 data files containing detailed information on institutional characteristics, finances, staffing, and student enrollment.

The following variables were drawn from IPEDS:

- **Institutional identifiers and characteristics:** IPEDS IDs, congressional district, updated to the 119th Congress, sector, institution level, control
- **Enrollment measures:** total 12-month unduplicated headcount and full-time-equivalent (FTE) enrollments
- **Employment:** total employees across position types (including medical school employees)
- **Financial:** total revenues, total expenses, total research expenses, total instructional spending, total student services spending, total spending on salaries, total spending on employee benefits, total student aid awarded

These data provide a detailed institutional profile—how colleges and universities are structured, how they are funded, and how resources flow through their operations. For consistency, the analysis focuses on Title IV, primarily postsecondary institutions.

Office of Postsecondary Education (OPE) Eligibility Matrices, 2025

To capture institutional designations relevant to minority-serving institutions (MSIs), we integrated data from the OPE Eligibility Matrices (2025–2031).

These indicators allow us to identify and categorize institutions based on federal MSI eligibility:

- **AANAPISI:** Asian American and Native American Pacific Islander–Serving Institution
- **ANNH:** Alaska Native and Native Hawaiian–Serving Institution
- **HBCU:** Historically Black College or University
- **HSI:** Hispanic-Serving Institution
- **NASNTI:** Native American–Serving Nontribal Institution
- **PBI:** Predominantly Black Institution
- **TCCU:** Tribally Controlled College or University

American Community Survey (ACS), 2023

We supplemented institutional data with 2023 ACS estimates from the U.S. Census Bureau to contextualize higher education within broader state-level labor market outcomes. The ACS provides data

on median earnings and unemployment rates among the civilian labor force, disaggregated by educational attainment:

Median earnings disaggregated by educational attainment:

- High school degree or equivalent
- Some college or associate degree
- Bachelor's degree or higher

Unemployment rates for the civilian labor force disaggregated by educational attainment

- High school degree or equivalent
- Some college or higher

These indicators enable us to link postsecondary education to state-level economic outcomes—specifically, how attainment levels translate into earnings and employment prospects.

Data Aggregation and Integration

Many higher education institutions operate within complex organizational structures that include main campuses, branch campuses, and additional instructional sites. To avoid overstating the economic footprint of these entities, we aggregated “child” institutions at the state level based on their parent–child financial reporting relationship in IPEDS. This approach provides a balanced representation of institutional impact while preserving state-level comparability.

Institutional records were merged across data sources using the IPEDS ID as the unique identifier. Where applicable, state-level variables (from ACS) were joined by Federal Information Processing Standards (FIPS) codes.

Purpose and Analytical Framework

The objective of Phase I was to establish a landscape-level foundation for understanding higher education's economic and workforce footprint. This phase serves as a descriptive baseline, organized around four core domains:

- **Colleges as Economic Enterprises:** Examining total revenues, expenditures, and research spending to capture the flow of financial resources through higher education and its role in the innovation economy.
- **Colleges as Key Employers:** Analyzing compensation data—including salaries, wages, and benefits—to highlight higher education's contribution to local and regional labor markets.
- **The Role of Higher Education in the Workforce:** Connecting educational attainment to state-level economic outcomes (median earnings and unemployment rates) using ACS data.
- **Investment in Students:** Assessing institutional and government financial support for students through aid, instruction, and student services spending to estimate investment per full-time-equivalent student.

Future Work

Future work will continue to develop the framework by improving existing data, integrating additional sources, and extending the analysis to provide a more comprehensive view of institutional and workforce impacts. By building on this foundational landscape, we aim to provide a more nuanced understanding of how colleges and universities contribute to both local and national economies, guide policy decisions, and inform institutional strategies for investment and growth.

Questions? Email ACE's Government Relations at govrel@acenet.edu.