The Case for Increasing College Completion Rates in Greater St. Louis

Talent: The Future of Metro St. Louis in the Knowledge Economy – Supplemental Report

June 2011

Contents

Section 1

A college-educated workforce is essential to realizing Greater St. Louis' economic development goals.

St. Louis has adopted an ambitious five-year strategy for economic growth.

Our vision: By 2020, Greater St. Louis will be consistently ranked among the top 10 of the 20 largest U.S. metropolitan areas in indicators of regional vitality, economic health, and the creation of community wealth.

The economic clusters at the core of our strategy:

Financial and Information Services
Health Science and Services
Sustainable Technologies
Advanced Manufacturing and Technology
Multi-modal Supply Chain Management

One of the four core principles of this strategy states that:

> "Tomorrow's successful regions will be those that achieve a purposeful alignment of the supply and demand of talent to fuel the growth of their regional economy."

The nature of work in these economic clusters has been – and will continue to be – transformed by technology and innovation. Businesses increasingly require a skilled, technically-proficient, and continuously-learning workforce.

Targeted Economic Sector	**Examples of New and Emerging Occupations in Sector**
Financial and Information Services	Business Intelligence Analysts Network Designers Risk Management Specialists
Health Science and Services	Informatics Nurse Specialists Nuclear Medicine Physicians Regulatory Affairs Managers
Sustainable Technologies	Environmental Economists Environmental Restoration Planners Solar Energy Systems Engineers
Advanced Manufacturing and Technology	Fuel Cell Technicians Manufacturing Engineering Technologists Robotics Engineers
Multi-modal Supply Chain Management	Customs Brokers Logistics Engineers Radio Frequency Identification Device Specialists

Source: U. S. Department of Labor 2009.[1]

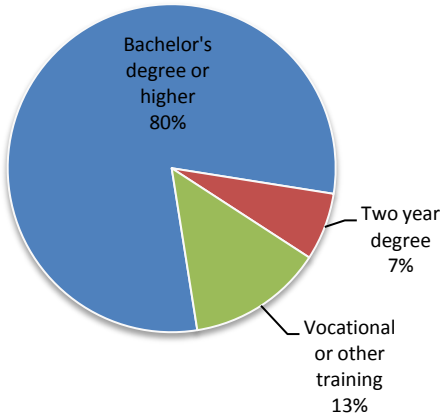
College degrees provide the foundational skills for many of these occupations.

- The Financial and Information Service cluster consists of 41 occupations. Of these, 30 are considered high growth occupations by MERIC. Eighty percent of these jobs will require a bachelor's degree or higher.

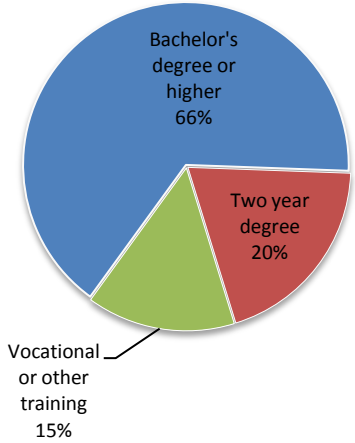
- The Health Science and Services cluster consists of 95 occupations. Of these, 61 are considered high growth occupations by MERIC. Sixty-six percent of these jobs will require a bachelor's degree or higher.

Most significant source of education and training for high-growth occupations

Financial and Information Services

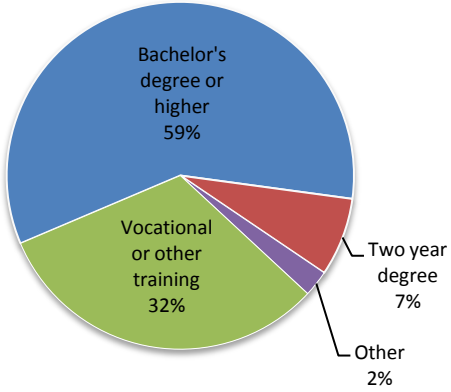


Health Science and Services

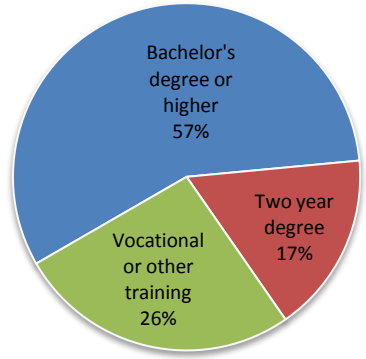


Most significant source of education and training for all occupations

Financial and Information Services



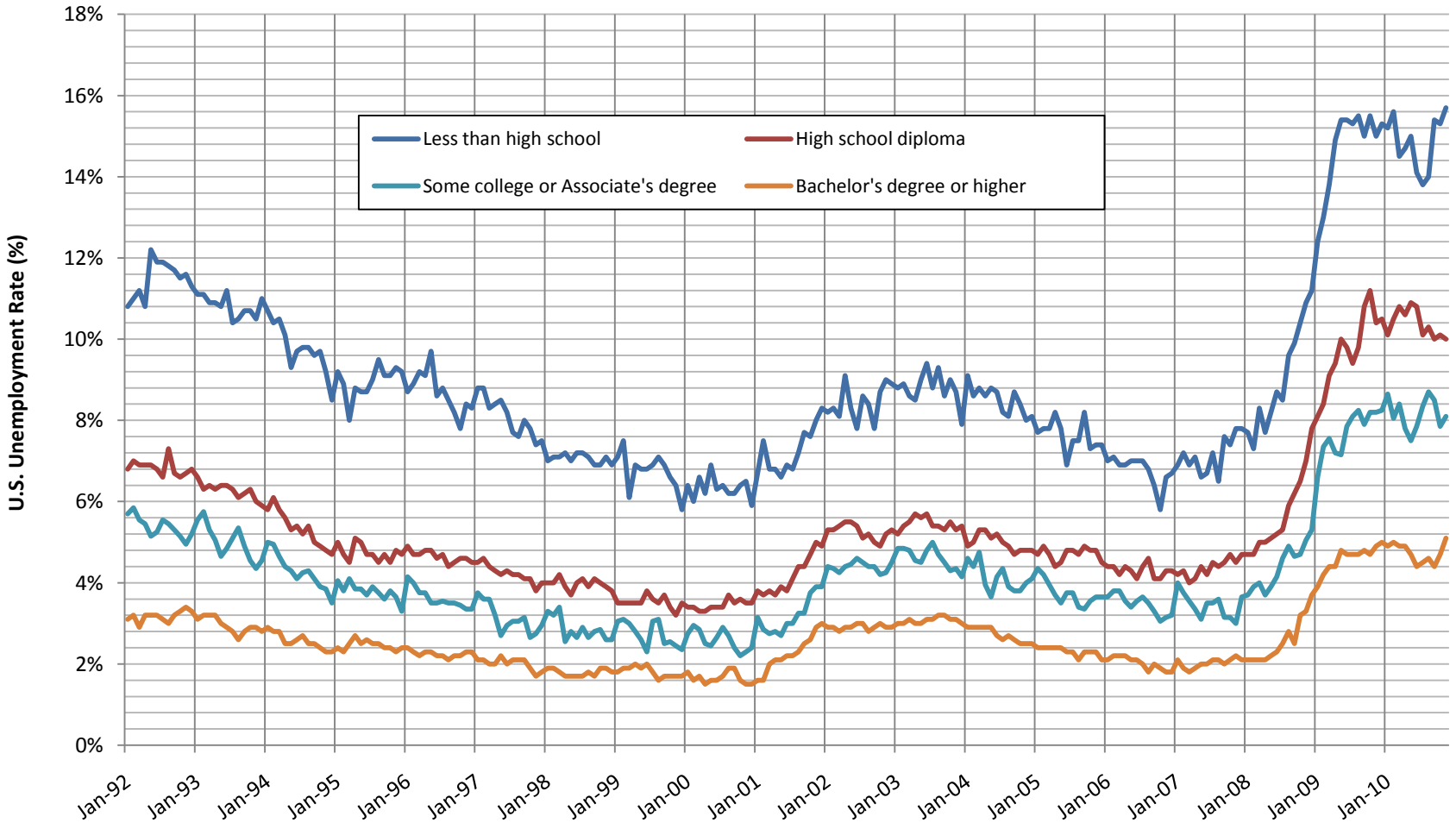
Health Science and Services



Sources: U.S. Bureau of Labor Statistics 2009; Missouri Economic Research and Information Center (MERIC) 2008.[2]

Individuals with lower levels of education were hit harder by the recession.

Unemployment rate by educational attainment level
U.S., 1992-2010



Source: U.S. Bureau of Labor Statistics 2010.[3]

As the United States slowly emerges from a period of great recession, the economic imperative of increasing college completion rates is being recognized, nationwide.

"America is slowly coming out of the Recession of 2007—only to find itself on a collision course with the future: not enough Americans are completing college. The Georgetown University Center on Education and the Workforce shows that by 2018, we will need 22 million new college degrees—but will fall short of that number by at least 3 million postsecondary degrees, Associate's or better."
Georgetown University Center on Education and the Workforce, Help Wanted: Projections of Jobs and Educational Requirements Through 2018*. June 2010.*

"If anything, the deep economic downturn of 2009 magnified the educational challenge for the nation and its metropolitan labor markets. Less-educated workers, as well as the metro areas in which they are most concentrated, have borne the brunt of the significant rise in unemployment."
Brookings Institution, The State of Metropolitan America. *Educational Attainment. May 2010*

Per capita income and college attainment rates are closely correlated. Using data from 2006 … [the national organization CEOs for Cities calculates that] raising the national median of the top 51 metro areas from 29.4 percent to 30.4 percent would be associated with an increase in income of $124 billion per year for the nation."
CEOs for Cities, The Talent Dividend

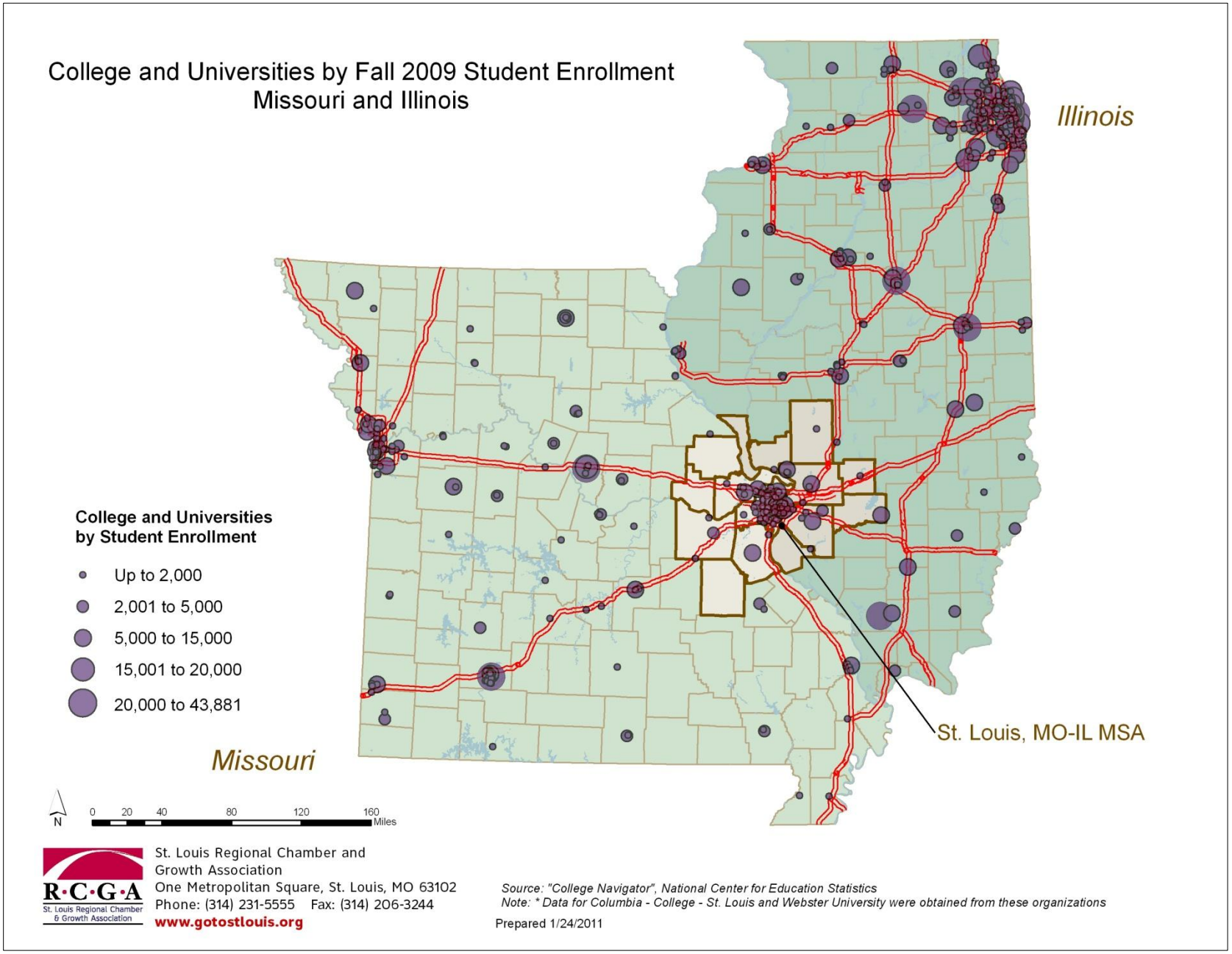
"It's hardly surprising that less educated workers have been disproportionately affected by the [economic] downturn. But now it appears that the swelling ranks of unemployed and underemployed workers are themselves a 'headwind' slowing the recovery…. Business is creating job openings, but most require at least some post-secondary education even to apply for a job, let alone get an offer from management."
*Chris Farrell, "*Failing U.S. Education Will Dumb Down Economic Growth."
Bloomberg Businessweek. June 24, 2010.

"Higher education is a prerequisite to success in a knowledge-based society and economy. The social and economic opportunities facing our country can best be addressed by educating many more people beyond high school." With this understanding, the national Lumina Foundation for Education is implementing a strategy to increase the proportion of Americans with high-quality degrees and credentials to 60 percent by the year 2025. This is "an audacious goal, but one that can and must be attained."
Lumina Foundation for Education's Strategic Plan. Goal 2025*. 2009.*

Section 2

How does St. Louis' current workforce measure up in college credentials?

The region enjoys a wealth of educational resources.



Almost 200,000 students were enrolled and 34,000 degrees were awarded in the 2009-2010 academic year.

Enrollment and degrees awarded for two-year schools
St. Louis MSA, 2009-2010

School Name	Total Enrollment	Total Degrees Awarded
Anthem College- Maryland Heights	346	101
Anthem College- Fenton	446	182
East Central College	4,203	374
Jefferson College	5,788	671
Kaskaskia College	5,337	527
Lecole Culinaire	614	169
Lewis & Clark Community College	8,179	644
Lutheran School of Nursing	160	0
Midwest Institute	191	11
Sanford-Brown College - Collinsville	612	24
Sanford-Brown College- Hazelwood	929	177
Southwestern Illinois College	14,440	1,338
St Louis College of Health Careers	340	11
St Louis College of Health Careers - Fenton	200	26
St. Charles CC	7,814	655
St. Louis CC - Florissant Valley	7,210	522
St. Louis CC - Forest Park	8,207	588
St. Louis CC - Meramec	11,186	901
St. Louis CC - Wildwood	1,401	47
Vatterott College-O'Fallon Campus	392	38
Total	**77,995**	**7,006**

Source: National Center For Education Statistics 2010.[4]

Enrollment and degrees awarded for four-year schools
St. Louis MSA, 2009-2010

School Name	Total Enrollment	Total Degrees Awarded
Aquinas Institute of Theology	244	72
Barnes-Jewish College Goldfarb School of Nursing	634	360
Blackburn College	607	122
Brown Mackie College	106	0
Chamberlain College of Nursing	3,545	1,438
Columbia College - St. Louis	1,441	110
Concordia Seminary	472	126
Covenant Theological Seminary	807	145
Eden Theological Seminary	209	38
Fontbonne University	2,863	856
Greenville College	1,576	468
Harris-Stowe State University	1,886	142
Hickey College	480	212
ITT Technical Institute - Arnold	903	259
ITT Technical Institute - Earth City	1,001	234
Kenrick Glennon Seminary	115	29
Lindenwood University	10,408	2,698
Logan College of Chiropractic	1,111	524
Maryville University	3,534	819
McKendree University	3,284	908
Midwest University	300	68
Missouri Baptist University	4,836	780
Missouri College	920	128
Missouri Tech	135	31
Principia College	527	102
Ranken Technical College	2,039	392
Sanford-Brown College - Fenton	1,044	215
Sanford-Brown College - Saint Peters	779	259
Southern Illinois University at Edwardsville	13,940	2,996
St. Louis Christian College	333	73
St. Louis College of Pharmacy	1,233	179
St. Louis University	16,317	3,097
Stevens College of Business & Arts	200	84
University of Missouri-St. Louis	16,534	2,886
University of Phoenix - St. Louis	605	121
Vatterott College - North Park	1,707	130
Vatterott College - Sunset Hills	1,052	154
Washington University	13,575	3,863
Webster University	8,126	2,100
Total	**119,428**	**27,218**

Source: National Center For Education Statistics 2010.

Nonetheless, the educational levels of our adult workforce are only average.

- Peer MSAs include the 20 largest MSAs (see Appendix A for a listing of regions) in the U.S. plus six additional MSAs that St. Louis competes with for economic development projects.
- The St. Louis region has higher levels of individuals with some college or an associate's degree than its peer regions and the U.S.
- The St. Louis region has lower levels of bachelor's and graduate degree attainment than its peer regions, but is higher than the U.S.
- Of those adults aged 25 and older who started college but did not finish, 67% finished one or more years.

Comparison of highest level of educational attainment for population aged 25 to 64
St. Louis MSA, Peer MSAs, U.S., 2009

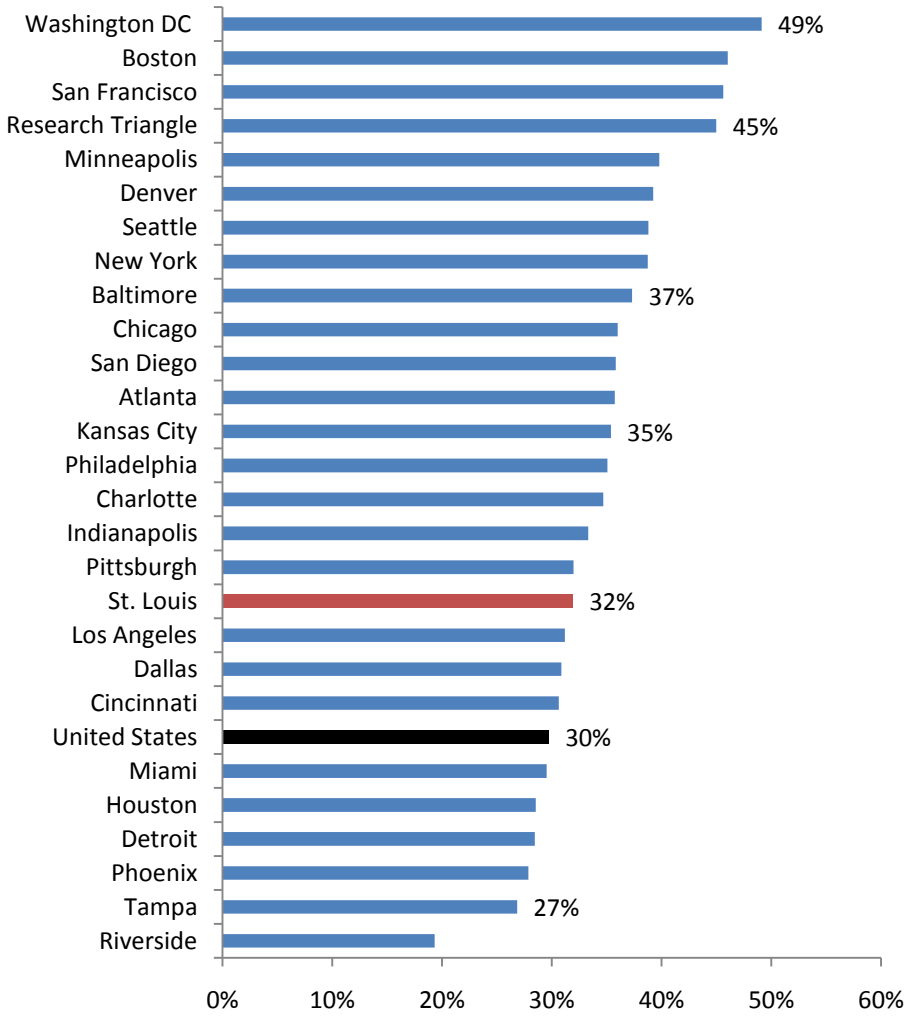
Education level	St. Louis MSA (Total)	St. Louis MSA (Percentage)	Peer MSAs (Avg. Percentage)	U.S. (Percentage)
Less than high school	123,799	8.1%	11.7%	12.6%
High school graduate, GED, or alternative	393,569	25.9%	23.7%	27%
Some college, no degree	380,846	25.1% *	21.2%	22.2%
Associate's degree	136,464	9% *	7.9%	8.4%
Bachelor's degree	299,251	19.7%	22.5%	19.1%
Graduate or professional degree	186,229	12.3%	13%	10.7%
Total	**1,520,158**	**100%**	**100%**	**100%**

Source: U.S. Census Bureau, American Community Survey 2009.[5]
Note: * indicates where St. Louis has higher levels of attainment than peer MSAs and the U.S.

Many of our competitor regions have significantly higher proportions of college graduates.

- St. Louis is tied for 17th with Pittsburgh out of 27 peer regions in bachelor's degree or higher attainment for the population aged 25 to 64.

Bachelor's degree or higher attainment for population aged 25 to 64
St. Louis MSA, Peer MSAs, U.S., 2009



Source: U.S. Census Bureau, American Community Survey 2009.[6]

The mobility of talented people impacts the overall college completion rates of our resident workforce.

Migration by educational level for individuals aged 22-39 (recent grads and young adults)
Illinois, Missouri, 2005-2007

	High school diploma only	Associate's degree or higher	Bachelor's degree or higher	Advanced degree	All levels
Illinois	-0.9%	-1.5%	-1.4%	-1.5%	-0.9%
Missouri	2%	1.2%	0.8%	-0.1%	2.6%

Source: National Center for Higher Education Management Systems 2010; data are from U.S. Census Bureau, American Community Survey.[8]

Migration by educational level and state for individuals aged 40-64 (prime working age)
Illinois, Missouri, 2005-2007

	High school diploma only	Associate's degree or higher	Bachelor's degree or higher	Advanced degree	All levels
Illinois	3.9%	13.3%	17.2%	9.5%	6.1%
Missouri	8.4%	-0.5%	-1.3%	-7.7%	4.3%

Source: National Center for Higher Education Management Systems 2010; data are from U.S. Census Bureau, American Community Survey.[7]

Section 3

What does our college pipeline tell us about the future?

St. Louis' college educated workforce represents a range of disciplines.

Field of bachelor's degree for first major for the population aged 25 and over
St. Louis MSA, Peer MSAs, U.S., 2009

Degree	St. Louis MSA (Total)	St. Louis MSA (Percentage)	Peer MSAs (Average Percentage)	U.S. (Percentage)
Computers, Mathematics and Statistics	23,116	4.2%	4.7%	4.2%
Biological, Agricultural, and Environmental Sciences	33,613	6.0%	5.9%	6.1%
Physical and Related Sciences	11,417	2.1%	2.5%	2.4%
Psychology	23,957	4.3%	4.6%	4.6%
Social Sciences	31,210	5.6%	8.3%	7.9%
Engineering	37,832	6.8%	8.7%	7.9%
Multidisciplinary Studies	10,293	1.9%	1.8%	1.9%
Science and Engineering Related Fields	51,798	9.3% *	8.4%	8.8%
Business	128,081	23.0% *	21.4%	20.1%
Education	84,862	15.3% *	11.3%	13.7%
Literature and Languages	19,401	3.5%	4.5%	4.6%
Liberal Arts and History	28,100	5.1%	5.4%	5.6%
Visual and Performing Arts	16,747	3.0%	3.9%	3.9%
Communications	24,833	4.5% *	3.9%	3.6%
Other	31,101	5.6% *	4.7%	5.0%
Total	**556,361**	**100%**	**100%**	**100%**

Source: U.S. Census Bureau, American Community Survey 2009.[9]
Note: * indicates where St. Louis has higher percentages of degrees than peer MSAs and the U.S.

Completions by Type of Degree for Business and Computer Programs/Majors
St. Louis MSA, 2008 – 2009

Financial and Information Services Cluster

Type of Degree	Number of Completions
Certificates	521
Associate's Degree	676
Bachelor's Degree	4,117
Master's Degree	5,882
Doctorate	35
Total	**11,231**

Source: National Center for Education Statistics 2010[10]

While lower than may be desired, the percentage of students in Missouri and Illinois who complete college is higher than the national average.

Percent of full-time AA degree students completing certificates or degrees within three years
Illinois, Missouri, U.S., Started 2005, completed

	Percentage completing a degree
Illinois	24.5%
Missouri	33.7%
U.S.	27.5%

Source: National Center for Higher Education Management Systems; data are from the National Center for Educational Statistics.[11]

Percent of full-time bachelor's students completing certificates or degrees within six years
Illinois, Missouri, U.S., Started 2002, completed 2008

	Percentage completing a certificate or degree
Illinois	58.9%
Missouri	56.6%
U.S.	55.9%

Source: National Center for Higher Education Management Systems; data are from the National Center for Educational Statistics. [12]

Working adults are returning to college.

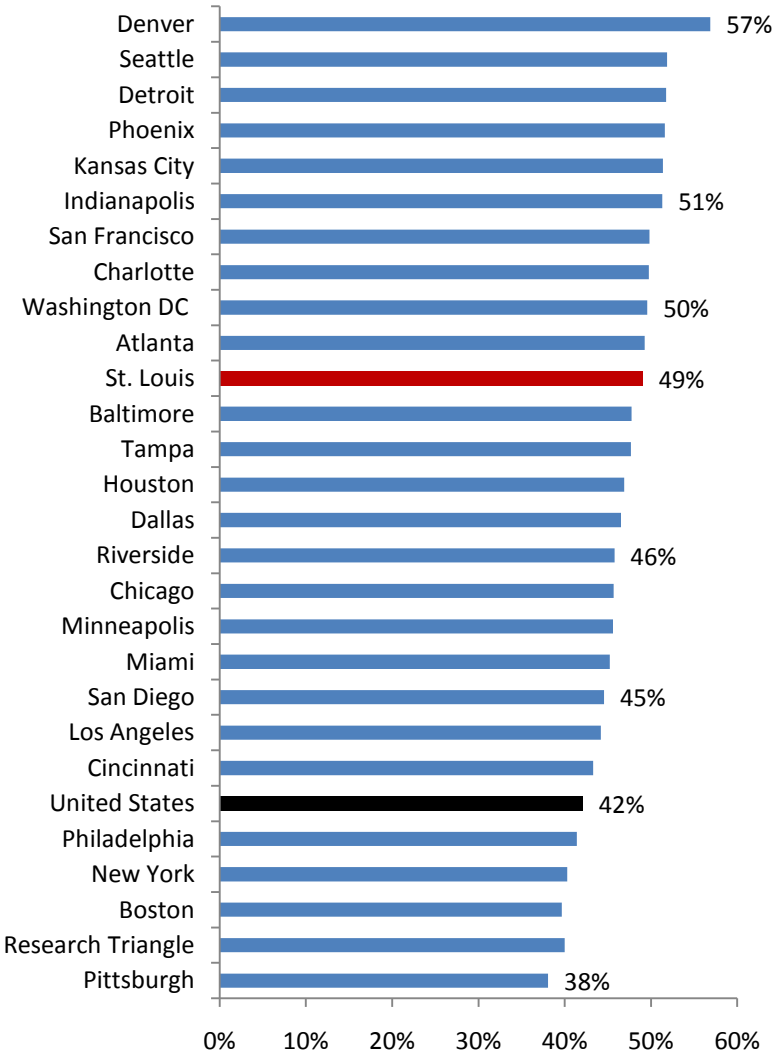
- In 2009, approximately 200,636 individuals were enrolled in college in the St. Louis MSA. Nearly half of these students (49%) were aged 25 or older.

Percentage point change in college enrollment by age
St. Louis MSA, Peer MSAs, U.S., 2005-2009

Age	St. Louis MSA	Peer MSAs	US
18 to 24 years	-2.2%	4.4%	6.2%
25 to 34 years	5.3%*	-0.8%	-1.9%
35 years and over	-3.3%	-3.6%	-4.4%

Source: U.S. Census Bureau, American Community Survey 2005 and 2009.[13]
Note: * indicates where St. Louis has higher percentages of enrollment than peer MSAs and the U.S.

Percentage of college enrollees aged 25 and over
St. Louis MSA, Peer MSAs, U.S., 2009



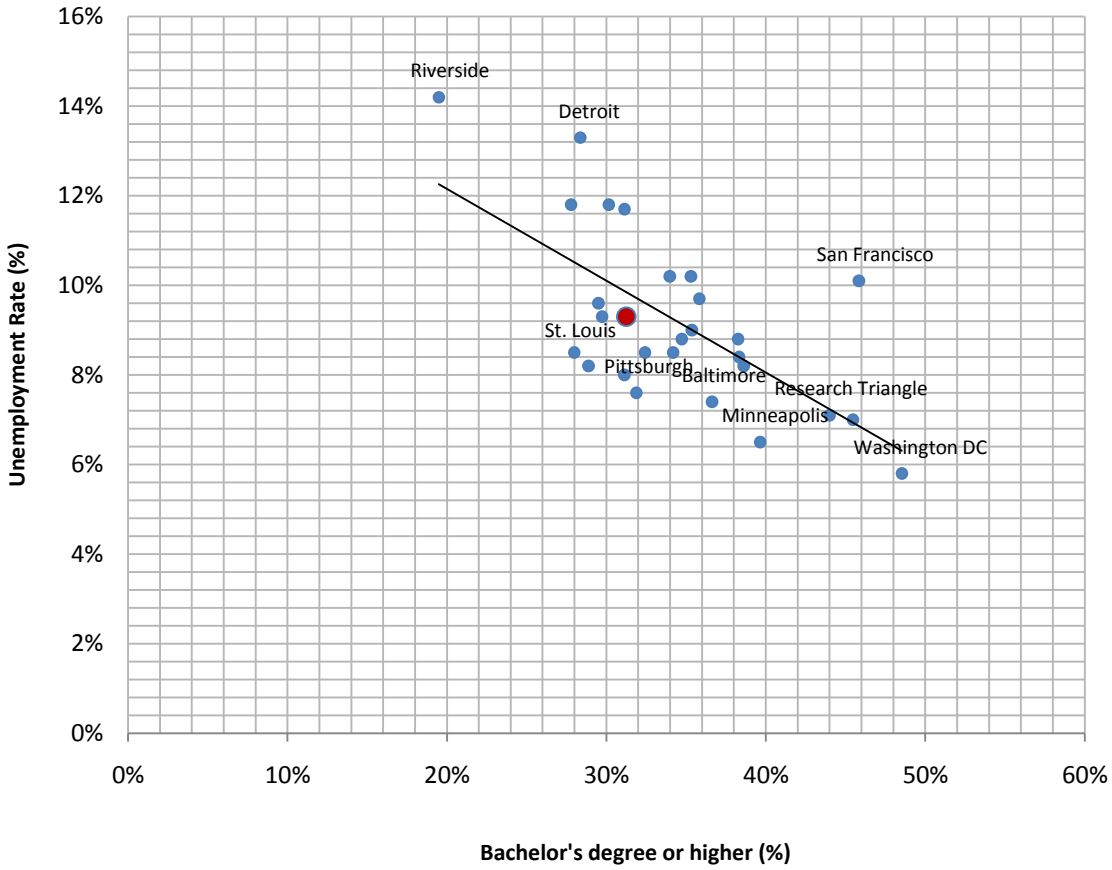
Source: U.S. Census Bureau, American Community Survey 2009.[14]

Section 4

What might Greater St. Louis hope to achieve by increasing the percentage of our population with college degrees?

Regions that have higher levels of education have lower levels of unemployment.

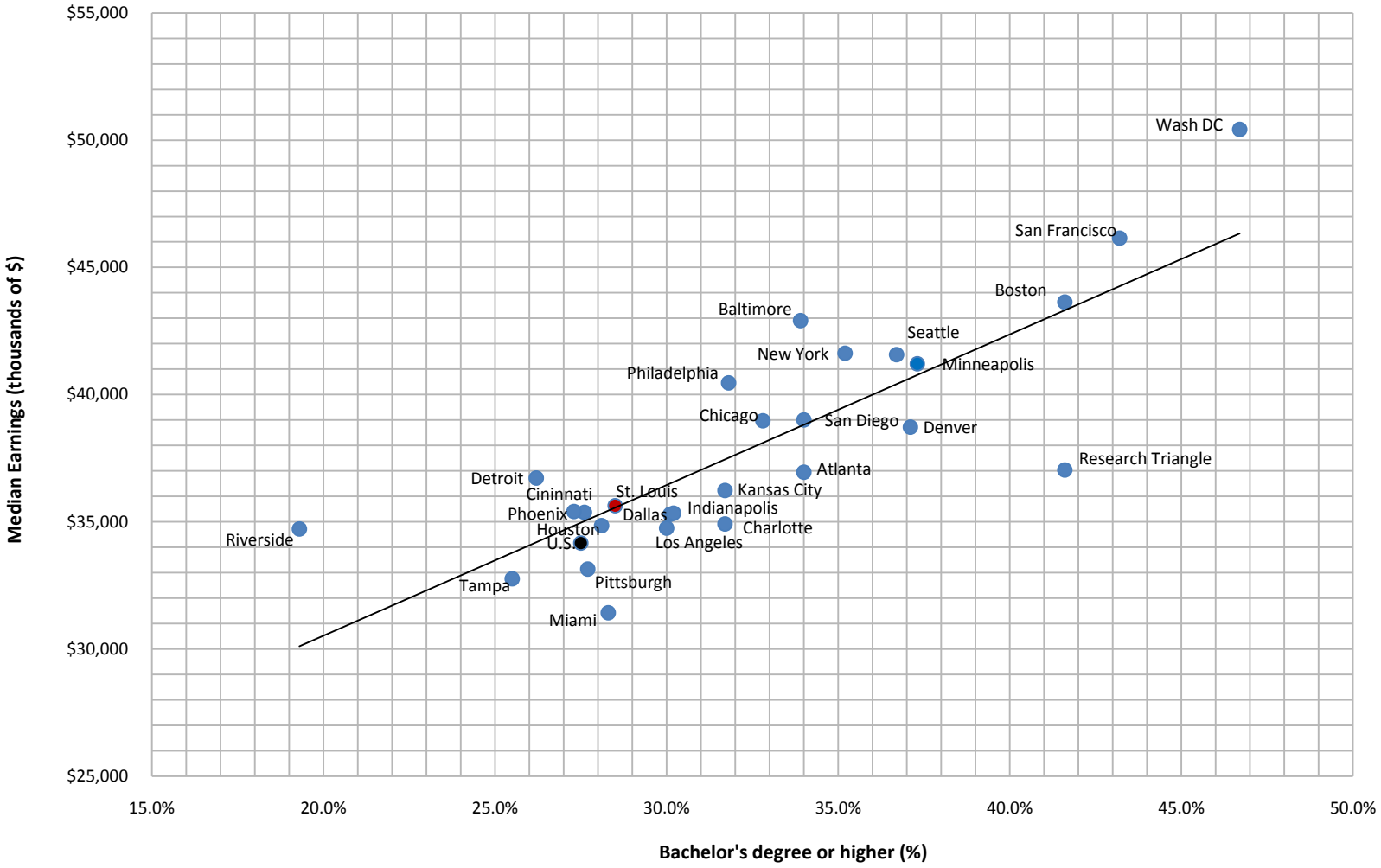
Percentage of bachelor's degree and higher by unemployment rate for the population aged 25 to 64
St. Louis MSA, Peer MSAs, U.S., 2005-2009



Sources: U.S. Census Bureau, American Community Survey 2005-2009; Bureau of Labor Statistics 2010.[15]

Regions that have higher levels of education have higher median earnings.

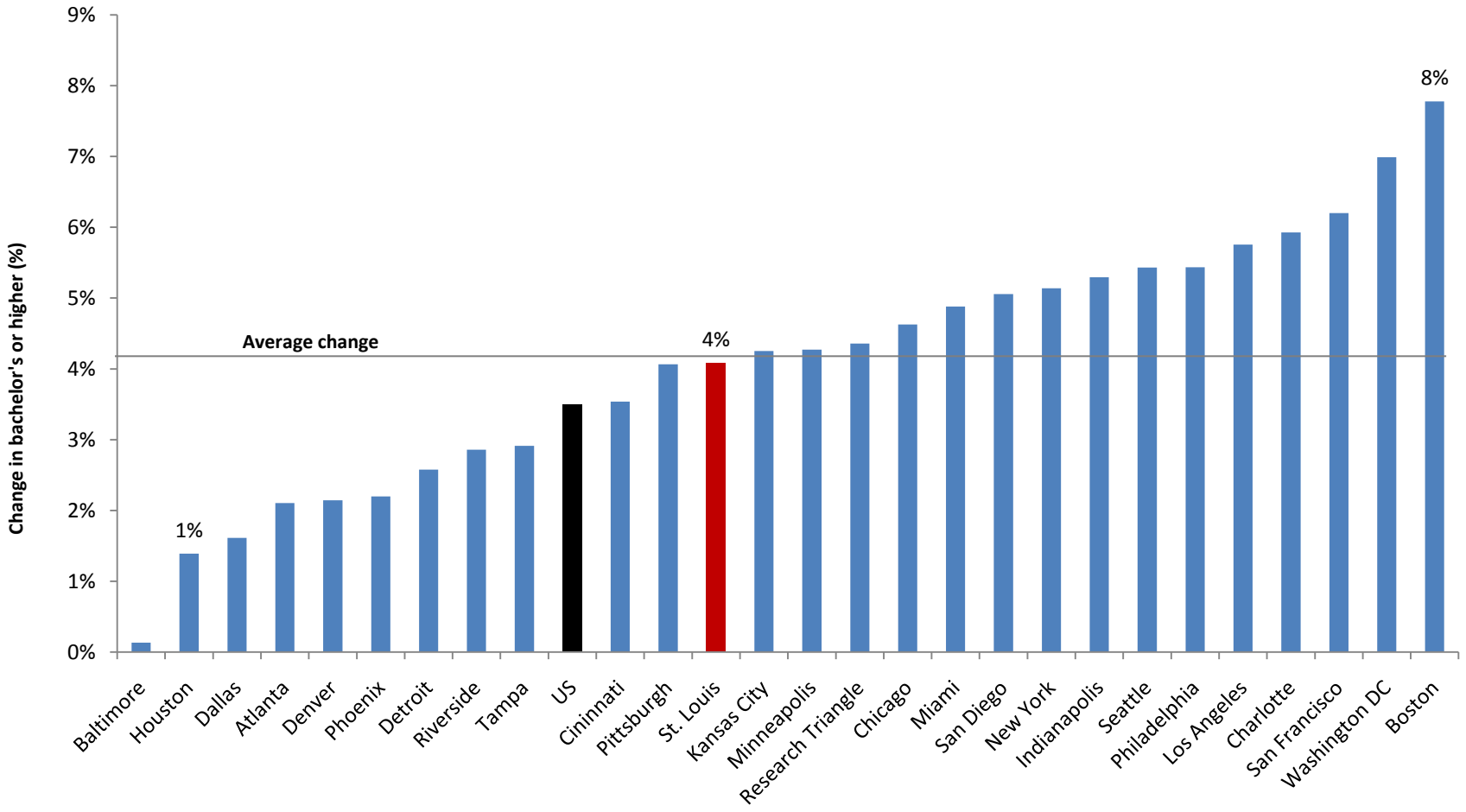
Median earnings by percentage with bachelor's degree or higher for the population aged 25 and over
St. Louis MSA, Peer MSAs, U.S., 2005-2009



Source: U.S. Census Bureau, American Community Survey 2005-2009.[16]

Regions with higher levels of education build upon their strengths.

Percentage point change in bachelor's degree or higher attainment for the population aged 25 and over
St. Louis MSA, Peer MSAs, U.S., 2000-2009

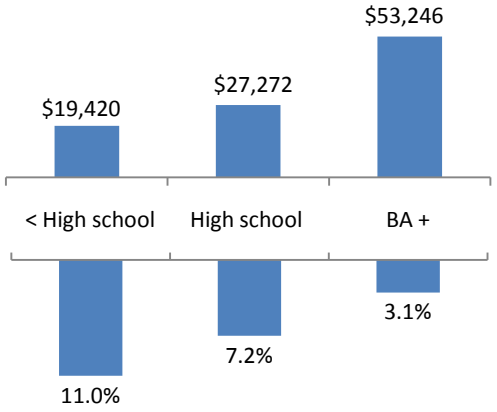


Sources: U.S. Census Bureau, Decennial Census 2000 and American Community Survey 2009.[17]

Education pays financial dividends to individuals.

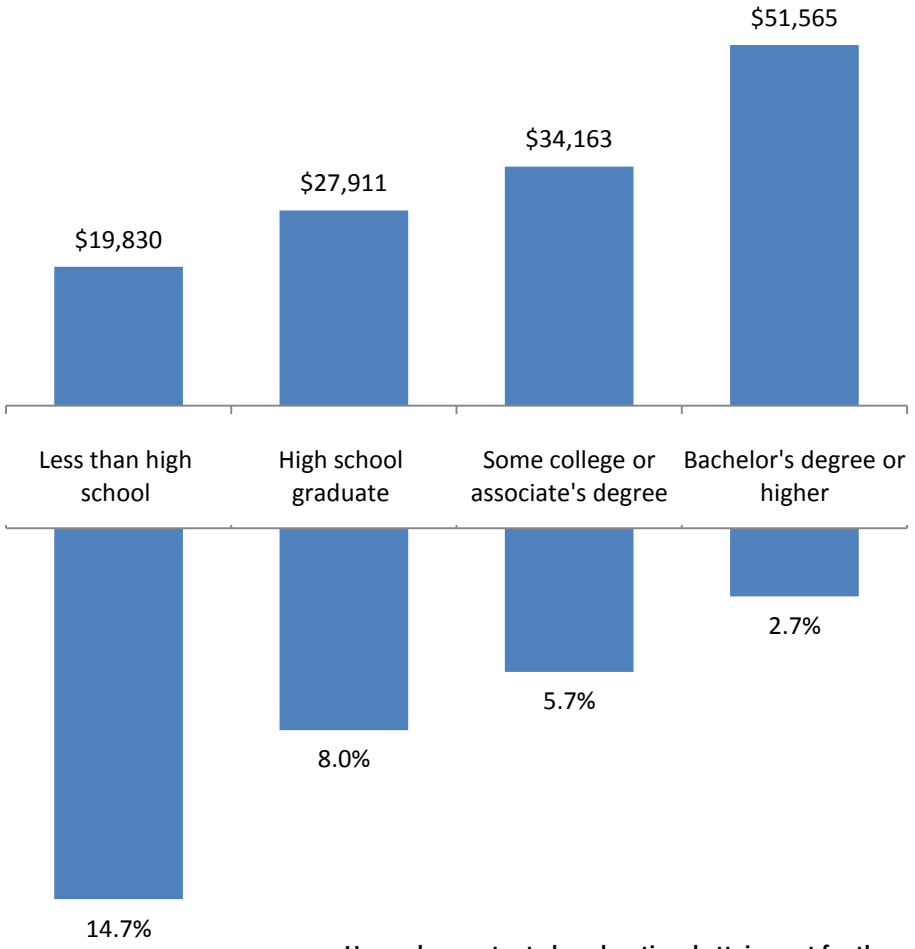
- On average, individuals with a bachelor's degree or higher earn more money and are less likely to be unemployed.
- Between 2005 and 2009, the average unemployment rate for those in St. Louis with a bachelor's degree or higher was 2.7 percent, compared to 8 percent for those with a high school diploma.

Median earnings by educational attainment
U.S., 2005-2009



Unemployment rate by educational attainment
U.S., 2005-2009

Median earnings by educational attainment for the population aged 25 and over
St. Louis MSA, 2005-2009



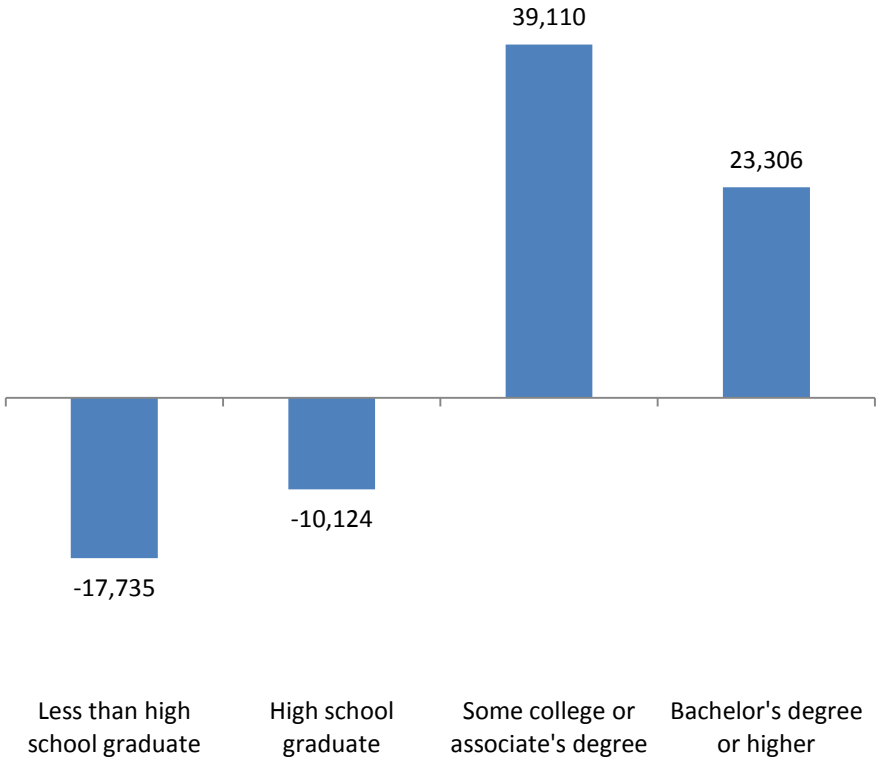
Unemployment rate by educational attainment for the population aged 25 to 64
St. Louis Metropolitan Area, 2005-2009

Source: U.S. Census Bureau, American Community Survey 2005-2009.[18]

Education improves the chances of full-time employment.

- Between 2005 and 2009, the number of full-time employed individuals with some college or more increased, while full-time employment declined for those without any college.

Change in the number full- time employed for the population aged 25 to 64
St. Louis MSA, 2005-2009



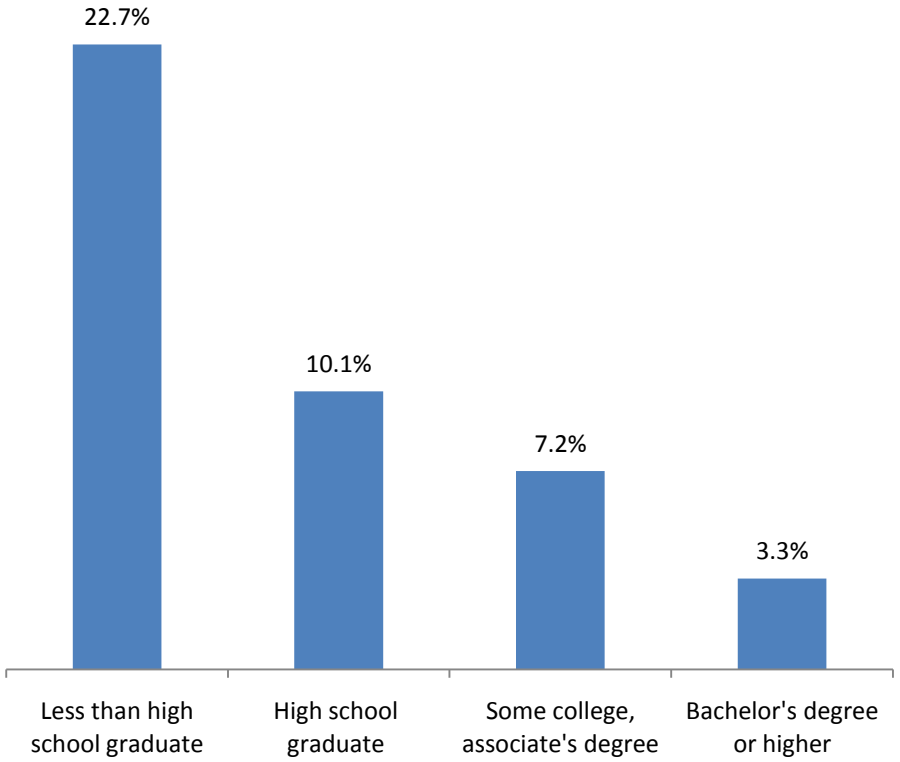
Source: U.S. Census Bureau, American Community Survey 2005-2009.[19]

Education decreases the likelihood of living in poverty.

- According to the U.S. Census Bureau, the 2009 poverty threshold for an individual was $10,956.

- The percentage of individuals living in poverty whose highest level of educational attainment is a high school diploma is about three times higher than for those with a bachelor's degree or more.

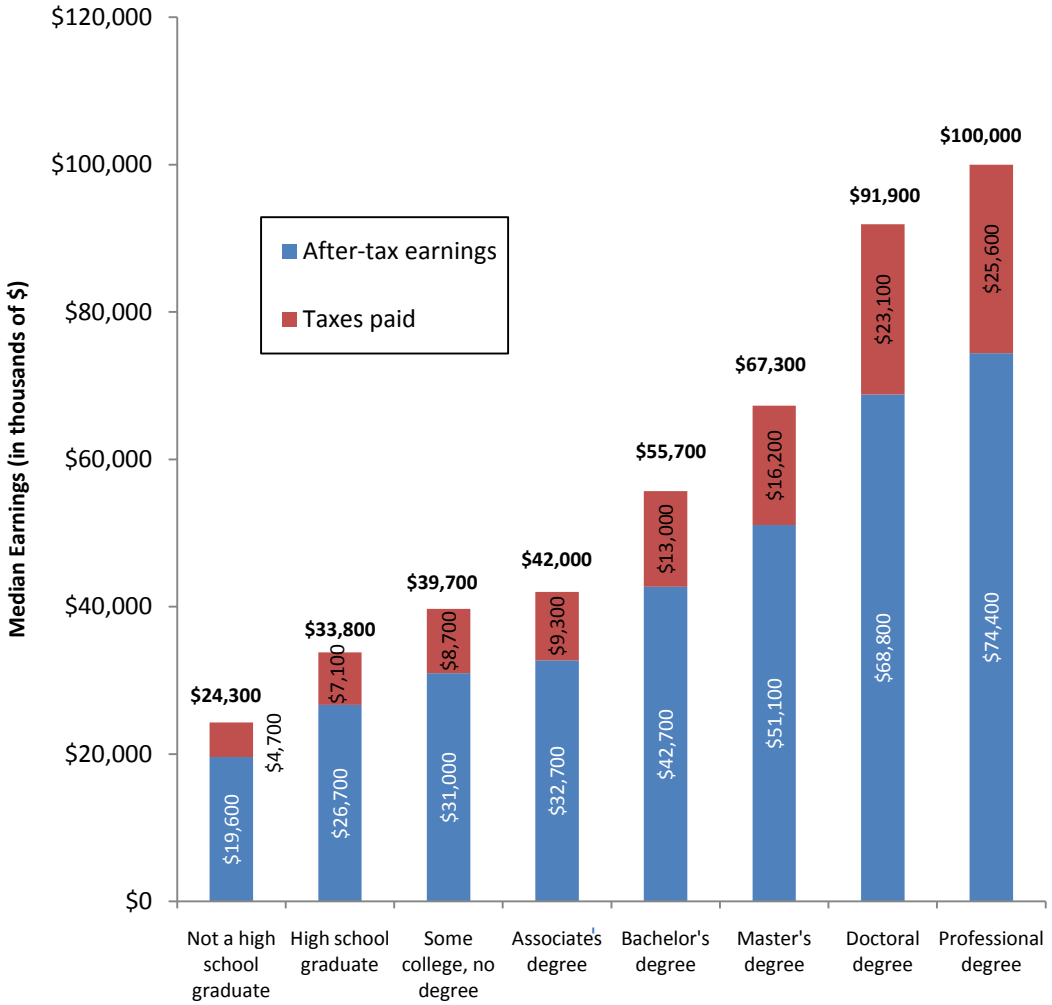
Poverty status in the last 12 months by educational attainment for the population aged 25 and over
St. Louis MSA, 2009



Source: U.S. Census Bureau, American Community Survey 2005-2009.[20]

Higher education levels increase tax revenues.

Median earnings and tax payments of full-time year-round workers ages 25 and older by education level
U.S., 2008



Sources: College Board Advocacy and Policy Center 2010; data are from the U.S. Census Bureau 2009; Internal Revenue Service 2008; Davis et al. 2009.[21]

Section 5

What barriers must be overcome to improve college completion rates?

Financial

- Over the past 30 years, average tuition and fees for colleges have steadily increased, with public four-year colleges outpacing private four-year colleges over the most recent decade. As it stands, average estimated undergraduate tuition and fees for the 2010-11 academic year are $19,595 for public-four year colleges and $27,293 for private four-year colleges (see chart on p. 28).
  College Board Advocacy & Policy Center 2010.

- These increases outpace growth in income and available financial aid.
  E. Terrence Jones and Cynthia J. Palazzo, *College Access Pipeline Report,* prepared for the St. Louis College Access Pipeline Project, July 2009.

- Tuition assistance programs – scholarships, loans, and employer contributions – typically pay only a portion of the cost of college, and many of these are being reduced in the face of fiscal constraints.

Time

- Increasingly, college students are working and going to school at the same time. This often prolongs the time that it takes for them to complete their degree, and presents daily time management challenges.

- In Fall 2009, 53 percent of students enrolled in two-year colleges and 42 percent of students enrolled in four-year colleges in the St. Louis region were part-time students.

Inadequate Preparation

- According to the Missouri Department of Higher Education, "more than 40 percent of area public high school graduates in 2009 entered Missouri colleges and universities with poor skills in reading and math, which required them to take at least one remedial course once they arrived on campus." This prolongs the time it takes to complete a degree, and may discourage completion.
  Cited in "Colleges find area freshmen unready" by Elisa Crouch, *St. Louis Post-Dispatch*, January 2, 2011.

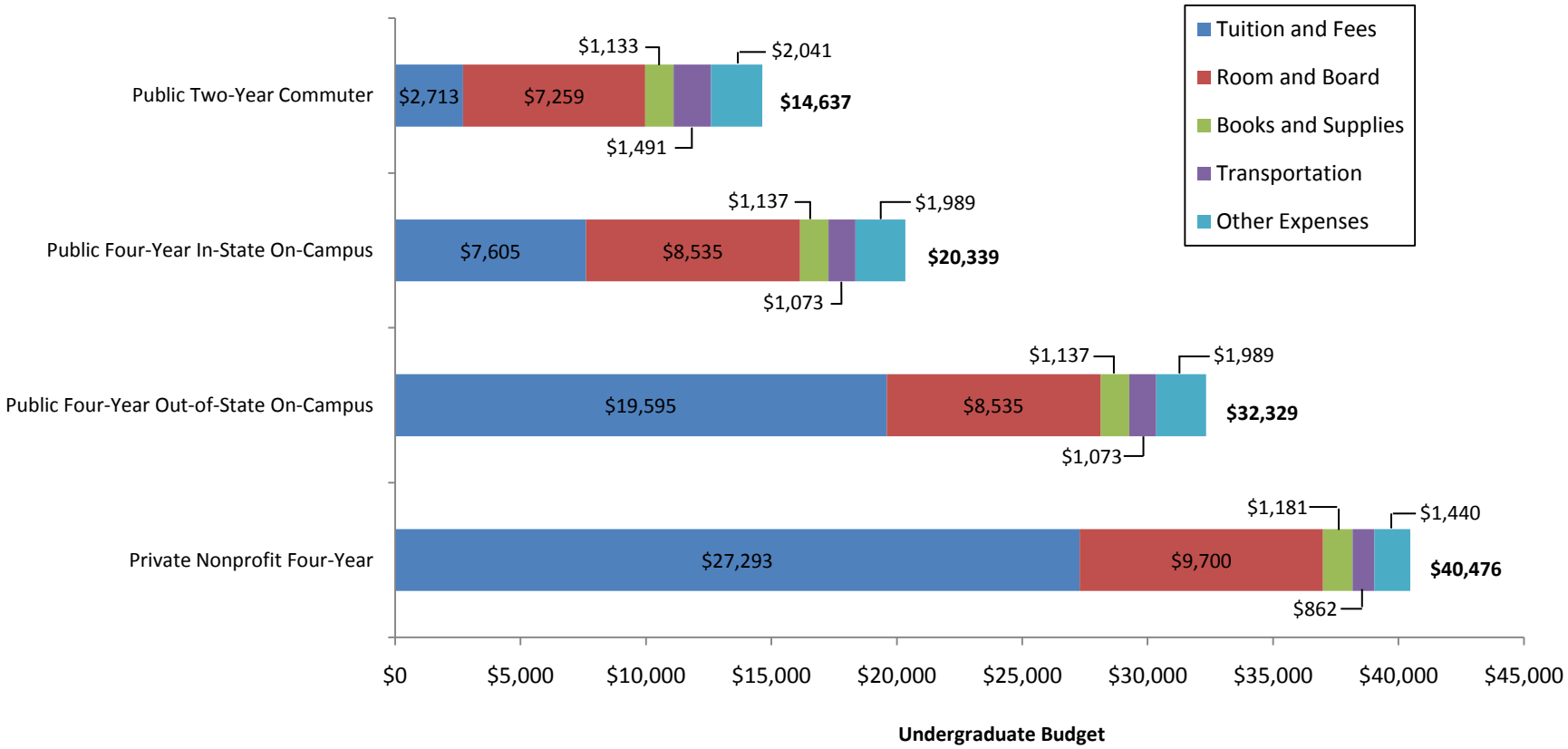
Social Environment

- The experiences and attitudes of others in one's environment impact whether an individual enrolls in college and persists to completion. A participant in a focus group convened by the RCGA and the Saint Louis Community Foundation remarked: "No one in my family ever went to college, so navigating enrollment, expectations of college courses, financial aid, degree requirements, is a real challenge."

- Focus group participants also pointed out that media images during the recent recession of well-educated people out of work caused them to question the real value of a college degree.

The cost of college is considerable.

Average estimated undergraduate budgets
U.S., 2010-11



Source: College Board Advocacy & Policy Center 2010; data are from The College Board Annual Survey of Colleges.[22]

Additional barriers faced by adult students:

Access to programs tailored to adult needs

- According to research conducted for the Lumina Foundation, many adult learners are challenged to find a program that meets their needs or interests and that will fit into to their schedule. Evening and online courses are often limited in scope. The Lumina Foundation notes "Adult learners often lack resources and generally must adapt to a system designed to serve younger, full-time students."
  Lumina Foundation for Education, *Returning to Learning*, March 2007.

- Participants in focus groups conducted by the RCGA and the Saint Louis Community Foundation noted that: "There are many evening programs for business but not for other majors, like engineering." "On-Line courses have been great for time management, but the availability of needed courses is limited."

- Many working adults say that they prefer being in classes with other working adults who face the same challenges and whose learning styles and interests are similar. Some who participated in the RCGA / Community Foundation focus groups said that they prefer classes taught by adjunct instructors who are also working in the field of study.

Difficulty of juggling work-school-family responsibilities

- The challenges facing all part-time students are exacerbated for those who are not only working and going to school at the same time, but also carrying out responsibilities to children and aging adult parents. Adults aged 30-55 who return to school are likely to confront multiple barriers at once.

Prevalence of non-credit courses

- According to research conducted for the Lumina Foundation, "many [working adult students] tend to enroll in non-traditional programs, such as non-credit bearing course sequences and contract education training. Such programs can compromise advanced certification or transfer to baccalaureate degree programs."

- The Lumina Foundation also points out that "American businesses spent more than $50 billion to train employees in 2004. This money often is invested in non-credit-bearing courses offered through continuing-education programs and contract education."
  Lumina Foundation for Education*, Returning to Learning,* March 2007.

Uncertainty about career benefits

- A national study of adults returning to college found that 57 percent had resumed their formal education in order to advance their careers. Yet, many participants in the RCGA / Saint Louis Community Foundation focus groups said that they felt unsure that their persistence in earning a college degree would have any tangible impact on job status or earnings with their current employer.
  Nancy L. Deutsch, *National Study of Non-Traditional Students,* Center for the Study of Higher Education, Charlottesville, VA., November 2010.

Section 6

Success can happen.

Several promising initiatives are currently underway in the St. Louis region to increase the percentage of our population with college degrees. Each one focuses on a specific population group and implements activities and services appropriate to the needs and interests of that group.

By setting a big table around which these many diverse initiatives can communicate, cooperate, and collaborate, the St. Louis RCGA's Talent Council can support progress at the regional level.

Examples of existing initiatives:

- business - college / university partnership (UMSL and Express Scripts)
- multi-business partnership (RCGA's planned business-driven initiative, focused on employees of companies offering tuition assistance)
- corporation-wide initiative (BJC Healthcare)
- college - government partnership (Graduate St. Louis Workforce Consortium)
- college initiative (UMSL Access Success)
- civic - non-profit partnership (College Access Pipeline project)
- veterans initiatives (Veterans Educational Assistance Program, or VEAP)
- labor union initiatives (Sheet metal workers and others)

Epilogue

A comprehensive approach to talent development is required.

Economic development officials cite "the percentage of our adult population with college degrees" as the single most important metric tied to business attraction and retention. As substantiated in this report, St. Louis must improve our standing on this measure if we aspire to reach our 2020 goal.

Business, human resource, and workforce development professionals emphasize that college degrees are a *starting point*, but the talented people needed to advance the vitality of our region must have additional competencies that are not necessarily evidenced by a degree.

These include:

- **applied skills,** the ability to apply knowledge in a dynamic business setting, including critical / analytical thinking, problem-solving, prioritization / focus, process improvement, decision-making

- **people skills**, such as active listening, customer orientation, oral and written communication, leadership, teamwork / collaboration, knowledge of company culture, ability to work well in a diverse environment

- **internal motivation to keep up with changes** in one's occupation and the economic sector in which he or she works

- **a record of continuous learning**, evidenced by recent course completion and certifications in relevant areas

- **an entrepreneurial attitude**, including an eagerness to generate new ideas and to be flexible and agile in the face of changing conditions and risks.

The regional strategy now being developed by business, government, and civic partners in Greater St. Louis will incorporate all these attributes in a coherent framework for future talent development.

Appendix A

Listing of Peer Metropolitan Statistical Areas

Atlanta-Sandy Springs-Marietta, GA
Baltimore-Towson, MD
Boston-Cambridge-Quincy, MA-NH
Charlotte-Gastonia-Concord, NC-SC
Chicago-Naperville-Joliet, IL-IN-WI
Cincinnati-Middletown, OH-KY-IN
Dallas-Fort Worth-Arlington, TX
Denver-Aurora-Broomfield, CO
Detroit-Warren-Livonia, MI
Durham-Chapel Hill, NC
Houston-Sugar Land-Baytown, TX
Indianapolis-Carmel, IN
Kansas City, MO-KS
Los Angeles-Long Beach-Santa Ana, CA
Miami-Fort Lauderdale-Pompano Beach, FL
Minneapolis-St. Paul-Bloomington, MN-WI
New York-Northern New Jersey-Long Island, NY-NJ-PA
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD
Phoenix-Mesa-Scottsdale, AZ
Pittsburgh, PA
Raleigh-Cary, NC
Riverside-San Bernardino-Ontario, CA
San Diego-Carlsbad-San Marcos, CA
San Francisco-Oakland-Fremont, CA
Seattle-Tacoma-Bellevue, WA
Tampa-St. Petersburg-Clearwater, FL
Washington-Arlington-Alexandria, DC-VA-MD-WV

Note: The combined Durham and Raleigh MSAs are referred to as Research Triangle in this study.

References and Notes

[1] Examples taken from the U.S. Department of Labor's New and Emerging occupations Listings - 159 Occupations Approved for Data Collection, June 2009 http://www.onetcenter.org/dl_files/NewEmergingList.pdf, Accessed December 2010.

[2] Sources: "Education and training measurements for workers 25 years and older by detailed occupation," Bureau of Labor Statistics, 2008, http://www.bls.gov/emp/ep_table_111.htm ; "Metropolitan and Nonmetropolitan Area Occupational Employment and Wage Estimates May 2009," Bureau of Labor Statistics, http://www.bls.gov/oes/current/oes_41180.htm**,** Accessed December 2010. "Regional Occupational Employment Projections 2008-2018," Missouri Economic Research and Information Center (MERIC) http://www.missourieconomy.org/occupations/occ_proj.stm, Accessed December 2010.
Note: The pie charts describe the educational requirements for occupations in two of the RCGA core clusters.

[3] Sources: "Labor force statistics from the Current Population Survey," Bureau of Labor Statistics, 2010, http://www.bls.gov/cps/data.htm, Accessed December, 2010.
"Geographic Profile of Employment and Unemployment 2002, 2004, 2008 and 2009," Bureau of Labor Statistics, http://www.bls.gov/opub/gp/gpsec2.htm, Accessed December, 2010.

[4] Source: "College Navigator," National Center for Education Statistics, http://nces.ed.gov/ipeds/cool/index.aspx, Accessed December, 2010.
Note: Data for Columbia College, St. Louis University and Webster University were obtained from these organizations.
Note: Degrees Awarded reflect data from the 2008-2009 school year.

[5] Source: "Table B15001. Sex by educational attainment for the population 18 years and over" from the 2009 American Community Survey 1-Year Estimates, U.S. Census Bureau, 2010, http://factfinder.census.gov/servlet/DTTable?_bm=y&-context=dt&-ds_name=ACS_2009_1YR_G00_&-mt_name=ACS_2009_1YR_G2000_B15001&-CONTEXT=dt&-tree_id=309&-geo_id=31000US41180&-search_results=31000US41180&-format=&-_lang=en, Accessed November 2010.

Note: Peer MSAs are the 20 largest MSAs in the U.S. and six additional MSAs that St. Louis competes with for economic development projects. See Appendix A for a complete listing of peer MSAs.

[6] Source: "Table B15001. Educational attainment for the population aged 25-64" from the 2009 American Community Survey 1-Year Estimates, U.S. Census Bureau, 2010, http://factfinder.census.gov/servlet/DTTable?_bm=y&-context=dt&-ds_name=ACS_2009_1YR_G00_&-mt_name=ACS_2009_1YR_G2000_B15001&-CONTEXT=dt&-tree_id=309&-geo_id=31000US41180&-search_results=31000US41180&-format=&-_lang=en**,** Accessed November, 2010.

[7] Source: National Center for Higher Education Management Systems, www.higheredinfo.org. Compiled by NCHES from U.S. Census Bureau, American Community Survey (ACS) Public Use Microdata Sample (PUMS) Files, Accessed December, 2010.

[8] Source: National Center for Higher Education Management Systems, www.higheredinfo.org. Compiled by NCHES from U.S. Census Bureau, American Community Survey (ACS) Public Use Microdata Sample (PUMS) Files, Accessed December, 2010.

[9] Source: "Table B15010: Detailed field of bachelor's degree for first major for the population 25 years and over," from the 2009 American Community Survey 1-Year Estimates, U.S. Census Bureau, 2010, http://factfinder.census.gov/servlet/DTTable?_bm=y&-context=dt&-ds_name=ACS_2009_1YR_G00_&-mt_name=ACS_2009_1YR_G2000_B15010&-CONTEXT=dt&-tree_id=309&-redoLog=true&-currentselections=ACS_2009_1YR_G2000_B15010&-geo_id=31000US41180&-search_results=31000US41180&-format=&-_lang=en , Accessed November, 2010.

[10] Source: "College Navigator" National Center for Education Statistics, http://nces.ed.gov/ipeds/cool/index.aspx, Accessed December, 2010.

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"Table: B14004. Sex by college or graduate school enrollment by type of school by age for population 15 years and over" from the 2009 American Community Survey 1-Year Estimates, U.S. Census Bureau, 2010. http://factfinder.census.gov/servlet/DTTable?_bm=y&-context=dt&-ds_name=ACS_2009_1YR_G00_&-CONTEXT=dt&-mt_name=ACS_2009_1YR_G2000_B14004&-tree_id=309&-redoLog=false&-geo_id=31000US41180&-geo_id=NBSP&-search_results=31000US41180&-format=&-_lang=en , Accessed November, 2010.

[14] Source: "Table: B14004. Sex by college or graduate school enrollment by type of school by age for population 15 years and over" from the 2009 American Community Survey 1-Year Estimates, U.S. Census Bureau, 2010. http://factfinder.census.gov/servlet/DTTable?_bm=y&-context=dt&-ds_name=ACS_2009_1YR_G00_&-CONTEXT=dt&-mt_name=ACS_2009_1YR_G2000_B14004&-tree_id=309&-redoLog=false&-geo_id=31000US41180&-geo_id=NBSP&-search_results=31000US41180&-format=&-_lang=en.

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[17]Sources: "Table QT-P20.: Educational Attainment by Sex" from Census 2000 Summary File 3 (SF 3) - Sample Data, U.S. Census 2010, http://factfinder.census.gov/servlet/DatasetMainPageServlet?_ds_name=DEC_2000_SF3_U&_program=DEC&_lang=en , Accessed November, 2010.
"Table B15001: Educational attainment for population aged 18 years and over" from 2009 American Community Survey 1-Year Estimates, U.S. Census Bureau, 2010, http://factfinder.census.gov/servlet/DTTable?_bm=y&-context=dt&-ds_name=ACS_2009_1YR_G00_&-mt_name=ACS_2009_1YR_G2000_B15001&-CONTEXT=dt&-tree_id=309&-geo_id=31000US41180&-search_results=31000US41180&-format=&-_lang=en, Accessed November, 2010.

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