

November 13, 2014



*Adler School of
Professional
Psychology*

*The Chicago
School of
Professional
Psychology*

*Chicago State
University*

*City Colleges of
Chicago*

*Columbia College
Chicago*

DePaul University

*Illinois Institute of
Technology*

*The John Marshall
Law School*

*Loyola University
Chicago*

*North Park
University*

*Northwestern
University*

*Robert Morris
University*

*Roosevelt
University*

*Saint Xavier
University*

*School of the Art
Institute of Chicago*

*The University of
Chicago*

*University of
Illinois at Chicago*

America's Urban Campus[®]

The Economic, Social, and Cultural Contributions of
Chicago's Colleges and Universities

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Commissioned by:
America's Urban Campus[®]

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The Chicago Community Trust



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I. Executive Summary

Chicago is home to dozens of higher education institutions, including community colleges, major research universities, and professional schools. A group of 17 of Chicago's largest higher education institutions, representing 216,000 students, has formed a coalition called America's Urban Campus (AUC) to collaborate on a range of initiatives.¹

AUC colleges and universities account for 90% of total higher education enrollment in the City of Chicago. They enhance the quality of life for students, alumni, and residents of the City of Chicago in many ways. While the total historical, cultural, social, and economic benefits that these universities provide to the City of Chicago are in some ways immeasurable, in this report we present a broad array of data and research that demonstrate the importance of these institutions to the economic, social, and cultural fabric of Chicago.

REPORT PURPOSE

America's Urban Campus commissioned Anderson Economic Group (AEG) to perform a comprehensive and rigorous analysis on a range of topics related to the activities of colleges and universities in Chicago. These include:

- An estimate of the total economic footprint of the 17 colleges and universities in America's Urban Campus, including the total spending, earnings, and employment that they support in the City of Chicago.²
- Aggregate information about the universities' students and alumni.
- A qualitative summary of important cultural and social programs, initiatives, and partnerships carried out by these universities in Chicago.
- A comparison of all Chicago colleges and universities to those of other cities.

This report was funded with a matching grant from The Chicago Community Trust.

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1. Throughout this report, we count the City Colleges of Chicago as one entity, though it consists of a network of seven community colleges and other academic programs.
 2. The economic footprint for America's Urban Campus includes:
 - spending by the schools, employees, and students;
 - activity by Chicago companies that rely upon these colleges and universities for their business;
 - jobs and earnings for Chicago residents from the colleges and universities themselves; and
 - jobs and earnings at Chicago companies affected by the purchase of goods and services by colleges, universities, and their students.

OVERVIEW OF APPROACH

Data on colleges, universities, students, and alumni were provided by the 17 members of America's Urban Campus. This data was corroborated by the Integrated Postsecondary Education Data System (IPEDS), a federal data source on higher education institutions.

In order to estimate the economic footprint of America's Urban Campus colleges and universities, we consider all of the spending by the universities and their students and estimate what proportion of it occurs in the city. We then estimate the total direct and indirect spending, employment, and earnings supported by America's Urban Campus colleges and universities in the City of Chicago using industry-specific and regional multipliers. The economic footprint presented in this report is based on activity during the 2013 fiscal year (FY 2013) for each university. For most universities, this covers spending from July 1, 2012 through June 30, 2013, but some fiscal years differ.

For peer city comparisons, we use publicly available data from IPEDS and other sources to compare the characteristics of *all* schools that lie within the city limits of major cities. For schools that have only a portion of their operations within a city, such as Northwestern University in Chicago and Tufts University in Boston, we estimate the size of this portion and include only this portion in our estimates. See "Appendix A. Methodology" on page A-1 for more details on our methods and important assumptions.

OVERVIEW OF FINDINGS

We found that America's Urban Campus colleges and universities make enormous economic, social, and cultural contributions to Chicago's economy. Our main findings are as follows:

- 1. The 17 America's Urban Campus colleges and universities supported \$10.8 billion in spending in the City of Chicago in 2013.*

The 17 AUC colleges and universities spent nearly \$3.3 billion on payroll for Chicago residents and \$2.2 billion at Chicago companies for goods and services in 2013. In addition, students that attended these universities spent nearly \$1.4 billion in the city, for a total of nearly \$6.9 billion in direct spending in Chicago. This activity had an indirect effect of nearly \$3.9 billion, as it supported spending by employees and vendors of Chicago colleges and universities, as well as vendors that serve students.

TABLE 1. Economic Footprint of AUC Colleges and Universities, Spending in Chicago, FY 2013 (billions)

	Direct	Indirect	Total
Payroll Spending	\$3.3	\$1.3	\$4.6
Non-payroll Spending	\$2.2	\$1.9	\$4.1
Student Spending	<u>\$1.4</u>	<u>\$0.7</u>	<u>\$2.1</u>
TOTAL	\$6.9	\$3.9	\$10.8

Source: AEG estimates and analysis, using base data from America's Urban Campus colleges and universities, Bureau of Economic Analysis

The result is a combined \$10.8 billion in spending in Chicago supported by economic activity at the 17 AUC colleges and universities in the year 2013.

See “Spending” on page 16 for more information.

2. The 17 America's Urban Campus colleges and universities collectively supported almost 46,000 jobs and nearly \$4.6 billion in earnings in the city in 2013. One in every 25 jobs in the city is directly attributable to or supported by these colleges and universities.

Spending by the colleges and universities, their students, and their vendors results in jobs and earnings at the universities themselves and at local businesses. We estimate that, in addition to the 33,000 employees that work for the colleges and universities, there are 13,000 employees in the city whose jobs are supported by college, university, and student spending.

This represents a total of 46,000 jobs in the city that are related to AUC college and university activities, accounting for 4.0% of total employment in Chicago. For comparison, this is well over half the size of the manufacturing industry in the city and approximately a third of the size of the entire professional, scientific, and technical services sector in the city.³

In addition to the \$3.3 billion in salaries, wages, and benefits paid directly to Chicago residents by the schools each year, we estimate that an additional \$1.3 billion in earnings for Chicago residents are supported by college, university,

3. City employment numbers by industry are based on the 2007 Economic Census.

and student spending. This represents a total of \$4.6 billion in earnings in the city from America's Urban Campus activities.

TABLE 2. Economic Footprint of AUC 17 Colleges and Universities, Employment and Earnings in Chicago, FY 2013

	Direct	Indirect	Total
Jobs (head count)	33,082	12,838	45,920
Earnings (billions)	\$3.3	\$1.3	\$4.6

Source: AEG estimates and analysis, using base data from America's Urban Campus colleges and universities, Bureau of Economic Analysis

See "Earnings and Jobs" on page 17 for more information.

3. The 155,500 known alumni of America's Urban Campus colleges and universities residing in Chicago account for one in every four college-educated residents in the city.

Perhaps the most important impact of higher education on a region is the attraction and retention of a talented and well-trained workforce. Of the one million alumni of America's Urban Campus colleges and universities worldwide, 17% of them continue to live in the City of Chicago. This does not include the alumni that live in the suburbs of Chicago and commute into the city on a daily basis. One in four Chicago residents with a bachelor's degree or higher attained that degree at one of AUC's 17 colleges and universities.

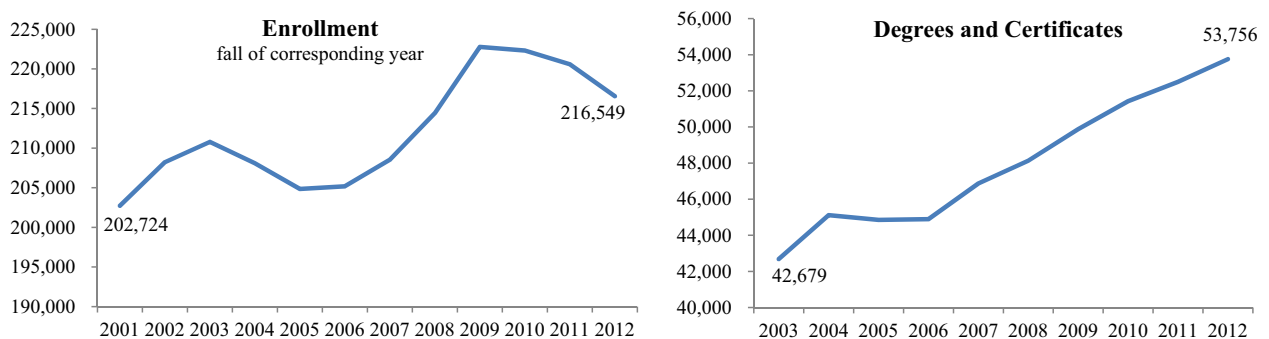
See "America's Urban Campus Alumni" on page 36 for more information.

4. America's Urban Campus college and university enrollment grew by just 7% from fall 2001 to fall 2012, but annual degree completions increased much faster—by 26%—from 2003 to 2012.

America's Urban Campus colleges and universities enroll over 216,000 students. Enrollment has grown over the past ten years but lagged over the past four years. However, America's Urban Campus colleges and universities are clearly improving at graduating the students they have. Degree and certificate completions grew by over a quarter for America's Urban Campus colleges and universities over the past ten years. They awarded 22,000 advanced degrees and 20,000 bachelor degrees in the year 2012, up from 17,000 and 16,000, respectively, in 2003.⁴

Figure 1 on page 5 shows the increase in enrollment and degrees at America's Urban Campus colleges and universities since 2003. See "America's Urban Campus Students and Degrees" on page 31 for more information.

4. Time periods differ due to availability of data.

FIGURE 1. Enrollment and Degrees at AUC Colleges and Universities, 2002-2012

Source: AEG estimates and analysis, based on source data from IPEDS
 Note: Y-axes in graphs do not start at zero

5. The colleges and universities that make up America's Urban Campus documented 1,400 distinct partnerships and programs with Chicago Public Schools. The programs spanned the city, involving at least 42,000 CPS students at 578 schools.

All America's Urban Campus institutions have a stake in improving education for students in the city's K-12 schools. As such, they all participate in partnerships and programs with CPS schools across the city. According to data provided by the colleges and universities, there were nearly 1,400 distinct America's Urban Campus partnerships and programs involving CPS schools.

Participating in these programs were 42,000 CPS students from 578 schools. These totals represent over 10% of students and almost 90% of schools. Furthermore, these numbers are an underestimate of the total scope of the partnership between CPS and America's Urban Campus schools, as programs attended by thousands of students were not included in this estimate due to insufficient data. See "America's Urban Campus and Chicago Public Schools" on page 21 for more information.

6. Relative to six peer cities, Chicago has the third-highest enrollment in higher education institutions and the fourth-highest investment in research and development by local universities. Similarly, Chicago is middle-of-the-pack in technology transfer, ranking fourth in patents issued and startups, and fifth in total licenses.

Chicago ranked third in total enrollment, behind Los Angeles and New York, in a comparison of Chicago's higher education institutions to those of peer cities. Interestingly, when we consider enrollment relative to city population, Chicago outranks Los Angeles and New York but falls behind the other smaller cities in our sample.

Colleges and universities in Chicago spend over \$1 billion on research and development, ranking fourth among the peer cities we selected, a small margin behind Atlanta and Los Angeles. In terms of technology transfer, or the transition of this research to the private sector, while researchers at Chicago colleges and universities received the second-most licensing revenue and applied for the most patents, last year they ranked fourth in total patents issued (105) and startup companies (16) and ranked fifth in total licenses acquired (105). See “Comparing Colleges and Universities in Major Cities” on page 40 for more information.

**ABOUT ANDERSON
ECONOMIC GROUP**

Anderson Economic Group, LLC is a research and consulting firm specializing in economics, public policy, finance and business valuation, and market and industry analysis. The firm has offices in Chicago, Illinois, and East Lansing, Michigan. AEG has conducted economic and fiscal impact studies for private, public, and non-profit clients across the United States. For more information, please see “Appendix B. About the Authors” on page B-1 or visit www.AndersonEconomicGroup.com.

II. America's Urban Campus: An Overview

In 2013, 17 of Chicago's largest colleges and universities formed a coalition that would allow them to better collaborate to achieve a range of common goals. America's Urban Campus (AUC) provides a common organization for representatives of America's Urban Campus institutions to discuss higher education policy issues, research partnerships, community efforts, and more.

In addition to improving collaboration and relationships among themselves, members of America's Urban Campus hope to use the organization to improve collaboration and communication with the city's business and cultural communities.

The 17 member schools are:

1. Adler School of Professional Psychology
2. The Chicago School of Professional Psychology
3. Chicago State University
4. City Colleges of Chicago
5. Columbia College Chicago
6. DePaul University
7. Illinois Institute of Technology
8. The John Marshall Law School
9. Loyola University Chicago
10. North Park University
11. Northwestern University
12. Robert Morris University
13. Roosevelt University
14. Saint Xavier University
15. School of the Art Institute of Chicago
16. The University of Chicago
17. University of Illinois at Chicago

In 2013, these schools enrolled more than 216,000 students from every state in the country and nearly 150 countries around the world, awarding 54,000 degrees and certificates. These colleges and universities account for approximately 90% of the total enrollment in higher education institutions in the City of Chicago.⁵ Nearly 40,000 of their students are originally from Chicago.

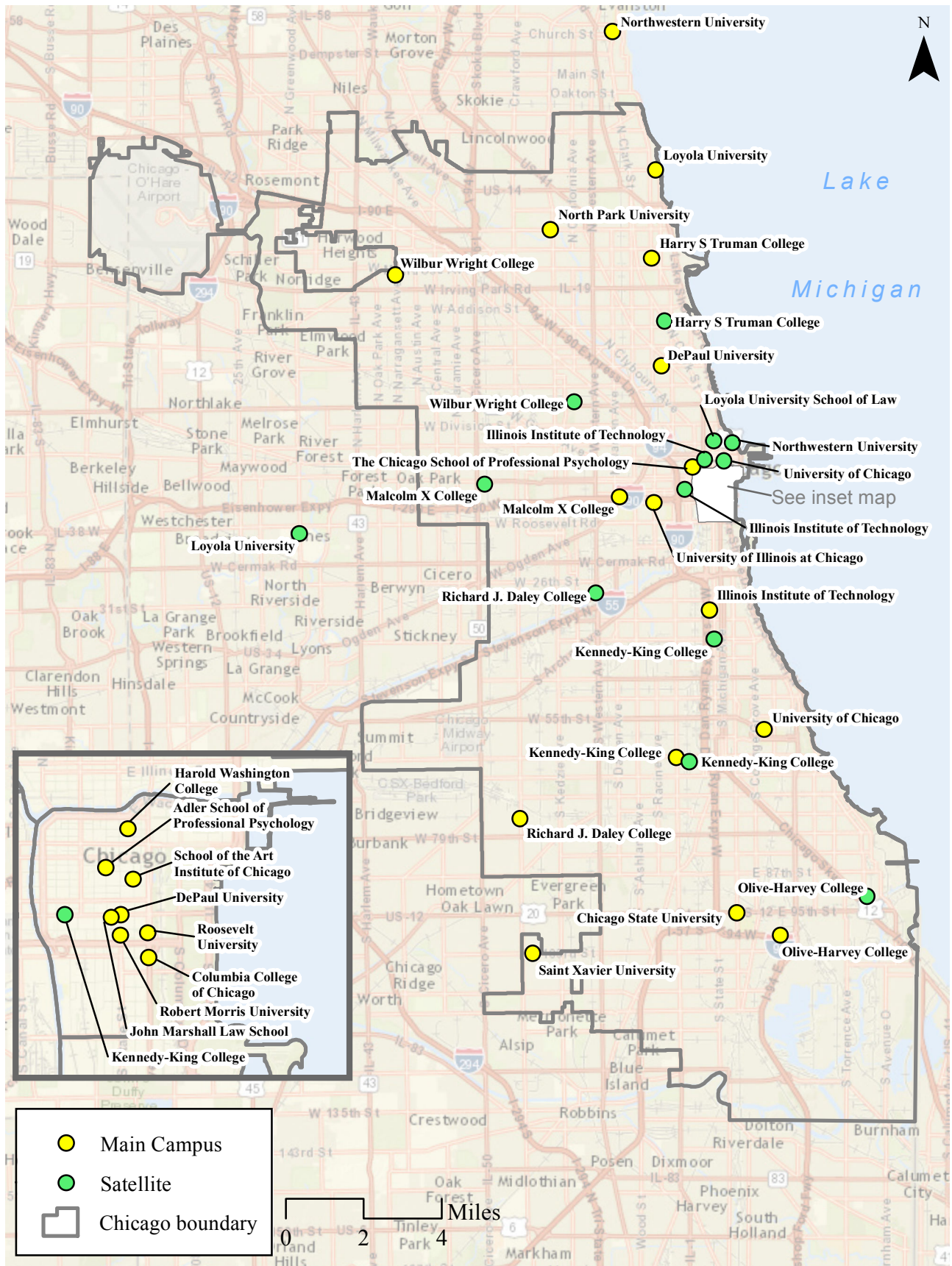
5. The total student count of 216,000 includes over 10,000 students at Northwestern's campus, which lies outside city limits in Evanston. Those students are not included in our estimate for what share of city enrollment is at America's Urban Campus institutions.

These colleges and universities are located throughout the city, and several of them have satellite campuses which further extend their reach. Map 1 on page 9 shows the campus locations of America's Urban Campus colleges and universities.⁶

Due to a paucity of data, City Colleges and Robert Morris University have not been included in our data on alumni location, student origins, and partnerships with Chicago Public Schools. They are also not included in our estimates for economic footprint. However, they have been included in the number of students and degrees granted.

6. This map includes all main campuses and satellite campuses. It excludes extension centers. We define a satellite campus as an additional campus that offers full degree programs and has full time students on-site. We consider an additional campus to be an extension center if it is affiliated with a high school, community center or a partnership between multiple universities, and if it does not offer full degree programs on-site.

Map 1. Campus Locations for America's Urban Campus



Source: America's Urban Campus Colleges and Universities
Analysis: Anderson Economic Group, LLC

PART I
ECONOMIC FOOTPRINT
OF AMERICA'S URBAN CAMPUS

III. America's Urban Campus Expenditures

In the process of providing education, performing research, and engaging in countless other activities, the 17 America's Urban Campus colleges and universities bring significant resources to bear throughout the city. In this section, we discuss spending by colleges and universities on payroll and non-payroll goods and services, as well as student spending.

In this section, we show numbers that reflect all spending by the schools and their students, whether or not it is going to Chicago vendors. In the next chapter, we consider only the expenditures at Chicago vendors to estimate the schools' economic footprint in the City of Chicago, specifically.

COLLEGE AND UNIVERSITY OPERATIONS

Colleges and universities spend money for the following purposes:

- Payroll, which includes spending on salaries, wages, and benefits;
- Non-payroll, which includes goods and services provided by third-party vendors. Non-payroll expenditures are divided into the following categories:⁷
 - Instruction;
 - Research;
 - Public Service, which includes expenses for community services, cooperative extension services, and public broadcasting services;
 - Academic Support, which includes expenses for activities and services that support the primary missions of instruction, research, and public service, such as retention and preservation of educational materials, academic administration including offices of deans, and course and curriculum development;
 - Student Services, which includes expenses associated with admissions, registrar activities, cultural events, student organization, career guidance, and other social development outside of formal instruction;
 - Institutional Support, which includes general administrative services, legal and fiscal operations, and other operating expenses for operational support for institutions;
 - Auxiliary Enterprises, which include self-supporting enterprises such as residence halls, student services, and unions;
 - Operation and Maintenance (O&M) of Plant;
 - Hospital Services;
 - Athletics; and
 - Construction.

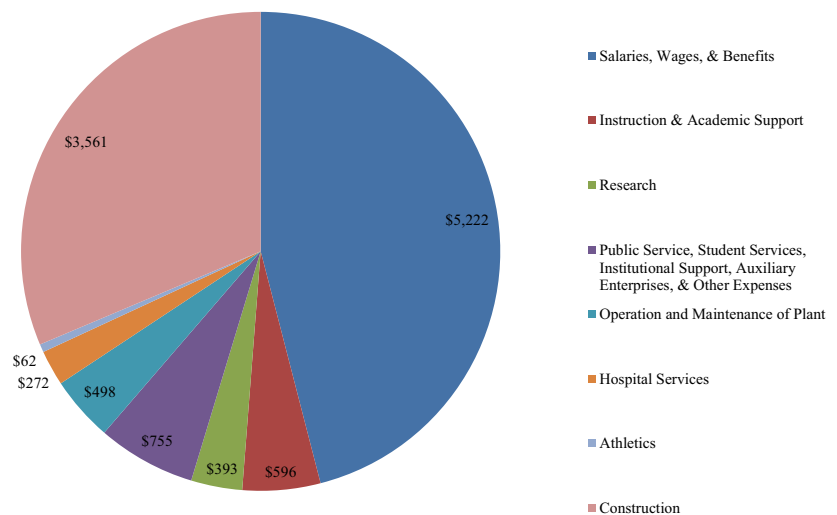
7. See the National Center for Education Statistics IPEDS glossary for further details, <<http://nces.ed.gov/ipeds/glossary>>.

The majority of expenditures in fiscal year (FY) 2013 were nonpayroll expenditures (54%). The largest non-payroll expenditures were for construction. Figure 2 below shows the proportion of America's Urban Campus spending by function for FY 2013. See "Appendix A. Methodology" on page A-1 for how we estimated spending in each category.

University Employees and Payroll. In fall 2012, America's Urban Campus colleges and universities collectively employed 52,504 faculty and staff members. These employees earned over \$3.8 billion in salaries and wages, and received an additional \$1.4 billion in employee benefits. The portion of employment and earnings that go to Chicago residents contribute to the economic footprint of America's Urban Campus's in the city, which is discussed in "Economic Footprint of America's Urban Campus" on page 14.

University Non-payroll Spending. In total, America's Urban Campus institutions spent over \$6.1 billion on non-payroll goods and services in FY 2013. The largest amount was spent on construction, at 58% of total non-payroll spending. The portion of these vendor payments that go to Chicago businesses contribute to the colleges' and universities' economic footprint in Chicago, which we discuss in "Economic Footprint of America's Urban Campus" on page 14.

FIGURE 2. Spending by America's Urban Campus Institutions, FY 2013 (millions)



Source: AEG estimates and analysis, based on source data from America's Urban Campus colleges and universities

STUDENT SPENDING

As we discuss in "Student Enrollment" on page 18, America's Urban Campus colleges and universities educate students from across the state, the country, and

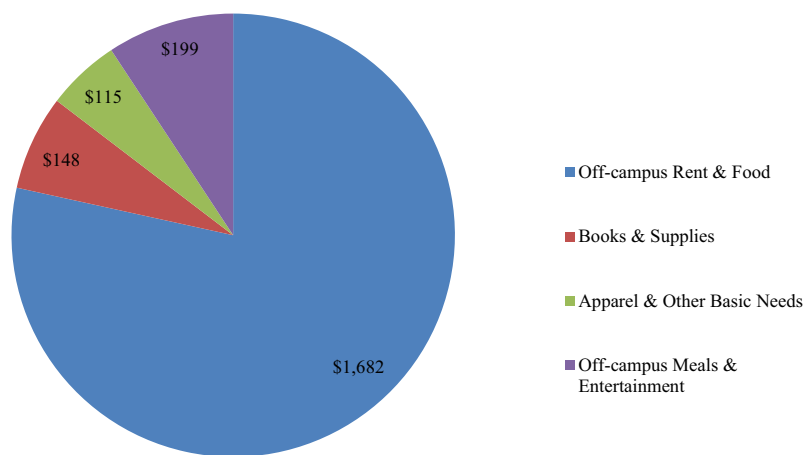
the world. These students spend money on goods and services in the following categories:

- Tuition
- On-campus room and board;
- Off-campus rent and groceries;
- Books and supplies;
- Apparel and other basic needs; and
- Meals and entertainment off campus.

We do not include tuition or on-campus room and board in our estimates to avoid double-counting expenditures. These funds go directly to America's Urban Campus colleges and universities, whose spending we have already captured in the above section.

For the remaining categories, we estimate that students spent over \$2.1 billion in 2013 while attending America's Urban Campus institutions in Chicago. The majority of student spending (78%) was on off-campus rent and food, followed by spending on off-campus meals and entertainment, which accounted for 9% of student spending. Figure 3 below shows student spending on non-tuition goods and services. See "Appendix A. Methodology" on page A-1 for how we estimated spending in each category.

FIGURE 3. Spending by Students at America's Urban Campus Institutions in Chicago, FY 2013 (millions)



Source: AEG estimates and analysis, based on source data from America's Urban Campus colleges and universities, College InSight, 2012-13 midyear Consumer Expenditure Survey

Much of this spending remains in Chicago, contributing to economic activity in the city. The economic footprint of student spending is discussed in "Economic Footprint of America's Urban Campus" on page 14.

IV. Economic Footprint of America's Urban Campus

In the previous section, we discussed the total operations and spending of America's Urban Campus colleges and universities and their students. In this section, we will discuss how college and university operations translate into a large economic footprint in the City of Chicago. While educating students, performing research, and engaging in countless other activities, America's Urban Campus institutions support a significant amount of spending, jobs, and earnings in Chicago. We aggregate the spending, jobs, and earnings associated with the following sources of economic activity to estimate the economic footprint of America's Urban Campus:

- Payroll spending;
- Non-payroll spending; and
- Student spending.

While over one million visitors to Chicago's colleges and universities for campus tours, graduation, and sporting events also contribute to their economic footprint, we do not include visitor spending in our estimates due to insufficient data. See "Visitors to AUC Schools" on page 18 for a summary of information on visitors to America's Urban Campus.

DEFINITION OF ECONOMIC FOOTPRINT

The economic footprint described in this section includes all spending, employment, and earnings associated with America's Urban Campus college and university operations and student spending. Universities and their students contribute to Chicago's economy in two ways:

1. The *direct* effect of the colleges' and universities' economic activity includes spending, employment, and earnings that are directly attributable to their operations in the city, including hiring Chicago residents and paying Chicago companies for goods and services.
2. The *indirect* effect of the colleges' and universities' economic activity occurs as dollars recirculate throughout the Chicago economy. Suppliers are part of a supply chain and have vendors of their own who benefit indirectly from college and university spending. In addition, employees use their wages to buy groceries from the local grocery store, and contractors may use their revenues from the colleges and universities to buy new equipment or expand their office space. Even then, dollars continue to circulate as grocery store owners and equipment providers now have more money to purchase goods and services in the city.

We estimate the total spending, earnings, and jobs supported by America's Urban Campus in Chicago by adding the direct and indirect effects. See "Appendix A. Methodology" on page A-1 for details of our estimation methods.

Difference Between Economic Footprint and Net Economic Impact

In this report, we present the *economic footprint* of American Urban Campus colleges and universities in Chicago. In other studies, we estimate the *net economic impact* of institutions in a defined region.⁸ A university's *economic footprint* is defined as the employment, earnings, and spending in a region that are related to *all* economic activity by that university. A university's *net economic impact* is defined as the employment, earnings, and spending in a region *caused* by the university, and excludes all employment, earnings, and spending that would have occurred in a region even without the university's presence.

For example, in the absence of a given university, operations at other nearby universities in the city would expand to receive more students; the land that university occupies would instead contain houses, a park, or an office building; and many of the employees that work at that university would have a job elsewhere in the city. That university's net economic impact captures the extent to which the economic activity related to a university *exceeds* the economic activity that would have occurred in its absence.

In this report, we present economic footprint instead of net economic impact because the characteristics of a hypothetical Chicago economy in the absence of any universities and colleges are too unpredictable to properly analyze. We generally do not apply net economic impact analysis to an entire sector of a major city.

Since we estimate economic footprint instead of net economic impact, we cannot say with confidence whether the spending we attribute to the universities would have happened even in the universities' absence, as we can with a net economic impact estimate. We can, however, say that the economic footprint describes the scope of economic activity by the universities and their students in Chicago, as well as the indirect effects of that spending on local vendors and households.

**COLLEGE,
UNIVERSITY, AND
STUDENT SPENDING
IN CHICAGO**

To estimate the economic footprint of America's Urban Campus colleges and universities in Chicago, we include only spending and employment that occurs *in the city*. Our estimates for spending in the city are presented below. Further details on specific categories of expenditures can be found in "Appendix A. Methodology" on page A-1.

8. Some examples include:

Erin Grover, Colby Spencer, and Alex Rosaen, "Empowering Michigan: Sixth Annual Economic Impact Report of Michigan's University Research Corridor," Anderson Economic Group, January 4, 2013.

Caroline Sallee, Scott D. Watkins, and Alex Rosaen, "The Economic Impact of Fermi National Accelerator Laboratory," Anderson Economic Group, August 19, 2011.

College and University Payroll Spending

As discussed in “America’s Urban Campus Expenditures” on page 11, in 2013, America’s Urban Campus institutions employed over 52,500 faculty and staff, and spent \$5.2 billion on payroll expenses. Approximately 63% of these employees reside in Chicago. Specifically, we estimate that 33,082 faculty and staff are Chicago residents, and they receive \$3.3 billion in salary, wages, and benefits.

University Non-Payroll Spending

Earlier in the report, we discussed the magnitude of university expenditures on non-payroll goods and services, estimating total expenditures in FY 2013 to be over \$6.1 billion. We estimate that 36%, or \$2.2 billion, of that spending goes to Chicago businesses. The proportion of spending that stays in Chicago is lower for non-payroll spending than for payroll spending because many colleges and universities source goods and services from outside of Chicago. Spending that occurs outside the city is not included in our economic footprint estimates.

Spending by Students

As described in “Student Spending” on page 10, the students at America’s Urban Campus colleges and universities spend over \$2.1 billion annually. We estimate that nearly \$1.4 billion of that is spent in Chicago.

TOTAL ECONOMIC FOOTPRINT IN CHICAGO

Direct spending—spending by colleges and universities and students in the city—spurs additional, indirect economic activity, as described in “Definition of Economic Footprint” on page 14. The total economic footprint of America’s Urban Campus in Chicago in terms of spending, earnings, and jobs is summarized in Table 3 below. The rest of this section provides further details on each aspect of the economic footprint.

TABLE 3. Total Economic Footprint for America’s Urban Campus in Chicago, FY 2013

	Direct	Indirect	Total
Spending (billions)	\$6.9	\$3.9	\$10.8
Earnings (billions)	\$3.3	\$1.3	\$4.6
Jobs (head count)	33,082	12,838	45,920

Source: AEG estimates and analysis, based on source data from America’s Urban Campus colleges and universities, College InSight, 2012-13 midyear Consumer Expenditure Survey BEA RIMS II Multipliers

Note: Direct earnings are included in spending.

Spending

College and university payroll and non-payroll spending, along with student spending, total \$6.9 billion in Chicago. When we add indirect spending in Chi-

Chicago's economy to direct spending, total spending comes to \$10.8 billion for FY 2013. Table 4 below shows the total footprint by source for America's Urban Campus in Chicago.

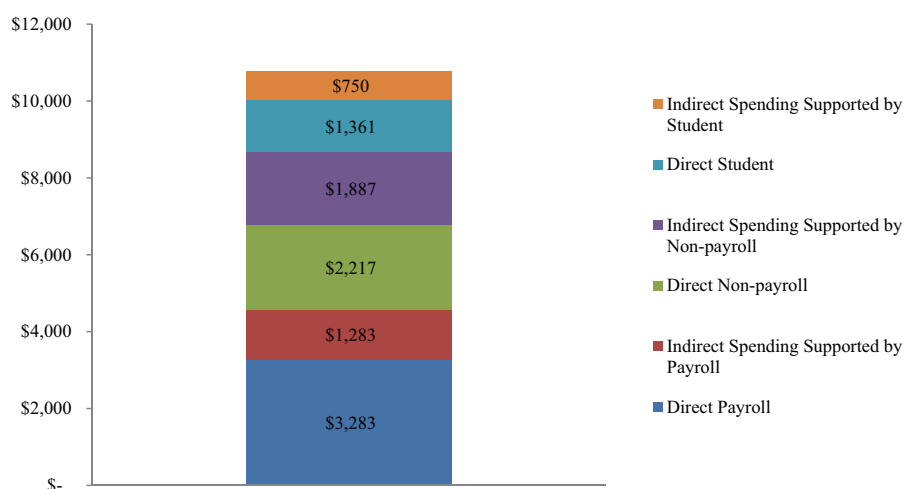
TABLE 4. Total Spending Supported by America's Urban Campus Institutions in Chicago, FY 2013 (billions)

	Direct	Indirect	Total
Payroll Spending	\$3.3	\$1.3	\$4.6
Non-payroll Spending	\$2.2	\$1.9	\$4.1
Student Spending	<u>\$1.4</u>	<u>\$0.7</u>	<u>\$2.1</u>
Total	\$6.9	\$3.9	\$10.8

Source: AEG estimates and analysis, based on source data from America's Urban Campus colleges and universities, College InSight, 2012-13 midyear Consumer Expenditure Survey, BEA RIMS II Multipliers

As shown above, each spending source contributes significantly to the economic footprint of America's Urban Campus in Chicago. Figure 4 below shows the proportion of the economic footprint attributable to each category of spending, highlighting that direct payroll spending accounts for the greatest proportion of the footprint, followed by direct non-payroll spending.

FIGURE 4. Economic Footprint of America's Urban Campus in Chicago by Type of Spending, FY 2013 (millions)



Source: AEG estimates and analysis, based on source data from America's Urban Campus colleges and universities, College InSight, 2012-13 midyear Consumer Expenditure Survey, BEA RIMS II Multipliers

Earnings and Jobs

As colleges and universities, their employees, and their students spend money on goods and services in the city, they support jobs and earnings for Chicago residents. The combined footprint for America's Urban Campus is 45,920 jobs

for Chicago residents, and \$4.6 billion in earnings. Table 5 below shows the direct and indirect effects America's Urban Campus institutions have on jobs and earnings in Chicago.

TABLE 5. Total Earnings and Employment Supported by America's Urban Campus Institutions in Chicago, FY 2013

	Direct	Indirect	Total
Earnings (billions)	\$3.3	\$1.3	\$4.6
Employment	33,082	12,838	45,920

Source: AEG estimates and analysis, based on source data from America's Urban Campus colleges and universities, BEA RIMS II Multipliers

For comparison, the employment total of 46,00 is well over half the size of the manufacturing industry in the city and approximately a third of the size of the entire professional, scientific, and technical services sector in the city.⁹

VISITORS TO AUC SCHOOLS

America's Urban Campus schools attract visitors to their campuses for a variety of different reasons. While many of these visitors are current residents of Chicago, others come from outside the city or state. These visitors eat at local restaurants and shop at Chicago stores. Some of these visitors stay at hotels in the city.

TABLE 6. Visitors to AUC Institutions by Reason for Visit, FY 2013

Reason for Visit	Number of Visitors
Commencement	80,828
Alumni Weekend	11,731
Campus Tours	92,175
Parent Weekends	3,164
Open House	13,990
Other Noteworthy Events ^a	855,658
Total	1,057,546

Source: AEG estimates and analysis, based on source data from America's Urban Campus colleges and universities

Note: Most campus visits for Northwestern and DePaul sporting events, etc., are not included here because they do not occur in Chicago.

a. Other Noteworthy Events include conferences, sports events, and theatre performances, among others.

Visitor spending contributes to the economic activity generated by America's Urban Campus. While data is insufficient to quantify the share of visitors from

9. City employment numbers by industry are based on the 2007 Economic Census.

outside the city and the amount of spending by visitors to America's Urban Campus institutions, we know that over one million individuals visit AUC campuses each year. See Table 6 on page 18 for more information.¹⁰

One million visitors is actually a significant underestimate of the total because it only includes visitor numbers tracked and provided by AUC schools. To put these numbers in context, the most well-attended museums in Chicago are the Museum of Science and Industry and the Art Institute, which each had approximately 1.5 million visitors in 2012.¹¹

10. Visitor estimates only include schools that track visitors by category. We do not attempt to estimate the number of visitors to campus for schools that do not track visitors.

11. Museums Work for Chicago, <http://www.museumsworkforchicago.com/museums.htm>, accessed on August 26, 2014.

PART II
SOCIAL AND CULTURAL CONTRIBUTIONS
OF AMERICA’S URBAN CAMPUS

V. America's Urban Campus and Chicago Public Schools

While we have estimated the amount of economic activity in Chicago supported by America's Urban Campus' spending, there are many other aspects of America's Urban Campus operations that bring benefits to the city. In addition to employing Chicago residents, doing business with Chicago-based vendors, and educating their own students, America's Urban Campus institutions also provide numerous social and cultural benefits to the City of Chicago. These benefits ultimately help to make the City of Chicago a world-class city.

In this chapter, we discuss partnerships and programs with Chicago Public Schools (CPS). We emphasize the CPS relationship with America's Urban Campus universities and colleges because of its scale and breadth. In the following chapters, we describe a broad array of specific programs that greatly impact the City of Chicago's culture and communities.

PARTNERSHIP WITH CHICAGO PUBLIC SCHOOLS

America's Urban Campus participated in or hosted nearly 1,400 programs in partnership with Chicago Public Schools. These programs range from after-school tutoring programs to programs designed to encourage interest in science and math fields. Some of these programs involve small groups of children, while others involve entire classrooms or grade levels. While it is not possible for AUC institutions to collect data on the number of CPS students impacted for every partnership, even the partially-representative data that has been collected shows a large impact on Chicago's youth. America's Urban Campus schools pursue partnerships with 88% of CPS schools. Over one in ten CPS students were impacted by an AUC-CPS program in the last year alone. See Table 7 below for more information.

TABLE 7. America's Urban Campus CPS Programs, FY 2013

Number of Participating CPS Schools	578
Number of Participating CPS Students	45,254
Number of Participating CPS Teachers	1,309
<i>Total Number of AUC-CPS Programs</i>	<i>1,372</i>

Source: America's Urban Campus colleges and universities

Analysis: Anderson Economic Group, LLC

While the data in Table 7 could be double-counting students who attended multiple programs, it is still likely that this is an underestimate of the total number of students impacted by AUC-CPS partnerships. There are several programs, attended by thousands of CPS students in all, where we do not have exact attendance numbers, either because they were not taken or because America's Urban Campus schools could not provide them.¹² The data presented in Table 7 only

include students from partnerships for which we received exact data collected by the AUC schools.

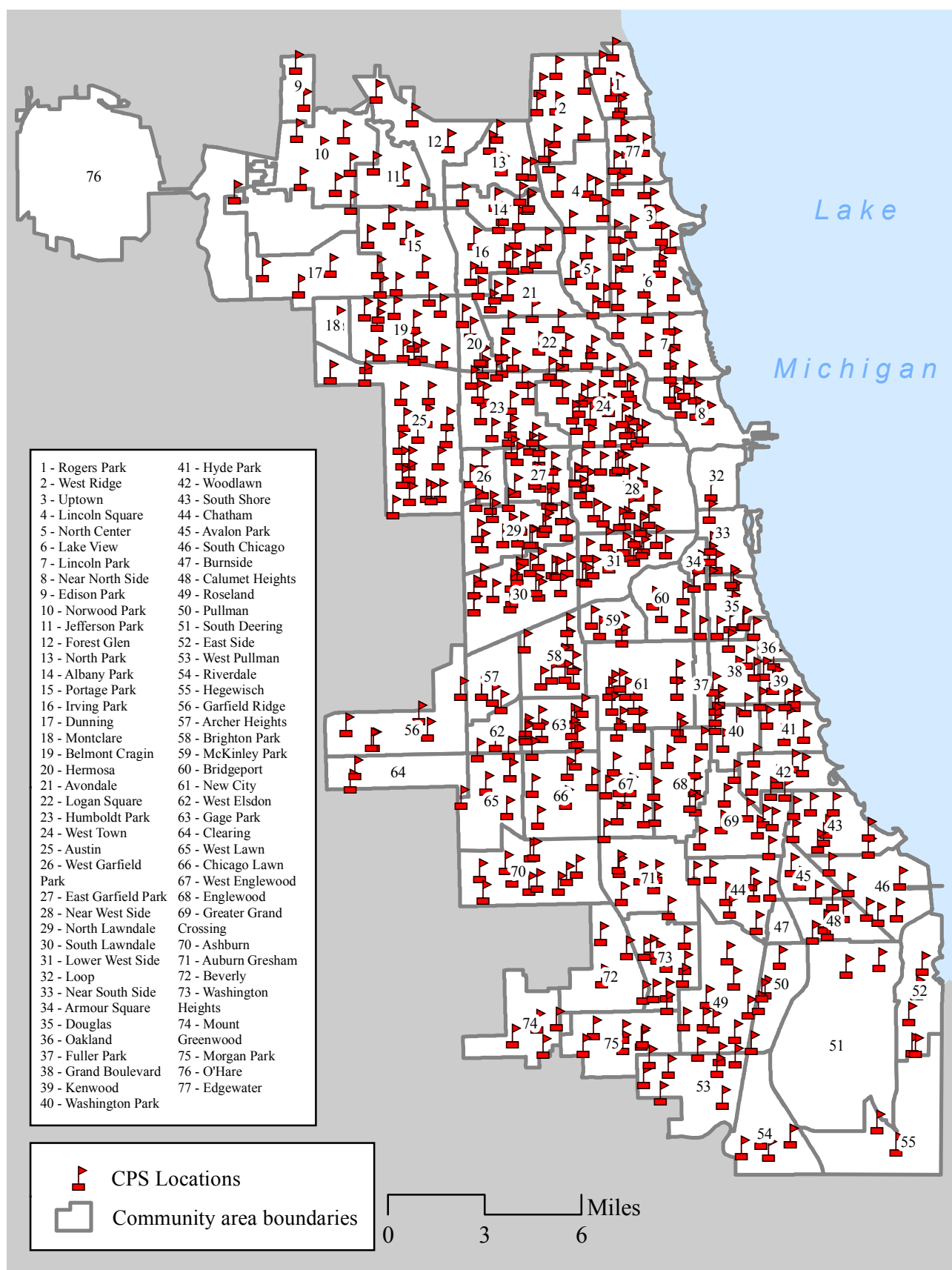
America's Urban Campus colleges and universities partner with schools in every corner of the city. Some of these programs take place on-site at a Chicago Public School, while others take place at the colleges and universities themselves. Map 2, on page 23, shows which CPS schools participate or host these programs. Note that many CPS schools shown on this map have multiple partnerships with AUC institutions.

**PROMOTING
COLLEGE READINESS
AND AFFORDABILITY**

Not counted in these numbers are scholarships and college readiness programs specifically targeting students that attend Chicago Public Schools. Virtually every college and university that is a part of America's Urban Campus has a program that helps local students afford college, facilitates the process of applying and finding a good fit, and/or provides classes and tutoring to ensure that local high school graduates are prepared to thrive academically at Chicago colleges and universities.

12. The current analysis does not include data from the following schools: Chicago State University, City Colleges of Chicago, John Marshall Law School, Robert Morris University, Saint Xavier University, and University of Illinois-Chicago.

Map 2. America's Urban Campus Partnerships with Chicago Public Schools



Source: America's Urban Campus Colleges and Universities
 Analysis: Anderson Economic Group, LLC

VI. Music, Theatre, and Art in America's Urban Campus

America's Urban Campus institutions bring a wide range of social and cultural programs to the City of Chicago. They are an indispensable part of the city's music, theatre, and visual arts communities. In this section, we first briefly discuss universities' role in these communities. Then, we discuss some specific programs run by America's Urban Campus colleges and universities that contribute to the arts in Chicago.

ATTRACTING TALENT AND VISITORS THROUGH THE ARTS

The students, faculty, and alumni of America's Urban Campus colleges and universities have been a major driving force behind the music, theatre, and arts scenes in the City of Chicago for decades. DePaul University, Columbia College Chicago, and Northwestern University all rank among the top 20 film schools in the country. DePaul and Northwestern are also among the top 25 drama schools.¹³ Alumni of these schools have gone on to win Oscars, Tonys, and Emmys on Broadway and in Hollywood, but they have also had a big impact in Chicago. America's Urban Campus alumni have founded or led some of the most prominent theatre companies in the city, including Lookingglass Theatre, Chicago Shakespeare Theatre, TimeLine Theatre, and Steppenwolf. Alumni, students, and faculty of these schools also participate in the city's world-renowned improv community.

In addition to theatre and film, musicians from America's Urban Campus colleges and universities go on to play in the city's orchestra, jazz clubs, and local bands while artists from America's Urban Campus colleges and universities present their work at galleries and museums throughout the city. The School of the Art Institute of Chicago is ranked second among fine arts schools by U.S. News and World Report.

Chicago's arts scene makes the city a more fun and engaging place to live, but it does much more than that. Because of the arts, Chicago is a primary destination for visitors and a more vibrant economy. According to the Chicago Department of Cultural Affairs, the city's "creative economy" accounted for \$2 billion in economic activity in 2012, much of it due to tourists attending local concerts, plays, and exhibitions.

13. Tim Appelo, "These Are the Top 25 Film Schools in the United States," *The Hollywood Reporter*, July 30, 2014, <http://www.hollywoodreporter.com/news/top-25-film-schools-united-721649>, accessed on September 13, 2014.

Tim Appelo, "The 25 Best Drama Schools in 2014," *The Hollywood Reporter*, June 6, 2014.

MUSEUMS AND ARCHITECTURE TOURS

Many AUC schools operate museums that are open to the public. These museums include a number of art museums, such as:

- The Art Institute of Chicago (School of the Art Institute of Chicago),
- The Museum of Contemporary Photography (Columbia College Chicago),
- The Loyola University Museum of Art,
- The Oriental Institute Museum (University of Chicago),
- The DePaul Art Museum, and
- The Gage Gallery (Roosevelt University), among others.

Other museums include the Jane Addams Hull-House Museum, operated by the University of Illinois at Chicago. The Hull-House, which was opened by Jane Addams and Ellen Gates Starr in 1889, was a place where immigrants of diverse communities gathered to learn, eat, debate, and acquire the skills necessary to create a home in a new country. The museum is comprised of two of the settlement complex's original thirteen buildings, the Hull-Home and the Residents' Dining Hall.

Additionally, several schools participate in programs that highlight the history of architecture in Chicago. The Mies van der Rohe Architecture Tour at the Illinois Institute of Technology is one example. The tour provides a glimpse into one of the United States' most influential architects, as well as the "Second Chicago School" style of architecture that has shaped the city's skyline.

ART IN THE COMMUNITY

In addition to traditional museums, America's Urban Campus contributes to the vibrance of the Chicago art scene by bringing art to the community. Some universities partner with community organizations to expand Chicago's current community-based art scene. Others organize art festivals that draw thousands of Chicago residents. AUC's art in the community contributions include:

- **The Manifest Urban Arts Festival.** This festival, hosted by Columbia College Chicago, features over 100 student showcases in the visual arts, music, dance, film, theater, writing, television, multimedia, performance art, comedy, video gaming, and sound collages. The event includes main-stage musical acts, street performers, an art walk, and parties. Over 30,000 people attend the festival each year, which is held in May in Chicago's South Loop.
- **Pivot Arts Incubator.** Loyola's Department of Fine and Performing Arts partners with Pivot Arts, a community-based fine arts organization, to connect innovative arts activity in Chicago's far north side neighborhoods. Loyola is currently participating in a performing arts incubator program that matches current Loyola students with a mentor. These students work with professions in the art industry to form new and originaive works.
- **Site, Environment, Communities.** A group of students and faculty from the School of the Art Institute of Chicago work together each year to create sustainable art and design projects that are informed by and in response to local com-

munities. The group is currently engaged with communities on the South Side, Logan Square, and West Side.

- **The Millennium Park Crown Fountain.** Almost any recent visitor to Chicago can recall the large faces spouting water in Millennium Park. While serving as the William and Stephanie Sick Distinguished Professor at The School of the Art Institute, Jaume Plensa, a Spanish sculptor, created Millennium Park's Crown Fountain with assistance from SAIC's Department of Art and Technology Studies. Students, faculty, and staff of SAIC put out a call to more than 180 community groups for volunteers whose faces would go on the fountain. In two shoots in 2003 and 2004, SAIC recorded 80 second clips of 1,000 Chicagoans.

MUSIC AND THEATER

America's Urban Campus also contributes to Chicago's music and theater scene. AUC schools host performances at Chicago theaters, including operas, musicals, ballets, and plays. Other schools sponsor outdoor concerts that are free and open to the public. Many of these performances feature local artists. AUC's music and theater contributions include:

- **The Gospel Choir.** The North Park University Gospel Choir performs contemporary sacred music from the spiritual and gospel genres. The choir performs in concerts in the city, which are open to the public.
- **Jazz in the Grass.** This weekly jazz concert series is sponsored by Chicago State University. The concerts highlight both local talent in the Midwest region, as well as artists from around the world. The event is free and open to the public.
- **Hyde Park Jazz Festival.** The University of Chicago is the lead and founding sponsor of the Hyde Park Jazz Festival, an annual festival that celebrates jazz's legacy and future in Hyde Park and Chicago's South Side. Now in its 8th year, the Jazz Fest spans 18 hours over 2 days to crowds exceeding 10,000. Performances are held throughout the Hyde Park neighborhood, home to the University of Chicago main campus.
- **Giving a Voice to Victims of Violence in Chicago.** More than 900 people were murdered in Chicago in the years 2011 and 2012 alone. In 2011, creative-writing students from DePaul University, in collaboration with the Steppenwolf Theatre, set out on an oral-history project to collect the stories of people affected by these acts of violence. These voices were brought to life in 2013 in the documentary play *How Long Will I Cry?: Voices of Youth Violence*. The play premiered at the Steppenwolf Theatre before touring eight Chicago Public Library branches in communities especially affected by the violence.
- **Outdoor Summer Concert.** Saint Xavier University hosts an annual outdoor summer concert on the front lawn of its Chicago campus. Past performances have included the Bradley Young Orchestra, the Roy Vombreck Orchestra, and the Voyager Orchestra, among others. The concert concludes with a fireworks finale at dusk. The event is free and open to the public.

VII. Social Services and Economic Development in America's Urban Campus

In addition to the world-renowned art, music, and theatre programs mentioned in the previous chapter, the colleges and universities of America's Urban Campus provide programming to foster a sense of community and to help those in need throughout the city. Students and teachers volunteer for tens of thousands of hours at clinics and non-profits, while colleges and universities throughout the city invest in their local neighborhoods through community-based organizations, parks, residential and commercial development, infrastructure, public safety, and more.

HEALTH CARE

A number of AUC schools provide extensive health care service. Some of these programs focus on treating often-overlooked health problems, such as mental health and childhood obesity. Other programs aim to provide primary care to underserved populations in the city.

- **The Mental Health Impact Assessment.** The goal of this Adler School of Professional Psychology project is to advance the practice of Health Impact Assessment and to integrate mental health considerations into Health Impact Assessment practice. Additionally, the project seeks to promote the mental health and well-being of residents in the community by increasing resident capacity to participate in community-based research.
- **Obesity Prevention Initiative for Latino Children: Super H.** Obesity harms many Americans, particularly members of minority communities. Obesity levels are especially high among Latino youth. Super H is an after-school program sponsored by the Chicago School of Professional Psychology that promotes good nutrition and physical activity.
- **Save Our School Children (S.O.S.).** The Forensic Center at the Chicago School of Professional Psychology runs a school-based program designed to address the issue of violence among youth who have contact with the law or are at risk for delinquency. This program seeks to prevent youth violence by using age-appropriate, culturally relevant interventions in a school setting.
- **Northwestern Feinberg School of Medicine.** Northwestern University's medical faculty, residents, and students serve the Chicago community through outreach and engagement activities, including free medical services through Chicago clinics, and collaborative research projects and studies. The institute for Public Health and Medicine is an innovative force at the interface of medicine and public health and the Center for Community Health engages directly with Chicago communities and provides seed money to community groups interested in improving health outcomes.
- **Urban Health Initiative.** The University of Chicago's Urban Health Initiative (UHI) is an effort to improve health and access to quality care for residents of Chicago's South Side. Through the South Side Healthcare Collaborative, the University has established a network of local primary care providers, community health centers, and local hospitals to treat patients before they get to the

emergency room. Also, the University is working with community groups and residents to better understand the impacts of the environment on long-term health and wellness.

LEGAL SERVICES

Among the 17 member institutions of America's Urban Campus, there are six law schools:

- DePaul University College of Law
- Chicago-Kent College of Law (Illinois Institute of Technology)
- John Marshall Law School
- Loyola University School of Law
- Northwestern University School of Law
- University of Chicago Law School

Each of these schools offer clinical projects and programs that provide JD candidates opportunities to develop legal experience and serve the surrounding community. Some clinical programs offer pro bono services, and others may charge fees on a sliding scale. The following list outlines just some of the topics that are covered by clinics of multiple America's Urban Campus law schools.

- **Business and Entrepreneurial Law.** This work involves small-business counseling and services such as contract review and negotiation, employment issues, non-disclosure and confidentiality agreements, etc.
- **Child and Family Law.** These clinics handle matters of legal separation, divorce, child support, child custody, visitation, etc. One clinic specifically represents children in cases relating to abuse or neglect, delinquency, special education, and mental health.
- **Criminal and Juvenile Justice.** Students in these clinics provide legal representation in criminal cases. Half of the law schools in America's Urban Campus offer a clinic specifically for clients who have been convicted of crimes of which they are innocent.
- **Tax Law.** These clinics handle disputes with the Internal Revenue Service. One clinic primarily serves low-income taxpayers, and typical cases involve disputes over disallowance of the earned income tax credit. Another clinic represents middle-income individuals and small business taxpayers and handles issues surrounding IRS audits, asset seizures, and other debt enforcement actions.
- **Health Law.** Examples of health-related cases include disability denials, discrimination issues, and vaccine-related injuries.
- **Environmental Law.** Half of the America's Urban Campus law schools provide representation for environmental issues such as permitting, illegal pollution, site remediation, and regulation enforcement.

ECONOMIC DEVELOPMENT

America's Urban Campus members also contribute to the economic development of the Chicago area. Colleges and universities are anchor institutions that invest in student housing, offices, public parks, entertainment venues, and infra-

structure in neighborhoods throughout Chicago. Some of the most notable developments have occurred in the South Loop, Bronzeville, Hyde Park, Lincoln Park, and Rogers Park. Specific contributions range from leadership and partnering on development projects to research and evaluation of policies and programs.

- **53rd Street Redevelopment.** The University of Chicago has partnered with the City of Chicago to revitalize the commercial corridor on 53rd Street in Hyde Park. One of the most notable projects is the development of Harper Court, which opened in November 2013. The 1.1 million square-foot mixed-use development is now a commercial hub that includes a 131-room Hyatt Place hotel, a 12-story office tower to house over 550 University of Chicago employees, the renovated Harper Theater, and several restaurants and retailers.
- **Center for Urban Economic Development.** The CUED is a unit of the College of Urban Planning and Public Affairs at the University of Illinois at Chicago. The center conducts research, policy analysis, and evaluation on urban and regional economic development issues, with a special emphasis on the Chicago metropolitan area. Recent projects and briefs include analyses of the manufacturing industry in the Chicago area and the economic impact of the Illinois Medical District.
- **Fredrick Blum Neighborhood Assistance Center.** The Neighborhood Assistance Center is part of the Department of Geography, Sociology, History, African American Studies, and Anthropology at Chicago State University. The center assists in developing neighborhood planning projects, performing land use and housing quality surveys, and conducting feasibility studies, among other services.

PROGRAMS FOR VETERANS

Several AUC schools offer specific programs to help members of our armed services transition into civilian life. These programs offer a variety of services, including assisting eligible student veterans in their preparation for college by refreshing academic skills and helping veterans file their Veteran Benefits Administration claims.

- **Veterans Upward Bound.** Veterans Upward Bound at Roosevelt University is the only veterans Federal TRIO Program funded by the US Department of Education in Illinois. This pre-college program is designed to assist eligible veterans to prepare for entry into college by refreshing their academic skills. This program has helped dozens of Chicago-area veterans.
- **The Veterans Legal Support Center and Clinic.** The John Marshall School of Law provides legal support services to Chicago veterans. They assist veterans with filing Veteran Benefits Administration claims, represent veterans on a range of legal issues, and help other schools develop veteran legal support centers.

PART III
STUDENTS AND ALUMNI OF
AMERICA'S URBAN CAMPUS

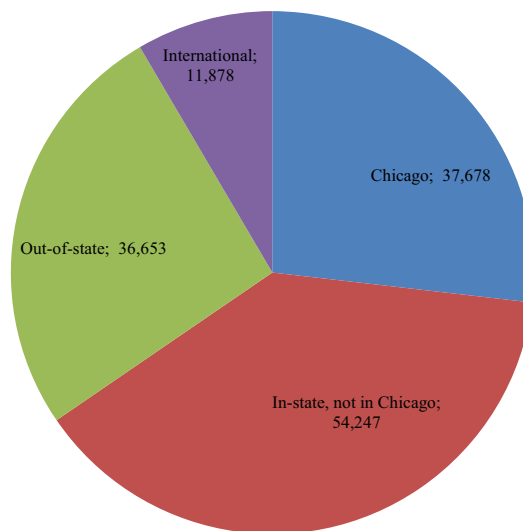
VIII. America's Urban Campus Students and Degrees

In the 2012-13 academic year, America's Urban Campus colleges and universities enrolled over 216,000 students, and awarded nearly 54,000 degrees and certificates. In this section, we discuss the student body of America's Urban Campus' 17 colleges and universities.

STUDENT ENROLLMENT

As shown in Map 3 on page 34 and Map 4 on page 35, the students at America's Urban Campus colleges and universities represent every state in the U.S. and nearly 150 countries across the world. Of the students enrolled in fall 2012 for which we have prior residence data, 27% were from Chicago, 39% were from elsewhere in Illinois, 26% were from other states in the U.S., and 8% were international.¹⁴ Figure 5 below shows student origins for AUC schools.

FIGURE 5. Student Origins at America's Urban Campus Institutions, Fall 2012



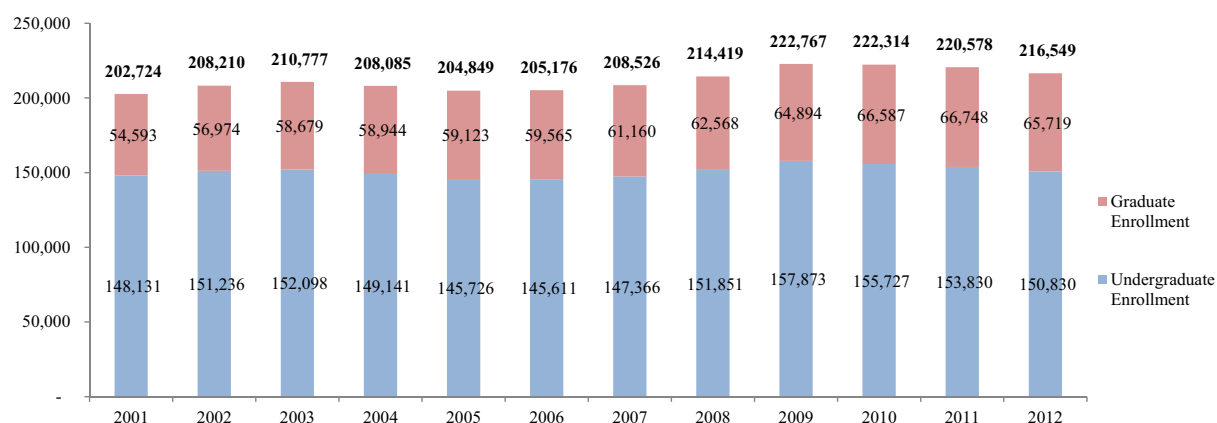
Source: AEG estimates and analysis, based on source data from America's Urban Campus colleges and universities
 Note: This figure only includes students from schools that reported student origin data

In fall 2012, there were 216,549 students enrolled in America's Urban Campus institutions. Of those students, 70% were undergraduate students. Student

14. We have prior residence data for students that attend Adler School of Professional Psychology, the Chicago School of Professional Psychology, Columbia College Chicago, DePaul University, Illinois Institute of Technology, John Marshall Law School, Loyola University, North Park University, Northwestern University, Roosevelt University, School of the Art Institute of Chicago, University of Chicago, and University of Illinois at Chicago. We have prior residence data for only undergraduate students that attend Saint Xavier University.

enrollment increased by almost 7% between 2001 and 2012, as shown in Figure 6 below.

FIGURE 6. Enrollment at America's Urban Campus Institutions, Fall 2001-Fall 2012

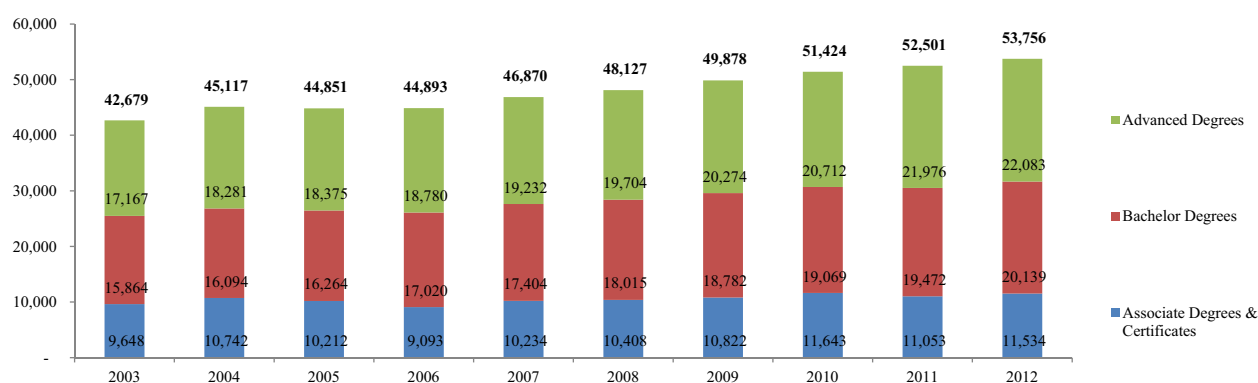


Source: AEG estimates and analysis, based on source data from IPEDS

DEGREES

In 2012, America's Urban Campus institutions awarded nearly 54,000 degrees and certificates, a 26% increase since 2003. The largest growth during this time period was in the number of associate degrees awarded, which grew by nearly 40% between 2003 and 2012. Figure 7 below shows the growth in completions by level.

FIGURE 7. Completions by Level of Degree at America's Urban Campus Institutions, 2003-2012



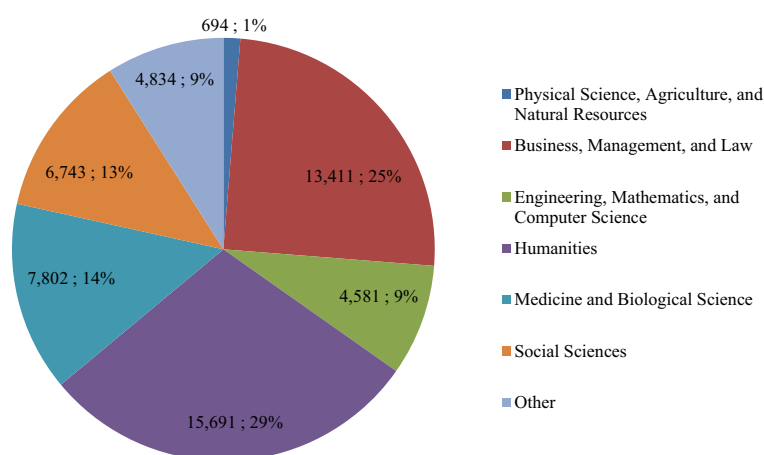
Source: AEG estimates and analysis, based on source data from IPEDS

America's Urban Campus colleges and universities offer degrees and certificates in nearly every subject. We categorize degrees and certificates in the following categories:

- Physical Science, Agriculture, and Natural Resources;
- Business, Management, and Law;
- Engineering, Mathematics, and Computer Science;
- Humanities;
- Medicine and Biological Science;
- Social Sciences; and,
- Other.¹⁵

Of the 53,756 degrees and certificates awarded to 2012 graduates, 29% were in the humanities fields, which include degrees and certificates in English, education, theology, performing arts, and history, among others. The second largest degree category was business, management, and law. Figure 8 on page 33 shows the proportion of degrees and certificates for each degree category.

FIGURE 8. Degrees and Certificates by Field of Study at America's Urban Campus Institutions, 2012

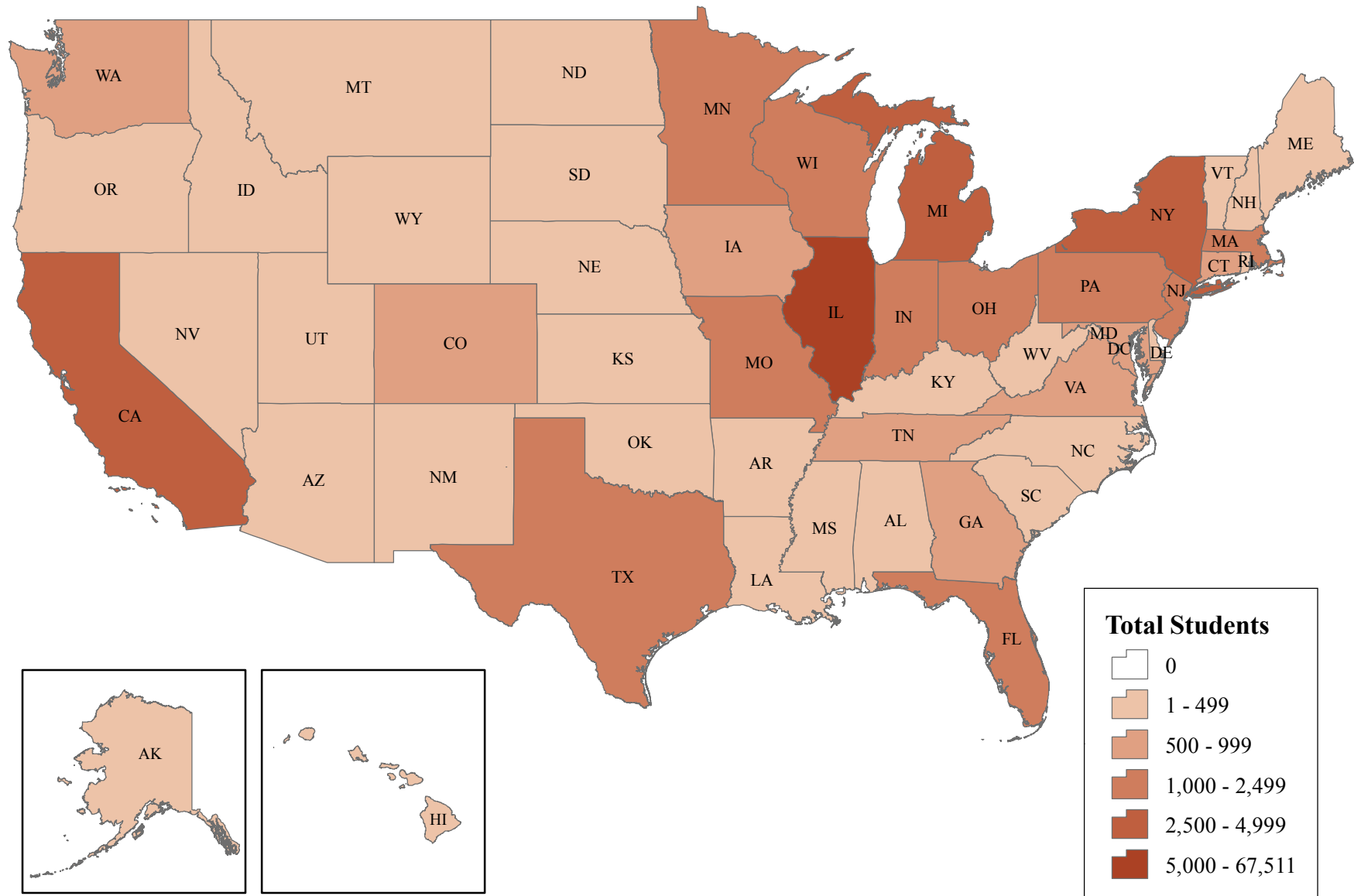


Source: AEG estimates and analysis, based on source data from IPEDS

The proportion of degrees by field of study differs between bachelor and advanced degrees, as one might expect. Humanities degrees make up the largest portion of bachelor degrees, while business, management, and law degrees make up the largest portion of advanced degrees. Business, management, and law degrees; medicine and biological science degrees; and engineering, mathematics, and computer science degrees represent a higher share of advanced degrees than bachelor degrees. Undergraduates receive a higher proportion of degrees in social sciences.

15. See “Academic Program Definitions” on page A-1 for a list of the degrees included in each field of study.

Map 3. Students by U.S. State, Fall 2013

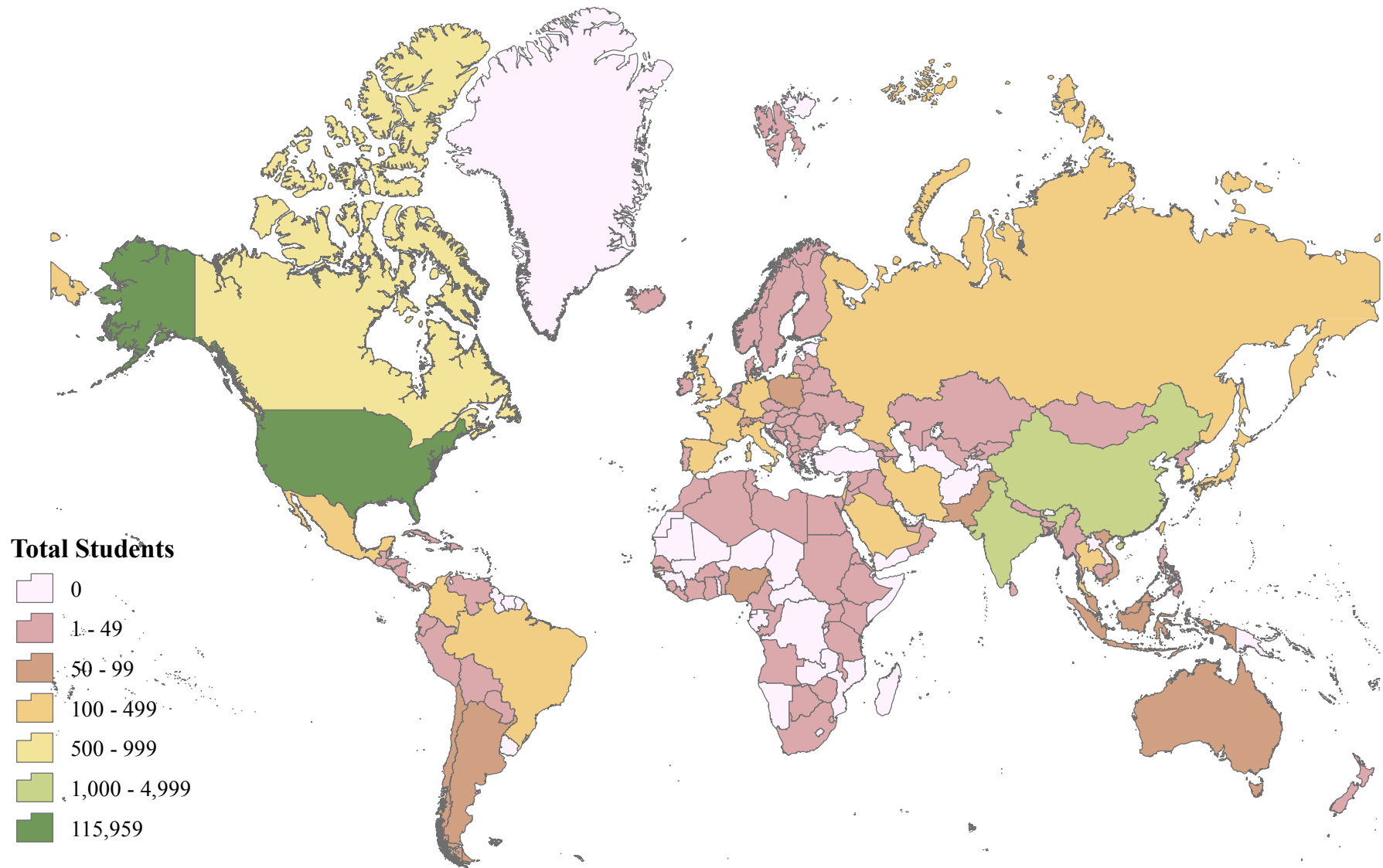


Source: America's Urban Campus Colleges and Universities

Analysis: Anderson Economic Group, LLC

Note: The following schools are not included in the Students by State totals: City Colleges of Chicago and Robert Morris University.

Map 4. Students by Country, Fall 2013



Source: America's Urban Campus Colleges and Universities

Analysis: Anderson Economic Group, LLC

Note: The following schools are not included in the Students by Country totals: City Colleges of Chicago, North Park University, Robert Morris University, and Saint Xavier University.

IX. America's Urban Campus Alumni

Perhaps the most important impact of higher education on a region is the attraction and retention of a talented and well-trained workforce. Many students graduate and continue to live and work in Chicago, contributing to the city's economy. In "America's Urban Campus Students and Degrees" on page 31, we discussed the student body of America's Urban Campus institutions. In this section, we discuss the size and scope of the alumni base for America's Urban Campus institutions in Chicago.

ALUMNI IN CHICAGO

Worldwide, there are more than 1 million alumni with a known address that attended an America's Urban Campus institution. These alumni live in each state in the U.S. and in 175 countries across the world. Of the 1 million living alumni with a known address, over 155,500 live in Chicago, representing roughly 9% of Chicago's population aged 25 and older.¹⁶ In addition, the alumni living in Chicago account for nearly one in four residents (24%) of the city with a bachelor's degree or higher.¹⁷

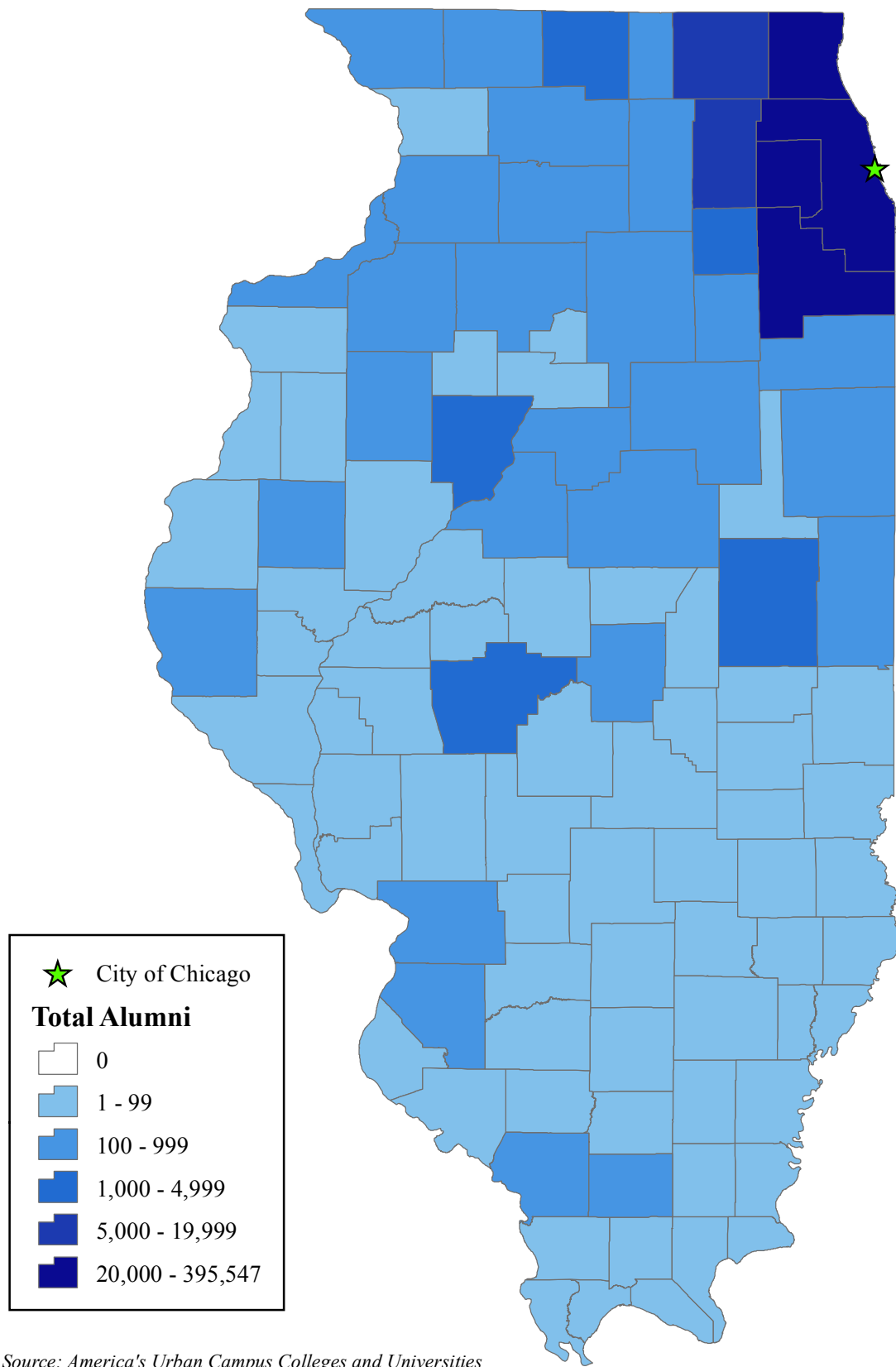
Half of the America's Urban Campus alumni living in Chicago graduated with a bachelor degree as their highest degree from an America's Urban Campus institution. An additional 49% of alumni graduated from an America's Urban Campus institution with an advanced degree as their highest degree.¹⁸

See "Map 5. Alumni by Illinois County" on page 37, "Map 6. Alumni by U.S. State" on page 38, and "Map 7. Alumni by Country" on page 39 for where America's Urban Campus alumni currently reside.

16. According to the U.S. Census Bureau, 2008-2012 American Community Survey 5-Year Estimates, Chicago had 1,782,006 residents aged 25 and older.

17. According to the U.S. Census Bureau, 2008-2012 American Community Survey 5-Year Estimates, there were 649,737 residents living in Chicago who had a bachelor's degree or higher. We use bachelor's degree as the cutoff because a very small share (<1%) of the alumni for whom we have addresses in Chicago received an associates' degree.

18. Unclassified alumni are due to graduates receiving associate's degrees and certificates. Additionally, some universities consider those who took classes but did not receive a degree as alumni; these types of alumni are also included in our analysis. Our estimates do not account for degrees that may have been earned at other universities. See "Appendix A. Methodology" on page A-1.

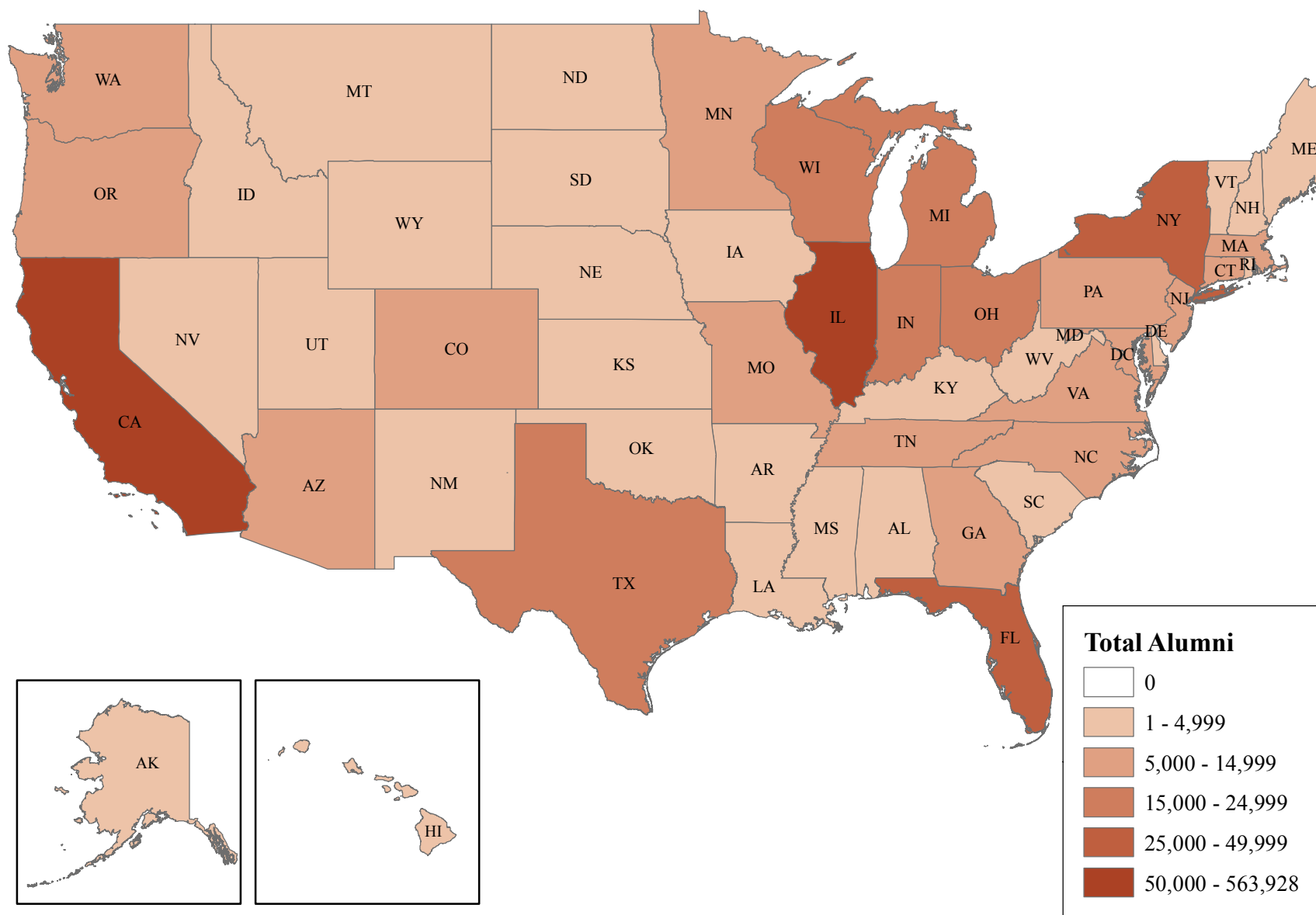


Source: America's Urban Campus Colleges and Universities

Analysis: Anderson Economic Group, LLC

Note: The following schools are not included in the Alumni by Illinois County totals: Chicago State University, City Colleges of Chicago, North Park University, and Robert Morris University. University of Illinois-Chicago data are included for the following counties: Champaign, Cook, DuPage, Kane, Kendall, Lake, McHenry, Peoria, Will, and Winnebago.

Map 6. Alumni by U.S. State



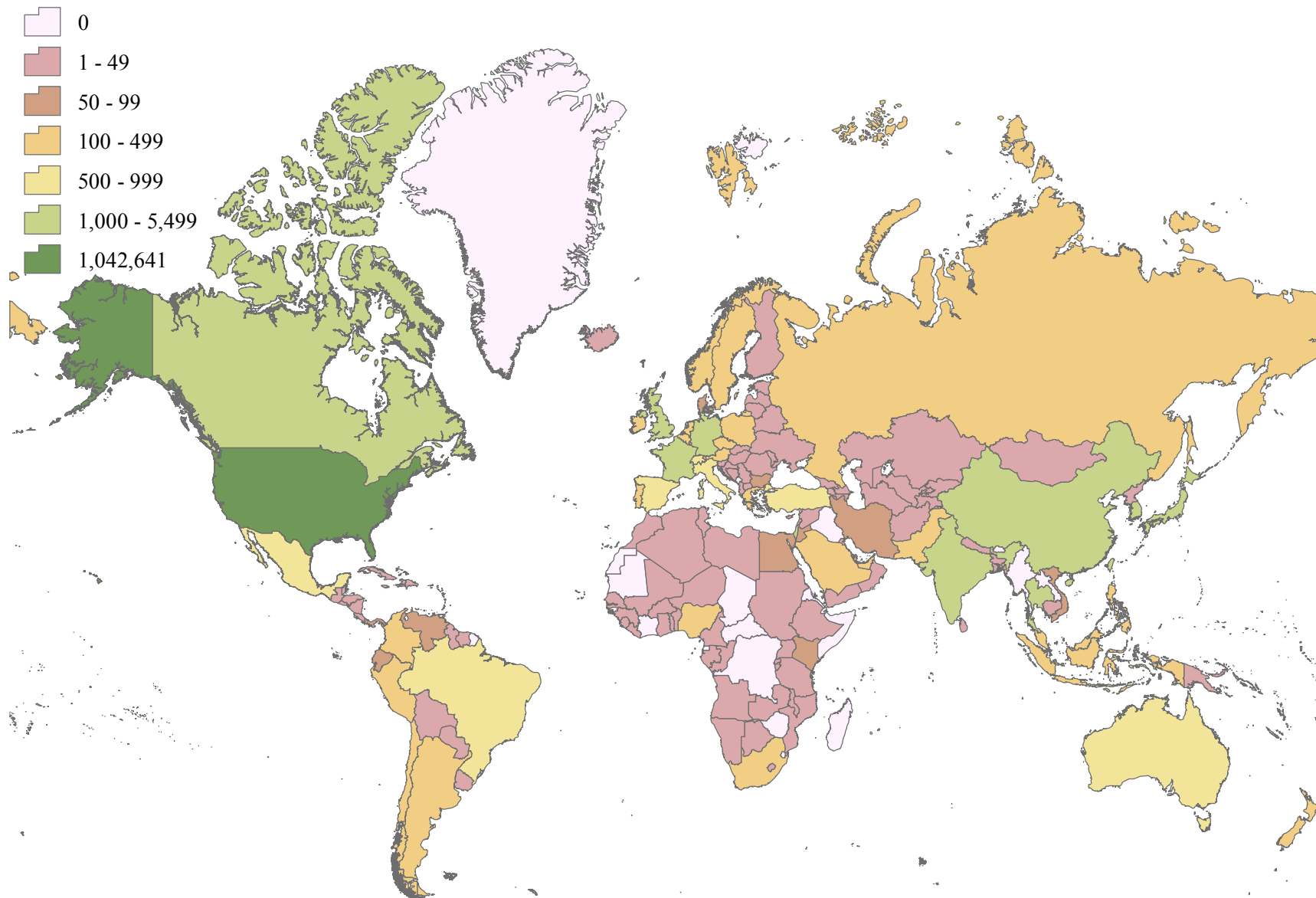
Source: America's Urban Campus Colleges and Universities

Analysis: Anderson Economic Group, LLC

Note: The following schools are not included in the Alumni by State totals: Chicago State University, City Colleges of Chicago, North Park University, Robert Morris University, and University of Illinois-Chicago.

Map 7. Alumni by Country

Total Alumni



Source: America's Urban Campus Colleges and Universities

Analysis: Anderson Economic Group, LLC

Note: The following schools are not included in the Alumni by Country totals: Chicago State University, City Colleges of Chicago, North Park University, Robert Morris University, and University of Illinois-Chicago.

X. Comparing Colleges and Universities in Major Cities

While colleges and universities in Chicago represent a massive contribution to the city's cultural, social, and economic vitality, one might expect the same for any major city. We compared the performance of all colleges and universities in Chicago on a range of metrics in order to see where the city stands, in comparison to some of the top cities across the country.

In this section, we first discuss how we selected peer cities and some details about our unique analysis. We then present the metrics and rank Chicago among our set of peer cities.

PEER CITIES

In this section, we compare colleges and universities in the City of Chicago to colleges and universities in the following major cities:

- New York
- Los Angeles
- Philadelphia
- San Francisco
- Boston
- Atlanta

This group of cities represents a diverse array of urban educational institutions ranging from city-based community colleges to some of the most prominent research universities in the country. The peer cities were selected on the basis of their similarities to Chicago in terms of population size, number, and caliber of universities.

Importantly, because our analysis only deals with the cities proper, major universities located in adjacent municipalities are excluded. If these universities have a satellite campus in the main city, however, we estimate and include metrics for only that satellite campus. For example, the Massachusetts Institute of Technology is not in Boston, Stanford and the University of California at Berkeley are not in San Francisco, much of Northwestern is not in Chicago (but, notably, Northwestern is included in America's Urban Campus metrics presented elsewhere in this report). However, Northwestern's Chicago campus, home to the law and medical schools, is included in Chicago for our peer cities analysis, while the main campus in nearby Evanston is not. Similarly, the medicine, dentistry, and biomedical sciences school for Tufts University is included in Boston for our peer cities analysis, but not the remainder of Tufts' academic programs.

STUDENTS

In the seven peer cities, total enrollment varies from a low of 82,432 in San Francisco to a high of over half a million in New York City. This range of student population was largely driven by overall population, with the largest cities having the most students. Total enrollment is summarized in Table 8 below.

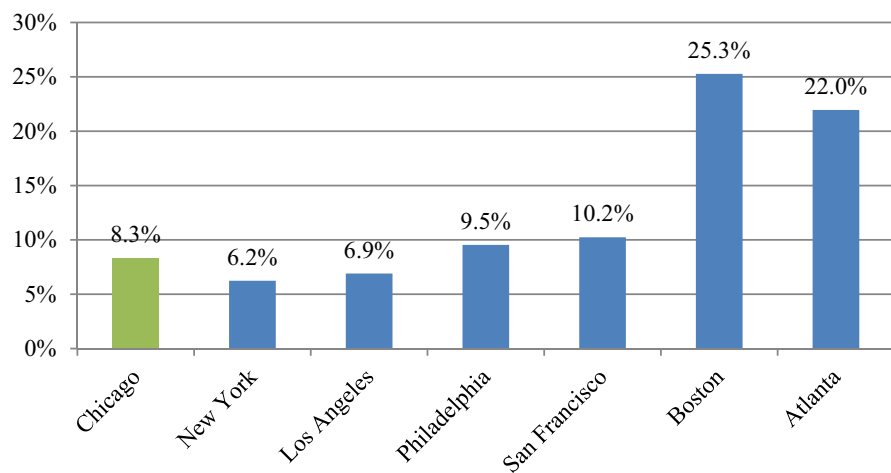
TABLE 8. Enrollment at Universities and Colleges in City Proper, Fall 2012

City	Enrollment
Chicago	224,788
New York	510,421
Los Angeles	261,778
Philadelphia	145,512
San Francisco	81,734
Boston	142,152
Atlanta	88,282

Source: AEG Estimates based on source data from IPEDS and various universities

Among our peer cities, the ratio of students to general population tapers as cities grow larger. New York has the lowest ratio of total enrollment to population at 6.2%. The next largest city has the next lowest ratio and so on, until we reach, Boston which has a 25% ratio to Atlanta's 22% despite the former possessing an additional 200,000 residents.

FIGURE 9. Enrollment in Colleges and Universities in Cities, shown as proportion of total population, Fall 2012



*Source: IPEDS, U.S. Census Bureau
Analysis Anderson Economic Group, LLC*

Chicago ranks third among all cities for number of students, with 225,000 total students enrolled in colleges and universities citywide. The ratio of enrollment

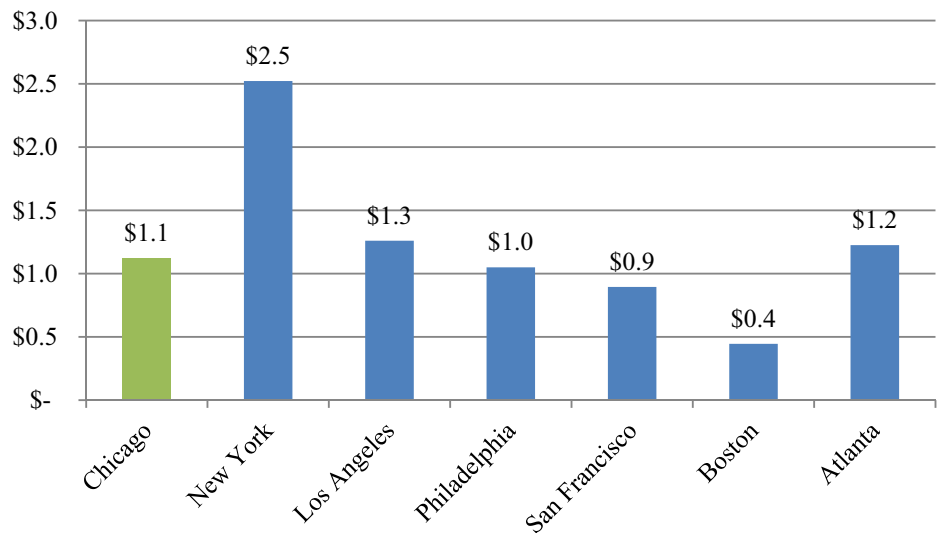
to population in Chicago is 8%, higher than that of New York and Los Angeles, but lower than that of other peer cities.

RESEARCH SPENDING

University spending on research also exhibited substantial variation, though it was driven by the presence or absence of certain major research institutions. New York led the group with \$2.5 billion, nearly double or more of the next closest competitors, Los Angeles with \$1.3 billion and Atlanta at \$1.2 billion. Chicago is not far behind, in fourth place, at \$1.1 billion.

Each of these cities benefits from the massive investments of major research universities, such as New York with Columbia (\$671 million) and NYU (\$644 million) or Atlanta with Georgia Tech (\$658 million) and Emory (\$409 million). These major research universities alone rival and in several cases exceed the total research expenditures of other cities on our list, San Francisco (\$895 million) and Boston (\$445 million), which are located in metropolitan areas where the dominant research institutions are located in other municipalities.

FIGURE 10. Research & Development Spending by Colleges and Universities in Cities, FY 2013 (billions)



Source: IPEDS

Analysis: Anderson Economic Group, LLC

TECH TRANSFER

Universities in each of the peer cities universities represent a substantial source of innovation and technological advancement. In 2012 they generated nearly 750 patents, launched over 120 startups and earned over \$689 million in licensing revenue combined. The distribution of this innovation was far from even, with New York finishing in the top two of all the categories assessed and Boston being among the last two finishers in all categories.

Innovation outputs, much like research spending inputs, were dominated by a few major institutions, particularly those with prominent engineering and medical schools. Patent activities, startup generation and licensing were all equitably distributed between these two types or slightly favoring the engineering schools; licensing revenue however, heavily skewed towards elite medical schools. For example, in Atlanta, Georgia Tech had nearly four times the numbers of patents awarded than Emory did, but less than a tenth as much licensing revenue.

The disparities between cities were also most prevalent in the income generated through licensing. With more than \$430 million, New York generated over 60% of the licensing revenue. Chicago came in second with \$131 million. Other categories showed closer competition, with New York, Los Angeles and Philadelphia all having similar results in terms of patents issued and startups launched. Chicago led in only one category—patent applications—where it had 522, edging out otherwise dominant New York, but Chicago’s middle-of-the-pack performance elsewhere belied a moderate success rate. In that year, only 105 patents were awarded, suggesting an approval rate of only 20%.

TABLE 9. Technology Transfer Activity by Colleges and Universities in Cities, FY 2012

City	Patents Issued	Patent Applications	Startups	Licenses Executed	Licensing Revenue (millions)
Chicago	105	522	16	105	\$131.0
New York	194	508	24	222	\$430.3
Los Angeles	164	329	22	103	\$29.9
Philadelphia	124	218	23	149	\$22.0
San Francisco	35	88	11	58	\$37.3
Boston	26	98	7	23	\$10.8
Atlanta	98	231	19	174	\$27.8

Source: Association of University Technology Managers Licensing Survey
Analysis: Anderson Economic Group, LLC

Appendix A. Methodology

This appendix describes how data sources were used to create the maps included in this report and the methodology used to complete our economic footprint analysis.

GEOGRAPHICAL ANALYSIS

All of the maps in this report were created using Geographic Information Software (GIS), using data provided by the universities and colleges in America's Urban Campus.

Map 1, "Campus Locations for America's Urban Campus Institutions," on page 9, was created using the addresses of America's Urban Campus colleges and universities.

Map 3, "Students by U.S. State, Fall 2012," on page 34, and Map 4, "Students by Country, Fall 2012," on page 35, were created using data provided by the colleges and universities. Schools provided the data for the residence of students enrolled in Fall 2013. These maps do not include students from schools that were unable to provide student origin data.¹⁹

We also received data from AUC schools on their alumni with known location by Illinois Zip Code, U.S. state, and country. Map 5, "Alumni by Illinois County," on page 37; Map 6, "Alumni by U.S. State," on page 38; and Map 7, "Alumni by Country," on page 39, were made following the same methodology as the maps showing students by location. These maps do not include alumni from schools that were unable to provide alumni data by location.²⁰

Additionally, we received information from AUC institutions on the partnerships they currently pursue with Chicago Public Schools (CPS). America's Urban Campus colleges and universities provided us with a list of their partnership schools, their partnership schools' addresses, and the addresses where programs take place. We verified that the schools were CPS schools using the CPS website. We used this data to create Map 2, "America's Urban Campus Partnerships with Chicago Public Schools," on page 23. Programs that take place at the

19. The following schools are not included in the Students by State map: Chicago State University, City Colleges of Chicago, Robert Morris University, and University of Illinois-Chicago. The following schools are not included in the Students by Country map: Chicago State University, City Colleges of Chicago, North Park University, Robert Morris University, Saint Xavier University, and University of Illinois-Chicago.

20. The following schools are not included in the Alumni by Illinois County map: Chicago State University, City Colleges of Chicago, North Park University, and Robert Morris University. The following schools are not included in the Alumni by State and the Alumni by Country maps: Chicago State University, City Colleges of Chicago, North Park University, Robert Morris University, and University of Illinois-Chicago.

CPS school are identified by a blue dot. CPS schools participating in programs that take place at the AUC campus are identified by a red dot. Note that many CPS schools have multiple partnerships with America's Urban Campus colleges and universities.

ACADEMIC PROGRAM DEFINITIONS

The academic program areas used in “Degrees” on page 19 are based on the National Center for Education Statistics’ Classification of Instructional Programs (CIP) codes that they use in their Integrated Postsecondary Education Data System (IPEDS). The composition of each program area is as follows:

The *Physical Science, Agriculture, and Natural Resources* academic program area includes the following fields of study: agriculture, agriculture operations, and related sciences; natural resources and conservation; and physical sciences.

The *Business, Management, and Law* academic program area includes the following fields of study: legal professions and studies; business, management, marketing, and related support services; and public administration.

The *Engineering, Mathematics, and Computer Science* academic program area includes the following fields of study: architecture and related services; computer and information sciences and support services; engineering; and mathematics and statistics.

The *Humanities* academic program area includes the following fields of study: area, ethnic, cultural, and gender studies; communication, journalism, and related programs; education; foreign languages, literatures, and linguistics; family and consumer sciences/human sciences; English language and literature/letters; liberal arts and sciences, general studies and humanities; library science; multi/interdisciplinary studies; philosophy and religious studies; theology and religious vocations; human services, general; visual and performing arts; and history.

The *Medicine and Biological Science* academic program area includes the following fields of study: biological and biomedical sciences; and health professions and related clinical sciences.

The *Social Sciences* academic program area includes the following fields of study: social sciences; psychology; public policy analysis; and social work.

The *Other* academic program area includes the following fields of study: personal and culinary services; parks, recreation, leisure, and fitness studies; Homeland security, law enforcement, firefighting, and related protective services; construction trades; mechanic and repair technologies/technicians; precision production; transportation and materials moving; communications technologies/technicians and support services; engineering technologies/techni-

cians; military technologies and applied sciences; community organization and advocacy; public administration and social service professions, other; and science technologies/technicians.

ESTIMATING ECONOMIC FOOTPRINT

We define *economic footprint* as the aggregate spending, jobs, and earnings in Chicago that are associated with the activity of America's Urban Campus 17 colleges and universities in Chicago. Economic footprint includes both direct effects and indirect effects, as described below:

1. The *direct* effect of the universities' economic activity includes spending, employment, and earnings that are directly attributable to the colleges' and universities' operations in the city, including hiring Chicago residents and paying Chicago companies for goods and services.
2. The *indirect* effect of the colleges' and universities' economic activity occurs as dollars re-circulate throughout the city's economy. Suppliers for the colleges and universities are part of a supply chain and have vendors of their own who benefit indirectly from university spending. In addition, employees use their wages to buy groceries from the local grocery store, and contractors may use their revenues from the universities to buy new equipment or expand their office space. Even then, dollars continue to circulate as grocery store owners and equipment providers now have more money to purchase goods and services in Chicago.

Note that, while we include extensive data on students from these schools, we do not include City Colleges or Robert Morris University in our estimate for economic footprint due to data availability.

RIMS II Multipliers

To estimate indirect spending, we multiplied direct spending by final demand output multipliers released by the U.S. Department of Commerce's Regional Input-Output Modeling System (RIMS II). We estimated the indirect jobs and earnings using RIMS II direct-effect multipliers. These multipliers are only available for Cook County, so we made adjustments to estimate what they should be for the City of Chicago.

We adjusted the output multipliers using a ratio of estimated sales in Chicago to estimated sales in Cook County.²¹ Estimated sales in Chicago and Cook County, respectively, were derived by dividing sales tax revenue in 2013 by the effective sales tax rate in that year. We adjusted this ratio slightly, assuming that Chicago-based companies are twice as likely to use a Chicago company as the average Cook County company. We then adjusted the corresponding multipliers for each industry in Cook County by multiplying this ratio by the portion of the multi-

21. FY 2013 Comprehensive Annual Financial Reports for Chicago and Cook County, respectively.

plier greater than one. We only multiplied the portion greater than one so as to only adjust the *indirect* portion of the impact, leaving the direct portion unchanged.

We took a similar approach to estimate the jobs and earnings multipliers for Chicago. For employment, we used a ratio of total Chicago employment to total Cook County employment.²² We adjusted this ratio by assuming that Chicago companies are twice as likely to use a Chicago company as the average Cook County company. For earnings, we had little data to go on. We simply assumed that the average earnings in Chicago were 15% higher than that for non-Chicago Cook County employees, and adjusted the employee ratio accordingly. We applied each of the resulting ratios to the employee and earnings fixed-effects multipliers for Cook County, respectively. Like with the final-demand output multiplier we derived, we only applied the derived ratios to the portion of the multiplier that exceeded one.

Spending

We estimate the direct and indirect spending for the following sources of economic activity:

- University payroll spending;
- University non-payroll spending; and
- Student spending.

Our economic footprint analysis is shown in detail in Table A-3 on page A-10.

Payroll Spending. In order to estimate the amount of payroll spending (wages, salaries, and employee fringe benefits) in the City of Chicago, we relied on data from America's Urban Campus colleges and universities, who provided us with the data they submit to IPEDS for FY 2013.²³ We then used the data they provided for wages by zip code to estimate the proportion of payroll going to Chicago residents. We multiplied this proportion by total payroll reported to IPEDS to estimate the wages and benefits going to Chicago residents.

If a school was unable to provide us with wages by zip code, we asked them to provide a conservative estimate of the proportion of payroll that remains in Chicago. If a school was unable to provide such an estimate, we used the average proportion of payroll going to Chicago residents for all America's Urban Campus schools as an estimate.²⁴

22. Bureau of Labor Statistics, Local Area Unemployment Statistics

23. The exception to this is that we used FY 2012 IPEDS data for North Park University and Saint Xavier University because FY 2013 data was not made available.

Non-payroll Spending. In order to estimate the non-payroll spending in Chicago, we used data provided by the America's Urban Campus colleges and universities. Schools provided non-payroll expenditure payments by zip code. We applied the proportion of payments to vendors in the city, according to spending by zip code data, to the amount of non-payroll spending reported in IPEDS for FY 2013.²⁵ We used school data and professional judgment to determine any differences in the percentage of spending remaining in Chicago by function.²⁶

If a school was unable to provide us with non-payroll spending by zip code, we used a conservative estimate of 35% for the proportion of non-payroll spending in Chicago.²⁷ This proportion is less than the average proportion of non-payroll spending in Chicago for any other school, so it is likely an underestimate; however, the proportion of non-payroll spending in Chicago varied significantly from school to school.

Student Spending. To calculate the student spending in Chicago, we used data provided by the AUC colleges and universities on the number of students that lived on- and off-campus at AUC schools. We then estimated the student spending for several categories of living expenses:

- Off-campus rent and food;
- Books and supplies;
- Apparel, food & grocery, and other basic needs; and
- Meals & entertainment off-campus.²⁸

For each category, we estimated total spending for the total number of students, with the exception of books and supplies, which we calculated on an FTE-basis. All values are in 2013 U.S. dollars.

24. University of Illinois-Chicago provided an estimate of the portion of their payroll that remains in Chicago. We used the average proportion of payroll going to Chicago residents for Columbia College Chicago.

25. The exception to this is that we used FY 2012 IPEDS data for North Park University and Saint Xavier University because FY 2013 data was not made available.

26. For example, public service expenditures, which include community services, extension services, and broadcasting, are more likely to occur in Chicago. For athletics, many of the recruiting expenses may actually take place outside of Chicago. Research may involve purchasing specialized equipment outside of the city. These are the considerations we kept in mind while determining the proportion of spending in Chicago by function.

27. We used this estimate for Chicago State University and Saint Xavier University.

28. In order to avoid double counting in our economic footprint, we do not include on-campus room and board in our analysis.

Off-Campus Rent and Food

We obtained room and board costs for on-campus undergraduate and graduate students from America's Urban Campus colleges and universities. We used these costs as a baseline to estimate the costs of rent and food for students living off-campus. In order to avoid double counting, we do not include on-campus room and board in our economic footprint analysis. We assumed that undergraduate students living off-campus spend 10% more on housing and food than undergraduates students living on-campus. We assumed that graduate students pay, on average, 10% more on housing and food than off-campus undergraduate students.

Several AUC institutions do not offer on-campus housing. For these schools, we estimated the cost of off-campus rent and food by using the average of all AUC schools' on-campus housing costs as a baseline. We then applied the same assumptions outlined above.

We assumed that a percentage of America's Urban Campus students live outside Chicago and commute in to the city. We assumed that the percentage of students living in the city varied by school due to a number of factors, including the location of the school (downtown vs. near suburbs) and the type of school (local school vs. national school). While we don't have data on the current residence of students, we do have data on the current zip code of students employed by AUC schools. For each school, we used the percentage of student employees living in Chicago as an estimate of the percentage of total students living in the city. We then applied these percentages to our estimates for total spending on rent and food to obtain the amount of spending on housing and food that occurs in Chicago.

Books and Supplies

We obtained data for books and supplies from College InSight.²⁹ We assumed that graduate students paid, on average, 10% more for books and supplies than undergraduate students.

Data on the cost of books and supplies was unavailable for several schools. We researched the costs of books and supplies for similar programs, and took the average. We also allowed for 35% of books and supplies to be purchased online, resulting in spending outside the city.

29. College InSight is an initiative of the Institute for College Access & Success, and provides data sourcing from IPEDS, Pell Grant files, Fiscal Operations Report and Application to Participate files, and Common Data Set files. Data can be found at college-insight.org.

Apparel, Meals, and Entertainment

Students at America's Urban Campus schools also spend money on clothes, food at restaurants, and entertainment, all of which contributes to AUC's economic footprint in Chicago. We obtained data on spending on apparel and needs, as well as food away from home and entertainment, from the midyear 2012-13 Consumer Expenditure Survey (CES).³⁰ This survey provides data on the average annual expenditures per household on many different categories of spending.

We used the CES age category "under 25" for undergraduate students. We assumed that the majority of off-campus undergraduate students do not have partners or children, and live as individuals with roommates. We divided the spending in the categories of spending used by the average number of people in the household to obtain average annual expenditures for an individual. For the "under 25" category, the average size of a household in the midyear 2012-13 CES survey was 1.9 persons.

We multiplied each of the spending category values by 75% to ensure that we only count purchases for time that the students spend on campus during the year. To estimate the amount spent by undergraduates living on campus, we used the CES data calculated for an individual for apparel and needs, as well as meals off-campus and entertainment. For students living off-campus, we assumed that spending was 10% higher for apparel and needs, and 20% higher for off-campus meals and entertainment.

We used the CES age category "25-34 years" for graduate students. Unlike undergraduate students, many graduate students have a partner or children. We assumed that 50% of graduate students live with a partner and/or children and 50% of graduate students live as individuals. We applied these assumptions to the data in the CES survey. We took 50% of the spending on each category and divided it by the average number of people in the household to obtain average annual expenditures for an individual. For the "25-34 years" category, the average size of a household in the midyear 2012-13 CES survey was 2.8 persons. We then added the calculated individual average to 50% of the spending of each category's household average to obtain the average spending for each category.

Similar to undergraduate students, we multiplied each of the spending category values by 75% to account for time that the students spend on campus during the year. To estimate the amount spent by graduates living on campus, we used the CES data calculated for the individual-household mix for apparel and needs, as well as meals off-campus and entertainment. We assumed that expenses for

30. Bureau of Labor Statistics, Consumer Expenditure Survey, "Age of reference person: Annual expenditure means, shares, standard errors, and coefficient of variation, Consumer Expenditure Survey, 3rd quarter 2012 through 2nd quarter 2013."

graduate students living off-campus were 10% higher for apparel and needs, and 20% higher for meals off-campus and entertainment than for graduate students living on-campus.

Similar to our assumptions for rent and food, we assumed that a portion of apparel, meals, and entertainment spending occurs outside of Chicago. We used the same percentage of spending in Chicago for apparel, meals, and entertainment as we did for spending on rent and food. We recognize that even if a student lives outside the city, he or she is likely to spend money at Chicago restaurants, stores, and entertainment venues. Thus, our student spending total represents a conservative estimate of the actual impact AUC student spending has on Chicago.

Employment

To estimate the employment in Chicago supported by America’s Urban Campus schools, we used the number of employees that work for Chicago’s colleges and universities. We also used data from the schools to determine what proportion of those employees live in Chicago.

We then applied the calculated BEA RIMS II direct-effect employment multipliers (see “RIMS II Multipliers” on page 3) to estimate the additional indirect citywide employment in industries supported by the AUC colleges and universities. For school faculty and staff, we used the multiplier for the “junior colleges, colleges, universities, and professional schools” industry. Table A-1 below shows the calculations for direct and indirect employment.

TABLE A-1. Employment Supported by AUC Colleges and Universities in Chicago, FY 2013

	Total	% in Chicago	Total in Chicago	Direct-effect multiplier	Direct and Indirect Jobs in Chicago
Faculty	18,454	60.7%	11,201	1.39	15,547
Staff	<u>34,050</u>	<u>64.3%</u>	<u>21,881</u>	<u>1.39</u>	<u>30,373</u>
Total Jobs	52,504	63.0%	33,082		45,920

Source: AEG estimates and analysis, based on source data from America’s Urban Campus colleges and universities, BEA RIMS II Multipliers

Earnings

To estimate the earnings impact of America’s Urban Campus colleges universities, we used the wages, salaries, and benefits paid to college and university employees. We also used data from the AUC schools to determine what proportion of those employees live in Chicago.

We then applied BEA RIMS II direct-effect employment multipliers (see “RIMS II Multipliers” on page 3) to estimate the additional indirect earnings in Chicago generated by AUC activity. For school faculty and staff, we used the multipliers for the “junior colleges, colleges, universities, and professional schools” industry. Table A-2 below shows the calculations for direct and indirect earnings.

TABLE A-2. Earnings Supported by AUC Colleges and Universities in Chicago, FY 2013 (millions)

	Total	% in Chicago	Total in Chicago	Direct-effect multiplier	Direct and Indirect Earnings in Chicago
Earnings	\$5,222	62.9%	\$3,283	1.39	\$4,567

Source: AEG estimates and analysis, based on source data from America’s Urban Campus colleges and universities, BEA RIMS II Multipliers

Note: Numbers do not multiply due to rounding.

TABLE A-3. Economic Footprint of America's Urban Campus in Chicago

Spending					
	2012 Spending	% in Chicago	2012 Spending in Chicago	Multiplier	Total Spending
Salaries and Wages	\$ 3,825,228,510	61.5%	\$ 2,353,481,201	1.17	\$ 2,762,662,493
Employee Benefits	\$ 1,396,813,266	66.5%	\$ 929,510,233	1.94	\$ 1,802,949,982
<i>Total Payroll Spending</i>	<i>\$ 5,222,041,776</i>		<i>\$ 3,282,991,434</i>		<i>\$ 4,565,612,476</i>
Instruction & Academic Support	\$ 595,885,953	52.9%	\$ 315,105,776	1.89	\$ 595,342,614
Research	\$ 392,599,093	15.9%	\$ 62,578,005	1.84	\$ 114,995,667
Public Service, Student Services, Institutional Support, Auxiliary Enterprises, & Other Expenses	\$ 754,738,648	56.1%	\$ 423,545,300	1.90	\$ 805,660,561
Operation and Maintenance of Plant	\$ 498,177,100	48.5%	\$ 241,687,525	1.86	\$ 448,933,938
Hospital Services	\$ 271,876,519	20.0%	\$ 54,375,304	1.86	\$ 100,946,126
Athletics	\$ 61,700,249	40.2%	\$ 24,780,901	1.97	\$ 48,849,732
Construction	\$ 3,560,846,087	30.8%	\$ 1,095,199,170	1.82	\$ 1,989,327,800
<i>Total Non-Payroll Spending</i>	<i>\$ 6,135,823,649</i>	<i>0.361365011</i>	<i>\$ 2,217,271,981</i>		<i>\$ 4,104,056,438</i>
Off-campus Rent & Food	\$ 1,681,651,375	63.4%	\$ 1,065,575,757	1.49	\$ 1,586,374,484
Books & Supplies	\$ 148,371,353	65.0%	\$ 96,441,379	1.72	\$ 165,814,765
Apparel & Other Basic Needs	\$ 114,880,280	63.6%	\$ 73,079,082	1.72	\$ 125,647,216
Off-campus Meals & Entertainment	\$ 198,895,045	63.5%	\$ 126,314,303	1.85	\$ 233,309,292
<i>Total Student Spending</i>	<i>\$ 2,143,798,052</i>		<i>\$ 1,361,410,521</i>		<i>\$ 2,111,145,757</i>
Earnings					
	Total	% in Chicago	Total Earnings in Chicago	Multiplier	Total Earnings
Total Earnings	\$ 5,222,041,776	62.9%	\$ 3,282,991,434	1.39	\$ 4,566,512,636
Jobs					
	Total	% in Chicago	Total Jobs in Chicago	Multiplier	Total Jobs
Faculty	18,454	60.7%	11,201	1.39	15,547
Staff	34,050	64.3%	21,881	1.39	30,373
Total	52,504	63%	33,082		45,920
Total Economic Footprint					
	Spending	Earnings	Jobs		
Direct	\$ 6,861,673,936	\$ 3,282,991,434	33,082		
Indirect	\$ 3,919,140,735	\$ 1,283,521,202	12,838		
Total	\$ 10,780,814,671	\$ 4,566,512,636	45,920		

Source: AEG estimates and analysis, based on source data from America's Urban Campus colleges and universities, College InSight, BEA RIMS II Multipliers, 2012-13 midyear Consumer Expenditure Survey

Note: The Economic Footprint does not currently include data from City Colleges of Chicago or Robert Morris University. Data from these institutions are pending.

PEER CITY COMPARISON

In order to compare the higher education sector of Chicago to that of other cities, we performed a unique analysis that carefully includes all schools within city limits and excludes others.

Selecting Peer Cities

First, we selected a set of six peer cities that provide a good benchmark for the City of Chicago. The first two we chose were the cities of New York and Los Angeles, the two most populous cities in the country (Chicago is the third most populous), both of which have a large amount of colleges and universities within their city limits.

We then turned to other large cities that are well-known for having a lot of prominent higher-education institutions. Of these, we worked with America's Urban Campus to choose Philadelphia, San Francisco, Boston, and Atlanta. Factors that went into our selection included a high city population, presence of a higher education sector, and reputation for higher education institutions within the city. We also sought a sample that had at least one city from every region in the U.S.

Determining Which Colleges to Include

Once we had our set of cities, we set about determining which colleges should be included as part of that city's higher education sector. Note that we wanted to include all nonprofit, degree-granting colleges and universities within city limits, and only those colleges and universities. This means that any colleges and universities within the metropolitan area but outside city limits were not included.

We begin with IPEDS data on all colleges and universities within each city. For each city, we then performed research to determine if a non-negligible portion of those colleges and universities designated to these cities was actually located outside of the city. We found that this did not apply to any schools that had a main campus located in each peer city.

Next, we performed research to determine if there were any colleges and universities located near the peer cities that had a significant presence in the city proper. For example, Northwestern is located in Evanston, outside Chicago, but its medical school, law school, and part-time business program are located near downtown Chicago. Similarly, Tufts University is located in Medford, outside Boston, but its medical school is located near downtown Boston. Table A-4 on page A-12 lists the remote campuses included in our sample.

TABLE A-4. Remote Campuses Located in Peer Cities, for Colleges and Universities Whose Main Campus Is Located Elsewhere

City	College or University	Fields of Study
Chicago	Northwestern University	Medicine
		Law
		Part-time Business
New York	Mercy College	Bronx and Manhattan campuses
Los Angeles	Loyola Marymount	Law
San Francisco	University of the Pacific	Dentistry
	University of Pennsylvania	Executive Business
Boston	Tufts University	Medicine
		Dentistry
		Nutrition
		Biomedical Sciences
	Harvard University	Business
Atlanta	Lesley University	Art and Design
	Mercer University	Pharmacy and Health Sciences
		Theology
		Nursing
		Continuing Studies
		Portions of business and education programs

Source: IPEDS, University or college websites

Estimating Metrics by City

Due to the need to allocate metrics to the schools as listed above, we were limited in which metrics that we could estimate with confidence. To estimate the total number of enrolled students at each college and university in our sample, we used IPEDS data for colleges and universities that had a main campus in each city. For remote campuses, we used online information about each program in order to estimate the portion of each school's student body enrolled in the fields of study listed in Table A-4 above.

Similarly, for research and development spending, we used IPEDS data on research and development spending for each school with a main campus in each city. For remote campuses, we used information from the National Science Foundation, which provides research and development spending by school *by field*. We counted only the portion of research and development spending that corresponded to the proper field of study, as listed in Table A-4 above.

Appendix B. About the Authors

ANDERSON ECONOMIC GROUP

Anderson Economic Group, LLC was founded in 1996 and today has offices in East Lansing, Michigan and Chicago, Illinois. AEG is a research and consulting firm that specializes in economics, public policy, financial valuation, and market research. AEG's past clients include:

- *Governments* such as the states of Michigan, North Carolina, Kentucky, and Wisconsin; the cities of Detroit, Cincinnati, Norfolk, and Fort Wayne; counties such as Oakland County, Michigan, and Collier County, Florida; and authorities such as the Detroit-Wayne County Port Authority.
- *Corporations* such as GM, Ford, Delphi, Honda, Taubman Centers, The Detroit Lions, PG&E Generating, SBC, Gambrinus, Labatt USA, and InBev USA; Spartan Stores, Nestle, automobile dealers and dealership groups representing Toyota, Honda, Chrysler, Mercedes-Benz, and other brands.
- *Nonprofit organizations* such as Michigan State University, Wayne State University, University of Michigan, Van Andel Institute, the Michigan Manufacturers Association, United Ways of Michigan, Service Employees International Union, Automation Alley, and the Michigan Chamber of Commerce.

Please visit www.AndersonEconomicGroup.com for more information.

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Mr. Horwitz is a Consultant at Anderson Economic Group, working in the Public Policy and Economic Analysis practice area. Mr. Horwitz' work includes research and analyses for a range of AEG clients representing both the public and private sectors.

Mr. Horwitz's recent work includes an assessment of the effects of personal property tax reform in Michigan, an assessment of the effects of proposed reforms to state pension and retiree health care systems, analyses of the fiscal condition and tax policies of Michigan's state and local governments, and a review of tax incentive programs administered by the states of Michigan and Kentucky, respectively.

Prior to joining AEG, Mr. Horwitz was the Coordinator of Distribution for the Community Center of St. Bernard near New Orleans, where he oversaw the distribution of donated food, clothes, and household supplies to low-income residents of St. Bernard Parish and New Orleans' Lower Ninth Ward.

Mr. Horwitz holds a Master of Public Policy from the Harris School of Public Policy at the University of Chicago and a Bachelor of Arts in Physics and Philosophy from Swarthmore College.

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David Westlake is an Analyst with Anderson Economic Group, working in the Public Policy and Economic Analysis practice area. His background is in energy and utility policy, as well as economic analysis. His work at AEG includes research and data analysis, as well as assisting on economic impact valuation projects.

Prior to joining Anderson Economic Group, Mr. Westlake worked as an Intern at the American Council on Renewable Energy in Washington, DC and at the US Embassy in Singapore. During graduate school he worked as a Research Assistant at Michigan State University's Institute of Public Utilities. His work included research and market analysis on developments and trends in the energy, water and communications industries.

Mr. Westlake holds B.A.s in both International Relations and Economics from Michigan State University and returned to MSU to earn his Master of Public Policy.

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Ms. Perry was a Research Associate at Anderson Economic Group during the production of this report, working in the Public Policy and Economic Analysis practice area.

Prior to joining Anderson Economic Group, Ms. Perry conducted research in Freiburg, Germany on a Fulbright scholarship. Her project examined the successes and shortcomings of the post-World War II trials that extended attempts of achieving justice beyond what was accomplished at Nuremberg. Ms. Perry also served as an intern for U.S. Senator Carl Levin.

Ms. Perry is a graduate of Michigan State University, James Madison College. She holds a Bachelor of Arts in International Relations and German.