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Examining the Employment Profile of Institutions Under the Mission-Driven Classification System and the Impact of Collective Bargainingⁱ

Louis E. Shedd,¹ Stephen G. Katsinas,² and Nathaniel J. Bray³

Recent studies have examined the number of higher education institutions and their employees who utilize collective bargaining. The *2012 Directory of U.S. faculty contracts and bargaining agents in institutions of higher education* (Berry & Savarese, 2012) found that, since 2006, two-year colleges added 50,000 members under unionized contracts, as the overall number of agreements increased. These agreements included part-time faculty and graduate student employees. In 2014, Sproul, Bucklew, and Houghton utilized the Union Membership and Coverage Database developed from the Current Population Survey (Hirsch & Macpherson, 2013) to determine that of the 12,781,235 educational service employees, over 31% (4,430,529) were covered under collective bargaining agreements.

Other recent studies have been conducted looking at various sectors of higher education and examining the results of collective bargaining on faculty salaries (Benedict, 2007; Katsinas, Ogun, & Bray, 2016; Mayhall, Katsinas, & Bray, 2015; Wickens, 2008). In 2007, Benedict examined the impact a union, or lack thereof, had on faculty compensation using the broad categories of two- and four-year institutions. Wickens (2008) looked at the impact of unions and collective bargaining on working conditions at public universities. Katsinas, Ogun, and Bray (2016) examined the impact of collective bargaining on faculty salaries and fringe benefits at regional four-year institutions, further broken down by geographic location (rural, suburban, and urban) and institution size. Mayhall, Katsinas, and Bray (2015) studied the combined effects of collective bargaining and local funding levels on faculty salaries and benefits at associate's colleges using the geographic and institutional size subcategories found in the 2010 Carnegie Basic Classification system.

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All of these studies have two things in common. First, each study found collective bargaining had some level of positive impact on faculty compensation. Second, all of the studies used some form of categorization method to choose which institutions were examined and the subsequent labels as descriptors within their research. Therefore, while Urban's claim of the importance of collective bargaining and studying its effect within the field of higher education remains valid, the context of any research in higher education is shaped by the method of classification used in the study. Framing clearly matters.

Purpose of this Study

This study uses a new mission-driven classification system to categorize 1,522 public institutions and the presence of a collective bargaining agreement to address four primary questions:

- What is the average salary outlay based on full-time employment data in the four Bureau of Labor Statistic's 2010 Standard Occupational Classifications (SOC) of Instruction, Research, Public Service, and Management categories (U.S. Dept. of Labor, 2010)?
- Is there any difference for the salaries being paid for employees of Regional Universities and Community Colleges based on their geographic subcategories of Rural, Suburban, and Urban locations?
- Is there any difference in the average number of employees based on full-time, part-time, and full-time equivalent employment data in the four SOCs of Instruction, Research, Public Service, and Management categories?
- Does the presence or lack of a collective bargaining agreement have any impact on the salary outlays or number of employees at Community Colleges, Regional Universities, or Flagship Universities?

History of the Carnegie Classification System

Bailey (1994, p. 12) describes classification as the bedrock for any type of research because it creates "the premier descriptive tool" for study. Since its original release in 1973, the Carnegie Classification system has become the premier classification tool within the field of higher education. The Carnegie Classification system has gone through several updates since the 1970s and is now embedded in virtually every major publication and project for higher education. The Carnegie Basic Classification system can be found in the National Center for Education Statistics' Integrated Postsecondary Education Data System (IPEDS) (NCES, n.d.), the U.S. News and World Reports' annual college rankings (Morse, Brooks, & Mason, 2016), the American

Institutes for Research Delta Cost Project (2016), and the American Association of University Professors' (AAUP) Faculty Compensation Survey (2017). At this time, all public and private degree-granting and accredited institutions have a Carnegie classification designation. The comprehensive application of the Carnegie Classification system across the entire universe of institutions, coupled with its presence in major data repositories and publications has led to widespread use among researchers conducting studies in the field of higher education (Kinkead, 2009).

However, as Katsinas, Ogun, and Bray (2016) pointed out, the Carnegie Classification system's reliance on highest degree awarded has led to groupings of institutions within categories that have very little similarity in terms of institutional mission and function. For example, University of Maryland Eastern Shore, which awarded 20 research or scholarship doctoral degrees in 2013-2014, and Capella University, a private for-profit institution that awarded 1,177 research or scholarship doctoral degrees in 2013-2014, are both placed within the category R3:Doctoral University – Moderate research activity. A further complication is the fact that, unlike the 2005 and 2010 Carnegie Basic Classification versions, the 2015 Carnegie Basic Classification system no longer utilizes any type of spatially-based geographic subcategory for its Associate's Colleges. Service delivery areas for Community Colleges are usually assigned by state statute based on geographic considerations (Friedel, Killacky, Katsinas, & Miller, 2014). As the state mandates an institution's service area, so too does it set the fundamental mission of an institution. Enrollment at most Community Colleges and Regional Universities is based on the size of local nearby populations. How institutions engage with and influence their service areas is also significantly impacted by the geography of the area or region it is in (Holland, 20005). The impact of geographic placement on an institution extends beyond being taken into consideration for classification and of worthy of further research.

Based on these considerations, this article utilizes a new, Mission-Driven Classification System to organize public two- and four-year institutions as an alternative to the 2015 Carnegie Classification system. Katsinas, Ogun, and Bray (2016) pilot-tested an early and more limited version of this classification system to classify the four-year institutions examined as Regional Universities. The mission-driven classification system presented here has been fully developed and identifies all 1,552 public higher education institutions in the United States into major classification categories of Flagship Universities, Regional Universities, and Community Colleges. Regional Universities and Community Colleges are further subcategorized based on an institution's geographic service area (rural, suburban, and urban) and its enrollment size. The combination of categories and subcategories allow for useful and applicable groupings based on an institution's mission and impact of their geographic location.

In the *2012 Directory of U.S. Faculty Contracts and Bargaining Agents in Institutions of Higher Education*, Berry and Savarese identified 519 institutions and 1,174 campuses that operate under collective bargaining agreements. Those agreements covered a combination of full- and part-time faculty and professional staff. Of the 519 institutions with collective bargaining agreements, 93% are public institutions and only 7% are private institutions. Furthermore, “Organized faculty are more evenly divided across institution type (two- or four-year institutions). Specifically, 43.4% of organized faculty are employed at two-year institutions relative to 32.7% at four-year institutions; the other 17.4% are located in public systems that have both two- and four-year components” (Berry & Savarese, 2012, p. ix). Of the faculty employed across these institutions, approximately 80% are represented by the American Association of University Professors (AAUP), the American Federation of Teachers (AFT), or the National Education Association (NEA). Given their large role in representing unionized faculty, it is no surprise that these three organizations have published numerous studies regarding faculty salary and compensation over the years.

The primary purpose of reports issued by the AAUP has been to serve as a source of information and comparisons of peer groups in order to help local AAUP members with compensation negotiations. The AAUP’s first study to collect information on faculty salaries began in 1919 with the formation of its Committee on Economic Conditions of the Profession known as Committee Z. The primary task of the committee was:

...to collect information regarding the scale of salaries of teachers of different grades in the principal American universities and colleges, the ratio of increase in salaries, during recent years, to the increase in the cost of living, and the ratio of the salaries paid in higher to those paid in lower grades of the teaching service. (AAUP, 1919, p. 13)

While the AAUP largely considered issues of salary to be local entity problems that needed to be addressed by states and the areas surrounding an institution as early as 1910, they recognized that the large scale collection and dissemination of data regarding salaries could be useful for these individual colleges.

In 1969, the AAUP began to use a survey format to collect data that was designed to measure inflation. This format still serves as the basis for their current surveys. AAUP reports data by faculty ranks of Professor, Associate Professor, Assistant Professor, Instructor, and All Ranks (Curtis & Thornton, 2014). The AAUP surveys began using the Carnegie Basic Classification system in the early 1970s. Since the Carnegie Basic Classification system has been a fundamental component of all U.S. Department of Education databases, this helped them draw more direct comparisons between institutional peer groups deemed appropriately similar by the leading classification system in the field of higher education.

The National Education Association has members in over 14,000 communities across the nation and serves over 3 million members (NEA, 2015). The NEA has collected data on salaries at higher education institutions since the 1950s. Their website includes links from 1996 to current year editions of the *NEA Almanac of Higher Education*. The *Almanac* is a well-regarded publication with articles on “faculty salaries and benefits, the economic conditions in the states, faculty workload, trends in bargaining, and information on non-faculty professionals on campus” (NEA 2015a).

The American Federation of Teachers (AFT) was founded in 1916 in Chicago, Illinois with a total of eight local charter affiliates. As of 2014, the AFT recorded 3,000 charter affiliates with 1.6 million members (AFT, 2015). This figure includes over 200,000 higher education faculty members. The AFT frequently produces reports covering a range to important topics in the field of higher education, including salaries and benefits for full-time and contingent faculty. The AFT commissioned a nationwide phone survey in 2010 through Hart Research Associates examining satisfaction levels for part-time faculty at two- and four-year institutions. The survey found that 62% of those surveyed were “very/mainly satisfied” (AFT, 2010, p. 10), however 41% of respondents felt improvements were needed in salaries (AFT, 2010, p. 12). Additionally, 44% felt that part-time faculty members were not given a “fair opportunity” to obtain a full-time position (AFT, 2010, p. 15).

The AAUP, NEA, and AFT have invested significant resources to research salary and benefits for faculty in higher education and sharing that information with their members to aid in negotiations. However, as Katsinas, Ogun, and Bray (2016) point out, the studies of these organizations frequently present their findings based on the broad categories of “two-year institutions” and “four-year institutions”. These broad categories do not recognize the significant differences that exist between institutions based on their mission, geographic placement, and enrollment size. The usage of broad categories also limits the usability of their published information and prevents further specificity at this time.

History and Value of Geographic Classification.

Recognizing the role that an institution’s geographic location plays in its mission and function has proven to be a useful subset in a higher education classification system. This is particularly true for two-year institutions and smaller four-year institutions. These institutions frequently have an assigned primary service area as designated by their state governing body (Friedel, Killacky, Katsinas, & Miller, 2014). Katsinas initially proposed a geographic model for the classification of two-year institutions in 1993. The geographic model went through several iterations over the next decade. His geographic model was updated in 2005 (Hardy) using data

from the 2000 Decennial Census and IPEDS data from the 2000-2001 and 2001-2002 academic years. The updated Katsinas, Lacey, and Hardy (Hardy & Katsinas, 2006) geographic model was integrated into the 2005 Carnegie Basic Classification system to classify the institutions within the Associate's Colleges category. The Katsinas, Lacey, and Hardy geographic classification model was also utilized in the 2010 Carnegie Classification system for the Associate's Colleges. However, the categories for two-year institutions underwent a significant change in the 2015 Carnegie Basic Classification system, and a geographic classification was not included in this update (Carnegie Classification, n.d.a). Despite the complex subcategories of student/program index used for Associate's Colleges in the 2015 update, the 2015 Carnegie Basic Classification system cannot express institutional mission and geographic location (Carnegie Classification, n.d.b.).

The concept for using a similar geographic system to classify smaller four-year institutions stemmed from Alden Dunham's *Colleges of the forgotten Americans: A profile of state colleges and regional universities* (1969). This work was part of a book series edited by Clark Kerr, the originator of the Carnegie Classification system. Dunham argued that institutions who were members of the American Association of Colleges and Universities (AASCU) member institutions had more in common in terms of mission with Associate's Colleges than with larger Doctoral Colleges and Universities. Ostar (1991) later echoed Dunham's assertion, saying that AASCU institutions and Associate's Colleges "share a similar philosophy, and serve a similar clientele" (p. 23). Garmise (2014) also suggested that these institutions serve similar types of students and play important roles in economic drivers for their locations and provide the trained workforce for surrounding industries. Given that AASCU places a strong emphasis on its members serving as "stewards of place," it seems appropriate to include geographic location for any classification system that includes the AASCU membership (AASCU, 2016). Kinkead (2009) was the first attempt to apply the Katsinas, Lacey, and Hardy geographic model when classifying regional universities that fell within the 2005 Carnegie Basic Classification category of Master's Colleges and Universities.

Maldonado (2006) performed the first study of faculty salaries that utilized the geographic classification found in the 2005 Carnegie Basic Classification system. Maldonado used federal data from the Fiscal Year 2003 and the National Center for the Study of Collective Bargaining in Higher Education and the Professions' 1996 *Directory of Collective Bargaining* to examine salaries for faculty at two-year colleges, based on whether their institution was located in a state with or without a collective bargaining agreement. Using the Grapevine definition, Maldonado also factored in the 25 states with institutional funding coming from local sources exceeding 10% of total institutional revenue and the 25 states with less than 10% of institutional funding coming from local sources (in most of these states, the local funding approached 0%).

Maldonado found that full-time faculty salaries were significantly impacted by geographic region, a collective bargaining agreement, and the presence of local funding. Maldonado found that Rural-Small institutions without collective bargaining and local funding reported salaries and fringe benefits for faculty averaged \$55,035 per year. However, Suburban institutions with collective bargaining and local funding reported salaries and fringe benefits for faculty averaging \$70,584 per year. This is a \$15,000 difference in average salary and benefits for faculty. Maldonado projected that this \$15,000 gap, projected over a thirty-year teaching period, adjusting for inflation, could easily represent a difference of a million dollars over a career.

In 2015, Mayhall, Katsinas, and Bray presented an update on Maldonado's work utilizing the IPEDS Human Resources data for the 2010-2011 academic year. Using the 2010 Carnegie Basic Classification system's geographic categories for associate's colleges and the presence of significant local funding, they analyzed full-time faculty salaries and fringe benefits at institutions with and without collective bargaining agreements. Full-time faculty at rural, suburban, and urban associate's colleges received monetary compensation that averaged \$81,307. Differences were observed if local tax appropriations were present. Overall, they found that collective bargaining and local appropriations had a positive impact on average salaries and fringe benefits compared to institutions without collective bargaining and local tax appropriations. The largest average annual gap of \$34,367 was found between full-time faculty at Suburban-Single Campus associate's colleges with local funding and collective bargaining compared to Rural-Small associate's colleges with local funding but with no collective bargaining.

Katsinas, Ogun, and Bray (2016) used an early version of this mission-driven classification system to create a geographically-based model to classify 390 "Regional" Universities that were members of AASCU as of August 2014. These institutions were largely classified by the 2010 Carnegie Basic Classification system as Masters and Baccalaureate institutions. IPEDS was used to gather data to identify the number of full-time faculty employed, their average salaries, and fringe benefits for the 2010-2011 academic year, the last year fringe benefits data was gathered in IPEDS' Human Resources survey. They found that a higher percentage of full-time faculty were employed for all categories at institutions with collective bargaining, and that salaries were 15% higher and fringe benefits were 32% greater at institutions with collective bargaining.

Methodology

The classification system used to organize data has an important impact of the analysis and subsequent results for research. The 2015 Basic Carnegie Classification system's reliance on highest degree awarded and lack acknowledgement for an institution's of geographic placement

leads to institutions with significant differences being placed within the same categories. As such, the mission-driven classification system serves as a better tool for the analysis of the impact collective bargaining agreements and local funding on the employment, salaries, and benefits at institutions.

Conceptual Framework for the Mission-Driven Classification System.

The mission-driven classification system presents institutional categories that reflect the differences between the mission and function of an institution. As such, the three main categories being utilized are Community Colleges, Regional Universities, and Flagship Universities. Subcategories based on an institution's enrollment size and rural, suburban, or urban geographic settings were also developed for Community Colleges and Regional Universities. To assist the reader in the text that follows, the three major categories are capitalized.

Community Colleges are institutions with a service area mandated by some type of governing body. Their programs are considered two-years or shorter, for which they award certificates or associate degrees. While some Community Colleges can award four-year degrees, the vast majority of their programming consists of curricula that are two-years or shorter. One of the goals of the mission-driven system was to classify institutions based on the role they play within U.S. higher education. As such, it was important to ensure that one of the primary criteria of institutions categorized as a Community College is that they prioritize their two-year programming.

Regional Universities are four-year institutions, most of which at the time of their founding were teacher-training institutions intended to serve the population of a specific area of a state (Dunham, 1969). A large portion of their student body consists of students from the surrounding area. They offer a wide range of baccalaureate degrees and along with some master's and doctoral degrees. Post-baccalaureate programs are fewer and narrower in scope compared to the breadth of programs offered by Flagship Universities, and they generally have limited resources devoted to research activities.

Flagship Universities are four-year institutions with a significant amount of post-baccalaureate programs and awards. Within the mission-driven classification system, it was decided that every state, territory, and district within the U.S. would have at least one Flagship University if there was an institution within the area that awarded doctoral-level programs and credentials. By this criterion, Guam is the only U.S. Trust Territory that does not have at least one Flagship University. Flagship Universities have a mission of serving the entire population of their state, or in the case of larger states, a substantial population. They often have a large portion of out-of-state students along with their in-state students. Flagship Universities will typically

award a large number of doctoral degrees in a variety of programs, and possess a large research function funded by federal grants. At this time there are no subcategories for Flagship Universities.

Classification by 2013-2014 IPEDS Data.

The mission-driven classification system only examined data from the 1,567 public institutions categorized within the 2015 Carnegie Basic Classification system that are not categorized as one of the 77 Special Focus or Tribal institutions. Federally designated service academies such as the United States Air Force Academy, the United States Coast Guard Academy, the United States Merchant Marine Academy, the United States Military Academy, and the United States Naval Academy were automatically excluded as military special use institutions. The Air Force Institute of Technology-Graduate School of Engineering & Management, Marion Military Institute, New Mexico Military Institute, Maine Maritime Academy, the California Maritime Academy, Massachusetts Maritime Academy, Virginia Military Institute, SUNY Maritime College, Citadel Military College of South Carolina, and the Naval Postgraduate School were also excluded as military special use institutions based on enrollment and credentials awarded. The exclusion of these 15 institutions resulted in a remaining 1,552 institutions being classified within the Mission-Driven Classification System.

The data used during the creation of the mission-driven classification system were taken from the 2013-2014 academic year and the fiscal year 2014, depending on how certain variables are collected by IPEDS. IPEDS is the most exhaustive and accurate source of data in higher education. At the time this classification project began, the 2013-2014 academic year and fiscal year 2014 represented the most recent year of final data available in the IPEDS data system.

The mission-driven classification system takes a “bottom-up” approach, so Community Colleges were classified first, in contrast to Carnegie’s highest degree awarded system. To be classified as a Community College, an institution could not have any graduate students enrolled using 12-month unduplicated enrollment or award any graduate degrees. If those criteria were met, any institution with a cumulative grand total of first major number of awards of the IPEDS variables “Award of less than 1 academic year,” “Award of at least 1 but less than 2 academic years,” “Award of at least 2 but less than 4 academic years,” and “Associate's degree” that equaled or exceeded 50% of the grand total awards for the institutions was included into the category. Once these factors were taken into account, there were 980 institutions that are classified as Community Colleges within the mission-driven classification system.

The remaining 572 institutions were classified as either Regional Universities or Flagship Universities by creating a baseline of data from selected institutions that were unequivocally

Flagship Universities from the list of the Association of Public and Land-granting Universities members. Institutional data of these institutions for 12-month unduplicated enrollment; fall semester undergraduate and graduate enrollment percentages; and the types of percentage of total award types for Bachelor's, Master's, Research and Scholarship PhDs, Professional Practice PhDs, and Other PhDs from IPEDS were collected and analyzed for the 2013-2014 academic year to determine what a Flagship University would look like according to the data points. A list of probable Flagship Universities was created and loaded into SPSS for discriminate analysis. The analysis results returned a correct classification rating of 95.4%. Most of the misclassified institutions were Flagship Universities that were included due to the decision that every state and territory should have at least one Flagship University. Only one institution, Indiana–Purdue University at Indianapolis, was changed from a Flagship to a Regional University. The final classification produced 108 Flagship Universities and 464 Regional Universities.

The size subcategories for Community Colleges and Regional Universities were determined using the same number ranges developed by Hardy in 2005. Rural-based Community Colleges and Regional Universities with a 12-month unduplicated enrollment less than 2,500 were considered Small, enrollments between 2,501 and 7,500 were considered Medium, and enrollments that exceeded 7,500 were considered Large.

Geographic subcategorization was determined for the Regional Universities and Community Colleges by carrying forward their geographic classification from the 2010 Carnegie Basic Classification system whenever possible, which used the Katsinas, Lacey, Hardy model (Hardy & Katsinas, 2006) and 2000 Census data and definitions to assign geographic categories to an institutions. A new 2010 Census has since been released with a redesigned approach to new definitions and a restructured approach to determining statistical areas. The 2010 Census uses an approach based on urban cores and industry centers to determine core-based statistical areas (CBSAs). The CBSAs identified in the 2010 Census were determined to be less useful for researching and identifying educational service areas in terms of Rural, Suburban, or Urban.

The geographic model created by Katsinas, Lacey, and Hardy (Hardy & Katsinas, 2006) has proven to be very stable since its initial creation, with only 14 out of 381 (3.7%) institutions requiring a change from suburban to urban categorization due to population increase from 2000 to 2010 (U.S. Census Bureau, 2010). Any institutions located within a city whose name made up part of the metropolitan statistical area (MSA) or as part of a primary metropolitan statistical area (PMSA) was categorized as “Urban.” Institutions were categorized as “Suburban” if they were located within a MSA or PMSA but the city was not part of the name of the designated area. For example, both Jefferson State Community College (JSCC) and Bessemer State Community College (BSCC) are within the Birmingham, Alabama MSA. JSCC is located in the city of

Birmingham, Alabama and is therefore classified as an “Urban” institution. BSCC is located in Bessemer, Alabama and is thus classified as “Suburban” because Bessemer is not part of the MSA name. If an institution was located outside of a metropolitan statistical area or in an area with a population less than 500,000, it was categorized “Rural.”

When available, the designation as a multi-campus or single campus institution for the 388 institutions classified as Community Colleges and subcategorized as Suburban or Urban was carried over from an institution’s 2010 Carnegie Basic Classification. If the institution did not have a designation from the 2010 Carnegie Basic Classification system, data reported in the IPEDS variable “Multi-institution or multi-campus organization” for the 2013-2014 academic year were used.

Salary and Employment Data Examined.

Data were collected for IPEDS variables of the number of and salaries of full-time equivalent employees as well as full-time and part-time employees. Of the seventeen Standard Occupational Classification (SOC) system employment categories found in IPEDS, the four categories of Instruction, Research, Public Service, and Management were chosen as areas with difference based on an institution’s mission and function. The number of full-time instruction staff, their tenure status, and the number and average salary outlays for full-time instructional staff by rank were also gathered. IPEDS defines “salary outlay” as the projected annual expenditure for salaries

The data were sorted into the institutional categories of the mission-driven classification system and presented across those institutional categories with and without collective bargaining agreements. The primary source for determining the presence of a collective bargaining agreement is the *2012 Directory of U.S. Faculty Contracts and Bargaining Agents in Institutions of Higher Education* (hereafter referred to as the *2012 Directory*) and the U.S. Department of Labor Office of Labor-Management Standards List of Collective Bargaining Agreements File (2017). Institutions from the U.S. territories and associated states of American Samoa, Guam, the Marshall Islands, Micronesia, Palau, Puerto Rico, and the U.S. Virgin Islands are not included in the *2012 Directory*. The presence of a collective bargaining agreement for these institutions was determined by examining the Office of Labor-Management Standards (2017).

Results

This classification of 1,552 institutions included all public institutions that were not classified as special focus or tribal institutions found in IPEDS, including institutions from 59 U.S. states, districts, territories, and associated states. According to a combination of data from

the 2012 *Directory* and the Office of Labor-Management Standards (2017), there are 31 areas with collective bargaining agreements for educational institutions and 28 areas without collective bargaining agreements, as Table 1 shows.

Table 1
States, Districts, and Territories with and without Collective Bargaining

State	Collective Bargaining	State	No Collective Bargaining
Alaska	X	Alabama	X
California	X	American Samoa*	X
Connecticut	X	Arizona	X
Delaware	X	Arkansas	X
District of Columbia	X	Colorado	X
Florida	X	Georgia	X
Hawaii	X	Guam*	X
Illinois	X	Idaho	X
Iowa	X	Indiana	X
Kansas	X	Kentucky	X
Maine	X	Louisiana	X
Maryland	X	Marshall Islands*	X
Massachusetts	X	Micronesia*	X
Michigan	X	Mississippi	X
Minnesota	X	North Carolina	X
Missouri	X	North Dakota	X
Montana	X	Northern Mariana Islands*	X
Nebraska	X	Oklahoma	X
Nevada	X	Palau*	X
New Hampshire	X	Puerto Rico*	X
New Jersey	X	South Carolina	X
New Mexico	X	Tennessee	X
New York	X	Texas	X
Ohio	X	Utah	X
Oregon	X	Virgin Islands*	X
Pennsylvania	X	Virginia	X
Rhode Island	X	West Virginia	X
South Dakota	X	Wyoming	X
Vermont	X		
Washington	X		
Wisconsin	X		
Total	31	Total	28

Note: Source: Berry, J., & Savarese, M. (2012). *Directory of U.S. faculty contacts and bargaining agents in*

State	Collective Bargaining	State	No Collective Bargaining
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institutions of higher education. New York, NY: National Center for the Study of Collective Bargaining in Higher Education and the Professions.

*Based on the Collective Bargaining Agreement information obtained from the U.S. Department of Labor Office of Labor-Management Standards, April 10, 2017. <https://www.dol.gov/olms/regs/compliance/cba/>

Table 2 presents a breakdown of the number of institutions with and without collective bargaining agreements and a percentage breakdown of those institutions within and across each geographic classification. This table has multiple points of interest. First, of the 1,552 institutions examined, 914 (59%) have collective bargaining agreements while 638 (41%) that do not. With Community Colleges making up essentially two-thirds of all institutions categorized, it is no surprise that they make up the largest percentage of institutions with (64%) and without (62%) collective bargaining agreements. It is important to point out that in the main categories and the subcategories, Rural Community Colleges make up the single largest classification for institutions with (33%) and without (45%) collective bargaining agreements. The fact that Rural Community Colleges constitute the largest segment of public higher education institutions shows that any study or research agenda that utilizes an urban-centric focus will, at the least, obfuscate and marginalize an important sector of educational data.

Mission-Driven Classification System	Institution Numbers			% Within each geographic type			% Across each geographic type		
	All Public Institutions	With Collective Bargaining	Without Collective Bargaining	All Public Institutions	With Collective Bargaining	Without Collective Bargaining	All Public Institutions	With Collective Bargaining	Without Collective Bargaining
Flagship Universities Total	108	62	46	100	57	43	7	7	7
Regional Universities Total	464	268	196	100	58	42	30	29	31
Rural - Small	33	23	10	100	70	30	2	3	2
Rural - Medium	123	62	61	100	50	50	8	7	10
Rural - Large	142	74	68	100	52	48	9	8	11
Rural Total	298	159	139	100	53	47	19	17	22
Suburban	85	59	26	100	69	31	5	6	4
Urban	81	50	31	100	62	38	5	5	5
Community Colleges Total	980	584	396	100	60	40	63	64	62
Rural - Small	131	65	66	100	50	50	8	7	10
Rural - Medium	300	139	161	100	46	54	19	15	25
Rural - Large	161	98	63	100	61	39	10	11	10
Rural Total	592	302	290	100	51	49	38	33	45
Suburban - Single	109	87	22	100	80	20	7	10	3
Suburban - Multi	109	83	26	100	76	24	7	9	4
Suburban Total	218	170	48	100	78	22	14	19	8
Urban - Single	37	26	11	100	70	30	2	3	2
Urban - Multi	133	86	47	100	65	35	9	9	7
Urban Total	170	112	58	100	66	34	11	12	9
All Institutions Total	1552	914	638	100	59	41	100	100	100

Source: Analysis of 2012 Directory of Collective Bargaining, NCSCBHEP and IPEDS data for 2013-2014.

Table 3 shows the total number and total salaries of full-time instructional staff and non-instructional staff for institutions within each category. The greater number of institutions with collective bargaining agreements, 914 institutions compared to 638 institutions without agreements, leads to higher total staff numbers and greater total salary outlays across the majority of institutional categories. However, within the higher numbers are two interesting points. First, Community Colleges with collective bargaining agreements employ a higher percentage (32%) of instructional staff compared to Community Colleges without collective bargaining agreements (28%). Second, institutions with collective bargaining agreements pay out just under \$49 billion dollars in salaries while institutions without collective bargaining agreements pay out just over \$31 billion in salaries. This difference of \$18 billion in salaries results in institutions with collective bargaining agreements paying out \$4.8 million more in annual salaries to full-time staff *per institution* than institutions without collective bargaining agreements.

With Collective Bargaining						
Mission-Driven Classification System	Total Full-Time Instructional Staff	Total Salary Outlays	Total Full-Time Non-Instructional Staff	Total Salary Outlays	Total Full-Time Staff	Total Salary Outlays
Flagship Universities	75,705	\$ 7,513,845,350	257,027	\$ 15,175,607,949	332,732	\$ 22,689,453,299
Regional Universities	81,506	\$ 6,246,485,970	150,158	\$ 8,206,740,266	231,664	\$ 14,453,226,236
Rural - Small	1,433	\$ 89,431,876	2,675	\$ 120,781,710	4,108	\$ 210,213,586
Rural - Medium	9,068	\$ 616,604,657	17,611	\$ 870,917,640	26,679	\$ 1,487,522,297
Rural - Large	29,556	\$ 2,150,880,931	54,636	\$ 2,876,538,618	84,192	\$ 5,027,419,549
Suburban	19,710	\$ 1,588,177,509	34,379	\$ 1,965,815,357	54,089	\$ 3,553,992,866
Urban	21,739	\$ 1,801,390,997	40,857	\$ 2,372,686,941	62,596	\$ 4,174,077,938
Community Colleges	72,891	\$ 5,085,533,605	126,475	\$ 6,771,687,085	199,366	\$ 11,857,220,690
Rural - Small	2,249	\$ 124,119,430	3,517	\$ 158,815,624	5,766	\$ 282,935,054
Rural - Medium	9,479	\$ 565,890,027	17,037	\$ 809,250,730	26,516	\$ 1,375,140,757
Rural - Large	14,231	\$ 935,114,009	24,412	\$ 1,238,966,040	38,643	\$ 2,174,080,049
Suburban - Single	11,355	\$ 871,595,159	20,820	\$ 1,207,713,461	32,175	\$ 2,079,308,620
Suburban - Multi	12,451	\$ 967,923,291	21,690	\$ 1,277,507,626	34,141	\$ 2,245,430,917
Urban - Single	5,837	\$ 381,266,195	11,209	\$ 574,634,341	17,046	\$ 955,900,536
Urban - Multi	17,289	\$ 1,239,625,494	27,790	\$ 1,504,799,263	45,079	\$ 2,744,424,757
Grand Total	230,102	\$ 18,845,864,925	533,660	\$ 30,154,035,300	763,762	\$ 48,999,900,225
Without Collective Bargaining						
Mission-Driven Classification System	Total Full-Time Instructional Staff	Total Salary Outlays	Total Full-Time Non-Instructional Staff	Total Salary Outlays	Total Full-Time Staff	Total Salary Outlays
Flagship Universities	57,372	\$ 5,263,357,872	179,819	\$ 9,561,216,593	237,191	\$ 14,824,574,465
Regional Universities	63,870	\$ 4,377,050,029	126,503	\$ 5,885,552,540	190,373	\$ 10,262,602,569
Rural - Small	667	\$ 38,474,770	1,268	\$ 47,968,716	1,935	\$ 86,443,486
Rural - Medium	9,209	\$ 558,375,880	18,333	\$ 757,601,341	27,542	\$ 1,315,977,221
Rural - Large	31,845	\$ 2,166,714,038	63,972	\$ 2,963,257,669	95,817	\$ 5,129,971,707
Suburban	9,903	\$ 699,755,929	17,904	\$ 873,632,033	27,807	\$ 1,573,387,962
Urban	12,246	\$ 913,729,412	25,026	\$ 1,243,092,781	37,272	\$ 2,156,822,193
Community Colleges	47,578	\$ 2,584,564,599	78,652	\$ 3,489,588,902	126,230	\$ 6,074,153,501
Rural - Small	2,650	\$ 125,998,976	4,914	\$ 196,763,515	7,564	\$ 322,762,491
Rural - Medium	13,644	\$ 687,540,215	20,699	\$ 861,470,145	34,343	\$ 1,549,010,360
Rural - Large	10,281	\$ 562,829,564	16,484	\$ 698,585,083	26,765	\$ 1,261,414,647
Suburban - Single	2,485	\$ 133,559,711	4,251	\$ 181,016,995	6,736	\$ 314,576,706
Suburban - Multi	5,155	\$ 303,051,040	8,736	\$ 432,146,060	13,891	\$ 735,197,100
Urban - Single	3,100	\$ 154,493,950	4,984	\$ 229,579,003	8,084	\$ 384,072,953
Urban - Multi	10,263	\$ 617,091,143	18,584	\$ 890,028,101	28,847	\$ 1,507,119,244
Grand Total	168,820	\$ 12,224,972,500	384,974	\$ 18,936,358,035	553,794	\$ 31,161,330,535

Source: Analysis of 2012 Directory of Collective Bargaining, NCSBHEP and IPEDS data for 2013-2014.

Table 4 presents data on the average number of full-time instructional staff and their respective tenure status for institutions with and without collective bargaining agreements. The information in this table has a number of interesting trends. All totaled, institutions without collective bargaining agreements employ on average 531 more instructional staff than institutions with collective bargaining, with 499 of these being found in Community Colleges. However, Flagship Universities with collective bargaining actually average 171 more instructional staff than their counterparts without collective bargaining. But the numbers and percentages across faculty statuses show an interesting pattern. Despite have fewer overall instructional staff, institutions with collective bargaining have a higher number (2,265) and percentage of instructional faculty (51%) for tenured faculty than the number (1,937) and percentage (39%) of tenured faculty at institutions without collective bargaining agreements. The institutions break even in the areas of “Tenure Track” and “Without Faculty Status” in regard to the existence of collective bargaining agreements. Institutions without collective bargaining agreements have a much higher number (1,793) and percentage (36%) of faculty “Not on Tenure Track” compared to the number (1,159) and percentage (26%) of faculty at institutions with collective bargaining. Institutions without collective bargaining agreements actually have a greater margin of average faculty in “Not on Tenure Track” (634) than they do for overall instructional faculty (531). These data indicate that faculty and staff organizations might place a certain level of importance on establishing positions that lead to tenure.

Mission-Driven Classification System	With Collective Bargaining				Without Collective Bargaining				
	Total Instructional Staff	With Faculty Status			Total Instructional Staff	With Faculty Status			
		Tenured	On Tenure Track	Not on Tenure Track		Tenured	On Tenure Track	Not on Tenure Track	
Flagship Universities	1,657	789	238	566	64	735	262	404	85
Regional Universities	304	161	62	61	20	153	82	98	12
Rural - Small	83	34	17	16	17	29	22	16	3
Rural - Medium	162	81	36	33	12	73	37	41	7
Rural - Large	480	235	88	94	63	238	112	139	12
Suburban	351	202	77	69	3	205	84	117	16
Urban	444	255	90	94	4	219	152	177	24
Community Colleges	176	96	31	41	8	63	31	128	28
Rural - Small	55	21	9	22	3	23	10	34	9
Rural - Medium	105	40	15	41	8	37	21	62	18
Rural - Large	221	98	27	72	23	86	39	120	38
Suburban - Single	160	101	24	27	8	44	20	90	39
Suburban - Multi	176	103	28	40	5	69	55	172	45
Urban - Single	278	168	68	38	4	71	26	267	-
Urban - Multi	233	138	45	45	6	109	48	153	23
Grand Total	4,405	2,265	762	1,159	218	1,937	888	1,793	318
Percentages Across Status	100	51	17	26	5	39	18	36	6

Source: Analysis of 2012 Directory of Collective Bargaining, NCSCBHEP and IPEDS data for 2013-2014.

Table 5 presents the average full-time and part-time staff in the SOC employment categories of instruction and research as well as the number of instructional and research graduate assistants at institutions with and without collective bargaining agreements. In these areas, institutions with collective bargaining agreements have 505 more instructional and research staff with the percentage ratio of 51% full-time and 49% part-time. This difference is essentially made up of a higher pool of part-time instructional and research personnel. Flagship Universities with collective bargaining agreements do show a higher average number of staff in all categories than Flagship Universities without collective bargaining agreements. However, on a percentage basis, institutions without collective bargaining agreements have a higher overall percentage ratio of full-time staff at 55% to 45% part-time staff. For institutions with and without collective bargaining agreements, Flagship Universities have the highest ratio of full-time to part-time instructional and research staff whereas Community Colleges have the lowest ratio of full-time to part-time instructional and research staff, and Regional Universities are in the middle. Also, institutions with collective bargaining agreements utilize 94 more instruction graduate assistants in the areas of instruction and research.

Average Number of Instructional, Research Staff, and Graduate Assistants, Fall 2013										
With Collective Bargaining										
Mission-Driven Classification System	Total Instructional & Research Staff	Full-Time Staff			Part-Time Staff			Graduate Assistants		Total Graduate Assistants
		Instructional	Research	Full-Time %	Instructional	Research	Part-Time %	Instructional	Research	
Flagship Universities	2,763	1,605	449	73	593	116	27	1,158	835	1,993
Regional Universities	560	281	21	55	250	40	45	94	60	154
Rural - Small	147	65	24	54	57	1	46	14	3	17
Rural - Medium	275	147	7	57	116	4	43	28	19	48
Rural - Large	700	410	20	63	261	9	37	135	86	221
Suburban	731	343	14	52	367	7	48	83	79	162
Urban	946	440	40	52	448	18	48	209	114	323
Community Colleges	483	137	2	33	342	1	67	2	-	2
Rural - Small	96	35	1	44	59	1	56	-	-	-
Rural - Medium	219	69	1	34	148	1	66	-	-	-
Rural - Large	480	147	3	34	330	1	66	-	-	-
Suburban - Single	509	132	2	27	373	2	73	-	-	-
Suburban - Multi	567	151	1	31	415	-	69	1	-	1
Urban - Single	817	225	2	28	589	1	72	-	-	-
Urban - Multi	689	203	2	31	484	-	69	2	-	2
Grand Total	8,940	3,973	565	51	4,240	162	49	1,630	1,136	2,766
Without Collective Bargaining										
Mission-Driven Classification System	Total Instructional & Research Staff	Full-Time Staff			Part-Time Staff			Graduate Assistants		Total Graduate Assistants
		Instructional	Research	Full-Time %	Instructional	Research	Part-Time %	Instructional	Research	
Flagship Universities	2,037	1,428	231	82	327	51	0	935	825	1,760
Regional Universities	542	326	42	65	176	8	0	95	109	182
Rural - Small	127	67	-	60	60	-	0	1	-	1
Rural - Medium	247	152	10	66	81	3	0	13	20	32
Rural - Large	755	490	20	69	236	10	0	145	115	260
Suburban	633	385	19	65	221	8	0	156	156	312
Urban	947	535	121	62	281	11	0	163	143	306
Community Colleges	526	160	3	39	363	1	61	-	-	-
Rural - Small	108	42	4	47	62	-	53	-	-	-
Rural - Medium	226	86	2	43	139	-	57	-	-	-
Rural - Large	457	168	4	40	285	1	60	-	-	-
Suburban - Single	379	114	6	40	260	-	60	-	-	-
Suburban - Multi	727	202	-	34	525	-	66	-	-	-
Urban - Single	1,013	285	2	33	726	-	67	-	-	-
Urban - Multi	774	227	-	32	548	-	68	-	-	-
Grand Total	8,430	4,180	416	55	3,750	83	45	1,412	1,260	2,672

Source: Analysis of 2012 Directory of Collective Bargaining, NCSCBHEP and IPEDS data for 2013-2014.

Table 6 presents the average number of full-time equivalent employees *within* the four SOC employment areas of Instruction, Research, Public Service, and Management. Full-time equivalent employees is calculated by the number of full-time employees plus one-third of all part-time employees for a given employment area. The data presented indicate there is essentially no difference between institutions with and without collective bargaining agreements when comparing overall employment or full-time equivalent employment.

Table 6									
<i>Average Number and Percentage of FTE Employees by Categories, 2013-2014</i>									
FTE Employees With Collective Bargaining									
Mission-Driven Classification System	Total FTE Employment	Instructional		Research		Public		MGMT	
		Number	%	Number	%	Number	%	Number	%
Flagship Universities	7,180	1,802	27	432	6	79	1	519	7
Regional Universities	906	360	41	5	0	2	0	68	8
Rural - Small	204	81	41	2	0	0	0	20	10
Rural - Medium	485	186	40	2	0	1	0	42	8
Rural - Large	1,265	489	39	6	0	3	0	96	8
Suburban	1,091	460	43	2	0	1	0	79	7
Urban	1,486	585	40	15	1	5	0	105	8
Community Colleges	538	251	48	0	0	2	0	36	8
Rural - Small	116	54	47	0	0	1	1	11	9
Rural - Medium	259	118	46	0	0	1	0	22	9
Rural - Large	540	254	47	0	0	0	0	40	8
Suburban - Single	542	256	47	0	0	6	1	36	8
Suburban - Multi	582	289	50	0	0	3	0	40	7
Urban - Single	988	421	46	0	0	-	0	63	7
Urban - Multi	738	363	52	0	0	0	0	42	6
Grand Total	15,476	5,359	35	459	3	100	1	1,115	7
FTE Employees Without Collective Bargaining									
	Total FTE Employment	Instructional		Research		Public		MGMT	
		Number	%	Number	%	Number	%	Number	%
Flagship Universities	6,042	1,537	26	203	1	97	2	430	10
Regional Universities	1,039	384	42	13	0	5	0	86	0
Rural - Small	218	87	47	-	0	0	0	26	0
Rural - Medium	491	179	35	2	1	7	1	43	0
Rural - Large	1,584	569	37	8	0	11	0	119	0
Suburban	1,177	459	51	11	1	1	0	107	0
Urban	1,723	628	40	45	1	7	0	136	0
Community Colleges	590	280	45	0	0	1	0	48	9
Rural - Small	147	61	40	0	0	0	0	16	10
Rural - Medium	280	131	47	0	0	1	0	25	9
Rural - Large	568	261	48	0	0	1	0	43	8
Suburban - Single	421	196	34	1	0	0	0	40	11
Suburban - Multi	783	377	59	-	0	-	0	66	7
Urban - Single	1,061	527	45	0	0	6	0	87	13
Urban - Multi	875	405	40	-	0	1	0	59	8
Grand Total	15,370	5,418	35	270	2	131	1	1,197	8

Source: Analysis of 2012 Directory of Collective Bargaining, NCSCBHEP and IPEDS data for 2013-20

Table 7 presents data for the average number of full-time instructional faculty by academic ranks. These data show a remarkably similar trend to the tenure track faculty in Table 3. The

institutions without collective bargaining agreements have an overall higher average number of instructional staff by 182 staff members. However, institutions with collective bargaining have an average of 169 more Professors, which is 29% of their total instructional staff whereas the Professors at institutions without collective bargaining agreements make up only 23% of the instructional staff. The numbers and percentages across the ranks of Associate Professor, Assistant Professors, Instructors, and Lectures largely balance out between institutions with and without collective bargaining agreements. However, for instructional staff with no academic rank, institutions without collective bargaining agreements employ an overall average of 451 staff, 11% of their overall instructional staff, compared to an overall average of 232 (6%) of the instructional staff for institutions with collective bargaining agreements. These data again point to faculty and staff organizations potentially using collective bargaining agreements to establish positions with a greater degree of stability and prestige.

Table 7

Average Number of Full-Time Instructional Faculty by Academic Rank, Fall 2013

Mission-Driven Classification System	With Collective Bargaining						Without Collective Bargaining						No Academic Rank	
	All Ranks	Professors	Associate Professors	Assistant Professors	Instructors	Lecturers	All Ranks	Professors	Associate Professors	Assistant Professors	Instructors	Lecturers		No Academic Rank
Flagship Universities	1,593	539	405	417	83	102	46	1,401	439	367	325	91	151	28
Regional Universities	280	83	79	70	19	25	5	324	75	85	92	36	29	7
Rural - Small	64	15	20	18	10	1	0	67	14	15	27	9	2	0
Rural - Medium	146	37	41	41	10	12	4	151	34	38	47	22	8	2
Rural - Large	407	120	111	102	41	28	6	488	115	132	137	51	36	17
Suburban	343	103	97	88	16	31	7	384	95	99	96	30	59	4
Urban	440	141	124	98	19	52	7	531	117	142	153	66	40	14
Community Colleges	137	25	15	19	54	2	23	159	21	18	21	44	1	55
Rural - Small	35	6	3	3	20	0	4	42	4	2	2	18	0	17
Rural - Medium	69	10	6	8	30	2	12	85	8	9	8	30	1	30
Rural - Large	147	25	14	16	54	1	39	165	28	19	18	51	0	50
Suburban - Single	132	29	20	19	50	1	13	113	15	12	9	30	1	46
Suburban - Multi	150	18	12	14	86	1	19	203	57	20	22	30	1	73
Urban - Single	225	58	36	41	37	3	49	285	9	35	64	106	3	67
Urban - Multi	203	27	16	29	98	5	27	223	24	26	25	42	2	104
Grand Total	3,953	1,127	905	896	554	239	232	4,135	959	914	931	577	303	451
Percentage by Rank	100	29	23	23	14	6	6	100	23	22	23	14	7	11

Source: Analysis of 2012 Directory of Collective Bargaining, NCSBHEP and IPEDS data for 2013-2014.

Table 8 presents the average salary outlay for full-time employees within the four SOC areas of Instruction, Research, Public Service, and Management. The table presents several noteworthy details. First, while institutions with collective bargaining agreements generally pay a higher salary, there are two areas where institutions without collective bargaining agreements average a significantly higher salary: Public Service employees at the Regional Universities in Suburban areas earn an average of \$10,026 more if employed under a collective bargaining agreement. Similarly, Management employees at Regional Universities, Rural-Small, earn an average of \$33,111 more per year than their counterparts at institutions with collective bargaining agreements. The Management area in general shows the most extreme differences in salaries between institutions with and without collective bargaining. Also worth noting is, as expected, Flagship Universities have the single highest overall salaries. The most significant difference for salaries is found at Community Colleges with and without collective bargaining agreements, especially working at Suburban institutions. The overall impact of this table shows an average difference of a 17% higher annual salary for institutions with collective bargaining agreements regardless of the area of employment, which equates to approximately \$322,000 in additional salary over a 30-year career. A career of 30 years at a Community College: Suburban – Single Campus with a collective bargaining agreement can result in an annual pay difference of 43%, which leads to a lifetime salary difference of \$706,782 as a benefit of working for an institution with a collective bargaining agreement. Assuming an employee began working in 1987 and retired in March of 2017, when you figure in the value of inflation over their career, the salary difference changes to over *\$1.5 million* higher lifetime salary at institutions with collective bargaining agreements.

Table 8
Average Salaries for Full-time Employees in SOC Areas, 2013-2014

Mission-Driven Classification System	With Collective Bargaining					Without Collective Bargaining					Impact over Time		
	Full-time Instructional Salaries	Research Salaries	Public Service Salaries	MGMT Salaries	Overall Average Salaries	Full-time Instructional Salaries	Research Salaries	Public Service Salaries	MGMT Salaries	Overall Average Salaries	Difference with Collective Bargaining	% Diff.	Salary Difference X 30 Years
Flagship Universities	\$ 95,868	\$ 70,230	\$ 74,981	\$ 123,271	\$ 92,657	\$ 89,130	\$ 73,673	\$ 76,157	\$ 126,046	\$ 88,892	\$ 3,765	4	\$ 112,945
Regional Universities	\$ 71,886	\$ 60,748	\$ 57,306	\$ 100,065	\$ 76,646	\$ 64,532	\$ 47,684	\$ 62,439	\$ 85,186	\$ 67,950	\$ 8,697	13	\$ 260,897
Rural - Small	\$ 61,031	\$ 40,197	\$ -	\$ 41,315	\$ 66,590	\$ 56,589	\$ -	\$ 55,872	\$ 74,426	\$ 60,075	\$ 6,515	11	\$ 195,449
Rural - Medium	\$ 66,331	\$ 65,104	\$ 71,855	\$ 101,405	\$ 70,460	\$ 60,304	\$ 57,380	\$ 51,181	\$ 84,123	\$ 63,725	\$ 6,735	11	\$ 202,062
Rural - Large	\$ 71,848	\$ 59,009	\$ 70,034	\$ 115,046	\$ 76,787	\$ 66,171	\$ 60,294	\$ 66,922	\$ 101,205	\$ 70,027	\$ 6,760	10	\$ 202,799
Suburban	\$ 79,256	\$ 69,778	\$ 83,462	\$ 119,118	\$ 83,766	\$ 69,425	\$ 63,382	\$ 67,016	\$ 93,037	\$ 73,014	\$ 10,752	15	\$ 322,563
Urban	\$ 80,965	\$ 69,654	\$ 61,177	\$ 123,442	\$ 85,630	\$ 70,169	\$ 57,363	\$ 71,203	\$ 73,140	\$ 72,909	\$ 12,720	17	\$ 381,610
Community Colleges	\$ 66,012	\$ 57,955	\$ 42,206	\$ 91,235	\$ 71,042	\$ 53,075	\$ 32,224	\$ 36,983	\$ 74,702	\$ 57,818	\$ 13,224	23	\$ 396,732
Rural - Small	\$ 54,299	\$ 33,975	\$ 34,421	\$ 68,488	\$ 59,660	\$ 47,659	\$ 40,014	\$ 31,642	\$ 68,693	\$ 52,788	\$ 6,872	13	\$ 206,160
Rural - Medium	\$ 59,344	\$ 64,281	\$ 52,744	\$ 80,862	\$ 63,888	\$ 50,255	\$ 48,780	\$ 48,820	\$ 74,348	\$ 55,128	\$ 8,760	16	\$ 262,814
Rural - Large	\$ 64,879	\$ 52,213	\$ 51,822	\$ 91,599	\$ 69,267	\$ 55,332	\$ 40,080	\$ 46,972	\$ 75,535	\$ 59,164	\$ 10,103	17	\$ 303,084
Suburban - Single	\$ 72,585	\$ 59,144	\$ 53,705	\$ 93,334	\$ 78,002	\$ 50,553	\$ 48,695	\$ 42,397	\$ 65,686	\$ 54,442	\$ 23,559	43	\$ 706,782
Suburban - Multi	\$ 74,859	\$ 94,668	\$ 57,079	\$ 110,787	\$ 80,264	\$ 56,047	\$ -	\$ -	\$ 83,426	\$ 61,410	\$ 18,854	31	\$ 565,613
Urban - Single	\$ 64,167	\$ 45,830	\$ -	\$ 92,779	\$ 69,850	\$ 51,134	\$ 48,000	\$ 37,921	\$ 73,747	\$ 56,960	\$ 12,890	23	\$ 386,709
Urban - Multi	\$ 71,952	\$ 55,574	\$ 45,667	\$ 100,796	\$ 76,364	\$ 60,544	\$ -	\$ 51,133	\$ 81,483	\$ 64,832	\$ 11,532	18	\$ 345,965
Overall Average	\$ 70,568	\$ 59,974	\$ 59,723	\$ 97,096	\$ 74,860	\$ 60,255	\$ 53,766	\$ 53,936	\$ 82,684	\$ 64,105	\$ 10,755	17	\$ 322,658
Grand Total Salaries	\$ 917,383	\$ 779,656	\$ 656,948	\$ 1,262,244	\$ 973,185	\$ 783,311	\$ 537,660	\$ 647,236	\$ 1,074,895	\$ 833,366	\$ 139,818	17	\$ 4,194,554

Source: Analysis of 2012 Directory of Collective Bargaining, NCSCBHEP and IPEDS data for 2013-2014.

Discussion

Katsinas, Ogun, and Bray's (2016) work served as a pilot test for this article by taking 390 Regional Universities that are AASCU members spread across multiple 2010 Carnegie Basic Classification categories and re-categorizing those institutions under a mission-driven classification system with geographic categories. This article takes that concept further and develops a mission-driven classification system with geographic categories for all 1,552 public institutions, classifying them within three major sectors of Flagship Universities, Regional Universities, and Community Colleges. By further comparing institutions within the mission-driven classification system using the presence or lack of collective bargaining agreements, striking differences are found in terms of the number of full and part-time employees, their status at an institution, and their salary.

The work of the AAUP, NEA, and AFT, going back to the early twentieth century, enables institutions to track and disseminate salary and compensation rates so members can be better prepared during negotiations. This body of literature constitutes a large portion of the research on compensation within higher education. However, at this stage, we believe the value of their work to their members would be greatly enhanced by presenting the data in more nuanced terms than simply by two- and four-year institutions, which assumes similarity in assigned workload and assigned institutional mission across the nation's 108 Flagship Universities and its 464 Regional Universities. We argue that this is a flawed assumption and that the problem is not and can never be addressed by the Carnegie Basic Classification system. The Carnegie universe does not provide a clear distinction between the realities of different types of institutions, particularly since the 2015 Carnegie Basic Classification system has removed the geographic classification previously applied to Associate's Colleges.

A recurring theme in the tables dealing with the average number of employees and instructors is that the institutions without collective bargaining have a greater number of instructional faculty. However, both Tables 3 and 7 indicate that greater numbers of faculty come from the areas of "Non-Tenure Track" and "No Academic Rank," - areas that indicate little to no chance of upward mobility. Institutions with collective bargaining, with their slightly lower overall number of faculty, have a higher percentage and, in some cases, an actual higher average number of faculty in a position to move up the faculty ladders of rank and tenure. Further research on this might be beneficial.

Geography matters for higher education institutions. It matters in regard to how an institution interacts with its local population and how the local area impacts the function of institutions (Garmise, 2014). As shown in Table 2, in terms of number of institutions, the 592

Rural Community Colleges comprise 60% of all Community Colleges. Rural institutions comprise 64% of all Regional Universities.

Geography also matters in term of the funding sources available to an institution. Maldonado (2006), and Mayhall, Katsinas, and Bray (2015) both found that state and local funding plays a significant role in the operating budgets and thus the rate of compensation for rural associate's colleges. State funding for higher education was drastically reduced across the nation during the Great Recession. These reductions contributed to a wave of institutions hiring non-tenure track, adjunct/part-time faculty due to the decreased pay and fringe benefits for positions at that level (June, 2012). Though the economic situation in many states is recovering, state appropriations have lagged behind and are now only beginning to rise, and the issue of lesser payment for an adjunct workforce still exists within higher education. Within the context of the presence or lack of collective bargaining, employees at Community Colleges, specifically Rural and Suburban institutions, saw the biggest impact in terms of salary. While all classification categories had at least a 10% higher rate of pay when collective bargaining was available, Rural Community Colleges saw an average increase of 15%, while Suburban Community College saw an average increase of 37% in annual salary. Geography, and the presence of local appropriations, clearly matters.

One area for further research is to compare the states with collective bargaining agreements to each other, rather than to those without collective bargaining. This article confirms and expands on the findings of others that institutions with collective bargaining agreements have higher levels of compensation than institutions without collective bargaining (Maldonado, 2006; Mayhall, Katsinas, & Bray, 2015; Katsinas, Ogun, & Bray, 2016). However, examining the differences found between states with collective bargaining may also provide useful results.

In conclusion, it is important to point out that this article is limited by the lack of current information on Fringe Benefits. Though information on the 2013-2014 academic year was the most current available in IPEDS when the research began, IPEDS quit collecting collective bargaining data in 2010-2011 and has not changed its policy to again collect information on fringe benefits information. As many earlier studies have pointed out, fringe benefits are an important part of the overarching picture of compensation for employees within higher education. It is important to reiterate Katsinas, Ogun, and Bray's (2016) call to have either the federal government or heavily interested third parties like AAUP, NEA, and AFT to once again take up the task of collecting this crucial piece of evidence for future research into trends in compensation in higher education.

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