The Limits of Institutional Measures for Assessing State, Regional and National Postsecondary Productivity

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About this Research

This paper is one of five in the *TIAA Institute Higher Education Series: Understanding Academic Productivity*, an initiative undertaken in support of NACUBO's Economic Models Project. That project was launched by NACUBO with the aim to provide colleges and universities with knowledge, ideas and tools to advance the difficult structural, cultural and political changes required for moving to more sustainable economic models. Given NACUBO's goal of offering thoughtful, objective and credible scholarship on the issues at hand, the TIAA Institute was a natural partner for the project.

This paper, written by Nate Johnson of Postsecondary Analytics, assesses state-level efforts to measure productivity. Johnson makes a data-driven case that while typical productivity measurement may be helpful for institutional management purposes, it can yield misleading results when generalized to larger regions, states or the nation. Indeed, system-wide productivity trends can differ from what any one institution within that system is experiencing. This finding, along with others regarding a range of inputs and outputs for productivity measurement, offers a unique analysis and view of the academic productivity question.

About the TIAA Institute

The TIAA Institute helps advance the ways individuals and institutions plan for financial security and organizational effectiveness. The Institute conducts in-depth research, provides access to a network of thought leaders and enables those it serves to anticipate trends, plan future strategies and maximize opportunities for success. To learn more, visit www.tiaainstitute.org.

About NACUBO

NACUBO, founded in 1962, is a nonprofit professional organization representing chief administrative and financial officers at more than 2,100 colleges and universities across the country. NACUBO's mission is to advance the economic viability, business practices and support for higher education institutions in fulfillment of their missions. For more information, visit www.nacubo.org.

Executive Summary

Understanding and measuring postsecondary education productivity for public policy purposes requires a framework different from that used for institutional or departmental analyses. Appropriately defining and assessing productivity within and among postsecondary institutions, as other papers in the TIAA Institute Higher Education Series: Understanding Academic Productivity demonstrate, can support meaningful and effective institutional management strategy. Peer grouping, association or system membership, Carnegie classification, tax status (public, nonprofit, for-profit), and sector (two-year or four-year) are among the categories that have analytical value for institutions seeking to benchmark their performance and assess progress in fulfilling their mission.

But unlike institutional leaders, whose primary responsibility is to their individual college or university, policymakers should be at least as interested in analyzing productivity in terms of student characteristics (e.g., age, income, academic history) and geography (metropolitan area, state, region, nation) as they are in the productivity of institutions relative to one another or over time. It is critical for decision-makers to understand that overall systemic trends in productivity within a geographical area may differ from what any of the individual institutions or sectors in that area are experiencing.

Two key implications emerge from taking a public policy point of view as opposed to an institutional view of productivity. First, student time and effort should be considered just as much an input into the equation as faculty or staff time or other institutional contributions. Second, the output measures of productivity at aggregate levels need to be redefined so they are not, like the credit hour or "full-time-equivalent," based on quantities of student time. The methodological tools and resources to understand productivity and other measures independent of institutional silos are increasingly available; when they receive more attention from policymakers and postsecondary education advocates, decision-making and resource allocation will improve.

This paper is one in a series of five focusing on productivity and new economic models for higher education.

The series offers a deeply-informed review of the literature, a two-part examination of higher education's contributions to the public good, an assessment of state-level efforts to measure productivity, and an in-depth description of a course-based tool to analyze costs.

Key Takeaways

- The composition of the postsecondary education sector is constantly and rapidly changing and varies over time and across regions
- Changes in the composition of the postsecondary sector, and not just changes within the institutions themselves, are often the key variables in long-term trends and relative state or regional performance
- Policymakers and postsecondary advocates have a responsibility to consider student time, not just institutional resources, as an input in assessing aggregate productivity

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- Productivity and related measures of performance should seek to estimate the net impact of postsecondary participation on different populations of students or potential students
- Resources and tools for better state- or regional-level productivity measurement are increasingly available

Institutional and Compositional Contributions to Productivity in Postsecondary Education

Significant choices about allocation of resources are being made constantly by state legislatures, Congress and local higher education governing boards.

If postsecondary education is considered a means to advance public policy goals or the private interests of citizens, then "productivity" can be a framework to understand how much a given investment of resources contributes to achieving those objectives. Within a particular college or university, where most analyses of efficiency and productivity have focused, this approach often takes the form of analyzing staffing patterns and ratios, or maximizing the use of costly fixed assets in pursuit of the institution's mission.

But for policymakers, the choices about allocation of resources are often about the nature and composition of the postsecondary sector itself—how many and what kinds of institutions to support, whether they should be public or private, how students' choices should be expanded or limited. Well-known policy landmarks that reflect those choices include the Morrill Act, the GI Bill, the California Master Plan, the creation of the City University of New York, the creation of the Pell Grant program, and the decision to expand Pell Grant eligibility to for-profit institutions. Other significant choices about allocation of resources are being made constantly by state legislatures, Congress and local higher education governing boards.

Institutional and departmental perspectives on productivity are important. Massy's paper on activity-based costing in the TIAA Institute Higher Education Series: Understanding Academic Productivity illustrates what a state-of-the-art approach to internal cost analysis at a single institution can look like.[1] There may be overlap between an institutional and a public policy framework. The two papers by Shaker and Plater on the importance of the public good in assessing faculty work and in accounting for institutional productivity make the case for taking a comprehensive view of the impact of institutions and individual faculty on broad public policy goals.[2]

Yet for policymakers, no matter how well-executed or comprehensive an institutional productivity measure might be, it cannot be a substitute for a broad view of productivity in which institutions are not the main focus of the analysis. It does not automatically follow that institutional gains in productivity will translate into collective improvements, even if—and it is a big if—their measures and objectives are the same. Policymakers are accountable for the system as a whole, including the positive and negative effects of institutional collaboration or competition, or the absence thereof.

1. Massy, 2016
2. Shaker and Plater, The Public Good, Productivity and Purpose: New Economic Models for Higher Education (2016), and The Public Good, Productivity and Faculty Work: Individual Effort and Social Value (2016)

One of the best ways to demonstrate the limitations of institution-based efficiency and productivity measures for informing public policy is to go back to the first systematic study of efficiency in college and university teaching in the United States, which was conducted by a mechanical engineer, Morris Cooke, in 1910.[3] The late 19th and early 20th century was a time of rapid growth in postsecondary education, growth that could be controversial because of its cost or because of the perceived expansion of the sector to new groups of students who seemed unlikely to benefit.

Using the tools of management and industrial engineering that had been developed and refined for the burgeoning manufacturing sector, Cooke conducted the equivalent of a time and motion study for a group of eight institutions, using their physics departments as the test case. He worked with faculty to detail time spent with students, on research, or on administrative matters, and with institutions to understand how the costs of a college's operations were spread across departments. The report was a direct ancestor of many of the systematic institutional cost and productivity analyses still in use today, including the University of California, Riverside activity-based costing project and the widely subscribed "National Study of Instructional Costs and Productivity" (aka "Delaware Cost Study").[4]

The limitations of institution-based efficiency and productivity measures for informing public policy is best demonstrated by the first study conducted by a mechanical engineer.

Productivity and 20th Century Postsecondary Enrollment Growth

Yet in spite of fears in the early 20th century that high costs and inefficiency were unsustainable, efficiency gains within existing institutions over the last century appear to have been among the least important factors in the massive expansion of U.S. higher education.

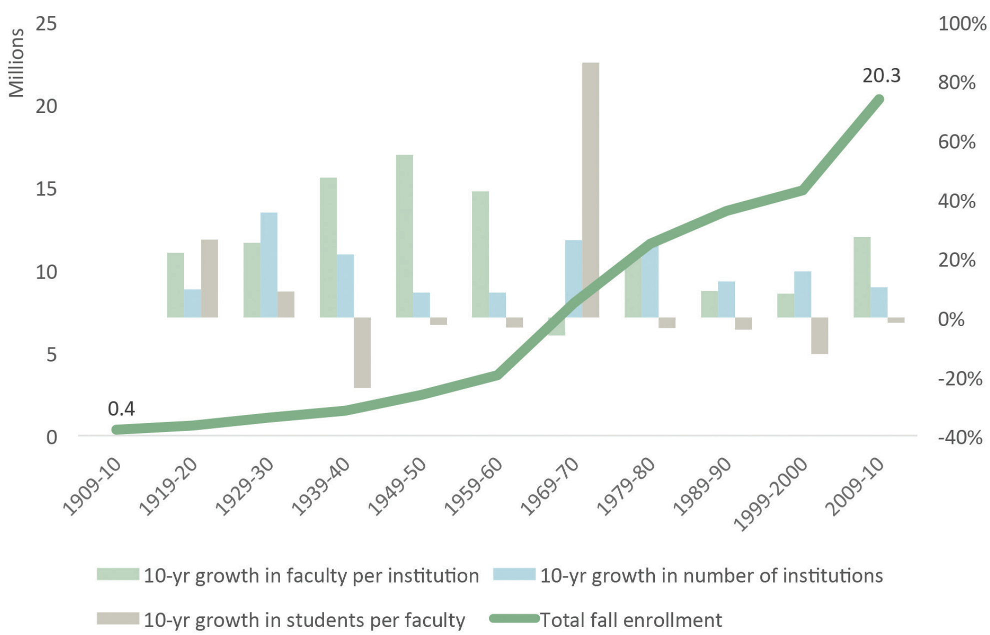
Nationally, from 1909-10 to 2009-10, as Figure 1 shows, enrollments nationally rose from 350,000 to over 20 million, an expansion that would have seemed unimaginable even to optimistic higher education advocates at the time. During that period, the number of institutions grew by 373% and the number of faculty per institution grew by 735%.[5] On the other hand, the number of students per faculty member—the measure most closely related to efficiency as defined in most cost analyses—rose just 45%.[6] Had only the number of institutions grown, with no change in the average number of faculty per institution or in the students to per faculty ratio, enrollment in 2009-10 would have been 1.7 million. Had only the average number of faculty per institution grown (and the student-to-faculty ratio stayed the same), enrollment in 2009-10 would have been about 3 million. Had only the number of students per faculty grown—the measure most closely related to institutional productivity—enrollment in 2009-10 would only have risen only to about 500,000. While it takes all three trends to produce the mathematical result of 20 million, notably, the efficiency measure contributes the least to the total.

Efficiency gains within existing institutions over the last century appear to have been among the least important factors in the massive expansion of U.S. higher education.

3. Cooke, 1910
4. University of Delaware Office of Institutional Research and Effectiveness 2016
5. Calculated based on Table 301.20 in the Digest of Education Statistics (Snyder, de Brey and Dillow 2016)
6. Calculated based on Table 301.20 in the Digest of Education Statistics (Snyder, de Brey and Dillow 2016)

Looking at another efficiency-related measure, in the 1910 Cooke study, the average calculated cost of the equivalent of a semester credit hour in physics (15 of Cooke's "student hours") at the eight institutions studied was about $13. At $3,800 the average full professor salary for physics was equal to about 291 semester credit hours. In 2007, the average cost per undergraduate semester credit hour for physical sciences in a multi-state survey of states using a fairly similar methodology was between $217-$540.[7] At the same time, the national average salary for a full professor in physics in 2007-08 was $85,294, equivalent to between 158-393 credit hours.[8] At least in orders of magnitude, the relative cost of education remained within the neighborhood of where it was a hundred years before, while the sheer quantity of enrollments and degrees continued to multiply.

Figure 1. Enrollment Growth from 1909-10 to 2009-10 Was Driven by Growth in Number of Institutions and Faculty



7. Conger, Bell and Stanley, 2010

8. College and University Professional Association for Human Resources, 2008

Making Institutions More Productive vs. Making More Productive Institutions

To the extent the average institution did become more "efficient"—at least in the limited sense of student-to-faculty ratios—it was largely because the universe of institutions was changing, and not necessarily because of changes within existing colleges and universities. Looking at average student-to-staff ratios today, more recently created institutions tend to be, on average, more "efficient" on that limited measure than their more established counterparts. Figure 2 breaks down the average 2013 student-to-staff ratio in U.S. higher education—about 5 FTE students per FTE employee—by the earliest accreditation date listed with the Office of Postsecondary Education.[9] Throughout the 20th century, new (or at least newly accredited) institutions tended to have progressively higher numbers of students per employee as the century progressed. The pattern holds in both public and private sectors and in the two sectors combined.

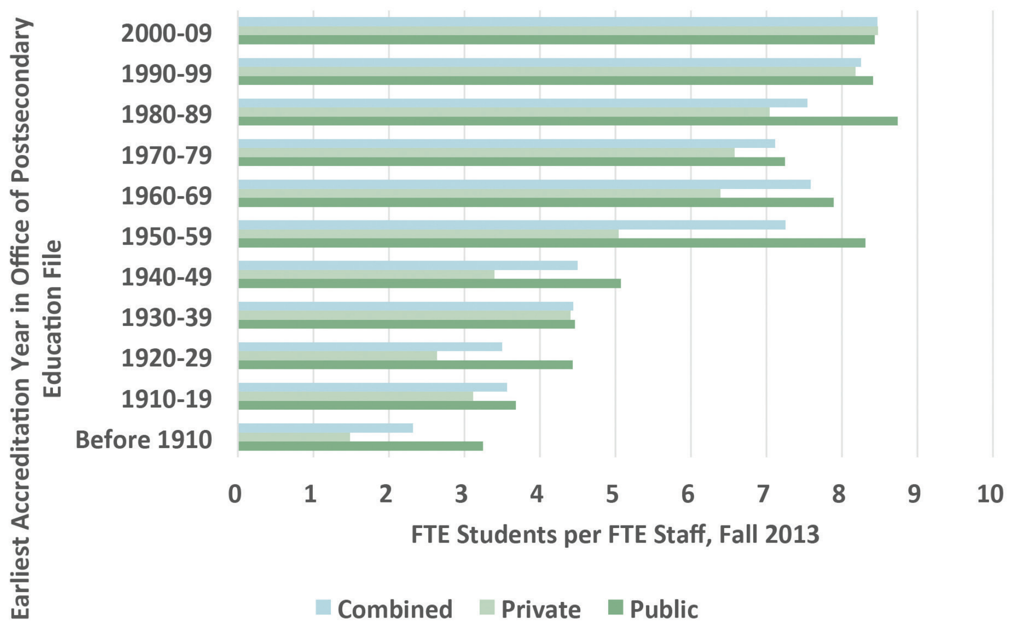
The change in the universe of postsecondary institutions may be a much bigger factor in overall productivity than the story of what is happening inside the institutions themselves.

As new institutions were created, they usually were designed with leaner budgets and efficiency in mind, with the savings passed either to students (e.g., lower-tuition community colleges), state governments (in the form of lower appropriations per student) or private investors (e.g., for-profit colleges). One of the major recommendations of the 1910 report involved allocation of the most experienced faculty to the highest level students, with more junior instructors teaching lower division courses and students. Whatever the merits of that idea, the most significant implementation of it was not within colleges, but in the expansion of a whole class of institutions, community colleges, that eliminated the research and upper division instruction functions altogether.

In typical institution-level analyses or peer comparisons, many of the institutions included in Figures 1 and 2 would never be found together in the same trend or comparison because they are, by definition, different in some key way from their predecessors. And yet within a geographic area or for a given student population, the change in the universe of postsecondary institutions may be a much bigger factor in overall productivity than the story of what is happening inside the institutions themselves.

9. Many institutions are much older than the date listed in this file, but the pattern would likely only be stronger if based on actual founding dates.

Figure 2. Newer Colleges Have Higher Average Student-to-Staff Ratios



Change in the Last Decade

Trends that cross institutional and sector boundaries can be more significant for public policy than institution-level measures.

Even on a shorter time horizon, trends that cross institutional and sector boundaries can be more significant for public policy than institution-level measures. Over the last decade, as Table 1 illustrates, the student-to-staff ratio was roughly flat from 2003 to 2013 across all degree-granting institutions in the United States, at 5.2 full-time-equivalent (FTE) students per FTE employee (Snyder, de Brey and Dillow 2016). Yet it was still a time of rapid change in the industry.

At the level of the major higher education sectors, four out of six sectors had declines in numbers of students per staff. But the for-profit sector, which has nearly twice the number of students per staff member as average, grew rapidly. So from an institutional perspective, it might appear that student-to-staff ratios were declining, but in terms of public policy, students on average would not be experiencing a decline because more of them were enrolling in the sector where the ratios are highest.

The slight increase in the number of students per staff in public four-year sector illustrates the distinction between within-institution measurement change, which institution and peer group tools like the Delaware Cost Study are designed to analyze, and among-institution change, which is systemic and not captured by institutional metrics alone.

The increase in the four-year sector overall during the decade is entirely attributable to the change in the sector's composition rather than the trends at individual institutions within it. Over the ten-year period, 70 formerly two-year colleges enrolling more than 300,000 students were reclassified as four-year institutions, a classification based on the highest degree awarded at an institution. Twenty of the institutions and about half of the students were in Florida, where the Florida Community College System was transformed into the bachelor-degree-granting Florida College System, but it was not just a Florida phenomenon. Institutions outside of Florida that converted to four-year status enrolled about as many students and spanned 18 different states. With an average student-to-staff ratio of 9.2 to 1, these institutions lifted the average of the four-year sector. Without them, the sector's student-to-staff ratio would have been flat.

The increase in student-to-staff ratios in the four-year sector overall is entirely attributable to the change in the sector's composition rather than the trends at individual institutions within it.

Table 1. Student-to-Staff Ratios Reflect Changing Sector Composition from 2003-2013

	2013 FTE Students per FTE Staff	2003 FTE Students per FTE Staff	Change in FTE students per FTE staff	2013 FTE Students	2003 FTE Students	Enrollment Change
Public four-year	4.6	4.4	0.1	6,712,000	5,511,000	22%
Nonprofit four-year	3.7	3.7	(0.1)	3,403,000	2,820,000	21%
For-profit four-year	9.9	10.6	(0.7)	1,036,000	390,000	166%
Public two-year	9.5	9.5	0.0	3,884,000	3,659,000	6%
Nonprofit two-year	6.3	6.6	(0.3)	27,000	40,000	-33%
For-profit two-year	8.9	9.8	(0.9)	318,000	226,000	41%
Grand Total	5.2	5.2	0.1	15,380,000	12,646,000	22%

Note: Based on author's calculations from institutional data reported to the Integrated Postsecondary Education Data System (IPEDS).

It would be easy to treat a phenomenon like this as an anomaly and adjust for it by reclassifying institutions. After all, most of the new “four-year” colleges are still predominantly associate-level institutions. But viewed in the longer term, institutional evolution like this is a feature, not a bug in the nation’s postsecondary system. Surveying trends in higher education in 1926, Arthur Klein wrote the U.S. Bureau of Education’s biennial report that, “Since emphasis has been upon junior college work as the first two years of the traditional college course, only the first half of what is still looked upon as a unit period in higher education, the natural ambition of these institutions has been to convert themselves into full-grown four-year colleges” (Klein, 1926).

Growth at the Margins of the Institutional Universe

It can be difficult for institutional leaders, policymakers, faculty or student advocates not to see postsecondary education through the lens of the generally well-established institutions they have worked in or attended. But substantial growth and change historically happens at the margins, with new kinds of institutions serving new populations of students, often in ways that may reduce cost but also raise concerns about quality and effectiveness. Sometimes the newcomers thrive and become big players, like the former Florida Technological University, which first enrolled students in 1968 and is now the University of Central Florida, one of the largest in the country and one of 13 institutions that were added to the “Research-Very High” Carnegie classification between 2005 and 2015. At the margins, institutions often fail, too, which may be noticed when the name is recognizable, like Antioch, Sweet Briar, or Corinthian, but not when it is a local for-profit business college or a distant community college campus merging with a larger sibling.

> Substantial growth and change historically happens at the margins, with new kinds of institutions serving new student populations, often in ways that may reduce cost but affect quality and effectiveness.

Overall, there were over 2,000 institutions eligible for federal financial aid in 2013 that were not in the institutional universe in 2003.[10] That number includes over 800 small for-profit vocational schools, but also hundreds of public and nonprofit campuses, including 17 public four-year campuses that were either new or newly independent within the decade. Hundreds more were not new, but had changed their Carnegie classification or their “sector,” a frequently used amalgamation of tax status and highest degree level. A handful converted from public to private or from nonprofit to for-profit, or vice versa.

There were also more than a thousand institutions in the 2003 database that had merged, transformed or gone out of business by 2013. To measure institutions only against themselves or their institutional categories is to turn a blind eye to how postsecondary education actually works and how it has achieved the results it has in the country and in most states.

10. This and the following paragraphs are based on author’s calculations using IPEDS data.

Students, Geography, and Institutional Groupings

To a much greater extent than for K-12 education, there is no such thing as a typical college or university. They are all charter schools, with selection and self-selection making geographic, economic and academic disparities among institutions much more systematic than they are among schools and districts in elementary and secondary education. And students do not necessarily choose institutions within sectors or Carnegie classes; the relevant choice is often between a two-year and a four-year college, a public or a private one, a for-profit or a community college, or between attending or not attending. Most students will attend more than one institution before they graduate—if they graduate at all.

There is no such thing as a typical college or university.

The selective and self-selective nature of higher education means that, if you lead or work at a college, university or vocational school—no matter what kind of institution it is—your students are atypical of postsecondary education in your state and the nation as a whole. Even the largest institutions in the smallest states enroll a relatively small, selected or self-selected proportion of the total. The majority of students in your state are different in some key way—academic, demographic or economic—from your own.

At the level of a state or large metropolitan area, as opposed to individual institutions, there is much less variation in the overall population of students and potential students—all states have a mix of traditional age and older students, academically well-prepared or not, economically advantaged or not, some interested in STEM fields, others in fine arts, etc. What varies more is how those students are distributed among public and private institutions, selective and nonselective colleges, or two- and four-year sectors. The performance of postsecondary education as a whole is determined by how well all of those institutions serve the population, which may or may not be reflected in individual institutional metrics.

The selective and self-selective nature of higher education means students in any one institution are different in some key way than the majority of students in each state and the nation as a whole.

Aggregate Productivity and the Risk of Institutional Illusions

Consider the example below of graduation rates, a familiar and widely used measure (though with only a tenuous connection to productivity in the strict sense).[11] In tables 2a and 2b, the same ten students are divided up in two different ways among two institutions which, for argument's sake, are assumed to be identically effective given students with the same entering characteristics. In a simplified sense, this model could represent how the public and private sectors work within states (New England), or how flagship and open access institutions divide responsibilities (Midwest), or how the admission boundaries are set between a four-year and a community college system (California). In the first example, the more selective institution takes the top half of the students and ends up with a graduation rate of 80%. The less selective institution is left with the bottom half and has a graduation rate of 55%.

11. Mackie, 2016

Table 2a. Selective Institution Admits Top 50% of Students

		High School GPA	Odds of College Graduation	Institution Graduation Rate	Overall Graduation Rate
Institution 1a—Selective	Student 1	4	90%	80%	68%
	Student 2	3.9	85%		
	Student 3	3.8	80%		
	Student 4	3.7	75%		
	Student 5	3.6	70%		
Institution 2a—Open Access	Student 6	3.5	65%	55%	
	Student 7	3.4	60%		
	Student 8	3.3	55%		
	Student 9	3.2	50%		
	Student 10	3.1	45%		

In the second arrangement, the selective institution only takes the top three, leaving the bottom seven to the less selective school. The increased selectivity does not just raise the graduation rate for the selective school, it also increases it for the open access college. Graduation rates for both institutions are higher, but the net aggregate result is exactly the same.

Table 2b. Selective Institution Admits Top 30% of Students

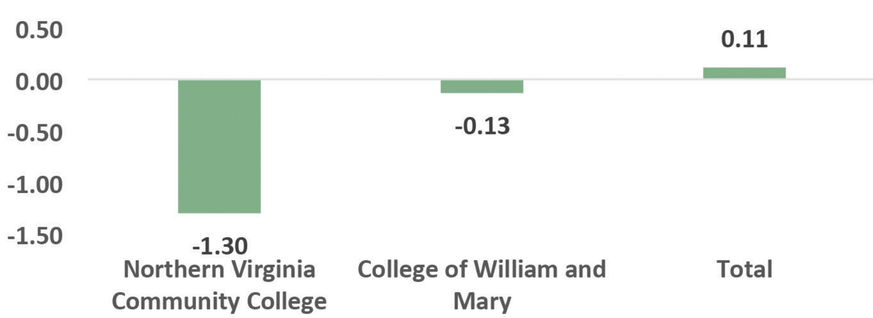
		High School GPA	Odds of College Graduation	Institution Graduation Rate	Overall Graduation Rate
Institution 1b—Selective	Student 1	4	90%	85%	68%
	Student 2	3.9	85%		
	Student 3	3.8	80%		
Institution 2b—Open Access	Student 4	3.7	75%	60%	
	Student 5	3.6	70%		
	Student 6	3.5	65%		
	Student 7	3.4	60%		
	Student 8	3.3	55%		
	Student 9	3.2	50%		
	Student 10	3.1	45%		

Looking just at institutional performance, it would be tempting to say that both institutions in the second example are better than (or improved upon, in the case of a time sequence) those in the first. But that is an illusion at the "state" level. The peer comparison or institutional benchmarking framework makes the illusion likely to appear when, for example, comparing public institutions in the Northeast where private colleges enroll many of the top students to their "peers" in the Midwest, where the public institutions are often more selective than the private schools. Comparing four-year institutions or community colleges across states can produce similar misleading results. Ultimately, for the state in question, the institutional comparisons simply do not matter as much as the overall result for the population.

Institutional comparisons simply do not matter as much as the **overall result for the population.**

In fact, such compositional effects are very common and made likely by competitive dynamics and economic or demographic pressures within regions. An example using actual data from two public institutions in Virginia illustrate how systematic changes within a state or region can result in a trend that differs from what any of the individual institutions experience. As shown in Figure 3, from 2003-2013 Northern Virginia Community College (NOVA) and the College of William and Mary both reduced their student-to-staff ratios, but when the numerators and denominators are combined, the net result is actually an increase.[12] From the institutions' point of view, both would rightly say staffing ratios are going down. But between the two institutions, the average student is experiencing a slight increase, as enrollment grows faster at NOVA, which has a much higher student-to-staff ratio, than at William and Mary, where the student-to-staff ratio is low.

Figure 3. Institutional Student-to-Staff Ratios Decline from 2003-2013, but Combined Effect is Increase



12. Author's analysis of data from the Integrated Postsecondary Education Data System. The example and these two institutions were chosen to make a mathematical and empirical point about the fallacy of composition in using institutional metrics to assess aggregate trends. In practice, it would be more common that the big apparent changes in institutional metrics would result in a smaller aggregate change in the same direction, or that small apparent institutional changes would result in a larger aggregate change in the same direction. The overall point would be the same, but less clearly illustrated.

Unless the data are aggregated at the policy level, looking at the parts alone will not be sufficient.

Even the most well-designed and consistently reported measure would look different through a state or regional lens than through that of an institution or peer group.

The same effect can and does happen with any important efficiency, accountability or quality measure: tuition rates, graduation rates, faculty salaries, employment outcomes, etc. Unless the data are aggregated at the policy level where the goals are being set and managed—whether a region, a state or the nation—then looking at the parts alone will not be sufficient.

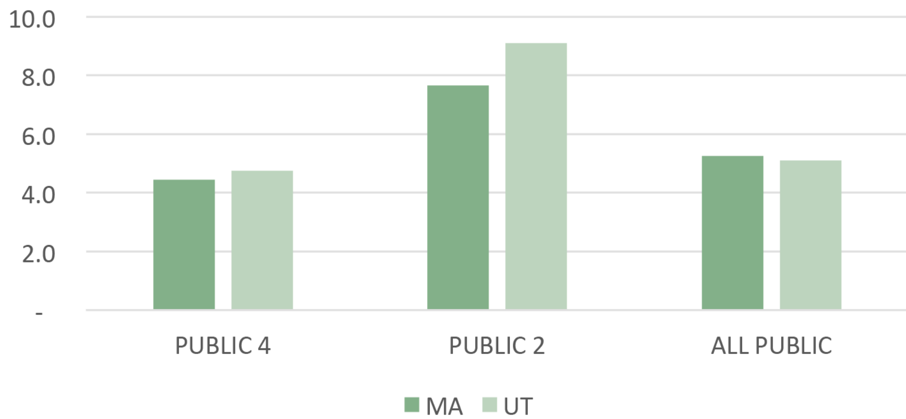
State and Metropolitan Area Aggregate Productivity Measurement

Two relevant policy levels are the state, based on the way political authority and responsibility for postsecondary education has evolved in the United States, and the metropolitan area, which is a critical level of aggregation in a student-centered model, given typical patterns of student mobility and choice. The Appendix to this paper includes tables for the 50 states and the top 50 metropolitan areas (by undergraduate enrollment) with examples of productivity-related measures disaggregated by institutional category—two- or four-year public, private—and also aggregated for both two- and four-year public sectors and for public and private combined. In many cases, the disaggregated perspective would lead to different conclusions from what the aggregate result suggests.

The measures (student-to-staff ratios, FTE enrollments to degree, and graduation rates) are used because they are easily calculated and easily understood to illustrate the point—and not because they are especially good proxies for real productivity. ("Efficiency" for example, could be little more than a euphemism for simply increasing class size, as long as it is defined entirely in terms of ratios of enrollments to personnel.) But even the most well-designed and consistently reported measure would look different through a state or regional lens than through that of an institution or peer group.

To cite just one example, in the state table, Utah has higher student-to-staff ratios than Massachusetts for both its public four-year and its public two-year sectors, as shown in Figure 4. But when all public institutions are taken together, that ratio is actually slightly lower in Utah because of the higher share of enrollment in four-year institutions. Even with both sectors being more "efficient" than those in Massachusetts, Utah's overall combined public sector efficiency (as measured by its student-to-staff ratio) is lower.

Figure 4: Fall 2013 FTE Student-to-Staff Ratios at Public 2- and 4-Year Institutions



Similarly, in the metropolitan area table, the Indianapolis and Miami metropolitan areas have roughly the same overall public/private combined student-to-staff ratio, but Indianapolis has a much higher ratio at private institutions and Miami has a much higher ratio at public institutions. That reflects, in part, the fact that the university with the largest teaching hospital in Miami is private, while in Indianapolis it is public. Its role in each city is comparable—most large cities have at least one major public or private university with a teaching hospital that provides both education and patient care in the region. But benchmarking productivity strictly by institutional control obscures the way the system as a whole functions and means there is no opportunity to evaluate the effect of the choices that have, over time, left some things to the private sector and taken on others as public responsibilities. Looking only at public or private sectors, one might be tempted to call Miami-area public colleges understaffed compared to Indianapolis, or to call the public colleges in Indianapolis bloated relative to the other city, but at least on this limited measure, the overall effect of the different ways the public and private sectors have evolved in each city has been the same combined result.

Benchmarking productivity strictly by institutional control obscures the way the system as a whole functions.

Student- vs. Institution-Focused Productivity Measurement

Examples used thus far have relied on a version of the productivity equation in which institutional resources—primarily in the form of faculty and other staff—are the input and students—in the form of course enrollments, credit hours or full-time equivalents—are the output. For reasons convincingly outlined by other papers in this series, that formulation is conceptually inadequate and incomplete. But for institutions, it does at least make a kind of business sense, given the way they operate as revenue-generating enterprises. Their

The productivity equation in which institutional resources are the input and students are the output **is conceptually inadequate and incomplete.**

expenses primarily take the form of personnel costs, and their revenues come in largely based on charges to students or third-party payers for quantities of student time in the form of contact hours, credit hours or "full-time-equivalents." Until that business model changes, it is difficult to argue against institutions that use conventional measures of productivity for internal management.

The student hour or semester credit hour has been an important accounting tool for institutions and, in spite of many well-founded criticisms, it has survived for a century as a measurement unit. If we did not yet have it, we would probably invent it again for the same reasons it came about in the first place.[13] Postsecondary reform efforts in Europe, in fact, have included the adoption of something like a credit hour as a common academic currency to facilitate transfer and common description of degree programs and requirements.[14] The student contact or credit hour is the foundation of efficiency and productivity measurement from Cooke's report to the Delaware Cost Study.

Student time, which is essentially treated as an output in institutional productivity measurement, **is a significant input from a public policy perspective.**

Student Time as Input, Not Output

Governments, however, are not in the same business as institutions and do not sell credit hours for money unless they have made a strategic decision to do so. Nor are institutional resources the only investments in postsecondary education for which policymakers are responsible. Student time, which is essentially treated as an output, or part of the numerator, in institutional productivity measurement, is a significant input, or part of the denominator, from a public policy perspective.

From a state government point of view, for example, consider a decision that saves $50,000 in institutional costs by centralizing an advising office a mile off-campus, but causes students to incur $50,000 in lost wages because of the additional time required to get there. While it would appear as a productivity gain to the institution, the net impact on total public and private resources required for the same output would be zero, since every dollar of institutional savings is offset by additional cost in student time.

In fact, student productivity often is defined implicitly in opposition to how an institution might define it. Advice to students about how to "get the most" out of the time and money spent on college frequently includes recommendations that effectively maximize their use of institutional resources; the more they make use of institutional resources, the more they will benefit from their investment. This is usually good advice—e.g., visit professors during office hours, participate in extracurricular activities, meet with advisors or tutors, etc.[15]

Even just valuing student time at the federal minimum wage, the 17.6 million full-time-equivalent students in the country in 2013-14 represented a nearly $200 billion input into the postsecondary education system. That is on top of the half trillion dollars spent

13. Shedd, 2003
14. European Commission n.d.
15. See, for example, "13 Versatile Ways to Get the Most Out of Your College Years" (Matthews, 2014)

by institutions themselves each year.[16] In both small ways, like a student's time waiting on hold or in line to talk to an advisor, and large ones, like the time it takes from entering postsecondary education to completion of the degree or other postsecondary goal, time can be as big a factor as out-of-pocket costs in determining affordability and total public and private cost of education. Even free tuition is not enough for students who still need to support themselves or their families while they go to school. Many countries with free or nearly free tuition have lower postsecondary participation rates than those with tuition charges because students still cannot afford the time required to attend.[17] As long as student time is treated as a free resource, many efforts to reform postsecondary education or reduce cost may miss their mark.

As long as student time is treated as a free resource, many efforts to reform postsecondary education or reduce cost may miss their mark.

If student time is one of the inputs for higher education productivity from a public policy viewpoint, then it cannot be, in the form of the time-based student credit hour, one of the outputs as well. On the other hand, the degree itself could be an output, since it is not inherently student-time dependent. A calculation of full-time-equivalent enrollments per degree is included in the tables following this paper as a student productivity measure (student time invested relative to a degree outcome). It is an imperfect measure, but useful as a counterpoint to other measures that are primarily based just on student time. A more rigorous version of such a measure would include weights assigned both to student time and to different types of degree or non-degree outcomes, based on empirical assessments of opportunity costs and of the economic and noneconomic benefits of actual degrees. In general, degrees have shown value in excess of their credit hours in a so-called "sheepskin" effect, but that effect varies and cannot be assumed to be stable or universally applicable. To the extent that it can be quantified, or that getting a degree brings other demonstrable public or private benefits, then some measure of the student time investment relative to the number of credentials earned would be a legitimate way to express what instructional productivity might mean from a student's point of view.

Population-Based Productivity Measurement

Whatever outcome or goal policymakers are seeking to maximize for their constituents—increased earnings, better health, civic engagement, personal growth, or mastery of a particular set of skills or domain of knowledge—the measure of productivity should be expressed in terms of the net gain attributable to postsecondary education, and not just as an end result with no baseline. The key questions are: What would be the expected outcome for the target population in the absence of the given postsecondary opportunity? How does that change given different available pathways (going to any college vs. none, public v. private, a particular program or institution compared to others, etc.)?

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What would be the expected outcome for the target population in the absence of the given postsecondary opportunity?

How does that change given different available pathways?

16. Snyder, de Brey and Dillow, 2016

17. See, for example, the list of countries with no tuition in *Financing Higher Education Worldwide* (Johnstone and Marcucci, 2010).

Too often, the counterfactual situation is not properly weighed, and relative performance is mistaken for impact or effect: Princeton graduates earn more than Montclair State grads, so the Ivy League school must have a bigger impact than a less selective public college; mechanical engineering majors earn more than social work majors, so engineering programs are a better choice; low-income students graduate at lower rates than higher-income students, so they should go to less selective institutions, etc.

The idea that students who do not do as well as others within an institution would be better off elsewhere often finds its way into important policy debates. The late Justice Scalia, for example, mused during oral arguments in Fisher v. Texas in 2015 that “There are those who contend that it does not benefit African-Americans to get them into the University of Texas where they do not do well, as opposed to having them go to a … slower track school where they do well.”[18] Even aside from the problematic association of students’ race with academic performance, Scalia makes the common but often unjustified leap between students’ comparative performance within an institution and the net benefit of the institution for those students. While intuitively appealing and sometimes true, that leap cannot be taken for granted and is often not supported by evidence.

In fact, the most methodologically rigorous studies often find that it is the relatively lower-performing students who benefit most from programs or institutions. One controlled experiment of financial aid in Nebraska, for example, found that, contrary to policies that prioritize financial aid based on academic merit, it was the least meritorious of the recipients in the treatment group who had the biggest gains attributable to the scholarship relative to similar students in the control group, even though in absolute terms their performance was still weaker.[19]

The alternative to college where a group of at-risk students is performing poorly relative to other groups may not be a better-suited, more effective institution, but an even worse and less well-resourced one, or it may be no college at all. One quasi-experimental study of the impact of four-year college access in Florida showed that high school students who just barely qualified for the state’s four-year public system had significantly improved outcomes compared those who just barely missed the mark.[20] The students just at the bottom of the admissible applicant pool would be the students most likely to be perceived as lower-performing or not prepared, and thought perhaps to be better off at a community college or not enrolled at all. When the real alternative to four-year enrollment is actually considered and the impact measured, however, that turns out not to be the case. Research and well-chosen analytical tools can help move the comparison outside of the institutional frame, in

18. Supreme Court of the United States, 2015
19. Angrist, et al., 2015
20. Zimmerman, 2014

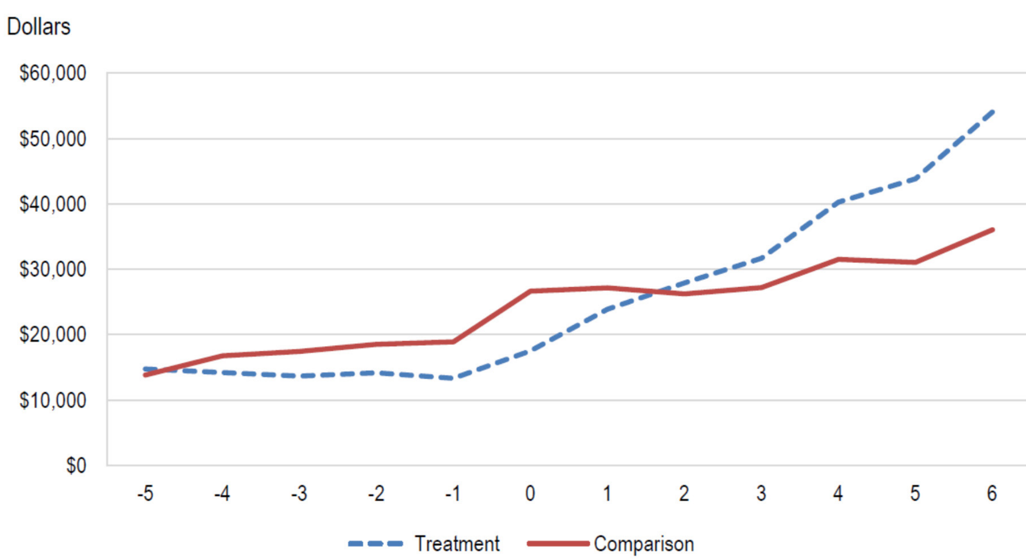
which the students appear to be low-performing compared to others within the institution, to compare their outcomes with what would have been predicted had the same students not been admitted.

Improving data resources and methodological tools are making it easier to estimate the impact of particular types of postsecondary experiences in the systematic way needed for more reliable productivity measurement across broad populations of students. The Center for the Analysis of Postsecondary Education and Employment (CAPSEE), for example, has sponsored multiple promising research projects in different states that are trying to distinguish the impact of institutions and programs from the differences in the types of students who attend in the first place.[21] Key elements in these approaches are the state longitudinal databases can help analyze trends across broad populations that include both postsecondary participants and non-participants.

Improving data resources and methodological tools are making it easier to estimate the impact of postsecondary experiences needed for more reliable productivity measurement across broad populations of students.

The State of Washington's Education Research Data Center is among the leaders in putting state data resources to work. It has in recent years shown the potential to use state databases to assess the impact of different pathways for comparable populations who make different postsecondary choices or do not participate at all.[22] The center's analyses typically focus on matched populations of students and nonstudents rather than on institutions.

Figure 5. Male Earnings: Associate Degree (Treatment) Compared to High School Only (Comparison), Years Since Degree, 2013 Dollars[23]



21. For details see http://capseecenter.org/. Another recent project that involved multiple state and national papers exploring alternative ways to separate the impact of postsecondary education from the qualities of entering students was *Context for Success*. Those papers are posted online at http://www.hcmstrategists.com/contextforsuccess/papers.html

22. For example, see (Washington Education Research and Data Center 2015)

23. Graph reproduced from (Washington Education Research and Data Center 2015) where it appears as Figure 3.

Figure 5, for example, illustrates income differences between associate degree earners and those with similar income histories and demographic characteristics who just finish high school, using data gleaned by tapping into Washington's state unemployment insurance and longitudinal education databases.

Of course while income growth is an important measure, especially at the lower end of the economic ladder, it is not the only one. The main point here about aggregating at regional and state levels would apply to any potential measure of student success or postsecondary productivity. One important new measurement resource for other outcomes of postsecondary education is the Gallup-Purdue study of links among college, work and well-being.[24] Even if the Gallup-Purdue study cannot yet provide estimates of net impact on its core measures, it provides context for more narrowly focused outcome measures and suggests broader ways to think about the many ways postsecondary education can affect individual lives and broader communities.

One important new measurement resource for other outcomes of postsecondary education is a study of links between college, work and well-being.

All states currently have the data required to conduct comprehensive, long-term studies like those being undertaken in Washington, including studies of key populations to understand what factors predict future economic or noneconomic success (or failure), and how postsecondary opportunities or choices affect those odds. More states, however, need to work at developing the skills and systems to make use of that data, and need to gather the political will to look objectively at the quality, cost and availability of options available to different populations.

Conclusion

Colleges and universities are critical components of the postsecondary education system in a given metropolitan area, state or the nation as a whole, but they are not the system itself. Students, whose pathways usually involve multiple institutions, are also part of the system, as are the set of regulations, institutional and student subsidies, and the governmental and nongovernmental entities that regulate, coordinate and support postsecondary education. Policymakers or advocates may have different goals for higher education—e.g., more access, degrees, jobs, income, civic engagement, innovation or pure learning. Regardless of their goals, it is important for all to understand not only the contributions of individual components within a given system, but also the productivity and effectiveness of the system itself.

24. Gallup and Purdue University, 2015

About the Author

Nate Johnson

Nate Johnson is principal consultant at Postsecondary Analytics in Tallahassee. He consults with states, institutions, associations and foundations on the measurement and policy implications of institutional costs, cost-effectiveness and student affordability. Among the white papers and reports he has authored are "College Costs, Prices and the Great Recession" for Lumina Foundation for Education (2013) and "What Does a College Degree Cost?" for the Delta Cost Project (2009). Johnson co-led the project "Context for Success" for HCM Strategists, which he summarized in a 2013 *Change* article, "Can Institutional Accountability Be Both Transparent and Fair?" He served on the National Research Council panel that produced the report, "Improving Measurement of Productivity in Higher Education" and is currently on the advisory board for the Center for Analysis of Postsecondary Education and Employment. Prior to becoming a consultant, Johnson served as executive director for institutional planning and research for the State University System of Florida, and held related positions at the University of Florida and the Florida Department of Education's office of transfer and articulation.

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Data Definitions

Fall FTE Students to FTE Staff. This measure follows definition of full-time-equivalent used in the Digest of Education Statistics Table 314.10, taking the number of fall full-time students plus 1/3 of the number of part-time students, and dividing by the number of full-time staff plus 1/3 of the number of part-time staff. It is a way to capture both the volume of student enrollments and the volume of staff employed at a comparable snapshot moment in time.

FTE Enrollments to Degrees. This measure divides the sum of reported 2013-14 full-time-equivalent enrollment by the number of degrees, weighted by typical type to degree. (Bachelor's, Doctorates = 1, Associate and Master's = 0.5, short-term certificates = 0.25). This is not based on fall enrollment but on annual credit hour enrollments and annual numbers of degrees awarded.

Graduation Rate. This is the standard federally required graduation rate that is based on the percentage of all entering full-time students who graduate within 150% of the normal time to degree (four years for bachelor's, two for associate). It is an incomplete measure generally considered misleading for institutions that enroll large numbers of part-time students and is included here only to show the composition effects of putting the numbers together between sectors compared to looking at them separately. Similar results would occur with more complete measures of graduation (such as those calculated by the National Student Clearinghouse for subset of states). The relative performance of institutions or institution groups would likely not change even if in absolute terms the numbers were higher.

Appendix

Productivity-Related Measures for Postsecondary Education by State

	PUBLIC 4-YEAR	PUBLIC 2-YEAR	ALL PUBLIC	NONPROFIT 4-YEAR	TOTAL
	Fall 2013 FTE Students per FTE Staff	Fall 2013 FTE Students per FTE Staff	Fall 2013 FTE Students per FTE Staff	Fall 2013 FTE Students per FTE Staff	Fall 2013 FTE Students per FTE Staff
Grand Total	**4.5**	**9.4**	**5.6**	**3.7**	**5.0**
State Median	**4.3**	**8.6**	**5.2**	**4.3**	**4.9**
AK	3.7	3.8	3.7	2.9	3.7
AL	4.2	9.0	5.0	4.9	5.0
AR	4.5	7.5	5.2	4.8	5.1
AZ	5.0	9.9	6.5	4.6	6.4
CA	4.9	14.2	7.7	3.6	6.5
CO	4.2	9.6	5.0	4.6	4.9
CT	4.1	9.3	5.2	2.4	3.6
DC	3.7		3.7	3.3	3.3
DE	4.5	7.1	5.0	7.8	5.5
FL	6.7	9.7	6.8	4.1	6.1
GA	4.8	7.6	5.3	3.0	4.7
HI	3.8	8.3	4.9	6.6	5.2
IA	3.7	8.1	5.0	4.7	4.9
ID	5.5	7.1	5.8	10.1	6.7
IL	3.4	9.5	5.3	3.3	4.4
IN	4.7	10.1	5.3	4.3	5.0
KS	4.3	7.2	5.1	6.6	5.3
KY	3.9	8.7	4.8	4.9	4.8
LA	5.3	12.3	6.4	3.1	5.6
MA	4.4	7.7	5.3	2.9	3.5
MD	4.0	6.3	4.7	1.8	3.7
ME	4.4	8.6	5.2	3.9	4.7
MI	4.3	9.9	5.3	6.0	5.4
MN	4.3	11.0	5.7	4.9	5.5
MO	4.1	8.3	5.0	3.5	4.3
MS	3.2	8.8	4.5	5.5	4.6
MT	5.1	5.8	5.2	4.6	5.1
NC	3.9	6.4	4.7	2.4	4.0
ND	4.7	5.3	4.8	3.5	4.6
NE	3.6	7.3	4.3	5.7	4.6
NH	5.3	6.6	5.7	4.3	4.9
NJ	4.3	10.2	5.8	4.1	5.4
NM	3.5	8.2	4.8	3.4	4.8
NV	6.7	9.4	6.9	5.0	6.7
NY	6.0	9.6	7.1	3.2	4.6
OH	4.2	8.5	4.9	4.4	4.7
OK	4.1	8.2	4.7	4.7	4.7
OR	4.0	8.4	5.2	4.8	5.1
PA	4.5	8.2	5.1	3.4	4.2

Productivity-Related Measures for Postsecondary Education by State

	PUBLIC 4-YEAR	PUBLIC 2-YEAR	ALL PUBLIC	NONPROFIT 4-YEAR	TOTAL
	Fall 2013 FTE Students per FTE Staff	Fall 2013 FTE Students per FTE Staff	Fall 2013 FTE Students per FTE Staff	Fall 2013 FTE Students per FTE Staff	Fall 2013 FTE Students per FTE Staff
PR	4.4	8.8	4.5	9.9	7.0
RI	5.7	9.9	6.6	3.8	4.7
SC	4.4	9.2	5.5	5.1	5.5
SD	5.4	7.5	5.6	4.3	5.4
TN	4.6	9.5	5.5	2.0	3.6
TX	4.0	8.8	5.2	3.8	5.0
UT	4.7	9.1	5.1	10.3	6.4
VA	4.2	10.3	5.4	5.4	5.4
VI	2.9		2.9		2.9
VT	3.5	6.9	3.8	4.0	3.9
WA	4.4	9.6	5.5	4.7	5.4
WI	4.8	6.6	5.2	3.5	4.7
WV	5.2	9.7	5.7	4.5	5.5
WY	3.4	5.5	4.3	1.5	4.3

Productivity-Related Measures for Postsecondary Education by State (continued)

	PUBLIC 4-YEAR	PUBLIC 2-YEAR	ALL PUBLIC	NONPROFIT 4-YEAR	TOTAL
	2013-14 FTE Enrollments per Degree	2013-14 FTE Enrollments per Degree	2013-14 FTE Enrollments per Degree	2013-14 FTE Enrollments per Degree	2013-14 FTE Enrollments per Degree
Grand Total	**4.7**	**9.8**	**5.8**	**4.5**	**5.4**
State Median	**4.8**	**9.0**	**5.7**	**4.5**	**5.4**
AK	6.4	2.9	6.3	4.3	6.2
AL	5.0	10.9	6.0	5.3	5.9
AR	5.0	5.8	5.2	4.9	5.2
AZ	4.4	7.5	5.5	4.4	5.5
CA	4.0	13.8	6.9	4.4	6.3
CO	4.8	9.4	5.6	4.1	5.4
CT	4.3	10.5	5.5	4.6	5.1
DC	5.7		5.7	3.9	4.0
DE	5.0	10.7	5.9	4.9	5.5
FL	5.1	8.2	5.2	5.0	5.1
GA	5.6	7.1	5.9	4.7	5.7
HI	4.5	7.4	5.3	4.1	5.0
IA	4.6	7.7	5.7	4.1	5.1
ID	4.9	9.9	5.8	7.2	6.3
IL	4.3	9.5	6.3	4.1	5.4
IN	5.0	7.9	5.5	4.4	5.2
KS	4.4	7.9	5.3	4.5	5.2
KY	4.8	6.9	5.4	4.9	5.3
LA	5.2	5.3	5.3	4.7	5.2
MA	4.6	9.8	5.7	4.3	4.8
MD	4.2	10.2	5.4	4.5	5.2
ME	4.9	8.8	5.7	4.6	5.3
MI	4.6	9.5	5.6	4.4	5.4
MN	4.8	7.2	5.6	4.3	5.2
MO	4.6	9.6	5.7	4.1	5.0
MS	5.1	8.6	6.3	4.6	6.1
MT	5.2	9.1	5.6	5.2	5.5
NC	4.6	10.1	6.2	4.6	5.8
ND	5.1	7.3	5.3	5.2	5.3
NE	4.7	9.2	5.8	4.0	5.2
NH	4.6	9.0	5.2	6.2	5.7
NJ	4.2	11.3	5.8	4.5	5.5
NM	5.1	8.6	6.3	6.4	6.3
NV	6.4	7.8	6.5	4.3	6.3
NY	4.4	10.3	5.7	4.3	5.0
OH	5.0	10.4	6.0	4.6	5.6
OK	4.7	9.0	5.5	4.6	5.3
OR	4.4	9.5	5.8	4.4	5.5
PA	4.6	11.2	5.5	4.4	4.9

Productivity-Related Measures for Postsecondary Education by State (continued)

	PUBLIC 4-YEAR	PUBLIC 2-YEAR	ALL PUBLIC	NONPROFIT 4-YEAR	TOTAL
	2013-14 FTE Enrollments per Degree	2013-14 FTE Enrollments per Degree	2013-14 FTE Enrollments per Degree	2013-14 FTE Enrollments per Degree	2013-14 FTE Enrollments per Degree
PR	6.2	6.6	6.3	6.5	6.4
RI	4.9	10.7	5.9	4.1	4.8
SC	5.1	10.7	6.5	5.2	6.2
SD	5.4	5.9	5.5	4.7	5.3
TN	4.7	8.6	5.5	4.5	5.2
TX	4.5	10.9	6.1	4.4	5.8
UT	5.0	9.9	5.4	4.9	5.2
VA	4.5	8.9	5.5	5.0	5.4
VI	6.7		6.7		6.7
VT	4.4	10.3	4.9	4.2	4.6
WA	4.9	8.0	5.8	4.0	5.5
WI	4.7	6.2	5.1	4.5	5.0
WV	5.3	7.0	5.5	5.6	5.5
WY	4.6	8.3	6.1	9.7	6.1

Productivity-Related Measures for Postsecondary Education by State (continued)

	PUBLIC 4-YEAR	PUBLIC 2-YEAR	ALL PUBLIC	NONPROFIT 4-YEAR	TOTAL
	FTE Enrollment	FTE Enrollment	FTE Enrollment	FTE Enrollment	FTE Enrollment
Grand Total	**5,951,993**	**4,416,452**	**10,368,445**	**2,680,825**	**13,049,270**
State Median	**87,186**	**57,350**	**141,246**	**30,777**	**166,023**
AK	18,311	403	18,714	331	19,045
AL	116,010	65,871	181,881	19,079	200,960
AR	71,881	38,805	110,686	13,255	123,941
AZ	114,671	126,792	241,463	4,246	245,709
CA	530,486	896,022	1,426,508	170,420	1,596,928
CO	122,025	61,307	183,332	18,533	201,865
CT	48,082	33,874	81,956	48,478	130,434
DC	3,317		3,317	37,688	41,005
DE	22,213	10,056	32,269	9,332	41,601
FL	536,694	38,115	574,809	115,154	689,963
GA	209,039	100,162	309,201	48,961	358,162
HI	20,440	16,255	36,695	10,085	46,780
IA	56,845	65,181	122,026	43,853	165,879
ID	34,674	16,084	50,758	35,880	86,638
IL	135,045	244,796	379,841	132,433	512,274
IN	165,608	67,265	232,873	69,037	301,910
KS	69,023	56,502	125,525	19,592	145,117
KY	88,416	52,830	141,246	24,194	165,440
LA	102,999	50,085	153,084	18,458	171,542
MA	89,770	67,121	156,891	169,649	326,540
MD	104,351	87,126	191,477	28,263	219,740
ME	21,698	11,510	33,208	15,050	48,258
MI	214,446	147,035	361,481	69,316	430,797
MN	98,951	89,709	188,660	48,371	237,031
MO	101,499	72,201	173,700	80,961	254,661
MS	61,340	65,003	126,343	10,800	137,143
MT	30,851	6,644	37,495	3,970	41,465
NC	168,110	189,016	357,126	71,458	428,584
ND	30,644	4,597	35,241	4,543	39,784
NE	40,903	30,113	71,016	20,834	91,850
NH	24,584	9,310	33,894	31,627	65,521
NJ	129,995	122,546	252,541	45,222	297,763
NM	43,082	48,434	91,516	680	92,196
NV	57,772	6,732	64,504	988	65,492
NY	295,690	236,958	532,648	334,211	866,859
OH	243,393	127,547	370,940	105,087	476,027
OK	85,557	40,286	125,843	18,532	144,375
OR	73,389	72,133	145,522	20,501	166,023
PA	224,834	95,035	319,869	196,261	516,130

Productivity-Related Measures for Postsecondary Education by State (continued)

	PUBLIC 4-YEAR	PUBLIC 2-YEAR	ALL PUBLIC	NONPROFIT 4-YEAR	TOTAL
	FTE Enrollment	FTE Enrollment	FTE Enrollment	FTE Enrollment	FTE Enrollment
PR	48,882	2,394	51,276	100,678	151,954
RI	19,527	10,233	29,760	34,848	64,608
SC	87,186	73,147	160,333	29,007	189,340
SD	25,300	6,703	32,003	5,595	37,598
TN	102,348	57,350	159,698	59,500	219,198
TX	439,322	448,258	887,580	91,046	978,626
UT	95,858	20,007	115,865	73,633	189,498
VA	162,103	121,869	283,972	78,114	362,086
VI	1,695		1,695		1,695
VT	16,241	3,314	19,555	12,898	32,453
WA	142,026	108,118	250,144	29,927	280,071
WI	136,931	65,112	202,043	43,068	245,111
WV	53,695	11,075	64,770	7,011	71,781
WY	9,262	13,953	23,215	111	23,326

Productivity-Related Measures for Postsecondary Education by Consolidated Statistical Metro Area

	PUBLIC 4-YEAR	PUBLIC 2-YEAR	ALL PUBLIC	NONPROFIT 4-YEAR	TOTAL
	Fall 2013 FTE Students per FTE Staff	Fall 2013 FTE Students per FTE Staff	Fall 2013 FTE Students per FTE Staff	Fall 2013 FTE Students per FTE Staff	Fall 2013 FTE Students per FTE Staff
US Total	4.5	9.3	5.6	3.7	5.0
Metro Area Median	4.4	9.1	5.8	4.4	4.6
New York-Newark, NY-NJ-CT-PA CSA	5.3	9.6	6.6	3.0	4.5
Los Angeles-Long Beach, CA CSA	5.6	14.7	8.8	3.7	6.9
Boston-Worcester-Providence, MA-RI-NH-CT CSA	4.8	8.0	5.6	3.2	3.8
Chicago-Naperville, IL-IN-WI CSA	3.5	9.9	6.0	3.2	4.4
San Jose-San Francisco-Oakland, CA CSA	3.8	13.6	6.4	2.8	5.1
Washington-Baltimore-Arlington, DC-MD-VA-WV-PA CSA	4.2	7.5	5.1	2.5	3.9
Philadelphia-Reading-Camden, PA-NJ-DE-MD CSA	5.3	9.5	6.4	3.3	4.6
Miami-Fort Lauderdale-Port St. Lucie, FL CSA	8.6	4.8	8.4	3.2	5.6
Dallas-Fort Worth, TX-OK CSA	4.4	10.4	6.3	4.8	6.0
Houston-The Woodlands, TX CSA	2.1	9.0	3.7	1.8	3.3
Detroit-Warren-Ann Arbor, MI CSA	3.3	10.7	4.5	6.7	4.8
Atlanta--Athens-Clarke County--Sandy Springs, GA CSA	4.3	7.8	4.8	2.2	4.0
Seattle-Tacoma, WA CSA	3.6	10.0	4.8	4.7	4.8
Salt Lake City-Provo-Orem, UT CSA	4.0	8.5	4.6	10.4	6.3
Minneapolis-St. Paul, MN-WI CSA	3.3	11.8	4.4	5.0	4.6
Orlando-Deltona-Daytona Beach, FL CSA	9.3	6.1	9.2	5.7	8.2
Denver-Aurora, CO CSA	3.8	10.3	4.6	4.8	4.7
Cleveland-Akron-Canton, OH CSA	6.4	8.7	7.1	3.2	5.5
Portland-Vancouver-Salem, OR-WA CSA	3.4	9.2	5.0	4.9	5.0
Indianapolis-Carmel-Muncie, IN CSA	3.8	10.1	5.9	4.3	5.6
Sacramento-Roseville, CA CSA	3.9	14.6	6.1	5.0	6.1
San Juan-Carolina, PR CSA	4.2	8.9	4.4	10.0	7.1
St. Louis-St. Charles-Farmington, MO-IL CSA	5.0	8.6	6.9	2.7	3.9
Pittsburgh-New Castle-Weirton, PA-OH-WV CSA	3.6	8.0	4.2	3.7	4.0
Columbus-Marion-Zanesville, OH CSA	2.1	9.2	2.6	5.0	2.9
Raleigh-Durham-Chapel Hill, NC CSA	2.6	6.7	3.2	1.5	2.5
Kansas City-Overland Park-Kansas City, MO-KS CSA	3.8	7.2	4.5	4.9	4.6
Cincinnati-Wilmington-Maysville, OH-KY-IN CSA	5.2	7.2	5.5	5.0	5.4
Albany-Schenectady, NY CSA	5.8	10.6	7.3	4.7	5.8
Charlotte-Concord, NC-SC CSA	5.8	6.8	6.3	4.9	5.9
Greensboro--Winston-Salem--High Point, NC CSA	5.0	7.4	5.8	2.4	4.1
Virginia Beach-Norfolk, VA-NC CSA	4.5	10.0	5.8	4.7	5.6
Milwaukee-Racine-Waukesha, WI CSA	6.7	6.3	6.6	3.1	4.5
Grand Rapids-Wyoming-Muskegon, MI CSA	7.6	10.0	8.2	6.3	7.5
Oklahoma City-Shawnee, OK CSA	3.4	7.5	3.9	5.6	4.1
Greenville-Spartanburg-Anderson, SC CSA	4.7	9.1	5.9	5.1	5.7
Rochester-Batavia-Seneca Falls, NY CSA	6.6	10.1	8.4	2.5	3.7
Hartford-West Hartford, CT CSA	3.1	8.6	3.8	3.8	3.8
Nashville-Davidson--Murfreesboro, TN CSA	7.5	10.2	8.3	1.0	2.2

Productivity-Related Measures for Postsecondary Education by Consolidated Statistical Metro Area

	PUBLIC 4-YEAR	PUBLIC 2-YEAR	ALL PUBLIC	NONPROFIT 4-YEAR	TOTAL
	Fall 2013 FTE Students per FTE Staff	Fall 2013 FTE Students per FTE Staff	Fall 2013 FTE Students per FTE Staff	Fall 2013 FTE Students per FTE Staff	Fall 2013 FTE Students per FTE Staff
Buffalo-Cheektowaga, NY CSA	5.4	10.1	6.3	5.6	6.1
Springfield-Greenfield Town, MA CSA	4.4	6.9	4.9	3.7	4.4
New Orleans-Metairie-Hammond, LA-MS CSA	4.8	10.1	6.2	3.0	4.6
Tallahassee-Bainbridge, FL-GA CSA	5.1	8.4	5.5	12.4	5.5
Lansing-East Lansing-Owosso, MI CSA	3.8	8.9	4.2	5.2	4.3
Madison-Janesville-Beloit, WI CSA	2.7	8.6	3.1	4.1	3.2
El Paso-Las Cruces, TX-NM CSA	4.8	10.3	6.2		6.2
Des Moines-Ames-West Des Moines, IA CSA	5.0	10.8	5.9	4.9	5.6
Dayton-Springfield-Sidney, OH CSA	5.3	7.9	6.3	4.5	5.5
Albuquerque-Santa Fe-Las Vegas, NM CSA	3.1	9.1	4.5	2.9	4.4
Tucson-Nogales, AZ CSA	3.2	9.8	4.0		4.0
Lexington-Fayette--Richmond--Frankfort, KY CSA	3.1	9.3	3.5	3.7	3.5
Syracuse-Auburn, NY CSA	4.0	9.6	5.5	3.9	4.5
State College-DuBois, PA CSA	3.4		3.4		3.4
Gainesville-Lake City, FL CSA	3.6		3.6	7.0	3.6
Columbia-Orangeburg-Newberry, SC CSA	4.4	8.5	4.9	4.9	4.9
Jacksonville-St. Marys-Palatka, FL-GA CSA	7.7		7.7	6.3	7.4
Fresno-Madera, CA CSA	11.4	12.6	12.0	5.7	11.2
Las Vegas-Henderson, NV-AZ CSA	7.8	6.9	7.7	4.7	7.5
Columbia-Moberly-Mexico, MO CSA	2.2	10.7	2.4	10.5	3.0
Savannah-Hinesville-Statesboro, GA CSA	7.0	8.0	7.1	6.6	7.0
Knoxville-Morristown-Sevierville, TN CSA	2.3	9.6	3.2	4.9	3.3
Omaha-Council Bluffs-Fremont, NE-IA CSA	2.7	8.0	3.9	5.7	4.5
Toledo-Port Clinton, OH CSA	5.5	9.1	6.0	5.4	5.9
Little Rock-North Little Rock, AR CSA	3.2	9.6	4.0	4.9	4.2
Memphis-Forrest City, TN-MS-AR CSA	5.2	9.1	6.6	4.8	6.1
Harrisburg-York-Lebanon, PA CSA	3.6	7.5	4.8	4.3	4.6
Lubbock-Levelland, TX CSA	3.1	9.5	3.4	4.5	3.5
Louisville/Jefferson County--Elizabethtown--Madison, KY-IN CSA	3.2	9.2	4.2	5.5	4.4
McAllen-Edinburg, TX CSA	9.1		9.1	6.3	9.1
Chattanooga-Cleveland-Dalton, TN-GA-AL CSA	7.5	8.7	8.0	6.0	7.2
Spokane-Spokane Valley-Coeur d'Alene, WA-ID CSA	7.9	7.8	7.8	4.8	6.7
Tulsa-Muskogee-Bartlesville, OK CSA	5.6	6.8	6.2	3.9	5.3
Springfield-Branson, MO CSA	7.0	8.0	7.3	5.8	6.8
Birmingham-Hoover-Talladega, AL CSA	1.9	8.3	2.9	4.7	3.1
Cedar Rapids-Iowa City, IA CSA	2.6	7.8	3.2	4.5	3.2
Bloomington-Bedford, IN CSA	4.4		4.4		4.4
Idaho Falls-Rexburg-Blackfoot, ID CSA		2.6	2.6	12.2	11.3
Lincoln-Beatrice, NE CSA	3.5	8.5	4.0	7.0	4.3
Kalamazoo-Battle Creek-Portage, MI CSA	6.2	9.2	6.9	3.8	6.5

Productivity-Related Measures for Postsecondary Education by Consolidated Statistical Metro Area

	PUBLIC 4-YEAR	PUBLIC 2-YEAR	ALL PUBLIC	NONPROFIT 4-YEAR	TOTAL
	Fall 2013 FTE Students per FTE Staff	Fall 2013 FTE Students per FTE Staff	Fall 2013 FTE Students per FTE Staff	Fall 2013 FTE Students per FTE Staff	Fall 2013 FTE Students per FTE Staff
Ithaca-Cortland, NY CSA	6.3	10.1	7.2	2.3	2.8
Modesto-Merced, CA CSA	6.6	14.1	9.2		9.2
Pullman-Moscow, WA-ID CSA	4.0		4.0	8.3	4.1
Lafayette-West Lafayette-Frankfort, IN CSA	3.2		3.2		3.2
Columbus-Auburn-Opelika, GA-AL CSA	4.2	8.2	4.5		4.5
Jackson-Vicksburg-Brookhaven, MS CSA	1.2	7.6	2.1	5.0	2.5
Greenville-Washington, NC CSA	3.9	8.5	4.5		4.5
Morgantown-Fairmont, WV CSA	4.3	12.9	4.5	5.9	4.5
Boise City-Mountain Home-Ontario, ID-OR CSA	6.7	7.6	6.9	5.1	6.6
Wichita-Arkansas City-Winfield, KS CSA	5.3	9.2	6.6	9.8	7.6
Harrisonburg-Staunton-Waynesboro, VA CSA	6.2	9.4	6.4	4.3	5.9
Cape Coral-Fort Myers-Naples, FL CSA	9.6	6.5	9.3	5.4	8.6
South Bend-Elkhart-Mishawaka, IN-MI CSA	8.0	8.0	8.0	2.5	3.2
Fayetteville-Lumberton-Laurinburg, NC CSA	5.8	7.0	6.3	4.4	5.9
Charleston-Huntington-Ashland, WV-OH-KY CSA	6.9	8.2	7.2	4.7	6.9
Huntsville-Decatur-Albertville, AL CSA	4.6	11.7	6.2	5.2	6.1
Reno-Carson City-Fernley, NV CSA	5.1	9.4	5.7	6.1	5.7
Bloomington-Pontiac, IL CSA	5.3	8.7	5.6	4.0	5.4
Fargo-Wahpeton, ND-MN CSA	5.4	5.8	5.4	4.0	5.2
Lafayette-Opelousas-Morgan City, LA CSA	7.0	12.9	8.3		8.3
Portland-Lewiston-South Portland, ME CSA	4.7	10.0	6.6	3.7	4.9
Eau Claire-Menomonie, WI CSA	7.6	6.5	7.4		7.4
Corpus Christi-Kingsville-Alice, TX CSA	6.4	7.1	6.6		6.6
Johnson City-Kingsport-Bristol, TN-VA CSA	4.9	9.0	5.7	5.3	5.6
Macon-Warner Robins, GA CSA	5.9	7.1	6.3	4.3	5.4
Monroe-Ruston-Bastrop, LA CSA	7.4	8.8	7.5		7.5
Mobile-Daphne-Fairhope, AL CSA	4.6	11.2	5.6	5.1	5.5
Mount Pleasant-Alma, MI CSA	8.4	3.5	8.4	4.2	7.9
Manhattan-Junction City, KS CSA	4.4	7.7	4.4	4.5	4.4
Mankato-New Ulm-North Mankato, MN CSA	9.1	7.3	8.8	4.2	7.3
Fort Wayne-Huntington-Auburn, IN CSA	7.9		7.9	7.3	7.6
Youngstown-Warren, OH-PA CSA	8.0		8.0	14.4	8.7
MayagÃ¼ez-San GermÃ¡n, PR CSA	3.9		3.9	9.6	5.1
Saginaw-Midland-Bay City, MI CSA	9.0	8.8	8.9	5.1	8.1
Bowling Green-Glasgow, KY CSA	5.9	9.2	6.3		6.3
Asheville-Brevard, NC CSA	4.7	5.6	5.3	4.5	5.1
Appleton-Oshkosh-Neenah, WI CSA	8.0	5.7	7.1	3.4	6.5
Erie-Meadville, PA CSA	7.2	4.7	7.0	5.7	6.2
Ponce-Coamo-Santa Isabel, PR CSA	7.2	8.0	7.3	7.6	7.5
Myrtle Beach-Conway, SC-NC CSA	6.7	7.9	7.1		7.2

Productivity-Related Measures for Postsecondary Education by Consolidated Statistical Metro Area

	PUBLIC 4-YEAR	PUBLIC 2-YEAR	ALL PUBLIC	NONPROFIT 4-YEAR	TOTAL
	Fall 2013 FTE Students per FTE Staff	Fall 2013 FTE Students per FTE Staff	Fall 2013 FTE Students per FTE Staff	Fall 2013 FTE Students per FTE Staff	Fall 2013 FTE Students per FTE Staff
Davenport-Moline, IA-IL CSA		8.1	8.1	4.6	6.0
Bloomsburg-Berwick-Sunbury, PA CSA	8.5		8.5	3.3	5.3
Green Bay-Shawano, WI CSA	7.8	7.1	7.4	3.5	6.0
Wausau-Stevens Point-Wisconsin Rapids, WI CSA	7.7	7.1	7.5		7.5
Peoria-Canton, IL CSA		8.2	8.2	4.7	6.0
Tyler-Jacksonville, TX CSA	5.4	9.7	7.3	7.5	7.3
Amarillo-Borger, TX CSA	8.2	7.7	7.9		7.9
North Port-Sarasota, FL CSA	7.9	5.5	7.4	3.9	6.8
Visalia-Porterville-Hanford, CA CSA		14.2	14.2		14.2
Rome-Summerville, GA CSA		9.2	9.2	4.5	6.8
Sioux City-Vermillion, IA-SD-NE CSA	4.9	8.6	5.7	5.5	5.7
Brownsville-Harlingen-Raymondville, TX CSA	6.7	5.8	6.4		6.4
Williamsport-Lock Haven, PA CSA	6.1		6.1	4.4	5.8
Springfield-Jacksonville-Lincoln, IL CSA	3.8	8.6	5.5	4.5	5.2
Joplin-Miami, MO-OK CSA	8.2	8.5	8.4	6.0	8.2
Hickory-Lenoir, NC CSA		5.2	5.2	5.9	5.3
Rocky Mount-Wilson-Roanoke Rapids, NC CSA		6.3	6.3	5.3	6.0
Midland-Odessa, TX CSA	6.6	6.5	6.6		6.6
Lima-Van Wert-Celina, OH CSA	15.7	8.5	10.8	8.5	9.4
Jonesboro-Paragould, AR CSA	5.8		5.8	5.2	5.8
Pueblo-CaÃ±on City, CO CSA	8.6	9.3	8.9		8.9
Cape Girardeau-Sikeston, MO-IL CSA	8.0	3.7	7.8		7.8
Rockford-Freeport-Rochelle, IL CSA		8.7	8.7	4.2	7.6
Longview-Marshall, TX CSA		7.6	7.6	4.5	5.7
Johnstown-Somerset, PA CSA	8.5	8.1	8.4	4.2	5.9
Medford-Grants Pass, OR CSA	7.2	8.1	7.6		7.6
Rochester-Austin, MN CSA	4.7	10.2	9.4	2.2	6.7
Findlay-Tiffin, OH CSA				6.2	6.2
Redding-Red Bluff, CA CSA		12.4	12.4	5.0	9.8
Martin-Union City, TN-KY CSA	7.4		7.4		7.4
Bend-Redmond-Prineville, OR CSA	1,143.9	10.1	11.2		11.2
Mansfield-Ashland-Bucyrus, OH CSA	8.3	7.0	7.4	4.7	5.5
Rapid City-Spearfish, SD CSA	6.9	7.1	6.9		6.9
Parkersburg-Marietta-Vienna, WV-OH CSA	10.0	5.8	8.1	4.0	6.0
Dothan-Enterprise-Ozark, AL CSA		9.2	9.2		9.2
Clovis-Portales, NM CSA	6.8	8.6	7.3		7.3
Victoria-Port Lavaca, TX CSA	6.6	7.1	6.8		6.8
New Bern-Morehead City, NC CSA		5.9	5.9		5.9
Quincy-Hannibal, IL-MO CSA		5.1	5.1	5.5	5.4
Elmira-Corning, NY CSA		8.8	8.8	3.8	6.4

Productivity-Related Measures for Postsecondary Education by Consolidated Statistical Metro Area

	PUBLIC 4-YEAR	PUBLIC 2-YEAR	ALL PUBLIC	NONPROFIT 4-YEAR	TOTAL
	Fall 2013 FTE Students per FTE Staff	Fall 2013 FTE Students per FTE Staff	Fall 2013 FTE Students per FTE Staff	Fall 2013 FTE Students per FTE Staff	Fall 2013 FTE Students per FTE Staff
Cleveland-Indianola, MS CSA	7.3	8.0	7.5		7.5
Paducah-Mayfield, KY-IL CSA		8.7	8.7	7.7	8.3
Richmond-Connersville, IN CSA	8.6		8.6	3.1	5.7
Edwards-Glenwood Springs, CO CSA	4.9		4.9		4.9
Hot Springs-Malvern, AR CSA		7.3	7.3		7.3
Kokomo-Peru, IN CSA	10.0		10.0		10.0
Moses Lake-Othello, WA CSA		7.8	7.8		7.8
Dixon-Sterling, IL CSA		7.7	7.7		7.7

Productivity-Related Measures for Postsecondary Education by Consolidated Statistical Metro Area (cont'd)

	PUBLIC 4-YEAR	PUBLIC 2-YEAR	ALL PUBLIC	NONPROFIT 4-YEAR	TOTAL
	2013-14 FTE Enrollments per Degree	2013-14 FTE Enrollments per Degree	2013-14 FTE Enrollments per Degree	2013-14 FTE Enrollments per Degree	2013-14 FTE Enrollments per Degree
US Total	**4.7**	**9.6**	**5.8**	**4.5**	**5.4**
Metro Area Median	**4.6**	**9.9**	**5.9**	**4.4**	**5.3**
New York-Newark, NY-NJ-CT-PA CSA	4.5	11.1	6.0	4.4	5.2
Los Angeles-Long Beach, CA CSA	4.0	14.0	7.3	4.3	6.4
Boston-Worcester-Providence, MA-RI-NH-CT CSA	4.7	10.1	6.0	4.5	4.9
Chicago-Naperville, IL-IN-WI CSA	4.4	10.1	7.1	4.2	5.5
San Jose-San Francisco-Oakland, CA CSA	3.9	14.3	6.7	4.4	6.1
Washington-Baltimore-Arlington, DC-MD-VA-WV-PA CSA	4.2	10.1	5.6	4.1	5.0
Philadelphia-Reading-Camden, PA-NJ-DE-MD CSA	4.6	12.1	6.1	4.4	5.3
Miami-Fort Lauderdale-Port St. Lucie, FL CSA	5.9	6.1	5.9	5.3	5.7
Dallas-Fort Worth, TX-OK CSA	4.0	10.8	6.0	4.3	5.7
Houston-The Woodlands, TX CSA	4.4	12.2	7.0	4.6	6.7
Detroit-Warren-Ann Arbor, MI CSA	4.6	10.0	5.9	4.3	5.6
Atlanta--Athens-Clarke County--Sandy Springs, GA CSA	5.2	8.1	5.7	4.7	5.5
Seattle-Tacoma, WA CSA	5.1	8.3	6.0	3.9	5.6
Salt Lake City-Provo-Orem, UT CSA	4.9	7.1	5.4	4.9	5.1
Minneapolis-St. Paul, MN-WI CSA	4.7	8.0	5.6	4.3	5.2
Orlando-Deltona-Daytona Beach, FL CSA	4.7	4.3	4.7	4.3	4.6
Denver-Aurora, CO CSA	4.6	10.2	5.6	4.1	5.3
Cleveland-Akron-Canton, OH CSA	5.2	9.8	6.2	4.6	5.8
Portland-Vancouver-Salem, OR-WA CSA	4.3	9.5	6.0	4.3	5.5
Indianapolis-Carmel-Muncie, IN CSA	4.7	7.9	6.1	4.7	5.9
Sacramento-Roseville, CA CSA	3.9	13.6	6.5	4.4	6.5
San Juan-Carolina, PR CSA	5.9	7.4	6.0	6.4	6.3
St. Louis-St. Charles-Farmington, MO-IL CSA	4.4	10.0	7.0	4.1	5.2
Pittsburgh-New Castle-Weirton, PA-OH-WV CSA	4.5	10.2	5.3	4.2	4.8
Columbus-Marion-Zanesville, OH CSA	5.3	10.3	6.2	4.2	5.6
Raleigh-Durham-Chapel Hill, NC CSA	4.4	11.4	5.5	4.6	5.2
Kansas City-Overland Park-Kansas City, MO-KS CSA	4.5	9.5	5.6	4.2	5.2
Cincinnati-Wilmington-Maysville, OH-KY-IN CSA	5.0	8.5	5.3	3.9	5.1
Albany-Schenectady, NY CSA	3.9	9.6	5.2	4.8	5.0
Charlotte-Concord, NC-SC CSA	4.6	12.1	7.1	4.4	6.2
Greensboro--Winston-Salem--High Point, NC CSA	4.6	8.2	5.9	4.4	5.4
Virginia Beach-Norfolk, VA-NC CSA	4.5	10.4	5.9	4.5	5.7
Milwaukee-Racine-Waukesha, WI CSA	4.8	8.0	5.5	4.5	5.0
Grand Rapids-Wyoming-Muskegon, MI CSA	4.4	10.7	5.3	4.8	5.2
Oklahoma City-Shawnee, OK CSA	4.6	7.7	5.2	4.5	5.1
Greenville-Spartanburg-Anderson, SC CSA	4.7	10.1	6.2	4.8	5.8
Rochester-Batavia-Seneca Falls, NY CSA	3.9	10.0	6.4	4.1	4.9
Hartford-West Hartford, CT CSA	3.9	10.3	4.7	4.5	4.7
Nashville-Davidson--Murfreesboro, TN CSA	4.9	7.8	5.7	4.1	5.0

Productivity-Related Measures for Postsecondary Education by Consolidated Statistical Metro Area (cont'd)

	PUBLIC 4-YEAR	PUBLIC 2-YEAR	ALL PUBLIC	NONPROFIT 4-YEAR	TOTAL
	2013-14 FTE Enrollments per Degree	2013-14 FTE Enrollments per Degree	2013-14 FTE Enrollments per Degree	2013-14 FTE Enrollments per Degree	2013-14 FTE Enrollments per Degree
Buffalo-Cheektowaga, NY CSA	4.3	8.6	5.0	3.9	4.7
Springfield-Greenfield Town, MA CSA	4.3	8.7	4.9	4.0	4.5
New Orleans-Metairie-Hammond, LA-MS CSA	4.9	6.9	5.6	4.7	5.2
Tallahassee-Bainbridge, FL-GA CSA	4.2	7.3	4.6	2.8	4.6
Lansing-East Lansing-Owosso, MI CSA	4.5	8.5	5.0	3.8	4.9
Madison-Janesville-Beloit, WI CSA	4.5	10.0	5.0	4.7	5.0
El Paso-Las Cruces, TX-NM CSA	4.7	9.5	6.0		6.0
Des Moines-Ames-West Des Moines, IA CSA	5.0	10.1	6.0	3.8	5.4
Dayton-Springfield-Sidney, OH CSA	5.0	10.1	6.8	4.7	5.9
Albuquerque-Santa Fe-Las Vegas, NM CSA	5.1	8.2	6.2	5.3	6.2
Tucson-Nogales, AZ CSA	4.8	7.5	5.4		5.4
Lexington-Fayette--Richmond--Frankfort, KY CSA	4.8	8.2	5.1	4.7	5.0
Syracuse-Auburn, NY CSA	4.4	12.1	6.2	4.5	5.1
State College-DuBois, PA CSA	4.1		4.1		4.1
Gainesville-Lake City, FL CSA	4.2		4.2	6.2	4.2
Columbia-Orangeburg-Newberry, SC CSA	5.0	11.6	5.8	5.8	5.8
Jacksonville-St. Marys-Palatka, FL-GA CSA	5.0		5.0	4.0	4.8
Fresno-Madera, CA CSA	4.1	17.1	7.0	4.4	6.7
Las Vegas-Henderson, NV-AZ CSA	6.9	8.7	7.0	4.2	6.8
Columbia-Moberly-Mexico, MO CSA	4.5	9.4	4.8	3.8	4.4
Savannah-Hinesville-Statesboro, GA CSA	5.9	5.4	5.8	4.4	5.4
Knoxville-Morristown-Sevierville, TN CSA	4.5	6.2	5.0	5.3	5.1
Omaha-Council Bluffs-Fremont, NE-IA CSA	4.6	11.4	6.6	3.8	5.1
Toledo-Port Clinton, OH CSA	4.8	10.8	5.3	4.0	5.2
Little Rock-North Little Rock, AR CSA	5.0	5.2	5.0	5.2	5.1
Memphis-Forrest City, TN-MS-AR CSA	4.5	10.3	6.2	5.3	6.0
Harrisburg-York-Lebanon, PA CSA	4.5	11.1	6.3	4.5	5.5
Lubbock-Levelland, TX CSA	4.5	11.7	5.0	3.6	5.0
Louisville/Jefferson County--Elizabethtown--Madison, KY-IN CSA	4.7	7.1	5.2	5.2	5.2
McAllen-Edinburg, TX CSA	7.0		7.0	9.7	7.0
Chattanooga-Cleveland-Dalton, TN-GA-AL CSA	5.7	7.4	6.4	5.0	5.8
Spokane-Spokane Valley-Coeur d'Alene, WA-ID CSA	4.9	9.2	6.7	4.3	5.8
Tulsa-Muskogee-Bartlesville, OK CSA	5.1	8.4	6.4	4.8	5.9
Springfield-Branson, MO CSA	4.9	6.9	5.5	4.4	5.1
Birmingham-Hoover-Talladega, AL CSA	5.1	10.3	6.6	5.1	6.2
Cedar Rapids-Iowa City, IA CSA	4.3	8.8	5.0	3.9	4.9
Bloomington-Bedford, IN CSA	4.8		4.8		4.8
Idaho Falls-Rexburg-Blackfoot, ID CSA		4.5	4.5	7.4	7.3
Lincoln-Beatrice, NE CSA	4.6	10.1	5.4	4.3	5.2
Kalamazoo-Battle Creek-Portage, MI CSA	4.5	9.4	5.5	4.5	5.4

Productivity-Related Measures for Postsecondary Education by Consolidated Statistical Metro Area (cont'd)

	PUBLIC 4-YEAR	PUBLIC 2-YEAR	ALL PUBLIC	NONPROFIT 4-YEAR	TOTAL
	2013-14 FTE Enrollments per Degree	2013-14 FTE Enrollments per Degree	2013-14 FTE Enrollments per Degree	2013-14 FTE Enrollments per Degree	2013-14 FTE Enrollments per Degree
Ithaca-Cortland, NY CSA	3.9	9.2	4.9	4.1	4.3
Modesto-Merced, CA CSA	4.6	16.6	7.9		7.9
Pullman-Moscow, WA-ID CSA	4.4		4.4	5.4	4.4
Lafayette-West Lafayette-Frankfort, IN CSA	4.6		4.6		4.6
Columbus-Auburn-Opelika, GA-AL CSA	4.5	8.8	4.8		4.8
Jackson-Vicksburg-Brookhaven, MS CSA	6.2	8.2	7.1	4.6	6.1
Greenville-Washington, NC CSA	5.0	10.9	5.8		5.8
Morgantown-Fairmont, WV CSA	5.3	8.9	5.5	3.5	5.4
Boise City-Mountain Home-Ontario, ID-OR CSA	5.0	12.4	6.4	5.7	6.3
Wichita-Arkansas City-Winfield, KS CSA	4.5	8.5	5.8	3.8	5.2
Harrisonburg-Staunton-Waynesboro, VA CSA	4.5	7.6	4.8	4.7	4.7
Cape Coral-Fort Myers-Naples, FL CSA	6.0	3.3	5.7	4.6	5.5
South Bend-Elkhart-Mishawaka, IN-MI CSA	6.0	7.9	6.7	4.3	4.9
Fayetteville-Lumberton-Laurinburg, NC CSA	5.0	11.7	7.1	6.3	7.0
Charleston-Huntington-Ashland, WV-OH-KY CSA	5.9	5.8	5.9	5.8	5.9
Huntsville-Decatur-Albertville, AL CSA	4.7	11.7	6.5	5.5	6.4
Reno-Carson City-Fernley, NV CSA	5.4	7.8	5.9	4.5	5.8
Bloomington-Pontiac, IL CSA	3.9	10.4	4.4	4.0	4.4
Fargo-Wahpeton, ND-MN CSA	5.0	7.1	5.2	4.6	5.1
Lafayette-Opelousas-Morgan City, LA CSA	5.3	3.8	4.6		4.6
Portland-Lewiston-South Portland, ME CSA	4.3	9.8	6.1	4.8	5.4
Eau Claire-Menomonie, WI CSA	4.6	5.2	4.7		4.7
Corpus Christi-Kingsville-Alice, TX CSA	4.9	7.3	5.2		5.2
Johnson City-Kingsport-Bristol, TN-VA CSA	4.4	6.6	5.0	3.7	4.7
Macon-Warner Robins, GA CSA	6.9	5.6	6.3	4.7	5.6
Monroe-Ruston-Bastrop, LA CSA	5.6	3.6	5.3		5.3
Mobile-Daphne-Fairhope, AL CSA	5.8	14.5	7.2	4.8	6.7
Mount Pleasant-Alma, MI CSA	4.3	16.4	4.3	4.8	4.3
Manhattan-Junction City, KS CSA	4.7	4.2	4.7	4.0	4.7
Mankato-New Ulm-North Mankato, MN CSA	5.1	7.6	5.4	4.7	5.2
Fort Wayne-Huntington-Auburn, IN CSA	6.1		6.1	5.3	5.7
Youngstown-Warren, OH-PA CSA	7.0		7.0	4.9	6.4
MayagÃ¼ez-San GermÃ¡n, PR CSA	6.4		6.4	7.5	6.8
Saginaw-Midland-Bay City, MI CSA	5.9	7.7	6.6	3.1	5.6
Bowling Green-Glasgow, KY CSA	4.9	6.8	5.1		5.1
Asheville-Brevard, NC CSA	4.5	9.2	7.3	5.5	6.8
Appleton-Oshkosh-Neenah, WI CSA	4.9	5.5	5.1	4.4	5.0
Erie-Meadville, PA CSA	5.0	11.5	5.1	4.4	4.7
Ponce-Coamo-Santa Isabel, PR CSA	7.1	5.1	6.7	7.2	7.1
Myrtle Beach-Conway, SC-NC CSA	5.4	8.2	6.4	13.6	6.4

Productivity-Related Measures for Postsecondary Education by Consolidated Statistical Metro Area (cont'd)

	PUBLIC 4-YEAR	PUBLIC 2-YEAR	ALL PUBLIC	NONPROFIT 4-YEAR	TOTAL
	2013-14 FTE Enrollments per Degree	2013-14 FTE Enrollments per Degree	2013-14 FTE Enrollments per Degree	2013-14 FTE Enrollments per Degree	2013-14 FTE Enrollments per Degree
Davenport-Moline, IA-IL CSA		10.1	10.1	3.6	5.7
Bloomsburg-Berwick-Sunbury, PA CSA	4.9		4.9	4.4	4.7
Green Bay-Shawano, WI CSA	4.3	5.6	4.9	4.4	4.8
Wausau-Stevens Point-Wisconsin Rapids, WI CSA	4.5	5.3	4.8		4.8
Peoria-Canton, IL CSA		8.0	8.0	3.9	5.4
Tyler-Jacksonville, TX CSA	4.3	8.7	6.0	8.3	6.1
Amarillo-Borger, TX CSA	4.3	8.8	5.7		5.7
North Port-Sarasota, FL CSA	6.5	3.4	5.9	4.1	5.6
Visalia-Porterville-Hanford, CA CSA		11.6	11.6		11.6
Rome-Summerville, GA CSA		8.4	8.4	4.7	6.7
Sioux City-Vermillion, IA-SD-NE CSA	5.1	5.0	5.0	4.7	5.0
Brownsville-Harlingen-Raymondville, TX CSA	5.9	11.1	6.9		6.9
Williamsport-Lock Haven, PA CSA	5.3		5.3	5.1	5.3
Springfield-Jacksonville-Lincoln, IL CSA	4.0	7.1	5.4	4.7	5.2
Joplin-Miami, MO-OK CSA	5.1	9.2	6.8	6.5	6.8
Hickory-Lenoir, NC CSA		9.2	9.2	4.9	8.1
Rocky Mount-Wilson-Roanoke Rapids, NC CSA		11.0	11.0	4.0	7.8
Midland-Odessa, TX CSA	7.6	7.2	7.4		7.4
Lima-Van Wert-Celina, OH CSA	8.4	8.2	8.2	5.8	6.7
Jonesboro-Paragould, AR CSA	4.4		4.4	17.7	4.5
Pueblo-CaÃ±on City, CO CSA	6.7	7.2	7.0		7.0
Cape Girardeau-Sikeston, MO-IL CSA	5.1	3.5	5.1		5.1
Rockford-Freeport-Rochelle, IL CSA		8.9	8.9	3.6	7.2
Longview-Marshall, TX CSA		5.4	5.4	4.6	4.9
Johnstown-Somerset, PA CSA	5.3	9.5	6.3	5.2	5.7
Medford-Grants Pass, OR CSA	4.6	7.7	5.6		5.6
Rochester-Austin, MN CSA	6.6	6.9	6.9	5.0	6.5
Findlay-Tiffin, OH CSA				5.9	5.9
Redding-Red Bluff, CA CSA		13.8	13.8	3.3	8.8
Martin-Union City, TN-KY CSA	5.4		5.4		5.4
Bend-Redmond-Prineville, OR CSA		10.6	11.5		11.5
Mansfield-Ashland-Bucyrus, OH CSA	7.5	8.1	7.9	4.9	5.7
Rapid City-Spearfish, SD CSA	5.9	6.3	5.9		5.9
Parkersburg-Marietta-Vienna, WV-OH CSA	4.6	6.8	5.2	4.7	5.0
Dothan-Enterprise-Ozark, AL CSA		11.4	11.4		11.4
Clovis-Portales, NM CSA	5.0	5.7	5.2		5.2
Victoria-Port Lavaca, TX CSA	3.7	9.0	5.1		5.1
New Bern-Morehead City, NC CSA		8.6	8.6		8.6
Quincy-Hannibal, IL-MO CSA		7.6	7.6	4.7	5.3
Elmira-Corning, NY CSA		9.6	9.6	4.4	6.9

Productivity-Related Measures for Postsecondary Education by Consolidated Statistical Metro Area (cont'd)

	PUBLIC 4-YEAR	PUBLIC 2-YEAR	ALL PUBLIC	NONPROFIT 4-YEAR	TOTAL
	2013-14 FTE Enrollments per Degree	2013-14 FTE Enrollments per Degree	2013-14 FTE Enrollments per Degree	2013-14 FTE Enrollments per Degree	2013-14 FTE Enrollments per Degree
Cleveland-Indianola, MS CSA	6.1	7.4	6.5		6.5
Paducah-Mayfield, KY-IL CSA		5.8	5.8		5.8
Richmond-Connersville, IN CSA	5.1		5.1	4.2	4.8
Edwards-Glenwood Springs, CO CSA	7.1		7.1		7.1
Hot Springs-Malvern, AR CSA		5.9	5.9		5.9
Kokomo-Peru, IN CSA	5.3		5.3		5.3
Moses Lake-Othello, WA CSA		7.2	7.2		7.2
Dixon-Sterling, IL CSA		6.3	6.3		6.3

Productivity-Related Measures for Postsecondary Education by Consolidated Statistical Metro Area (cont'd)

	PUBLIC 4-YEAR	PUBLIC 2-YEAR	ALL PUBLIC	NONPROFIT 4-YEAR	TOTAL
	FTE Enrollment	FTE Enrollment	FTE Enrollment	FTE Enrollment	FTE Enrollment
US Total	**5,973,491**	**4,460,251**	**10,433,742**	**2,710,402**	**13,144,144**
Metro Area Median					
New York-Newark, NY-NJ-CT-PA CSA	299,677	258,921	558,598	280,079	838,677
Los Angeles-Long Beach, CA CSA	215,185	425,513	640,698	101,617	742,315
Boston-Worcester-Providence, MA-RI-NH-CT CSA	100,200	74,537	174,737	214,163	388,900
Chicago-Naperville, IL-IN-WI CSA	59,726	166,120	225,846	115,177	341,023
San Jose-San Francisco-Oakland, CA CSA	106,979	183,106	290,085	40,052	330,137
Washington-Baltimore-Arlington, DC-MD-VA-WV-PA CSA	126,414	122,294	248,708	69,205	317,913
Philadelphia-Reading-Camden, PA-NJ-DE-MD CSA	103,422	81,578	185,000	102,837	287,837
Miami-Fort Lauderdale-Port St. Lucie, FL CSA	171,557	6,929	178,486	52,691	231,177
Dallas-Fort Worth, TX-OK CSA	77,017	126,270	203,287	27,580	230,867
Houston-The Woodlands, TX CSA	71,607	128,377	199,984	8,080	208,064
Detroit-Warren-Ann Arbor, MI CSA	84,872	83,061	167,933	31,813	199,746
Atlanta--Athens-Clarke County--Sandy Springs, GA CSA	115,962	50,312	166,274	24,569	190,843
Seattle-Tacoma, WA CSA	77,982	65,487	143,469	18,202	161,671
Salt Lake City-Provo-Orem, UT CSA	61,235	23,782	85,017	73,189	158,206
Minneapolis-St. Paul, MN-WI CSA	56,949	50,906	107,855	36,857	144,712
Orlando-Deltona-Daytona Beach, FL CSA	101,722	2,546	104,268	23,386	127,654
Denver-Aurora, CO CSA	69,152	39,913	109,065	15,298	124,363
Cleveland-Akron-Canton, OH CSA	56,398	41,475	97,873	25,623	123,496
Portland-Vancouver-Salem, OR-WA CSA	43,276	58,459	101,735	20,919	122,654
Indianapolis-Carmel-Muncie, IN CSA	35,841	67,265	103,106	16,715	119,821
Sacramento-Roseville, CA CSA	47,668	70,658	118,326	1,243	119,569
San Juan-Carolina, PR CSA	30,977	2,040	33,017	75,911	108,928
St. Louis-St. Charles-Farmington, MO-IL CSA	19,776	47,343	67,119	41,140	108,259
Pittsburgh-New Castle-Weirton, PA-OH-WV CSA	49,602	23,889	73,491	33,900	107,391
Columbus-Marion-Zanesville, OH CSA	50,894	29,638	80,532	24,648	105,180
Raleigh-Durham-Chapel Hill, NC CSA	48,018	31,508	79,526	18,794	98,320
Kansas City-Overland Park-Kansas City, MO-KS CSA	40,204	30,942	71,146	24,278	95,424
Cincinnati-Wilmington-Maysville, OH-KY-IN CSA	59,908	14,260	74,168	11,524	85,692
Albany-Schenectady, NY CSA	23,690	19,028	42,718	38,959	81,677
Charlotte-Concord, NC-SC CSA	24,700	37,838	62,538	17,666	80,204
Greensboro--Winston-Salem--High Point, NC CSA	27,565	30,408	57,973	19,205	77,178
Virginia Beach-Norfolk, VA-NC CSA	36,098	30,640	66,738	7,712	74,450
Milwaukee-Racine-Waukesha, WI CSA	30,461	15,313	45,774	24,654	70,428
Grand Rapids-Wyoming-Muskegon, MI CSA	30,467	15,310	45,777	20,167	65,944
Oklahoma City-Shawnee, OK CSA	37,336	17,011	54,347	10,649	64,996
Greenville-Spartanburg-Anderson, SC CSA	25,164	23,523	48,687	15,555	64,242
Rochester-Batavia-Seneca Falls, NY CSA	12,148	22,456	34,604	28,955	63,559
Hartford-West Hartford, CT CSA	29,246	15,402	44,648	17,399	62,047
Nashville-Davidson--Murfreesboro, TN CSA	24,431	17,564	41,995	19,615	61,610

Productivity-Related Measures for Postsecondary Education by Consolidated Statistical Metro Area (cont'd)

	PUBLIC 4-YEAR	PUBLIC 2-YEAR	ALL PUBLIC	NONPROFIT 4-YEAR	TOTAL
	FTE Enrollment	FTE Enrollment	FTE Enrollment	FTE Enrollment	FTE Enrollment
Buffalo-Cheektowaga, NY CSA	30,139	15,379	45,518	15,483	61,001
Springfield-Greenfield Town, MA CSA	28,278	10,668	38,946	18,205	57,151
New Orleans-Metairie-Hammond, LA-MS CSA	20,627	19,304	39,931	16,163	56,094
Tallahassee-Bainbridge, FL-GA CSA	40,102	12,325	52,427	479	52,906
Lansing-East Lansing-Owosso, MI CSA	37,663	11,757	49,420	3,083	52,503
Madison-Janesville-Beloit, WI CSA	37,726	11,442	49,168	3,192	52,360
El Paso-Las Cruces, TX-NM CSA	27,824	24,080	51,904		51,904
Des Moines-Ames-West Des Moines, IA CSA	27,208	15,270	42,478	8,876	51,354
Dayton-Springfield-Sidney, OH CSA	13,323	19,854	33,177	15,929	49,106
Albuquerque-Santa Fe-Las Vegas, NM CSA	22,652	25,924	48,576	405	48,981
Tucson-Nogales, AZ CSA	31,287	17,412	48,699		48,699
Lexington-Fayette--Richmond--Frankfort, KY CSA	34,393	7,749	42,142	6,289	48,431
Syracuse-Auburn, NY CSA	12,055	11,792	23,847	24,321	48,168
State College-DuBois, PA CSA	47,643		47,643		47,643
Gainesville-Lake City, FL CSA	45,922		45,922	431	46,353
Columbia-Orangeburg-Newberry, SC CSA	27,270	10,601	37,871	7,917	45,788
Jacksonville-St. Marys-Palatka, FL-GA CSA	38,034		38,034	7,348	45,382
Fresno-Madera, CA CSA	17,703	23,289	40,992	2,391	43,383
Las Vegas-Henderson, NV-AZ CSA	39,526	3,188	42,714	461	43,175
Columbia-Moberly-Mexico, MO CSA	25,213	3,959	29,172	13,239	42,411
Savannah-Hinesville-Statesboro, GA CSA	27,150	5,779	32,929	8,087	41,016
Knoxville-Morristown-Sevierville, TN CSA	20,562	16,588	37,150	3,663	40,813
Omaha-Council Bluffs-Fremont, NE-IA CSA	11,612	16,010	27,622	12,994	40,616
Toledo-Port Clinton, OH CSA	29,025	8,354	37,379	2,203	39,582
Little Rock-North Little Rock, AR CSA	19,409	11,612	31,021	8,020	39,041
Memphis-Forrest City, TN-MS-AR CSA	13,999	16,926	30,925	7,538	38,463
Harrisburg-York-Lebanon, PA CSA	10,778	12,639	23,417	14,888	38,305
Lubbock-Levelland, TX CSA	27,359	7,424	34,783	1,358	36,141
Louisville/Jefferson County--Elizabethtown--Madison, KY-IN CSA	18,623	11,043	29,666	5,990	35,656
McAllen-Edinburg, TX CSA	35,244		35,244	116	35,360
Chattanooga-Cleveland-Dalton, TN-GA-AL CSA	13,278	11,148	24,426	10,712	35,138
Spokane-Spokane Valley-Coeur d'Alene, WA-ID CSA	10,653	16,323	26,976	8,142	35,118
Tulsa-Muskogee-Bartlesville, OK CSA	12,403	14,753	27,156	7,883	35,039
Springfield-Branson, MO CSA	14,567	10,046	24,613	10,365	34,978
Birmingham-Hoover-Talladega, AL CSA	12,579	15,572	28,151	6,681	34,832
Cedar Rapids-Iowa City, IA CSA	20,316	10,413	30,729	3,740	34,469
Bloomington-Bedford, IN CSA	33,030		33,030		33,030
Idaho Falls-Rexburg-Blackfoot, ID CSA		514	514	32,385	32,899
Lincoln-Beatrice, NE CSA	17,982	8,244	26,226	5,196	31,422
Kalamazoo-Battle Creek-Portage, MI CSA	17,195	11,097	28,292	2,990	31,282

Productivity-Related Measures for Postsecondary Education by Consolidated Statistical Metro Area (cont'd)

	PUBLIC 4-YEAR	PUBLIC 2-YEAR	ALL PUBLIC	NONPROFIT 4-YEAR	TOTAL
	FTE Enrollment	FTE Enrollment	FTE Enrollment	FTE Enrollment	FTE Enrollment
Ithaca-Cortland, NY CSA	6,446	3,735	10,181	20,944	31,125
Modesto-Merced, CA CSA	12,518	18,501	31,019		31,019
Pullman-Moscow, WA-ID CSA	30,499		30,499	152	30,651
Lafayette-West Lafayette-Frankfort, IN CSA	30,147		30,147		30,147
Columbus-Auburn-Opelika, GA-AL CSA	25,303	4,533	29,836		29,836
Jackson-Vicksburg-Brookhaven, MS CSA	9,578	13,265	22,843	6,902	29,745
Greenville-Washington, NC CSA	20,658	8,521	29,179		29,179
Morgantown-Fairmont, WV CSA	26,604	1,711	28,315	41	28,356
Boise City-Mountain Home-Ontario, ID-OR CSA	14,457	8,754	23,211	3,495	26,706
Wichita-Arkansas City-Winfield, KS CSA	9,778	11,345	21,123	4,705	25,828
Harrisonburg-Staunton-Waynesboro, VA CSA	18,537	2,855	21,392	4,355	25,747
Cape Coral-Fort Myers-Naples, FL CSA	21,224	1,467	22,691	2,715	25,406
South Bend-Elkhart-Mishawaka, IN-MI CSA	5,029	4,081	9,110	15,409	24,519
Fayetteville-Lumberton-Laurinburg, NC CSA	9,763	11,830	21,593	2,849	24,442
Charleston-Huntington-Ashland, WV-OH-KY CSA	16,320	6,226	22,546	1,501	24,047
Huntsville-Decatur-Albertville, AL CSA	11,101	10,883	21,984	1,836	23,820
Reno-Carson City-Fernley, NV CSA	16,440	6,732	23,172	527	23,699
Bloomington-Pontiac, IL CSA	16,701	3,785	20,486	2,004	22,490
Fargo-Wahpeton, ND-MN CSA	16,831	2,257	19,088	2,683	21,771
Lafayette-Opelousas-Morgan City, LA CSA	13,387	8,244	21,631		21,631
Portland-Lewiston-South Portland, ME CSA	5,227	7,323	12,550	8,632	21,182
Eau Claire-Menomonie, WI CSA	16,988	4,013	21,001		21,001
Corpus Christi-Kingsville-Alice, TX CSA	15,946	4,944	20,890		20,890
Johnson City-Kingsport-Bristol, TN-VA CSA	10,384	6,165	16,549	4,144	20,693
Macon-Warner Robins, GA CSA	9,160	6,573	15,733	4,592	20,325
Monroe-Ruston-Bastrop, LA CSA	17,233	2,388	19,621		19,621
Mobile-Daphne-Fairhope, AL CSA	10,258	6,582	16,840	2,707	19,547
Mount Pleasant-Alma, MI CSA	17,790	82	17,872	1,356	19,228
Manhattan-Junction City, KS CSA	18,304	652	18,956	247	19,203
Mankato-New Ulm-North Mankato, MN CSA	12,629	2,540	15,169	3,849	19,018
Fort Wayne-Huntington-Auburn, IN CSA	9,329		9,329	9,070	18,399
Youngstown-Warren, OH-PA CSA	14,332		14,332	3,674	18,006
MayagÃ¼ez-San GermÃ¡n, PR CSA	10,693		10,693	7,178	17,871
Saginaw-Midland-Bay City, MI CSA	8,049	6,978	15,027	2,620	17,647
Bowling Green-Glasgow, KY CSA	14,716	2,798	17,514		17,514
Asheville-Brevard, NC CSA	3,396	10,210	13,606	3,716	17,322
Appleton-Oshkosh-Neenah, WI CSA	9,978	5,552	15,530	1,600	17,130
Erie-Meadville, PA CSA	9,287	329	9,616	7,429	17,045
Ponce-Coamo-Santa Isabel, PR CSA	3,079	488	3,567	12,097	15,664
Myrtle Beach-Conway, SC-NC CSA	8,518	6,861	15,379	142	15,521

Productivity-Related Measures for Postsecondary Education by Consolidated Statistical Metro Area (cont'd)

	PUBLIC 4-YEAR	PUBLIC 2-YEAR	ALL PUBLIC	NONPROFIT 4-YEAR	TOTAL
	FTE Enrollment	FTE Enrollment	FTE Enrollment	FTE Enrollment	FTE Enrollment
Davenport-Moline, IA-IL CSA		10,216	10,216	5,135	15,351
Bloomsburg-Berwick-Sunbury, PA CSA	9,047		9,047	5,985	15,032
Green Bay-Shawano, WI CSA	5,118	6,096	11,214	2,940	14,154
Wausau-Stevens Point-Wisconsin Rapids, WI CSA	8,723	5,335	14,058		14,058
Peoria-Canton, IL CSA		7,796	7,796	6,249	14,045
Tyler-Jacksonville, TX CSA	4,576	7,991	12,567	814	13,381
Amarillo-Borger, TX CSA	6,097	7,002	13,099		13,099
North Port-Sarasota, FL CSA	10,033	1,345	11,378	1,183	12,561
Visalia-Porterville-Hanford, CA CSA		12,295	12,295		12,295
Rome-Summerville, GA CSA		8,525	8,525	3,715	12,240
Sioux City-Vermillion, IA-SD-NE CSA	5,896	3,701	9,597	2,350	11,947
Brownsville-Harlingen-Raymondville, TX CSA	8,102	3,798	11,900		11,900
Williamsport-Lock Haven, PA CSA	10,001		10,001	1,372	11,373
Springfield-Jacksonville-Lincoln, IL CSA	2,414	5,283	7,697	3,369	11,066
Joplin-Miami, MO-OK CSA	4,472	5,631	10,103	657	10,760
Hickory-Lenoir, NC CSA		9,122	9,122	1,453	10,575
Rocky Mount-Wilson-Roanoke Rapids, NC CSA		7,557	7,557	2,313	9,870
Midland-Odessa, TX CSA	6,723	3,067	9,790		9,790
Lima-Van Wert-Celina, OH CSA	1,772	2,445	4,217	5,390	9,607
Jonesboro-Paragould, AR CSA	9,153		9,153	159	9,312
Pueblo-CaÃ±on City, CO CSA	4,267	4,934	9,201		9,201
Cape Girardeau-Sikeston, MO-IL CSA	8,951	218	9,169		9,169
Rockford-Freeport-Rochelle, IL CSA		7,626	7,626	1,101	8,727
Longview-Marshall, TX CSA		3,659	3,659	4,347	8,006
Johnstown-Somerset, PA CSA	2,783	1,526	4,309	3,607	7,916
Medford-Grants Pass, OR CSA	3,951	3,515	7,466		7,466
Rochester-Austin, MN CSA	480	6,496	6,976	267	7,243
Findlay-Tiffin, OH CSA				7,204	7,204
Redding-Red Bluff, CA CSA		5,572	5,572	1,003	6,575
Martin-Union City, TN-KY CSA	6,450		6,450		6,450
Bend-Redmond-Prineville, OR CSA	397	5,954	6,351		6,351
Mansfield-Ashland-Bucyrus, OH CSA	1,047	1,942	2,989	3,190	6,179
Rapid City-Spearfish, SD CSA	4,980	993	5,973		5,973
Parkersburg-Marietta-Vienna, WV-OH CSA	2,538	1,557	4,095	1,861	5,956
Dothan-Enterprise-Ozark, AL CSA		5,579	5,579		5,579
Clovis-Portales, NM CSA	3,614	1,614	5,228		5,228
Victoria-Port Lavaca, TX CSA	2,241	2,634	4,875		4,875
New Bern-Morehead City, NC CSA		4,586	4,586		4,586
Quincy-Hannibal, IL-MO CSA		1,448	1,448	3,120	4,568
Elmira-Corning, NY CSA		3,083	3,083	1,413	4,496

Productivity-Related Measures for Postsecondary Education by Consolidated Statistical Metro Area (cont'd)

	PUBLIC 4-YEAR	PUBLIC 2-YEAR	ALL PUBLIC	NONPROFIT 4-YEAR	TOTAL
	FTE Enrollment	FTE Enrollment	FTE Enrollment	FTE Enrollment	FTE Enrollment
Cleveland-Indianola, MS CSA	2,410	1,977	4,387		4,387
Paducah-Mayfield, KY-IL CSA		4,052	4,052		4,052
Richmond-Connersville, IN CSA	2,850		2,850	1,047	3,897
Edwards-Glenwood Springs, CO CSA	3,503		3,503		3,503
Hot Springs-Malvern, AR CSA		3,104	3,104		3,104
Kokomo-Peru, IN CSA	2,578		2,578		2,578
Moses Lake-Othello, WA CSA		1,782	1,782		1,782
Dixon-Sterling, IL CSA		1,643	1,643		1,643

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