SENATE COMMITTEE ON FACULTY BENEFITS

Spring 2021 Report on Faculty Salaries

(Informational)

Introduction

The Report on Faculty Salaries is an informational report of the Committee on Faculty Benefits offering an analysis of faculty salaries at Penn State. This report is accompanied by a set of dashboards produced by the Office of Planning, Assessment, and Institutional Research (OPAIR), with thanks to the College of Medicine and University Libraries. The dashboards provide comparisons with other institutions and comparisons among the colleges and campuses within Penn State. The dashboards are available to faculty and academic administrators on the OPAIR website: https://opair.psu.edu/institutional-research/publications-and-reports/faculty-salary-report/. Some of the dashboards contain restricted data provided by the Association for American Universities Data Exchange (AAUDE). Dashboards that contain AAUDE data are restricted to faculty senators due to confidentiality boundaries outlined in the data-sharing agreement for participating institutions. The data-sharing agreement can be accessed using the link in this paragraph.

Many factors may contribute to differences in salary statistics across peer institutions, and thus, make it difficult to draw inferences from these data. For instance, market forces, non-monetary compensations and benefits, and cost of living differences across institutions are often not reflected in the data. Comparisons across institutions or across units within institutions can be complicated by unequal distributions in key dimensions such as discipline, rank, length of time in rank, and length of employment. The data presented in the dashboards may be limited and may not provide enough detail for drawing inferences about important issues pertaining to faculty compensation. However, these data may be useful for informing discussions and prompting further inquiry by the Senate. The Committee on Faculty Benefits encourages the members of the faculty at Penn State to use the data as a reference.

Definition of Salary

The salaries presented in the dashboards reflect contract salary. These salary figures *do not* include additional or supplemental monies an individual may receive for activities such as summer teaching, extra assignments, or administrative stipends. The salary data also do not include fringe benefits such as the University's contribution to the individual's retirement plan, health insurance, or tuition discounts.

The salary data are defined based on a 9-month (36-week) appointment. Unless otherwise noted, salaries for faculty members on 12-month (48-week) appointments are converted to a 9- month equivalent using a standard conversion factor of 0.818 (9/11). The conversation rate is common in the industry when normalizing salaries for reporting purposes.

Association of American Universities Data Exchange (AAUDE) Dashboards

The Association of American Universities Data Exchange (AAUDE) is an organization composed of Association of American Universities (AAU) institutions that contribute their institutional data to the data exchange. The AAU[1] describes itself as being "composed of America's leading research universities. AAU's 65 research universities transform lives through education, research, and innovation." While all AAU institutions are eligible to participate in the data exchange, typically only between 50 and 60 percent of the member institutions will submit data to data exchange in any given year. The data available through the exchange are for an institution's "main campus" only.

The AAU comparisons allow Penn State to benchmark faculty salaries at University Park with other leading research institutions. Direct comparison to individual institutions is not available as the confidentiality rules governing participation in the data exchange prohibit individually identifying institutional data. However, the data may be useful for indicating Penn State's relative position among the group of AAU institutions. The Salary Comparison dashboards present comparisons with *averages* based on all institutions reporting their data in the given year.

College level comparisons are possible using AAUDE because Classification of Instructional Programs (CIP) information is available in the AAUDE data set. The CIP codes are a taxonomic scheme developed by the U.S. Department of Education's National Center for Education Statistics (NCES) to support tracking and reporting of fields of study and program completion activity.[2] The college level comparisons in the Salary Comparison dashboard compare each of Penn State's colleges with a composite of equivalent CIP codes from other AAU institutions.

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[1] For more information on the AAU, see http://www.aau.edu/home.aspx

[2] For more information on CIP codes see http://nces.ed.gov/ipeds/cipcode/.

Salary Comparison - Tenure Line:

This dashboard compares AAU institutions and Penn State University Park salaries overall and by college. The table displays the salaries for both AAU and Penn State by college for the ranks of professor, associate professor and assistant professor. Using the selector buttons to the left of the line graphs, you can alter the view to select each rank plotted individually to compare salaries over time between Penn State and AAU averages by college (Fall 2015- Fall 2019).

Faculty Ranking:

This dashboard compares AAU public universities' average salaries by rank to Penn State's average salaries. It also contains a second report of Penn State compared to Big Ten public universities, which can be accessed by clicking the respective icon above the chart. This report only uses 9-month appointments for tenure-line faculty. It also displays the average salary of faculty of Penn State over time to give context to the rankings.

Intra-University Data Dashboards

The intra-institutional comparisons are based on Penn State's internal data sources. The dashboards are based on a snapshot of the human resources database taken at the end of September 2020. Faculty salaries by location, rank, gender, time-in-rank, college, and position type (academic vs. academic administrator) are displayed. These snapshot data are used for the University's official reporting activities. The data used in the dashboards include all individuals classified as "academic" with a full-time appointment type.

In addition to the data collected from AAUDE and Penn State's human resources system, additional data are available for College of Medicine and University Libraries. The data shown in the College of Medicine dashboard are provided by the Hershey Medical Center to provide information on average salaries for faculty at the Medical Center. The data shown for librarians are provided by University Libraries.

The intra-university dashboards present salary quartiles and mean years in rank along a few key dimensions (e.g., gender and location). It is important to note than when a category contains fewer than six individuals, summary statistics are suppressed for privacy reasons.

Faculty Salaries by Location, Rank and Gender -Tenure Line:

This dashboard provides a comparison of the 2018, 2019, and 2020 faculty salary data by rank and by location (Commonwealth Campuses, Dickinson Law, and University Park). Selectors for the year and tenure status change the data displayed on the table and graph.

In addition, a selector to drill further into the data and add gender to the table is located above the graph.

University Park by Location and Gender -Tenure Line:

This dashboard displays faculty salary statistics for 2018, 2019, and 2020 by college at University Park. The table lists the number of faculty in each rank and the mean years in rank, as well as the median, 25th Percentile and 75th Percentile for each rank. The graph provides a visual representation of the table. A selector is located above the graph to add gender breakdown into the chart and graph.

Faculty Salaries by Campus, Division, Rank and Gender -Tenure Line:

This dashboard displays faculty salary statistics for 2018, 2019, and 2020 by campus college and division. The table lists the number of faculty in each rank and the mean years in rank, as well as the median, 25th Percentile and 75th Percentile for each rank. The graph provides a visual representation of the table. A selector is located above the graph to add gender breakdown into the chart and graph.

Full Time Faculty Salaries for Academics and Academic Administrators -Tenure Line:

This dashboard displays faculty salary statistics for 2018, 2019, and 2020 split by academic and academic administrators, as well as Commonwealth Campuses and University Park. The table lists the number of faculty in each rank and the mean years in rank, as well as the median, 25th Percentile and 75th Percentile for each rank. The graph displays a single rank, which can be selected using the slicer above the graph, to show a comparison of academic and academic administrator salaries at each location.

Tenure-Line Faculty by Time in Rank:

This dashboard shows faculty salary by rank, location (Commonwealth Campuses and University Park), and time in rank. The charts display the number of individuals in each category and their average salary. The user can switch the display between 2018, 2019, and 2020 using the slicer above the chart. The graphs below the chart present the data visually for a single rank. The rank can be changed using the selection buttons the right of the graphs.

College of Medicine Dashboard

Salary data for Penn State Hershey is presented in the College of Medicine Dashboard. The dashboard shows quartile distributions of the salaries of full-time basic science faculty and clinical faculty by rank. Penn State data are presented alongside Association of American Medical Colleges (AAMC) salary percentiles. For basic science faculty, the Penn State data are shown by gender. The selector located above the chart allows the user to select between basic science, clinical MDs, and Clinical PhDs. The graph displays a single rank for the selected universe and can be changed by using the selector buttons to the right of the graph.

Librarian Salaries Dashboard

The Association of Research Libraries (ARL[3]) describes itself as a "nonprofit membership organization of libraries and archives in major public and private universities, federal government agencies, and large public institutions in Canada and the US. We are a forum for the exchange of ideas and a catalyst for collective action to create, share, and sustain our global knowledge. We advocate on research libraries' behalf, convene our research and higher education partners, share intelligence on current issues, and develop the next generation of diverse library leaders."

Through membership in the ARL, Penn State shares salary-related data for its librarian faculty. The Librarian Salaries Dashboard presents Penn State's librarian salaries in comparison to other institutions in the Big Ten.

The dashboard displays the number of full-time employees (FTE), the average salary (Avg Salary), and total salary for each institution by rank (Librarian, Assistant Librarian, Associate Librarian, and Affiliate Librarian). The graphs display the FTE and average salary by institution, with Penn State highlighted in blue. The selector buttons above the table can be used to switch between ranks.

Limitations of the Data

The dashboards accompanying this report offer several different perspectives on faculty salaries. The data presented in the dashboards are an attempt to provide as objective an analysis as possible. However, readers are cautioned to consider the limitations of these data before drawing any conclusions.

Direct comparisons with other institutions can be difficult as organizations differ in structure. Often there are unequal proportions among one or more key factors such as rank, academic discipline, age, and years of experience. The use of the average as the reported statistic further complicates the comparison. The average is susceptible to the influence of extreme values in the population.

Comparisons based on intra-university data may seem to be an opportunity to exercise more control over the chosen statistic. Many of the supporting tables accompanying this report present salary quartiles, which are much less likely to be influenced by extreme values but interpreting differences between percentiles can be more difficult than differences based on the average. Unequal proportions among the groupings within the organization can create paradoxical situations where conclusions based on data at one level of aggregation may not be supported at a finer level of detail.

The data presented in the dashboards reflect the entire population. Before drawing any conclusions from those differences, readers are reminded that there are many factors that affect an individual's salary. The data presented in the dashboards reflect a few factors that seem most relevant to the interests of the Faculty Senate. Properly controlling for the number of factors known to affect an individual's salary would require an analysis beyond the scope of this report. There are also factors such as market forces, non-monetary compensation and benefits, and professional reputation that are not reflected in the data.

Conclusion

The data available in the dashboards accompanying this report present several perspectives on faculty salaries at Penn State. Despite these many perspectives, the data reflect a limited view of faculty compensation. While it can be difficult to draw inferences from these limited data, the Committee on Faculty Benefits hopes that these data can be useful in enabling Penn State's faculty members to be better informed about their salary relative to their colleagues both within Penn State and at some of Penn State's peer institutions.