

Postgraduation Earnings: A Survey of Leading Data Sources for Damages Experts

By Mona Birjandi
and Matt Farber



FLAVIO COELHO/MOMENT AND 3DFOTO/ISTOCK/GETTY IMAGES PLUS VIA GETTY IMAGES

Economists and damages experts frequently encounter situations where they need to address the economic impact associated with disruptions in individuals' earnings streams. These disruptions can arise from various unexpected events, such as employment terminations or product defects that cause injury or death. In such cases, the role of the economic or damages expert is to compare the likely stream of future earnings with what would have occurred had the disruption not taken place. Specifically, the damages expert must determine damages that accurately reflect the economic losses the plaintiff has incurred and will continue to incur attributable to the disruption. The expert must consider factors such as age, education, location, gender, race, occupation, and industry, all of which can impact an individual's predicted future earnings. Experts typically rely on published statistics based on survey data showing earnings averages by occupation, industry, full-time status, year of employment, education, gender, race, age, and other factors likely to affect income.¹

In November 2014, Students for Fair Admissions, Inc. (SFFA) filed lawsuits against Harvard University and the University of North Carolina, challenging their admissions procedures. The case progressed to the U.S. Supreme Court, which concluded that "Harvard's and UNC's policies are unconstitutional because they serve objectives that are insufficiently measurable, employ racial categories that are imprecise and overbroad, rely on racial stereotypes and disadvantage nonminority groups, and do not have an end point."² This landmark decision by the Supreme Court limited the ability of institutions of higher education to consider an applicant's race in and of itself as a factor in the admissions decision.³ In the wake of this ruling, we are likely to see an increase in litigation related to higher education admission policies. In these cases, the impact of a student's educational path will play an important role in determining an individual's predicted future earnings. The changes to come from this ruling are expected to increase legal challenges related to DEI initiatives not only in the academic setting⁴ but also in the employment context, and some employers have started reevaluating their DEI programs to mitigate legal risks.⁵

An essential component in the damages assessments associated with such cases will be the expected postgraduate earnings outcomes related to a particular field of study, educational degree, or institution of higher education. Survey data can play a crucial role in providing statistical evidence on the expected earnings outcomes. However, using survey data in legal settings presents significant challenges that require careful consideration. One major challenge is the potential for bias in survey design, which can arise from factors such as the selection of respondents, the phrasing of questions, the timing of the survey, and other methodological factors. Such biases can distort the results, making them less reliable as evidence. In addition, the

methodology used to collect and analyze survey data can vary widely, impacting the validity and reliability of the findings. For experts determining damages in scenarios where the field of study or choice of higher education institution plays a key role in determining future earnings trajectories, it is important to understand and appreciate what data is available, how it was collected, and its utility—or lack thereof—in the context of specific facts of the case.

For this reason, through a detailed examination of various databases, this article presents a catalog of leading data sources that provide earnings information by field of study, educational attainment, and college or university. This article covers the key aspects of data from various sources, including their origin and

Survey data can play a crucial role in providing statistical evidence on the expected earnings outcomes.

description, their demographic scope and coverage, the depth of information provided, representativeness, accessibility protocols, data timeliness, and critical strengths and limitations for analysis. By outlining these key aspects, the article intends to serve as a valuable resource for damages experts, aiding them in effectively incorporating survey data into their analysis and ensuring that the data used is both robust and defensible.

National Center for Science and Engineering Statistics (NCSES)

The NCSES, within the National Science Foundation (NSF), conducts several surveys to monitor workforce trends in the science and engineering sectors. The following surveys focus on assessing employment outcomes in these fields⁶:

- National Survey of College Graduates (NSCG)
- Early Career Doctorates Survey (ECDS)
- Survey of Doctorate Recipients (SDR)
- Survey of Earned Doctorates (SED)

The NCSES Data Explorer platform (<https://nces.nsf.gov/explore-data>) and the SESTAT platform (<https://ncesdata.nsf.gov/sestat/>) provide interactive access to the data. The subsequent sections provide detailed references for each dataset.

National Survey of College Graduates (NSCG). The NSCG is a biennial survey of college graduates residing in the U.S. that has been conducted since the 1970s. The NSCG



TIP: Experts estimating future earnings damages impacted by education or field of study must understand available data sources, their collection methods, and their utility.

is sponsored by the NSF and conducted by the U.S. Census Bureau. The survey provides data on the number and characteristics of individuals with a bachelor's or a higher degree, with a focus on individuals with education and/or employment in science or engineering. Table 1 summarizes the key features of this survey.

TABLE 1. KEY FEATURES OF THE NATIONAL SURVEY OF COLLEGE GRADUATES (NSCG) DATA

Feature	Notes
Provider	<ul style="list-style-type: none"> National Center for Science and Engineering Statistics (NCSES) and U.S. Census Bureau
Coverage	<ul style="list-style-type: none"> The NSCG is a biennial survey conducted every two or three years. Data from 1993 to the present is available on the NCSES website. Most recent survey includes approximately 164,000 individuals.
Key Outcomes and Variables	<ul style="list-style-type: none"> Certification attainment Educational history Employment sector Job satisfaction Labor force status Occupation information Primary work activity Earnings School enrollment status Student loan debt Work-related training Field of degree

Mona Birjandi, PhD, was a senior economist at Data for Decisions LLC (DfD), a boutique economic consulting firm specializing in labor and employment and life sciences, at the time of conducting and writing this research. DfD has a proven track record of assisting clients with high-stakes class action and single-plaintiff employment lawsuits. She is now a principal economist and director of data analytics at Outten & Golden LLP, where she specializes in applying microeconomic theory and econometric methods to complex labor and employment litigation and leads a team focused on leveraging data in support of litigation efforts. She may be reached at mbirjandi@outtengolden.com. **Matt Farber, PhD**, is a managing director at Secretariat. He specializes in microeconomic theory and data analysis techniques, applying this knowledge to matters relating to antitrust, intellectual property, breach of contract, and false advertising, among others. He may be reached at mfarber@secretariat-intl.com.

Access	<ul style="list-style-type: none"> Access to the data is provided through the NCSES website. The NCSES also offers access to several prepopulated tables and provides statistics derived from the data.
Key Strengths	<ul style="list-style-type: none"> Comprehensive coverage: The NSCG provides a comprehensive dataset covering a broad spectrum of variables related to the demographics, education, employment, and salary of U.S. college graduates from all academic disciplines, offering a rich resource for analysis and research. Longitudinal depth: The NSCG is administered biennially, and data is provided since 1993, which allows for the tracking of changes and trends over time.
Key Limitations	<ul style="list-style-type: none"> Focus on degree holders: Since the NSCG specifically targets individuals with at least a bachelor's degree, it may not fully capture the dynamics and employment outcomes for those without higher education credentials.
Example Questions *User inputs in <i>[italics]</i>	<ul style="list-style-type: none"> What are the expected average earnings of a <i>[male]</i> with a <i>[bachelor's]</i> degree in <i>[mathematics and statistics]</i>? What is the distribution of earnings across occupations for <i>[males]</i> with a <i>[bachelor's]</i> degree in <i>[mathematics and statistics]</i>?
References	<ul style="list-style-type: none"> Data: https://nces.nsf.gov/explore-data/microdata Methodology: https://nces.nsf.gov/surveys/national-survey-college-graduates/2021#methodology Questionnaires: https://www.census.gov/programs-surveys/nscg/tech-documentation/questionnaires.html Analysis: https://nces.nsf.gov/surveys/national-survey-college-graduates/2021#analysis

Early Career Doctorates Survey (ECDS). The ECDS provides data on the demographic profiles, labor market experiences, and career trajectories of early career doctorate holders. The target population for this survey includes individuals who earned their first doctoral degree (PhD, MD, or equivalent) in the past 10 years and work in U.S. academic institutions and federally funded research and development centers (FFRDCs). The survey includes professional and research doctorate holders from all fields, regardless of the country where the degree was obtained (U.S. or abroad). Table 2 summarizes the key features of this survey.

TABLE 2. KEY FEATURES OF THE EARLY CAREER DOCTORATES SURVEY (ECDS) DATA

Feature	Notes
Provider	<ul style="list-style-type: none"> National Center for Science and Engineering Statistics (NCSES)

Coverage	<ul style="list-style-type: none"> The frequency of this survey has not been established. Currently only 2017 survey data is available. The current survey includes 15,465 individuals.
Key Outcomes and Variables	<ul style="list-style-type: none"> Educational history (e.g., institution attended, date of degree, field of degree) Professional activities and achievements (e.g., publications, patents) Employer characteristics (e.g., organization type) Professional and personal life balance Mentoring, training, and research opportunities Career paths and plans (e.g., location, type of desired position) Earnings and productivity
Access	<ul style="list-style-type: none"> Access to the data is not directly provided through the NCSES website. The NCSES offers access to several prepopulated tables and provides statistics derived from the data.
Key Strengths	<ul style="list-style-type: none"> Comprehensive coverage: The ECDS data provides extensive information on early career doctorate holders across a wide range of fields, offering a detailed view of the demographics, labor market experiences, and employment situations within academic institutions and FFRDCs.
Key Limitations	<ul style="list-style-type: none"> Limited longitudinal depth: Because the ECDS focuses on the initial stages of academic and research careers, it does not provide insights into the long-term career progression and outcomes of doctorate holders. Limited availability of data: The survey data is currently available only for the year 2017.
Example Questions *User inputs in [italics]	<ul style="list-style-type: none"> What are the expected average earnings of a [male] with a [doctorate] degree in [mathematics and statistics], employed as a [tenure track faculty] [2 to 5 years] after graduation? What is the distribution of earnings across occupations (within academic institutions and federally funded research and development centers) for [males] with a [doctorate] degree in [mathematics and statistics]?
References	<ul style="list-style-type: none"> Data: https://nces.nsf.gov/surveys/early-career-doctorates/2017#data Methodology: https://nces.nsf.gov/surveys/early-career-doctorates/2017#methodology Analysis: https://nces.nsf.gov/surveys/early-career-doctorates/2017#analysis

Survey of Doctorate Recipients (SDR). The SDR provides demographic, education, and career history information for individuals with a U.S. research doctoral degree in a science, engineering, or health field. The SDR represents doctorate-degree holders who are working, retired, seeking work, or in some other situation. It samples individuals who are less than 76 years of age. Table 3 summarizes the key features of this survey.

TABLE 3. KEY FEATURES OF THE SURVEY OF DOCTORATE RECIPIENTS (SDR) DATA	
Feature	Notes
Provider	<ul style="list-style-type: none"> National Center for Science and Engineering Statistics (NCSES)
Coverage	<ul style="list-style-type: none"> The SDR is a biennial survey. Data from 2001 to the present is available on the NCSES website. Most recent survey includes approximately 125,938 individuals.
Key Outcomes and Variables	<ul style="list-style-type: none"> Demographics (e.g., age, race, sex, ethnicity, citizenship) Educational history Employment status Field of degree Occupation Earnings
Access	<ul style="list-style-type: none"> Access to the data is provided through the NCSES website. The NCSES also offers access to several prepopulated tables and provides statistics derived from the data.
Key Strengths	<ul style="list-style-type: none"> Comprehensive coverage: The SDR provides detailed demographic, educational, and career information about individuals with a research doctoral degree in science, engineering, and health fields from U.S. institutions. Longitudinal design: The SDR tracks the career paths of doctorate recipients over time, offering valuable longitudinal data that can be used to analyze trends and patterns in employment, mobility, and career development.
Key Limitations	<ul style="list-style-type: none"> Limited scope: The SDR focuses only on individuals who have earned a research doctoral degree in certain fields in science, engineering, and health from U.S. institutions, which limits its applicability to the broader workforce. In particular, the SDR excludes individuals who earned research doctorates from academic institutions outside the U.S.; those with doctorates in non-science, engineering, or health fields, including business, education, arts, and humanities; and those with professional doctoral degrees.
Example Questions *User inputs in [italics]	<ul style="list-style-type: none"> What are the expected average earnings of a [male] with a [doctorate] degree in [mathematics and statistics]? What is the distribution of earnings across occupations for [males] with a [doctorate] degree in [mathematics and statistics]?

References	<ul style="list-style-type: none"> • Data: https://nces.nsf.gov/explore-data/microdata; https://nces.nsf.gov/surveys/doctorate-recipients/2021#data • Methodology: https://nces.nsf.gov/surveys/doctorate-recipients/2021#methodology • Questionnaires: https://nces.nsf.gov/surveys/doctorate-recipients/2021#questionnaires • Analysis: https://nces.nsf.gov/surveys/doctorate-recipients/2021#analysis
-------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Survey of Earned Doctorates (SED). The SED is an annual census of research doctorate recipients from U.S. academic institutions that collects information on educational history, demographic characteristics, graduate funding source and educational debts, and postgraduation plans. The target population for the SED consists of all individuals receiving a research doctorate from a U.S. academic institution in the 12-month period before the survey administration.

Compared to the SDR, the SED focuses on the point of doctoral degree completion and immediate postgraduation outcomes, while the SDR offers a more long-term view of the career paths and employment experiences of doctorate holders. In particular, the SED is an annual census capturing information on individuals who receive a research doctorate from U.S. institutions within the academic year prior to the survey administration. In contrast, the SDR is conducted biennially and monitors the career trajectories of those who have obtained a doctoral degree in a science, engineering, or health field from a U.S. institution, including individuals already in the workforce, thereby providing a longitudinal perspective on their career development. Table 4 summarizes the key features of the SED.

TABLE 4. KEY FEATURES OF THE SURVEY OF EARNED DOCTORATES (SED) DATA	
Feature	Notes
Provider	<ul style="list-style-type: none"> • National Center for Science and Engineering Statistics (NCSES)
Coverage	<ul style="list-style-type: none"> • The SED is an annual survey. • Data tables (some with data going back to 1977) are available on the NCSES website. • Most recent survey includes approximately 57,596 individuals.
Key Outcomes and Variables	<ul style="list-style-type: none"> • Demographics (e.g., age, race, sex, ethnicity, citizenship) • Educational history • Postgraduation commitments and plans • Field of degree • Earnings

Access	<ul style="list-style-type: none"> • Access to the data is not directly provided through the NCSES website. • The NCSES offers access to several prepopulated tables and provides statistics derived from the data.
Key Strengths	<ul style="list-style-type: none"> • Comprehensive coverage: The SED provides detailed data on all individuals receiving research doctorates from U.S. institutions in a given year. It captures extensive demographic information and academic details, such as field of study, and immediate postgraduation plans. • Longitudinal design: The tables track trends over time (some going back to 1977), offering valuable longitudinal comparisons.
Key Limitations	<ul style="list-style-type: none"> • Lack of long-term focus: The SED focuses on the point of doctorate receipt and immediate postgraduation plans, lacking data on long-term career outcomes. • Limited scope: The survey includes only individuals receiving a research doctorate from a U.S. academic institution and does not include workers in the U.S. obtaining doctorates abroad.
Example Questions *User inputs in <i>[italics]</i>	<ul style="list-style-type: none"> • What are the expected average earnings of a <i>[male]</i> with a <i>[doctorate]</i> degree in <i>[mathematics and statistics]</i>? • What is the distribution of earnings across postgraduation plans (e.g., academia, government, industry) for <i>[males]</i> with a <i>[doctorate]</i> degree in <i>[mathematics and statistics]</i>?
References	<ul style="list-style-type: none"> • Data: https://nces.nsf.gov/pubs/nsf24300/data-tables • Methodology: https://nces.nsf.gov/surveys/earned-doctorates/2022#methodology • Questionnaires: https://nces.nsf.gov/surveys/earned-doctorates/2022#questionnaires • Analysis: https://nces.nsf.gov/surveys/earned-doctorates/2022#analysis

National Association of Colleges and Employers: First-Destination Survey (FDS)

The First-Destination Survey (FDS), conducted by the National Association of Colleges and Employers (NACE), gathers data on the career outcomes of recent college graduates six months after graduation. This survey includes career outcomes for graduates at all levels of higher education—including associate, bachelor’s, master’s, and doctorate—within six months of completing their degrees. Table 5 summarizes the key features of this survey.

TABLE 5. KEY FEATURES OF THE FIRST-DESTINATION SURVEY (FDS) DATA	
Feature	Notes
Provider	<ul style="list-style-type: none"> • National Association of Colleges and Employers (NACE)

Coverage	<ul style="list-style-type: none"> • The FDS data is provided by graduating class and includes annual reports starting from the class of 2014. • For the class of 2022, the FDS data includes responses from 344 institutions, and the report features data for 594,000 bachelor's degree graduates, 187,000 master's degree graduates, 31,000 doctoral degree graduates, and 16,000 associate degree graduates. • More than 80% of schools conducted first-destination surveys in 2021–2022.
Key Outcomes and Variables	<ul style="list-style-type: none"> • Types of employment (e.g., full- or part-time, contract, freelance) • Additional education (e.g., accepted to graduate or professional school, still seeking either employment or further education) • Starting salary for those employed full-time • Demographics (e.g., gender, ethnicity) • Field of study • School characteristics (e.g., public vs. private, school size) • Region
Access	<ul style="list-style-type: none"> • The annual reports and dashboard are publicly accessible, but the data is not downloadable directly from the NACE website.
Key Strengths	<ul style="list-style-type: none"> • Comprehensive coverage: The FDS captures a broad spectrum of educational outcomes, including data from graduates at the associate, bachelor's, master's, and doctoral levels, and for different fields of study. • Timely data collection: By focusing on the first six months postgraduation, the FDS provides timely insights into the immediate employment or further education status of recent graduates. • Large dataset: Annually, more than 80% of schools conduct the FDS, which makes the FDS a comprehensive source of information.
Key Limitations	<ul style="list-style-type: none"> • Lack of long-term focus: Focusing on the first six months after graduation provides immediate postgraduation outcomes but does not capture long-term career progress or educational impact over time.
Example Questions *User inputs in <i>[italics]</i>	<ul style="list-style-type: none"> • What are the expected average earnings of a <i>[male]</i> with a <i>[doctorate]</i> degree in <i>[mathematics and statistics]</i> within six months of graduation? • What is the distribution of earnings across occupation types (e.g., continue education, seek employment, military service) for <i>[males]</i> with a <i>[doctorate]</i> degree in <i>[mathematics and statistics]</i>?
References	<ul style="list-style-type: none"> • Data: https://www.nacweb.org/job-market/graduate-outcomes/first-destination/ • Methodology: https://www.nacweb.org/job-market/graduate-outcomes/first-destination/standards-and-protocols/ • 2022 dashboard: https://www.nacweb.org/job-market/graduate-outcomes/first-destination/class-of-2022/interactive-dashboard

U.S. Department of Education: College Scorecard

The U.S. Department of Education provides the College Scorecard data, which includes information on the key performance indicators of institutions as a whole and of specific fields of study within those institutions. The data is provided through federal reporting from institutions, federal financial aid records, and tax information. While more limited in many ways than the other data sources discussed in this article,⁷ the College Scorecard nevertheless offers insights into the performance of institutions receiving federal financial aid and the outcomes (primarily debt and earnings) of all students of those institutions. Table 6 summarizes the key features of this survey.

TABLE 6. KEY FEATURES OF THE COLLEGE SCORECARD DATA

Feature	Notes
Provider	• U.S. Department of Education
Coverage	• Annual from 1997 to present (further details below).
Key Outcomes and Variables	<ul style="list-style-type: none"> • Enrollment • Student aid • Graduation rates and costs • Student outcomes (debt and earnings) • Earnings and debt
Access	<ul style="list-style-type: none"> • The data files are publicly available in zipped XLS format for download. • Institution-level data files are provided for 1996–97 through 2021–22. • Field of study–level data files are provided for the pooled 2014–15, 2015–16 award years to the pooled 2018–19, 2019–20 award years.
Key Strengths	<ul style="list-style-type: none"> • Comprehensiveness: College Scorecard provides detailed information on various aspects of postsecondary institutions in the U.S., including tuition costs, graduation rates, average salary after graduation, and student debt levels. Some of this information is available at the field of study level.
Key Limitations	<ul style="list-style-type: none"> • Limited coverage: The data includes only Title IV–receiving students, so figures may not be representative of institutions with a low proportion of Title IV–eligible students. Additionally, the data is restricted to students who are not enrolled (enrolled means having an in-school deferment status for at least 30 days of the measurement year), so students who are currently enrolled in, for example, graduate school at the time of measurement are excluded. • Missing information: A significant limitation of the College Scorecard is the privacy-driven suppression of earnings data by field of study, resulting in a substantial portion of missing information. • Lack of demographic information: One other limitation of the data is the lack of disaggregation by sociodemographic factors such as race, gender, age, or socioeconomic status.

Example Questions *User inputs in <i>[italics]</i>	<ul style="list-style-type: none"> What are the expected average earnings one year after graduation for an individual who graduated from <i>[University of Northern Colorado]</i> with a <i>[doctorate]</i> degree in <i>[mathematics and statistics]</i>?
References	<ul style="list-style-type: none"> Data: https://collegescorecard.ed.gov/data/ Methodology: https://collegescorecard.ed.gov/assets/FieldOfStudyDataDocumentation.pdf; https://collegescorecard.ed.gov/assets/InstitutionDataDocumentation.pdf Dictionary: https://collegescorecard.ed.gov/assets/CollegeScorecardDataDictionary.xlsx; https://collegescorecard.ed.gov/data/glossary/

U.S. Census Bureau

The U.S. Census Bureau conducts several surveys to monitor employment and the economic and demographic characteristics of the U.S. population. The following surveys focus on assessing the employment outcomes for the workforce by educational attainment:

- Post-Secondary Employment Outcomes (PSEO)
- Current Population Survey (CPS) Annual Social and Economic Supplement (ASEC)
- American Community Survey (ACS)
- Survey of Income and Program Participation (SIPP)

The subsequent sections offer more detailed information and references for each of these surveys.

Post-Secondary Employment Outcomes (PSEO).

The PSEO data prepared by the U.S. Census Bureau offers a data initiative that tracks the employment and earnings outcomes of college and university graduates based on administrative records. PSEO data provides earnings and employment outcomes by degree level, degree major, post-secondary institution, and state of institution. The data tracks earnings and employment outcomes for graduates one year, five years, and 10 years after graduation, and covers approximately 25% of all degrees awarded in the U.S. The current PSEO is released as a research data product in experimental form but is expanding to include data from more states and institutions in the coming years.⁸ Table 7 summarizes the key features of this survey.

TABLE 7. KEY FEATURES OF THE POST-SECONDARY EMPLOYMENT OUTCOMES (PSEO) DATA

Feature	Notes
Provider	• U.S. Census Bureau
Coverage	<ul style="list-style-type: none"> • Annual from 1997 to present (further details below). • Data provided by graduation cohort, including data from the classes of 2001 to 2018.

Key Outcomes and Variables	<ul style="list-style-type: none"> Earnings (available at the 25th, 50th, and 75th percentiles, one, five, and 10 years after graduation) Employment Institutions and states Educational attainment Degree field Graduation cohort
Access	<ul style="list-style-type: none"> The data files are publicly available in zipped CSV format for download. The PSEO data can also be accessed through the PSEO Explorer visualization tool.
Key Strengths	<ul style="list-style-type: none"> Administrative data source: PSEO utilizes administrative records rather than self-reported data, which can reduce the biases typically associated with surveys and provide more accurate and reliable information. Longitudinal tracking: It offers longitudinal insights into graduates' employment and earnings over time (one, five, and 10 years after graduation), providing a long-term perspective on the value of different postsecondary educational paths.
Key Limitations	<ul style="list-style-type: none"> Limited coverage: The PSEO data does not cover all institutions or all states. The data is experimental in nature but is expanding to include more institutions. Lack of demographic information: One other limitation of the data is the lack of disaggregation by sociodemographic factors such as race, gender, age, or socioeconomic status.
Example Questions *User inputs in <i>[italics]</i>	<ul style="list-style-type: none"> What are the expected average earnings of an individual in the <i>[2004–2006]</i> cohort at the <i>[Colorado School of Mines]</i> with a <i>[bachelor's]</i> degree in <i>[mathematics and statistics]</i> <i>[one year]</i> after graduation? What is the distribution of earnings across occupations for an individual in the <i>[2004–2006]</i> cohort at the <i>[Colorado School of Mines]</i> with a <i>[bachelor's]</i> degree in <i>[mathematics and statistics]</i> <i>[one year]</i> after graduation?
References	<ul style="list-style-type: none"> Data: https://lehd.ces.census.gov/data/pseo_experimental.html Methodology: https://lehd.ces.census.gov/data/pseo_documentation.html; https://lehd.ces.census.gov/doc/PSEOTechnicalDocumentation.pdf Data explorer: https://lehd.ces.census.gov/data/pseo_explorer.html

Current Population Survey (CPS) Annual Social and Economic Supplement (ASEC).

The CPS is the source of the U.S. government's official statistics on employment. The ASEC supplement to the CPS provides not only the standard monthly labor force data but also additional information on work experience, income, noncash benefits, and migration. Comprehensive work experience data includes details on the employment status, occupation, and industry of individuals

aged 15 and older. Moreover, the survey offers further data on those 15 years old and older, covering income and education levels, as well as demographic characteristics like age, sex, race, household relationship, and ethnicity.⁹ Table 8 summarizes the key features of this survey.

TABLE 8. KEY FEATURES OF THE CURRENT POPULATION SURVEY ANNUAL SOCIAL AND ECONOMIC SUPPLEMENT (CPS-ASEC) DATA	
Feature	Notes
Provider	<ul style="list-style-type: none"> • U.S. Census Bureau
Coverage	<ul style="list-style-type: none"> • Annual from 1992 to present. • The total sample size for the ASEC is about 95,000 households.
Key Outcomes and Variables	<ul style="list-style-type: none"> • Earnings • Employment • Educational attainment • Demographics (e.g., age, race, sex, ethnicity, citizenship) • Occupation
Access	<ul style="list-style-type: none"> • The data files are publicly available in zipped CSV format for download. • The CPS-ASEC also offers access to several prepopulated tables and provides statistics derived from the data (e.g., PINC-04 tables on earnings by educational attainment).
Key Strengths	<ul style="list-style-type: none"> • Comprehensive socioeconomic information: The CPS-ASEC provides extensive data on various socioeconomic factors, including income, employment, education, and health insurance coverage, offering a broad view of the social and economic conditions in the U.S. • Detailed demographic information: The survey offers detailed demographic information, allowing for in-depth analysis of different population groups by age, sex, race, and ethnicity, among other characteristics.
Key Limitations	<ul style="list-style-type: none"> • Lack of field of degree or institution information: While the CPS-ASEC dataset provides data on employment outcomes by educational attainment level, it does not include information on the field of degree or institution.
Example Questions *User inputs in [italics]	<ul style="list-style-type: none"> • What are the expected average earnings in [2021] of an [Asian] [male] with a [doctorate degree]? • What is the distribution of earnings across occupations for an [Asian] [male] with a [doctorate degree]?
References	<ul style="list-style-type: none"> • Data: https://www.census.gov/data/datasets/time-series/demo/cps/cps-asec.html; https://www.census.gov/data/tables/time-series/demo/income-poverty/cps-pinc/pinc-04.html; https://data.census.gov/mdat/#/ • Methodology: https://www.census.gov/programs-surveys/cps/technical-documentation/complete.html; https://www.census.gov/programs-surveys/cps/technical-documentation/methodology.html

American Community Survey (ACS). The U.S. Census Bureau’s ACS is a nationwide survey that collects and produces annual information on social, economic, housing, and demographic characteristics of our nation’s population.¹⁰ While the CPS primarily focuses on labor force statistics, the ACS is designed to provide detailed demographic, social, economic, and housing statistics, covering a wide range of topics such as education, employment, income, housing, and migration patterns. Table 9 summarizes the key features of this survey.

TABLE 9. KEY FEATURES OF THE AMERICAN COMMUNITY SURVEY (ACS) DATA	
Feature	Notes
Provider	<ul style="list-style-type: none"> • U.S. Census Bureau
Coverage	<ul style="list-style-type: none"> • Annual from 2004 to present. • The total sample size for the ACS is about 3.5 million addresses.
Key Outcomes and Variables	<ul style="list-style-type: none"> • Earnings • Employment • Educational attainment • Demographics (e.g., age, race, sex, ethnicity) • Occupation • Field of degree (by bachelor’s field)
Access	<ul style="list-style-type: none"> • The data files are publicly available in zipped format for download. • Several prepopulated tables and statistics derived from the data are also available for download.
Key Strengths	<ul style="list-style-type: none"> • Comprehensive socioeconomic information: The ACS provides extensive data on various socioeconomic factors, including income, employment, education, and health insurance coverage, offering a broad view of the social and economic conditions in the U.S. • Detailed demographic information: The survey offers detailed demographic information, allowing for in-depth analysis of different population groups by age, sex, race, and ethnicity, among other characteristics. • Large sample size: The ACS samples about 3.5 million addresses annually in the U.S.
Key Limitations	<ul style="list-style-type: none"> • Field of degree is associated with bachelor’s degree: The ACS collects data on the highest level of education achieved by respondents, but field of degree is associated with the respondent’s bachelor’s degree.
Example Questions *User inputs in [italics]	<ul style="list-style-type: none"> • What are the expected earnings in [2021] of an [Asian] [male] with a [bachelor’s] degree in [mathematics]? • What is the distribution of earnings across occupations for an [Asian] [male] with a [bachelor’s] degree in [mathematics]?

References	<ul style="list-style-type: none"> • Data: https://data.census.gov/mdat/#/; https://www.census.gov/programs-surveys/acs/data.html • Methodology: https://www.census.gov/content/dam/Census/programs-surveys/acs/about/ACS_Information_Guide.pdf • Questionnaire: https://www.census.gov/programs-surveys/acs/about/forms-and-instructions.html
-------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Survey of Income and Program Participation (SIPP).

The SIPP is a nationally representative, longitudinal survey offering detailed insights into income dynamics, employment status, household changes, and government program participation. The primary goal of the SIPP is to deliver detailed data on the income and program participation of individuals and households in the U.S. In addition, SIPP gathers extensive information on various aspects of economic well-being, including family dynamics, educational attainment, housing expenditures, asset ownership, health insurance, disability, childcare, and food security.¹¹ Table 10 summarizes the key features of this survey.

TABLE 10. KEY FEATURES OF THE SURVEY OF INCOME AND PROGRAM PARTICIPATION (SIPP) DATA

Feature	Notes
Provider	• U.S. Census Bureau
Coverage	<ul style="list-style-type: none"> • Annual from 1984 to present. • The total sample size for the SIPP ranges from about 14,000 to 52,000 households.
Key Outcomes and Variables	<ul style="list-style-type: none"> • Earnings • Employment • Educational attainment • Demographics (e.g., age, race, sex, ethnicity) • Occupation • Assets and liabilities • Program participation and income transfers • Health and well-being
Access	• The data files are publicly available for download.
Key Strengths	<ul style="list-style-type: none"> • Comprehensive socioeconomic information: The SIPP provides extensive data on various socioeconomic factors, including income, employment, education, and health insurance coverage. • Detailed demographic information: The survey offers detailed demographic information, allowing for in-depth analysis of different population groups by age, sex, race, and ethnicity, among other characteristics. • Longitudinal study: The SIPP is a longitudinal survey, capturing changes in household and family composition over a multiyear period.
Key Limitations	<ul style="list-style-type: none"> • Lack of field of degree or institution information: While the SIPP dataset provides data on employment outcomes by educational attainment level, it does not include information on the field of degree or institution.

Example Questions *User inputs in <i>[italics]</i>	<ul style="list-style-type: none"> • What are the expected average earnings in [2021] of an [Asian] [male] with a [doctorate] degree? • What is the distribution of earnings across occupations for an [Asian] [male] with a [doctorate] degree?
References	<ul style="list-style-type: none"> • Data: https://data.census.gov/mdat/#/; https://www.census.gov/programs-surveys/sipp/data.html • Methodology: https://www.census.gov/programs-surveys/sipp/tech-documentation.html • Questionnaire: https://www.census.gov/programs-surveys/sipp/tech-documentation/questionnaires.html

College-Specific Employment Outcome Statistics and Reports

In addition to the data sources mentioned above, various institutions also offer survey data of their alumni. These surveys are helpful as they shed light on the employment trajectories of graduates from these institutions. However, it is important to note that the nature and frequency of the data provided can differ significantly across institutions. Furthermore, when relying on college-specific data, damages experts should carefully evaluate whether such data accurately represents the overall alumni population. Below are a few examples:

- **MIT graduate education statistics:** MIT provides statistics on graduate student demographics, admissions, time to degree, doctoral completions, and doctoral alumni outcomes. Users can look at MIT alumni employment outcomes (e.g., salaries, top employers, occupation) by program and field of study.¹²
- **Yale University Office of Career Strategy (OCS) annual report:** Yale OCS tracks the choices of Yale College students during their summers and after graduation. Among various reports provided by the OCS, a “Four-Year Look” report provides information about Yale College graduates four years after graduation and allows users to search these outcomes by year and major.¹³
- **Harvard Business School (HBS) employment data:** HBS provides statistics on industries, functions, locations, and destinations by alumni cohort (from 2019 to the present).¹⁴

Navigating the Complexities of Education Data in Economic Damages Assessments

The ability to measure expected earnings, which is central to assessing economic damages, depends on reliable and sufficiently detailed earnings data. Various factors such as age, education, location, gender, race, occupation, and industry can impact the expected future earnings stream. Of all the factors affecting future earnings potential, this article has focused on education, an area often underexplored by practitioners, despite the expected rise in cases requiring

information on postgraduate earnings outcomes based on a specific field of study, educational degree, and institution of higher education.

Survey data is frequently used to evaluate expected earnings. However, its use in litigation can be challenging due to potential attacks on the validity of the data, including issues with the range or time frame applied, the representativeness of the population chosen, and the reliability of the survey responses. One of the primary pitfalls in utilizing survey data in litigation is the potential for biases and inaccuracies inherent in the data collection process. Sampling errors, nonresponse biases, and misinterpretations of survey questions can all skew the results, leading to misleading conclusions.

For experts estimating damages in scenarios where the field of study or choice of higher education institution plays a key role in determining future earnings trajectories, it is important to understand and appreciate what data is available, how it was collected, and its utility—or lack thereof—in the context of specific facts of the case. For this reason, through a detailed examination of various databases, this article has provided a catalog of leading data sources that provide information on earnings based on field of study, educational attainment, and institutional affiliation. It is hoped that this article will provide a useful set of guideposts to damages experts as to the origins, scope, accessibility, strengths, limitations, and utility of the data sources for use in litigation moving forward. By critically examining and selecting appropriate survey data, damages experts can more effectively navigate the complexities of legal disputes involving statistical evidence related to the impact of education on future compensation. ◀

Notes

1. STANLEY P. STEPHENSON, HOW ECONOMISTS COMPUTE LOST EARNINGS AND OTHER ECONOMIC DAMAGES IN PERSONAL INJURY CASES (2013).

2. *Students for Fair Admissions, Inc. v. President & Fellows of Harvard Coll.*, 600 U.S. 181, 352 (2023), https://www.supremecourt.gov/opinions/22pdf/20-1199_hgdj.pdf.

3. Memorandum from U.S. Dep't of Just. & U.S. Dep't of Educ., Questions and Answers Regarding the Supreme Court's Decision in *Students for Fair Admissions, Inc. v. Harvard College and University of North Carolina* (Aug. 14, 2023), https://www.justice.gov/d9/2023-08/post-sffa_resource_faq_final_508.pdf; see also Letter from Kristen Clarke, Assistant Att'y Gen., U.S. Dep't of Just. & Catherine E. Lhamon, Assistant Sec'y for Civ. Rts., U.S. Dep't of Educ. (Aug. 14, 2023), <https://www2.ed.gov/about/offices/list/ocr/letters/colleague-20230814.pdf>.

4. For example, in September 2023, SFFA, the group that spearheaded the cases against Harvard University and the University of North Carolina, also filed a lawsuit challenging the race-conscious admissions policies of the U.S. Military Academy at West Point. See Nate Raymond & Phil Stewart, *US Anti-Affirmative Action Group Challenges West Point Admissions Policy*, REUTERS (Sept. 19, 2023), <https://www.reuters.com/world/us/us-anti-affirmative-action-group-challenges-west-point-admissions-policy-2023-09-19/>.

5. See, e.g., Taylor Telford & Julian Mark, *DEI Is Getting a New Name. Can It Dump the Political Baggage?*, WASH. POST (May 5, 2024), <https://www.washingtonpost.com/business/2024/05/05/dei-affirmative-action-rebrand-evolution/>.

6. *Surveys*, NAT'L CTR. FOR SCI. & ENG'G STAT., <https://nces.nsf.gov/surveys> (last visited Oct. 10, 2024).

7. A school designated as Title IV is a higher education institution that processes U.S. federal student aid.

8. *Post-Secondary Employment Outcomes (PSEO)*, U.S. CENSUS BUREAU, https://lehd.ces.census.gov/data/pseo_experimental.html (last visited Oct. 10, 2024).

9. U.S. CENSUS BUREAU, CURRENT POPULATION SURVEY 2023 ANNUAL SOCIAL AND ECONOMIC (ASEC) SUPPLEMENT (2023), <https://www2.census.gov/programs-surveys/cps/techdocs/cpsmar23.pdf>.

10. U.S. CENSUS BUREAU, AMERICAN COMMUNITY SURVEY: INFORMATION GUIDE (2017), https://www.census.gov/content/dam/Census/programs-surveys/acs/about/ACS_Information_Guide.pdf.

11. U.S. CENSUS BUREAU, 2022 SURVEY OF INCOME AND PROGRAM PARTICIPATION USER'S GUIDE (2023), https://www2.census.gov/programs-surveys/sipp/tech-documentation/methodology/2022_SIPP_Users_Guide_SEP23.pdf.

12. *Graduate Education Statistics*, MIT OFF. OF THE PROVOST: INSTITUTIONAL RSCH., <https://ir.mit.edu/graduate-education-statistics> (last visited Oct. 10, 2024). Information about other MIT surveys is available at <https://ir.mit.edu/surveys>.

13. *Four-Year Look*, YALE UNIV. OFF. OF CAREER STRATEGY, <https://ocs.yale.edu/four-year-look/> (last visited Oct. 10, 2024). Information about other Yale OCS reports is available at <https://ocs.yale.edu/channels/statistics-reports/>.

14. *Employment Data*, HARV. BUS. SCH., <https://www.hbs.edu/recruiting/employment-data/Pages/default.aspx> (last visited Oct. 10, 2024).